SECTION 6

PRELIMINARY SITE CHARACTERIZATION GROUNDWATER TECHNICAL MEMORANDUM

MOLYCORP MINE RI/FS

REVISION 0

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Molycorp, Inc.
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URS Corporation
8181 E. Tufts Ave
Denver, CO 80237

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SECTIONSIX Groundwater

This section documents and summarizes analytical results for groundwater samples collected as part of the RI/FS at the Molycorp mine and tailings facility near Questa, New Mexico. Groundwater data collection for the RI began in fall 2002 and ended in spring 2004.

Groundwater was sampled and analyzed in the vicinity of the mine site and tailings facility to characterize the nature and extent of potential contamination and to provide the necessary data to evaluate potential exposure to human and ecological receptors. Groundwater samples were collected from existing monitoring wells, extraction wells, piezometers, from the underground workings at the mine site, and reference wells upstream of the mine. New monitoring wells were installed at the mine site and tailings facility during the RI and the new wells were included in the sampling program. Seeps and springs were also sampled and are treated as part of the groundwater medium.

For the purposes of the RI, the mine site was divided into six groundwater exposure areas and three groundwater exposure areas were established at the tailings facility (Figures 6-1 and 6-2, respectively). Groundwater exposures areas were established using several factors that included watershed boundaries, physical features (i.e., rock piles), current or past operational activities, and potential exposure pathways.

Sampling of reference groundwater was conducted for the purpose of evaluating the extent of contamination above reference concentrations. For the mine site, reference locations included wells at the upstream mine boundary, other locations upstream of the mine, and in upper Capulin Canyon. Tailings facility reference locations included wells upgradient (north) and to the west of the tailings facility. On-mine site reference sampling locations are shown on Figure 6-1 and Figure 6-3 shows the off-mine site reference locations. The tailings facility reference locations are shown on Figure 6-2.

Groundwater sampling was conducted on a quarterly basis for all wells and seeps and/or springs. Quarterly sampling events were performed in September/October 2002; January, April, July, and September 2003; and January and April 2004. New monitoring wells were sampled on a monthly basis after they were installed to obtain a sufficient number of data points for statistical evaluation of chemical data and assessment of potential trends.

Groundwater samples were analyzed for 25 dissolved and 25 total metals, typically 16 inorganics, total cyanide, and field parameters that included pH, temperature, conductivity, oxidation-reduction potential, turbidity, dissolved oxygen, and flow for seeps and springs. Subsets of existing wells at the mine area and tailings facility were monitored monthly for field parameters to allow for the evaluation of possible seasonal trends. Hexavalent chromium was analyzed in a subset of the groundwater samples collected only during fall 2002 to allow for the determination of the ratio of trivalent to hexavalent chromium. Selected wells were analyzed for organics potentially released in a given area. Organic compounds analyzed in select wells at the mine site included VOCs, SVOCs, explosives, and total petroleum hydrocarbons (Motor oil and Diesel Fuel No. 2), and dioxins in a very limited number of samples. VOCs and SVOCs were analyzed in select wells at the tailings facility. Rationale for each sampling location, sampling frequency, analyte list, and analyte methods are provided in the Molycorp RI/FS Draft Final Work Plan (URS 2002b).

During spring 2004, additional sampling of wells and springs at the mine site and off-site reference area was performed that was not originally contained in the Work Plan. At the request of EPA, select wells were sampled and analyzed for lead and sulfur isotopes, and lanthanides. At that same time, select wells were also analyzed for the stable isotopes of oxygen and hydrogen, and tritium and helium to estimate the age of the water.

Appendix A-6 contains tables of analyte concentrations and field measurements for groundwater samples collected during the RI, and the additional sampling of select mine site wells and springs during spring 2004. Some values or concentrations may have been rejected during the data validation process. Rejected data are not in Appendix A-6, but are discussed in their respective section of this memorandum.

Section 15.4 describes an evaluation of observed field or laboratory contaminants and provides a list by medium of analytes that are considered as attributable to laboratory or field contamination rather than being related to presence in the medium under evaluation. These compounds are not included in the summary result tables in this section, but results for analysis of these compounds are included in the printout of the RI sample analysis results in Appendix A-6.

Individual summary tables for each groundwater-bearing zone (e.g., alluvium, bedrock) within each groundwater exposure or reference area have been prepared. Individual summary tables combine analytical results from all sampling events and present the number of samples collected; percent detection; and minimum, maximum, mean, and median values. The summary tables also contain EPA Region 6 Risk-Based SLC for Human Health at a Hazard Quotient of one. Groundwater Data Quality Objectives (URS 2002e) require comparison of analyte concentrations to these SLC as a first step in the Data Quality Objectives process.

The following section briefly discusses detected analytes for each groundwater-bearing unit or aquifer within each groundwater exposure or reference area. The discussion focuses on inorganics and metals that are detected in greater than 90 percent of the samples. A summary section discusses mean analyte concentrations that exceed Human Health SLC, and how those concentrations compare to reference areas.

6.1 REFERENCE OFF-SITE MINE GROUNDWATER

The off-site mine reference area is comprised of watersheds upstream of the mine site boundary. These watersheds include Hansen, Straight, and Hottentot creeks, each of which has monitoring wells installed by the U.S. Geologic Survey as part of the Pre-Mining Background Study (Figure 6-3). The U.S. Geological Survey sampled these wells during the RI, but the results are not part of the preliminary site characterization. The geologic setting of these watersheds is believed to be analogous to the mine area prior to mining. The creeks drain volcanic rocks with variable alteration and pyrite content and have not been developed or mined. This area also contains hydrothermal scar areas similar to those that currently exist in Goathill Gulch and upper Sulphur Gulch on the mine area, and buried under portions of the Sugar Shack South and Middle rock piles. The off-site reference area also includes the alluvium within the Red River valley from the town of Red River to the mine. Off-site mine reference groundwater was sampled from the alluvium, colluvium/debris flow, bedrock, and alluvial seeps/springs.

6.1.1 Alluvium

Alluvial groundwater within the off-site mine reference area occurs along the Red River valley and floodplain. Alluvial wells that were sampled included LB-A 0.5 miles upstream of the mine, SC-7A, and SC-8A in the lower portion of Straight Creek drainage, and Elephant Rock Campground Well 1. Table 6-1 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 14 samples were collected and analyzed for metals and inorganics analyses, and one sample was analyzed for the stable isotopes of oxygen and hydrogen. During June 2003, two phosphorous values were rejected during data validation, one for the Elephant Rock Campground well and the other for the SC-8A well.

Values of pH ranged from 3.7 to 6.8 standard units (su), with a mean value of 5.2 su. Specific conductance values ranged from 254 to 1,620 microSiemens per centimeter (uS/cm), with a mean value of 782 uS/cm.

Eleven inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

A total of 16 dissolved metal analytes were detected. Of the detected dissolved metals, calcium and magnesium were detected in greater than 90 percent of the samples. A total of 18 metal (total) analytes were detected. Of the detected total metals, calcium and magnesium were detected in greater than 90 percent of the samples. Metals (total) that were not detected in any samples included: arsenic, chromium, mercury, molybdenum, silver, thallium, and vanadium.

A single sample from alluvial well SC-8A was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD) and specific results for these analytes are contained in Table 6-1.

6.1.2 Colluvium/Debris Flow

The majority of colluvial/debris flow wells in the off-mine site reference area is located in the Straight Creek drainage and include: SC-1A, -3A, -4A, -5A, and –6A, and two wells at the Water Treatment Facility AWWT-1 and –2. Additionally, colluvial/debris flow wells in the Hottentot Creek drainage (HTT-A) and Hansen Creek drainage (HAN-A) were sampled in the off-mine site reference area. Table 6-2 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 31 samples were collected and analyzed for metals and inorganics analyses, and one sample was analyzed for the stable isotopes of oxygen and hydrogen, sulfur isotopes, lead isotopes, and for age dating using helium and tritium.

Values of pH ranged from 2.5 to 6.6 su, with a mean value of 3.5 su. Specific conductance values ranged from 1,090 to 3,000 uS/cm, with a mean value of 2,280 uS/cm.

Thirteen inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were always detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for mercury, silver, and thallium. Of the detected dissolved metals, aluminum, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the sample. All total metals were detected except for mercury, silver, and thallium. Of the detected total metals, aluminum, calcium, magnesium, manganese and zinc were detected in greater than 90 percent of the samples.

A single sample from colluvial/debris flow well SC-1A was additionally analyzed for helium and tritium to estimate the age of the water. The age was estimated to be 0.87 years. A single sample from SC-1A was also analyzed for the stable isotopes of oxygen (δO^{18}) and hydrogen (δ D), sulfur isotopes (δ ^{34}S), and lead isotopes (^{204}Pb/^{206}Pb, ^{207}Pb/^{206}Pb, and ^{208}Pb/^{206}Pb). Specific results for these analytes are contained in Table 6-2.

6.1.3 Bedrock

All of the bedrock wells in the off-mine site reference area are located in the Straight Creek drainage and include: SC-1B, -2B, and –5B. Table 6-3 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 16 samples were collected and analyzed for metals and inorganics analyses, and one sample was analyzed for the stable isotopes of oxygen and hydrogen, and for age dating using helium and tritium.

Values of pH ranged from 5.6 to 7.3 su, with a mean value of 6.4 su. Specific conductance values ranged from 2,270 to 3,360 uS/cm, with a mean value of 2,750 uS/cm.

Twelve inorganic analytes were detected. Of the detected analytes, bicarbonate, fluoride, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for cadmium, mercury, silver, and thallium. Of the detected dissolved metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples. All total metals were detected except for cadmium, mercury, silver, and thallium. Of the detected total metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples.

A single sample from bedrock well SC-1B was additionally analyzed for tritium to estimate the age of the water; however, the helium component for age dating was not analyzed. SC-1B was also analyzed for the stable isotopes of oxygen (δO^{18}) and hydrogen (δ D). Specific results for these analytes are contained in Table 6-3.

6.1.4 Alluvial Seeps

Alluvial seeps and springs sampled in the off-mine site reference area included Waldo and Chambers springs (Figure 6-3). Waldo Spring is approximately 2,000 ft downstream of Hansen Creek. Chambers Spring is approximately 2,500 feet south of the mill and Red River. Although not upstream of the mine site, Chambers Spring was included in the off-mine site reference area because it is south of Red River in an area that is unimpacted by mine activities. Table 6-4 contains summary statistics for analyte values and comparisons to Human Health SLC. A total

of nine samples were collected and analyzed for metals and inorganics analyses, and one sample was analyzed for the stable isotopes of oxygen and hydrogen.

Values of pH ranged from 4.5 to 7.8 su, with a mean value of 6.3 su. Specific conductance values ranged from 252 to 906 uS/cm, with a mean value of 518 uS/cm.

Ten inorganic analytes were detected. Of the detected analytes, chloride, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Thirteen dissolved metals were detected. Of the detected dissolved metals, calcium and magnesium were detected in greater than 90 percent of the samples. Thirteen total metals were detected. Of the detected total metals, calcium and magnesium were detected in greater than 90 percent of the samples.

A single sample from Chambers Spring was additionally analyzed for the stable isotopes of oxygen (δO^{18}) and hydrogen (δD). Specific results for these analytes are contained in Table 6-4.

6.1.5 Town of Red River Tap Water

Groundwater wells are the water supply source for the town of Red River. The town operates four wells that are located approximately 0.5 mile upstream of the ski area along Pioneer Creek. The wells are about 100 feet deep and completed within alluvium near the bedrock contact. The town also operates a single well at the south end of town, near the present-day Prospector Lodge. This well is about 150 feet deep and completed within the Red River alluvium. The only form of treatment for the water from the wells is chlorination (personal comm. Jake Pierce 2004). Water from drinking water taps in the town was sampled and the water has been included as part of the off-mine site reference area. The sampled locations include: Red River Condos Nos. 1 and 2, and the Red River Lodge (Figure 6-3). Table 6-5 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of three samples were collected and analyzed for metals and inorganics analyses.

Values of pH ranged from 7 to 7.5 su, with a mean value of 7.2 su. Specific conductance values ranged from 211 to 255 uS/cm, with a mean value of 237 uS/cm.

Seven inorganic analytes were detected. Of the detected analytes, bicarbonate, chloride, nitrate, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Eleven dissolved metals were detected. Of the detected dissolved metals, barium, calcium, copper, lead, magnesium, manganese, potassium, sodium, and zinc were detected in greater than 90 percent of the samples. Thirteen total metals were detected. Of the detected metals (total), barium, calcium, copper, lead, magnesium, potassium, sodium, uranium, and zinc were detected in greater than 90 percent of the samples.

6.2 REFERENCE ON-SITE MINE GROUNDWATER

On-site mine reference groundwater locations include areas of the mine site that are distant from mining operations and are considered to be unimpacted by current or past mining activities. The Work Plan identified one area that met these requirements, which is at the upstream mine property boundary east of the mill. During winter 2002/2003, the U.S. Geological Survey installed groundwater monitoring wells in upper Capulin Canyon as part of the Pre-Mining Background Study (Figure 6-1). The Capulin Canyon wells are located west of the Capulin Canyon water collection system and in a drainage that has not been affected by mining activities. On-site mine reference groundwater was sampled from the alluvium, colluvium, and bedrock.

6.2.1 Alluvium

On-site reference groundwater for the alluvium was sampled at one monitoring well, MMW-17A, which is at the upstream mine property boundary. Table 6-6 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 15 samples were collected and analyzed for metals and inorganics analyses. One sample was analyzed for the stable isotopes of oxygen and hydrogen, explosives, and hexavalent chromium. All total metals from the November and December 2002 sampling events for MW-17A were rejected during data validation. Additional data rejected for MMW-17A included: one explosive compound in November 2003, phosphorous in June 2003, and dissolved and total chromium and dissolved nickel in October 2003.

Values of pH ranged from 3.3 to 4.6 su, with a mean value of 4.2 su. Specific conductance values ranged from 96 to 1,430 uS/cm, with a mean value of 757 uS/cm.

Twelve inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Eleven dissolved metals were detected. Of the detected dissolved metals, calcium and manganese were detected in greater than 90 percent of the samples. Of the detected total metals, calcium and manganese were detected in greater than 90 percent of the samples.

A single sample from MMW-17A was additionally analyzed for the stable isotopes of oxygen (δO^{18}) and hydrogen (δD). Specific results for these analytes are contained in Table 6-6. One sample was analyzed for four explosive compounds and hexavalent chromium, and each was not detected.

6.2.2 Colluvium

Two wells, CC-1A and CC-2A, are located in upper Capulin Canyon (Figure 6-1) and represent on-site mine reference groundwater for the colluvium. The two wells were installed by the U.S. Geological Survey as part of the Pre-Mining Background Study, and were added to the RI sampling program in spring 2003. Table 6-7 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 21 samples were collected and analyzed for

metals and inorganics analyses. A single sample from one well was additionally analyzed for the stable isotopes of oxygen and hydrogen, and a single sample from the other well was additionally analyzed for sulfur and lead isotopes.

Values of pH ranged from 4.4 to 7.2 su, with a mean value of 6.2 su. Specific conductance values ranged from 261 to 1,680 uS/cm, with a mean value of 918 uS/cm.

Fourteen inorganic analytes were detected. Of the detected analytes, bicarbonate, fluoride, sulfate, alkalinity, total dissolved solids, and total suspended solids were always detected in each sample. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, lead, mercury, silver, and thallium. Of the detected dissolved metals, calcium, magnesium, manganese, and sodium were detected in greater than 90 percent of the samples. All total metals were detected except for antimony. Of the detected total metals, aluminum, calcium, iron, magnesium, manganese, and sodium were detected in greater than 90 percent of the samples.

A single sample from colluvial well CC-1A was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). The other well CC-2A was additionally analyzed for sulfur isotopes ($\delta {}^{34}S$) and lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$). Specific results for these analytes are contained in Table 6-7.

6.2.3 Bedrock

Three wells were sampled and represent the on-site mine reference bedrock groundwater (Figure 6-1). Two of the wells, CC-1B and CC-2B, are located in upper Capulin Canyon. The other well is MMW-17B, which is at the eastern mine property boundary. Table 6-8 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 41 samples were collected and analyzed for metals and inorganics analyses. A single sample from two wells was additionally analyzed for the stable isotopes of oxygen and hydrogen, and a single sample from one well was analyzed for hexavalent chromium and age dating. All total metals for MMW-17B from samples collected in October and December 2002 were rejected during data validation. Phosphorous values for CC-1B and CC-2B in June 2003 were also rejected.

Values of pH ranged from 4 to 7.3 su, with a mean value of 5.8 su. Specific conductance values ranged from 96 to 1,810 uS/cm, with a mean value of 1,010 uS/cm.

Thirteen inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, lead, mercury, silver, and thallium. Of the detected dissolved metals, calcium and manganese were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, cadmium, cobalt, mercury, silver, and thallium. Of the detected total metals, calcium and manganese were detected in greater than 90 percent of the samples.

A single sample from bedrock wells CC-1B and MMW-17B was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). A single sample from MMW-17B was additionally analyzed for hexavalent chromium, which was not detected, and tritium and helium for age dating. Specific results for these analytes are contained in Table 6-8.

6.3 MINE SITE GROUNDWATER

Groundwater at the mine site was divided into six exposure areas (Figure 6-1.). Exposure areas at the mine site include:

- GW-1 – Area Drained by Capulin Canyon
- GW-2 – Area That Contains Capulin Rock Pile
- GW-3 – Portions of Goathill Gulch and Open Pit Area
- GW-4 – South Mine Site Rock Piles
- GW-5 – Administration and Maintenance & Electrical Area
- GW-6 – Mill Site Area

The following subsections discuss analytical results for each groundwater-bearing unit i.e., alluvium, colluvium, bedrock, or seeps/springs) within each of the six exposures areas.

6.3.1 Groundwater Area 1 – Area Drained by Capulin Canyon

Exposure area GW-1 covers the area drained by Capulin Canyon to the downstream mine property boundary. The exposure area also includes the Red River floodplain. There are two sets of paired monitoring wells located in Capulin Canyon and pair of wells near the downstream property boundary. Several seeps occur along the northern bank of Red River near the mouth of Capulin Canyon and are within the exposure area (Figure 6-1).

The Capulin Rock Pile, although located within the Capulin Canyon drainage basin, is not included in GW-1 because most of the surface runoff from the rock pile is captured by the existing surface water collection system and directed to the underground workings. Similarly, the mine reference wells in upper Capulin Canyon are not included in GW-1.

6.3.1.1 Alluvium

Alluvial groundwater within exposure area GW-1 occurs along the Red River floodplain. Monitoring well MMW-45A was installed during the RI to characterize alluvial groundwater at the downstream mine property boundary. An additional alluvial monitoring well, MMW-50A, was installed in February 2004 at the request of EPA. The additional well was sampled three consecutive months in spring 2004. Four shallow piezometers were installed near Spring 13 for the design of the Spring 13 water collection system. They include Spring 13 P-1, P-2, P-3 and P-4. A sample from Spring 13 P-1 was collected and analyzed once in May 2004, and field parameters were measured in the other three piezometers at the same time. The remaining

alluvial well in exposure area GW-1 is a well at the Questa Ranger Station Well. The Questa Ranger Station well is approximately 3,000 feet downstream of the mine property boundary and exposure area GW-1. Although the well is not within the GW-1 exposure area identified in the Work Plan, it was added to the exposure area because it represents alluvial groundwater just downstream of and proximal to the mine site.

Table 6-9 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 20 samples were collected and analyzed for metals and inorganics analyses. A single sample from MMW-45A and MMW-50A was additionally analyzed for the stable isotopes of oxygen and hydrogen, and the sample from MMW-45A was also analyzed for lead and sulfur isotopes, and lanthanides.

Values of pH ranged from 2.6 to 6.3 su, with a mean value of 3.5 su. Specific conductance values ranged from 410 to 2,250 uS/cm, with a mean value of 1,490 uS/cm.

Thirteen inorganic analytes were detected. Of the detected analytes, chloride, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, boron, silver, and thallium. Of the detected dissolved metals, aluminum, calcium, copper, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, boron, silver, and thallium. Of the detected total metals, aluminum, calcium, copper, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples.

A single sample from alluvial well MMW-45A and MMW-50A was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). A single sample from MMW-45A was also analyzed for sulfur isotopes ($\delta {}^{34}S$) and lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$) for lanthanides. Specific results for these analytes are contained in Table 6-9.

6.3.1.2 Colluvial/Debris Flow

Colluvial groundwater within exposure area GW-1 is found along the Capulin Canyon drainage. Two monitoring wells were sampled in this exposure area and include: MMW-23A in upper Capulin Canyon, and MMW-2 near the mouth of Capulin Canyon. Table 6-10 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 17 samples were collected and analyzed for metals and inorganics analyses. A single sample from each well was additionally analyzed for the stable isotopes of oxygen and hydrogen, and sulfur and lead isotopes. MMW-23A was also analyzed once for hexavalent chromium. All total metals for MMW-2 in November 2002 and all total metals in MMW-23A in October 2002 were rejected during data validation.

Values of pH ranged from 2.8 to 6.2 su, with a mean value of 5.7 su. Specific conductance values ranged from 1,630 to 5,250 uS/cm, with a mean value of 2,600 uS/cm.

Thirteen inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony and silver. Of the detected dissolved metals, beryllium, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, molybdenum, and silver. Of the detected total metals, aluminum, beryllium, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples.

A single sample from colluvial well MMW-23A and MMW-2 was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD), and sulfur isotopes ($\delta {}^{34}S$) and lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$). A single sample from MMW-23A was also analyzed for hexavalent chromium, which was not detected. Specific results for these analytes are contained in Table 6-10.

6.3.1.3 Bedrock

Bedrock groundwater within exposure area GW-1 was sampled at three wells. MMW-23B and MMW-3 are at the upper and lower reaches of Capulin Canyon, respectively. MMW-45B is at the downstream mine property boundary. Table 6-11 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 29 samples were collected and analyzed for metals and inorganics analyses. A single sample from each well was additionally analyzed for the stable isotopes of oxygen and hydrogen. MMW-23B was also analyzed once for hexavalent chromium.

Values of pH ranged from 3.3 to 8.7 su, with a mean value of 5.8 su. Specific conductance values ranged from 480 to 4,650 uS/cm, with a mean value of 2,130 uS/cm.

Eleven inorganic analytes were detected. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, silver, and thallium. Of the detected dissolved metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples. All total metals were detected except for antimony and thallium. Of the detected total metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples.

A single sample from colluvial well MMW-23B, MMW-3, and MMW-45B was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). A single sample from MMW-45B was also analyzed for hexavalent chromium, which was not detected. Specific results for these analytes are contained in Table 6-11.

6.3.1.4 Alluvial Seeps

Seeps issue from the alluvial groundwater system within exposure area GW-1. The seeps occur along the bank of Red River and include (from upstream to downstream): Spring 13, Lower Spring 13, Spring 14M, Spring 14MA, and Spring 15M. The Spring 13 water collection system is also within this exposure area and sampled at its downstream vault and identified as Spring 13-Pump. Table 6-12 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 47 samples were collected and analyzed for dissolved metals and inorganics analyses; 44 samples were analyzed for total metals. Two samples were additionally analyzed for hexavalent chromium, and a single sample was analyzed for lead and sulfur isotopes, explosives, and helium and tritium for age dating. Three samples were analyzed for the stable isotopes of oxygen and hydrogen.

All total metals for Lower Spring 13 and Spring 13 in October 2002, and all total metals for Spring 14-M in November 2002 were rejected during data validation. Cyanide was rejected for Lower Spring 13 in October 2002 and January 2003. Dissolved chromium and nickel for Spring 13-Pump were rejected in December 2003 and phosphorous in June 2003.

Values of pH ranged from 2.8 to 4.8 su, with a mean value of 3.7 su. Specific conductance values ranged from 288 to 4,170 uS/cm, with a mean value of 1,540 uS/cm.

Twelve inorganic analytes were detected. Of the detected analytes, chloride, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, boron, molybdenum, silver, and thallium. Of the detected dissolved metals, aluminum, calcium, manganese, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for boron and thallium. Of the detected total metals, aluminum, calcium, manganese, and zinc were detected in greater than 90 percent of the samples.

A sample from Lower Spring 13, Spring 13, and Spring 14M was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). Lower Spring 13 and Spring 14M were additionally analyzed for hexavalent chromium, which was detected in only the Lower Spring 13 sample at 0.022 mg/L. Spring 13 was also analyzed for sulfur isotopes ($\delta {}^{34}S$) and lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$), and helium and tritium for age dating. A single sample from Spring 13-Pump was analyzed for five explosive compounds, which were each not detected. Specific results for these analytes are contained in Table 6-12.

6.3.2 Groundwater Area 2 – Area That Contains Capulin Rock Pile

Exposure area GW-2 covers the uppermost portion of the Capulin Canyon drainage and contains the Capulin Rock Pile. There are currently no monitoring wells located within groundwater exposure area GW-2. However, groundwater issuing from the side of the Capulin Rock Pile has been sampled to characterize the groundwater in this exposure area. The seepage is identified as Capulin Spring Source (Figure 6-1).

6.3.2.1 Colluvial Seeps

Water from the side of Capulin Rock Pile was sampled and represents seepage from colluvial material within exposure area GW-2. Table 6-13 contains summary statistics for analyte values and comparisons to Human Health SLC. Two samples were collected and analyzed for metals and inorganics analyses. A single sample of the seepage was additionally analyzed for the stable isotopes of oxygen and hydrogen.

Values of pH ranged from 2.4 to 2.8 su, with a mean value of 2.6 su. Specific conductance values ranged from 10,800 to 11,100 uS/cm, with a mean value of 10,900 uS/cm. The seepage flow ranged from 5.3 to 15.9 gallons per minute (gpm).

Eleven inorganic analytes were detected. Of the detected analytes, chloride, fluoride, nitrite, ortho phosphorous, sulfate, total dissolved solids, total suspended solids, and TOC were always detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, barium, lead, molybdenum, potassium, silver, sodium, and thallium. Some of these metals may not have been detected due to elevated reporting limits. The following lists the dissolved metals that were detected in greater than 90 percent of the samples.

Analyte	Analyte	Analyte
Aluminum	Cobalt	Nickel
Beryllium	Copper	Selenium
Cadmium	Iron	Vanadium
Calcium	Magnesium	Zinc
Chromium	Manganese	

Metals (total) not detected were the same as for the dissolved metals listed above. Detected total metals in greater than 90 percent of the samples are the same as for dissolved metals.

A single sample from Capulin Spring Source additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). Specific results for these analytes are contained in Table 6-13.

6.3.3 Groundwater Area 3 – Portions of Goathill Gulch and Open Pit Area

Exposure area GW-3 includes the central mine, open pit, and Blind Gulch and Spring Gulch Rock Piles. It also includes Goathill North and South Rock Piles and portions of Goathill Gulch. Groundwater within this area is influenced by the open pit and development of the new underground mine and subsidence zone above the mine in Goathill Gulch. Alluvial groundwater does not occur in this exposure area. Three wells are completed into colluvial materials in this exposures area, and are located at the Blind Gulch and Spring Gulch Rock Piles. However, only one of these wells intersects colluvial groundwater, the other two are dry. Bedrock groundwater

was sampled at two wells near the Spring Gulch Rock Pile and at three underground locations. Seepage from colluvial materials downstream of the Goathill North Rock Pile was also sampled.

6.3.3.1 Colluvial/Debris Flow

Three wells have been installed into colluvial materials to monitor colluvial groundwater in exposure area GW-3: MMW-35A, MMW-41A, and MMW-40A. Only MMW-40A has been sampled and the other two wells have been dry. Table 6-14 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of seven samples were collected and analyzed for metals and inorganics analyses. A single sample from the well was additionally analyzed for explosive compounds, VOCs, SVOCs, and the stable isotopes of oxygen and hydrogen.

Values of pH ranged from 5.4 to 6.9 su, with a mean value of 6.1 su. Specific conductance values ranged from 977 to 1,230 uS/cm, with a mean value of 1,070 uS/cm.

Eleven inorganic analytes were detected. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, phosphorous, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, chromium, cobalt, iron, mercury, silver, and thallium. Of the detected dissolved metals, calcium, magnesium, and molybdenum were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, chromium, cobalt, mercury, and thallium. Of the detected total metals, calcium and magnesium were detected in greater than 90 percent of the samples.

Three of the seven samples were analyzed for VOCs, SVOCs, and explosive compounds, and none were detected. A single sample was additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δ D). Specific results for these analytes are contained Table 6-14.

6.3.3.2 Bedrock

Five bedrock sample locations are within exposure area GW-3. Two locations are bedrock monitoring wells, MMW-34B and MMW-35B, near the Spring Gulch Rock Pile. The other three are underground locations Mine1, F1, and P1. The Mine1 sample location is at the end of the Decline and represents a mixture of groundwater from numerous underground locations before the water is pumped to the mill. F1 and P1 are locations beneath the subsidence zone that collect groundwater (Figure 6-1).

Table 6-15 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 21 samples were collected and analyzed for metals and inorganics analyses from the two monitoring wells and the Mine1 location. Nine samples were analyzed for explosives, VOCs, and SVOCs from the same two wells and Mine1 location. Hexavalent chromium was analyzed in a single sample from the two wells. Stable isotopes of oxygen and hydrogen were analyzed in a single sample from the two wells and the F1 and P1 underground locations.

Values of pH ranged from 4.2 to 7.8 su, with a mean value of 6.0 su. Specific conductance values ranged from 46 to 6,490 uS/cm, with a mean value of 2,960 uS/cm.

Fourteen inorganic analytes were detected. Of the detected analytes, chloride, fluoride, sulfate, total dissolved solids, and total suspended solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony and mercury. Of the detected dissolved metals, beryllium, calcium, magnesium, manganese, molybdenum, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for antimony and mercury. Of the detected total metals, beryllium, calcium, lead, magnesium, manganese, molybdenum, and zinc were detected in greater than 90 percent of the samples.

Explosive compounds VOCs and SVOCs were not detected. Hexavalent chromium was detected at 0.0073 mg/L in one of the two samples that were analyzed. Four samples were additionally analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD). Specific results for these analytes are contained in Table 6-15.

6.3.3.3 Colluvial Seeps

Seepage from colluvial materials occurs near the toe of Goathill South Rock Pile. Two locations were sampled during the RI to characterize colluvial groundwater within exposure area GW-3. The two locations are Goathill Spring Source and Goathill Spring. Goathill Spring Source is a few 10's of feet down slope of where the seepage first issues from the ground, whereas Goathill Spring is approximately 800 feet further down slope (Figure 6-1).

Table 6-16 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of nine samples were collected and analyzed for metals and inorganics analyses from the two seep locations. One sample was additionally analyzed for hexavalent chromium and stable isotopes of oxygen and hydrogen. All total metals for Goathill Spring from the October 2002 sample were rejected during data validation.

Values of pH ranged from 2.3 to 2.8 su, with a mean value of 2.5 su. Specific conductance values ranged from 10,000 to 13,700 uS/cm, with a mean value of 11,400 uS/cm. Seepage flow ranged from 2.4 to 20 gpm.

Twelve inorganic analytes were detected. Of the detected analytes, chloride, fluoride, nitrite, ortho phosphorus, sulfate, total dissolved solids, total suspended solids, and TOC were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, barium, molybdenum, potassium, silver, and thallium. The following lists the dissolved metals that were detected in greater than 90 percent of the samples.

Analyte	Analyte	Analyte
Aluminum	Chromium	Magnesium
Beryllium	Cobalt	Manganese
Cadmium	Copper	Nickel
Calcium	Iron	Zinc

Metals (total) that were not detected included antimony, boron, molybdenum, and sodium. The detected total metals in greater than 90 percent of the samples are the same as for dissolved metals.

The single sample that was analyzed for hexavalent chromium was detected at 0.0023 mg/L. A single sample that was analyzed for stable isotopes of oxygen (δO^{18}) and hydrogen (δD) and specific results for these analytes are contained in Table 6-16.

6.3.4 Exposure Area GW-4 – South Mine Site Rock Piles

Exposure area GW-4 covers the front rock pile area that includes Sulphur Gulch, Middle, and Sugar Shack South Rock Piles. The exposure area also includes the Red River floodplain from Sulphur Gulch to just downstream of Columbine Creek. Groundwater in exposure area GW-4 occurs in the alluvium along Red River, in colluvium underlying some of the rock piles, and in bedrock at lower elevation along the river. Several seeps occur along the banks of Red River that issue from the alluvial aquifer.

6.3.4.1 Alluvium

Numerous alluvial monitoring wells are within exposure area GW-4 and were sampled to characterize the alluvial groundwater quality. A total of 22 alluvial wells were sampled during the RI. Individual wells are listed below.

Private and Campground Wells:

D1GW, F1GW, Columbine Canyon Well, Columbine Campground Well, Company Cabin Well

Water Collection System Wells:

GWW-1, GWW-2, and GWW-3

Monitoring Wells:

MMW-10A, MMW-10C, MMW-13, MMW-29A, MMW-30A, MMW-31A, MMW-32A, MMW-33A, MMW-49A, P-3, P-4A, P-4B, P-5A, and P-5B

Table 6-17 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 184 samples were collected and analyzed for metals and inorganics analyses.

Sixty-one samples were analyzed for explosives. Hexavalent chromium was analyzed in nine samples. Stable isotopes of oxygen and hydrogen were analyzed in 14 samples. Sulfur and lead isotopes were analyzed in one sample, and three samples were analyzed for lanthanides. For the dissolved lanthanides analysis in MMW-30A, an additional type of QC sample was collected to evaluate adsorption of lanthanides on the filter material. The evaluation of the results for the QC sample is discussed in detail in the Data Validation Report (DVR) for the February 2004 specialty sampling event and in Section 15. Helium and tritium were analyzed in two samples for age dating.

As a result of data validation, all total metals were rejected for November 2002 samples in the following wells: D1GW, MMW-10A, MMW-10C, MMW-29A, MMW-30A, MMW-31A, MMW-32A, MMW-33A, P-3, P-4B, and P-5B. The June 2003 phosphorous values in Columbine Campground Well, MMW-33A, P4A, and P5A were rejected. A single explosive compound from the May 2003 samples in MMW-10A, MMW-29A, and MMW-33A was rejected. The cyanide value was rejected for GWW-1 in April 2003, GWW-3 in January 2004, MMW-29A in January 2003, and MMW-33A in December 2003.

Values of pH ranged from 2.2 to 7.9 su, with a mean value of 4.6 su. Values of pH for alluvial groundwater lower than the upper 3's may be suspect. Therefore, the lower end of the pH range and the mean value are affected by the suspect values. Specific conductance values ranged from 139 to 2,630 uS/cm, with a mean value of 1,540 uS/cm.

All of the inorganic analytes were detected except for carbonate. Of the detected analytes, fluoride, nitrate, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for silver and thallium. Of the detected dissolved metals, calcium, magnesium, and zinc were detected in greater than 90 percent of the samples. All total metals were detected. Of the detected total metals, calcium, magnesium, and zinc were detected in greater than 90 percent of the samples.

Explosive compounds were not detected in any of the samples that were analyzed. Hexavalent chromium was detected in three of the nine samples at a maximum concentration of 0.0053 mg/L. Specific results for lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$), sulfur isotopes ($\delta\ ^{34}S$), stable isotopes of oxygen ($\delta\ O^{18}$) and hydrogen (δ D), lanthanides analytes, and tritium and helium for age dating are contained in Table 6-17.

6.3.4.2 Colluvial/Debris Flow

Colluvial monitoring wells in exposure area GW-4 were sampled to characterize groundwater quality within the colluvial water-bearing unit. The colluvial wells are primarily near the base of Sugar Shack South, Middle, and Sulphur Gulch Rock Piles. Two of the colluvial wells are completed in colluvial materials underlying the Middle and Sulphur Gulch Rock Piles. A total of six colluvial wells were sampled during the RI: MMW-11A, MMW-16, MMW-19A, MMW-27A, MMW-38A, and MMW-39A (Figure 6-1).

Table 6-18 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 38 samples were collected and analyzed for metals and inorganics analyses. Twelve samples were analyzed for explosives. Hexavalent chromium was analyzed in two samples. Stable isotopes of oxygen and hydrogen were analyzed in five samples. Sulfur isotopes were analyzed in three samples and lead isotopes were analyzed in six samples. Four samples were analyzed for lanthanides. Helium and tritium were analyzed in three samples for age dating. One sample was analyzed for VOCs and SVOCs.

As a result of data validation, all total metals from November 2002 samples in MMW-11A, MMW-19A, MMW-38A, and MMW-39A were rejected. Phosphorous values for MMW-16 and MMW-27A were rejected for the June 2003 and January 2004 respective samples. A single explosive compound from the May 2003 sample for MMW-27A was rejected.

Values of pH ranged from 2.8 to 4.4 su, with a mean value of 3.8 su. Specific conductance values ranged from 1,950 to 7,560 uS/cm, with a mean value of 3,800 uS/cm.

Twelve inorganic analytes were detected. Of the detected analytes, chloride, fluoride, phosphorous, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was detected in three of the 35 samples that were analyzed at a maximum concentration of 0.12 mg/L.

All dissolved metals were detected except for antimony, barium, mercury, and thallium. Of the detected dissolved metals, aluminum, beryllium, calcium, copper, magnesium, manganese, nickel, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, barium, and thallium. Total metals detected in greater than 90 percent of the samples are the same as the dissolved metals.

Explosive compounds were not detected in any of the samples that were analyzed. Hexavalent chromium was detected in one of the two samples that were analyzed at a concentration of 0.0023 mg/L. The one sample that was analyzed for VOCs and SVOCs did not detect any organic compounds. Specific results for lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$), sulfur isotopes ($\delta\ ^{34}S$), stable isotopes of oxygen ($\delta\ O^{18}$) and hydrogen (δ D), lanthanides, and tritium and helium for age dating are contained in Table 6-18.

6.3.4.3 Bedrock

The bedrock groundwater within exposure area GW-4 is monitored by 11 wells and one underground location (i.e., Moly Tunnel). Most all of the wells are located near the base of the front rock piles that include Sulphur Gulch, Middle, and Sugar Shack South: MMW-10B, MMW-11, MMW-18B, MMW-19B, MMW-24, MMW-25B, MMW-29B, MMW-30B, MMW-31B, and MMW-32B. One bedrock well, P-5C is located in the Columbine Park area. Groundwater within the Moly Tunnel was sampled from a discharge pipe that penetrates the concrete bulkhead.

Table 6-19 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 91 samples were collected and analyzed for metals and inorganics analyses. Explosive compounds were analyzed in 42 samples. Hexavalent chromium was analyzed in

eight samples. Stable isotopes of oxygen and hydrogen were analyzed in six samples. Two samples were analyzed for lanthanides. For the dissolved lanthanides analysis in MMW-30B, an additional type of QC sample was collected to evaluate adsorption of lanthanides on the filter material. The evaluation of the results for the QC sample is discussed in detail in the DVR for the February 2004 specialty sampling event and in Section 15. Helium and tritium were analyzed in three samples for age dating. One sample was analyzed for dioxins, two for SVOCs, and nine for VOCs.

Based on the data validation, all total metals from November 2002 samples for MMW-10B, MMW-11, MMW-24, and P-5C were rejected. The July 2003 total and dissolved values for selenium and silver were rejected for MMW-30B. For MMW-30B, the April 2003 ortho phosphate and July 2003 nitrite values were rejected. For MMW-31B, the December 2002 total dissolved solids and August 2003 nitrite values were rejected. Two explosive compounds in the July 2003 MMW-30B sample and one compound in the January 2004 sample were rejected. One explosive compound from the May 2003 sample from MMW-31B was rejected.

Values of pH ranged from 2.9 to 7.8 su, with a mean value of 6 su. The minimum value of 2.9 su is suspect because all other values for that particular well were greater than 4.3 su. Specific conductance values ranged from 332 to 6,810 uS/cm, with a mean value of 2,640 uS/cm.

All inorganics were detected except for carbonate. Of the detected analytes, chloride, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, silver, and thallium. Of the detected dissolved metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples. All total metals were detected except for thallium. Total metals detected in greater than 90 percent of the samples are the same as the dissolved metals.

Three explosive compounds were detected. Four samples detected 2,4,6-trinitrotoluene with a maximum concentration of 0.0089 mg/L. Seven samples detected cyclotrimethylenetrinitramine with a maximum concentration of 0.0038 mg/L. Two samples detected pentaerythrltoltetranitrate with a maximum concentration of 0.088 mg/L. Hexavalent chromium was detected in three samples at a maximum concentration of 0.025 mg/L. The one sample that was analyzed for dioxins did not detect any of the seven aroclors that were analyzed. No SVOCs were detected. Two VOCs were detected including 1,2-dichloroethane and 2-butanone. Specific results for stable isotopes of oxygen (δO^{18}) and hydrogen (δ D), lanthanides, and tritium and helium for age dating are contained in Table 6-19.

6.3.4.4 Alluvial Seeps

Three seeps along the banks of Red River have been historically sampled within exposure area GW-4. These seeps include Sulphur Gulch Seep, Portal Springs, and Cabin Springs (Figure 6-1). The source of the seepage is primarily from the alluvial groundwater. These seeps were sampled infrequently during the RI because of insufficient or no flow most of the time.

Table 6-20 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of four samples were collected and analyzed for metals and inorganics analyses.

Values of pH ranged from 4.3 to 5.8 su, with a mean value of 4.8 su. Specific conductance values ranged from 580 to 2,290 uS/cm, with a mean value of 1,250 uS/cm. Flows ranged from 0.1 to 1.0 gpm.

Eleven inorganics were detected. Of the detected analytes, chloride, fluoride, nitrate, phosphorous, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Seventeen dissolved metals were detected. Of the detected dissolved metals, calcium, magnesium, and manganese were detected in greater than 90 percent of the samples. Sixteen total metals were detected. Total metals detected in greater than 90 percent of the samples are the same as the dissolved metals.

6.3.5 Groundwater Area 5 – Administration and Mechanical & Electrical Area

Exposure area GW-5 covers the lower Goathill Gulch drainage, administration facilities, M&E, Sugar Shack West Rock Pile, and the Columbine/Cottonwood Park area along the Red River floodplain. An unnamed drainage channel flows through the M&E area. The drainage bifurcates into two channels above the mine site. One channel extends across the new underground mine to the base of the Goathill South Rock Pile, and the other leads to a buried drainage channel beneath the Sugar Shack West Rock Pile. Groundwater occurs in the alluvium along the Red River floodplain, colluvium/debris flow, and bedrock. Seeps occur that are sourced by alluvial and colluvial groundwater.

6.3.5.1 Alluvium

Alluvial groundwater within exposure area GW-5 was sampled in nine wells. Two of the wells, Columbine Nos. 1 and 2 are water supply wells for the mill. Alluvial monitoring wells included: P-1, P-2, and MMW-47A in the Columbine Park area; US-1, US-2, and US-3 around the Upper Sump; and MMW-42A near the entrance to the mine from State Highway 38. Note that MMW-42A is partially screened in debris flow materials and it may be a mixture of alluvial and colluvial groundwater (Figure 6-1).

Based on the data validation, all total metals from November 2002 samples for Columbine No. 1, Columbine No. 2, MMW-42A, MMW-47A, P-1, P-2, and US-2 were rejected. The April 2003 cyanide value for P-2 was rejected. One explosive compound from the May 2003 sample from MMW-47A was rejected.

Table 6-21 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 75 samples were collected and analyzed for metals and inorganic analyses. Twenty samples were analyzed for explosives, VOCs, and SVOCs. Hexavalent chromium and stable isotopes of oxygen and hydrogen were analyzed in four samples.

Values of pH ranged from 2.7 to 7.2 su, with a mean value of 5.2 su. Specific conductance values ranged from 202 to 2,800 uS/cm, with a mean value of 1,070 uS/cm.

All of the inorganic analytes were detected except for carbonate and hydroxide. Of the detected analytes, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, arsenic, and thallium. Of the detected dissolved metals, calcium and magnesium were detected in greater than 90 percent of the samples. All total metals were detected except for thallium. Of the detected total metals, calcium and magnesium were detected in greater than 90 percent of the samples.

Explosive compounds, hexavalent chromium, VOCs, and SVOCs were not detected in any of the samples that were analyzed. Stable isotopes of oxygen (δO^{18}) and hydrogen (δD) were analyzed and specific results are contained in Table 6-21.

6.3.5.2 Colluvial/Debris Flow

Colluvial groundwater within exposure area GW-5 was sampled in five monitoring wells. Two of the wells, MMW-21 and MMW-22, are located in the M&E area. The other three wells, MMW-8B, MMW-44A, and MMW-48A monitor groundwater within the Goathill Gulch debris flow materials (Figure 6-1).

Table 6-22 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 56 samples were collected and analyzed for metals and inorganics analyses. Explosive compounds were analyzed in 25 samples. Hexavalent chromium was analyzed in one sample. Stable isotopes of oxygen and hydrogen were analyzed in five samples. Sulfur and lead isotopes and lanthanides were analyzed in one sample. For the dissolved lanthanides analysis in MMW-21, an additional type of QC sample was collected to evaluate adsorption of lanthanides on the filter material. The evaluation of the results for the QC sample is discussed in detail in the DVR for the February 2004 specialty sampling event and in Section 15. Helium and tritium were analyzed in two samples for age dating. Twenty-nine samples were analyzed for VOCs and SVOCs. Total petroleum hydrocarbons (Motor oil and Diesel Fuel No. 2) were analyzed in four samples.

As a result of data validation, all total metals from MMW-21, MMW-22, and MMW-44A were rejected for the November 2002 samples. One explosive compound from the May 2003 samples for MMW-44A and MMW-48A was rejected. One VOC from MMW-48A was rejected in each of the January and April 2004 samples.

Values of pH ranged from 1.8 to 6.2 su, with a mean value of 4 su. The minimum value of 1.8 su is suspect because all other values for that particular well were one su greater. Specific conductance values ranged from 2270 to 5,330 uS/cm, with a mean value of 3,330 uS/cm.

All inorganics were detected except for carbonate and hydroxide. Of the detected analytes, chloride, fluoride, phosphorous, sulfate, and total dissolved solids were detected in greater than

90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony and silver. Of the detected dissolved metals, calcium, magnesium, and zinc were detected in greater than 90 percent of the samples. All total metals were detected except for mercury. Total metals detected in greater than 90 percent of the samples included, aluminum, calcium, magnesium, and zinc.

One explosive compound, 2,4,6-trinitrotoluene, was detected at a concentration of 0.00046 mg/L in one sample. Hexavalent chromium, SVOCs Motor oil, and Diesel Fuel No. 2 were not detected. Four VOCs were detected. Maximum concentrations were 1,1,1-Trichloroethane, 0.021 mg/L; 1,1-Dichloroethene, 0.005mg/L; m&p-Xylene 0.00024 mg/L; Total Xylene 0.00024 mg/L.

Specific results for lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$), sulfur isotopes ($\delta\ ^{34}S$), stable isotopes of oxygen ($\delta\ O^{18}$) and hydrogen (δ D), lanthanides, and tritium and helium for age dating are contained in Table 6-22.

6.3.5.3 Bedrock

Bedrock groundwater within exposure area GW-5 was sampled in five monitoring wells. Bedrock monitoring wells that were sampled include: MMW-7 at the M&E area; MMW-8A, MMW-42B, and MMW-44B beneath the Goathill Gulch debris fan; and MMW-36B at the toe of Sugar Shack West Rock Pile. In addition, five underground locations were sampled: C3, Neck Fault, P4, P6, and P9 (Figure 6-1). However, only stable isotopes of oxygen and hydrogen were analyzed from the underground locations.

Table 6-23 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 54 samples were collected and analyzed for metals and inorganics analyses. Explosive compounds were analyzed in 16 samples. Hexavalent chromium was analyzed in two samples. Stable isotopes of oxygen and hydrogen were analyzed in 10 samples. Two samples were analyzed for lanthanides. Helium and tritium were analyzed in two samples for age dating. Two samples were analyzed for sulfur and lead isotopes. VOCs and SVOCs were analyzed in 16 samples.

Based on data validation, all total metals from the October 2002 sample for MMW-36B and the November 2002 sample from MMW-7 were rejected. One explosive compound from the May 2003 sample for MMW-44B was rejected.

Values of pH ranged from 3.7 to 7.9 su, with a mean value of 6 su. Specific conductance values ranged from 1,880 to 7,650 uS/cm, with a mean value of 3,880 uS/cm.

All inorganics were detected except for carbonate and hydroxide. Of the detected analytes, chloride, fluoride, sulfate, total dissolved solids, and total suspended solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for silver and thallium. Of the detected dissolved metals, calcium, iron, magnesium, manganese, and sodium were detected in greater than 90 percent of the samples. All total metals were detected except for silver. Total metals detected in greater than 90 percent of the samples are the same as the dissolved metals.

No explosive compounds were detected. One sample detected hexavalent chromium at a concentration of 0.0033 mg/L. No SVOCs were detected. Three VOCs were detected. Maximum concentrations of the detected VOCs were: 1,1,1-trichloroethane at 0.002 mg/L, 1,1-dichloroethene at 0.001 mg/L, and toluene at 0.008 mg/L. Specific results for lead isotopes ($^{204}Pb/^{206}Pb$, $^{207}Pb/^{206}Pb$, and $^{208}Pb/^{206}Pb$), sulfur isotopes ($\delta\ ^{34}S$), stable isotopes of oxygen ($\delta\ O^{18}$) and hydrogen (δ D), lanthanides, and tritium and helium for age dating are contained in Table 6-23.

6.3.5.4 Alluvial Seeps

Seepage from the alluvial aquifer within exposure area GW-5 occurs primarily at one location, Spring 39. Spring 39 issues from the banks of Red River and was sampled during the RI when measurable flow occurred. Associated with Spring 39 is Upper Spring 39, which is approximately 200 feet upstream of Spring 39. Alluvial seepage was also sampled from the Spring 39 drain and water collection system, identified as Spring 39-Pump (Figure 6-1). Shaft Spring has been sampled in the past and is within the exposure area; however, the spring was dry during the RI or obscured by riprap along the riverbank.

Table 6-24 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 20 samples were collected and analyzed for metals and inorganics analyses. One sample was additionally tested for explosives and hexavalent chromium.

All total metals from the October 2002 Spring 39 sample were rejected as a result of data validation. The June 2003 phosphorous value from Spring 39-Pump was also rejected.

Values of pH ranged from 4.4 to 6.4 su, with a mean value of 5.1 su. Specific conductance values ranged from 168 to 1,860 uS/cm, with a mean value of 1,220 uS/cm. Flows ranged from 0.1 to 200 gpm. The high flow of 200 gpm was measured at Upper Spring 39 and believed to be a mixture of Red River water and seepage.

Twelve inorganics were detected. Of the detected analytes, chloride, fluoride, nitrate, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Seventeen dissolved metals were detected. Of the detected dissolved metals, calcium and magnesium were detected in greater than 90 percent of the samples. Twenty-one total metals were detected. Total metals detected in greater than 90 percent of the samples are the same as the dissolved metals.

Hexavalent chromium and explosive compounds were not detected in the one seep sample.

6.3.5.5 Colluvial Seeps

Groundwater seepage from colluvial/debris fan material occurs at one location within exposure area GW-5. The single location is Goathill Gulch Seep (Figure 6-1), which is near the confluence of Goathill Gulch and Red River. The seep issues from debris flow material near the riverbank.

Table 6-25 contains summary statistics for analyte values and comparisons to Human Health SLC. One sample was collected and analyzed for metals and inorganics analyses. The seepage flow was measured an additional two times, but the flow was insufficient to collect a water sample for metals and inorganic analyses.

The value of pH was 4.1 su. Specific conductance was 1,810 uS/cm.

Eight inorganics were detected. Of the detected analytes, ammonia, chloride, fluoride, phosphorous, sulfate, total dissolved solids, total suspended solids, and TOC were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Seven dissolved metals were detected. Of the detected dissolved metals, beryllium, calcium, copper, lead, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples. Five total metals were detected. Of the detected total metals, beryllium, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples.

6.3.6 Groundwater Area 6 – Mill Site Area

Groundwater exposure area GW-6 covers the mill site and Red River floodplain along the mill (Figure 6-1). Groundwater occurs within the alluvium and bedrock in this exposure area. Colluvial groundwater and seeps are not present in the exposure area.

6.3.6.1 Alluvium

Alluvial groundwater in exposure area GW-6 was sampled from two monitoring wells and one supply well. The monitoring wells include MMW-43A and MMW-28A, which are upgradient and downgradient of the mill, respectively. The Lab Well is completed in the alluvium and supplies water for the lab at the mill (Figure 6-1). Other supply wells (Mill 1 and Mill 1A1) are in the mill area, but were not sampled during the RI. Potato Patch Spring has been sampled in the past and is within the exposure area; however, the spring was dry during the RI.

Table 6-26 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 30 samples were collected and analyzed for metals and inorganics analyses. Explosives were analyzed in six samples. Stable isotopes of oxygen and hydrogen were analyzed in two samples. Tritium and helium were analyzed in one sample for age dating. Thirteen samples were analyzed for VOCs and SVOCs. As a result of data validation, one explosive compound from May 2003 sample and the June 2003 phosphorous value for MMW-28A were rejected.

Values of pH ranged from 5 to 7.2 su, with a mean value of 6.2 su. Specific conductance values ranged from 110 and 2,390 uS/cm, with a mean value of 1000 uS/cm.

All inorganic compounds were detected except for carbonate, hydroxide, and nitrite. Of the detected analytes, bicarbonate, fluoride, sulfate, and alkalinity were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except for antimony, lead, mercury, silver, and thallium. Of the detected dissolved metals, calcium and magnesium were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, mercury, silver, and thallium. Of the detected total metals, calcium and magnesium were detected in greater than 90 percent of the samples.

Explosive compounds and hexavalent chromium were not detected. Three VOCs were detected. Detected VOCs and maximum concentrations include: 1,1,1-trichloroethane at 0.002 mg/L, 1,1-dichloroethane at 0.004 mg/L, and trichloroethane at 0.0009 mg/L. No SVOCs were detected. Specific results for stable isotopes of oxygen (δO^{18}) and hydrogen (δD) and tritium and helium for age dating are contained in Table 6-26.

6.3.6.2 Bedrock

Bedrock groundwater in exposure area GW-6 was sampled in one monitoring well. The bedrock monitoring well, MMW-28B, is downgradient of the mill (Figure 6-1).

Table 6-27 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of eight samples were collected and analyzed for metals and inorganics analyses. Explosives were analyzed in two samples. Stable isotopes of oxygen and hydrogen, and tritium and helium were analyzed in one sample. Three samples were analyzed for VOCs and SVOCs. As a result of data validation, all total metals for the November 2002 sample for MMW-28B were rejected.

Values of pH ranged from 3.9 to 4.7 su, with a mean value of 4.4 su. Specific conductance values ranged from 842 and 966 uS/cm, with a mean value of 904 uS/cm.

Ten inorganic compounds were detected. Of the detected analytes, chloride, fluoride, sulfate, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Seven dissolved metals were detected. Of the detected dissolved metals, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples. Ten total metals were detected. Of the detected total metals, calcium, magnesium, manganese, and zinc were detected in greater than 90 percent of the samples.

Explosive compounds were not detected. One VOC, 1,1,1-trichloroethane, was detected at a maximum concentration of 0.001 mg/L. No SVOCs were detected. Specific results for stable isotopes of oxygen (δO^{18}) and hydrogen (δD), and tritium and helium for age dating are contained in Table 6-27.

6.4 REFERENCE TAILINGS FACILITY GROUNDWATER

Reference groundwater occurs upgradient of the tailings facility within hydrogeologic settings that are analogous to those within the tailings facility. The overall direction of groundwater flow is to the south and southwest; therefore, upgradient reference groundwater is north and northeast of the tailings facility.

Groundwater occurs within three primary units at the tailings facility and in reference groundwater. Groundwater occurs within an alluvial aquifer that is divided into an upper and basal section. The Upper Alluvial Aquifer is comprised of the first occurrence of the water table and may contain perched groundwater. The Basal Alluvial Aquifer is comprised of deeper groundwater within alluvial sediments, typically found at depths greater than 80 to 100 feet. Deep groundwater also occurs within consolidated basalt and andesite (volcanics) and referred to as the Basal Bedrock Aquifer. The Basal Bedrock Aquifer underlies the western portion of the tailings facility and Guadalupe Mountain. Additional reference groundwater for the tailings facility was sampled from private wells in Questa and a well at Cater Ranch, which is approximately six miles north of the tailings facility.

6.4.1 Upper Alluvial Aquifer

Reference groundwater within the Upper Alluvial Aquifer was sampled at MW-21, which is located at the northeast boundary of the tailings facility (Figure 6-2). Table 6-28 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 10 samples were collected and analyzed for metals and inorganics analyses.

Values of pH ranged from 6.9 to 7.6 su, with a mean value of 7.4 su. Specific conductance values ranged from 1,030 and 1,190 uS/cm, with a mean value of 1,110 uS/cm.

All inorganic compounds were detected except carbonate and hydroxide. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, sulfate, alkalinity, total dissolved solids, and total suspended solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Fourteen dissolved metals were detected. Of the detected dissolved metals, arsenic, barium, calcium, magnesium, selenium, and sodium were detected in greater than 90 percent of the samples. Seventeen total metals were detected. Of the detected total metals, arsenic, barium, calcium, magnesium, selenium, sodium, and vanadium were detected in greater than 90 percent of the samples.

6.4.2 Basal Alluvial Aquifer

Reference groundwater within the Basal Alluvial Aquifer was sampled at MW-20, which is located at the northeast boundary of the tailings facility (Figure 6-2). Table 6-29 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 16 samples were collected and analyzed for metals and inorganics analyses.

Values of pH ranged from 5.3 to 7.6 su, with a mean value of 7.2 su. Specific conductance values ranged from 416 and 480 uS/cm, with a mean value of 447 uS/cm.

All inorganic compounds were detected except carbonate. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, phosphorous, sulfate, alkalinity, total dissolved solids, and total suspended solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Sixteen dissolved metals were detected. Of the detected dissolved metals, barium, calcium, magnesium, selenium, sodium, and vanadium were detected in greater than 90 percent of the samples. Eighteen total metals were detected. Of the detected total metals, barium, calcium, magnesium, selenium, sodium, and vanadium were detected in greater than 90 percent of the samples.

6.4.3 Basal Bedrock Aquifer

Reference groundwater within the Basal Bedrock Aquifer was sampled at MW-22. The reference bedrock well is completed in the volcanics immediately west of the tailings facility (Figure 6-2). Table 6-30 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of eight samples were collected and analyzed for metals and inorganics analyses.

Values of pH ranged from 7 to 8.3 su, with a mean value of 7.9 su. Specific conductance values ranged from 225 and 244 uS/cm, with a mean value of 237 uS/cm.

All inorganic compounds were detected except carbonate, hydroxide, and TOC. Of the detected analytes, bicarbonate, chloride, fluoride, and alkalinity were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Sixteen dissolved metals were detected. Of the detected dissolved metals, arsenic, barium, boron, calcium, magnesium, molybdenum, and vanadium were detected in greater than 90 percent of the samples. Eighteen total metals were detected. Of the detected total metals, arsenic, barium, boron, calcium, magnesium, molybdenum, and vanadium were detected in greater than 90 percent of the samples.

6.4.4 Questa Residential Tap Water

Two private residence taps were sampled and are included in the tailings reference groundwater. The two locations are identified as PR1 and PR2 and are located in Questa, south of Red River (Figure 6-2). The source of the water is presumed to be from the Red River alluvium (i.e., Upper Alluvial Aquifer). Table 6-31 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of two samples were collected and analyzed for metals and inorganics analyses.

Values of pH were 7.6 and 7.8 su. Specific conductance values were 382 and 394 uS/cm.

Seven inorganic compounds were detected. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Thirteen dissolved metals were detected. Of the detected dissolved metals, arsenic, barium, boron, calcium, copper, lead, magnesium, molybdenum, potassium, sodium, vanadium, and zinc were detected in greater than 90 percent of the samples. Total metals detected in greater than 90 percent of the samples were the same as dissolved metals.

6.4.5 Cater Ranch Tap Water

A well at Cater Ranch was sampled during the RI and is representative of reference groundwater. The well is identified as "Cater Ranch" and is approximately six miles north of the tailings facility (Figure 6-2). The source of the groundwater is presumed to be from a depth comparable to the Basal Alluvial Aquifer. It is not known if the water is treated or not. Table 6-32 contains summary statistics for analyte values and comparisons to Human Health SLC. One sample was collected and analyzed for metals and inorganics analyses.

The pH value was 7.4 su. The specific conductance value was 149 uS/cm.

Eight inorganic compounds were detected. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, sulfate, alkalinity, total dissolved solids, and total suspended solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Ten dissolved metals were detected. Of the detected dissolved metals, barium, calcium, copper, magnesium, manganese, molybdenum, potassium, sodium, vanadium, and zinc were detected in greater than 90 percent of the samples. Total metals detected in greater than 90 percent of the samples were the same as dissolved metals, with the addition of barium and uranium.

6.5 TAILINGS FACILITY GROUNDWATER

Groundwater occurs within three primary units at the tailings facility. Groundwater occurs within an alluvial aquifer that is divided into an upper and basal section. The Upper Alluvial Aquifer is comprised of the first occurrence of the water table and may contain perched groundwater. The Basal Alluvial Aquifer is comprised of deeper groundwater within alluvial sediments, typically found at depths greater than 80 to 100 feet. Deep groundwater also occurs within consolidated basalt and andesite (volcanics) and referred to as the Basal Bedrock Aquifer. The Basal Bedrock Aquifer underlies the western portion of the tailings facility and Guadalupe Mountain.

The tailings facility was initially divided into three groundwater exposure areas. The three exposure areas are:

- GW-11 – Groundwater Area 11 - Dry/Maintenance Area and Downgradient
- GW-12 – Groundwater Area 12 - IX Plant and Pope Lake

- GW-13 – Groundwater Area 13 – Groundwater for Tailings Area

The GW-12 exposure area near the IX Plant and Pope Lake was identified in the Work Plan as a potential exposure area only if soil sample results indicated a potential for impacts to groundwater. A well was to be installed in the exposure area if soil results showed the potential for impact to groundwater. Review of soil sample results in the exposure area showed that all analytes were below the EPA Region 6 Soil SLC at a Hazard Quotient of 1, except for arsenic. Arsenic values ranged from 2 to 4 mg/kg in the soil samples, and are typical of naturally occurring concentrations in the Western United States. Given the low soil concentrations and that the depth to the groundwater table is approximately 200 feet in this area, leaching of metals and inorganics to groundwater is not expected to impact groundwater. Consequently, no monitoring well was installed in groundwater exposure area GW-12 and the exposure area has been removed from the RI.

The following subsections discuss analytical results for each aquifer within the two remaining exposure areas GW-11 and GW-13.

6.5.1 Groundwater Area 11 – Dry/Maintenance Area and Downgradient

Groundwater exposure area GW-11 encompasses a relatively small area in the vicinity of the Dry/Maintenance (Figure 6-2). The exposure area extends downgradient of the Dry/Maintenance. Two wells are within the exposure area and were sampled during the RI.

6.5.1.1 Upper Alluvial Aquifer

The Upper Alluvial Aquifer groundwater in exposure area GW-11 is monitored by MW-17, which is downgradient of the Dry/Maintenance (Figure 6-2). Table 6-33 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 16 samples were collected and analyzed for metals and inorganics analyses. One sample was analyzed for hexavalent chromium. Eight samples were analyzed for VOCs and SVOCs.

Values of pH ranged from 7.3 to 7.7 su, with a mean value of 7.5 su. Specific conductance values ranged from 87 to 768 uS/cm, with a mean value of 667 uS/cm.

All inorganic compounds were detected except carbonate, hydroxide, and nitrite. Of the detected analytes, bicarbonate, fluoride, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Sixteen dissolved metals were detected. Of the detected dissolved metals, barium, boron, calcium, magnesium, molybdenum, sodium, and vanadium were detected in greater than 90 percent of the samples. Detected total metals included those mentioned above in addition to arsenic and iron.

Hexavalent chromium was not detected. No VOCs or SVOCs were detected.

6.5.1.2 Basal Alluvial Aquifer

The Basal Alluvial Aquifer groundwater in exposure area GW-11 is monitored by MW-CH. This well is used for non-potable water supply at the Dry/Maintenance (Figure 6-2). Table 6-34 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of seven samples were collected and analyzed for metals and inorganics analyses. Three samples were analyzed for VOCs and SVOCs.

Values of pH ranged from 6.6 to 7.9 su, with a mean value of 7.4 su. Specific conductance values ranged from 454 to 526 uS/cm, with a mean value of 498 uS/cm.

Eleven inorganic compounds were detected. Of the detected analytes, bicarbonate, fluoride, sulfate, and alkalinity were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Sixteen dissolved metals were detected. Of the detected dissolved metals, barium, boron, calcium, copper, magnesium, vanadium, and zinc were detected in greater than 90 percent of the samples. Twelve total metals were detected. Of the detected total metals, barium, boron, calcium, copper, magnesium, vanadium, and zinc were detected in greater than 90 percent of the samples.

No VOCs or SVOCs were detected.

6.5.2 Groundwater Area 13 – Groundwater for Tailings Area

Groundwater exposure area GW-13 encompasses the entire tailings facility aside from the small area around the Dry/Maintenance (Figure 6-2). Monitoring wells, temporary piezometers, and drive points were sampled to characterize the groundwater quality within the Upper and Basal Alluvial aquifers and in the Basal Bedrock Aquifer. Seeps and springs issuing from the alluvium and bedrock were also sampled.

6.5.2.1 Upper Alluvial Aquifer

A total of 41 locations were sampled in the Upper Alluvial Aquifer. These locations included (Figure 6-2):

Monitoring Wells:

MW-A, MW-B, MW-14, MW-15, MW-2, MW-26, MW-28, MW-29, MW-4, MW-7A, MW-9A, LS-1, LS-2, LS-3, and Hunt's Pond Well

Extraction Wells:

EW-3, EW-4, EW-5A, EW-5B, EW-5C, EW-5D, EW-6, 002 Pumpback and 002 Pumpback Discharge (i.e., at the end of the pumpback pipeline)

Temporary Piezometers and Drive Points:

TPZ-5U, TPZ-6U, TPZ-7U, DP-1 through DP-14

The collective discharge from the 002 Outfall is discussed separately in the GW-13 Exposure Area section. The 002 Pumpback was included with the Upper Alluvial Aquifer locations because it represents only a portion of the discharge from the 002 Outfall and it is not entirely characteristic of the 002 Outfall chemistry. For this reason, the 002 Pumpback was kept separate from 002 Outfall and included in the Upper Alluvial Aquifer section.

Table 6-35 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 181 samples were collected and analyzed for inorganics, and 181 and 177 samples were analyzed for dissolved and total metals, respectively. Thirteen samples were analyzed for hexavalent chromium.

As a result of data validation, all total metals from the October/November 2002 samples from EW-5B, MW-15, MW-4, and MW-B were rejected. The June 2003 phosphorous value for MW-9A and April 2004 nitrate value for MW-A were rejected.

Values of pH ranged from 5 to 12.7 su, with a mean value of 7 su. The 12.7 pH value was from a grout-contaminated temporary piezometer. Specific conductance values ranged from 235 and 3,960 uS/cm, with a mean value of 1,300 uS/cm. A single flow value 85 gpm was measured from the 002 Pumpback.

All inorganic compounds were detected. Of the detected analytes, bicarbonate, chloride, fluoride, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except beryllium, mercury, silver, and thallium. Of the detected dissolved metals, barium, calcium, magnesium, molybdenum, and sodium were detected in greater than 90 percent of the samples. All total metals were detected except for antimony. Of the detected total metals, barium, calcium, magnesium, and sodium were detected in greater than 90 percent of the samples. Hexavalent chromium was detected in two of 13 samples at a maximum concentration of 0.0023 mg/L.

6.5.2.2 Basal Alluvial Aquifer

A total of five locations were sampled in the Basal Alluvial Aquifer. These locations included (Figure 6-2): monitoring wells MW-10, MW-7C, and MW24, extraction well EW-2, and temporary piezometer TPZ-7L.

Table 6-36 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 38 samples were collected and analyzed for metals and inorganics analyses. Three samples were analyzed for hexavalent chromium.

Values of pH ranged from 6.6 to 8.4 su, with a mean value of 7.4 su. Specific conductance values ranged from 26 to 3,190 uS/cm, with a mean value of 575 uS/cm.

All inorganic compounds were detected. Of the detected analytes, bicarbonate, sulfate, and alkalinity were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except antimony, beryllium, mercury, silver, and thallium. Of the detected dissolved metals, barium, calcium, magnesium, sodium, and vanadium were detected in greater than 90 percent of the samples. All total metals were detected except for antimony. Of the detected total metals, barium, calcium, magnesium, sodium, and vanadium were detected in greater than 90 percent of the samples.

6.5.2.3 Basal Bedrock Aquifer

A total of 11 locations were sampled in the Basal Bedrock Aquifer. These locations included (Figure 6-2) seven monitoring wells: MW-1, MW-11, MW-12, MW-13, MW-23, MW-25, and MW-27; one extraction well: EW-1; and three temporary piezometers: TPZ-1, TPZ-2, and TPZ-5B.

Table 6-37 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 76 samples were collected and analyzed for metals and inorganics analyses. Five samples were analyzed for hexavalent chromium.

Values of pH ranged from 6.5 to 8.3 su, with a mean value of 7.6 su. Specific conductance values ranged from 82 to 1,770 uS/cm, with a mean value of 665 uS/cm.

All inorganic compounds were detected except for carbonate and hydroxide. Of the detected analytes, bicarbonate, fluoride, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and a single, qualified value of cyanide was detected at 0.01 mg/L.

All dissolved metals were detected except beryllium, cadmium, mercury, silver, and thallium. Of the detected dissolved metals, barium, boron, calcium, magnesium, molybdenum, and vanadium were detected in greater than 90 percent of the samples. All total metals were detected except for cadmium, mercury, and thallium. Of the detected total metals, barium, calcium, magnesium, molybdenum, and vanadium were detected in greater than 90 percent of the samples. Hexavalent chromium was detected in one sample at a concentration of 0.0023 mg/L.

6.5.2.4 Upper Alluvial Seeps

Several seeps issue from the alluvium within exposure area GW-13. A total of 10 seep locations were sampled in the Upper Alluvial Aquifer. The seeps occur at three general areas (Figure 6-2):

Dam No. 1A:

West Seep and East Seep

South of Tailings:

Embargo Road Seep, Spring 7, Spring 8, and Spring 17

003 Drainage:

003 West Seep, 003 East Seep, 003 Central Seep, and 003 Seep Confluence.

Note that the location where Spring 17 is sampled is at the fish hatchery. However, the source area for Spring 17 is south of the tailings facility and the water is piped to the fish hatchery.

Table 6-38 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 38 samples were collected and analyzed for metals and inorganics analyses. One sample was additionally analyzed for VOCs, SVOCs, and total petroleum hydrocarbons.

Values of pH ranged from 6 to 7.8 su, with a mean value of 7.2 su. Specific conductance values ranged from 256 to 2,760 uS/cm, with a mean value of 1,700 uS/cm.

All inorganic compounds were detected except for carbonate and hydroxide. Of the detected analytes, bicarbonate, chloride, fluoride, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was detected in nine of the 38 samples corresponding to the 003 East Seep and 003 Central Seep locations. The maximum concentration of cyanide was 0.019 mg/L.

All dissolved metals were detected except antimony, cadmium, mercury, silver, and thallium. Of the detected dissolved metals, barium, boron, calcium, magnesium, and sodium were detected in greater than 90 percent of the samples. All total metals were detected except for the same metals previously identified for dissolved metals. Of the detected total metals, barium, boron, calcium, magnesium, and sodium were detected in greater than 90 percent of the samples.

The sample that was analyzed for organic compounds did not have any detections of VOCs, SVOCs, and total petroleum hydrocarbons inclusive of Diesel Fuel No. 2, Motor oil, and Gasoline.

6.5.2.5 Basal Bedrock Seeps

Several seeps issue from the bedrock within exposure area GW-13. A total of eight seep locations were sampled in the Basal Bedrock Aquifer. Seeps that issue from the bedrock (volcanics) primarily occur south of Dam No. 4 (Figure 6-2) and include: Spring 9, Spring 9A, Spring 10, Spring 12, Spring 12A, Spring 14-T, Spring 15-T, and Spring 18.

Table 6-39 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 52 samples were collected and analyzed for metals and inorganics analyses. Two samples were additionally analyzed for hexavalent chromium.

Values of pH ranged from 5.9 to 8.3 su, with a mean value of 7.4 su. Specific conductance values ranged from 46 to 2,590 uS/cm, with a mean value of 623 uS/cm.

All inorganic compounds were detected except for carbonate and hydroxide. Of the detected analytes, bicarbonate, chloride, fluoride, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

All dissolved metals were detected except antimony, beryllium, cadmium, mercury, nickel, and thallium. Of the detected dissolved metals, barium, boron, calcium, magnesium, molybdenum, potassium, and sodium were detected in greater than 90 percent of the samples. All total metals were detected except for antimony, cadmium, silver, and thallium. Of the detected total metals, barium, boron, calcium, magnesium, molybdenum, potassium, and sodium were detected in greater than 90 percent of the samples. Hexavalent chromium was not detected.

6.5.2.6 Outfall 002 Discharge

Groundwater within exposure area GW-13 is discharged to Red River at the 002 Outfall. The 002 Outfall has been historically sampled at the manhole (well) near the southern property boundary before the water is piped off site and to the river. Sampling of the 002 Outfall water during the RI occurred at the historically sampled manhole location, as well as at the end of the pipe near the river (Figure 6-2). Samples collected during the RI were not part of the NPDES Compliance Sampling.

Table 6-40 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of 12 samples were collected and analyzed for metals and inorganics analyses. One sample was additionally analyzed for hexavalent chromium and uranium.

Values of pH ranged from 6.4 to 7.7 su, with a mean value of 7.1 su. Specific conductance values ranged from 1,550 to 3,400 uS/cm, with a mean value of 1,790 uS/cm.

All inorganic compounds were detected except for carbonate, hydroxide, and nitrite. Of the detected analytes, bicarbonate, chloride, fluoride, phosphorous, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Sixteen dissolved metals were detected. Of the detected dissolved metals, barium, calcium, magnesium, manganese, molybdenum, potassium, sodium, and vanadium were detected in greater than 90 percent of the samples. Twenty total metals were detected. Of the detected total metals, barium, calcium, magnesium, manganese, molybdenum, potassium, sodium, and vanadium were detected in greater than 90 percent of the samples. Hexavalent chromium was not detected and uranium was detected at 0.037 mg/L in the one sample that was analyzed.

6.5.2.7 Residential Tap Water South of Tailings Facility

Upper Alluvial Aquifer groundwater south of the tailings facility was sampled at three residential taps. The source of the water is from a well at each home. The three sample locations are identified as PR-3, PR-4, and PR-5 (Figure 6-2). The samples were collected as part of the Tailings Spill Investigation in May 2004.

Table 6-41 contains summary statistics for analyte values and comparisons to Human Health SLC. A total of five samples were collected and analyzed for metals and inorganics analyses, of which three samples were from PR-3.

Values of pH ranged from 6.3 to 6.7 su, with a mean of 6.5 su. Specific conductance values ranged from 299 and 466 uS/cm, with a mean of 411 uS/cm.

Ten inorganic compounds were detected. Of the detected analytes, bicarbonate, chloride, fluoride, nitrate, sulfate, alkalinity, and total dissolved solids were detected in greater than 90 percent of the samples. Each sample was additionally tested for cyanide (total) and cyanide was not detected.

Fourteen dissolved metals were detected. Of the detected dissolved metals, barium, calcium, magnesium, molybdenum, potassium, and zinc were detected in greater than 90 percent of the samples. Twelve total metals were detected. Of the detected total metals, barium, calcium, magnesium, and zinc were detected in greater than 90 percent of the samples.

6.6 SUMMARY

The following summarizes detected analytes in groundwater at reference areas, mine site, and tailing facility. Analytes exceeding human health SLC are also discussed. Comparisons between analytes that exceeded SLC for the mine site/tailings facility groundwater and reference groundwater are also presented. The comparisons are made for those analytes that exceed SLC and are detected in 50 percent or greater of the samples that were analyzed. Comparisons are made based on water-bearing unit or source (i.e., alluvium or bedrock) and between groundwater exposure areas and reference areas.

6.6.1 Off-Mine Site Reference

Of the 16 inorganic analytes, 12 were detected in alluvial and bedrock groundwater, and 13 were detected in colluvial groundwater. Of the 25 metals (total) that were analyzed, the alluvial groundwater had the fewest detected metals at 18, while 22 metal were detected in the colluvial groundwater, and 21 metals were detected in the bedrock groundwater.

The following lists the inorganic and metals that exceeded SLC for each water-bearing unit or source. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC. Colluvial groundwater had the greatest number of inorganic and metal analytes that exceeded SLC. Exceedance of fluoride, iron, and manganese SLC was common for the alluvial, colluvial, and bedrock groundwater. Exceedance of the manganese SLC was common to all groundwaters except for the Red River Tap water. The Red River Tap water did not exceed any SLC.

Off-Mine Site Reference Exceedance of Human Health SLC	
Water-Bearing Unit	**Metal/Inorganic Analytes**
Alluvium	F, Al, Sb, Fe, Mn
Colluvium	F, SO_4, Al, Sb, As, Cd, Cr, Fe, Pb, Mn, Ni, Zn
Bedrock	Cl, F, SO_4, Be, Fe, Mn
Alluvial Seeps	Mn
Red River Tap Water	None

6.6.2 On-Mine Site Reference

Between 12 and 14 of the 16 inorganic analytes were detected in alluvial, colluvial, and bedrock groundwater. Of the 25 metals (total) that were analyzed, the alluvial groundwater had the fewest detected metals at 11, while 24 metals were detected in the colluvial groundwater, and 18 metals were detected in the bedrock groundwater. Explosive compounds were not detected in alluvial groundwater and hexavalent chromium was not detected in alluvial and bedrock groundwater.

The following lists the inorganics and metals that exceeded SLC for each water-bearing unit. Colluvial groundwater had the greatest number of inorganic and metal analytes that exceeded SLC. Exceedance of the fluoride and manganese SLC was common for the alluvial, colluvial and bedrock groundwater. For each groundwater, 50 percent or greater of the manganese detections exceeded the SLC.

On-Mine Site Reference Exceedance of Human Health SLC	
Water-Bearing Unit	**Metal/Inorganic Analytes**
Alluvium	F, Mn
Colluvium	F, Be, Fe, Mn, Pb
Bedrock	F, Mn

6.6.3 Mine Site

The following sections summarize detected metals and inorganics, and identify analytes exceeding Human Health SLC. Analytes exceeding SLC are divided into water-bearing units within each of the six groundwater exposure areas at the mine site. Graphs were prepared that compare mean concentrations of mine site analytes exceeding SLC in 50 percent or greater of the detected values, to the same analyte exceedances for the off- and on-mine site reference areas. A white bar on the graphs indicates the 50 percent or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting

limit, whichever was greater, was plotted. Comparisons were made for alluvial, colluvial, and bedrock groundwater and alluvial seep/springs.

Alluvial Groundwater

Alluvial groundwater was sampled in four exposure areas: GW-1, GW-4, GW-5, and GW-6; alluvial groundwater was not present in GW-2 and GW-3. Within the four exposure areas, between 11 and 15 of the 16 inorganic analytes were detected in alluvial groundwater. Exposure area GW-4 had the greatest number of detected inorganic analytes and GW-1 had the least. Between 18 and 25 metals (total) were detected in the four exposure areas. Exposure area GW-4 had the greatest number of metals (total) and GW-1 had the least.

Alluvial groundwater in GW-4, GW-5, and GW-6 was analyzed for explosive compounds and none were detected. Exposure area GW-5 had no detections of VOCs and GW-6 had three detected VOCs, but the detected values were below Human Health SLC. Exposure area GW-5 and GW-6 had no detections of SVOCs.

The following table lists the inorganics and metals that exceeded SLC for alluvial groundwater. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC. Exposure areas GW-4 and GW-5 had the greatest number of analytes that exceeded SLC. Fluoride and manganese exceeded SLC in all exposure areas where alluvial groundwater was present, and the two analytes typically exceeded SLC more than 50 percent of the time. Exposure area GW-6 had the fewest exceedances of SLC and none of the detected analytes exceeded SLC more than 50 percent of the time.

Mine Site Alluvial Groundwater Exceedance of Human Health SLC

Groundwater Exposure Area	Metal/Inorganic Analytes
GW-1	F, Al, As, Cd, Fe, Mn
GW-2	No alluvial groundwater present
GW-3	No alluvial groundwater present
GW-4	F, SO_4, Al, Sb, As, Be, Cd, Fe, Pb, Mn, Ni, Th
GW-5	Cl, F, SO_4, Al, Sb, As, Cd, Cr, Cu, Pb, Mn, Ni
GW-6	F, SO_4, Mn

Graphical comparisons were made between alluvial groundwater at the mine site exposure areas and the off- and on-mine site reference areas for individual analytes that were detected greater than 50 percent of the time. The analytes that meet these criteria in at least one exposure or reference area include:

- Fluoride
- Aluminum

- Manganese

Comparisons were made using total concentrations for inorganics and metals and the computed mean concentrations.

Figure 6-4 shows mean concentrations for fluoride at the six mine site exposure areas and the two reference areas. Mean fluoride concentrations at GW-1, GW-4, GW-5, and on-mine site reference area were greater than the SLC and greater than the mean concentration at the off-mine site reference area.

Figure 6-5 shows mean concentrations for aluminum (total). Mean aluminum concentration exceeded the SLC only at exposure area GW-1. Exposure areas GW-4, GW-5, GW-6, and on-mine site reference areas had mean concentrations below the SLC.

Figure 6-6 shows mean concentrations for manganese (total). Mean manganese concentrations at GW-1, GW-4, GW-5, and the off-mine site reference were greater than the SLC and greater than the mean concentration at the on-mine site reference area. The mean manganese concentrations at the off- and on-mine site reference areas were equal to or slightly greater than the SLC.

Colluvial Groundwater

Colluvial groundwater was sampled in four exposure areas: GW-1, GW-3, GW-4, and GW-5. Colluvial monitoring wells were not present in GW-2 and colluvial groundwater was not present in GW-6. Within the four exposure areas, between 11 and 14 of the 16 inorganic analytes were detected in colluvial groundwater. Exposure area GW-5 had the greatest number of detected inorganic analytes and GW-3 had the least. Between 20 and 24 metals (total) were detected. Exposure area GW-5 had the greatest number of metals (total) and GW-3 had the least.

Colluvial groundwater in GW-3, GW-4, and GW-5 was analyzed for explosive compounds, VOCs, and SVOCs. None of these compounds were detected in GW-3 and GW-4. In GW-5, one explosive compound, and four VOCs were detected, but none were greater than Human Health SLC. No SVOCs were detected in these exposure areas. Colluvial groundwater in exposure area GW-5 was additionally analyzed for Motor Oil and Diesel Fuel No. 2 and these compounds were not detected.

The following table lists the inorganics and metals that exceeded SLC for alluvial groundwater. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC. Exposure area GW-4 had the greatest number of analytes that exceeded SLC, followed by GW-5 and GW-1. Only sulfate exceeded SLC in GW-3. Fluoride, sulfate, manganese, and to a lesser extent aluminum, exceeded SLC more than 50 percent of the time in exposure areas GW-1, GW-4, and GW-5.

Mine Site Colluvial Groundwater Exceedance of Human Health SLC	
Groundwater Exposure Area	**Metal/Inorganic Analytes**
GW-1	F, SO_4, Al, As, Be, Cd, Cr, Fe, Mn, Ni, Zn
GW-2	No colluvial groundwater sampled
GW-3	SO4
GW-4	F, NO_3, SO_4, Al, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Ni, Zn
GW-5	F, SO_4, Al, Sb, As, Cd, Cr, Co, Cu, Fe, Pb, Mn, Ni
GW-6	No colluvial groundwater

Graphical comparisons were made between colluvial groundwater at mine site exposure areas and the off- and on-mine site reference areas for individual analytes that were detected greater than 50 percent of the time. Analytes that meet these criteria in at least one exposure or reference area include:

- Fluoride
- Sulfate
- Aluminum
- Cadmium
- Copper
- Iron
- Manganese
- Nickel

Comparisons were made using total concentrations for inorganics and metals and the computed mean concentrations.

Figure 6-7 shows mean concentrations for fluoride at the six mine site exposure areas and the two reference areas. Mean fluoride concentrations at GW-1, GW-4, and GW-5 were greater than the SLC and greater than the mean concentration at the off- and on-mine site reference areas. Exposure area GW-4 had the highest mean fluoride concentration. The mean fluoride concentrations at the off- and on-mine site reference areas also exceeded SLC.

Mean concentrations of sulfate are shown on Figure 6-8. Mean sulfate concentrations exceeded SLC at GW-1, GW-4 and GW-5. Mean sulfate concentrations at the off-mine site reference area exceeded SLC, but the on-mine site reference area did not.

Figure 6-9 shows mean concentrations for aluminum (total). Mean aluminum concentrations at GW-4 and GW-5 were greater than the SLC and greater than the mean concentration at the off-mine site reference area. The mean aluminum concentration at the off-mine site reference area also exceeded SLC, but the on-mine site reference area did not.

Mean concentrations of cadmium (total) are shown on Figure 6-10. Mean cadmium concentrations exceeded SLC at GW-1 and GW-4.

Mean concentrations of copper (total) are shown on Figure 6-11. Mean copper concentrations exceeded SLC at GW-4 and GW-5.

Figure 6-12 shows mean concentrations for iron (total). Mean iron concentrations at GW-1 and GW-5 were greater than the SLC. The mean iron concentration at the off- and on-mine site reference areas also exceeded SLC, and the mean concentrations at the two reference areas were greater than the mean concentration at GW-1, but not GW-5.

Figure 6-13 shows mean concentrations for manganese (total). Mean manganese concentrations at GW-1, GW-4, and GW-5 were greater than the SLC. The mean manganese concentrations at the off- and on-mine site reference areas also exceeded SLC. The mean manganese concentration at the on-mine site reference area was approximately equal to the mean concentration at GW-5.

Mean concentrations of nickel (total) are shown on Figure 6-14. Mean nickel concentrations exceeded SLC at GW-4 and GW-5.

Bedrock Groundwater

Bedrock groundwater was sampled in five exposure areas: GW-1, GW-3, GW-4, GW-5, and GW-6. Bedrock monitoring wells were not present in GW-2. Within the five exposure areas, between seven and 15 of the 16 inorganic analytes were detected in bedrock groundwater. Exposure area GW-4 had the greatest number of detected inorganic analytes and GW-6 had the least. Between 10 and 24 metals (total) were detected. Exposure area GW-4 and GW-5 had the greatest number of metals (total) and GW-6 had the least.

Bedrock groundwater in GW-3, GW-4, GW-5, and GW-6 was analyzed for explosive compounds, VOCs, and SVOCs. Explosive compounds were not detected in each of the exposure areas except for GW-4, where three compounds were detected. One of the three explosive compounds (2,4,6-trinitrotoluene) was detected at 0.0089 mg/L and exceeded the SLC of 0.0022 mg/L. Up to three VOCs were detected in the four exposure areas. Concentrations of VOCs were low and below SLC. No SVOCs were detected in the four exposure areas. Dioxins (aroclors) were analyzed in one sample in GW-4 and none were detected.

The following table lists the inorganics and metals that exceeded SLC for bedrock groundwater. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC. Exposure area GW-4 had the greatest number of analytes that exceeded SLC, followed by GW-5. Exposure area GW-6 had the fewest analytes that exceeded SLC. Fluoride, sulfate, manganese, iron, and lead exceeded SLC more than 50 percent of the time in two or more exposure areas. Aluminum exceeded SLC more than 50 percent of the time in only GW-1.

Mine Site Bedrock Groundwater Exceedance of Human Health SLC	
Groundwater Exposure Area	**Metal/Inorganic Analytes**
GW-1	F, SO4, Al As, Cd, Cr, Fe, Pb, Mn, Ni, Zn
GW-2	No bedrock groundwater sampled
GW-3	F, SO4, Al, As, Be, Cd, Cu, Fe, Pb, Mn, Mo, Zn
GW-4	Cl, F, NO3, NO2, SO4, Al, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Zn
GW-5	F, SO4, Al, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Ni, V
GW-6	F, Mn

Graphical comparisons were made between bedrock groundwater mine site exposure areas and the off- and on-mine site reference areas for individual analytes that were detected greater than 50 percent of the time. Analytes that meet these criteria in at least one exposure or reference area include:

- Fluoride
- Sulfate
- Aluminum
- Beryllium
- Iron
- Lead
- Manganese

Comparisons were made using total concentrations for inorganics and metals and the computed mean concentrations.

Figure 6-15 shows bedrock groundwater mean concentrations for fluoride at the six mine site exposure areas and the two reference areas. Mean fluoride concentrations at GW-1, GW-3, GW-4, and GW-5 were greater than the SLC. The mean fluoride concentrations at the off-mine site reference area also exceeded SLC.

Mean sulfate concentrations in bedrock groundwater are shown on Figure 6-16. Mean sulfate concentrations in exposure areas GW-3 and GW-5 exceeded SLC, whereas, mean sulfate concentrations were less than SLC at GW-1, GW-4, and GW-6. Bedrock groundwater at the off-mine site reference area also had a mean sulfate concentration that exceeded SLC.

Figure 6-17 shows mean concentrations for aluminum (total) at the six mine site exposure areas and the two reference areas. The mean aluminum concentration at only GW-1 was greater than the SLC.

Figure 6-18 shows mean concentrations for beryllium (total) at the six mine site exposure areas and the two reference areas. The mean beryllium concentration only at GW-3 exceeded the SLC.

Mean iron (total) concentrations in bedrock groundwater are shown on Figure 6-19. Mean iron concentrations in exposure areas GW-1 and GW-5 exceeded SLC. Bedrock groundwater at the off-mine site reference area also had a mean iron concentration that exceeded SLC.

Figure 6-20 shows mean concentrations for lead (total) at the six mine site exposure areas and the two reference areas. The mean lead concentrations at GW-1 and GW-3 exceeded the SLC.

Mean manganese (total) concentrations in bedrock groundwater are shown on Figure 6-21. Mean manganese concentrations at each exposure area equaled or exceeded SLC. Bedrock groundwater at both the off- and on-mine site reference areas also had mean manganese concentrations that exceeded SLC.

Seeps/Springs

Seeps and/or springs occur in all exposure areas except for GW-6. Exposure areas GW-1, GW-4, and GW-5 have alluvial seeps that were sampled and exposure areas GW-2, GW-3, and GW-5 have colluvial seeps. In general, the colluvial seeps have more detected inorganic and metal analytes than alluvial seeps.

The following table lists the inorganics and metals that exceeded SLC for seeps. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC. Exposure area GW-3 had the greatest number of analytes that exceeded SLC, followed closely by GW-2 and then GW-1. Exposure areas GW-4 and GW-5 had the fewest analytes that exceeded SLC. Fluoride and manganese exceeded SLC in more than 50 percent of the samples in all exposure areas where seeps were sampled.

Mine Site Seeps and Springs
Exceedance of Human Health SLC

Groundwater Exposure Area	Source of Seep/Spring	Metal/Inorganic Analytes
GW-1	Alluvium	F, SO_4, Al, Sb, As, Cd, Cr, Cu, Fe, Mn, Ni
GW-2	Colluvium	F, SO_4, Al, As, Be, Cd, Cr, Co, Cu, Fe, Mn, Ni, Zn
GW-3	Colluvium	Cl, F, SO_4, Al, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Ni, Se, Th, Zn
GW-4	Alluvium	F, Cd, Mn
GW-5	Alluvium	F, As, Mn
	Colluvium	F, Mn
GW-6	No seeps/springs	No seeps/springs

Graphical comparisons were made between seepage at the mine site and reference areas. Seepage from colluvial materials at reference areas did not occur or was not sampled. Therefore, comparisons were made only for mine site and reference alluvial seepage, and for individual analytes that were detected greater than 50 percent of the time. Analytes that meet these criteria in at least one exposure or reference area include:

- Fluoride
- Aluminum
- Iron
- Manganese

Comparisons were made using total concentrations for inorganics and metals and the computed mean concentrations. Alluvial seepage was sampled in exposure areas GW-1, GW-4, and GW-5, and the off-mine site reference area. Exposure areas GW-2, GW-3, and GW-6, and the on-mine site reference area were not part of the comparison because no alluvial seepage was present.

Figure 6-22 shows mean concentrations for fluoride in alluvial seepage at the mine site exposure areas and reference areas. Mean fluoride concentrations at GW-1, GW-4, and GW-5 were greater than the SLC.

Mean aluminum (total) concentrations in alluvial seepage are shown on Figure 6-23. The mean aluminum concentration at exposure area GW-1 exceeded SLC.

Mean iron (total) concentrations in alluvial seepage are shown on Figure 6-24. The mean iron concentration at exposure area GW-1 exceeded SLC.

Figure 6-25 shows mean concentrations for manganese (total) in alluvial seepage at the mine site exposure areas and reference areas. Mean manganese concentrations at GW-1 and GW-4 were greater than the SLC.

6.6.4 Tailings Facility Reference

Upper Alluvial Aquifer

Of the 16 inorganic analytes tested, 14 were detected in reference groundwater in the Upper Alluvial Aquifer. Of the 25 metals (total) that were analyzed, 17 were detected. None of the analytes exceeded the Human Health SLC.

Basal Alluvial Aquifer

All but one of the 16 inorganic analytes was detected in the Basal Alluvial Aquifer. Of the 25 metals (total) that were analyzed, 18 were detected. None of the analytes exceeded the Human Health SLC.

Basal Bedrock Aquifer

Of the 16 inorganic analytes tested, 13 were detected in reference groundwater in the Basal Bedrock Aquifer. Of the 25 metals (total) that were analyzed, 18 were detected. None of the analytes exceeded the Human Health SLC.

Questa Residential Tap Water

Of the 16 inorganic analytes tested, seven were detected in reference residential tap water. The residential tap water had the fewest detected inorganic analytes of all tailings facility reference groundwater. Of the 25 metals (total) that were analyzed, 13 were detected. None of the analytes exceeded the Human Health SLC.

Cater Ranch

Eight of the 16 inorganic analytes were detected in reference groundwater at Cater Ranch. Of the 25 metals (total) that were analyzed, 10 were detected. Groundwater at Cater Ranch had the fewest detected metals (total) of all tailings facility reference groundwater. None of the analytes exceeded the Human Health SLC.

6.6.5 Tailings Facility

The following summarizes detected inorganic and metal analytes in groundwater at exposure areas GW-1 and GW-13, including Outfall 002. Mean concentrations are presented for analytes having greater than 50 percent of detections exceeding the Human Health SLC. Comparisons of detected analytes greater than Human Health SLC are made between exposure and reference areas.

Upper Alluvial Aquifer

Between 13 and 16 inorganic analytes were detected in the Upper Alluvial Aquifer groundwater. Of the 25 metals (total) that were analyzed, between 18 and 24 were detected. The number of detected inorganics and metals (total) were greater in exposure area GW-13 than in GW-11. In exposure area GW-11, no VOCs or SVOCs were detected; VOCs and SVOCs were not analyzed in exposure area GW-13.

The following lists the inorganics and metals that exceeded Human Health SLC for the Upper Alluvial Aquifer. Underlined analytes in the table had 50 percent or greater of the detections that exceeded the SLC.

Tailing Facility Upper Alluvial Aquifer Exceedance of Human Health SLC	
Groundwater Exposure Area	**Metal (total)/Inorganic Analytes**
GW-11	<u>Mo</u>
GW-13	Al, As, NO_3, Mn, Mo, Cr, Fe, Pb, V

*Note: In GW-13, aluminum, arsenic, chromium, iron, lead, and vanadium may be considered as outliers because they were detected in only a few samples that had high turbidity.

Exposure area GW-13 had the greatest number of analytes that exceeded SLC, but none of the exceedances occurred in greater than 50 percent of the samples. Many of the analytes that exceeded SLC did so in only a few samples (i.e., low percent exceedance of SLC), most of which were associated with the samples from drive points south of the tailings facility. These rare exceedances are most likely due to high turbidity of the sample that affects the particulate, or total, fraction of the sample analytes. Support for this is evident in the low number of dissolved analytes (from filtered samples) that exceeded SLC, which was limited to only two analytes: manganese and molybdenum. Consequently, the following metal analytes in GW-13 that exceeded SLC may be considered as outliers: aluminum, arsenic, chromium, iron, lead, and vanadium. Manganese and molybdenum, on the other hand, had exceedances of SLC in samples of 19 and 27 percent, respectively. The higher percentage of exceedances for these two analytes suggests that they are not outliers and may be the only metals to actually exceed SLC.

In exposure area GW-11, the only analyte exceeding SLC was molybdenum. Molybdenum exceeded SLC in greater than 50 percent of the samples where molybdenum was detected. The mean concentration was 0.77 mg/L.

Groundwater in the Upper Alluvial Aquifer at the tailings facility had two metals (manganese and molybdenum) and one inorganic (nitrate) that exceeded SLC, taking into account that several of the metals that exceeded SLC may be outliers. In comparison, reference groundwater in the Upper Alluvial Aquifer had no metals or inorganics that exceeded SLC.

Basal Alluvial Aquifer

Between 11 and 16 inorganic analytes were detected in the Basal Alluvial Aquifer groundwater. Of the 25 metals (total) that were analyzed, between 12 and 24 were detected. The number of detected inorganics and metals (total) were greater in exposure area GW-13 than in GW-11. In exposure area GW-11, no VOCs or SVOCs were detected. VOCs and SVOCs were not analyzed in exposure area GW-13.

The following lists the inorganics and metals that exceeded Human Health SLC for the Basal Alluvial Aquifer.

Tailings Facility Basal Alluvial Aquifer Exceedance of Human Health SLC	
Groundwater Exposure Area	**Metal (total)/Inorganic Analytes**
GW-11	Pb
GW-13	Al, Cr, Fe, Pb, Mn, V

None of the analytes listed above exceeded SLC in greater than 50 percent of the samples.

In exposure area GW-11, the only analyte exceeding SLC was lead. The exceedance of lead occurred in one sample from MW-CH. The lead (total) concentration of 0.0154 mg/L slightly exceeded the SLC of 0.015 mg/L. Compared to the other lead values from MW-CH, the 0.0154 mg/L is uncharacteristically high and may be considered to be an outlier.

Exposure area GW-13 had the greatest number of analytes that exceeded SLC. Many of the analytes that exceeded SLC did so in only a few samples (i.e., low percent exceedance of SLC). These rare exceedances may be associated with turbidity of the sample that affects the particulate, or total, fraction of the sample analytes. Support for this is that no dissolved analytes (from filtered samples) exceeded SLC. Consequently, the metal analytes in GW-13 that exceeded SLC may be considered as outliers.

Taking into account that the metal analytes exceeding SLC in the Basal Alluvial Aquifer at the tailings facility may be outliers, potentially no metals or inorganics exceeded SLC. In comparison, reference groundwater in the Basal Alluvial Aquifer also had no metals or inorganics that exceeded SLC.

Basal Bedrock Aquifer

Basal bedrock groundwater occurs only in exposure area GW-13. Fourteen of the 16 inorganic analytes were detected in the Basal Bedrock Aquifer groundwater. Of the 25 metals (total) that were analyzed, 22 were detected.

No inorganic analytes and three metals (total) exceeded Human Health SLC. The three metals included iron, manganese, and molybdenum. None of the three metals exceeded SLC in greater than 50 percent of the samples. Only one sample in one well exceeded the iron SLC. That iron concentration was an order of magnitude greater than the other samples for the well, suggesting that the high iron concentration is an outlier. Consequently, the analytes exceeding SLC may only include manganese and molybdenum. In comparison, reference groundwater in the Basal Bedrock Aquifer had no metals or inorganics that exceeded SLC.

Upper Alluvial and Basal Bedrock Aquifer Seepage

Seepage from the Upper Alluvial and Basal Bedrock aquifers occurs only in exposure area GW-13. Fourteen of the 16 inorganic analytes were detected in the seepage. Of the 25 metals (total) that were analyzed, 20 were detected in the seepage from the Upper Alluvial Aquifer and 21 were detected in seepage from the Basal Bedrock Aquifer. A single sample was analyzed for organic compounds including: Motor Oil, Diesel Fuel No. 2, gasoline, VOCs, and SVOCs. No organic compounds were detected.

One inorganic (sulfate) analyte and one metal (total molybdenum) exceeded Human Health SLC in seepage from the Upper Alluvial Aquifer. Detections of the two analytes that exceeded SLC occurred in less than 50 percent of the samples. The mean concentrations for the two analytes were: sulfate 853 mg/L and molybdenum 0.12 mg/L. No Human Health SLC were exceeded in seepage from the Basal Bedrock Aquifer

Reference seepage did not occur or was not sampled; therefore, comparison of tailings facility seepage to reference seepage could not be made.

002 Outfall Discharge

Outfall 002 occurs in exposure area GW-13. Thirteen of the 16 inorganic analytes were detected in the discharge water. Of the 25 metals (total) that were analyzed, 20 were detected. One analyte was detected at concentrations that exceeded Human Health SLC, namely molybdenum (total). Exceedances of the molybdenum SLC occurred in greater than 50 percent of the samples. The mean molybdenum concentration was 1.2 mg/L.

SECTION 6

GROUNDWATER

TABLES

Table 6-1
Groundwater-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	14	NA	No SLC					0.42	7.9	4.6	5.1
Eh	T	millivolts	14	NA	No SLC					52.1	453	288	298
pH	T	SU	14	NA	No SLC					3.7	6.8	5.2	5.2
Specific Conductance	T	uS/cm	14	NA	No SLC					254	1620	782	587
Temperature	T	Celsius	14	NA	No SLC					5.8	17.7	9.1	8
Turbidity	T	NTU	14	NA	No SLC					0	22.2	4.6	2.4
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	13	46.2	No SLC			1	1.1	ND	62.8		
Carbonate (as CaCO3)	T	mg/L	13	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	13	69.2	HH DW (HQ=1)	250	0	3	12.7	ND	6.7	4.3	3.5
Cyanide	T	mg/L	13	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	14	100	HH DW (HQ=1)	2.2	50			0.27	4.5	1.9	1.5
Hardness	T	mg/L	14	100	No SLC					120	719	360	283
Hydroxide (as CaCO3)	T	mg/L	13	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	13	30.8	HH DW (HQ=1)	10	0	0.2	1	ND	0.33		
Nitrite	T	mg/L	13	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	13	100	No SLC					4	7.1	5.5	5.2
Phosphate, Ortho As P	T	mg/L	13	30.8	No SLC			0.01	0.032	ND	0.23		
Phosphorus	T	mg/L	11	54.5	No SLC			0.01	0.01	ND	0.046	0.021	0.011
Specific Conductance	T	umhos/cm	13	100	No SLC					225	1560	755	736
Sulfate	T	mg/L	14	100	HH DW (HQ=1)	1500	0			68.2	990	418	296
Total Alkalinity	T	mg/L	13	46.2	No SLC			1	1.1	ND	62.8		
Total Dissolved Solids	T	mg/L	14	100	No SLC					144	1890	768	666
Total Kjeldahl Nitrogen	T	mg/L	11	9.1	No SLC			0.24	2.3	ND	2.8		
Total Organic Carbon	T	mg/L	13	38.5	No SLC			1	1.6	ND	1.7		
Total Suspended Solids	T	mg/L	14	0	No SLC			0.5	2.2	ND	ND		
Hardness	D	mg/L	14	100	No SLC					119	734	354	283
Isotopes													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-1
Groundwater-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Delta D	T	per mil	1	100	No SLC					-98.6	-98.6	-98.6	-98.6
Delta O-18	T	per mil	1	100	No SLC					-13.6	-13.6	-13.6	-13.6
Metals													
Aluminum	T	mg/L	14	42.9	HH DW (HQ=1)	37	50	0.18	16.4	ND	39		
Antimony	T	mg/L	14	7.1	HH DW (HQ=1)	0.015	100	0.0005	0.082	ND	0.15		
Arsenic	T	mg/L	14	0	HH DW (HQ=1)	0.01	0	0.0002	0.045	ND	ND		
Barium	T	mg/L	14	57.1	HH DW (HQ=1)	2.6	0	0.049	0.12	ND	0.023	0.03	0.023
Beryllium	T	mg/L	14	21.4	HH DW (HQ=1)	0.073	0	0.0002	0.019	ND	0.008		
Boron	T	mg/L	14	21.4	HH DW (HQ=1)	3.3	0	0.0084	0.084	ND	0.0059		
Cadmium	T	mg/L	14	7.1	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	0.0076		
Calcium	T	mg/L	14	100	No SLC					35.7	187	98	79.8
Chromium	T	mg/L	14	0	HH DW (HQ=1)	0.1	0	0.0006	0.57	ND	ND		
Cobalt	T	mg/L	14	7.1	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	0.11		
Copper	T	mg/L	14	28.6	HH DW (HQ=1)	1.4	0	0.0015	0.35	ND	0.056		
Iron	T	mg/L	14	28.6	HH DW (HQ=1)	11	100	0.19	3.7	ND	34.9		
Lead	T	mg/L	14	7.1	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.00021		
Magnesium	T	mg/L	14	100	No SLC					7.5	61.4	27.9	20.3
Manganese	T	mg/L	14	50	HH DW (HQ=1)	1.7	100	0.013	0.019	ND	6.2	2.2	1.1
Mercury	T	mg/L	14	0	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	ND		
Molybdenum	T	mg/L	14	0	HH DW (HQ=1)	0.18	0	0.0014	0.024	ND	ND		
Nickel	T	mg/L	14	28.6	HH DW (HQ=1)	0.73	0	0.002	1.7	ND	0.31		
Potassium	T	mg/L	14	35.7	No SLC			1.1	110	ND	1.4		
Selenium	T	mg/L	14	14.3	HH DW (HQ=1)	0.18	0	0.0004	0.036	ND	0.0043		
Silver	T	mg/L	14	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	14	14.3	No SLC			4.9	99.1	ND	13.2		
Thallium	T	mg/L	14	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0017	ND	ND		
Vanadium	T	mg/L	14	0	HH DW (HQ=1)	0.037	0	0.0002	0.0049	ND	ND		
Zinc	T	mg/L	14	71.4	HH DW (HQ=1)	11	0	0.04	1	ND	2.2	0.77	0.3
Aluminum	D	mg/L	14	42.9	HH DW (HQ=1)	37	33.3	0.18	16.1	ND	39.7		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-1
Groundwater-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Antimony	D	mg/L	14	0	HH DW (HQ=1)	0.015	0	0.001	0.082	ND	ND		
Arsenic	D	mg/L	14	0	HH DW (HQ=1)	0.01	0	0.0002	0.062	ND	ND		
Barium	D	mg/L	14	57.1	HH DW (HQ=1)	2.6	0	0.049	0.12	ND	0.024	0.03	0.023
Beryllium	D	mg/L	14	21.4	HH DW (HQ=1)	0.073	0	0.0002	0.013	ND	0.0068		
Boron	D	mg/L	14	14.3	HH DW (HQ=1)	3.3	0	0.0036	0.084	ND	0.0052		
Cadmium	D	mg/L	14	7.1	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	0.01		
Calcium	D	mg/L	14	100	No SLC					35.2	191	96.3	77.8
Chromium	D	mg/L	14	0	HH DW (HQ=1)	0.1	0	0.0006	0.57	ND	ND		
Cobalt	D	mg/L	14	7.1	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	0.11		
Copper	D	mg/L	14	28.6	HH DW (HQ=1)	1.4	0	0.0014	0.35	ND	0.057		
Iron	D	mg/L	14	28.6	HH DW (HQ=1)	11	100	0.19	3.7	ND	33.7		
Lead	D	mg/L	14	0	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	ND		
Magnesium	D	mg/L	14	100	No SLC					7.4	62.4	27.4	20.1
Manganese	D	mg/L	14	50	HH DW (HQ=1)	1.7	100	0.013	0.019	ND	6.6	2.2	1.1
Mercury	D	mg/L	14	0	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	ND		
Molybdenum	D	mg/L	14	0	HH DW (HQ=1)	0.18	0	0.0014	0.024	ND	ND		
Nickel	D	mg/L	14	21.4	HH DW (HQ=1)	0.73	0	0.002	1.7	ND	0.25		
Potassium	D	mg/L	14	35.7	No SLC			1.1	110	ND	1.4		
Selenium	D	mg/L	14	14.3	HH DW (HQ=1)	0.18	0	0.0004	0.036	ND	0.003		
Silver	D	mg/L	14	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	14	14.3	No SLC			1.7	99.1	ND	13.7		
Thallium	D	mg/L	14	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	D	mg/L	14	0	HH DW (HQ=1)	0.26	0	0.0002	0.0044	ND	ND		
Zinc	D	mg/L	14	71.4	HH DW (HQ=1)	11	0	0.04	1.7	ND	2.2	0.82	0.42

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-2
Groundwater-Colluvium
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	31	NA	No SLC					0.23	9.6	3.2	1.8
Eh	T	millivolts	31	NA	No SLC					90.1	650	413	418
pH	T	SU	31	NA	No SLC					2.5	6.6	3.5	3.4
Specific Conductance	T	uS/cm	31	NA	No SLC					1090	3000	2280	2420
Temperature	T	Celsius	31	NA	No SLC					6.2	17.2	9.3	8.5
Turbidity	T	NTU	31	NA	No SLC					0	53.4	11.2	8
Helium Isotope and Tritium													
3H-3He	T	Years	1	100	No SLC					0.87	0.87	0.87	0.87
DEL He3	T	%	1	100	No SLC					1	1	1	1
DEL He4	T	%	1	100	No SLC					4.8	4.8	4.8	4.8
He Corr	T	1E-8cc/g	1	100	No SLC					5	5	5	5
Tritium TU	T	TU	1	100	No SLC					5.1	5.1	5.1	5.1
Uncert Age	T	Years	1	100	No SLC					0.9	0.9	0.9	0.9
Uncert TU	T	TU	1	100	No SLC					0.15	0.15	0.15	0.15
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	30	6.7	No SLC			1	1	ND	306		
Carbonate (as CaCO3)	T	mg/L	30	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	30	70	HH DW (HQ=1)	250	0	1.4	10.5	ND	15.9	4.5	4
Cyanide	T	mg/L	27	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	31	96.8	HH DW (HQ=1)	2.2	100	6	6	ND	13.4	7.6	8.9
Hardness	T	mg/L	31	100	No SLC					320	2220	1150	1220
Hydroxide (as CaCO3)	T	mg/L	30	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	30	23.3	HH DW (HQ=1)	10	0	0.2	0.4	ND	0.68		
Nitrite	T	mg/L	30	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	30	100	No SLC					3.1	6.9	4	3.8
Phosphate, Ortho As P	T	mg/L	30	43.3	No SLC			0.01	0.036	ND	0.32		
Phosphorus	T	mg/L	27	81.5	No SLC			0.01	0.02	ND	0.15	0.035	0.031
Specific Conductance	T	umhos/cm	30	100	No SLC					929	2720	2010	2160

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-2
Groundwater-Colluvium
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Sulfate	T	mg/L	31	100	HH DW (HQ=1)	1500	64.5			617	2360	1570	1690
Total Alkalinity	T	mg/L	30	6.7	No SLC			1	1	ND	306		
Total Dissolved Solids	T	mg/L	30	100	No SLC					946	3970	2460	2760
Total Kjeldahl Nitrogen	T	mg/L	27	22.2	No SLC			0.24	2.4	ND	3.5		
Total Organic Carbon	T	mg/L	27	55.6	No SLC			1	1.7	ND	2.5	1.2	1.2
Total Suspended Solids	T	mg/L	28	42.9	No SLC			1.1	17.5	ND	37.5		
Hardness	D	mg/L	31	100	No SLC					324	2060	1130	1210
Isotopes													
204Pb/206Pb	T	mg/L	1	100	No SLC					0.000061	0.000061	0.000061	0.000061
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00059	0.00059	0.00059	0.00059
208Pb/206Pb	T	mg/L	1	100	No SLC					0.00097	0.00097	0.00097	0.00097
Delta D	T	per mil	1	100	No SLC					-95.5	-95.5	-95.5	-95.5
Delta O-18	T	per mil	1	100	No SLC					-13	-13	-13	-13
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0047	0.0047	0.0047	0.0047
204Pb/206Pb	D	mg/L	1	100	No SLC					0.000059	0.000059	0.000059	0.000059
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00044	0.00044	0.00044	0.00044
208Pb/206Pb	D	mg/L	1	100	No SLC					0.00041	0.00041	0.00041	0.00041
Delta 34S	D	per mil	1	100	No SLC					-3.9	-3.9	-3.9	-3.9
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0023	0.0023	0.0023	0.0023
Metals													
Aluminum	T	mg/L	31	93.5	HH DW (HQ=1)	37	100	0.22	0.51	ND	107	69.5	75.5
Antimony	T	mg/L	31	6.5	HH DW (HQ=1)	0.015	100	0.001	0.082	ND	0.088		
Arsenic	T	mg/L	31	9.7	HH DW (HQ=1)	0.01	66.7	0.0004	0.056	ND	0.039		
Barium	T	mg/L	31	3.2	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.0074		
Beryllium	T	mg/L	31	74.2	HH DW (HQ=1)	0.073	0	0.0076	0.027	ND	0.03	0.015	0.015
Boron	T	mg/L	31	6.5	HH DW (HQ=1)	3.3	0	0.023	0.084	ND	0.011		
Cadmium	T	mg/L	31	19.4	HH DW (HQ=1)	0.018	83.3	0.0005	0.13	ND	0.078		
Calcium	T	mg/L	31	100	No SLC					73.3	504	295	321
Chromium	T	mg/L	31	6.5	HH DW (HQ=1)	0.1	50	0.0011	0.57	ND	0.22		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-2
Groundwater-Colluvium
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cobalt	T	mg/L	31	32.3	HH DW (HQ=1)	0.73	0	0.18	0.37	ND	0.36		
Copper	T	mg/L	31	48.4	HH DW (HQ=1)	1.4	0	0.003	1.4	ND	1		
Iron	T	mg/L	31	58.1	HH DW (HQ=1)	11	77.8	0.45	26.4	ND	98.4	21.1	8.5
Lead	T	mg/L	31	19.4	HH DW (HQ=1)	0.015	16.7	0.001	0.004	ND	0.022		
Magnesium	T	mg/L	31	96.8	No SLC			48.5	48.5	ND	279	99.5	96.7
Manganese	T	mg/L	31	100	HH DW (HQ=1)	1.7	100			3.9	20.2	12.7	13.9
Mercury	T	mg/L	31	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	31	3.2	HH DW (HQ=1)	0.18	0	0.0011	0.024	ND	0.016		
Nickel	T	mg/L	31	64.5	HH DW (HQ=1)	0.73	15	0.33	1.7	ND	1.1	0.51	0.47
Potassium	T	mg/L	31	3.2	No SLC			3.3	110	ND	4.4		
Selenium	T	mg/L	31	38.7	HH DW (HQ=1)	0.18	0	0.0004	0.036	ND	0.013		
Silver	T	mg/L	31	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	31	22.6	No SLC			32.8	100	ND	42.9		
Thallium	T	mg/L	31	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	T	mg/L	31	19.4	HH DW (HQ=1)	0.037	0	0.0002	0.0022	ND	0.01		
Zinc	T	mg/L	31	96.8	HH DW (HQ=1)	11	3.3	2	2	ND	11.8	4.4	4.8
Aluminum	D	mg/L	31	93.5	HH DW (HQ=1)	37	100	0.22	0.51	ND	108	69	78.2
Antimony	D	mg/L	31	3.2	HH DW (HQ=1)	0.015	100	0.001	0.082	ND	0.087		
Arsenic	D	mg/L	31	9.7	HH DW (HQ=1)	0.01	66.7	0.0004	0.055	ND	0.045		
Barium	D	mg/L	31	3.2	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.0073		
Beryllium	D	mg/L	31	71	HH DW (HQ=1)	0.073	0	0.0075	0.027	ND	0.028	0.014	0.014
Boron	D	mg/L	31	6.5	HH DW (HQ=1)	3.3	0	0.023	0.084	ND	0.011		
Cadmium	D	mg/L	31	16.1	HH DW (HQ=1)	0.018	60	0.0005	0.16	ND	0.035		
Calcium	D	mg/L	31	100	No SLC					74.2	486	291	301
Chromium	D	mg/L	31	3.2	HH DW (HQ=1)	0.1	0	0.0011	0.57	ND	0.019		
Cobalt	D	mg/L	31	41.9	HH DW (HQ=1)	0.73	0	0.18	0.46	ND	0.36		
Copper	D	mg/L	31	48.4	HH DW (HQ=1)	1.4	0	0.0022	1.4	ND	1		
Iron	D	mg/L	31	48.4	HH DW (HQ=1)	11	93.3	0.31	26.8	ND	97.9		
Lead	D	mg/L	31	12.9	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.0025		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-2
Groundwater-Colluvium
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Magnesium	D	mg/L	31	96.8	No SLC			48.5	48.5	ND	258	97.2	96.1
Manganese	D	mg/L	31	100	HH DW (HQ=1)	1.7	100			3.9	20.5	12.6	14.1
Mercury	D	mg/L	31	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	31	3.2	HH DW (HQ=1)	0.18	0	0.0024	0.024	ND	0.0021		
Nickel	D	mg/L	31	54.8	HH DW (HQ=1)	0.73	11.8	0.24	1.7	ND	1.2	0.49	0.49
Potassium	D	mg/L	31	3.2	No SLC			3.3	110	ND	4.4		
Selenium	D	mg/L	31	41.9	HH DW (HQ=1)	0.18	0	0.0006	0.036	ND	0.011		
Silver	D	mg/L	31	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	31	22.6	No SLC			32.8	99.1	ND	41.8		
Thallium	D	mg/L	31	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0025	ND	ND		
Vanadium	D	mg/L	31	25.8	HH DW (HQ=1)	0.26	0	0.0002	0.0031	ND	0.011		
Zinc	D	mg/L	31	96.8	HH DW (HQ=1)	11	3.3	2	2	ND	11.6	4.4	4.8

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-3
Groundwater-Bedrock
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	15	NA	No SLC					-1	3.2	1	0.62
Eh	T	millivolts	15	NA	No SLC					-358	308	-65.5	-151
pH	T	SU	15	NA	No SLC					5.6	7.3	6.4	6.6
Specific Conductance	T	uS/cm	15	NA	No SLC					2270	3360	2750	2630
Temperature	T	Celsius	15	NA	No SLC					4.4	14.5	8.7	8.8
Turbidity	T	NTU	15	NA	No SLC					0.5	53.5	15.8	8.7
Helium Isotope and Tritium													
Tritium TU	T	TU	1	100	No SLC					0.03	0.03	0.03	0.03
Uncert TU	T	TU	1	100	No SLC					0.01	0.01	0.01	0.01
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	15	100	No SLC					45.1	458	203	179
Carbonate (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	15	80	HH DW (HQ=1)	250	8.3	2.4	21.2	ND	261	24.7	6.8
Cyanide	T	mg/L	13	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	16	100	HH DW (HQ=1)	2.2	37.5			1.1	8.4	3.7	1.6
Hardness	T	mg/L	16	100	No SLC					1370	2340	1800	1750
Hydroxide (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	15	0	HH DW (HQ=1)	10	0	0.2	0.4	ND	ND		
Nitrite	T	mg/L	15	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	15	100	No SLC					5.8	7.3	6.7	6.8
Phosphate, Ortho As P	T	mg/L	15	33.3	No SLC			0.01	0.048	ND	0.58		
Phosphorus	T	mg/L	13	61.5	No SLC			0.01	0.03	ND	0.099	0.026	0.015
Specific Conductance	T	umhos/cm	15	100	No SLC					1850	3270	2390	2280
Sulfate	T	mg/L	16	100	HH DW (HQ=1)	1500	56.3			1370	1980	1640	1600
Total Alkalinity	T	mg/L	15	100	No SLC					45.1	458	203	179
Total Dissolved Solids	T	mg/L	15	100	No SLC					2140	3160	2680	2750
Total Kjeldahl Nitrogen	T	mg/L	13	30.8	No SLC			0.2	1.5	ND	3.3		
Total Organic Carbon	T	mg/L	13	53.8	No SLC			1.1	2.3	ND	11.2	2.4	1.4

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-3
Groundwater-Bedrock
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Suspended Solids	T	mg/L	14	85.7	No SLC			2.4	5.8	ND	33.2	11	7.1
Hardness	D	mg/L	16	100	No SLC					1320	2320	1790	1760
Isotopes													
Delta D	T	per mil	1	100	No SLC					-99.7	-99.7	-99.7	-99.7
Delta O-18	T	per mil	1	100	No SLC					-13.5	-13.5	-13.5	-13.5
Metals													
Aluminum	T	mg/L	16	31.3	HH DW (HQ=1)	37	0	0.18	7.3	ND	6.9		
Antimony	T	mg/L	16	6.3	HH DW (HQ=1)	0.015	0	0.0008	0.072	ND	0.00097		
Arsenic	T	mg/L	16	31.3	HH DW (HQ=1)	0.01	0	0.0002	0.047	ND	0.0014		
Barium	T	mg/L	16	43.8	HH DW (HQ=1)	2.6	0	0.0062	0.12	ND	0.031		
Beryllium	T	mg/L	16	56.3	HH DW (HQ=1)	0.073	11.1	0.0002	0.003	ND	0.12	0.02	0.0011
Boron	T	mg/L	16	31.3	HH DW (HQ=1)	3.3	0	0.0081	0.084	ND	0.03		
Cadmium	T	mg/L	16	0	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	ND		
Calcium	T	mg/L	16	100	No SLC					420	762	522	518
Chromium	T	mg/L	16	6.3	HH DW (HQ=1)	0.1	0	0.0006	0.23	ND	0.0082		
Cobalt	T	mg/L	16	37.5	HH DW (HQ=1)	0.73	0	0.0011	0.32	ND	0.25		
Copper	T	mg/L	16	18.8	HH DW (HQ=1)	1.4	0	0.0007	0.27	ND	0.035		
Iron	T	mg/L	16	75	HH DW (HQ=1)	11	50	0.46	2.3	ND	67.3	21.8	2.3
Lead	T	mg/L	16	43.8	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.014		
Magnesium	T	mg/L	16	100	No SLC					36.2	232	123	125
Manganese	T	mg/L	16	100	HH DW (HQ=1)	1.7	100			2.5	28	12.1	5.9
Mercury	T	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	16	18.8	HH DW (HQ=1)	0.18	0	0.0004	0.023	ND	0.081		
Nickel	T	mg/L	16	37.5	HH DW (HQ=1)	0.73	0	0.0015	0.33	ND	0.63		
Potassium	T	mg/L	16	81.3	No SLC			3.3	63.8	ND	18.5	10.1	7.4
Selenium	T	mg/L	16	12.5	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.013		
Silver	T	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	16	87.5	No SLC			67.8	99.1	ND	88.2	46	45.3
Thallium	T	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-3
Groundwater-Bedrock
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Vanadium	T	mg/L	16	25	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.00087		
Zinc	T	mg/L	16	50	HH DW (HQ=1)	11	0	0.014	0.091	ND	5.9	1.4	0.045
Aluminum	D	mg/L	16	31.3	HH DW (HQ=1)	37	0	0.18	6.9	ND	6.6		
Antimony	D	mg/L	16	6.3	HH DW (HQ=1)	0.015	0	0.0008	0.072	ND	0.0011		
Arsenic	D	mg/L	16	25	HH DW (HQ=1)	0.01	0	0.0002	0.043	ND	0.0014		
Barium	D	mg/L	16	43.8	HH DW (HQ=1)	2.6	0	0.0062	0.12	ND	0.031		
Beryllium	D	mg/L	16	56.3	HH DW (HQ=1)	0.073	11.1	0.0002	0.0055	ND	0.12	0.02	0.0019
Boron	D	mg/L	16	43.8	HH DW (HQ=1)	3.3	0	0.0081	0.084	ND	0.031		
Cadmium	D	mg/L	16	0	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	ND		
Calcium	D	mg/L	16	100	No SLC					394	781	517	516
Chromium	D	mg/L	16	6.3	HH DW (HQ=1)	0.1	0	0.0006	0.23	ND	0.0079		
Cobalt	D	mg/L	16	56.3	HH DW (HQ=1)	0.73	0	0.0011	0.32	ND	0.31	0.084	0.013
Copper	D	mg/L	16	18.8	HH DW (HQ=1)	1.4	0	0.0007	0.27	ND	0.032		
Iron	D	mg/L	16	75	HH DW (HQ=1)	11	50	0.46	2.2	ND	65.8	21.3	2
Lead	D	mg/L	16	6.3	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.0023		
Magnesium	D	mg/L	16	100	No SLC					33.3	230	123	123
Manganese	D	mg/L	16	100	HH DW (HQ=1)	1.7	100			2.3	28.4	12	5.9
Mercury	D	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	16	12.5	HH DW (HQ=1)	0.18	0	0.0004	0.023	ND	0.083		
Nickel	D	mg/L	16	37.5	HH DW (HQ=1)	0.73	0	0.0015	0.33	ND	0.63		
Potassium	D	mg/L	16	81.3	No SLC			3.3	63.8	ND	18.7	10.1	7.5
Selenium	D	mg/L	16	12.5	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.0079		
Silver	D	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	16	87.5	No SLC			33.6	99.1	ND	88.6	44.5	43.6
Thallium	D	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	16	18.8	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.00077		
Zinc	D	mg/L	16	43.8	HH DW (HQ=1)	11	0	0.015	0.19	ND	4.2		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-4
Seep/Spring-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	9	NA	No SLC					1.9	11.6	6.9	7.4
Eh	T	millivolts	9	NA	No SLC					157	417	320	368
Flow	T	gpm	9	NA	No SLC					0.1	210	67.2	50
pH	T	SU	9	NA	No SLC					4.5	7.8	6.3	6.8
Specific Conductance	T	uS/cm	9	NA	No SLC					252	906	518	297
Temperature	T	Celsius	9	NA	No SLC					2.4	10.7	6.1	4.8
Turbidity	T	NTU	8	NA	No SLC					0	4.1	1.1	0.3
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	9	66.7	No SLC			1	2.9	ND	114	60.5	101
Carbonate (as CaCO3)	T	mg/L	9	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	9	100	HH DW (HQ=1)	250	0			0.68	7.4	3.4	1.2
Cyanide	T	mg/L	9	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	9	100	HH DW (HQ=1)	2.2	0			0.41	1.4	0.81	0.49
Hardness	T	mg/L	9	100	No SLC					127	420	246	151
Hydroxide (as CaCO3)	T	mg/L	9	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	9	0	HH DW (HQ=1)	10	0	0.2	0.4	ND	ND		
Nitrite	T	mg/L	9	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	9	100	No SLC					4.7	8.2	6.7	8
Phosphate, Ortho As P	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Phosphorus	T	mg/L	9	22.2	No SLC			0.01	0.01	ND	0.027		
Specific Conductance	T	umhos/cm	9	100	No SLC					236	821	480	291
Sulfate	T	mg/L	9	100	HH DW (HQ=1)	1500	0			29.2	520	220	40.4
Total Alkalinity	T	mg/L	9	66.7	No SLC			1	2.9	ND	114	60.5	101
Total Dissolved Solids	T	mg/L	9	100	No SLC					132	952	435	216
Total Kjeldahl Nitrogen	T	mg/L	9	0	No SLC			0.24	0.24	ND	ND		
Total Organic Carbon	T	mg/L	9	11.1	No SLC			1	2.6	ND	1.3		
Total Suspended Solids	T	mg/L	9	44.4	No SLC			0.6	2.7	ND	10.8		
Hardness	D	mg/L	9	100	No SLC					127	410	246	154

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-4
Seep/Spring-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Isotopes													
Delta D	T	per mil	1	100	No SLC					-97.4	-97.4	-97.4	-97.4
Delta O-18	T	per mil	1	100	No SLC					-13.6	-13.6	-13.6	-13.6
Metals													
Aluminum	T	mg/L	9	22.2	HH DW (HQ=1)	37	0	0.22	12.3	ND	10.2		
Antimony	T	mg/L	9	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	T	mg/L	9	0	HH DW (HQ=1)	0.01	0	0.0004	0.037	ND	ND		
Barium	T	mg/L	9	44.4	HH DW (HQ=1)	2.6	0	0.019	0.12	ND	0.02		
Beryllium	T	mg/L	9	33.3	HH DW (HQ=1)	0.073	0	0.0002	0.003	ND	0.0076		
Boron	T	mg/L	9	11.1	HH DW (HQ=1)	3.3	0	0.0036	0.12	ND	0.0062		
Cadmium	T	mg/L	9	0	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	ND		
Calcium	T	mg/L	9	100	No SLC					40.3	116	71.1	49.8
Chromium	T	mg/L	9	0	HH DW (HQ=1)	0.1	0	0.00076	0.19	ND	ND		
Cobalt	T	mg/L	9	0	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	ND		
Copper	T	mg/L	9	11.1	HH DW (HQ=1)	1.4	0	0.0014	0.33	ND	0.0043		
Iron	T	mg/L	9	0	HH DW (HQ=1)	11	0	0.28	6.7	ND	ND		
Lead	T	mg/L	9	0	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	ND		
Magnesium	T	mg/L	9	100	No SLC					6.3	31.8	16.7	6.9
Manganese	T	mg/L	9	44.4	HH DW (HQ=1)	1.7	25	0.012	0.026	ND	1.8		
Mercury	T	mg/L	9	0	HH DW (HQ=1)	0.011	0	0.0001	0.00013	ND	ND		
Molybdenum	T	mg/L	9	55.6	HH DW (HQ=1)	0.18	0	0.012	0.024	ND	0.014	0.01	0.011
Nickel	T	mg/L	9	11.1	HH DW (HQ=1)	0.73	0	0.0015	0.44	ND	0.54		
Potassium	T	mg/L	9	44.4	No SLC			1.1	63.8	ND	1.2		
Selenium	T	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.0006	0.03	ND	ND		
Silver	T	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	9	0	No SLC			1.7	99.1	ND	ND		
Thallium	T	mg/L	9	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	T	mg/L	9	33.3	HH DW (HQ=1)	0.037	0	0.0004	0.002	ND	0.0005		
Zinc	T	mg/L	9	33.3	HH DW (HQ=1)	11	0	0.015	0.16	ND	4.8		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-4
Seep/Spring-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	D	mg/L	9	22.2	HH DW (HQ=1)	37	0	0.18	15.2	ND	9.6		
Antimony	D	mg/L	9	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	D	mg/L	9	0	HH DW (HQ=1)	0.01	0	0.0004	0.037	ND	ND		
Barium	D	mg/L	9	44.4	HH DW (HQ=1)	2.6	0	0.019	0.12	ND	0.019		
Beryllium	D	mg/L	9	11.1	HH DW (HQ=1)	0.073	0	0.0002	0.003	ND	0.0039		
Boron	D	mg/L	9	0	HH DW (HQ=1)	3.3	0	0.0036	0.12	ND	ND		
Cadmium	D	mg/L	9	0	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	ND		
Calcium	D	mg/L	9	100	No SLC					40.5	112	70.7	50.5
Chromium	D	mg/L	9	0	HH DW (HQ=1)	0.1	0	0.0006	0.19	ND	ND		
Cobalt	D	mg/L	9	11.1	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	0.0026		
Copper	D	mg/L	9	0	HH DW (HQ=1)	1.4	0	0.0014	0.39	ND	ND		
Iron	D	mg/L	9	0	HH DW (HQ=1)	11	0	0.28	6.7	ND	ND		
Lead	D	mg/L	9	0	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	ND		
Magnesium	D	mg/L	9	100	No SLC					6.3	31.5	16.8	6.8
Manganese	D	mg/L	9	44.4	HH DW (HQ=1)	1.7	25	0.012	0.019	ND	1.8		
Mercury	D	mg/L	9	11.1	HH DW (HQ=1)	0.011	0	0.0001	0.00019	ND	0.0001		
Molybdenum	D	mg/L	9	55.6	HH DW (HQ=1)	0.18	0	0.012	0.024	ND	0.013	0.01	0.01
Nickel	D	mg/L	9	11.1	HH DW (HQ=1)	0.73	0	0.0015	0.45	ND	0.17		
Potassium	D	mg/L	9	44.4	No SLC			1.1	63.8	ND	1.2		
Selenium	D	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.0006	0.03	ND	ND		
Silver	D	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	9	0	No SLC			2.8	99.1	ND	ND		
Thallium	D	mg/L	9	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	9	22.2	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.0004		
Zinc	D	mg/L	9	22.2	HH DW (HQ=1)	11	0	0.015	1.8	ND	0.69		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-5
Residential Tap Water-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	3	NA	No SLC					4.3	5.7	5.2	5.6
Eh	T	millivolts	3	NA	No SLC					117	178	149	151
pH	T	SU	3	NA	No SLC					7	7.5	7.2	7.2
Specific Conductance	T	uS/cm	3	NA	No SLC					211	255	237	244
Temperature	T	Celsius	3	NA	No SLC					13.1	38.9	22.1	14.3
Turbidity	T	NTU	3	NA	No SLC					0	56	18.7	0.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	3	100	No SLC					99.3	101	100	100
Carbonate (as CaCO3)	T	mg/L	3	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	3	100	HH DW (HQ=1)	250	0			2.5	2.6	2.5	2.5
Cyanide	T	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	3	0	HH DW (HQ=1)	2.2	0	0.1	0.1	ND	ND		
Hardness	T	mg/L	3	100	No SLC					111	115	113	114
Hydroxide (as CaCO3)	T	mg/L	3	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	3	100	HH DW (HQ=1)	10	0			0.25	0.26	0.25	0.25
Nitrite	T	mg/L	3	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
Sulfate	T	mg/L	3	100	HH DW (HQ=1)	1500	0			20.6	22.2	21.2	20.8
Total Alkalinity	T	mg/L	3	100	No SLC					99.3	101	100	100
Total Dissolved Solids	T	mg/L	3	100	No SLC					136	180	154	146
Total Suspended Solids	T	mg/L	3	0	No SLC			0.5	0.5	ND	ND		
Hardness	D	mg/L	3	100	No SLC					112	114	113	113
Metals													
Aluminum	T	mg/L	3	66.7	HH DW (HQ=1)	37	0	0.024	0.024	ND	0.045	0.029	0.028
Antimony	T	mg/L	3	0	HH DW (HQ=1)	0.015	0	0.0005	0.0011	ND	ND		
Arsenic	T	mg/L	3	0	HH DW (HQ=1)	0.01	0	0.0002	0.0002	ND	ND		
Barium	T	mg/L	3	100	HH DW (HQ=1)	2.6	0			0.084	0.09	0.086	0.085
Beryllium	T	mg/L	3	0	HH DW (HQ=1)	0.073	0	0.0002	0.0002	ND	ND		
Boron	T	mg/L	3	33.3	HH DW (HQ=1)	3.3	0	0.0048	0.0048	ND	0.015		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-5
Residential Tap Water-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	T	mg/L	3	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	T	mg/L	3	100	No SLC					35.1	36.5	35.9	36.1
Chromium	T	mg/L	3	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		
Cobalt	T	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	T	mg/L	3	100	HH DW (HQ=1)	1.4	0			0.016	0.054	0.039	0.048
Iron	T	mg/L	3	0	HH DW (HQ=1)	11	0	0.033	0.033	ND	ND		
Lead	T	mg/L	3	100	HH DW (HQ=1)	0.015	0			0.00018	0.0013	0.0006	0.00033
Magnesium	T	mg/L	3	100	No SLC					5.6	5.8	5.7	5.7
Manganese	T	mg/L	3	66.7	HH DW (HQ=1)	1.7	0	0.0007	0.0007	ND	0.002	0.0011	0.00084
Mercury	T	mg/L	3	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	3	33.3	HH DW (HQ=1)	0.18	0	0.00044	0.00074	ND	0.00041		
Nickel	T	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	T	mg/L	3	100	No SLC					0.87	0.94	0.92	0.94
Selenium	T	mg/L	3	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	T	mg/L	3	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	T	mg/L	3	100	No SLC					3.6	4.2	3.8	3.7
Thallium	T	mg/L	3	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Uranium	T	mg/L	3	100	No SLC					0.00079	0.00095	0.00088	0.00089
Vanadium	T	mg/L	3	0	HH DW (HQ=1)	0.037	0	0.0002	0.0002	ND	ND		
Zinc	T	mg/L	3	100	HH DW (HQ=1)	11	0			0.0064	0.16	0.072	0.044
Aluminum	D	mg/L	3	0	HH DW (HQ=1)	37	0	0.024	0.024	ND	ND		
Antimony	D	mg/L	3	0	HH DW (HQ=1)	0.015	0	0.0005	0.0005	ND	ND		
Arsenic	D	mg/L	3	0	HH DW (HQ=1)	0.01	0	0.0002	0.0002	ND	ND		
Barium	D	mg/L	3	100	HH DW (HQ=1)	2.6	0			0.085	0.089	0.086	0.085
Beryllium	D	mg/L	3	0	HH DW (HQ=1)	0.073	0	0.0002	0.0002	ND	ND		
Boron	D	mg/L	3	33.3	HH DW (HQ=1)	3.3	0	0.0048	0.0048	ND	0.014		
Cadmium	D	mg/L	3	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	D	mg/L	3	100	No SLC					35.7	36.2	36	36
Chromium	D	mg/L	3	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-5
Residential Tap Water-Alluvial Aquifer
RI/FS Reference Off-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cobalt	D	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	D	mg/L	3	100	HH DW (HQ=1)	1.4	0			0.028	0.051	0.04	0.041
Iron	D	mg/L	3	0	HH DW (HQ=1)	11	0	0.033	0.033	ND	ND		
Lead	D	mg/L	3	100	HH DW (HQ=1)	0.015	0			0.00025	0.00062	0.00039	0.0003
Magnesium	D	mg/L	3	100	No SLC					5.7	5.8	5.7	5.7
Manganese	D	mg/L	3	100	HH DW (HQ=1)	1.7	0			0.001	0.005	0.003	0.0031
Mercury	D	mg/L	3	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	3	33.3	HH DW (HQ=1)	0.18	0	0.00046	0.00057	ND	0.00042		
Nickel	D	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	D	mg/L	3	100	No SLC					0.88	0.99	0.93	0.93
Selenium	D	mg/L	3	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	D	mg/L	3	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	D	mg/L	3	100	No SLC					3.7	3.9	3.8	3.8
Thallium	D	mg/L	3	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Vanadium	D	mg/L	3	0	HH DW (HQ=1)	0.26	0	0.0002	0.0002	ND	ND		
Zinc	D	mg/L	3	100	HH DW (HQ=1)	11	0			0.01	0.15	0.068	0.043

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-6
Groundwater-Alluvial Aquifer
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	1	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	15	NA	No SLC					0.87	7.6	3.7	3.6
Eh	T	millivolts	15	NA	No SLC					207	620	384	405
pH	T	SU	15	NA	No SLC					3.3	4.6	4.2	4.4
Specific Conductance	T	uS/cm	15	NA	No SLC					96	1430	757	749
Temperature	T	Celsius	15	NA	No SLC					6.4	11.4	8.1	8.1
Turbidity	T	NTU	15	NA	No SLC					0	52.6	10.6	3.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	15	6.7	No SLC			1	3.2	ND	1.2		
Carbonate (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	15	86.7	HH DW (HQ=1)	250	0	3.8	13.8	ND	6.6	5.3	5.6
Cyanide	T	mg/L	15	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	15	93.3	HH DW (HQ=1)	2.2	14.3	1	1	ND	13.4	2.5	1.7
Hardness	T	mg/L	15	100	No SLC					304	389	346	339
Hydroxide (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	15	46.7	HH DW (HQ=1)	10	0	0.2	0.47	ND	0.42		
Nitrite	T	mg/L	15	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	11	100	No SLC					3.8	4.7	4.5	4.7
Phosphate, Ortho As P	T	mg/L	15	13.3	No SLC			0.01	0.018	ND	0.082		
Phosphorus	T	mg/L	14	50	No SLC			0.01	0.018	ND	0.034	0.01	0.0095
Specific Conductance	T	umhos/cm	11	100	No SLC					628	780	701	685
Sulfate	T	mg/L	15	100	HH DW (HQ=1)	1500	0			355	444	393	389
Total Alkalinity	T	mg/L	15	6.7	No SLC			1	3.2	ND	1.2		
Total Dissolved Solids	T	mg/L	15	100	No SLC					532	952	703	678

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-6
Groundwater-Alluvial Aquifer
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Kjeldahl Nitrogen	T	mg/L	15	6.7	No SLC			0.24	0.25	ND	0.28		
Total Organic Carbon	T	mg/L	15	0	No SLC			1	1.4	ND	ND		
Total Suspended Solids	T	mg/L	15	26.7	No SLC			0.5	6.5	ND	5.6		
Hardness	D	mg/L	15	100	No SLC					314	390	347	342
Isotopes													
Delta D	T	per mil	1	100	No SLC					-97.9	-97.9	-97.9	-97.9
Delta O-18	T	per mil	1	100	No SLC					-13.6	-13.6	-13.6	-13.6
Metals													
Aluminum	T	mg/L	13	84.6	HH DW (HQ=1)	37	0	12.9	18	ND	14.2	10.2	9.8
Antimony	T	mg/L	13	0	HH DW (HQ=1)	0.015	0	0.003	0.082	ND	ND		
Arsenic	T	mg/L	13	0	HH DW (HQ=1)	0.01	0	0.023	0.048	ND	ND		
Barium	T	mg/L	13	0	HH DW (HQ=1)	2.6	0	0.048	0.14	ND	ND		
Beryllium	T	mg/L	13	46.2	HH DW (HQ=1)	0.073	0	0.003	0.015	ND	0.0035		
Boron	T	mg/L	13	0	HH DW (HQ=1)	3.3	0	0.027	0.12	ND	ND		
Cadmium	T	mg/L	13	0	HH DW (HQ=1)	0.018	0	0.004	0.13	ND	ND		
Calcium	T	mg/L	13	100	No SLC					83.3	106	94.6	93.6
Chromium	T	mg/L	12	0	HH DW (HQ=1)	0.1	0	0.009	0.23	ND	ND		
Cobalt	T	mg/L	13	15.4	HH DW (HQ=1)	0.73	0	0.11	0.37	ND	0.041		
Copper	T	mg/L	13	7.7	HH DW (HQ=1)	1.4	0	0.052	0.33	ND	0.056		
Iron	T	mg/L	13	0	HH DW (HQ=1)	11	0	0.3	4.6	ND	ND		
Lead	T	mg/L	13	0	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	ND		
Magnesium	T	mg/L	13	61.5	No SLC			24.9	35.2	ND	31.4	22.3	23.4
Manganese	T	mg/L	13	100	HH DW (HQ=1)	1.7	53.8			1.4	2.1	1.7	1.7
Mercury	T	mg/L	15	6.7	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.0002		
Molybdenum	T	mg/L	13	0	HH DW (HQ=1)	0.18	0	0.011	0.041	ND	ND		
Nickel	T	mg/L	13	23.1	HH DW (HQ=1)	0.73	0	0.14	0.73	ND	0.28		
Potassium	T	mg/L	13	0	No SLC			2	63.8	ND	ND		
Selenium	T	mg/L	13	0	HH DW (HQ=1)	0.18	0	0.003	0.008	ND	ND		
Silver	T	mg/L	13	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-6
Groundwater-Alluvial Aquifer
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Sodium	T	mg/L	13	15.4	No SLC			36.6	99.1	ND	7.6		
Thallium	T	mg/L	13	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	T	mg/L	13	0	HH DW (HQ=1)	0.037	0	0.001	0.002	ND	ND		
Zinc	T	mg/L	13	69.2	HH DW (HQ=1)	11	0	0.6	0.71	ND	0.83	0.54	0.62
Aluminum	D	mg/L	15	73.3	HH DW (HQ=1)	37	0	7.6	17.7	ND	12.1	9.1	10
Antimony	D	mg/L	15	0	HH DW (HQ=1)	0.015	0	0.003	0.082	ND	ND		
Arsenic	D	mg/L	15	0	HH DW (HQ=1)	0.01	0	0.023	0.048	ND	ND		
Barium	D	mg/L	15	0	HH DW (HQ=1)	2.6	0	0.048	0.14	ND	ND		
Beryllium	D	mg/L	15	46.7	HH DW (HQ=1)	0.073	0	0.002	0.0078	ND	0.0047		
Boron	D	mg/L	15	0	HH DW (HQ=1)	3.3	0	0.027	0.12	ND	ND		
Cadmium	D	mg/L	15	0	HH DW (HQ=1)	0.018	0	0.004	0.13	ND	ND		
Calcium	D	mg/L	15	100	No SLC					87.7	106	95.2	92.7
Chromium	D	mg/L	14	0	HH DW (HQ=1)	0.1	0	0.009	0.23	ND	ND		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	15	13.3	HH DW (HQ=1)	0.73	0	0.11	0.37	ND	0.045		
Copper	D	mg/L	15	6.7	HH DW (HQ=1)	1.4	0	0.054	0.37	ND	0.048		
Iron	D	mg/L	15	0	HH DW (HQ=1)	11	0	0.3	4.6	ND	ND		
Lead	D	mg/L	15	0	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	ND		
Magnesium	D	mg/L	15	60	No SLC			24.9	35.2	ND	30.3	22.3	24.2
Manganese	D	mg/L	15	100	HH DW (HQ=1)	1.7	46.7			1.4	2	1.7	1.7
Mercury	D	mg/L	15	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	15	0	HH DW (HQ=1)	0.18	0	0.011	0.024	ND	ND		
Nickel	D	mg/L	14	28.6	HH DW (HQ=1)	0.73	0	0.21	0.73	ND	0.3		
Potassium	D	mg/L	15	6.7	No SLC			3.3	63.8	ND	3.4		
Selenium	D	mg/L	15	0	HH DW (HQ=1)	0.18	0	0.003	0.008	ND	ND		
Silver	D	mg/L	15	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		
Sodium	D	mg/L	15	13.3	No SLC			17.3	99.1	ND	9.5		
Thallium	D	mg/L	15	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	D	mg/L	15	0	HH DW (HQ=1)	0.26	0	0.001	0.002	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-6
Groundwater-Alluvial Aquifer
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Zinc	D	mg/L	15	73.3	HH DW (HQ=1)	11	0	0.56	0.74	ND	0.7	0.54	0.61

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-7
Groundwater-Colluvium
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	21	NA	No SLC					0.85	10.1	5.7	5.4
Eh	T	millivolts	21	NA	No SLC					-99.3	366	94.4	99
pH	T	SU	21	NA	No SLC					4.4	7.2	6.2	6.1
Specific Conductance	T	uS/cm	21	NA	No SLC					261	1680	918	576
Temperature	T	Celsius	21	NA	No SLC					4.3	15.7	9.3	8.8
Turbidity	T	NTU	21	NA	No SLC					1.4	227	57.4	44.7
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	20	100	No SLC					41.3	188	106	93.7
Carbonate (as CaCO3)	T	mg/L	20	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	20	80	HH DW (HQ=1)	250	0	2	15.4	ND	23.9	6.9	6.7
Cyanide	T	mg/L	10	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	21	100	HH DW (HQ=1)	2.2	52.4			0.82	18.6	6.4	3.3
Hardness	T	mg/L	21	100	No SLC					199	696	433	396
Hydroxide (as CaCO3)	T	mg/L	20	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	20	30	HH DW (HQ=1)	10	0	0.2	0.4	ND	0.64		
Nitrite	T	mg/L	20	5	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.0057		
pH	T	SU	20	100	No SLC					6.1	7.7	6.8	7
Phosphate, Ortho As P	T	mg/L	20	10	No SLC			0.01	0.01	ND	0.1		
Phosphorus	T	mg/L	11	81.8	No SLC			0.01	0.03	ND	0.64	0.084	0.024
Specific Conductance	T	umhos/cm	19	100	No SLC					385	1490	833	634
Sulfate	T	mg/L	21	100	HH DW (HQ=1)	1500	0			95.3	848	412	367
Total Alkalinity	T	mg/L	20	100	No SLC					41.3	188	106	93.7
Total Dissolved Solids	T	mg/L	21	100	No SLC					304	1330	773	628
Total Kjeldahl Nitrogen	T	mg/L	11	18.2	No SLC			0.24	0.26	ND	3.5		
Total Organic Carbon	T	mg/L	10	20	No SLC			1	1.2	ND	2.2		
Total Suspended Solids	T	mg/L	12	91.7	No SLC			3.4	3.4	ND	101	33.6	27
Hardness	D	mg/L	21	100	No SLC					185	685	416	423
Isotopes													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-7
Groundwater-Colluvium
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
204Pb/206Pb	T	mg/L	1	100	No SLC					0.000053	0.000053	0.000053	0.000053
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00084	0.00084	0.00084	0.00084
208Pb/206Pb	T	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Delta D	T	per mil	1	100	No SLC					-93.5	-93.5	-93.5	-93.5
Delta O-18	T	per mil	1	100	No SLC					-12.6	-12.6	-12.6	-12.6
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.00077	0.00077	0.00077	0.00077
204Pb/206Pb	D	mg/L	1	100	No SLC					0.000052	0.000052	0.000052	0.000052
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00084	0.00084	0.00084	0.00084
208Pb/206Pb	D	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Delta 34S	D	per mil	1	100	No SLC					-2.7	-2.7	-2.7	-2.7
Lead	D	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.000038	0.000038	ND	ND		
Metals													
Aluminum	T	mg/L	21	100	HH DW (HQ=1)	37	0			0.78	29.4	7.6	6.5
Antimony	T	mg/L	21	0	HH DW (HQ=1)	0.015	0	0.0006	0.072	ND	ND		
Arsenic	T	mg/L	21	47.6	HH DW (HQ=1)	0.01	0	0.0004	0.04	ND	0.004		
Barium	T	mg/L	21	76.2	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.27	0.056	0.047
Beryllium	T	mg/L	21	71.4	HH DW (HQ=1)	0.073	33.3	0.0003	0.0076	ND	0.084	0.034	0.018
Boron	T	mg/L	21	81	HH DW (HQ=1)	3.3	0	0.0063	0.084	ND	0.032	0.019	0.018
Cadmium	T	mg/L	21	38.1	HH DW (HQ=1)	0.018	0	0.0003	0.005	ND	0.0029		
Calcium	T	mg/L	21	100	No SLC					58.6	255	151	140
Chromium	T	mg/L	21	52.4	HH DW (HQ=1)	0.1	0	0.0006	0.028	ND	0.042	0.0099	0.005
Cobalt	T	mg/L	21	66.7	HH DW (HQ=1)	0.73	0	0.0023	0.038	ND	0.02	0.0096	0.0078
Copper	T	mg/L	21	47.6	HH DW (HQ=1)	1.4	0	0.00079	0.015	ND	0.023		
Iron	T	mg/L	21	90.5	HH DW (HQ=1)	11	68.4	0.84	4.7	ND	45.4	18.2	14.1
Lead	T	mg/L	21	85.7	HH DW (HQ=1)	0.015	16.7	0.0008	0.0039	ND	0.038	0.007	0.0033
Magnesium	T	mg/L	21	100	No SLC					11.3	17	13.6	13.6
Manganese	T	mg/L	21	100	HH DW (HQ=1)	1.7	52.4			0.094	45.5	17.8	7.1
Mercury	T	mg/L	21	9.5	HH DW (HQ=1)	0.011	0	0.0001	0.00026	ND	0.00077		
Molybdenum	T	mg/L	21	42.9	HH DW (HQ=1)	0.18	0	0.001	0.023	ND	0.022		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-7
Groundwater-Colluvium
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nickel	T	mg/L	21	52.4	HH DW (HQ=1)	0.73	0	0.0024	0.03	ND	0.035	0.012	0.012
Potassium	T	mg/L	21	85.7	No SLC			3.3	5	ND	9.3	5.9	6.5
Selenium	T	mg/L	21	66.7	HH DW (HQ=1)	0.18	0	0.001	0.008	ND	0.0035	0.0017	0.0014
Silver	T	mg/L	21	4.8	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	0.00045		
Sodium	T	mg/L	21	90.5	No SLC			22.6	30.8	ND	43.9	30	27.6
Thallium	T	mg/L	21	9.5	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	0.00031		
Vanadium	T	mg/L	21	66.7	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.022	0.003	0.001
Zinc	T	mg/L	21	81	HH DW (HQ=1)	11	0	0.019	0.062	ND	4.7	1.8	0.84
Aluminum	D	mg/L	21	47.6	HH DW (HQ=1)	37	0	0.18	3.5	ND	6.7		
Antimony	D	mg/L	21	0	HH DW (HQ=1)	0.015	0	0.0006	0.072	ND	ND		
Arsenic	D	mg/L	21	14.3	HH DW (HQ=1)	0.01	0	0.0002	0.04	ND	0.00045		
Barium	D	mg/L	21	66.7	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.049	0.024	0.025
Beryllium	D	mg/L	21	52.4	HH DW (HQ=1)	0.073	45.5	0.00025	0.0061	ND	0.084	0.03	0.026
Boron	D	mg/L	21	81	HH DW (HQ=1)	3.3	0	0.013	0.084	ND	0.032	0.018	0.016
Cadmium	D	mg/L	21	38.1	HH DW (HQ=1)	0.018	0	0.0003	0.005	ND	0.0029		
Calcium	D	mg/L	21	100	No SLC					57.9	254	146	150
Chromium	D	mg/L	21	23.8	HH DW (HQ=1)	0.1	0	0.0006	0.01	ND	0.017		
Cobalt	D	mg/L	21	81	HH DW (HQ=1)	0.73	0	0.0038	0.038	ND	0.021	0.01	0.0082
Copper	D	mg/L	21	23.8	HH DW (HQ=1)	1.4	0	0.0011	0.015	ND	0.0035		
Iron	D	mg/L	21	52.4	HH DW (HQ=1)	11	72.7	0.17	0.67	ND	42.9	12.1	5.3
Lead	D	mg/L	21	0	HH DW (HQ=1)	0.015	0	0.0002	0.001	ND	ND		
Magnesium	D	mg/L	21	100	No SLC					9.3	14.3	12.4	12.8
Manganese	D	mg/L	21	90.5	HH DW (HQ=1)	1.7	57.9	0.015	0.019	ND	46.4	16	10.8
Mercury	D	mg/L	21	0	HH DW (HQ=1)	0.011	0	0.0001	0.00024	ND	ND		
Molybdenum	D	mg/L	21	38.1	HH DW (HQ=1)	0.18	0	0.001	0.023	ND	0.025		
Nickel	D	mg/L	21	42.9	HH DW (HQ=1)	0.73	0	0.0014	0.03	ND	0.028		
Potassium	D	mg/L	21	85.7	No SLC			3.3	4	ND	9.1	5.1	4.5
Selenium	D	mg/L	21	57.1	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.0023	0.0013	0.00098
Silver	D	mg/L	21	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-7
Groundwater-Colluvium
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Sodium	D	mg/L	21	90.5	No SLC			24.4	37.4	ND	40.7	28.7	27.7
Thallium	D	mg/L	21	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	21	28.6	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.00065		
Zinc	D	mg/L	21	52.4	HH DW (HQ=1)	11	0	0.014	0.057	ND	4.8	1.6	1.2

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-8
Groundwater-Bedrock
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	41	NA	No SLC					0.14	32.5	2.5	1.1
Eh	T	millivolts	41	NA	No SLC					-161	490	182	182
pH	T	SU	41	NA	No SLC					4	7.3	5.8	6.8
Specific Conductance	T	uS/cm	41	NA	No SLC					96	1810	1010	768
Temperature	T	Celsius	41	NA	No SLC					4.2	13.8	8.3	8.3
Turbidity	T	NTU	41	NA	No SLC					0	141	14.9	2.7
Helium Isotope and Tritium													
3H-3He	T	Years	1	100	No SLC					13.5	13.5	13.5	13.5
DEL He3	T	%	1	100	No SLC					34.1	34.1	34.1	34.1
DEL He4	T	%	1	100	No SLC					18.9	18.9	18.9	18.9
He Corr	T	1E-8cc/g	1	100	No SLC					5.7	5.7	5.7	5.7
Tritium TU	T	TU	1	100	No SLC					7.9	7.9	7.9	7.9
Uncert Age	T	Years	1	100	No SLC					0.56	0.56	0.56	0.56
Uncert TU	T	TU	1	100	No SLC					0.24	0.24	0.24	0.24
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	40	60	No SLC			1	4.7	ND	257	137	201
Carbonate (as CaCO3)	T	mg/L	40	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	40	80	HH DW (HQ=1)	250	0	2	15.1	ND	7.7	5	5.5
Cyanide	T	mg/L	40	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	41	100	HH DW (HQ=1)	2.2	2.4			1.1	3.8	1.6	1.6
Hardness	T	mg/L	40	100	No SLC					281	1150	543	358
Hydroxide (as CaCO3)	T	mg/L	40	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	40	22.5	HH DW (HQ=1)	10	0	0.2	0.52	ND	0.41		
Nitrite	T	mg/L	40	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	33	100	No SLC					4.2	7.7	6.4	7
Phosphate, Ortho As P	T	mg/L	40	12.5	No SLC			0.01	0.087	ND	0.1		
Phosphorus	T	mg/L	38	39.5	No SLC			0.01	0.022	ND	0.079		
Specific Conductance	T	umhos/cm	32	100	No SLC					515	1820	914	672

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-8
Groundwater-Bedrock
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Sulfate	T	mg/L	41	100	HH DW (HQ=1)	1500	0			100	904	457	412
Total Alkalinity	T	mg/L	40	60	No SLC			1	4.7	ND	257	137	201
Total Dissolved Solids	T	mg/L	41	97.6	No SLC			623	623	ND	1670	831	626
Total Kjeldahl Nitrogen	T	mg/L	40	2.5	No SLC			0.24	2.4	ND	3.1		
Total Organic Carbon	T	mg/L	40	22.5	No SLC			1	2.5	ND	3.2		
Total Suspended Solids	T	mg/L	41	41.5	No SLC			0.5	2.6	ND	25.6		
Hardness	D	mg/L	41	100	No SLC					275	1190	540	356
Isotopes													
Delta D	T	per mil	2	100	No SLC					-92.3	-97.3	-94.8	-94.8
Delta O-18	T	per mil	2	100	No SLC					-13	-13.5	-13.3	-13.3
Metals													
Aluminum	T	mg/L	39	33.3	HH DW (HQ=1)	37	0	0.14	17.3	ND	13.1		
Antimony	T	mg/L	39	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	T	mg/L	39	2.6	HH DW (HQ=1)	0.01	0	0.0004	0.048	ND	0.00041		
Barium	T	mg/L	39	53.8	HH DW (HQ=1)	2.6	0	0.02	0.12	ND	0.038	0.032	0.026
Beryllium	T	mg/L	39	20.5	HH DW (HQ=1)	0.073	0	0.0002	0.012	ND	0.0061		
Boron	T	mg/L	39	48.7	HH DW (HQ=1)	3.3	0	0.014	0.12	ND	0.017		
Cadmium	T	mg/L	39	0	HH DW (HQ=1)	0.018	0	0.0003	0.13	ND	ND		
Calcium	T	mg/L	39	100	No SLC					89.6	424	184	99.3
Chromium	T	mg/L	39	0	HH DW (HQ=1)	0.1	0	0.0006	0.37	ND	ND		
Cobalt	T	mg/L	39	0	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	ND		
Copper	T	mg/L	39	7.7	HH DW (HQ=1)	1.4	0	0.0013	0.42	ND	0.23		
Iron	T	mg/L	39	17.9	HH DW (HQ=1)	11	0	0.19	4.9	ND	3.2		
Lead	T	mg/L	39	5.1	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.00053		
Magnesium	T	mg/L	39	87.2	No SLC			29.3	35.2	ND	31.5	19.7	19.5
Manganese	T	mg/L	39	100	HH DW (HQ=1)	1.7	51.3			0.093	5.5	2.3	1.8
Mercury	T	mg/L	41	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	39	30.8	HH DW (HQ=1)	0.18	0	0.001	0.024	ND	0.025		
Nickel	T	mg/L	39	12.8	HH DW (HQ=1)	0.73	0	0.0014	0.73	ND	0.32		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-8
Groundwater-Bedrock
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Potassium	T	mg/L	39	46.2	No SLC			1.5	63.8	ND	6.6		
Selenium	T	mg/L	39	5.1	HH DW (HQ=1)	0.18	0	0.0006	0.008	ND	0.0014		
Silver	T	mg/L	39	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	39	61.5	No SLC			17.3	99.1	ND	52.1	31	27
Thallium	T	mg/L	39	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	T	mg/L	39	7.7	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.00084		
Zinc	T	mg/L	39	38.5	HH DW (HQ=1)	11	0	0.016	0.73	ND	0.78		
Aluminum	D	mg/L	41	31.7	HH DW (HQ=1)	37	0	0.14	18.3	ND	14.7		
Antimony	D	mg/L	41	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	D	mg/L	41	7.3	HH DW (HQ=1)	0.01	33.3	0.0004	0.048	ND	0.027		
Barium	D	mg/L	41	51.2	HH DW (HQ=1)	2.6	0	0.018	0.12	ND	0.038	0.031	0.027
Beryllium	D	mg/L	41	22	HH DW (HQ=1)	0.073	0	0.0002	0.011	ND	0.0045		
Boron	D	mg/L	41	46.3	HH DW (HQ=1)	3.3	0	0.013	0.12	ND	0.016		
Cadmium	D	mg/L	41	2.4	HH DW (HQ=1)	0.018	100	0.0003	0.13	ND	0.11		
Calcium	D	mg/L	41	100	No SLC					86.5	439	180	100
Chromium	D	mg/L	41	2.4	HH DW (HQ=1)	0.1	0	0.0006	0.37	ND	0.00099		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	41	7.3	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.29		
Copper	D	mg/L	41	14.6	HH DW (HQ=1)	1.4	0	0.0007	0.39	ND	0.74		
Iron	D	mg/L	41	17.1	HH DW (HQ=1)	11	0	0.19	11.3	ND	3		
Lead	D	mg/L	41	0	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	ND		
Magnesium	D	mg/L	41	85.4	No SLC			26.9	35.2	ND	31.3	19.7	19.2
Manganese	D	mg/L	41	100	HH DW (HQ=1)	1.7	51.2			0.022	5.4	2.2	1.8
Mercury	D	mg/L	41	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	41	26.8	HH DW (HQ=1)	0.18	0	0.001	0.024	ND	0.0048		
Nickel	D	mg/L	41	17.1	HH DW (HQ=1)	0.73	0	0.0014	0.73	ND	0.42		
Potassium	D	mg/L	41	41.5	No SLC			1.4	63.8	ND	7.5		
Selenium	D	mg/L	41	12.2	HH DW (HQ=1)	0.18	0	0.0006	0.008	ND	0.0036		
Silver	D	mg/L	41	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-8
Groundwater-Bedrock
RI/FS Reference On-Site Mine Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Sodium	D	mg/L	41	58.5	No SLC			17.3	99.1	ND	50.6	30.3	25.5
Thallium	D	mg/L	41	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	D	mg/L	41	9.8	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.00053		
Zinc	D	mg/L	41	36.6	HH DW (HQ=1)	11	0	0.015	0.7	ND	0.75		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-9
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	22	NA	No SLC					0.48	38	4.9	3.2
Eh	T	millivolts	22	NA	No SLC					153	740	406	421
pH	T	SU	22	NA	No SLC					2.6	6.3	3.5	3.5
Specific Conductance	T	uS/cm	22	NA	No SLC					410	2250	1490	1520
Temperature	T	Celsius	22	NA	No SLC					5.9	13	9.2	8.6
Turbidity	T	NTU	21	NA	No SLC					0	148	27.6	2.3
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	19	5.3	No SLC			1	1	ND	45		
Carbonate (as CaCO3)	T	mg/L	19	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	19	100	HH DW (HQ=1)	250	0			4.3	125	39.5	24.7
Cyanide	T	mg/L	19	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	20	100	HH DW (HQ=1)	2.2	95			1.1	28.4	12.3	11.8
Hardness	T	mg/L	20	100	No SLC					205	799	582	605
Hydroxide (as CaCO3)	T	mg/L	19	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	19	78.9	HH DW (HQ=1)	10	0	0.2	0.62	ND	0.75	0.37	0.36
Nitrite	T	mg/L	19	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	17	100	No SLC					3.5	6.5	4.2	4.1
Phosphate, Ortho As P	T	mg/L	19	26.3	No SLC			0.01	0.017	ND	0.21		
Phosphorus	T	mg/L	19	63.2	No SLC			0.01	0.019	ND	0.085	0.022	0.016
Specific Conductance	T	umhos/cm	17	100	No SLC					356	1920	1410	1430
Sulfate	T	mg/L	20	100	HH DW (HQ=1)	1500	0			172	1310	947	1010
Total Alkalinity	T	mg/L	19	5.3	No SLC			1	1	ND	45		
Total Dissolved Solids	T	mg/L	20	100	No SLC					248	2590	1580	1560
Total Kjeldahl Nitrogen	T	mg/L	19	10.5	No SLC			0.24	0.28	ND	0.31		
Total Organic Carbon	T	mg/L	19	36.8	No SLC			0.63	2.7	ND	2.3		
Total Suspended Solids	T	mg/L	20	45	No SLC			0.6	2	ND	45.8		
Hardness	D	mg/L	20	100	No SLC					209	789	582	606
Isotopes													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-9
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
204Pb/206Pb	T	mg/L	1	100	No SLC					0.000053	0.000053	0.000053	0.000053
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00085	0.00085	0.00085	0.00085
208Pb/206Pb	T	mg/L	1	100	No SLC					0.0021	0.0021	0.0021	0.0021
Delta D	T	per mil	2	100	No SLC					-90.7	-91	-90.8	-90.8
Delta O-18	T	per mil	2	100	No SLC					-12.6	-12.8	-12.7	-12.7
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.000038	0.000038	0.000038	0.000038
204Pb/206Pb	D	mg/L	1	100	No SLC					0.000052	0.000052	0.000052	0.000052
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00084	0.00084	0.00084	0.00084
208Pb/206Pb	D	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Delta 34S	D	per mil	1	100	No SLC					-5	-5	-5	-5
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.000045	0.000045	0.000045	0.000045
Lanthanides													
Cerium	T	mg/L	1	100	No SLC					0.61	0.61	0.61	0.61
Dysprosium	T	mg/L	1	100	No SLC					0.052	0.052	0.052	0.052
Erbium	T	mg/L	1	100	No SLC					0.018	0.018	0.018	0.018
Europium	T	mg/L	1	100	No SLC					0.0098	0.0098	0.0098	0.0098
Gadolinium	T	mg/L	1	100	No SLC					0.085	0.085	0.085	0.085
Holmium	T	mg/L	1	100	No SLC					0.0081	0.0081	0.0081	0.0081
Lanthanum	T	mg/L	1	100	No SLC					0.22	0.22	0.22	0.22
Lutetium	T	mg/L	1	100	No SLC					0.0015	0.0015	0.0015	0.0015
Neodymium	T	mg/L	1	100	No SLC					0.38	0.38	0.38	0.38
Praseodymium	T	mg/L	1	100	No SLC					0.087	0.087	0.087	0.087
Samarium	T	mg/L	1	100	No SLC					0.089	0.089	0.089	0.089
Terbium	T	mg/L	1	100	No SLC					0.012	0.012	0.012	0.012
Thulium	T	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Ytterbium	T	mg/L	1	100	No SLC					0.011	0.011	0.011	0.011
Yttrium	T	mg/L	1	100	No SLC					0.19	0.19	0.19	0.19
Cerium	D	mg/L	1	100	No SLC					0.7	0.7	0.69	0.69
Dysprosium	D	mg/L	1	100	No SLC					0.048	0.048	0.048	0.048

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-9
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Erbium	D	mg/L	1	100	No SLC					0.017	0.017	0.017	0.017
Europium	D	mg/L	1	100	No SLC					0.0096	0.0096	0.0096	0.0096
Gadolinium	D	mg/L	1	100	No SLC					0.088	0.088	0.088	0.088
Holmium	D	mg/L	1	100	No SLC					0.0076	0.0076	0.0076	0.0076
Lanthanum	D	mg/L	1	100	No SLC					0.26	0.26	0.25	0.25
Lutetium	D	mg/L	1	100	No SLC					0.0014	0.0014	0.0014	0.0014
Neodymium	D	mg/L	1	100	No SLC					0.41	0.41	0.41	0.41
Praseodymium	D	mg/L	1	100	No SLC					0.096	0.096	0.096	0.096
Samarium	D	mg/L	1	100	No SLC					0.088	0.088	0.088	0.088
Terbium	D	mg/L	1	100	No SLC					0.011	0.011	0.011	0.011
Thulium	D	mg/L	1	100	No SLC					0.0019	0.0019	0.0019	0.0019
Ytterbium	D	mg/L	1	100	No SLC					0.011	0.011	0.011	0.011
Yttrium	D	mg/L	1	100	No SLC					0.21	0.21	0.21	0.21
Metals													
Aluminum	T	mg/L	20	95	HH DW (HQ=1)	37	100	0.62	0.62	ND	127	76.7	77.1
Antimony	T	mg/L	20	0	HH DW (HQ=1)	0.015	0	0.001	0.072	ND	ND		
Arsenic	T	mg/L	20	20	HH DW (HQ=1)	0.01	75	0.0004	0.076	ND	0.035		
Barium	T	mg/L	20	10	HH DW (HQ=1)	2.6	0	0.012	0.14	ND	0.047		
Beryllium	T	mg/L	20	90	HH DW (HQ=1)	0.073	0	0.001	0.017	ND	0.053	0.032	0.036
Boron	T	mg/L	20	0	HH DW (HQ=1)	3.3	0	0.0063	0.084	ND	ND		
Cadmium	T	mg/L	20	20	HH DW (HQ=1)	0.018	25	0.0007	0.13	ND	0.039		
Calcium	T	mg/L	20	100	No SLC					61.2	215	154	161
Chromium	T	mg/L	20	5	HH DW (HQ=1)	0.1	0	0.0057	0.23	ND	0.012		
Cobalt	T	mg/L	20	35	HH DW (HQ=1)	0.73	0	0.0037	0.36	ND	0.3		
Copper	T	mg/L	20	100	HH DW (HQ=1)	1.4	0			0.015	1.3	0.82	0.76
Iron	T	mg/L	20	20	HH DW (HQ=1)	11	25	0.3	4.6	ND	12.1		
Lead	T	mg/L	20	10	HH DW (HQ=1)	0.015	0	0.00073	0.004	ND	0.013		
Magnesium	T	mg/L	20	100	No SLC					12.6	63.7	47.7	49.5
Manganese	T	mg/L	20	100	HH DW (HQ=1)	1.7	95			0.073	22.8	15.6	17.3

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-9
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Mercury	T	mg/L	20	5	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00016		
Molybdenum	T	mg/L	20	10	HH DW (HQ=1)	0.18	0	0.0011	0.03	ND	0.014		
Nickel	T	mg/L	20	55	HH DW (HQ=1)	0.73	0	0.017	0.73	ND	0.5	0.29	0.3
Potassium	T	mg/L	20	15	No SLC			1.7	63.8	ND	40.9		
Selenium	T	mg/L	20	55	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.013	0.0068	0.0067
Silver	T	mg/L	20	0	HH DW (HQ=1)	0.18	0	0.0002	0.0013	ND	ND		
Sodium	T	mg/L	20	25	No SLC			35.2	99.1	ND	204		
Thallium	T	mg/L	20	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	T	mg/L	20	10	HH DW (HQ=1)	0.037	0	0.0002	0.0029	ND	0.0024		
Zinc	T	mg/L	20	95	HH DW (HQ=1)	11	0	0.091	0.091	ND	5.6	3.8	4
Aluminum	D	mg/L	20	95	HH DW (HQ=1)	37	100	0.62	0.62	ND	123	75.8	76.5
Antimony	D	mg/L	20	0	HH DW (HQ=1)	0.015	0	0.001	0.072	ND	ND		
Arsenic	D	mg/L	20	10	HH DW (HQ=1)	0.01	100	0.0002	0.082	ND	0.034		
Barium	D	mg/L	20	5	HH DW (HQ=1)	2.6	0	0.012	0.14	ND	0.044		
Beryllium	D	mg/L	20	90	HH DW (HQ=1)	0.073	0	0.001	0.013	ND	0.053	0.031	0.036
Boron	D	mg/L	20	0	HH DW (HQ=1)	3.3	0	0.0063	0.084	ND	ND		
Cadmium	D	mg/L	20	20	HH DW (HQ=1)	0.018	50	0.0007	0.13	ND	0.035		
Calcium	D	mg/L	20	95	No SLC			166	166	ND	212	150	156
Chromium	D	mg/L	20	5	HH DW (HQ=1)	0.1	0	0.0057	0.23	ND	0.012		
Cobalt	D	mg/L	20	30	HH DW (HQ=1)	0.73	0	0.0037	0.36	ND	0.24		
Copper	D	mg/L	20	100	HH DW (HQ=1)	1.4	0			0.0064	1.4	0.83	0.82
Iron	D	mg/L	20	15	HH DW (HQ=1)	11	0	0.3	4.6	ND	5.8		
Lead	D	mg/L	20	10	HH DW (HQ=1)	0.015	0	0.00071	0.004	ND	0.0031		
Magnesium	D	mg/L	20	100	No SLC					12.8	64	47.4	48.1
Manganese	D	mg/L	20	100	HH DW (HQ=1)	1.7	95			0.06	22.6	15.6	16.9
Mercury	D	mg/L	20	5	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00014		
Molybdenum	D	mg/L	20	5	HH DW (HQ=1)	0.18	0	0.0011	0.032	ND	0.012		
Nickel	D	mg/L	20	70	HH DW (HQ=1)	0.73	7.1	0.017	0.73	ND	19.2	1.3	0.35
Potassium	D	mg/L	20	15	No SLC			1.8	63.8	ND	42.4		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-9

Groundwater-Alluvial Aquifer

RI/FS Groundwater Area 1 - Area drained by Capulin Canyon

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Selenium	D	mg/L	20	65	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.015	0.0073	0.0075
Silver	D	mg/L	20	0	HH DW (HQ=1)	0.18	0	0.0002	0.0023	ND	ND		
Sodium	D	mg/L	20	15	No SLC			9.2	99.1	ND	34.1		
Thallium	D	mg/L	20	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0017	ND	ND		
Vanadium	D	mg/L	20	5	HH DW (HQ=1)	0.26	0	0.0002	0.0028	ND	0.0022		
Zinc	D	mg/L	20	95	HH DW (HQ=1)	11	0	0.091	0.091	ND	6.1	3.9	4.1

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-10
Groundwater-Colluvium
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	26	NA	No SLC					0.02	8.2	1.4	0.84
EH	T	millivolts	26	NA	No SLC					-14.3	450	131	112
pH	T	SU	25	NA	No SLC					2.8	6.2	5.7	5.9
Specific Conductance	T	uS/cm	26	NA	No SLC					1630	5250	2600	2550
Temperature	T	Celsius	26	NA	No SLC					3.4	16.6	9.5	8.9
Turbidity	T	NTU	25	NA	No SLC					0	198	52.3	50.2
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	15	80	No SLC			1	8.1	ND	162	65.8	63.8
Carbonate (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	15	86.7	HH DW (HQ=1)	250	0	1	8.5	ND	8.6	6.3	6.8
Cyanide	T	mg/L	15	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	17	100	HH DW (HQ=1)	2.2	100			6.2	74.2	20.7	10.6
Hardness	T	mg/L	16	100	No SLC					519	1780	1440	1530
Hydroxide (as CaCO3)	T	mg/L	15	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	15	6.7	HH DW (HQ=1)	10	0	0.2	1	ND	0.75		
Nitrite	T	mg/L	15	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	11	100	No SLC					3.8	6.4	5.7	6
Phosphate, Ortho As P	T	mg/L	15	6.7	No SLC			0.01	0.22	ND	0.016		
Phosphorus	T	mg/L	15	60	No SLC			0.01	0.01	ND	0.061	0.014	0.013
Specific Conductance	T	umhos/cm	11	100	No SLC					1850	2660	2350	2410
Sulfate	T	mg/L	17	100	HH DW (HQ=1)	1500	76.5			1180	2350	1680	1610
Total Alkalinity	T	mg/L	15	80	No SLC			1	8.1	ND	162	65.8	63.8
Total Dissolved Solids	T	mg/L	17	100	No SLC					2040	3630	2630	2540
Total Kjeldahl Nitrogen	T	mg/L	15	13.3	No SLC			0.24	0.27	ND	0.45		
Total Organic Carbon	T	mg/L	15	66.7	No SLC			1	3.5	ND	8.3	2.7	2.3
Total Suspended Solids	T	mg/L	17	88.2	No SLC			3.9	14.8	ND	156	39.7	15.1
Hardness	D	mg/L	17	100	No SLC					1160	1860	1520	1540
Isotopes													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-10
Groundwater-Colluvium
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
204Pb/206Pb	T	mg/L	2	100	No SLC					0.000045	0.000095	0.00007	0.00007
207Pb/206Pb	T	mg/L	2	100	No SLC					0.00034	0.00036	0.00035	0.00035
208Pb/206Pb	T	mg/L	2	100	No SLC					0.00026	0.0003	0.00028	0.00028
Delta D	T	per mil	2	100	No SLC					-80.3	-91.6	-86	-86
Delta O-18	T	per mil	2	100	No SLC					-11.1	-12.3	-11.7	-11.7
Lead	T	mg/L	2	100	HH DW (HQ=1)	0.015	0			0.0019	0.0023	0.0021	0.0021
204Pb/206Pb	D	mg/L	2	100	No SLC					0.000028	0.000093	0.000061	0.000061
207Pb/206Pb	D	mg/L	2	100	No SLC					0.00032	0.00036	0.00034	0.00034
208Pb/206Pb	D	mg/L	2	100	No SLC					0.00024	0.00026	0.00025	0.00025
Delta 34S	D	per mil	2	100	No SLC					-4.3	-7.1	-5.7	-5.7
Lead	D	mg/L	2	100	HH DW (HQ=1)	0.015	0			0.0007	0.0022	0.0014	0.0014
Metals													
Aluminum	T	mg/L	15	100	HH DW (HQ=1)	37	20			3.1	102	28.6	18.5
Antimony	T	mg/L	15	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	T	mg/L	15	73.3	HH DW (HQ=1)	0.01	45.5	0.0027	0.1	ND	0.22	0.043	0.012
Barium	T	mg/L	15	13.3	HH DW (HQ=1)	2.6	0	0.0073	0.12	ND	0.007		
Beryllium	T	mg/L	15	100	HH DW (HQ=1)	0.073	33.3			0.013	0.16	0.056	0.019
Boron	T	mg/L	15	46.7	HH DW (HQ=1)	3.3	0	0.0064	0.084	ND	0.048		
Cadmium	T	mg/L	15	53.3	HH DW (HQ=1)	0.018	12.5	0.03	0.13	ND	0.04	0.023	0.015
Calcium	T	mg/L	15	100	No SLC					258	548	467	490
Chromium	T	mg/L	15	20	HH DW (HQ=1)	0.1	33.3	0.0006	0.37	ND	0.11		
Cobalt	T	mg/L	15	66.7	HH DW (HQ=1)	0.73	0	0.16	0.32	ND	0.41	0.14	0.08
Copper	T	mg/L	15	53.3	HH DW (HQ=1)	1.4	0	0.17	0.3	ND	0.4	0.096	0.083
Iron	T	mg/L	15	80	HH DW (HQ=1)	11	75	2.7	3.6	ND	23.8	12.8	18.2
Lead	T	mg/L	15	73.3	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	0.0056	0.0025	0.0021
Magnesium	T	mg/L	15	100	No SLC					57.5	134	81.6	74.7
Manganese	T	mg/L	15	100	HH DW (HQ=1)	1.7	100			14.8	82.1	30.5	20.5
Mercury	T	mg/L	17	11.8	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00023		
Molybdenum	T	mg/L	15	0	HH DW (HQ=1)	0.18	0	0.0011	0.024	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-10
Groundwater-Colluvium
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nickel	T	mg/L	15	80	HH DW (HQ=1)	0.73	16.7	0.15	0.27	ND	0.98	0.3	0.16
Potassium	T	mg/L	15	46.7	No SLC			3.3	63.8	ND	9.3		
Selenium	T	mg/L	15	73.3	HH DW (HQ=1)	0.18	0	0.008	0.038	ND	0.071	0.015	0.011
Silver	T	mg/L	15	0	HH DW (HQ=1)	0.18	0	0.0002	0.0025	ND	ND		
Sodium	T	mg/L	15	80	No SLC			32.8	99.1	ND	98	60.9	73.1
Thallium	T	mg/L	15	6.7	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	0.00021		
Vanadium	T	mg/L	15	33.3	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.00096		
Zinc	T	mg/L	15	100	HH DW (HQ=1)	11	13.3			2.9	15.5	5.8	3.6
Aluminum	D	mg/L	17	82.4	HH DW (HQ=1)	37	28.6	1.8	5.1	ND	102	21.8	5.9
Antimony	D	mg/L	17	0	HH DW (HQ=1)	0.015	0	0.0006	0.082	ND	ND		
Arsenic	D	mg/L	17	52.9	HH DW (HQ=1)	0.01	44.4	0.0004	0.093	ND	0.21	0.038	0.012
Barium	D	mg/L	17	17.6	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.0094		
Beryllium	D	mg/L	17	100	HH DW (HQ=1)	0.073	29.4			0.0077	0.17	0.048	0.012
Boron	D	mg/L	17	41.2	HH DW (HQ=1)	3.3	0	0.023	0.084	ND	0.013		
Cadmium	D	mg/L	17	52.9	HH DW (HQ=1)	0.018	22.2	0.03	0.13	ND	0.12	0.03	0.02
Calcium	D	mg/L	17	100	No SLC					259	545	472	492
Chromium	D	mg/L	17	11.8	HH DW (HQ=1)	0.1	0	0.0006	0.37	ND	0.011		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	17	58.8	HH DW (HQ=1)	0.73	0	0.16	0.32	ND	0.39	0.13	0.09
Copper	D	mg/L	17	41.2	HH DW (HQ=1)	1.4	0	0.0066	0.3	ND	0.4		
Iron	D	mg/L	17	64.7	HH DW (HQ=1)	11	81.8	0.67	4.6	ND	21.3	11	18
Lead	D	mg/L	17	52.9	HH DW (HQ=1)	0.015	0	0.0002	0.0041	ND	0.0037	0.0013	0.001
Magnesium	D	mg/L	17	100	No SLC					51.5	140	82.5	77
Manganese	D	mg/L	17	100	HH DW (HQ=1)	1.7	100			15.2	85.4	31.6	20.7
Mercury	D	mg/L	17	5.9	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00012		
Molybdenum	D	mg/L	17	5.9	HH DW (HQ=1)	0.18	0	0.0011	0.024	ND	0.002		
Nickel	D	mg/L	17	82.4	HH DW (HQ=1)	0.73	21.4	0.2	0.34	ND	0.94	0.34	0.19
Potassium	D	mg/L	17	47.1	No SLC			3.3	63.8	ND	20.3		
Selenium	D	mg/L	17	58.8	HH DW (HQ=1)	0.18	0	0.0016	0.038	ND	0.065	0.014	0.004

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-10

Groundwater-Colluvium

RI/FS Groundwater Area 1 - Area drained by Capulin Canyon

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Silver	D	mg/L	17	0	HH DW (HQ=1)	0.18	0	0.0002	0.0022	ND	ND		
Sodium	D	mg/L	17	76.5	No SLC			36.6	99.1	ND	96.6	61.7	74
Thallium	D	mg/L	17	5.9	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	0.00022		
Vanadium	D	mg/L	17	11.8	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.00059		
Zinc	D	mg/L	17	100	HH DW (HQ=1)	11	17.6			2.5	16.6	6.2	3.6

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-11
Groundwater-Bedrock
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	36	NA	No SLC					0.05	9.3	1.3	0.53
EH	T	millivolts	36	NA	No SLC					-58.7	577	192	216
pH	T	SU	36	NA	No SLC					3.3	8.7	5.8	6.7
Specific Conductance	T	uS/cm	36	NA	No SLC					480	4650	2130	2390
Temperature	T	Celsius	36	NA	No SLC					2	24.8	10	9
Turbidity	T	NTU	34	NA	No SLC					0	115	17.4	7.5
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	29	51.7	No SLC			1	1	ND	401	106	122
Carbonate (as CaCO3)	T	mg/L	29	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	29	86.2	HH DW (HQ=1)	250	0	0.97	27.3	ND	41.3	11.6	5.5
Cyanide	T	mg/L	29	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	29	100	HH DW (HQ=1)	2.2	100			2.4	66.1	30	3
Hardness	T	mg/L	29	100	No SLC					116	1540	981	1080
Hydroxide (as CaCO3)	T	mg/L	29	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	29	0	HH DW (HQ=1)	10	0	0.2	0.4	ND	ND		
Nitrite	T	mg/L	29	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	23	100	No SLC					3.9	8	5.5	4.4
Phosphate, Ortho As P	T	mg/L	29	34.5	No SLC			0.01	0.04	ND	0.22		
Phosphorus	T	mg/L	29	62.1	No SLC			0.01	0.015	ND	0.09	0.037	0.039
Specific Conductance	T	umhos/cm	23	100	No SLC					645	2600	2040	2270
Sulfate	T	mg/L	29	100	HH DW (HQ=1)	1500	51.7			204	1960	1320	1610
Total Alkalinity	T	mg/L	29	51.7	No SLC			1	1	ND	401	106	122
Total Dissolved Solids	T	mg/L	29	96.6	No SLC			491	491	ND	3490	2260	2390
Total Kjeldahl Nitrogen	T	mg/L	29	0	No SLC			0.24	0.26	ND	ND		
Total Organic Carbon	T	mg/L	29	37.9	No SLC			1	3.5	ND	2.6		
Total Suspended Solids	T	mg/L	29	89.7	No SLC			3.8	6.4	ND	298	19.8	5.5
Hardness	D	mg/L	29	100	No SLC					114	1520	983	1110
Isotopes													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-11
Groundwater-Bedrock
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Delta D	T	per mil	3	100	No SLC					-80.9	-89.7	-85.8	-86.8
Delta O-18	T	per mil	3	100	No SLC					-11.2	-12.5	-11.9	-12.1
Metals													
Aluminum	T	mg/L	29	58.6	HH DW (HQ=1)	37	82.4	0.22	0.86	ND	180	78.7	5.6
Antimony	T	mg/L	29	0	HH DW (HQ=1)	0.015	0	0.0002	0.082	ND	ND		
Arsenic	T	mg/L	29	51.7	HH DW (HQ=1)	0.01	20	0.0004	0.095	ND	0.064	0.014	0.0025
Barium	T	mg/L	29	37.9	HH DW (HQ=1)	2.6	0	0.0073	0.12	ND	0.034		
Beryllium	T	mg/L	29	75.9	HH DW (HQ=1)	0.073	0	0.0002	0.0022	ND	0.068	0.025	0.0018
Boron	T	mg/L	29	48.3	HH DW (HQ=1)	3.3	0	0.012	0.084	ND	0.028		
Cadmium	T	mg/L	29	34.5	HH DW (HQ=1)	0.018	40	0.0003	0.13	ND	0.072		
Calcium	T	mg/L	29	100	No SLC					35.4	519	283	265
Chromium	T	mg/L	29	6.9	HH DW (HQ=1)	0.1	50	0.0006	0.23	ND	0.16		
Cobalt	T	mg/L	29	72.4	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.49	0.17	0.011
Copper	T	mg/L	29	58.6	HH DW (HQ=1)	1.4	0	0.0007	0.0074	ND	1	0.41	0.011
Iron	T	mg/L	29	86.2	HH DW (HQ=1)	11	56	0.28	0.67	ND	40.4	18.3	3.1
Lead	T	mg/L	29	69	HH DW (HQ=1)	0.015	75	0.00038	0.0061	ND	0.2	0.09	0.037
Magnesium	T	mg/L	29	100	No SLC					6.4	116	66.5	59
Manganese	T	mg/L	29	100	HH DW (HQ=1)	1.7	79.3			0.053	51	22	4.5
Mercury	T	mg/L	29	6.9	HH DW (HQ=1)	0.011	0	0.0001	0.00016	ND	0.00035		
Molybdenum	T	mg/L	29	27.6	HH DW (HQ=1)	0.18	0	0.0011	0.024	ND	0.013		
Nickel	T	mg/L	29	72.4	HH DW (HQ=1)	0.73	47.6	0.0015	0.85	ND	0.96	0.35	0.016
Potassium	T	mg/L	29	51.7	No SLC			1.4	63.8	ND	39.8	12.4	7.7
Selenium	T	mg/L	29	62.1	HH DW (HQ=1)	0.18	0	0.0002	0.0016	ND	0.028	0.0089	0.001
Silver	T	mg/L	29	3.4	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	0.00029		
Sodium	T	mg/L	29	58.6	No SLC			34.3	99.1	ND	121	68.8	91.8
Thallium	T	mg/L	29	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	T	mg/L	29	65.5	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.0035	0.0012	0.001
Zinc	T	mg/L	29	82.8	HH DW (HQ=1)	11	8.3	0.02	0.16	ND	12.1	5	0.86
Aluminum	D	mg/L	29	48.3	HH DW (HQ=1)	37	100	0.012	0.63	ND	178		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-11

Groundwater-Bedrock

RI/FS Groundwater Area 1 - Area drained by Capulin Canyon

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Antimony	D	mg/L	29	0	HH DW (HQ=1)	0.015	0	0.0002	0.082	ND	ND		
Arsenic	D	mg/L	29	37.9	HH DW (HQ=1)	0.01	36.4	0.0004	0.077	ND	0.055		
Barium	D	mg/L	29	37.9	HH DW (HQ=1)	2.6	0	0.0073	0.12	ND	0.033		
Beryllium	D	mg/L	29	69	HH DW (HQ=1)	0.073	0	0.0002	0.0017	ND	0.068	0.025	0.00085
Boron	D	mg/L	29	44.8	HH DW (HQ=1)	3.3	0	0.013	0.084	ND	0.027		
Cadmium	D	mg/L	29	24.1	HH DW (HQ=1)	0.018	57.1	0.0001	0.13	ND	0.092		
Calcium	D	mg/L	29	100	No SLC					35.2	509	284	272
Chromium	D	mg/L	29	6.9	HH DW (HQ=1)	0.1	0	0.0006	0.23	ND	0.0035		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	29	79.3	HH DW (HQ=1)	0.73	0	0.0011	0.32	ND	0.42	0.17	0.012
Copper	D	mg/L	29	55.2	HH DW (HQ=1)	1.4	0	0.0003	0.0033	ND	1	0.41	0.0033
Iron	D	mg/L	29	72.4	HH DW (HQ=1)	11	66.7	0.042	0.67	ND	41	17.8	1.5
Lead	D	mg/L	29	48.3	HH DW (HQ=1)	0.015	100	0.0001	0.0014	ND	0.22		
Magnesium	D	mg/L	29	100	No SLC					6.1	116	66.6	59.7
Manganese	D	mg/L	29	96.6	HH DW (HQ=1)	1.7	82.1	0.048	0.048	ND	50.6	22	4.3
Mercury	D	mg/L	29	3.4	HH DW (HQ=1)	0.011	0	0.0001	0.0002	ND	0.00049		
Molybdenum	D	mg/L	29	27.6	HH DW (HQ=1)	0.18	0	0.0011	0.024	ND	0.0095		
Nickel	D	mg/L	29	65.5	HH DW (HQ=1)	0.73	47.4	0.0002	0.9	ND	1	0.35	0.017
Potassium	D	mg/L	29	48.3	No SLC			1.3	63.8	ND	35.4		
Selenium	D	mg/L	29	51.7	HH DW (HQ=1)	0.18	0	0.0002	0.008	ND	0.024	0.0092	0.00092
Silver	D	mg/L	29	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	D	mg/L	29	58.6	No SLC			36.6	99.1	ND	121	70.1	92.5
Thallium	D	mg/L	29	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	D	mg/L	29	41.4	HH DW (HQ=1)	0.26	0	0.0001	0.002	ND	0.0035		
Zinc	D	mg/L	29	79.3	HH DW (HQ=1)	11	13	0.016	0.16	ND	12	5	0.32

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-12
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	1	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	49	NA	No SLC					2	91.5	7.5	5.6
EH	T	millivolts	50	NA	No SLC					149	498	384	401
Flow	T	gpm	41	NA	No SLC					0.035	5.6	1.2	1
pH	T	SU	50	NA	No SLC					2.8	4.8	3.7	3.6
Specific Conductance	T	uS/cm	50	NA	No SLC					288	4170	1540	1650
Temperature	T	Celsius	50	NA	No SLC					2	18.3	9.2	9.3
Turbidity	T	NTU	47	NA	No SLC					0	1300	33.4	1.2
Helium Isotope and Tritium													
3H-3He	T	Years	1	100	No SLC					18.8	18.8	18.8	18.8
DEL He3	T	%	1	100	No SLC					80.8	80.8	80.8	80.8
DEL He4	T	%	1	100	No SLC					13.9	13.9	13.9	13.9
He Corr	T	1E-8cc/g	1	100	No SLC					5.2	5.2	5.2	5.2
Tritium TU	T	TU	1	100	No SLC					10.9	10.9	10.9	10.9
Uncert Age	T	Years	1	100	No SLC					0.53	0.53	0.53	0.53
Uncert TU	T	TU	1	100	No SLC					0.36	0.36	0.36	0.36
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	46	0	No SLC			1	2.6	ND	ND		
Carbonate (as CaCO3)	T	mg/L	46	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	46	100	HH DW (HQ=1)	250	0			5.6	51.4	23.7	25.4
Cyanide	T	mg/L	46	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	46	100	HH DW (HQ=1)	2.2	97.8			1.6	49.7	11.4	11.5
Hardness	T	mg/L	44	100	No SLC					176	880	591	668
Hydroxide (as CaCO3)	T	mg/L	46	0	No SLC			1	1	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-12
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrate	T	mg/L	46	10.9	HH DW (HQ=1)	10	0	0.2	1	ND	0.46		
Nitrite	T	mg/L	46	17.4	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.013		
pH	T	SU	38	100	No SLC					3.6	5.3	4.2	4.1
Phosphate, Ortho As P	T	mg/L	46	15.2	No SLC			0.01	0.023	ND	0.14		
Phosphorus	T	mg/L	45	64.4	No SLC			0.01	0.027	ND	0.22	0.022	0.013
Specific Conductance	T	umhos/cm	38	100	No SLC					455	2180	1490	1650
Sulfate	T	mg/L	47	100	HH DW (HQ=1)	1500	14.9			205	1990	1030	1070
Total Alkalinity	T	mg/L	46	0	No SLC			1	2.6	ND	ND		
Total Dissolved Solids	T	mg/L	47	95.7	No SLC			315	592	ND	2780	1580	1770
Total Kjeldahl Nitrogen	T	mg/L	45	2.2	No SLC			0.24	0.33	ND	2.6		
Total Organic Carbon	T	mg/L	46	41.3	No SLC			0.4	3.2	ND	3		
Total Suspended Solids	T	mg/L	47	70.2	No SLC			0.5	7.3	ND	135	11.4	2.3
Hardness	D	mg/L	47	100	No SLC					175	860	583	662
Isotopes													
204Pb/206Pb	T	mg/L	1	100	No SLC					0.00014	0.00014	0.00014	0.00014
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00058	0.00058	0.00058	0.00058
208Pb/206Pb	T	mg/L	1	100	No SLC					0.00058	0.00058	0.00058	0.00058
Delta D	T	per mil	3	100	No SLC					-91.2	-95.7	-92.9	-91.8
Delta O-18	T	per mil	3	100	No SLC					-12.6	-13.3	-12.9	-12.8
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.00068	0.00068	0.00068	0.00068
204Pb/206Pb	D	mg/L	1	100	No SLC					0.00014	0.00014	0.00014	0.00014
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00061	0.00061	0.00061	0.00061
208Pb/206Pb	D	mg/L	1	100	No SLC					0.00066	0.00066	0.00066	0.00066
Delta 34S	D	per mil	1	100	No SLC					-2.5	-2.5	-2.5	-2.5
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0075	0.0075	0.0075	0.0075
Metals													
Aluminum	T	mg/L	44	97.7	HH DW (HQ=1)	37	74.4	11.4	11.4	ND	129	78.3	86.5
Antimony	T	mg/L	44	2.3	HH DW (HQ=1)	0.015	100	0.0006	0.097	ND	0.043		
Arsenic	T	mg/L	44	4.5	HH DW (HQ=1)	0.01	100	0.0004	0.052	ND	0.028		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-12
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	T	mg/L	44	2.3	HH DW (HQ=1)	2.6	0	0.012	0.19	ND	0.0098		
Beryllium	T	mg/L	44	77.3	HH DW (HQ=1)	0.073	0	0.014	0.031	ND	0.038	0.015	0.015
Boron	T	mg/L	44	0	HH DW (HQ=1)	3.3	0	0.004	0.12	ND	ND		
Cadmium	T	mg/L	44	15.9	HH DW (HQ=1)	0.018	14.3	0.013	0.13	ND	0.019		
Calcium	T	mg/L	44	100	No SLC					50.2	245	161	182
Chromium	T	mg/L	44	4.5	HH DW (HQ=1)	0.1	50	0.0037	0.37	ND	0.18		
Cobalt	T	mg/L	44	29.5	HH DW (HQ=1)	0.73	0	0.18	0.38	ND	0.26		
Copper	T	mg/L	44	81.8	HH DW (HQ=1)	1.4	2.8	0.17	1.1	ND	1.5	0.76	0.84
Iron	T	mg/L	44	68.2	HH DW (HQ=1)	11	93.3	0.3	11.6	ND	49.7	17.6	17.6
Lead	T	mg/L	44	38.6	HH DW (HQ=1)	0.015	0	0.001	0.0061	ND	0.0068		
Magnesium	T	mg/L	44	84.1	No SLC			16.7	29.5	ND	66.5	45.2	51.3
Manganese	T	mg/L	44	100	HH DW (HQ=1)	1.7	97.7			1.2	17.5	11	11.9
Mercury	T	mg/L	47	4.3	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00058		
Molybdenum	T	mg/L	44	2.3	HH DW (HQ=1)	0.18	0	0.0011	0.03	ND	0.019		
Nickel	T	mg/L	44	52.3	HH DW (HQ=1)	0.73	4.3	0.2	0.45	ND	6	0.43	0.25
Potassium	T	mg/L	44	11.4	No SLC			3.3	63.8	ND	51.9		
Selenium	T	mg/L	44	38.6	HH DW (HQ=1)	0.18	0	0.0016	0.03	ND	0.0093		
Silver	T	mg/L	44	2.3	HH DW (HQ=1)	0.18	0	0.0002	0.0019	ND	0.0011		
Sodium	T	mg/L	44	18.2	No SLC			21.9	99.1	ND	66.3		
Thallium	T	mg/L	44	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0018	ND	ND		
Vanadium	T	mg/L	44	4.5	HH DW (HQ=1)	0.037	0	0.0002	0.0021	ND	0.0027		
Zinc	T	mg/L	44	97.7	HH DW (HQ=1)	11	0	0.57	0.57	ND	6.1	3.1	3.3
Aluminum	D	mg/L	47	91.5	HH DW (HQ=1)	37	74.4	12.2	111	ND	126	74.8	83.9
Antimony	D	mg/L	47	0	HH DW (HQ=1)	0.015	0	0.0006	0.097	ND	ND		
Arsenic	D	mg/L	47	4.3	HH DW (HQ=1)	0.01	100	0.0004	0.052	ND	0.046		
Barium	D	mg/L	47	2.1	HH DW (HQ=1)	2.6	0	0.012	0.19	ND	0.0098		
Beryllium	D	mg/L	47	78.7	HH DW (HQ=1)	0.073	0	0.012	0.033	ND	0.034	0.015	0.014
Boron	D	mg/L	47	0	HH DW (HQ=1)	3.3	0	0.0036	0.12	ND	ND		
Cadmium	D	mg/L	47	17	HH DW (HQ=1)	0.018	25	0.012	0.13	ND	0.071		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-12
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 1 - Area drained by Capulin Canyon
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Calcium	D	mg/L	47	100	No SLC					49	238	159	180
Chromium	D	mg/L	46	2.2	HH DW (HQ=1)	0.1	0	0.0037	0.37	ND	0.0064		
Chromium, Hexavalent	D	mg/L	2	50	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.022	0.013	0.013
Cobalt	D	mg/L	47	29.8	HH DW (HQ=1)	0.73	0	0.18	0.38	ND	0.28		
Copper	D	mg/L	47	74.5	HH DW (HQ=1)	1.4	0	0.17	1.2	ND	1.3	0.71	0.74
Iron	D	mg/L	47	68.1	HH DW (HQ=1)	11	87.5	0.3	13.4	ND	50.7	16.5	14.8
Lead	D	mg/L	47	19.1	HH DW (HQ=1)	0.015	0	0.001	0.0058	ND	0.0072		
Magnesium	D	mg/L	47	80.9	No SLC			16.7	29.5	ND	66.3	44.4	50.8
Manganese	D	mg/L	47	100	HH DW (HQ=1)	1.7	97.9			0.97	17.2	10.9	12
Mercury	D	mg/L	47	2.1	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00045		
Molybdenum	D	mg/L	47	0	HH DW (HQ=1)	0.18	0	0.0011	0.03	ND	ND		
Nickel	D	mg/L	46	54.3	HH DW (HQ=1)	0.73	4	0.2	0.45	ND	1.3	0.32	0.25
Potassium	D	mg/L	47	6.4	No SLC			2.5	63.8	ND	38.6		
Selenium	D	mg/L	47	34	HH DW (HQ=1)	0.18	0	0.002	0.03	ND	0.0066		
Silver	D	mg/L	47	0	HH DW (HQ=1)	0.18	0	0.0002	0.0014	ND	ND		
Sodium	D	mg/L	47	12.8	No SLC			21.9	99.1	ND	24.2		
Thallium	D	mg/L	47	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0018	ND	ND		
Vanadium	D	mg/L	47	2.1	HH DW (HQ=1)	0.26	0	0.0002	0.0053	ND	0.0024		
Zinc	D	mg/L	47	97.9	HH DW (HQ=1)	11	0	0.57	0.57	ND	8.9	3.1	3.4

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-13
Seep/Spring-Colluvium
RI/FS Groundwater Area 2 - Area that contains Capulin Rock Pile
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	2	NA	No SLC					8.9	10.5	9.7	9.7
Eh	T	millivolts	2	NA	No SLC					556	604	580	580
Flow	T	gpm	2	NA	No SLC					5.3	15.9	10.6	10.6
pH	T	SU	2	NA	No SLC					2.4	2.8	2.6	2.6
Specific Conductance	T	uS/cm	2	NA	No SLC					10800	11100	10900	10900
Temperature	T	Celsius	2	NA	No SLC					6.8	10.5	8.6	8.6
Turbidity	T	NTU	1	NA	No SLC					20.9	20.9	20.9	20.9
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	2	0	No SLC			1	1	ND	ND		
Carbonate (as CaCO3)	T	mg/L	2	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	2	100	HH DW (HQ=1)	250	0			21.3	127	74.1	74.1
Cyanide	T	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	2	100	HH DW (HQ=1)	2.2	100			77.5	208	143	143
Hardness	T	mg/L	2	100	No SLC					5150	5370	5260	5260
Hydroxide (as CaCO3)	T	mg/L	2	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	2	0	HH DW (HQ=1)	10	0	1	2	ND	ND		
Nitrite	T	mg/L	2	100	HH DW (HQ=1)	1	0			0.053	0.08	0.066	0.066
pH	T	SU	2	100	No SLC					3	3.1	3	3
Phosphate, Ortho As P	T	mg/L	2	100	No SLC					0.37	0.67	0.52	0.52
Phosphorus	T	mg/L	2	50	No SLC			0.01	0.01	ND	0.031	0.018	0.018
Specific Conductance	T	umhos/cm	2	100	No SLC					9060	10300	9680	9680
Sulfate	T	mg/L	2	100	HH DW (HQ=1)	1500	100			11600	13700	12700	12700
Total Alkalinity	T	mg/L	2	0	No SLC			1	1	ND	ND		
Total Dissolved Solids	T	mg/L	2	100	No SLC					18900	22700	20800	20800
Total Kjeldahl Nitrogen	T	mg/L	2	50	No SLC			0.82	0.82	ND	0.84	0.62	0.62
Total Organic Carbon	T	mg/L	2	100	No SLC					12.6	13.3	13	13
Total Suspended Solids	T	mg/L	2	100	No SLC					70	72.7	71.3	71.3
Hardness	D	mg/L	2	100	No SLC					4810	5430	5120	5120

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-13
Seep/Spring-Colluvium
RI/FS Groundwater Area 2 - Area that contains Capulin Rock Pile
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Isotopes													
Delta D	T	per mil	1	100	No SLC					-91	-91	-91	-91
Delta O-18	T	per mil	1	100	No SLC					-12.5	-12.5	-12.5	-12.5
Metals													
Aluminum	T	mg/L	2	100	HH DW (HQ=1)	37	100			1160	1170	1170	1170
Antimony	T	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.038	0.053	ND	ND		
Arsenic	T	mg/L	2	50	HH DW (HQ=1)	0.01	100	0.12	0.12	ND	0.09	0.075	0.075
Barium	T	mg/L	2	0	HH DW (HQ=1)	2.6	0	0.049	0.073	ND	ND		
Beryllium	T	mg/L	2	100	HH DW (HQ=1)	0.073	100			0.28	0.28	0.28	0.28
Boron	T	mg/L	2	0	HH DW (HQ=1)	3.3	0	0.036	0.046	ND	ND		
Cadmium	T	mg/L	2	100	HH DW (HQ=1)	0.018	100			0.62	0.66	0.64	0.64
Calcium	T	mg/L	2	100	No SLC					445	466	456	456
Chromium	T	mg/L	2	100	HH DW (HQ=1)	0.1	100			0.19	0.6	0.4	0.4
Cobalt	T	mg/L	2	100	HH DW (HQ=1)	0.73	100			3.8	3.8	3.8	3.8
Copper	T	mg/L	2	100	HH DW (HQ=1)	1.4	100			8.6	9.2	8.9	8.9
Iron	T	mg/L	2	100	HH DW (HQ=1)	11	100			363	419	391	391
Lead	T	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	ND		
Magnesium	T	mg/L	2	100	No SLC					980	1020	1000	1000
Manganese	T	mg/L	2	100	HH DW (HQ=1)	1.7	100			478	527	503	503
Mercury	T	mg/L	2	50	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00023	0.00014	0.00014
Molybdenum	T	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.016	0.022	ND	ND		
Nickel	T	mg/L	2	100	HH DW (HQ=1)	0.73	100			8.8	8.9	8.8	8.8
Potassium	T	mg/L	2	0	No SLC			15.5	25	ND	ND		
Selenium	T	mg/L	2	100	HH DW (HQ=1)	0.18	0			0.085	0.1	0.094	0.094
Silver	T	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.001	0.0056	ND	ND		
Sodium	T	mg/L	2	0	No SLC			21.9	32.8	ND	ND		
Thallium	T	mg/L	2	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	T	mg/L	2	100	HH DW (HQ=1)	0.037	0			0.005	0.011	0.0078	0.0078
Zinc	T	mg/L	2	100	HH DW (HQ=1)	11	100			111	124	118	118

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-13

Seep/Spring-Colluvium

RI/FS Groundwater Area 2 - Area that contains Capulin Rock Pile

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	D	mg/L	2	100	HH DW (HQ=1)	37	100			1080	1190	1140	1140
Antimony	D	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.038	0.053	ND	ND		
Arsenic	D	mg/L	2	50	HH DW (HQ=1)	0.01	100	0.11	0.11	ND	0.091	0.072	0.072
Barium	D	mg/L	2	0	HH DW (HQ=1)	2.6	0	0.049	0.073	ND	ND		
Beryllium	D	mg/L	2	100	HH DW (HQ=1)	0.073	100			0.28	0.28	0.28	0.28
Boron	D	mg/L	2	50	HH DW (HQ=1)	3.3	0	0.036	0.036	ND	0.053	0.035	0.035
Cadmium	D	mg/L	2	100	HH DW (HQ=1)	0.018	100			0.65	0.66	0.66	0.66
Calcium	D	mg/L	2	100	No SLC					414	471	443	443
Chromium	D	mg/L	2	100	HH DW (HQ=1)	0.1	100			0.25	0.58	0.42	0.42
Cobalt	D	mg/L	2	100	HH DW (HQ=1)	0.73	100			3.5	3.9	3.7	3.7
Copper	D	mg/L	2	100	HH DW (HQ=1)	1.4	100			8.6	8.7	8.6	8.6
Iron	D	mg/L	2	100	HH DW (HQ=1)	11	100			369	391	380	380
Lead	D	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	ND		
Magnesium	D	mg/L	2	100	No SLC					917	1030	974	974
Manganese	D	mg/L	2	100	HH DW (HQ=1)	1.7	100			447	533	490	490
Mercury	D	mg/L	2	50	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00022	0.00014	0.00014
Molybdenum	D	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.016	0.028	ND	ND		
Nickel	D	mg/L	2	100	HH DW (HQ=1)	0.73	100			8.3	8.9	8.6	8.6
Potassium	D	mg/L	2	0	No SLC			15.5	25	ND	ND		
Selenium	D	mg/L	2	100	HH DW (HQ=1)	0.18	0			0.078	0.11	0.095	0.095
Silver	D	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.001	0.0055	ND	ND		
Sodium	D	mg/L	2	0	No SLC			21.9	44.2	ND	ND		
Thallium	D	mg/L	2	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	D	mg/L	2	100	HH DW (HQ=1)	0.26	0			0.0061	0.0089	0.0075	0.0075
Zinc	D	mg/L	2	100	HH DW (HQ=1)	11	100			104	126	115	115

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	3	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	3	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	3	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	3	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	7	NA	No SLC					3.8	7.4	5.2	4.8
EH	T	millivolts	7	NA	No SLC					77.1	618	319	318
pH	T	SU	7	NA	No SLC					5.4	6.9	6.1	6.1
Specific Conductance	T	uS/cm	7	NA	No SLC					977	1230	1070	1020
Temperature	T	Celsius	7	NA	No SLC					6	17.7	13.7	14.4
Turbidity	T	NTU	7	NA	No SLC					0	58	8.8	1.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	7	100	No SLC					16.2	44.6	38.7	42
Carbonate (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	7	100	HH DW (HQ=1)	250	0			10	41.3	14.8	10.5
Cyanide	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	7	100	HH DW (HQ=1)	2.2	0			1.6	1.9	1.8	1.8
Hardness	T	mg/L	7	100	No SLC					467	1390	662	553
Hydroxide (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	7	100	HH DW (HQ=1)	10	0			1.9	3	2.1	2
Nitrite	T	mg/L	7	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	5	100	No SLC					5.8	6.5	6.3	6.5
Phosphate, Ortho As P	T	mg/L	7	57.1	No SLC			0.1	0.11	ND	0.11	0.073	0.055
Phosphorus	T	mg/L	7	100	No SLC					0.031	0.12	0.091	0.11
Specific Conductance	T	umhos/cm	5	100	No SLC					885	2080	1200	1020
Sulfate	T	mg/L	7	100	HH DW (HQ=1)	1500	14.3			491	1530	671	528
Total Alkalinity	T	mg/L	7	100	No SLC					16.2	44.6	38.7	42

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Dissolved Solids	T	mg/L	7	100	No SLC					478	3640	1430	922
Total Kjeldahl Nitrogen	T	mg/L	7	14.3	No SLC			0.24	0.24	ND	3.9		
Total Organic Carbon	T	mg/L	7	0	No SLC			1	1.3	ND	ND		
Total Suspended Solids	T	mg/L	7	14.3	No SLC			0.7	2.4	ND	13.7		
Hardness	D	mg/L	7	100	No SLC					422	1400	659	563
Isotopes													
Delta D	T	per mil	1	100	No SLC					-101	-101	-101	-101
Delta O-18	T	per mil	1	100	No SLC					-13.7	-13.7	-13.7	-13.7
Metals													
Aluminum	T	mg/L	7	14.3	HH DW (HQ=1)	37	0	0.14	2.2	ND	1.4		
Antimony	T	mg/L	7	0	HH DW (HQ=1)	0.015	0	0.0002	0.082	ND	ND		
Arsenic	T	mg/L	7	85.7	HH DW (HQ=1)	0.01	0	0.035	0.035	ND	0.0012	0.003	0.00057
Barium	T	mg/L	7	85.7	HH DW (HQ=1)	2.6	0	0.12	0.12	ND	0.045	0.034	0.032
Beryllium	T	mg/L	7	42.9	HH DW (HQ=1)	0.073	0	0.0002	0.003	ND	0.001		
Boron	T	mg/L	7	57.1	HH DW (HQ=1)	3.3	0	0.0038	0.064	ND	0.024	0.017	0.017
Cadmium	T	mg/L	7	42.9	HH DW (HQ=1)	0.018	0	0.0005	0.13	ND	0.0045		
Calcium	T	mg/L	7	100	No SLC					120	377	173	143
Chromium	T	mg/L	7	0	HH DW (HQ=1)	0.1	0	0.0006	0.23	ND	ND		
Cobalt	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.0011	0.32	ND	ND		
Copper	T	mg/L	7	28.6	HH DW (HQ=1)	1.4	0	0.00088	0.23	ND	0.016		
Iron	T	mg/L	7	14.3	HH DW (HQ=1)	11	0	0.31	4.6	ND	1.8		
Lead	T	mg/L	7	14.3	HH DW (HQ=1)	0.015	0	0.0002	0.002	ND	0.0067		
Magnesium	T	mg/L	7	100	No SLC					40.8	109	55.8	47.6
Manganese	T	mg/L	7	14.3	HH DW (HQ=1)	1.7	0	0.005	0.16	ND	0.18		
Mercury	T	mg/L	7	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	7	85.7	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	0.081	0.058	0.069
Nickel	T	mg/L	7	71.4	HH DW (HQ=1)	0.73	0	0.017	0.45	ND	0.099	0.054	0.011
Potassium	T	mg/L	7	85.7	No SLC			63.8	63.8	ND	4.8	8.1	4.1
Selenium	T	mg/L	7	71.4	HH DW (HQ=1)	0.18	0	0.0021	0.003	ND	0.0059	0.0025	0.0022

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Silver	T	mg/L	7	14.3	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	0.0018		
Sodium	T	mg/L	7	85.7	No SLC			99.1	99.1	ND	89.9	41.8	31.8
Thallium	T	mg/L	7	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	T	mg/L	7	42.9	HH DW (HQ=1)	0.037	0	0.0004	0.001	ND	0.0023		
Zinc	T	mg/L	7	85.7	HH DW (HQ=1)	11	0	0.13	0.13	ND	0.5	0.19	0.14
Aluminum	D	mg/L	7	14.3	HH DW (HQ=1)	37	0	0.14	2.2	ND	0.023		
Antimony	D	mg/L	7	0	HH DW (HQ=1)	0.015	0	0.0002	0.082	ND	ND		
Arsenic	D	mg/L	7	57.1	HH DW (HQ=1)	0.01	0	0.0004	0.035	ND	0.00062	0.0029	0.00048
Barium	D	mg/L	7	85.7	HH DW (HQ=1)	2.6	0	0.12	0.12	ND	0.033	0.032	0.032
Beryllium	D	mg/L	7	42.9	HH DW (HQ=1)	0.073	0	0.0002	0.0024	ND	0.003		
Boron	D	mg/L	7	57.1	HH DW (HQ=1)	3.3	0	0.0046	0.064	ND	0.023	0.017	0.017
Cadmium	D	mg/L	7	42.9	HH DW (HQ=1)	0.018	0	0.0005	0.13	ND	0.0052		
Calcium	D	mg/L	7	100	No SLC					108	380	173	145
Chromium	D	mg/L	7	0	HH DW (HQ=1)	0.1	0	0.0006	0.23	ND	ND		
Cobalt	D	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.0016	0.32	ND	ND		
Copper	D	mg/L	7	28.6	HH DW (HQ=1)	1.4	0	0.0015	0.23	ND	0.0053		
Iron	D	mg/L	7	0	HH DW (HQ=1)	11	0	0.023	4.6	ND	ND		
Lead	D	mg/L	7	14.3	HH DW (HQ=1)	0.015	0	0.0001	0.002	ND	0.00033		
Magnesium	D	mg/L	7	100	No SLC					36.8	110	55.4	48.4
Manganese	D	mg/L	7	14.3	HH DW (HQ=1)	1.7	0	0.005	0.16	ND	0.0061		
Mercury	D	mg/L	7	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	7	100	HH DW (HQ=1)	0.18	0			0.0012	0.075	0.061	0.069
Nickel	D	mg/L	7	71.4	HH DW (HQ=1)	0.73	0	0.017	0.45	ND	0.098	0.053	0.01
Potassium	D	mg/L	7	85.7	No SLC			63.8	63.8	ND	4.6	8	4
Selenium	D	mg/L	7	71.4	HH DW (HQ=1)	0.18	0	0.003	0.003	ND	0.006	0.0025	0.0019
Silver	D	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	D	mg/L	7	85.7	No SLC			99.1	99.1	ND	89.5	42.2	33.4
Thallium	D	mg/L	7	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	D	mg/L	7	28.6	HH DW (HQ=1)	0.26	0	0.0002	0.001	ND	0.0002		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Zinc	D	mg/L	7	71.4	HH DW (HQ=1)	11	0	0.083	0.13	ND	0.5	0.17	0.14
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2,4-Dichlorophenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2,4-Dimethylphenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2,4-Dinitrophenol	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
2,4-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2,6-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2-Chloronaphthalene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2-Chlorophenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2-Methylnaphthalene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
2-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
2-Nitrophenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
3-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
4-Chloroaniline	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
4-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
4-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
4-Nitrophenol	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
Acenaphthene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Acenaphthylene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Anthracene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Benzo(a)anthracene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)pyrene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Benzo(b)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Benzo(k)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Carbazole	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Chrysene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Dibenzofuran	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Fluoranthene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Fluorene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobenzene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobutadiene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Hexachloroethane	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Isophorone	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Naphthalene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Nitrobenzene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Pentachlorophenol	T	mg/L	3	0	No SLC			0.025	0.027	ND	ND		
Phenanthrene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Phenol	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		
Pyrene	T	mg/L	3	0	No SLC			0.01	0.011	ND	ND		

Volatile Organics

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,1,1-Trichloroethane	T	mg/L	3	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	3	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	3	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-14
Groundwater-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Ethylbenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	3	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	9	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	9	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	9	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	9	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	20	NA	No SLC					0.35	17	4.7	4.1
Eh	T	millivolts	23	NA	No SLC					13.8	531	211	177
pH	T	SU	23	NA	No SLC					4.2	7.8	6	6.3
Specific Conductance	T	uS/cm	23	NA	No SLC					46	6490	2960	2940
Temperature	T	Celsius	23	NA	No SLC					7.6	16.3	12	11.6
Turbidity	T	NTU	23	NA	No SLC					0	251	64	31.5
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	21	71.4	No SLC			1.1	5.3	ND	360	164	168
Carbonate (as CaCO3)	T	mg/L	21	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	21	90.5	HH DW (HQ=1)	250	0	3.6	5	ND	240	72.8	16.8
Cyanide	T	mg/L	21	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	21	100	HH DW (HQ=1)	2.2	81			2.1	131	45.8	10
Hardness	T	mg/L	21	100	No SLC					1310	2270	1930	1960
Hydroxide (as CaCO3)	T	mg/L	21	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	21	57.1	HH DW (HQ=1)	10	0	0.2	0.82	ND	3.5	1.1	0.54
Nitrite	T	mg/L	21	23.8	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.011		
pH	T	SU	15	100	No SLC					4.3	7.9	6.4	6.8
Phosphate, Ortho As P	T	mg/L	21	4.8	No SLC			0.01	0.013	ND	0.016		
Phosphorus	T	mg/L	21	81	No SLC			0.01	0.01	ND	0.15	0.028	0.019
Specific Conductance	T	umhos/cm	15	100	No SLC					2080	3200	2790	2820
Sulfate	T	mg/L	21	100	HH DW (HQ=1)	1500	81			1380	2150	1770	1820
Total Alkalinity	T	mg/L	21	71.4	No SLC			1.1	5.3	ND	360	164	168

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Dissolved Solids	T	mg/L	21	100	No SLC					2260	3920	3200	3150
Total Kjeldahl Nitrogen	T	mg/L	21	9.5	No SLC			0.24	0.37	ND	2.7		
Total Organic Carbon	T	mg/L	21	42.9	No SLC			1	3	ND	3		
Total Suspended Solids	T	mg/L	21	90.5	No SLC			2.2	5.8	ND	71.8	23.8	25.9
Hardness	D	mg/L	21	100	No SLC					1340	2300	1910	1970
Isotopes													
Delta D	T	per mil	4	100	No SLC					-81.8	-97.2	-87.3	-85
Delta O-18	T	per mil	4	100	No SLC					-11.1	-12.9	-11.8	-11.7
Metals													
Aluminum	T	mg/L	21	81	HH DW (HQ=1)	37	41.2	0.14	2.2	ND	85	27.8	5
Antimony	T	mg/L	21	0	HH DW (HQ=1)	0.015	0	0.0004	0.082	ND	ND		
Arsenic	T	mg/L	21	38.1	HH DW (HQ=1)	0.01	25	0.0004	0.048	ND	0.055		
Barium	T	mg/L	21	47.6	HH DW (HQ=1)	2.6	0	0.0092	0.12	ND	0.03		
Beryllium	T	mg/L	21	100	HH DW (HQ=1)	0.073	61.9			0.018	0.15	0.089	0.1
Boron	T	mg/L	21	52.4	HH DW (HQ=1)	3.3	0	0.012	0.084	ND	0.028	0.019	0.015
Cadmium	T	mg/L	21	71.4	HH DW (HQ=1)	0.018	26.7	0.0005	0.13	ND	0.1	0.026	0.0062
Calcium	T	mg/L	21	100	No SLC					431	839	609	603
Chromium	T	mg/L	21	14.3	HH DW (HQ=1)	0.1	0	0.0006	0.37	ND	0.0047		
Cobalt	T	mg/L	21	66.7	HH DW (HQ=1)	0.73	0	0.038	0.37	ND	0.19	0.099	0.09
Copper	T	mg/L	21	71.4	HH DW (HQ=1)	1.4	13.3	0.0015	0.23	ND	1.6	0.43	0.01
Iron	T	mg/L	21	61.9	HH DW (HQ=1)	11	7.7	0.31	4.9	ND	43.9	4.9	2.3
Lead	T	mg/L	21	100	HH DW (HQ=1)	0.015	4.8			0.00074	0.039	0.0073	0.0033
Magnesium	T	mg/L	21	100	No SLC					35.3	201	99.3	82
Manganese	T	mg/L	21	100	HH DW (HQ=1)	1.7	100			4.6	43.5	22.9	27
Mercury	T	mg/L	21	0	HH DW (HQ=1)	0.011	0	0.0001	0.00016	ND	ND		
Molybdenum	T	mg/L	21	95.2	HH DW (HQ=1)	0.18	35	0.001	0.001	ND	6.5	1.8	0.12
Nickel	T	mg/L	21	76.2	HH DW (HQ=1)	0.73	0	0.15	0.45	ND	0.5	0.18	0.17
Potassium	T	mg/L	21	76.2	No SLC			20.2	63.8	ND	17.8	14.7	12.1
Selenium	T	mg/L	21	61.9	HH DW (HQ=1)	0.18	0	0.0006	0.003	ND	0.039	0.0069	0.0017

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Silver	T	mg/L	21	4.8	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	0.00014		
Sodium	T	mg/L	21	81	No SLC			45.6	99.1	ND	73.4	46.8	49.5
Thallium	T	mg/L	21	23.8	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	0.0005		
Vanadium	T	mg/L	21	38.1	HH DW (HQ=1)	0.037	0	0.0004	0.002	ND	0.0006		
Zinc	T	mg/L	21	100	HH DW (HQ=1)	11	4.8			0.38	11.3	4.2	3.2
Aluminum	D	mg/L	21	42.9	HH DW (HQ=1)	37	77.8	0.019	2.2	ND	87.9		
Antimony	D	mg/L	21	0	HH DW (HQ=1)	0.015	0	0.0002	0.082	ND	ND		
Arsenic	D	mg/L	21	14.3	HH DW (HQ=1)	0.01	33.3	0.00023	0.048	ND	0.045		
Barium	D	mg/L	21	47.6	HH DW (HQ=1)	2.6	0	0.0092	0.12	ND	0.023		
Beryllium	D	mg/L	21	100	HH DW (HQ=1)	0.073	61.9			0.0046	0.15	0.081	0.099
Boron	D	mg/L	21	61.9	HH DW (HQ=1)	3.3	0	0.011	0.084	ND	0.095	0.022	0.014
Cadmium	D	mg/L	21	71.4	HH DW (HQ=1)	0.018	26.7	0.0005	0.13	ND	0.093	0.026	0.006
Calcium	D	mg/L	21	100	No SLC					441	851	606	578
Chromium	D	mg/L	21	9.5	HH DW (HQ=1)	0.1	0	0.0006	0.37	ND	0.0035		
Chromium, Hexavalent	D	mg/L	2	50	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0073	0.0062	0.0062
Cobalt	D	mg/L	21	66.7	HH DW (HQ=1)	0.73	0	0.038	0.37	ND	0.2	0.097	0.09
Copper	D	mg/L	21	61.9	HH DW (HQ=1)	1.4	15.4	0.00089	0.23	ND	1.7	0.43	0.0031
Iron	D	mg/L	21	38.1	HH DW (HQ=1)	11	12.5	0.023	4.9	ND	39.5		
Lead	D	mg/L	21	38.1	HH DW (HQ=1)	0.015	0	0.0002	0.002	ND	0.013		
Magnesium	D	mg/L	21	100	No SLC					35.4	185	97	79
Manganese	D	mg/L	21	100	HH DW (HQ=1)	1.7	100			4.7	40.7	22	26.8
Mercury	D	mg/L	21	0	HH DW (HQ=1)	0.011	0	0.0001	0.00024	ND	ND		
Molybdenum	D	mg/L	21	95.2	HH DW (HQ=1)	0.18	40	0.001	0.001	ND	6.4	1.8	0.096
Nickel	D	mg/L	21	71.4	HH DW (HQ=1)	0.73	0	0.15	0.45	ND	0.52	0.17	0.14
Potassium	D	mg/L	21	71.4	No SLC			15.5	63.8	ND	18.1	14.2	12.1
Selenium	D	mg/L	21	52.4	HH DW (HQ=1)	0.18	0	0.0006	0.003	ND	0.036	0.0063	0.0008
Silver	D	mg/L	21	4.8	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	0.00012		
Sodium	D	mg/L	21	81	No SLC			32.8	99.1	ND	73.1	46.1	49.5
Thallium	D	mg/L	21	19	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	0.00049		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Vanadium	D	mg/L	21	9.5	HH DW (HQ=1)	0.26	0	0.0001	0.002	ND	0.00031		
Zinc	D	mg/L	21	100	HH DW (HQ=1)	11	0			0.33	10	3.9	2.4
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2,4-Dichlorophenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2,4-Dimethylphenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2,4-Dinitrophenol	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
2,4-Dinitrotoluene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2,6-Dinitrotoluene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2-Chloronaphthalene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2-Chlorophenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2-Methylnaphthalene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2-Methylphenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
2-Nitroaniline	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
2-Nitrophenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
3-Nitroaniline	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
4-Chloroaniline	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
4-Methylphenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
4-Nitroaniline	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
4-Nitrophenol	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
Acenaphthene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Acenaphthylene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Anthracene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)anthracene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)pyrene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Benzo(b)fluoranthene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Benzo(k)fluoranthene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Carbazole	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Chrysene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Dibenzofuran	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Fluoranthene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Fluorene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobenzene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobutadiene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Hexachloroethane	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Isophorone	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Naphthalene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Nitrobenzene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Pentachlorophenol	T	mg/L	9	0	No SLC			0.025	0.029	ND	ND		
Phenanthrene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Phenol	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		
Pyrene	T	mg/L	9	0	No SLC			0.01	0.011	ND	ND		

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"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
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A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	9	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	9	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	9	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	9	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-15
Groundwater-Bedrock
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dichlorodifluoromethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	9	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	9	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	9	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-16
Seep/Spring-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	10	NA	No SLC					8.3	14.3	10.4	10.1
Eh	T	millivolts	10	NA	No SLC					457	604	508	479
Flow	T	gpm	14	NA	No SLC					2.4	20	11.4	10.9
pH	T	SU	10	NA	No SLC					2.3	2.8	2.5	2.5
Specific Conductance	T	uS/cm	10	NA	No SLC					10500	13700	11400	11100
Temperature	T	Celsius	10	NA	No SLC					0.95	18	8.5	7.5
Turbidity	T	NTU	10	NA	No SLC					8.7	1200	271	63
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	9	0	No SLC			1	1	ND	ND		
Carbonate (as CaCO3)	T	mg/L	9	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	9	100	HH DW (HQ=1)	250	22.2			10.2	258	68.7	15.6
Cyanide	T	mg/L	9	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	9	100	HH DW (HQ=1)	2.2	100			77.5	175	105	92.8
Hardness	T	mg/L	8	100	No SLC					3520	5400	4320	4110
Hydroxide (as CaCO3)	T	mg/L	9	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	9	22.2	HH DW (HQ=1)	10	0	1	2	ND	1.8		
Nitrite	T	mg/L	9	100	HH DW (HQ=1)	1	0			0.044	0.11	0.074	0.072
pH	T	SU	7	100	No SLC					2.7	3.1	2.9	2.8
Phosphate, Ortho As P	T	mg/L	9	100	No SLC					0.095	17.9	11.8	12.9
Phosphorus	T	mg/L	9	66.7	No SLC			0.01	0.01	ND	13	1.5	0.018
Specific Conductance	T	umhos/cm	7	100	No SLC					8600	14300	10700	10300
Sulfate	T	mg/L	9	100	HH DW (HQ=1)	1500	100			12300	17400	14800	14600
Total Alkalinity	T	mg/L	9	0	No SLC			1	1	ND	ND		
Total Dissolved Solids	T	mg/L	9	100	No SLC					17900	27900	22900	22900
Total Kjeldahl Nitrogen	T	mg/L	9	55.6	No SLC			0.24	0.68	ND	0.49	0.3	0.32
Total Organic Carbon	T	mg/L	9	100	No SLC					8.3	11.7	9.9	10.3
Total Suspended Solids	T	mg/L	9	100	No SLC					19.3	8690	1030	83.5
Hardness	D	mg/L	9	100	No SLC					3480	5250	4260	4070

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-16
Seep/Spring-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Isotopes													
Delta D	T	per mil	1	100	No SLC					-89.2	-89.2	-89.2	-89.2
Delta O-18	T	per mil	1	100	No SLC					-12.3	-12.3	-12.3	-12.3
Metals													
Aluminum	T	mg/L	8	100	HH DW (HQ=1)	37	100			1300	1750	1490	1500
Antimony	T	mg/L	8	0	HH DW (HQ=1)	0.015	0	0.028	0.082	ND	ND		
Arsenic	T	mg/L	8	75	HH DW (HQ=1)	0.01	100	0.07	0.1	ND	0.14	0.085	0.085
Barium	T	mg/L	8	12.5	HH DW (HQ=1)	2.6	0	0.049	0.12	ND	0.25		
Beryllium	T	mg/L	8	100	HH DW (HQ=1)	0.073	100			0.23	0.33	0.27	0.26
Boron	T	mg/L	8	0	HH DW (HQ=1)	3.3	0	0.027	0.12	ND	ND		
Cadmium	T	mg/L	8	100	HH DW (HQ=1)	0.018	100			0.39	0.64	0.51	0.51
Calcium	T	mg/L	8	100	No SLC					350	439	402	411
Chromium	T	mg/L	8	100	HH DW (HQ=1)	0.1	100			0.22	0.72	0.59	0.61
Cobalt	T	mg/L	8	100	HH DW (HQ=1)	0.73	100			2.8	4.6	3.6	3.5
Copper	T	mg/L	8	100	HH DW (HQ=1)	1.4	100			7.5	9.7	8.6	8.8
Iron	T	mg/L	8	100	HH DW (HQ=1)	11	100			261	1290	618	603
Lead	T	mg/L	8	75	HH DW (HQ=1)	0.015	33.3	0.001	0.002	ND	0.66	0.089	0.0049
Magnesium	T	mg/L	8	100	No SLC					643	1050	806	750
Manganese	T	mg/L	8	100	HH DW (HQ=1)	1.7	100			364	601	454	425
Mercury	T	mg/L	9	33.3	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.001		
Molybdenum	T	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.011	0.046	ND	ND		
Nickel	T	mg/L	8	100	HH DW (HQ=1)	0.73	100			6.5	9.8	8.1	8.1
Potassium	T	mg/L	8	12.5	No SLC			3.3	63.8	ND	146		
Selenium	T	mg/L	8	87.5	HH DW (HQ=1)	0.18	14.3	0.1	0.1	ND	0.22	0.11	0.11
Silver	T	mg/L	8	12.5	HH DW (HQ=1)	0.18	0	0.0002	0.0051	ND	0.0069		
Sodium	T	mg/L	8	0	No SLC			3.5	99.1	ND	ND		
Thallium	T	mg/L	8	12.5	HH DW (HQ=1)	0.0026	100	0.0002	0.001	ND	0.0029		
Vanadium	T	mg/L	8	75	HH DW (HQ=1)	0.037	16.7	0.002	0.002	ND	0.099	0.024	0.018
Zinc	T	mg/L	8	100	HH DW (HQ=1)	11	100			79	126	99.7	97.6

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-16
Seep/Spring-Colluvium
RI/FS Groundwater Area 3 - Portions of Goathill Gulch and Open Pit Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	D	mg/L	9	100	HH DW (HQ=1)	37	100			1280	1700	1460	1470
Antimony	D	mg/L	9	0	HH DW (HQ=1)	0.015	0	0.028	0.082	ND	ND		
Arsenic	D	mg/L	9	77.8	HH DW (HQ=1)	0.01	100	0.094	0.12	ND	0.12	0.078	0.078
Barium	D	mg/L	9	0	HH DW (HQ=1)	2.6	0	0.048	0.12	ND	ND		
Beryllium	D	mg/L	9	100	HH DW (HQ=1)	0.073	100			0.23	0.32	0.26	0.25
Boron	D	mg/L	9	11.1	HH DW (HQ=1)	3.3	0	0.027	0.12	ND	0.24		
Cadmium	D	mg/L	9	100	HH DW (HQ=1)	0.018	100			0.32	0.62	0.49	0.51
Calcium	D	mg/L	9	100	No SLC					352	422	399	406
Chromium	D	mg/L	9	100	HH DW (HQ=1)	0.1	100			0.18	0.74	0.59	0.63
Chromium, Hexavalent	D	mg/L	1	100	HH DW (HQ=1)	0.11	0			0.0023	0.0023	0.0023	0.0023
Cobalt	D	mg/L	9	100	HH DW (HQ=1)	0.73	100			2.9	4.5	3.5	3.4
Copper	D	mg/L	9	100	HH DW (HQ=1)	1.4	100			7.1	9.6	8.6	9.1
Iron	D	mg/L	9	100	HH DW (HQ=1)	11	100			248	661	544	614
Lead	D	mg/L	9	66.7	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	0.0022	0.0015	0.0015
Magnesium	D	mg/L	9	100	No SLC					633	1020	792	743
Manganese	D	mg/L	9	100	HH DW (HQ=1)	1.7	100			363	579	444	424
Mercury	D	mg/L	9	22.2	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00077		
Molybdenum	D	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.011	0.024	ND	ND		
Nickel	D	mg/L	9	100	HH DW (HQ=1)	0.73	100			6.4	9.6	8.1	8
Potassium	D	mg/L	9	0	No SLC			3.3	63.8	ND	ND		
Selenium	D	mg/L	9	88.9	HH DW (HQ=1)	0.18	12.5	0.095	0.095	ND	0.21	0.11	0.1
Silver	D	mg/L	9	0	HH DW (HQ=1)	0.18	0	0.0002	0.0051	ND	ND		
Sodium	D	mg/L	9	11.1	No SLC			3.5	99.1	ND	55.6		
Thallium	D	mg/L	9	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	9	77.8	HH DW (HQ=1)	0.26	0	0.002	0.002	ND	0.036	0.017	0.017
Zinc	D	mg/L	9	100	HH DW (HQ=1)	11	100			78.5	121	98.4	96.9

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-17
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	61	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	58	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	61	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	61	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	61	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	184	NA	No SLC					0.3	76.2	6.7	6
EH	T	millivolts	184	NA	No SLC					5.3	820	372	379
PH	T	SU	184	NA	No SLC					2.2	7.9	4.6	4.3
Specific Conductance	T	uS/cm	184	NA	No SLC					139	2630	1540	1730
Temperature	T	Celsius	184	NA	No SLC					5.4	18.4	8.8	8.5
Turbidity	T	NTU	175	NA	No SLC					0	1320	19	1.4
Helium Isotope and Tritium													
3H-3He	T	Years	2	100	No SLC					14	90.6	52.3	52.3
DEL He3	T	%	2	100	No SLC					8.4	38.6	23.5	23.5
DEL He4	T	%	2	100	No SLC					62.3	88.3	75.3	75.3
He Corr	T	1E-8cc/g	2	100	No SLC					7.7	8.9	8.3	8.3
Tritium TU	T	TU	2	100	No SLC					0.014	8.5	4.3	4.3
Uncert Age	T	Years	2	100	No SLC					0.54	2.7	1.6	1.6
Uncert TU	T	TU	2	100	No SLC					0.01	0.26	0.13	0.13
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	182	19.2	No SLC			1	12.1	ND	210		
Carbonate (as CaCO3)	T	mg/L	182	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	182	82.4	HH DW (HQ=1)	250	0	0.52	29.4	ND	82.4	17.1	17.6
Cyanide	T	mg/L	178	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	184	98.9	HH DW (HQ=1)	2.2	84.6	1	5	ND	44.1	20.6	23.7
Hardness	T	mg/L	176	100	No SLC					71.3	1620	806	848
Hydroxide (as CaCO3)	T	mg/L	182	1.1	No SLC			1	4.9	ND	174		
Nitrate	T	mg/L	182	89.6	HH DW (HQ=1)	10	0	0.2	2.9	ND	6.2	2.9	3.1

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-17
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrite	T	mg/L	182	1.6	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.069		
pH	T	SU	138	100	No SLC					3.5	7.9	5.1	4.7
Phosphate, Ortho As P	T	mg/L	182	37.4	No SLC			0.01	1.4	ND	0.48		
Phosphorus	T	mg/L	178	64	No SLC			0.01	0.1	ND	2.8	0.045	0.021
Specific Conductance	T	umhos/cm	136	100	No SLC					123	2270	1400	1530
Sulfate	T	mg/L	184	97.8	HH DW (HQ=1)	1500	5.6	8.8	14.2	ND	1720	946	1010
Total Alkalinity	T	mg/L	182	19.2	No SLC			1	12.1	ND	210		
Total Dissolved Solids	T	mg/L	184	94.6	No SLC			78	173	ND	2850	1540	1660
Total Kjeldahl Nitrogen	T	mg/L	177	5.1	No SLC			0.24	0.26	ND	4.6		
Total Organic Carbon	T	mg/L	182	22	No SLC			1	5	ND	7.2		
Total Suspended Solids	T	mg/L	184	39.1	No SLC			0.5	7.7	ND	2150		
Hardness	D	mg/L	184	100	No SLC					72.6	1570	815	858
Isotopes													
204Pb/206Pb	T	mg/L	1	100	No SLC					0.00005	0.00005	0.00005	0.00005
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00047	0.00047	0.00047	0.00047
208Pb/206Pb	T	mg/L	1	100	No SLC					0.00074	0.00074	0.00074	0.00074
Delta D	T	per mil	14	100	No SLC					-82.8	-97.7	-94.5	-95.4
Delta O-18	T	per mil	14	100	No SLC					-11.1	-13.8	-13.1	-13.2
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0015	0.0015	0.0014	0.0014
204Pb/206Pb	D	mg/L	1	100	No SLC					0.000052	0.000052	0.000052	0.000052
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00083	0.00083	0.00083	0.00083
208Pb/206Pb	D	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Delta 34S	D	per mil	1	100	No SLC					-0.4	-0.4	-0.4	-0.4
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.000044	0.000044	0.000044	0.000044
Lanthanides													
Cerium	T	mg/L	2	100	No SLC					0.037	0.055	0.046	0.046
Dysprosium	T	mg/L	2	100	No SLC					0.0044	0.0077	0.006	0.006
Erbium	T	mg/L	2	100	No SLC					0.0019	0.0033	0.0026	0.0026
Europium	T	mg/L	2	100	No SLC					0.0011	0.0022	0.0016	0.0016

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-17
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Gadolinium	T	mg/L	2	100	No SLC					0.0069	0.0097	0.0083	0.0083
Holmium	T	mg/L	2	100	No SLC					0.00083	0.0014	0.0011	0.0011
Lanthanum	T	mg/L	2	100	No SLC					0.023	0.04	0.032	0.032
Lutetium	T	mg/L	2	100	No SLC					0.00015	0.00029	0.00022	0.00022
Neodymium	T	mg/L	2	100	No SLC					0.027	0.039	0.033	0.033
Praseodymium	T	mg/L	2	100	No SLC					0.0072	0.0086	0.0079	0.0079
Samarium	T	mg/L	2	100	No SLC					0.0043	0.009	0.0067	0.0067
Terbium	T	mg/L	2	100	No SLC					0.00091	0.0015	0.0012	0.0012
Thulium	T	mg/L	2	100	No SLC					0.0002	0.00037	0.00029	0.00029
Ytterbium	T	mg/L	2	100	No SLC					0.001	0.0021	0.0015	0.0015
Yttrium	T	mg/L	2	100	No SLC					0.035	0.045	0.039	0.039
Cerium	D	mg/L	2	100	No SLC					0.008	0.062	0.035	0.035
Dysprosium	D	mg/L	2	100	No SLC					0.00072	0.0075	0.0041	0.0041
Erbium	D	mg/L	2	100	No SLC					0.00032	0.0032	0.0017	0.0017
Europium	D	mg/L	2	100	No SLC					0.00018	0.0022	0.0012	0.0012
Gadolinium	D	mg/L	2	100	No SLC					0.0012	0.01	0.0057	0.0057
Holmium	D	mg/L	2	100	No SLC					0.00014	0.0013	0.00073	0.00073
Lanthanum	D	mg/L	2	100	No SLC					0.0089	0.027	0.018	0.018
Lutetium	D	mg/L	2	100	No SLC					0.000024	0.00029	0.00015	0.00015
Neodymium	D	mg/L	2	100	No SLC					0.005	0.042	0.024	0.024
Praseodymium	D	mg/L	2	100	No SLC					0.0013	0.0096	0.0055	0.0055
Samarium	D	mg/L	2	100	No SLC					0.00076	0.0091	0.0049	0.0049
Terbium	D	mg/L	2	100	No SLC					0.00015	0.0015	0.00082	0.00082
Thulium	D	mg/L	2	100	No SLC					0.000035	0.00037	0.0002	0.0002
Ytterbium	D	mg/L	2	100	No SLC					0.00018	0.0021	0.0011	0.0011
Yttrium	D	mg/L	2	100	No SLC					0.007	0.049	0.028	0.028
Metals													
Aluminum	T	mg/L	173	82.7	HH DW (HQ=1)	37	63.6	0.006	30.2	ND	124	35.3	38.8
Antimony	T	mg/L	173	1.7	HH DW (HQ=1)	0.015	100	0.0002	0.14	ND	0.17		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-17
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Arsenic	T	mg/L	173	6.4	HH DW (HQ=1)	0.01	63.6	0.0004	0.063	ND	0.095		
Barium	T	mg/L	173	16.8	HH DW (HQ=1)	2.6	0	0.0073	0.19	ND	0.058		
Beryllium	T	mg/L	173	52.6	HH DW (HQ=1)	0.073	0	0.0002	0.034	ND	0.052	0.0096	0.01
Boron	T	mg/L	173	4.6	HH DW (HQ=1)	3.3	0	0.0027	0.2	ND	0.078		
Cadmium	T	mg/L	173	26.6	HH DW (HQ=1)	0.018	82.6	0.0001	0.37	ND	0.13		
Calcium	T	mg/L	173	99.4	No SLC			2.9	2.9	ND	528	172	162
Chromium	T	mg/L	172	1.7	HH DW (HQ=1)	0.1	0	0.0006	0.57	ND	0.021		
Cobalt	T	mg/L	173	27.7	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.47		
Copper	T	mg/L	173	80.3	HH DW (HQ=1)	1.4	0	0.0003	1.3	ND	1.3	0.49	0.52
Iron	T	mg/L	173	9.2	HH DW (HQ=1)	11	6.3	0.023	6.7	ND	24.1		
Lead	T	mg/L	173	37	HH DW (HQ=1)	0.015	4.7	0.0001	0.018	ND	0.028		
Magnesium	T	mg/L	173	96	No SLC			2.9	48.5	ND	192	90.4	102
Manganese	T	mg/L	173	89.6	HH DW (HQ=1)	1.7	92.9	0.0009	0.033	ND	44.5	17.8	20.4
Mercury	T	mg/L	184	1.1	HH DW (HQ=1)	0.011	0	0.0001	0.00024	ND	0.00012		
Molybdenum	T	mg/L	173	11.6	HH DW (HQ=1)	0.18	0	0.0011	0.03	ND	0.072		
Nickel	T	mg/L	173	62.4	HH DW (HQ=1)	0.73	17.6	0.0002	1.7	ND	1.1	0.4	0.43
Potassium	T	mg/L	173	20.2	No SLC			0.49	110	ND	34.1		
Selenium	T	mg/L	173	46.2	HH DW (HQ=1)	0.18	0	0.0004	0.036	ND	0.018		
Silver	T	mg/L	173	0.58	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	0.0031		
Sodium	T	mg/L	173	26.6	No SLC			3.3	99.1	ND	61.8		
Thallium	T	mg/L	173	0.58	HH DW (HQ=1)	0.0026	100	0.0001	0.001	ND	0.0032		
Vanadium	T	mg/L	173	13.3	HH DW (HQ=1)	0.037	0	0.0001	0.0051	ND	0.0056		
Zinc	T	mg/L	173	91.9	HH DW (HQ=1)	11	0	0.016	6.5	ND	8.8	3.9	4.4
Aluminum	D	mg/L	184	82.1	HH DW (HQ=1)	37	66.9	0.0042	29.9	ND	85.6	35.2	40
Antimony	D	mg/L	184	0.54	HH DW (HQ=1)	0.015	100	0.0002	0.097	ND	0.071		
Arsenic	D	mg/L	184	4.9	HH DW (HQ=1)	0.01	66.7	0.0004	0.081	ND	0.044		
Barium	D	mg/L	184	15.8	HH DW (HQ=1)	2.6	0	0.0092	0.19	ND	0.057		
Beryllium	D	mg/L	184	55.4	HH DW (HQ=1)	0.073	0	0.0002	0.038	ND	0.023	0.0096	0.01
Boron	D	mg/L	184	4.3	HH DW (HQ=1)	3.3	0	0.0027	0.2	ND	0.014		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-17
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	D	mg/L	184	26.6	HH DW (HQ=1)	0.018	85.7	0.0001	0.39	ND	0.25		
Calcium	D	mg/L	184	100	No SLC					24.8	515	174	164
Chromium	D	mg/L	183	2.2	HH DW (HQ=1)	0.1	50	0.0006	0.57	ND	0.37		
Chromium, Hexavalent	D	mg/L	9	33.3	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0053		
Cobalt	D	mg/L	184	32.6	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	0.56		
Copper	D	mg/L	184	77.7	HH DW (HQ=1)	1.4	0	0.0003	1.3	ND	1.3	0.48	0.53
Iron	D	mg/L	184	4.3	HH DW (HQ=1)	11	12.5	0.023	6.7	ND	13.6		
Lead	D	mg/L	184	26.6	HH DW (HQ=1)	0.015	6.1	0.0001	0.004	ND	0.022		
Magnesium	D	mg/L	184	96.2	No SLC			2.9	48.5	ND	188	92.3	103
Manganese	D	mg/L	184	89.1	HH DW (HQ=1)	1.7	94.5	0.0009	0.13	ND	43.5	18.3	21.2
Mercury	D	mg/L	184	1.1	HH DW (HQ=1)	0.011	0	0.0001	0.00022	ND	0.00016		
Molybdenum	D	mg/L	184	9.8	HH DW (HQ=1)	0.18	0	0.0011	0.03	ND	0.054		
Nickel	D	mg/L	184	64.7	HH DW (HQ=1)	0.73	15.1	0.0002	1.7	ND	1.3	0.42	0.46
Potassium	D	mg/L	184	17.9	No SLC			0.54	110	ND	41		
Selenium	D	mg/L	184	42.4	HH DW (HQ=1)	0.18	0	0.0004	0.036	ND	0.016		
Silver	D	mg/L	184	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	D	mg/L	184	26.6	No SLC			3.3	126	ND	262		
Thallium	D	mg/L	184	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	D	mg/L	184	10.9	HH DW (HQ=1)	0.26	0	0.0002	0.0068	ND	0.0042		
Zinc	D	mg/L	184	90.2	HH DW (HQ=1)	11	0	0.016	6.9	ND	9.6	4.1	4.5

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	12	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	11	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	12	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	12	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	12	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	39	NA	No SLC					0.5	8	4.6	4.7
EH	T	millivolts	39	NA	No SLC					198	706	434	434
pH	T	SU	39	NA	No SLC					2.8	4.4	3.8	4
Specific Conductance	T	uS/cm	39	NA	No SLC					1950	7560	3800	3210
Temperature	T	Celsius	39	NA	No SLC					6.5	24.6	11.7	10.3
Turbidity	T	NTU	39	NA	No SLC					0	197	13.3	2.2
Helium Isotope and Tritium													
3H-3He	T	Years	3	100	No SLC					0.32	60.1	21.6	4.5
DEL He3	T	%	3	100	No SLC					0.5	569	193	9.5
DEL He4	T	%	3	100	No SLC					4.3	751	255	8.7
He Corr	T	1E-8cc/g	3	100	No SLC					5	38.3	16.1	5.1
Tritium TU	T	TU	3	100	No SLC					5.1	8.6	6.7	6.6
Uncert Age	T	Years	3	100	No SLC					0.54	0.71	0.6	0.55
Uncert TU	T	TU	3	100	No SLC					0.15	0.26	0.2	0.2
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	35	0	No SLC			1	4.2	ND	ND		
Carbonate (as CaCO3)	T	mg/L	35	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	35	97.1	HH DW (HQ=1)	250	0	37.1	37.1	ND	106	35.8	27.1
Cyanide	T	mg/L	35	8.6	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	0.12		
Fluoride	T	mg/L	38	100	HH DW (HQ=1)	2.2	97.4			0.71	158	66.1	36.7
Hardness	T	mg/L	34	100	No SLC					954	4970	2110	1290
Hydroxide (as CaCO3)	T	mg/L	35	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	35	88.6	HH DW (HQ=1)	10	25.8	0.4	0.5	ND	87	8.6	4.3

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrite	T	mg/L	35	34.3	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.41		
pH	T	SU	27	100	No SLC					3.1	4.8	4.3	4.4
Phosphate, Ortho As P	T	mg/L	35	28.6	No SLC			0.01	0.24	ND	0.08		
Phosphorus	T	mg/L	33	93.9	No SLC			0.01	0.01	ND	0.36	0.064	0.052
Specific Conductance	T	umhos/cm	27	100	No SLC					1640	6900	3280	2250
Sulfate	T	mg/L	38	100	HH DW (HQ=1)	1500	57.9			1180	7650	2980	1650
Total Alkalinity	T	mg/L	35	0	No SLC			1	4.2	ND	ND		
Total Dissolved Solids	T	mg/L	38	100	No SLC					1850	12800	4800	3030
Total Kjeldahl Nitrogen	T	mg/L	35	17.1	No SLC			0.24	0.69	ND	4.4		
Total Organic Carbon	T	mg/L	35	60	No SLC			1	3.1	ND	4.7	2.1	1.2
Total Suspended Solids	T	mg/L	38	55.3	No SLC			0.9	5.2	ND	405	26.1	2.6
Hardness	D	mg/L	38	100	No SLC					895	5020	2150	1280
Isotopes													
204Pb/206Pb	T	mg/L	3	100	No SLC					0.000049	0.00012	0.000078	0.000063
207Pb/206Pb	T	mg/L	3	100	No SLC					0.00051	0.00072	0.00062	0.00063
208Pb/206Pb	T	mg/L	3	100	No SLC					0.00042	0.0013	0.00087	0.0009
Delta D	T	per mil	5	100	No SLC					-88.7	-95.1	-92.9	-93.8
Delta O-18	T	per mil	5	100	No SLC					-12	-13.1	-12.6	-12.9
Lead	T	mg/L	3	100	HH DW (HQ=1)	0.015	33.3			0.005	0.13	0.048	0.0092
204Pb/206Pb	D	mg/L	3	100	No SLC					0.000048	0.00012	0.000079	0.000064
207Pb/206Pb	D	mg/L	3	100	No SLC					0.00051	0.00069	0.0006	0.00061
208Pb/206Pb	D	mg/L	3	100	No SLC					0.00042	0.0011	0.00081	0.00086
Delta 34S	D	per mil	3	100	No SLC					-2.4	-2.9	-2.7	-2.8
Lead	D	mg/L	3	100	HH DW (HQ=1)	0.015	33.3			0.0051	0.1	0.039	0.0085
Lanthanides													
Cerium	T	mg/L	3	100	No SLC					0.27	2.1	1.2	1.3
Dysprosium	T	mg/L	3	100	No SLC					0.031	0.33	0.17	0.15
Erbium	T	mg/L	3	100	No SLC					0.012	0.14	0.073	0.069
Europium	T	mg/L	3	100	No SLC					0.0099	0.084	0.043	0.035

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Gadolinium	T	mg/L	3	100	No SLC					0.046	0.46	0.23	0.18
Holmium	T	mg/L	3	100	No SLC					0.0052	0.057	0.03	0.027
Lanthanum	T	mg/L	3	100	No SLC					0.096	0.64	0.41	0.48
Lutetium	T	mg/L	3	100	No SLC					0.0011	0.012	0.0068	0.0078
Neodymium	T	mg/L	3	100	No SLC					0.19	1.7	0.83	0.64
Praseodymium	T	mg/L	3	100	No SLC					0.042	0.34	0.18	0.16
Samarium	T	mg/L	3	100	No SLC					0.044	0.41	0.2	0.14
Terbium	T	mg/L	3	100	No SLC					0.0064	0.068	0.034	0.027
Thulium	T	mg/L	3	100	No SLC					0.0014	0.016	0.0086	0.0089
Ytterbium	T	mg/L	3	100	No SLC					0.0079	0.089	0.05	0.053
Yttrium	T	mg/L	3	100	No SLC					0.15	1.7	0.9	0.82
Cerium	D	mg/L	3	100	No SLC					0.29	2.3	1.3	1.5
Dysprosium	D	mg/L	3	100	No SLC					0.031	0.32	0.16	0.14
Erbium	D	mg/L	3	100	No SLC					0.012	0.13	0.068	0.066
Europium	D	mg/L	3	100	No SLC					0.01	0.084	0.043	0.036
Gadolinium	D	mg/L	3	100	No SLC					0.05	0.48	0.24	0.19
Holmium	D	mg/L	3	100	No SLC					0.0053	0.054	0.028	0.025
Lanthanum	D	mg/L	3	100	No SLC					0.11	0.75	0.46	0.54
Lutetium	D	mg/L	3	100	No SLC					0.0011	0.011	0.0065	0.0074
Neodymium	D	mg/L	3	100	No SLC					0.21	1.7	0.87	0.68
Praseodymium	D	mg/L	3	100	No SLC					0.047	0.36	0.19	0.18
Samarium	D	mg/L	3	100	No SLC					0.046	0.4	0.2	0.15
Terbium	D	mg/L	3	100	No SLC					0.0066	0.067	0.034	0.027
Thulium	D	mg/L	3	100	No SLC					0.0014	0.015	0.0083	0.0085
Ytterbium	D	mg/L	3	100	No SLC					0.0081	0.086	0.048	0.052
Yttrium	D	mg/L	3	100	No SLC					0.16	1.9	0.97	0.86
Metals													
Aluminum	T	mg/L	34	100	HH DW (HQ=1)	37	100			39.2	457	149	76.1
Antimony	T	mg/L	34	0	HH DW (HQ=1)	0.015	0	0.003	0.082	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Arsenic	T	mg/L	34	17.6	HH DW (HQ=1)	0.01	100	0.002	0.048	ND	0.047		
Barium	T	mg/L	34	0	HH DW (HQ=1)	2.6	0	0.012	0.14	ND	ND		
Beryllium	T	mg/L	34	94.1	HH DW (HQ=1)	0.073	43.8	0.018	0.034	ND	0.22	0.082	0.019
Boron	T	mg/L	34	8.8	HH DW (HQ=1)	3.3	0	0.023	0.084	ND	0.036		
Cadmium	T	mg/L	34	52.9	HH DW (HQ=1)	0.018	100	0.06	0.2	ND	0.21	0.089	0.062
Calcium	T	mg/L	34	100	No SLC					171	581	321	229
Chromium	T	mg/L	34	8.8	HH DW (HQ=1)	0.1	66.7	0.009	0.57	ND	0.12		
Cobalt	T	mg/L	34	73.5	HH DW (HQ=1)	0.73	28	0.31	0.37	ND	3	0.72	0.35
Copper	T	mg/L	34	100	HH DW (HQ=1)	1.4	41.2			0.7	7.5	2.6	1.2
Iron	T	mg/L	34	17.6	HH DW (HQ=1)	11	33.3	0.3	14.3	ND	12.2		
Lead	T	mg/L	34	73.5	HH DW (HQ=1)	0.015	24	0.001	0.01	ND	0.22	0.026	0.0057
Magnesium	T	mg/L	34	100	No SLC					99.3	915	317	167
Manganese	T	mg/L	34	100	HH DW (HQ=1)	1.7	100			13.9	259	87.2	39.5
Mercury	T	mg/L	38	2.6	HH DW (HQ=1)	0.011	0	0.0001	0.00012	ND	0.00015		
Molybdenum	T	mg/L	34	14.7	HH DW (HQ=1)	0.18	0	0.01	0.024	ND	0.05		
Nickel	T	mg/L	34	94.1	HH DW (HQ=1)	0.73	68.8	0.44	1.7	ND	5.2	1.7	0.84
Potassium	T	mg/L	34	5.9	No SLC			3.3	110	ND	12.4		
Selenium	T	mg/L	34	85.3	HH DW (HQ=1)	0.18	0	0.007	0.008	ND	0.066	0.019	0.012
Silver	T	mg/L	34	8.8	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	0.0034		
Sodium	T	mg/L	34	38.2	No SLC			32.8	99.1	ND	84.8		
Thallium	T	mg/L	34	0	HH DW (HQ=1)	0.0026	0	0.001	0.0019	ND	ND		
Vanadium	T	mg/L	34	14.7	HH DW (HQ=1)	0.037	0	0.001	0.0055	ND	0.011		
Zinc	T	mg/L	34	97.1	HH DW (HQ=1)	11	42.4	7.1	7.1	ND	30.9	14.2	7.6
Aluminum	D	mg/L	38	100	HH DW (HQ=1)	37	100			40.1	455	152	78
Antimony	D	mg/L	38	0	HH DW (HQ=1)	0.015	0	0.003	0.082	ND	ND		
Arsenic	D	mg/L	38	10.5	HH DW (HQ=1)	0.01	100	0.002	0.048	ND	0.04		
Barium	D	mg/L	38	0	HH DW (HQ=1)	2.6	0	0.012	0.14	ND	ND		
Beryllium	D	mg/L	38	94.7	HH DW (HQ=1)	0.073	44.4	0.018	0.032	ND	0.22	0.084	0.02
Boron	D	mg/L	38	5.3	HH DW (HQ=1)	3.3	0	0.018	0.084	ND	0.036		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	D	mg/L	38	65.8	HH DW (HQ=1)	0.018	100	0.07	0.13	ND	0.23	0.095	0.066
Calcium	D	mg/L	38	100	No SLC					160	591	323	230
Chromium	D	mg/L	38	10.5	HH DW (HQ=1)	0.1	100	0.009	0.57	ND	0.16		
Chromium, Hexavalent	D	mg/L	2	50	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0023	0.0036	0.0036
Cobalt	D	mg/L	38	78.9	HH DW (HQ=1)	0.73	26.7	0.31	0.37	ND	3	0.75	0.35
Copper	D	mg/L	38	94.7	HH DW (HQ=1)	1.4	44.4	1.1	1.1	ND	6.8	2.6	1.2
Iron	D	mg/L	38	13.2	HH DW (HQ=1)	11	60	0.3	16.8	ND	12.9		
Lead	D	mg/L	38	71.1	HH DW (HQ=1)	0.015	18.5	0.001	0.009	ND	0.2	0.017	0.0053
Magnesium	D	mg/L	38	100	No SLC					101	925	326	171
Manganese	D	mg/L	38	100	HH DW (HQ=1)	1.7	100			14.1	259	88.8	40.5
Mercury	D	mg/L	38	0	HH DW (HQ=1)	0.011	0	0.0001	0.00017	ND	ND		
Molybdenum	D	mg/L	38	7.9	HH DW (HQ=1)	0.18	0	0.01	0.024	ND	0.056		
Nickel	D	mg/L	38	94.7	HH DW (HQ=1)	0.73	77.8	0.45	1.7	ND	5.3	1.7	0.85
Potassium	D	mg/L	38	7.9	No SLC			3.3	110	ND	18.5		
Selenium	D	mg/L	38	84.2	HH DW (HQ=1)	0.18	0	0.007	0.008	ND	0.065	0.019	0.011
Silver	D	mg/L	38	2.6	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	0.0012		
Sodium	D	mg/L	38	44.7	No SLC			32.8	99.1	ND	101		
Thallium	D	mg/L	38	0	HH DW (HQ=1)	0.0026	0	0.001	0.0019	ND	ND		
Vanadium	D	mg/L	38	10.5	HH DW (HQ=1)	0.26	0	0.001	0.0057	ND	0.0045		
Zinc	D	mg/L	38	97.4	HH DW (HQ=1)	11	43.2	6.6	6.6	ND	31.4	14.4	7.8
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
2,4-Dinitrotoluene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,6-Dinitrotoluene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2-Chloronaphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
2-Nitrophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chloroaniline	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4-Nitrophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
Acenaphthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chrysene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dibenzofuran	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Nitrobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
Phenanthrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	1	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	1	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	1	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-18
Groundwater-Colluvium
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,2-Dichloroethene (total)	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	1	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	1	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	1	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	42	9.5	HH DW (HQ=1)	0.0022	75	0.00025	0.00025	ND	0.0089		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	39	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	38	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	42	16.7	No SLC			0.00025	0.00025	ND	0.0038		
HMX	T	mg/L	4	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	41	4.9	No SLC			0.01	0.01	ND	0.088		
Field													
DO	T	mg/L	118	NA	No SLC					-1.9	80.7	3.7	2.5
Eh	T	millivolts	118	NA	No SLC					-490	722	166	189
pH	T	SU	118	NA	No SLC					2.9	7.8	6	6.5
Specific Conductance	T	uS/cm	118	NA	No SLC					332	6810	2640	2660
Temperature	T	Celsius	118	NA	No SLC					0.7	25.1	9.4	8.8
Turbidity	T	NTU	114	NA	No SLC					0	221	22.4	8.7
Helium Isotope and Tritium													
3H-3He	T	Years	3	100	No SLC					2	136	65.2	58.2
DEL He3	T	%	3	100	No SLC					2.9	88.7	48.5	53.9
DEL He4	T	%	3	100	No SLC					9.6	543	225	121
He Corr	T	1E-8cc/g	3	100	No SLC					5.2	30.5	15.4	10.6
Tritium TU	T	TU	3	100	No SLC					0.012	6.5	2.4	0.57
Uncert Age	T	Years	3	100	No SLC					0.7	0.84	0.76	0.74
Uncert TU	T	TU	3	100	No SLC					0.01	0.19	0.074	0.017
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	88	76.1	No SLC			1	137	ND	1230	180	149
Carbonate (as CaCO3)	T	mg/L	88	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	88	95.5	HH DW (HQ=1)	250	1.2	3.7	39	ND	275	23.6	25
Cyanide	T	mg/L	88	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	91	100	HH DW (HQ=1)	2.2	68.1			1.5	48	14.2	5.8
Hardness	T	mg/L	90	100	No SLC					603	2580	1590	1750
Hydroxide (as CaCO3)	T	mg/L	88	1.1	No SLC			1	1	ND	53.5		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrate	T	mg/L	88	33	HH DW (HQ=1)	10	24.1	0.2	1.1	ND	74.3		
Nitrite	T	mg/L	86	15.1	HH DW (HQ=1)	1	15.4	0.005	0.005	ND	4.2		
pH	T	SU	62	100	No SLC					4	7.6	6.3	6.8
Phosphate, Ortho As P	T	mg/L	87	9.2	No SLC			0.01	0.84	ND	0.51		
Phosphorus	T	mg/L	88	76.1	No SLC			0.01	0.037	ND	1.4	0.058	0.028
Specific Conductance	T	umhos/cm	62	100	No SLC					944	3020	2330	2490
Sulfate	T	mg/L	91	100	HH DW (HQ=1)	1500	53.8			394	2110	1430	1570
Total Alkalinity	T	mg/L	88	76.1	No SLC			1	137	ND	1230	180	149
Total Dissolved Solids	T	mg/L	90	100	No SLC					802	3660	2430	2610
Total Kjeldahl Nitrogen	T	mg/L	88	4.5	No SLC			0.24	0.27	ND	0.48		
Total Organic Carbon	T	mg/L	88	33	No SLC			0.85	2.7	ND	373		
Total Suspended Solids	T	mg/L	91	76.9	No SLC			0.5	51.7	ND	10300	140	6.7
Hardness	D	mg/L	91	100	No SLC					580	2470	1590	1760
Isotopes													
Delta D	T	per mil	6	100	No SLC					-72.4	-95.6	-84.6	-84.5
Delta O-18	T	per mil	6	100	No SLC					-10.1	-13.1	-11.6	-11.6
Lanthanides													
Cerium	T	mg/L	1	100	No SLC					0.0017	0.0017	0.0017	0.0017
Dysprosium	T	mg/L	1	100	No SLC					0.00018	0.00018	0.00018	0.00018
Erbium	T	mg/L	1	100	No SLC					0.00012	0.00012	0.00012	0.00012
Europium	T	mg/L	1	100	No SLC					0.000039	0.000039	0.000039	0.000039
Gadolinium	T	mg/L	1	100	No SLC					0.00019	0.00019	0.00019	0.00019
Holmium	T	mg/L	1	100	No SLC					0.000038	0.000038	0.000038	0.000038
Lanthanum	T	mg/L	1	100	No SLC					0.00046	0.00046	0.00046	0.00046
Lutetium	T	mg/L	1	100	No SLC					0.000017	0.000017	0.000017	0.000017
Neodymium	T	mg/L	1	100	No SLC					0.00062	0.00062	0.00062	0.00062
Praseodymium	T	mg/L	1	100	No SLC					0.00014	0.00014	0.00014	0.00014
Samarium	T	mg/L	1	100	No SLC					0.00016	0.00016	0.00016	0.00016
Terbium	T	mg/L	1	100	No SLC					0.000029	0.000029	0.000029	0.000029

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Thulium	T	mg/L	1	100	No SLC					0.000017	0.000017	0.000017	0.000017
Ytterbium	T	mg/L	1	100	No SLC					0.00011	0.00011	0.00011	0.00011
Yttrium	T	mg/L	1	100	No SLC					0.0015	0.0015	0.0015	0.0015
Cerium	D	mg/L	1	100	No SLC					0.0015	0.0015	0.0015	0.0015
Dysprosium	D	mg/L	1	100	No SLC					0.0002	0.0002	0.0002	0.0002
Erbium	D	mg/L	1	100	No SLC					0.00015	0.00015	0.00015	0.00015
Europium	D	mg/L	1	100	No SLC					0.000044	0.000044	0.000044	0.000044
Gadolinium	D	mg/L	1	100	No SLC					0.00018	0.00018	0.00018	0.00018
Holmium	D	mg/L	1	100	No SLC					0.000047	0.000047	0.000047	0.000047
Lanthanum	D	mg/L	1	100	No SLC					0.00037	0.00037	0.00037	0.00037
Lutetium	D	mg/L	1	100	No SLC					0.000023	0.000023	0.000023	0.000023
Neodymium	D	mg/L	1	100	No SLC					0.0005	0.0005	0.00049	0.00049
Praseodymium	D	mg/L	1	100	No SLC					0.00011	0.00011	0.00011	0.00011
Samarium	D	mg/L	1	100	No SLC					0.00014	0.00014	0.00014	0.00014
Terbium	D	mg/L	1	100	No SLC					0.00003	0.00003	0.00003	0.00003
Thulium	D	mg/L	1	100	No SLC					0.000023	0.000023	0.000023	0.000023
Ytterbium	D	mg/L	1	100	No SLC					0.00015	0.00015	0.00014	0.00014
Yttrium	D	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Metals													
Aluminum	T	mg/L	87	56.3	HH DW (HQ=1)	37	30.6	0.006	2.3	ND	81.7	14.4	1.1
Antimony	T	mg/L	87	1.1	HH DW (HQ=1)	0.015	0	0.0004	0.082	ND	0.00042		
Arsenic	T	mg/L	87	54	HH DW (HQ=1)	0.01	8.5	0.0004	0.048	ND	0.033	0.0055	0.00088
Barium	T	mg/L	87	72.4	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.3	0.03	0.022
Beryllium	T	mg/L	87	74.7	HH DW (HQ=1)	0.073	23.1	0.0002	0.038	ND	0.11	0.023	0.0051
Boron	T	mg/L	87	47.1	HH DW (HQ=1)	3.3	0	0.0027	0.084	ND	0.25		
Cadmium	T	mg/L	87	49.4	HH DW (HQ=1)	0.018	55.8	0.0002	0.38	ND	0.13		
Calcium	T	mg/L	87	100	No SLC					147	781	479	555
Chromium	T	mg/L	87	26.4	HH DW (HQ=1)	0.1	4.3	0.0006	0.57	ND	0.25		
Cobalt	T	mg/L	87	47.1	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.39		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Copper	T	mg/L	87	47.1	HH DW (HQ=1)	1.4	9.8	0.0007	0.33	ND	1.7		
Iron	T	mg/L	87	63.2	HH DW (HQ=1)	11	20	0.19	6.7	ND	36.9	4.4	2
Lead	T	mg/L	87	83.9	HH DW (HQ=1)	0.015	50.7	0.0002	0.019	ND	1.7	0.081	0.012
Magnesium	T	mg/L	87	100	No SLC					29.6	182	97.8	102
Manganese	T	mg/L	87	95.4	HH DW (HQ=1)	1.7	86.7	0.012	0.019	ND	42.7	14.7	13.1
Mercury	T	mg/L	91	4.4	HH DW (HQ=1)	0.011	0	0.0001	0.00014	ND	0.0002		
Molybdenum	T	mg/L	87	42.5	HH DW (HQ=1)	0.18	0	0.0004	0.024	ND	0.036		
Nickel	T	mg/L	87	66.7	HH DW (HQ=1)	0.73	12.1	0.0004	1.7	ND	0.95	0.23	0.035
Potassium	T	mg/L	87	71.3	No SLC			1.9	110	ND	13.2	8.2	4.9
Selenium	T	mg/L	86	47.7	HH DW (HQ=1)	0.18	0	0.0004	0.012	ND	0.022		
Silver	T	mg/L	86	1.2	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	0.00037		
Sodium	T	mg/L	87	75.9	No SLC			9.9	99.1	ND	260	53.2	43.7
Thallium	T	mg/L	87	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0018	ND	ND		
Vanadium	T	mg/L	87	46	HH DW (HQ=1)	0.037	0	0.0002	0.0046	ND	0.0075		
Zinc	T	mg/L	87	85.1	HH DW (HQ=1)	11	5.4	0.016	3	ND	14.1	3.1	2.8
Aluminum	D	mg/L	91	52.7	HH DW (HQ=1)	37	37.5	0.006	0.63	ND	85.1	15.1	0.32
Antimony	D	mg/L	91	0	HH DW (HQ=1)	0.015	0	0.0004	0.082	ND	ND		
Arsenic	D	mg/L	91	49.5	HH DW (HQ=1)	0.01	11.1	0.0004	0.048	ND	0.04		
Barium	D	mg/L	91	68.1	HH DW (HQ=1)	2.6	0	0.012	0.12	ND	0.055	0.023	0.017
Beryllium	D	mg/L	91	73.6	HH DW (HQ=1)	0.073	22.4	0.0002	0.017	ND	0.1	0.022	0.005
Boron	D	mg/L	91	45.1	HH DW (HQ=1)	3.3	0	0.0027	0.084	ND	0.22		
Cadmium	D	mg/L	91	44	HH DW (HQ=1)	0.018	65	0.0002	0.42	ND	0.072		
Calcium	D	mg/L	91	100	No SLC					150	715	472	534
Chromium	D	mg/L	91	19.8	HH DW (HQ=1)	0.1	5.6	0.0006	0.57	ND	0.11		
Chromium, Hexavalent	D	mg/L	8	37.5	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.025		
Cobalt	D	mg/L	91	46.2	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.41		
Copper	D	mg/L	91	45.1	HH DW (HQ=1)	1.4	9.8	0.0006	1.3	ND	1.9		
Iron	D	mg/L	91	44	HH DW (HQ=1)	11	20	0.028	6.7	ND	27.4		
Lead	D	mg/L	91	64.8	HH DW (HQ=1)	0.015	49.2	0.0002	0.019	ND	0.14	0.026	0.0052

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Magnesium	D	mg/L	91	100	No SLC					28.6	190	99.4	103
Manganese	D	mg/L	91	93.4	HH DW (HQ=1)	1.7	89.4	0.005	0.019	ND	44.6	15.1	12.4
Mercury	D	mg/L	91	1.1	HH DW (HQ=1)	0.011	0	0.0001	0.00017	ND	0.00013		
Molybdenum	D	mg/L	91	42.9	HH DW (HQ=1)	0.18	0	0.0004	0.024	ND	0.036		
Nickel	D	mg/L	91	62.6	HH DW (HQ=1)	0.73	15.8	0.0004	1.7	ND	2.5	0.25	0.042
Potassium	D	mg/L	91	71.4	No SLC			1.6	110	ND	31.4	8.6	5.2
Selenium	D	mg/L	90	45.6	HH DW (HQ=1)	0.18	0	0.0004	0.0093	ND	0.022		
Silver	D	mg/L	90	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	91	78	No SLC			18.4	99.1	ND	241	54.4	44.4
Thallium	D	mg/L	91	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0019	ND	ND		
Vanadium	D	mg/L	91	19.8	HH DW (HQ=1)	0.26	0	0.0002	0.0051	ND	0.0052		
Zinc	D	mg/L	91	82.4	HH DW (HQ=1)	11	5.3	0.0069	2.9	ND	12.9	3.2	2.8
Pesticides-PCBs													
Aroclor 1016	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Aroclor 1221	T	mg/L	1	0	No SLC			0.002	0.002	ND	ND		
Aroclor 1232	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Aroclor 1242	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Aroclor 1248	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Aroclor 1254	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Aroclor 1260	T	mg/L	1	0	No SLC			0.001	0.001	ND	ND		
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
2,4-Dinitrotoluene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2,6-Dinitrotoluene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2-Chloronaphthalene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
2-Nitrophenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
4-Chloroaniline	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
4-Methylphenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
4-Nitrophenol	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
Acenaphthene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Chrysene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dibenzofuran	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Nitrobenzene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	2	0	No SLC			0.025	0.026	ND	ND		
Phenanthrene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	9	0	HH DW (HQ=1)	0.84	0	0.01	0.22	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
1,1,2-Trichloroethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
1,1-Dichloroethane	T	mg/L	9	11.1	HH DW (HQ=1)	0.81	0	0.01	0.22	ND	0.0009		
1,1-Dichloroethene	T	mg/L	9	0	HH DW (HQ=1)	0.34	0	0.01	0.22	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
1,2-Dichlorobenzene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
1,2-Dichloroethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-19
Groundwater-Bedrock
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,2-Dichloroethene (total)	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
1,2-Dichloropropane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
1,3-Dichlorobenzene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
1,4-Dichlorobenzene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
2-Butanone	T	mg/L	9	33.3	HH DW (HQ=1)	7.1	0	0.01	0.22	ND	0.015		
2-Hexanone	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
4-Methyl-2-pentanone	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Benzene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Bromodichloromethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Bromoform	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Bromomethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Carbon tetrachloride	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Chlorobenzene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Chloroethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Chloromethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Dibromochloromethane	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Dichlorodifluoromethane	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
Ethylbenzene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Styrene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Toluene	T	mg/L	9	0	HH DW (HQ=1)	0.72	0	0.01	0.22	ND	ND		
Total Xylene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		
Trichloroethene	T	mg/L	9	0	HH DW (HQ=1)	0.000028	0	0.01	0.22	ND	ND		
Trichlorofluoromethane	T	mg/L	7	0	No SLC			0.01	0.22	ND	ND		
Vinyl chloride	T	mg/L	9	0	No SLC			0.01	0.22	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-20
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	4	NA	No SLC					5	39.3	14.9	7.7
EH	T	millivolts	4	NA	No SLC					200	442	307	294
Flow	T	gpm	7	NA	No SLC					0.1	1	0.33	0.26
pH	T	SU	4	NA	No SLC					4.3	5.8	4.8	4.6
Specific Conductance	T	uS/cm	4	NA	No SLC					580	2290	1250	1060
Temperature	T	Celsius	4	NA	No SLC					8.7	12	10.1	9.8
Turbidity	T	NTU	4	NA	No SLC					0.5	113	31.5	6.2
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	4	25	No SLC			1	4.5	ND	44.5		
Carbonate (as CaCO3)	T	mg/L	4	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	4	100	HH DW (HQ=1)	250	0			9	14.2	12	12.3
Cyanide	T	mg/L	3	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	4	100	HH DW (HQ=1)	2.2	75			1	15.4	8.6	9
Hardness	T	mg/L	4	100	No SLC					250	687	493	517
Hydroxide (as CaCO3)	T	mg/L	4	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	4	100	HH DW (HQ=1)	10	0			0.36	2.2	1.4	1.5
Nitrite	T	mg/L	4	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	4	100	No SLC					4.4	5.2	4.7	4.6
Phosphate, Ortho As P	T	mg/L	4	0	No SLC			0.01	0.01	ND	ND		
Phosphorus	T	mg/L	3	100	No SLC					0.015	0.027	0.022	0.023
Specific Conductance	T	umhos/cm	4	100	No SLC					547	1340	978	1010
Sulfate	T	mg/L	4	100	HH DW (HQ=1)	1500	0			255	1040	592	537
Total Alkalinity	T	mg/L	4	25	No SLC			1	4.5	ND	44.5		
Total Dissolved Solids	T	mg/L	4	100	No SLC					502	1550	954	881
Total Kjeldahl Nitrogen	T	mg/L	3	0	No SLC			0.24	0.24	ND	ND		
Total Organic Carbon	T	mg/L	3	33.3	No SLC			1.1	1.3	ND	1.1		
Total Suspended Solids	T	mg/L	4	75	No SLC			1.7	1.7	ND	109	29.7	4.4
Hardness	D	mg/L	4	100	No SLC					258	702	496	513

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-20
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	4	50	HH DW (HQ=1)	37	0	1.8	2.2	ND	33.1	17	17
Antimony	T	mg/L	4	0	HH DW (HQ=1)	0.015	0	0.0005	0.082	ND	ND		
Arsenic	T	mg/L	4	0	HH DW (HQ=1)	0.01	0	0.0002	0.035	ND	ND		
Barium	T	mg/L	4	25	HH DW (HQ=1)	2.6	0	0.073	0.12	ND	0.015		
Beryllium	T	mg/L	4	50	HH DW (HQ=1)	0.073	0	0.002	0.003	ND	0.011	0.0054	0.0049
Boron	T	mg/L	4	25	HH DW (HQ=1)	3.3	0	0.046	0.064	ND	0.011		
Cadmium	T	mg/L	4	25	HH DW (HQ=1)	0.018	100	0.03	0.13	ND	0.023		
Calcium	T	mg/L	4	100	No SLC					65.1	139	111	120
Chromium	T	mg/L	4	0	HH DW (HQ=1)	0.1	0	0.0006	0.19	ND	ND		
Cobalt	T	mg/L	4	25	HH DW (HQ=1)	0.73	0	0.18	0.37	ND	0.12		
Copper	T	mg/L	4	25	HH DW (HQ=1)	1.4	0	0.17	0.33	ND	0.42		
Iron	T	mg/L	4	0	HH DW (HQ=1)	11	0	0.17	6.7	ND	ND		
Lead	T	mg/L	4	50	HH DW (HQ=1)	0.015	0	0.001	0.002	ND	0.002	0.0011	0.00091
Magnesium	T	mg/L	4	100	No SLC					21.3	82.3	52.3	52.8
Manganese	T	mg/L	4	100	HH DW (HQ=1)	1.7	75			0.18	17	8.9	9.3
Mercury	T	mg/L	4	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	4	0	HH DW (HQ=1)	0.18	0	0.0016	0.016	ND	ND		
Nickel	T	mg/L	4	25	HH DW (HQ=1)	0.73	0	0.2	0.45	ND	0.32		
Potassium	T	mg/L	4	25	No SLC			25	63.8	ND	2.4		
Selenium	T	mg/L	4	25	HH DW (HQ=1)	0.18	0	0.008	0.03	ND	0.004		
Silver	T	mg/L	4	25	HH DW (HQ=1)	0.18	0	0.001	0.0018	ND	0.00012		
Sodium	T	mg/L	4	25	No SLC			21.9	99.1	ND	13		
Thallium	T	mg/L	4	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	T	mg/L	4	0	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	ND		
Zinc	T	mg/L	4	50	HH DW (HQ=1)	11	0	0.57	1.5	ND	3.4	1.8	1.8
Aluminum	D	mg/L	4	50	HH DW (HQ=1)	37	0	1.8	2.2	ND	33.7	17.1	16.9
Antimony	D	mg/L	4	0	HH DW (HQ=1)	0.015	0	0.0005	0.082	ND	ND		
Arsenic	D	mg/L	4	25	HH DW (HQ=1)	0.01	100	0.0002	0.035	ND	0.04		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-20
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 4 - South Mine Site Rockpiles
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	D	mg/L	4	25	HH DW (HQ=1)	2.6	0	0.073	0.12	ND	0.015		
Beryllium	D	mg/L	4	50	HH DW (HQ=1)	0.073	0	0.002	0.003	ND	0.0094	0.005	0.0049
Boron	D	mg/L	4	25	HH DW (HQ=1)	3.3	0	0.046	0.064	ND	0.0088		
Cadmium	D	mg/L	4	25	HH DW (HQ=1)	0.018	100	0.03	0.13	ND	0.023		
Calcium	D	mg/L	4	100	No SLC					67.2	143	112	119
Chromium	D	mg/L	4	0	HH DW (HQ=1)	0.1	0	0.0006	0.19	ND	ND		
Cobalt	D	mg/L	4	25	HH DW (HQ=1)	0.73	0	0.18	0.37	ND	0.11		
Copper	D	mg/L	4	25	HH DW (HQ=1)	1.4	0	0.23	0.33	ND	0.41		
Iron	D	mg/L	4	0	HH DW (HQ=1)	11	0	0.17	6.7	ND	ND		
Lead	D	mg/L	4	25	HH DW (HQ=1)	0.015	0	0.001	0.002	ND	0.0007		
Magnesium	D	mg/L	4	100	No SLC					22	84	52.5	52.1
Manganese	D	mg/L	4	100	HH DW (HQ=1)	1.7	75			0.18	17.1	9	9.3
Mercury	D	mg/L	4	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	4	0	HH DW (HQ=1)	0.18	0	0.0016	0.016	ND	ND		
Nickel	D	mg/L	4	25	HH DW (HQ=1)	0.73	0	0.2	0.45	ND	0.32		
Potassium	D	mg/L	4	25	No SLC			25	63.8	ND	2.4		
Selenium	D	mg/L	4	25	HH DW (HQ=1)	0.18	0	0.008	0.03	ND	0.0044		
Silver	D	mg/L	4	0	HH DW (HQ=1)	0.18	0	0.0001	0.0011	ND	ND		
Sodium	D	mg/L	4	50	No SLC			53.2	99.1	ND	25.7	28.7	26.2
Thallium	D	mg/L	4	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	D	mg/L	4	0	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	ND		
Zinc	D	mg/L	4	50	HH DW (HQ=1)	11	0	0.57	1.5	ND	3.5	1.9	1.8

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	20	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	19	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	20	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	20	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	73	NA	No SLC					0.72	116	8.1	7
Eh	T	millivolts	74	NA	No SLC					70.4	672	358	354
pH	T	SU	74	NA	No SLC					2.7	7.2	5.2	5.1
Specific Conductance	T	uS/cm	74	NA	No SLC					202	2800	1090	1100
Temperature	T	Celsius	74	NA	No SLC					2.1	28	8.1	8
Turbidity	T	NTU	70	NA	No SLC					0	112	13	5
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	75	37.3	No SLC			1	9.8	ND	77.2		
Carbonate (as CaCO3)	T	mg/L	75	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	75	88	HH DW (HQ=1)	250	7.6	0.85	23.2	ND	390	35.6	10.5
Cyanide	T	mg/L	74	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	75	100	HH DW (HQ=1)	2.2	69.3			0.41	26.3	10.1	11.2
Hardness	T	mg/L	69	100	No SLC					101	988	480	540
Hydroxide (as CaCO3)	T	mg/L	75	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	75	73.3	HH DW (HQ=1)	10	0	0.2	1.7	ND	3.8	1.3	1.3
Nitrite	T	mg/L	75	4	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.052		
pH	T	SU	54	100	No SLC					3.5	7.7	5.6	5.2
Phosphate, Ortho As P	T	mg/L	75	5.3	No SLC			0.01	0.24	ND	12.9		
Phosphorus	T	mg/L	75	44	No SLC			0.01	0.027	ND	0.17		
Specific Conductance	T	umhos/cm	54	100	No SLC					176	2570	942	943
Sulfate	T	mg/L	75	100	HH DW (HQ=1)	1500	1.3			31.7	1720	564	567
Total Alkalinity	T	mg/L	75	34.7	No SLC			1	9.8	ND	77.2		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Dissolved Solids	T	mg/L	75	93.3	No SLC			166	528	ND	3580	995	950
Total Kjeldahl Nitrogen	T	mg/L	75	1.3	No SLC			0.24	0.37	ND	0.37		
Total Organic Carbon	T	mg/L	75	12	No SLC			1	2.1	ND	3.7		
Total Suspended Solids	T	mg/L	75	24	No SLC			0.5	5.9	ND	17.8		
Hardness	D	mg/L	75	100	No SLC					99.4	1020	503	554
Isotopes													
Delta D	T	per mil	4	100	No SLC					-88	-96.9	-94.5	-96.6
Delta O-18	T	per mil	4	100	No SLC					-12.1	-13.5	-13	-13.3
Metals													
Aluminum	T	mg/L	68	58.8	HH DW (HQ=1)	37	15	0.003	20.1	ND	190	23.4	9.9
Antimony	T	mg/L	68	2.9	HH DW (HQ=1)	0.015	50	0.0002	0.097	ND	0.047		
Arsenic	T	mg/L	68	2.9	HH DW (HQ=1)	0.01	50	0.0002	0.052	ND	0.024		
Barium	T	mg/L	68	38.2	HH DW (HQ=1)	2.6	0	0.012	0.19	ND	0.086		
Beryllium	T	mg/L	68	58.8	HH DW (HQ=1)	0.073	0	0.0002	0.02	ND	0.037	0.0098	0.006
Boron	T	mg/L	68	11.8	HH DW (HQ=1)	3.3	0	0.0039	0.12	ND	0.0075		
Cadmium	T	mg/L	68	25	HH DW (HQ=1)	0.018	70.6	0.0001	0.39	ND	0.059		
Calcium	T	mg/L	68	100	No SLC					32.6	234	114	119
Chromium	T	mg/L	68	5.9	HH DW (HQ=1)	0.1	50	0.0006	0.57	ND	0.18		
Cobalt	T	mg/L	68	11.8	HH DW (HQ=1)	0.73	0	0.0011	0.37	ND	0.39		
Copper	T	mg/L	68	44.1	HH DW (HQ=1)	1.4	20	0.0003	0.58	ND	3.2		
Iron	T	mg/L	68	7.4	HH DW (HQ=1)	11	0	0.023	4.9	ND	5.2		
Lead	T	mg/L	68	10.3	HH DW (HQ=1)	0.015	14.3	0.0001	0.004	ND	0.17		
Magnesium	T	mg/L	68	98.5	No SLC			24.9	24.9	ND	105	46.5	55.1
Manganese	T	mg/L	68	67.6	HH DW (HQ=1)	1.7	97.8	0.001	0.038	ND	24.8	7	6
Mercury	T	mg/L	75	4	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	0.00018		
Molybdenum	T	mg/L	68	20.6	HH DW (HQ=1)	0.18	0	0.001	0.03	ND	0.013		
Nickel	T	mg/L	68	61.8	HH DW (HQ=1)	0.73	7.1	0.0002	1.7	ND	1	0.29	0.29
Potassium	T	mg/L	68	38.2	No SLC			1.4	110	ND	284		
Selenium	T	mg/L	68	29.4	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.025		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Silver	T	mg/L	68	4.4	HH DW (HQ=1)	0.18	0	0.0001	0.0012	ND	0.0021		
Sodium	T	mg/L	68	33.8	No SLC			2.8	99.1	ND	64.9		
Thallium	T	mg/L	68	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		
Vanadium	T	mg/L	68	2.9	HH DW (HQ=1)	0.037	0	0.0001	0.002	ND	0.0023		
Zinc	T	mg/L	68	73.5	HH DW (HQ=1)	11	0	0.0036	2	ND	6.4	2.5	2.5
Aluminum	D	mg/L	75	60	HH DW (HQ=1)	37	15.6	0.0054	20.1	ND	187	24.6	9.7
Antimony	D	mg/L	75	0	HH DW (HQ=1)	0.015	0	0.0002	0.097	ND	ND		
Arsenic	D	mg/L	75	0	HH DW (HQ=1)	0.01	0	0.0002	0.052	ND	ND		
Barium	D	mg/L	75	36	HH DW (HQ=1)	2.6	0	0.012	0.19	ND	0.089		
Beryllium	D	mg/L	75	60	HH DW (HQ=1)	0.073	0	0.0002	0.03	ND	0.037	0.01	0.0066
Boron	D	mg/L	75	8	HH DW (HQ=1)	3.3	0	0.0036	0.12	ND	0.0087		
Cadmium	D	mg/L	74	21.6	HH DW (HQ=1)	0.018	87.5	0.0001	0.38	ND	0.063		
Calcium	D	mg/L	75	100	No SLC					31.9	240	120	122
Chromium	D	mg/L	75	6.7	HH DW (HQ=1)	0.1	0	0.0006	0.57	ND	0.092		
Chromium, Hexavalent	D	mg/L	4	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	75	10.7	HH DW (HQ=1)	0.73	0	0.0016	0.37	ND	0.38		
Copper	D	mg/L	75	37.3	HH DW (HQ=1)	1.4	25	0.0003	0.6	ND	3.4		
Iron	D	mg/L	75	4	HH DW (HQ=1)	11	0	0.031	4.9	ND	4.9		
Lead	D	mg/L	75	5.3	HH DW (HQ=1)	0.015	25	0.0001	0.004	ND	0.022		
Magnesium	D	mg/L	75	98.7	No SLC			24.9	24.9	ND	115	49	56
Manganese	D	mg/L	75	68	HH DW (HQ=1)	1.7	100	0.001	0.019	ND	26.4	7.4	6.1
Mercury	D	mg/L	75	4	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00024		
Molybdenum	D	mg/L	75	24	HH DW (HQ=1)	0.18	0	0.001	0.03	ND	0.014		
Nickel	D	mg/L	75	60	HH DW (HQ=1)	0.73	8.9	0.0015	1.7	ND	1.1	0.3	0.23
Potassium	D	mg/L	75	36	No SLC			1.1	110	ND	381		
Selenium	D	mg/L	75	28	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.024		
Silver	D	mg/L	75	4	HH DW (HQ=1)	0.18	0	0.0001	0.0016	ND	0.002		
Sodium	D	mg/L	75	36	No SLC			3.3	191	ND	71.6		
Thallium	D	mg/L	75	0	HH DW (HQ=1)	0.0026	0	0.0001	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Vanadium	D	mg/L	75	2.7	HH DW (HQ=1)	0.26	0	0.0001	0.002	ND	0.0024		
Zinc	D	mg/L	75	76	HH DW (HQ=1)	11	0	0.0061	3.4	ND	7.1	2.6	2.6
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2,4-Dichlorophenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2,4-Dimethylphenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2,4-Dinitrophenol	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
2,4-Dinitrotoluene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2,6-Dinitrotoluene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2-Chloronaphthalene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2-Chlorophenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2-Methylnaphthalene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2-Methylphenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
2-Nitroaniline	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
2-Nitrophenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
3-Nitroaniline	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
4-Chloroaniline	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
4-Methylphenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
4-Nitroaniline	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
4-Nitrophenol	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
Acenaphthene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Acenaphthylene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Anthracene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)anthracene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)pyrene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Benzo(b)fluoranthene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Benzo(k)fluoranthene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Carbazole	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Chrysene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Dibenzofuran	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Fluoranthene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Fluorene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobenzene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobutadiene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Hexachloroethane	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Isophorone	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Naphthalene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Nitrobenzene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Pentachlorophenol	T	mg/L	20	0	No SLC			0.025	0.028	ND	ND		
Phenanthrene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Phenol	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		
Pyrene	T	mg/L	20	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	20	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	20	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	20	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	20	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-21
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dichlorodifluoromethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	20	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	20	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	20	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	25	4	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	0.00046		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	23	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	25	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	25	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	25	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	78	NA	No SLC					0.09	24.8	3.9	2.9
EH	T	millivolts	78	NA	No SLC					-178	834	368	380
pH	T	SU	78	NA	No SLC					1.8	6.2	4	3.3
Specific Conductance	T	uS/cm	77	NA	No SLC					2270	5330	3330	3430
Temperature	T	Celsius	78	NA	No SLC					6.2	20.4	10.7	10.1
Turbidity	T	NTU	76	NA	No SLC					0	357	29.7	13.8
Helium Isotope and Tritium													
3H-3He	T	Years	2	100	No SLC					0.39	3.5	1.9	1.9
DEL He3	T	%	2	100	No SLC					0.2	3	1.6	1.6
DEL He4	T	%	2	100	No SLC					0.5	0.7	0.6	0.6
He Corr	T	1E-8cc/g	2	100	No SLC					4.7	4.8	4.8	4.8
Tritium TU	T	TU	2	100	No SLC					2.7	3.6	3.2	3.2
Uncert Age	T	Years	2	100	No SLC					1.1	1.7	1.4	1.4
Uncert TU	T	TU	2	100	No SLC					0.08	0.11	0.094	0.094
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	53	22.6	No SLC			1	13.2	ND	39.4		
Carbonate (as CaCO3)	T	mg/L	53	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	53	98.1	HH DW (HQ=1)	250	0	0.45	0.45	ND	88.6	45	41.3
Cyanide	T	mg/L	53	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	56	100	HH DW (HQ=1)	2.2	85.7			0.38	66.8	26.7	28.7
Hardness	T	mg/L	53	100	No SLC					548	2560	1700	1590
Hydroxide (as CaCO3)	T	mg/L	53	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	53	45.3	HH DW (HQ=1)	10	0	0.2	0.66	ND	3.3		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrite	T	mg/L	53	15.1	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.024		
pH	T	SU	37	100	No SLC					3.1	6.9	4.5	4.3
Phosphate, Ortho As P	T	mg/L	53	47.2	No SLC			0.01	0.76	ND	0.32		
Phosphorus	T	mg/L	53	96.2	No SLC			0.028	0.2	ND	0.51	0.14	0.12
Specific Conductance	T	umhos/cm	37	100	No SLC					929	3710	3050	3130
Sulfate	T	mg/L	56	100	HH DW (HQ=1)	1500	94.6			528	3590	2490	2520
Total Alkalinity	T	mg/L	53	22.6	No SLC			1	13.2	ND	39.4		
Total Dissolved Solids	T	mg/L	56	100	No SLC					864	4910	3770	3900
Total Kjeldahl Nitrogen	T	mg/L	52	5.8	No SLC			0.24	0.32	ND	0.35		
Total Organic Carbon	T	mg/L	53	56.6	No SLC			1	3	ND	4	1.7	1.5
Total Suspended Solids	T	mg/L	56	80.4	No SLC			0.5	4.7	ND	220	17.2	5.3
Hardness	D	mg/L	56	100	No SLC					544	2680	1720	1640
Isotopes													
204Pb/206Pb	T	mg/L	1	100	No SLC					0.00005	0.00005	0.00005	0.00005
207Pb/206Pb	T	mg/L	1	100	No SLC					0.00082	0.00082	0.00082	0.00082
208Pb/206Pb	T	mg/L	1	100	No SLC					0.0019	0.0019	0.0019	0.0019
Delta D	T	per mil	5	100	No SLC					-80.9	-86.9	-84.2	-85.8
Delta O-18	T	per mil	5	100	No SLC					-11	-11.8	-11.5	-11.7
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.00051	0.00051	0.00051	0.00051
204Pb/206Pb	D	mg/L	1	100	No SLC					0.000053	0.000053	0.000053	0.000053
207Pb/206Pb	D	mg/L	1	100	No SLC					0.00084	0.00084	0.00084	0.00084
208Pb/206Pb	D	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Delta 34S	D	per mil	1	100	No SLC					-4.6	-4.6	-4.6	-4.6
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0001	0.0001	0.0001	0.0001
Lanthanides													
Cerium	T	mg/L	1	100	No SLC					0.16	0.16	0.16	0.16
Dysprosium	T	mg/L	1	100	No SLC					0.04	0.04	0.04	0.04
Erbium	T	mg/L	1	100	No SLC					0.017	0.017	0.017	0.017
Europium	T	mg/L	1	100	No SLC					0.013	0.013	0.013	0.013

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Gadolinium	T	mg/L	1	100	No SLC					0.049	0.049	0.049	0.049
Holmium	T	mg/L	1	100	No SLC					0.007	0.007	0.007	0.007
Lanthanum	T	mg/L	1	100	No SLC					0.045	0.045	0.045	0.045
Lutetium	T	mg/L	1	100	No SLC					0.0015	0.0015	0.0015	0.0015
Neodymium	T	mg/L	1	100	No SLC					0.16	0.16	0.16	0.16
Praseodymium	T	mg/L	1	100	No SLC					0.029	0.029	0.029	0.029
Samarium	T	mg/L	1	100	No SLC					0.042	0.042	0.042	0.042
Terbium	T	mg/L	1	100	No SLC					0.0077	0.0077	0.0077	0.0077
Thulium	T	mg/L	1	100	No SLC					0.002	0.002	0.002	0.002
Ytterbium	T	mg/L	1	100	No SLC					0.011	0.011	0.011	0.011
Yttrium	T	mg/L	1	100	No SLC					0.2	0.2	0.2	0.2
Cerium	D	mg/L	1	100	No SLC					0.19	0.19	0.19	0.19
Dysprosium	D	mg/L	1	100	No SLC					0.038	0.038	0.038	0.038
Erbium	D	mg/L	1	100	No SLC					0.016	0.016	0.016	0.016
Europium	D	mg/L	1	100	No SLC					0.013	0.013	0.013	0.013
Gadolinium	D	mg/L	1	100	No SLC					0.053	0.053	0.053	0.053
Holmium	D	mg/L	1	100	No SLC					0.0068	0.0068	0.0068	0.0068
Lanthanum	D	mg/L	1	100	No SLC					0.052	0.052	0.052	0.052
Lutetium	D	mg/L	1	100	No SLC					0.0014	0.0014	0.0014	0.0014
Neodymium	D	mg/L	1	100	No SLC					0.17	0.17	0.17	0.17
Praseodymium	D	mg/L	1	100	No SLC					0.032	0.032	0.032	0.032
Samarium	D	mg/L	1	100	No SLC					0.043	0.043	0.043	0.043
Terbium	D	mg/L	1	100	No SLC					0.0077	0.0077	0.0077	0.0077
Thulium	D	mg/L	1	100	No SLC					0.0019	0.0019	0.0019	0.0019
Ytterbium	D	mg/L	1	100	No SLC					0.011	0.011	0.011	0.011
Yttrium	D	mg/L	1	100	No SLC					0.22	0.22	0.22	0.22
Metals													
Aluminum	T	mg/L	53	90.6	HH DW (HQ=1)	37	62.5	0.18	16.1	ND	356	147	163
Antimony	T	mg/L	53	1.9	HH DW (HQ=1)	0.015	100	0.00032	0.097	ND	0.07		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Arsenic	T	mg/L	53	13.2	HH DW (HQ=1)	0.01	14.3	0.0004	0.088	ND	0.03		
Barium	T	mg/L	53	15.1	HH DW (HQ=1)	2.6	0	0.0048	0.19	ND	0.16		
Beryllium	T	mg/L	53	73.6	HH DW (HQ=1)	0.073	0	0.0002	0.029	ND	0.068	0.026	0.026
Boron	T	mg/L	53	7.5	HH DW (HQ=1)	3.3	0	0.0027	0.12	ND	0.025		
Cadmium	T	mg/L	53	43.4	HH DW (HQ=1)	0.018	65.2	0.0098	0.13	ND	0.12		
Calcium	T	mg/L	53	100	No SLC					140	623	418	380
Chromium	T	mg/L	53	13.2	HH DW (HQ=1)	0.1	28.6	0.0006	0.57	ND	0.26		
Cobalt	T	mg/L	53	77.4	HH DW (HQ=1)	0.73	2.4	0.0011	0.37	ND	1.3	0.37	0.41
Copper	T	mg/L	53	64.2	HH DW (HQ=1)	1.4	64.7	0.0007	1.3	ND	6.5	2.1	1.1
Iron	T	mg/L	53	66	HH DW (HQ=1)	11	77.1	0.19	10.7	ND	174	32.7	15.3
Lead	T	mg/L	53	30.2	HH DW (HQ=1)	0.015	6.3	0.0001	0.004	ND	0.025		
Magnesium	T	mg/L	53	100	No SLC					48.2	245	159	163
Manganese	T	mg/L	53	86.8	HH DW (HQ=1)	1.7	97.8	0.0082	6.6	ND	41.8	18.7	15.8
Mercury	T	mg/L	56	0	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	ND		
Molybdenum	T	mg/L	53	9.4	HH DW (HQ=1)	0.18	0	0.0002	0.03	ND	0.067		
Nickel	T	mg/L	53	81.1	HH DW (HQ=1)	0.73	69.8	0.44	1.7	ND	1.9	0.75	0.84
Potassium	T	mg/L	53	20.8	No SLC			3.3	110	ND	41.6		
Selenium	T	mg/L	53	52.8	HH DW (HQ=1)	0.18	0	0.0016	0.009	ND	0.018	0.0062	0.0045
Silver	T	mg/L	53	3.8	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	0.0027		
Sodium	T	mg/L	53	47.2	No SLC			21.9	99.1	ND	92.9		
Thallium	T	mg/L	53	1.9	HH DW (HQ=1)	0.0026	0	0.0001	0.0019	ND	0.00029		
Vanadium	T	mg/L	53	50.9	HH DW (HQ=1)	0.037	0	0.0004	0.004	ND	0.017	0.0019	0.0013
Zinc	T	mg/L	53	92.5	HH DW (HQ=1)	11	0	0.16	4.8	ND	10.6	4.8	3.7
Aluminum	D	mg/L	56	89.3	HH DW (HQ=1)	37	66	0.18	17.6	ND	348	152	172
Antimony	D	mg/L	56	0	HH DW (HQ=1)	0.015	0	0.0002	0.097	ND	ND		
Arsenic	D	mg/L	56	12.5	HH DW (HQ=1)	0.01	28.6	0.0004	0.052	ND	0.069		
Barium	D	mg/L	56	12.5	HH DW (HQ=1)	2.6	0	0.0048	0.19	ND	0.047		
Beryllium	D	mg/L	56	71.4	HH DW (HQ=1)	0.073	0	0.0002	0.056	ND	0.068	0.026	0.028
Boron	D	mg/L	56	7.1	HH DW (HQ=1)	3.3	0	0.0027	0.12	ND	0.028		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	D	mg/L	56	30.4	HH DW (HQ=1)	0.018	58.8	0.007	0.13	ND	0.081		
Calcium	D	mg/L	56	100	No SLC					139	651	421	378
Chromium	D	mg/L	56	10.7	HH DW (HQ=1)	0.1	16.7	0.0006	0.57	ND	0.15		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	56	73.2	HH DW (HQ=1)	0.73	0	0.0016	0.4	ND	0.71	0.37	0.37
Copper	D	mg/L	56	64.3	HH DW (HQ=1)	1.4	63.9	0.0027	2.2	ND	6.3	2.2	1.1
Iron	D	mg/L	56	58.9	HH DW (HQ=1)	11	81.8	0.31	12.8	ND	179	33.8	7.8
Lead	D	mg/L	56	1.8	HH DW (HQ=1)	0.015	0	0.0001	0.004	ND	0.0024		
Magnesium	D	mg/L	56	100	No SLC					47.9	256	162	178
Manganese	D	mg/L	56	87.5	HH DW (HQ=1)	1.7	100	0.0065	0.63	ND	40.6	19.3	16.6
Mercury	D	mg/L	56	3.6	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	0.00013		
Molybdenum	D	mg/L	56	5.4	HH DW (HQ=1)	0.18	0	0.0002	0.03	ND	0.069		
Nickel	D	mg/L	56	82.1	HH DW (HQ=1)	0.73	69.6	0.44	1.7	ND	1.4	0.74	0.81
Potassium	D	mg/L	56	21.4	No SLC			3.3	110	ND	41.8		
Selenium	D	mg/L	56	51.8	HH DW (HQ=1)	0.18	0	0.0016	0.008	ND	0.019	0.0062	0.004
Silver	D	mg/L	56	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	D	mg/L	56	50	No SLC			32.8	116	ND	94.9	49.5	47
Thallium	D	mg/L	56	1.8	HH DW (HQ=1)	0.0026	0	0.0001	0.002	ND	0.00028		
Vanadium	D	mg/L	56	33.9	HH DW (HQ=1)	0.26	0	0.0004	0.004	ND	0.0038		
Zinc	D	mg/L	56	92.9	HH DW (HQ=1)	11	1.9	0.16	4.8	ND	11.3	4.9	3.7
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
1-Methylnaphthalene	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
1-Methylphenanthrene	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2,4-Dichlorophenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2,4-Dimethylphenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2,4-Dinitrophenol	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2,4-Dinitrotoluene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2,6-Dinitrotoluene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2-Chloronaphthalene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2-Chlorophenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2-Methylnaphthalene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
2-Methylphenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
2-Nitroaniline	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
2-Nitrophenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
3-Nitroaniline	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
4-Chloroaniline	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
4-Methylphenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
4-Nitroaniline	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
4-Nitrophenol	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
Acenaphthene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Acenaphthylene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Anthracene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Benzo(a)anthracene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Benzo(a)pyrene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Benzo(b)fluoranthene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Benzo(e)pyrene	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Benzo(k)fluoranthene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Carbazole	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Chrysene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Dibenzofuran	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Dibenzothiophene	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Fluoranthene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Fluorene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Hexachlorobenzene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobutadiene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Hexachloroethane	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Isophorone	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Naphthalene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Naphthalene, 2,3,5-trimethyl-	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
Naphthalene, 2,6-dimethyl-	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
Nitrobenzene	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Pentachlorophenol	T	mg/L	25	0	No SLC			0.025	0.029	ND	ND		
Perylene	T	mg/L	4	0	No SLC			0.00002	0.000021	ND	ND		
Phenanthrene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Phenol	T	mg/L	25	0	No SLC			0.01	0.011	ND	ND		
Pyrene	T	mg/L	29	0	No SLC			0.00002	0.011	ND	ND		
Total Pet Hydrocarbons													
Diesel Fuel (No. 2)	T	mg/L	4	0	No SLC			0.1	0.11	ND	ND		
Motor Oil	T	mg/L	4	0	No SLC			0.25	0.26	ND	ND		
Volatile Organics													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,1,1,2-Tetrachloroethane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,1,1-Trichloroethane	T	mg/L	29	69	HH DW (HQ=1)	0.84	0	0.01	0.024	ND	0.021	0.0038	0.002
1,1,2,2-Tetrachloroethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	29	0	HH DW (HQ=1)	0.81	0	0.001	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	29	10.3	HH DW (HQ=1)	0.34	0	0.001	0.01	ND	0.005		
1,1-Dichloropropene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,2,3-Trichlorobenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,2,3-Trichloropropane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,2,4-Trimethylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,2-Dibromoethane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,2-Dichlorobenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,3,5-Trimethylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,3-Dichlorobenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,3-Dichloropropane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
1,4-Dichlorobenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
1,4-Dioxane	T	mg/L	4	0	No SLC			0.05	0.05	ND	ND		
2,2-Dichloropropane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
2-Butanone	T	mg/L	29	0	HH DW (HQ=1)	7.1	0	0.005	0.01	ND	ND		
2-Chloroethyl vinyl ether	T	mg/L	2	0	No SLC			0.001	0.001	ND	ND		
2-Chlorotoluene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
2-Hexanone	T	mg/L	29	0	No SLC			0.005	0.01	ND	ND		
4-Chlorotoluene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
4-Methyl-2-pentanone	T	mg/L	29	0	No SLC			0.005	0.01	ND	ND		
Acrolein	T	mg/L	4	0	No SLC			0.005	0.005	ND	ND		
Acrylonitrile	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Allyl Chloride	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Benzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Bromobenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Bromochloromethane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Bromodichloromethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Bromoform	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Bromomethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Chlorobenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Chloroethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Chloromethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Chloroprene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
cis-1,4-Dichloro-2-butene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Dibromochloromethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Dibromomethane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Dichlorodifluoromethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Ethyl Methacrylate	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Ethylbenzene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Iodomethane	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Isobutanol	T	mg/L	4	0	No SLC			0.05	0.05	ND	ND		
Isopropylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
m&p-Xylene	T	mg/L	4	25	No SLC			0.001	0.001	ND	0.00024		
Methacrylonitrile	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-22
Groundwater-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Methyl methacrylate	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Methyl-t-butyl ether	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
n-Butylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
n-Propylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
o-Xylene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
p-Isopropyltoluene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Propionitrile	T	mg/L	4	0	No SLC			0.004	0.004	ND	ND		
sec-Butylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Styrene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
t-Butylbenzene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Tetrahydrofuran	T	mg/L	4	0	No SLC			0.014	0.014	ND	ND		
Toluene	T	mg/L	29	0	HH DW (HQ=1)	0.72	0	0.001	0.01	ND	ND		
Total Xylene	T	mg/L	29	3.4	No SLC			0.001	0.01	ND	0.00024		
trans-1,2-Dichloroethene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
trans-1,4-Dichloro-2-butene	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Trichloroethene	T	mg/L	29	0	HH DW (HQ=1)	0.000028	0	0.001	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		
Vinyl acetate	T	mg/L	4	0	No SLC			0.001	0.001	ND	ND		
Vinyl chloride	T	mg/L	29	0	No SLC			0.001	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	16	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	15	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	16	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	16	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	72	NA	No SLC					0.01	9.5	1.4	0.94
Eh	T	millivolts	77	NA	No SLC					-487	595	57	32.9
pH	T	SU	77	NA	No SLC					3.7	7.9	6	6.7
Specific Conductance	T	uS/cm	77	NA	No SLC					1880	7650	3880	2940
Temperature	T	Celsius	77	NA	No SLC					4.5	23.6	10.6	10.2
Turbidity	T	NTU	75	NA	No SLC					0	1210	43.5	7.3
Helium Isotope and Tritium													
3H-3He	T	Years	2	100	No SLC					10.2	71.5	40.8	40.8
DEL He3	T	%	2	100	No SLC					5.4	597	301	301
DEL He4	T	%	2	100	No SLC					13.9	842	428	428
He Corr	T	1E-8cc/g	2	100	No SLC					5.4	45	25.2	25.2
Tritium TU	T	TU	2	100	No SLC					1.8	3	2.4	2.4
Uncert Age	T	Years	2	100	No SLC					0.56	1.7	1.1	1.1
Uncert TU	T	TU	2	100	No SLC					0.055	0.089	0.072	0.072
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	52	73.1	No SLC			1	1	ND	563	258	283
Carbonate (as CaCO3)	T	mg/L	52	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	52	96.2	HH DW (HQ=1)	250	0	11.2	15.1	ND	103	24.7	18
Cyanide	T	mg/L	52	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	54	100	HH DW (HQ=1)	2.2	46.3			1.1	141	24	2.2
Hardness	T	mg/L	52	100	No SLC					1470	3880	2180	1870
Hydroxide (as CaCO3)	T	mg/L	52	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	52	5.8	HH DW (HQ=1)	10	0	0.2	0.4	ND	1.4		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrite	T	mg/L	52	3.8	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.021		
pH	T	SU	37	100	No SLC					4.2	7.2	6.3	6.9
Phosphate, Ortho As P	T	mg/L	52	46.2	No SLC			0.01	5	ND	31.6		
Phosphorus	T	mg/L	52	76.9	No SLC			0.01	0.061	ND	34.6	2.3	0.072
Specific Conductance	T	umhos/cm	37	100	No SLC					2320	6700	3290	2750
Sulfate	T	mg/L	54	100	HH DW (HQ=1)	1500	63			1190	6940	2490	1570
Total Alkalinity	T	mg/L	52	73.1	No SLC			1	1	ND	563	258	283
Total Dissolved Solids	T	mg/L	54	100	No SLC					2140	11200	4030	2800
Total Kjeldahl Nitrogen	T	mg/L	53	13.2	No SLC			0.24	2.1	ND	2.6		
Total Organic Carbon	T	mg/L	52	53.8	No SLC			1	5	ND	15.1	2.2	1.5
Total Suspended Solids	T	mg/L	54	90.7	No SLC			3.9	9	ND	279	24.7	13.5
Hardness	D	mg/L	54	100	No SLC					1460	4190	2240	1880
Isotopes													
204Pb/206Pb	T	mg/L	2	100	No SLC					0.00011	0.00022	0.00016	0.00016
207Pb/206Pb	T	mg/L	2	100	No SLC					0.00071	0.00076	0.00074	0.00074
208Pb/206Pb	T	mg/L	2	100	No SLC					0.00097	0.0013	0.0011	0.0011
Delta D	T	per mil	10	100	No SLC					-68.1	-92.2	-83.8	-84.3
Delta O-18	T	per mil	10	100	No SLC					-9.9	-12.9	-11.5	-11.4
Lead	T	mg/L	2	100	HH DW (HQ=1)	0.015	50			0.001	0.021	0.011	0.011
204Pb/206Pb	D	mg/L	2	100	No SLC					0.000054	0.00011	0.000081	0.000081
207Pb/206Pb	D	mg/L	2	100	No SLC					0.0007	0.00085	0.00078	0.00078
208Pb/206Pb	D	mg/L	2	100	No SLC					0.0012	0.0021	0.0017	0.0017
Delta 34S	D	per mil	2	100	No SLC					-4.5	-5.3	-4.9	-4.9
Lead	D	mg/L	2	100	HH DW (HQ=1)	0.015	50			0.0007	0.02	0.01	0.01
Lanthanides													
Cerium	T	mg/L	2	100	No SLC					0.024	0.19	0.11	0.11
Dysprosium	T	mg/L	2	100	No SLC					0.026	0.087	0.057	0.057
Erbium	T	mg/L	2	100	No SLC					0.012	0.038	0.025	0.025
Europium	T	mg/L	2	100	No SLC					0.0061	0.026	0.016	0.016

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Gadolinium	T	mg/L	2	100	No SLC					0.027	0.1	0.065	0.065
Holmium	T	mg/L	2	100	No SLC					0.0049	0.016	0.01	0.01
Lanthanum	T	mg/L	2	100	No SLC					0.0073	0.058	0.032	0.032
Lutetium	T	mg/L	2	100	No SLC					0.00092	0.0029	0.0019	0.0019
Neodymium	T	mg/L	2	100	No SLC					0.03	0.23	0.13	0.13
Praseodymium	T	mg/L	2	100	No SLC					0.0044	0.037	0.021	0.021
Samarium	T	mg/L	2	100	No SLC					0.014	0.078	0.046	0.046
Terbium	T	mg/L	2	100	No SLC					0.0047	0.016	0.01	0.01
Thulium	T	mg/L	2	100	No SLC					0.0014	0.0042	0.0028	0.0028
Ytterbium	T	mg/L	2	100	No SLC					0.0072	0.023	0.015	0.015
Yttrium	T	mg/L	2	100	No SLC					0.15	0.53	0.34	0.34
Cerium	D	mg/L	2	100	No SLC					0.026	0.2	0.11	0.11
Dysprosium	D	mg/L	2	100	No SLC					0.024	0.075	0.049	0.049
Erbium	D	mg/L	2	100	No SLC					0.011	0.032	0.021	0.021
Europium	D	mg/L	2	100	No SLC					0.006	0.024	0.015	0.015
Gadolinium	D	mg/L	2	100	No SLC					0.028	0.099	0.064	0.064
Holmium	D	mg/L	2	100	No SLC					0.0045	0.014	0.009	0.009
Lanthanum	D	mg/L	2	100	No SLC					0.0083	0.062	0.035	0.035
Lutetium	D	mg/L	2	100	No SLC					0.00083	0.0025	0.0017	0.0017
Neodymium	D	mg/L	2	100	No SLC					0.031	0.24	0.13	0.13
Praseodymium	D	mg/L	2	100	No SLC					0.0047	0.039	0.022	0.022
Samarium	D	mg/L	2	100	No SLC					0.014	0.073	0.044	0.044
Terbium	D	mg/L	2	100	No SLC					0.0045	0.014	0.0094	0.0094
Thulium	D	mg/L	2	100	No SLC					0.0012	0.0036	0.0024	0.0024
Ytterbium	D	mg/L	2	100	No SLC					0.0065	0.02	0.013	0.013
Yttrium	D	mg/L	2	100	No SLC					0.15	0.53	0.34	0.34
Metals													
Aluminum	T	mg/L	52	42.3	HH DW (HQ=1)	37	63.6	0.017	0.63	ND	495		
Antimony	T	mg/L	52	3.8	HH DW (HQ=1)	0.015	0	0.0002	0.053	ND	0.0042		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Arsenic	T	mg/L	52	63.5	HH DW (HQ=1)	0.01	9.1	0.0002	0.049	ND	0.043	0.0063	0.0016
Barium	T	mg/L	52	73.1	HH DW (HQ=1)	2.6	0	0.048	0.13	ND	0.1	0.03	0.026
Beryllium	T	mg/L	52	71.2	HH DW (HQ=1)	0.073	5.4	0.0002	0.004	ND	0.095	0.012	0.0029
Boron	T	mg/L	52	71.2	HH DW (HQ=1)	3.3	0	0.0084	0.099	ND	0.13	0.03	0.022
Cadmium	T	mg/L	52	13.5	HH DW (HQ=1)	0.018	71.4	0.0002	0.13	ND	0.082		
Calcium	T	mg/L	52	100	No SLC					440	692	567	579
Chromium	T	mg/L	52	13.5	HH DW (HQ=1)	0.1	14.3	0.0006	0.57	ND	0.12		
Cobalt	T	mg/L	52	63.5	HH DW (HQ=1)	0.73	21.2	0.0011	0.37	ND	2.5	0.38	0.013
Copper	T	mg/L	52	38.5	HH DW (HQ=1)	1.4	35	0.0003	1.5	ND	10.5		
Iron	T	mg/L	52	100	HH DW (HQ=1)	11	61.5			0.17	276	64.3	15.5
Lead	T	mg/L	52	38.5	HH DW (HQ=1)	0.015	30	0.0001	0.02	ND	0.019		
Magnesium	T	mg/L	52	100	No SLC					47.6	651	187	96.1
Manganese	T	mg/L	52	100	HH DW (HQ=1)	1.7	71.2			1.2	36.6	12.5	9.3
Mercury	T	mg/L	54	5.6	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00078		
Molybdenum	T	mg/L	52	26.9	HH DW (HQ=1)	0.18	0	0.00072	0.024	ND	0.017		
Nickel	T	mg/L	52	63.5	HH DW (HQ=1)	0.73	36.4	0.0015	0.019	ND	5.5	0.8	0.015
Potassium	T	mg/L	52	71.2	No SLC			4.9	110	ND	15.4	9.8	7.8
Selenium	T	mg/L	52	21.2	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.017		
Silver	T	mg/L	52	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	T	mg/L	52	90.4	No SLC			32.8	99.1	ND	138	84.3	96.2
Thallium	T	mg/L	52	1.9	HH DW (HQ=1)	0.0026	0	0.0001	0.002	ND	0.00034		
Vanadium	T	mg/L	52	80.8	HH DW (HQ=1)	0.037	19	0.0002	0.036	ND	0.14	0.022	0.0013
Zinc	T	mg/L	52	67.3	HH DW (HQ=1)	11	0	0.015	5.8	ND	10.4	1.2	0.24
Aluminum	D	mg/L	54	35.2	HH DW (HQ=1)	37	84.2	0.011	0.63	ND	524		
Antimony	D	mg/L	54	3.7	HH DW (HQ=1)	0.015	0	0.00028	0.053	ND	0.004		
Arsenic	D	mg/L	54	53.7	HH DW (HQ=1)	0.01	0	0.0002	0.048	ND	0.0025	0.0055	0.0016
Barium	D	mg/L	54	70.4	HH DW (HQ=1)	2.6	0	0.048	0.13	ND	0.042	0.027	0.026
Beryllium	D	mg/L	54	68.5	HH DW (HQ=1)	0.073	5.4	0.0002	0.004	ND	0.089	0.013	0.0032
Boron	D	mg/L	54	66.7	HH DW (HQ=1)	3.3	0	0.0084	0.084	ND	0.12	0.028	0.021

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	D	mg/L	54	11.1	HH DW (HQ=1)	0.018	83.3	0.0002	0.13	ND	0.1		
Calcium	D	mg/L	54	100	No SLC					437	674	567	583
Chromium	D	mg/L	54	16.7	HH DW (HQ=1)	0.1	22.2	0.0006	0.57	ND	0.5		
Chromium, Hexavalent	D	mg/L	2	50	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0033	0.0041	0.0041
Cobalt	D	mg/L	54	72.2	HH DW (HQ=1)	0.73	20.5	0.0011	0.016	ND	2.7	0.44	0.016
Copper	D	mg/L	54	38.9	HH DW (HQ=1)	1.4	38.1	0.0003	1.5	ND	12		
Iron	D	mg/L	54	100	HH DW (HQ=1)	11	61.1			0.093	285	69.9	15
Lead	D	mg/L	54	16.7	HH DW (HQ=1)	0.015	77.8	0.0001	0.019	ND	0.02		
Magnesium	D	mg/L	54	100	No SLC					45.4	706	200	97
Manganese	D	mg/L	54	100	HH DW (HQ=1)	1.7	70.4			1.2	38.6	13.3	9.5
Mercury	D	mg/L	54	1.9	HH DW (HQ=1)	0.011	0	0.0001	0.00033	ND	0.0002		
Molybdenum	D	mg/L	54	22.2	HH DW (HQ=1)	0.18	0	0.00069	0.024	ND	0.0096		
Nickel	D	mg/L	54	64.8	HH DW (HQ=1)	0.73	40	0.0015	0.017	ND	5.9	0.9	0.017
Potassium	D	mg/L	54	66.7	No SLC			4.5	110	ND	15.6	9.9	7.8
Selenium	D	mg/L	54	24.1	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.02		
Silver	D	mg/L	54	0	HH DW (HQ=1)	0.18	0	0.0001	0.001	ND	ND		
Sodium	D	mg/L	54	92.6	No SLC			39	123	ND	131	85.4	96.6
Thallium	D	mg/L	54	0	HH DW (HQ=1)	0.0026	0	0.0001	0.002	ND	ND		
Vanadium	D	mg/L	54	66.7	HH DW (HQ=1)	0.26	0	0.0002	0.03	ND	0.14	0.024	0.00073
Zinc	D	mg/L	54	44.4	HH DW (HQ=1)	11	0	0.015	5.8	ND	7.5		
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2,4-Dichlorophenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2,4-Dimethylphenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2,4-Dinitrophenol	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
2,4-Dinitrotoluene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2,6-Dinitrotoluene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2-Chloronaphthalene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2-Chlorophenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2-Methylnaphthalene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2-Methylphenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
2-Nitroaniline	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
2-Nitrophenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
3-Nitroaniline	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
4-Chloroaniline	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
4-Methylphenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
4-Nitroaniline	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
4-Nitrophenol	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
Acenaphthene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Acenaphthylene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Anthracene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Benzo(a)anthracene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Benzo(a)pyrene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Benzo(b)fluoranthene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Benzo(k)fluoranthene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Carbazole	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Chrysene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dibenzofuran	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Fluoranthene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Fluorene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Hexachlorobenzene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Hexachlorobutadiene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Hexachloroethane	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Isophorone	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Naphthalene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Nitrobenzene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Pentachlorophenol	T	mg/L	16	0	No SLC			0.025	0.032	ND	ND		
Phenanthrene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Phenol	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Pyrene	T	mg/L	16	0	No SLC			0.01	0.013	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	16	6.3	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	0.002		
1,1,2,2-Tetrachloroethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	16	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	16	6.3	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	0.001		
1,2,4-Trichlorobenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-23
Groundwater-Bedrock
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,2-Dichloroethene (total)	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	16	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	16	18.8	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	0.008		
Total Xylene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	16	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	16	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-24
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	1	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	1	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	20	NA	No SLC					0.83	10.1	5.5	5.7
EH	T	millivolts	20	NA	No SLC					103	458	342	368
Flow	T	gpm	11	NA	No SLC					0.1	200	25.4	1.6
pH	T	SU	20	NA	No SLC					4.4	6.4	5.1	4.8
Specific Conductance	T	uS/cm	20	NA	No SLC					168	1860	1220	1370
Temperature	T	Celsius	20	NA	No SLC					1.9	13.8	8.9	9.4
Turbidity	T	NTU	20	NA	No SLC					0	38.6	5.3	0.7
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	20	60	No SLC			1.6	4.4	ND	75.6	16	4.6
Carbonate (as CaCO3)	T	mg/L	20	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	20	95	HH DW (HQ=1)	250	0	1.3	1.3	ND	22.4	14.5	16.6
Cyanide	T	mg/L	20	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	19	94.7	HH DW (HQ=1)	2.2	100	1	1	ND	12.2	7.5	7.4
Hardness	T	mg/L	19	94.7	No SLC			130	130	ND	1020	690	777
Hydroxide (as CaCO3)	T	mg/L	20	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	20	95	HH DW (HQ=1)	10	0	0.47	0.47	ND	1.9	1.4	1.8
Nitrite	T	mg/L	20	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	16	100	No SLC					4.7	6.7	5.2	5
Phosphate, Ortho As P	T	mg/L	20	20	No SLC			0.01	0.016	ND	0.16		
Phosphorus	T	mg/L	19	52.6	No SLC			0.01	0.01	ND	0.13	0.023	0.011
Specific Conductance	T	umhos/cm	16	100	No SLC					210	1780	1250	1290
Sulfate	T	mg/L	20	100	HH DW (HQ=1)	1500	0			35.8	1100	716	819

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-24
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Total Alkalinity	T	mg/L	20	60	No SLC			1.6	4.4	ND	75.6	16	4.6
Total Dissolved Solids	T	mg/L	20	95	No SLC			145	145	ND	1900	1180	1200
Total Kjeldahl Nitrogen	T	mg/L	19	0	No SLC			0.24	0.25	ND	ND		
Total Organic Carbon	T	mg/L	20	25	No SLC			1	1.6	ND	1.8		
Total Suspended Solids	T	mg/L	20	75	No SLC			0.5	1.5	ND	64.5	5.6	2.4
Hardness	D	mg/L	20	95	No SLC			130	130	ND	1050	698	761
Metals													
Aluminum	T	mg/L	19	68.4	HH DW (HQ=1)	37	0	0.28	21.3	ND	29.7	12.5	10.6
Antimony	T	mg/L	19	0	HH DW (HQ=1)	0.015	0	0.0006	0.097	ND	ND		
Arsenic	T	mg/L	19	5.3	HH DW (HQ=1)	0.01	100	0.0004	0.052	ND	0.036		
Barium	T	mg/L	19	10.5	HH DW (HQ=1)	2.6	0	0.014	0.19	ND	0.11		
Beryllium	T	mg/L	19	26.3	HH DW (HQ=1)	0.073	0	0.0003	0.016	ND	0.0092		
Boron	T	mg/L	19	5.3	HH DW (HQ=1)	3.3	0	0.0075	0.12	ND	0.028		
Cadmium	T	mg/L	19	15.8	HH DW (HQ=1)	0.018	0	0.0004	0.13	ND	0.0094		
Calcium	T	mg/L	19	94.7	No SLC			214	214	ND	258	174	191
Chromium	T	mg/L	19	5.3	HH DW (HQ=1)	0.1	0	0.009	0.37	ND	0.00091		
Cobalt	T	mg/L	19	5.3	HH DW (HQ=1)	0.73	0	0.0029	0.37	ND	0.046		
Copper	T	mg/L	19	26.3	HH DW (HQ=1)	1.4	0	0.003	0.42	ND	0.4		
Iron	T	mg/L	19	5.3	HH DW (HQ=1)	11	0	0.31	6.7	ND	0.9		
Lead	T	mg/L	19	31.6	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	0.0072		
Magnesium	T	mg/L	19	94.7	No SLC			10.7	10.7	ND	91.7	59.1	65.9
Manganese	T	mg/L	19	73.7	HH DW (HQ=1)	1.7	64.3	0.022	0.19	ND	3.6	1.5	1.6
Mercury	T	mg/L	20	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	19	5.3	HH DW (HQ=1)	0.18	0	0.01	0.11	ND	0.0038		
Nickel	T	mg/L	19	42.1	HH DW (HQ=1)	0.73	0	0.0026	0.73	ND	0.42		
Potassium	T	mg/L	19	15.8	No SLC			3.3	63.8	ND	5.1		
Selenium	T	mg/L	19	31.6	HH DW (HQ=1)	0.18	0	0.001	0.03	ND	0.009		
Silver	T	mg/L	19	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	19	15.8	No SLC			5.1	99.1	ND	16.8		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-24
Seep/Spring-Alluvial Aquifer
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Thallium	T	mg/L	19	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	T	mg/L	19	10.5	HH DW (HQ=1)	0.037	0	0.001	0.002	ND	0.0023		
Zinc	T	mg/L	19	84.2	HH DW (HQ=1)	11	0	0.39	1.2	ND	3.7	1.3	1.2
Aluminum	D	mg/L	20	70	HH DW (HQ=1)	37	0	0.28	22	ND	30.6	12.4	10.7
Antimony	D	mg/L	20	0	HH DW (HQ=1)	0.015	0	0.0006	0.097	ND	ND		
Arsenic	D	mg/L	20	0	HH DW (HQ=1)	0.01	0	0.0004	0.052	ND	ND		
Barium	D	mg/L	20	10	HH DW (HQ=1)	2.6	0	0.012	0.19	ND	0.055		
Beryllium	D	mg/L	20	25	HH DW (HQ=1)	0.073	0	0.0003	0.019	ND	0.0085		
Boron	D	mg/L	20	0	HH DW (HQ=1)	3.3	0	0.0075	0.12	ND	ND		
Cadmium	D	mg/L	20	15	HH DW (HQ=1)	0.018	0	0.0004	0.13	ND	0.0073		
Calcium	D	mg/L	20	100	No SLC					33.4	265	182	199
Chromium	D	mg/L	20	0	HH DW (HQ=1)	0.1	0	0.0009	0.37	ND	ND		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	20	10	HH DW (HQ=1)	0.73	0	0.0029	0.37	ND	0.22		
Copper	D	mg/L	20	20	HH DW (HQ=1)	1.4	0	0.0024	0.53	ND	0.4		
Iron	D	mg/L	20	5	HH DW (HQ=1)	11	0	0.3	6.7	ND	0.62		
Lead	D	mg/L	20	10	HH DW (HQ=1)	0.015	0	0.0002	0.004	ND	0.002		
Magnesium	D	mg/L	20	95	No SLC			10.7	10.7	ND	94.6	59.7	63.9
Manganese	D	mg/L	20	70	HH DW (HQ=1)	1.7	64.3	0.009	0.46	ND	3.6	1.5	1.6
Mercury	D	mg/L	20	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	20	5	HH DW (HQ=1)	0.18	0	0.011	0.11	ND	0.0046		
Nickel	D	mg/L	20	45	HH DW (HQ=1)	0.73	0	0.0026	0.73	ND	0.69		
Potassium	D	mg/L	20	15	No SLC			3.3	63.8	ND	5.4		
Selenium	D	mg/L	20	20	HH DW (HQ=1)	0.18	0	0.001	0.03	ND	0.0066		
Silver	D	mg/L	20	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	20	20	No SLC			5.1	99.1	ND	57.6		
Thallium	D	mg/L	20	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	20	0	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	ND		
Zinc	D	mg/L	20	80	HH DW (HQ=1)	11	0	0.025	0.93	ND	4	1.2	1.1

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-25
Seep/Spring-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	1	NA	No SLC					6.5	6.5	6.5	6.5
Eh	T	millivolts	1	NA	No SLC					445	445	445	445
Flow	T	gpm	3	NA	No SLC					0.05	10.8	3.7	0.1
pH	T	SU	1	NA	No SLC					4.1	4.1	4.1	4.1
Specific Conductance	T	uS/cm	1	NA	No SLC					1810	1810	1810	1810
Temperature	T	Celsius	1	NA	No SLC					4.4	4.4	4.4	4.4
Turbidity	T	NTU	1	NA	No SLC					0	0	0	0
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	1	0	No SLC			1	1	ND	ND		
Carbonate (as CaCO3)	T	mg/L	1	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	1	100	HH DW (HQ=1)	250	0			39.9	39.9	39.9	39.9
Cyanide	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	1	100	HH DW (HQ=1)	2.2	100			6.5	6.5	6.5	6.5
Hardness	T	mg/L	1	100	No SLC					894	894	894	894
Hydroxide (as CaCO3)	T	mg/L	1	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	1	0	HH DW (HQ=1)	10	0	0.4	0.4	ND	ND		
Nitrite	T	mg/L	1	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	1	100	No SLC					5.4	5.4	5.4	5.4
Phosphate, Ortho As P	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Phosphorus	T	mg/L	1	100	No SLC					0.017	0.017	0.017	0.017
Specific Conductance	T	umhos/cm	1	100	No SLC					1700	1700	1700	1700
Sulfate	T	mg/L	1	100	HH DW (HQ=1)	1500	0			1070	1070	1070	1070
Total Alkalinity	T	mg/L	1	0	No SLC			1	1	ND	ND		
Total Dissolved Solids	T	mg/L	1	100	No SLC					1610	1610	1610	1610
Total Kjeldahl Nitrogen	T	mg/L	1	0	No SLC			0.24	0.24	ND	ND		
Total Organic Carbon	T	mg/L	1	100	No SLC					1.5	1.5	1.5	1.5
Total Suspended Solids	T	mg/L	1	100	No SLC					2.3	2.3	2.3	2.3
Hardness	D	mg/L	1	100	No SLC					898	898	898	898

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-25
Seep/Spring-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	1	0	HH DW (HQ=1)	37	0	36.8	36.8	ND	ND		
Antimony	T	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.003	0.003	ND	ND		
Arsenic	T	mg/L	1	0	HH DW (HQ=1)	0.01	0	0.047	0.047	ND	ND		
Barium	T	mg/L	1	0	HH DW (HQ=1)	2.6	0	0.14	0.14	ND	ND		
Beryllium	T	mg/L	1	100	HH DW (HQ=1)	0.073	0			0.0062	0.0062	0.0062	0.0062
Boron	T	mg/L	1	0	HH DW (HQ=1)	3.3	0	0.075	0.075	ND	ND		
Cadmium	T	mg/L	1	0	HH DW (HQ=1)	0.018	0	0.04	0.04	ND	ND		
Calcium	T	mg/L	1	100	No SLC					250	250	250	250
Chromium	T	mg/L	1	0	HH DW (HQ=1)	0.1	0	0.09	0.09	ND	ND		
Cobalt	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.29	0.29	ND	ND		
Copper	T	mg/L	1	0	HH DW (HQ=1)	1.4	0	0.47	0.47	ND	ND		
Iron	T	mg/L	1	0	HH DW (HQ=1)	11	0	3	3	ND	ND		
Lead	T	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.001	0.001	ND	ND		
Magnesium	T	mg/L	1	100	No SLC					65.9	65.9	65.9	65.9
Manganese	T	mg/L	1	100	HH DW (HQ=1)	1.7	100			6.1	6.1	6.1	6.1
Mercury	T	mg/L	1	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.016	0.016	ND	ND		
Nickel	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.26	0.26	ND	ND		
Potassium	T	mg/L	1	0	No SLC			32.7	32.7	ND	ND		
Selenium	T	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.005	0.005	ND	ND		
Silver	T	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		
Sodium	T	mg/L	1	0	No SLC			51.3	51.3	ND	ND		
Thallium	T	mg/L	1	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	T	mg/L	1	0	HH DW (HQ=1)	0.037	0	0.001	0.001	ND	ND		
Zinc	T	mg/L	1	100	HH DW (HQ=1)	11	0			2.2	2.2	2.2	2.2
Aluminum	D	mg/L	1	0	HH DW (HQ=1)	37	0	37.6	37.6	ND	ND		
Antimony	D	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.003	0.003	ND	ND		
Arsenic	D	mg/L	1	0	HH DW (HQ=1)	0.01	0	0.047	0.047	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-25
Seep/Spring-Colluvium
RI/FS Groundwater Area 5 - Admin and ME Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	D	mg/L	1	0	HH DW (HQ=1)	2.6	0	0.14	0.14	ND	ND		
Beryllium	D	mg/L	1	100	HH DW (HQ=1)	0.073	0			0.0061	0.0061	0.0061	0.0061
Boron	D	mg/L	1	0	HH DW (HQ=1)	3.3	0	0.075	0.075	ND	ND		
Cadmium	D	mg/L	1	0	HH DW (HQ=1)	0.018	0	0.04	0.04	ND	ND		
Calcium	D	mg/L	1	100	No SLC					250	250	250	250
Chromium	D	mg/L	1	0	HH DW (HQ=1)	0.1	0	0.09	0.09	ND	ND		
Cobalt	D	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.29	0.29	ND	ND		
Copper	D	mg/L	1	100	HH DW (HQ=1)	1.4	0			0.47	0.47	0.47	0.47
Iron	D	mg/L	1	0	HH DW (HQ=1)	11	0	3	3	ND	ND		
Lead	D	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.0017	0.0017	0.0017	0.0017
Magnesium	D	mg/L	1	100	No SLC					66.4	66.4	66.4	66.4
Manganese	D	mg/L	1	100	HH DW (HQ=1)	1.7	100			6.2	6.2	6.2	6.2
Mercury	D	mg/L	1	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.016	0.016	ND	ND		
Nickel	D	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.26	0.26	ND	ND		
Potassium	D	mg/L	1	0	No SLC			32.7	32.7	ND	ND		
Selenium	D	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.005	0.005	ND	ND		
Silver	D	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		
Sodium	D	mg/L	1	0	No SLC			51.3	51.3	ND	ND		
Thallium	D	mg/L	1	0	HH DW (HQ=1)	0.0026	0	0.001	0.001	ND	ND		
Vanadium	D	mg/L	1	0	HH DW (HQ=1)	0.26	0	0.001	0.001	ND	ND		
Zinc	D	mg/L	1	100	HH DW (HQ=1)	11	0			2.2	2.2	2.2	2.2

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	6	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	5	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	6	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	6	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	6	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	30	NA	No SLC					0.05	106	6.9	3.4
Eh	T	millivolts	30	NA	No SLC					-32	609	212	240
pH	T	SU	30	NA	No SLC					5	7.2	6.2	6
Specific Conductance	T	uS/cm	30	NA	No SLC					110	2390	1000	854
Temperature	T	Celsius	30	NA	No SLC					5.6	18	9.9	9
Turbidity	T	NTU	30	NA	No SLC					0	248	32.6	8
Helium Isotope and Tritium													
3H-3He	T	Years	1	100	No SLC					24	24	24	24
DEL He3	T	%	1	100	No SLC					57.4	57.4	57.4	57.4
DEL He4	T	%	1	100	No SLC					50	50	50	50
He Corr	T	1E-8cc/g	1	100	No SLC					7.2	7.2	7.2	7.2
Tritium TU	T	TU	1	100	No SLC					5.3	5.3	5.3	5.3
Uncert Age	T	Years	1	100	No SLC					0.63	0.63	0.63	0.63
Uncert TU	T	TU	1	100	No SLC					0.29	0.29	0.29	0.29
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	29	100	No SLC					52.9	242	112	74.4
Carbonate (as CaCO3)	T	mg/L	29	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	29	86.2	HH DW (HQ=1)	250	0	2	9.1	ND	14.9	8.1	8.5
Cyanide	T	mg/L	29	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	30	100	HH DW (HQ=1)	2.2	3.3			0.26	2.4	0.84	0.62
Hardness	T	mg/L	30	100	No SLC					142	1500	610	451
Hydroxide (as CaCO3)	T	mg/L	29	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	29	48.3	HH DW (HQ=1)	10	0	0.2	1	ND	0.79		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrite	T	mg/L	29	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	21	100	No SLC					5.8	7.3	6.6	6.8
Phosphate, Ortho As P	T	mg/L	29	17.2	No SLC			0.01	0.01	ND	14.1		
Phosphorus	T	mg/L	28	25	No SLC			0.01	0.01	ND	0.21		
Specific Conductance	T	umhos/cm	21	100	No SLC					281	2110	969	804
Sulfate	T	mg/L	30	100	HH DW (HQ=1)	1500	3.3			52.2	2580	547	383
Total Alkalinity	T	mg/L	29	100	No SLC					52.9	242	112	74.4
Total Dissolved Solids	T	mg/L	30	86.7	No SLC			210	1140	ND	2150	865	695
Total Kjeldahl Nitrogen	T	mg/L	28	10.7	No SLC			0.24	0.28	ND	3.2		
Total Organic Carbon	T	mg/L	29	10.3	No SLC			1	5	ND	1.4		
Total Suspended Solids	T	mg/L	30	40	No SLC			0.5	1.5	ND	171		
Hardness	D	mg/L	30	100	No SLC					142	1480	607	456
Isotopes													
Delta D	T	per mil	2	100	No SLC					-93.1	-97.3	-95.2	-95.2
Delta O-18	T	per mil	2	100	No SLC					-12.7	-13.4	-13	-13
Metals													
Aluminum	T	mg/L	30	30	HH DW (HQ=1)	37	0	0.006	4.5	ND	1.6		
Antimony	T	mg/L	30	0	HH DW (HQ=1)	0.015	0	0.0004	0.082	ND	ND		
Arsenic	T	mg/L	30	20	HH DW (HQ=1)	0.01	0	0.0004	0.047	ND	0.00077		
Barium	T	mg/L	30	80	HH DW (HQ=1)	2.6	0	0.017	0.14	ND	0.049	0.033	0.039
Beryllium	T	mg/L	30	23.3	HH DW (HQ=1)	0.073	0	0.0002	0.011	ND	0.0011		
Boron	T	mg/L	30	63.3	HH DW (HQ=1)	3.3	0	0.0027	0.084	ND	0.018	0.012	0.011
Cadmium	T	mg/L	30	36.7	HH DW (HQ=1)	0.018	0	0.0002	0.08	ND	0.0015		
Calcium	T	mg/L	30	100	No SLC					45.6	436	179	130
Chromium	T	mg/L	30	13.3	HH DW (HQ=1)	0.1	0	0.0006	0.19	ND	0.0046		
Cobalt	T	mg/L	30	20	HH DW (HQ=1)	0.73	0	0.0011	0.36	ND	0.0041		
Copper	T	mg/L	30	46.7	HH DW (HQ=1)	1.4	0	0.00077	0.2	ND	0.22		
Iron	T	mg/L	30	20	HH DW (HQ=1)	11	0	0.023	4.2	ND	5.7		
Lead	T	mg/L	30	40	HH DW (HQ=1)	0.015	0	0.0002	0.002	ND	0.0041		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Magnesium	T	mg/L	30	93.3	No SLC			30.7	35.2	ND	99.4	38.5	29.5
Manganese	T	mg/L	30	53.3	HH DW (HQ=1)	1.7	43.8	0.0025	0.28	ND	3.4	0.78	0.026
Mercury	T	mg/L	30	0	HH DW (HQ=1)	0.011	0	0.0001	0.00023	ND	ND		
Molybdenum	T	mg/L	30	50	HH DW (HQ=1)	0.18	0	0.0011	0.016	ND	0.024	0.0056	0.0053
Nickel	T	mg/L	30	50	HH DW (HQ=1)	0.73	0	0.0004	0.73	ND	0.015	0.028	0.0064
Potassium	T	mg/L	30	70	No SLC			1.3	52.2	ND	4.8	4.2	2.3
Selenium	T	mg/L	30	13.3	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.0021		
Silver	T	mg/L	30	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	T	mg/L	30	63.3	No SLC			3.3	91.6	ND	34.6	16.6	13.5
Thallium	T	mg/L	30	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	T	mg/L	30	23.3	HH DW (HQ=1)	0.037	0	0.0002	0.002	ND	0.0026		
Zinc	T	mg/L	30	63.3	HH DW (HQ=1)	11	0	0.024	0.39	ND	0.23	0.11	0.12
Aluminum	D	mg/L	30	16.7	HH DW (HQ=1)	37	0	0.028	4.3	ND	0.44		
Antimony	D	mg/L	30	0	HH DW (HQ=1)	0.015	0	0.0004	0.082	ND	ND		
Arsenic	D	mg/L	30	6.7	HH DW (HQ=1)	0.01	0	0.0002	0.047	ND	0.00052		
Barium	D	mg/L	30	80	HH DW (HQ=1)	2.6	0	0.015	0.14	ND	0.049	0.032	0.037
Beryllium	D	mg/L	30	23.3	HH DW (HQ=1)	0.073	0	0.0002	0.012	ND	0.00072		
Boron	D	mg/L	30	60	HH DW (HQ=1)	3.3	0	0.0027	0.084	ND	0.018	0.011	0.0075
Cadmium	D	mg/L	30	23.3	HH DW (HQ=1)	0.018	0	0.0002	0.08	ND	0.00096		
Calcium	D	mg/L	30	100	No SLC					45.7	432	179	134
Chromium	D	mg/L	30	6.7	HH DW (HQ=1)	0.1	0	0.0006	0.19	ND	0.0013		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	30	20	HH DW (HQ=1)	0.73	0	0.0011	0.36	ND	0.0057		
Copper	D	mg/L	30	43.3	HH DW (HQ=1)	1.4	0	0.0014	0.2	ND	0.093		
Iron	D	mg/L	30	23.3	HH DW (HQ=1)	11	0	0.023	4.2	ND	3.5		
Lead	D	mg/L	30	0	HH DW (HQ=1)	0.015	0	0.0002	0.002	ND	ND		
Magnesium	D	mg/L	30	90	No SLC			29	35.2	ND	98	37.8	29.9
Manganese	D	mg/L	30	56.7	HH DW (HQ=1)	1.7	41.2	0.0009	0.28	ND	3.3	0.76	0.029
Mercury	D	mg/L	30	0	HH DW (HQ=1)	0.011	0	0.0001	0.00019	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Molybdenum	D	mg/L	30	53.3	HH DW (HQ=1)	0.18	0	0.0011	0.023	ND	0.013	0.0053	0.0055
Nickel	D	mg/L	30	56.7	HH DW (HQ=1)	0.73	0	0.0015	0.73	ND	0.015	0.028	0.007
Potassium	D	mg/L	30	73.3	No SLC			1.2	52.2	ND	4.7	4.1	2.2
Selenium	D	mg/L	30	26.7	HH DW (HQ=1)	0.18	0	0.0004	0.008	ND	0.0017		
Silver	D	mg/L	30	0	HH DW (HQ=1)	0.18	0	0.0002	0.001	ND	ND		
Sodium	D	mg/L	30	66.7	No SLC			4.9	91.6	ND	35.2	16.2	13
Thallium	D	mg/L	30	0	HH DW (HQ=1)	0.0026	0	0.0002	0.001	ND	ND		
Vanadium	D	mg/L	30	3.3	HH DW (HQ=1)	0.26	0	0.0002	0.002	ND	0.00049		
Zinc	D	mg/L	30	53.3	HH DW (HQ=1)	11	0	0.024	0.39	ND	0.23	0.097	0.1
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
2,4-Dinitrotoluene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2,6-Dinitrotoluene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Chloronaphthalene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
2-Nitrophenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
4-Chloroaniline	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
4-Methylphenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
4-Nitrophenol	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
Acenaphthene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Chrysene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Dibenzofuran	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Nitrobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	13	0	No SLC			0.025	0.026	ND	ND		
Phenanthrene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	13	46.2	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	0.002		
1,1,2,2-Tetrachloroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	13	23.1	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	0.004		
1,1-Dichloroethene	T	mg/L	13	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	13	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-26
Groundwater-Alluvial Aquifer
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Carbon tetrachloride	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	13	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	13	7.7	HH DW (HQ=1)	0.000028	100	0.01	0.01	ND	0.0009		
Trichlorofluoromethane	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	13	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Explosives													
2,4,6-Trinitrotoluene	T	mg/L	2	0	HH DW (HQ=1)	0.0022	0	0.00025	0.00025	ND	ND		
2,6-Pyridinediamine, 3,5-dinitro-N,N`-bis(2,4,6-tri	T	mg/L	2	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotetramethylenetetranitramine	T	mg/L	2	0	No SLC			0.00025	0.00025	ND	ND		
Cyclotrimethylenetrinitramine	T	mg/L	2	0	No SLC			0.00025	0.00025	ND	ND		
Pentaerythritol tetranitrate	T	mg/L	2	0	No SLC			0.01	0.01	ND	ND		
Field													
DO	T	mg/L	17	NA	No SLC					2	8.8	2.9	2.4
EH	T	millivolts	17	NA	No SLC					179	459	334	339
pH	T	SU	17	NA	No SLC					3.9	4.7	4.4	4.4
Specific Conductance	T	uS/cm	17	NA	No SLC					842	966	904	904
Temperature	T	Celsius	17	NA	No SLC					4.6	13.7	8.5	8.2
Turbidity	T	NTU	17	NA	No SLC					0	47.1	8.6	3.8
Helium Isotope and Tritium													
3H-3He	T	Years	1	100	No SLC					18.9	18.9	18.9	18.9
DEL He3	T	%	1	100	No SLC					69.4	69.4	69.4	69.4
DEL He4	T	%	1	100	No SLC					60.5	60.5	60.5	60.5
He Corr	T	1E-8cc/g	1	100	No SLC					7.6	7.6	7.6	7.6
Tritium TU	T	TU	1	100	No SLC					9.7	9.7	9.7	9.7
Uncert Age	T	Years	1	100	No SLC					0.52	0.52	0.52	0.52
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	7	0	No SLC			1	2.3	ND	ND		
Carbonate (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	7	100	HH DW (HQ=1)	250	0			6.5	8.5	7.5	7.4
Cyanide	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	8	100	HH DW (HQ=1)	2.2	25			1.8	2.6	2.2	2.1
Hardness	T	mg/L	7	100	No SLC					412	455	432	426
Hydroxide (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	7	57.1	HH DW (HQ=1)	10	0	0.58	0.77	ND	0.66	0.46	0.43
Nitrite	T	mg/L	7	14.3	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.0062		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
pH	T	SU	5	100	No SLC					3.6	5.4	4.6	4.7
Phosphate, Ortho As P	T	mg/L	7	14.3	No SLC			0.01	0.011	ND	1.7		
Phosphorus	T	mg/L	7	85.7	No SLC			0.03	0.03	ND	0.024	0.019	0.02
Specific Conductance	T	umhos/cm	5	100	No SLC					851	900	886	893
Sulfate	T	mg/L	8	100	HH DW (HQ=1)	1500	0			434	521	479	482
Total Alkalinity	T	mg/L	7	0	No SLC			1	2.3	ND	ND		
Total Dissolved Solids	T	mg/L	8	100	No SLC					710	974	784	755
Total Kjeldahl Nitrogen	T	mg/L	7	0	No SLC			0.24	2.2	ND	ND		
Total Organic Carbon	T	mg/L	7	14.3	No SLC			1	1.6	ND	1		
Total Suspended Solids	T	mg/L	8	75	No SLC			2.9	3.5	ND	20.1	6.4	4.4
Hardness	D	mg/L	8	100	No SLC					366	480	431	435
Isotopes													
Delta D	T	per mil	1	100	No SLC					-97.3	-97.3	-97.3	-97.3
Delta O-18	T	per mil	1	100	No SLC					-13.3	-13.3	-13.3	-13.3
Metals													
Aluminum	T	mg/L	7	71.4	HH DW (HQ=1)	37	0	8.9	9.2	ND	8.6	6.6	6.6
Antimony	T	mg/L	7	0	HH DW (HQ=1)	0.015	0	0.0051	0.097	ND	ND		
Arsenic	T	mg/L	7	0	HH DW (HQ=1)	0.01	0	0.023	0.052	ND	ND		
Barium	T	mg/L	7	0	HH DW (HQ=1)	2.6	0	0.048	0.19	ND	ND		
Beryllium	T	mg/L	7	42.9	HH DW (HQ=1)	0.073	0	0.003	0.01	ND	0.0075		
Boron	T	mg/L	7	0	HH DW (HQ=1)	3.3	0	0.023	0.12	ND	ND		
Cadmium	T	mg/L	7	0	HH DW (HQ=1)	0.018	0	0.005	0.13	ND	ND		
Calcium	T	mg/L	7	100	No SLC					115	128	121	119
Chromium	T	mg/L	7	0	HH DW (HQ=1)	0.1	0	0.01	0.37	ND	ND		
Cobalt	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.038	0.37	ND	ND		
Copper	T	mg/L	7	0	HH DW (HQ=1)	1.4	0	0.056	0.33	ND	ND		
Iron	T	mg/L	7	0	HH DW (HQ=1)	11	0	2.1	6.7	ND	ND		
Lead	T	mg/L	7	42.9	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	0.0015		
Magnesium	T	mg/L	7	100	No SLC					30.2	34	31.7	31.1

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Manganese	T	mg/L	7	100	HH DW (HQ=1)	1.7	85.7			1.7	2.1	1.8	1.8
Mercury	T	mg/L	8	0	HH DW (HQ=1)	0.011	0	0.0001	0.00013	ND	ND		
Molybdenum	T	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.011	0.03	ND	ND		
Nickel	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.079	0.45	ND	ND		
Potassium	T	mg/L	7	14.3	No SLC			3.3	63.8	ND	41.4		
Selenium	T	mg/L	7	14.3	HH DW (HQ=1)	0.18	0	0.002	0.008	ND	0.0058		
Silver	T	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		
Sodium	T	mg/L	7	14.3	No SLC			28.7	99.1	ND	113		
Thallium	T	mg/L	7	0	HH DW (HQ=1)	0.0026	0	0.001	0.0017	ND	ND		
Vanadium	T	mg/L	7	0	HH DW (HQ=1)	0.037	0	0.001	0.0045	ND	ND		
Zinc	T	mg/L	7	100	HH DW (HQ=1)	11	0			0.66	0.74	0.69	0.69
Aluminum	D	mg/L	8	62.5	HH DW (HQ=1)	37	0	8.2	9.4	ND	7.4	5.9	6.1
Antimony	D	mg/L	8	0	HH DW (HQ=1)	0.015	0	0.003	0.097	ND	ND		
Arsenic	D	mg/L	8	0	HH DW (HQ=1)	0.01	0	0.023	0.052	ND	ND		
Barium	D	mg/L	8	0	HH DW (HQ=1)	2.6	0	0.048	0.19	ND	ND		
Beryllium	D	mg/L	8	37.5	HH DW (HQ=1)	0.073	0	0.002	0.01	ND	0.0091		
Boron	D	mg/L	8	0	HH DW (HQ=1)	3.3	0	0.023	0.12	ND	ND		
Cadmium	D	mg/L	8	0	HH DW (HQ=1)	0.018	0	0.005	0.13	ND	ND		
Calcium	D	mg/L	8	100	No SLC					102	133	121	122
Chromium	D	mg/L	8	0	HH DW (HQ=1)	0.1	0	0.01	0.37	ND	ND		
Cobalt	D	mg/L	8	0	HH DW (HQ=1)	0.73	0	0.038	0.37	ND	ND		
Copper	D	mg/L	8	0	HH DW (HQ=1)	1.4	0	0.049	0.33	ND	ND		
Iron	D	mg/L	8	0	HH DW (HQ=1)	11	0	2.4	6.7	ND	ND		
Lead	D	mg/L	8	50	HH DW (HQ=1)	0.015	0	0.001	0.004	ND	0.0013	0.0011	0.0011
Magnesium	D	mg/L	8	100	No SLC					26.8	36	31.6	31.9
Manganese	D	mg/L	8	100	HH DW (HQ=1)	1.7	87.5			1.5	2.3	1.9	1.9
Mercury	D	mg/L	8	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.011	0.03	ND	ND		
Nickel	D	mg/L	8	0	HH DW (HQ=1)	0.73	0	0.076	0.45	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Potassium	D	mg/L	8	0	No SLC			3.3	63.8	ND	ND		
Selenium	D	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.002	0.008	ND	ND		
Silver	D	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.001	0.001	ND	ND		
Sodium	D	mg/L	8	0	No SLC			32.7	99.1	ND	ND		
Thallium	D	mg/L	8	0	HH DW (HQ=1)	0.0026	0	0.001	0.0017	ND	ND		
Vanadium	D	mg/L	8	0	HH DW (HQ=1)	0.26	0	0.001	0.0047	ND	ND		
Zinc	D	mg/L	8	100	HH DW (HQ=1)	11	0			0.58	0.78	0.68	0.67
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2,4-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,6-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Chloronaphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2-Nitrophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chloroaniline	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
4-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4-Nitrophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
Acenaphthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chrysene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibenzofuran	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Nitrobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
N-Nitrosodiphenylamine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
Phenanthrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	3	66.7	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	0.001	0.0023	0.001
1,1,2,2-Tetrachloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	3	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	3	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-27
Groundwater-Bedrock
RI/FS Groundwater Area 6 - Mill Site Area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Chloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	3	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-28
Groundwater-Upper Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	10	NA	No SLC					7.5	10.9	8.9	8.6
Eh	T	millivolts	10	NA	No SLC					63.8	550	249	189
pH	T	SU	10	NA	No SLC					6.9	7.6	7.4	7.4
Specific Conductance	T	uS/cm	10	NA	No SLC					1030	1190	1110	1120
Temperature	T	Celsius	10	NA	No SLC					8.1	15.2	11.7	11.8
Turbidity	T	NTU	10	NA	No SLC					0	59.9	22.7	14.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	10	100	No SLC					119	136	130	131
Carbonate (as CaCO3)	T	mg/L	10	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	10	100	HH DW (HQ=1)	250	0			12	163	86.4	87.4
Cyanide	T	mg/L	10	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	10	90	HH DW (HQ=1)	2.2	0	0.44	0.44	ND	0.51	0.36	0.36
Hardness	T	mg/L	10	100	No SLC					191	529	465	495
Hydroxide (as CaCO3)	T	mg/L	10	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	10	100	HH DW (HQ=1)	10	0			2.1	9.9	8.3	8.8
Nitrite	T	mg/L	10	50	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.052	0.014	0.0056
pH	T	SU	10	100	No SLC					7.1	7.7	7.5	7.5
Phosphate, Ortho As P	T	mg/L	10	50	No SLC			0.01	0.028	ND	0.068	0.022	0.014
Phosphorus	T	mg/L	10	90	No SLC			0.04	0.04	ND	0.077	0.035	0.033
Specific Conductance	T	umhos/cm	10	100	No SLC					447	1150	1010	1060
Sulfate	T	mg/L	10	90	HH DW (HQ=1)	1500	0	251	251	ND	420	287	319
Total Alkalinity	T	mg/L	10	100	No SLC					119	136	130	131
Total Dissolved Solids	T	mg/L	10	100	No SLC					370	924	780	833
Total Kjeldahl Nitrogen	T	mg/L	10	30	No SLC			0.24	0.51	ND	2.1		
Total Organic Carbon	T	mg/L	10	30	No SLC			1	2.4	ND	2.4		
Total Suspended Solids	T	mg/L	10	100	No SLC					4.2	68	19.9	11.2
Hardness	D	mg/L	10	100	No SLC					187	525	461	490
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-28
Groundwater-Upper Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	10	40	HH DW (HQ=1)	37	0	0.22	0.72	ND	2.6		
Antimony	T	mg/L	10	0	HH DW (HQ=1)	0.015	0	0.0007	0.0024	ND	ND		
Arsenic	T	mg/L	10	100	HH DW (HQ=1)	0.01	0			0.00049	0.0022	0.001	0.00097
Barium	T	mg/L	10	100	HH DW (HQ=1)	2.6	0			0.049	0.089	0.062	0.06
Beryllium	T	mg/L	10	0	HH DW (HQ=1)	0.073	0	0.0002	0.0004	ND	ND		
Boron	T	mg/L	10	80	HH DW (HQ=1)	3.3	0	0.021	0.023	ND	0.026	0.019	0.02
Cadmium	T	mg/L	10	0	HH DW (HQ=1)	0.018	0	0.0003	0.0007	ND	ND		
Calcium	T	mg/L	10	100	No SLC					57.3	162	142	154
Chromium	T	mg/L	10	30	HH DW (HQ=1)	0.1	0	0.0006	0.0078	ND	0.0031		
Cobalt	T	mg/L	10	0	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	ND		
Copper	T	mg/L	10	20	HH DW (HQ=1)	1.4	0	0.0014	0.0028	ND	0.0051		
Iron	T	mg/L	10	10	HH DW (HQ=1)	11	0	0.25	0.84	ND	1.9		
Lead	T	mg/L	10	20	HH DW (HQ=1)	0.015	0	0.0002	0.0029	ND	0.0011		
Magnesium	T	mg/L	10	100	No SLC					11.7	32.2	26.5	27.7
Manganese	T	mg/L	10	60	HH DW (HQ=1)	1.7	0	0.012	0.019	ND	0.15	0.055	0.03
Mercury	T	mg/L	10	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	10	40	HH DW (HQ=1)	0.18	0	0.0011	0.0042	ND	0.0039		
Nickel	T	mg/L	10	10	HH DW (HQ=1)	0.73	0	0.0014	0.003	ND	0.0043		
Potassium	T	mg/L	10	70	No SLC			2.2	2.7	ND	3.8	2.2	2.2
Selenium	T	mg/L	10	100	HH DW (HQ=1)	0.18	0			0.0034	0.015	0.0099	0.01
Silver	T	mg/L	10	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	T	mg/L	10	100	No SLC					22.6	66.7	55.8	58.2
Thallium	T	mg/L	10	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	T	mg/L	10	100	HH DW (HQ=1)	0.037	0			0.00043	0.0045	0.0014	0.0013
Zinc	T	mg/L	10	0	HH DW (HQ=1)	11	0	0.016	0.049	ND	ND		
Aluminum	D	mg/L	10	0	HH DW (HQ=1)	37	0	0.22	0.63	ND	ND		
Antimony	D	mg/L	10	0	HH DW (HQ=1)	0.015	0	0.0006	0.0024	ND	ND		
Arsenic	D	mg/L	10	100	HH DW (HQ=1)	0.01	0			0.00045	0.0017	0.00082	0.00068
Barium	D	mg/L	10	100	HH DW (HQ=1)	2.6	0			0.048	0.066	0.057	0.057

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-28
Groundwater-Upper Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	10	0	HH DW (HQ=1)	0.073	0	0.0002	0.0004	ND	ND		
Boron	D	mg/L	10	80	HH DW (HQ=1)	3.3	0	0.02	0.021	ND	0.027	0.018	0.018
Cadmium	D	mg/L	10	0	HH DW (HQ=1)	0.018	0	0.0003	0.0011	ND	ND		
Calcium	D	mg/L	10	100	No SLC					56.2	163	141	152
Chromium	D	mg/L	10	40	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0024		
Cobalt	D	mg/L	10	10	HH DW (HQ=1)	0.73	0	0.0017	0.0038	ND	0.0028		
Copper	D	mg/L	10	40	HH DW (HQ=1)	1.4	0	0.002	0.0046	ND	0.016		
Iron	D	mg/L	10	0	HH DW (HQ=1)	11	0	0.19	0.67	ND	ND		
Lead	D	mg/L	10	0	HH DW (HQ=1)	0.015	0	0.0002	0.0008	ND	ND		
Magnesium	D	mg/L	10	100	No SLC					11.5	31.8	26.2	27.1
Manganese	D	mg/L	10	40	HH DW (HQ=1)	1.7	0	0.012	0.03	ND	0.11		
Mercury	D	mg/L	10	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	10	40	HH DW (HQ=1)	0.18	0	0.0011	0.0041	ND	0.0037		
Nickel	D	mg/L	10	0	HH DW (HQ=1)	0.73	0	0.0014	0.003	ND	ND		
Potassium	D	mg/L	10	70	No SLC			2.1	2.7	ND	2.9	2	2.1
Selenium	D	mg/L	10	100	HH DW (HQ=1)	0.18	0			0.0037	0.014	0.0099	0.0099
Silver	D	mg/L	10	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	D	mg/L	10	100	No SLC					22.9	65.6	55.6	59.1
Thallium	D	mg/L	10	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	D	mg/L	10	70	HH DW (HQ=1)	0.26	0	0.0004	0.0039	ND	0.00084	0.00059	0.00042
Zinc	D	mg/L	10	0	HH DW (HQ=1)	11	0	0.016	0.049	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-29
Groundwater-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	16	NA	No SLC					1.5	10.2	7.7	7.7
Eh	T	millivolts	16	NA	No SLC					75.7	511	246	238
pH	T	SU	16	NA	No SLC					5.3	7.6	7.2	7.4
Specific Conductance	T	uS/cm	16	NA	No SLC					416	480	447	449
Temperature	T	Celsius	16	NA	No SLC					7.6	16.7	11.1	10.8
Turbidity	T	NTU	16	NA	No SLC					1.7	220	61.3	51.6
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	16	100	No SLC					122	147	129	125
Carbonate (as CaCO3)	T	mg/L	16	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	16	93.8	HH DW (HQ=1)	250	0	20.4	20.4	ND	87.7	17	12
Cyanide	T	mg/L	16	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	16	93.8	HH DW (HQ=1)	2.2	0	0.38	0.38	ND	0.54	0.41	0.41
Hardness	T	mg/L	16	100	No SLC					183	468	213	194
Hydroxide (as CaCO3)	T	mg/L	16	6.3	No SLC			1	1	ND	122		
Nitrate	T	mg/L	16	100	HH DW (HQ=1)	10	0			1.8	9.1	2.4	2
Nitrite	T	mg/L	16	6.3	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.009		
pH	T	SU	11	100	No SLC					7	7.7	7.4	7.5
Phosphate, Ortho As P	T	mg/L	16	56.3	No SLC			0.01	0.029	ND	0.083	0.022	0.018
Phosphorus	T	mg/L	16	93.8	No SLC			0.084	0.084	ND	0.2	0.061	0.048
Specific Conductance	T	umhos/cm	11	100	No SLC					354	1140	487	432
Sulfate	T	mg/L	16	100	HH DW (HQ=1)	1500	0			73.2	326	107	86.7
Total Alkalinity	T	mg/L	16	100	No SLC					122	147	129	125
Total Dissolved Solids	T	mg/L	16	93.8	No SLC			294	294	ND	774	337	311
Total Kjeldahl Nitrogen	T	mg/L	16	6.3	No SLC			0.24	0.61	ND	2.4		
Total Organic Carbon	T	mg/L	16	18.8	No SLC			1	1.6	ND	1.3		
Total Suspended Solids	T	mg/L	16	93.8	No SLC			12.2	12.2	ND	331	46.2	18.6
Hardness	D	mg/L	16	100	No SLC					184	488	214	192
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-29
Groundwater-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	16	43.8	HH DW (HQ=1)	37	0	0.22	1.2	ND	9.8		
Antimony	T	mg/L	16	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	T	mg/L	16	56.3	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.0013	0.00047	0.00043
Barium	T	mg/L	16	100	HH DW (HQ=1)	2.6	0			0.047	0.1	0.07	0.07
Beryllium	T	mg/L	16	0	HH DW (HQ=1)	0.073	0	0.0002	0.00077	ND	ND		
Boron	T	mg/L	16	81.3	HH DW (HQ=1)	3.3	0	0.015	0.019	ND	0.023	0.017	0.019
Cadmium	T	mg/L	16	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	T	mg/L	16	100	No SLC					54.8	145	64	57.5
Chromium	T	mg/L	16	43.8	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0088		
Cobalt	T	mg/L	16	0	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	ND		
Copper	T	mg/L	16	18.8	HH DW (HQ=1)	1.4	0	0.00082	0.0054	ND	0.0026		
Iron	T	mg/L	16	50	HH DW (HQ=1)	11	0	0.28	0.83	ND	5.5	0.74	0.37
Lead	T	mg/L	16	62.5	HH DW (HQ=1)	0.015	0	0.0002	0.0017	ND	0.0037	0.001	0.00065
Magnesium	T	mg/L	16	100	No SLC					11.1	26	13	11.9
Manganese	T	mg/L	16	62.5	HH DW (HQ=1)	1.7	0	0.012	0.04	ND	0.22	0.043	0.019
Mercury	T	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	16	62.5	HH DW (HQ=1)	0.18	0	0.0012	0.0052	ND	0.0058	0.0024	0.0021
Nickel	T	mg/L	16	12.5	HH DW (HQ=1)	0.73	0	0.0014	0.0041	ND	0.0045		
Potassium	T	mg/L	16	75	No SLC			0.52	2.9	ND	3.1	1.4	1.4
Selenium	T	mg/L	16	93.8	HH DW (HQ=1)	0.18	0	0.0039	0.0039	ND	0.012	0.0033	0.0028
Silver	T	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	ND		
Sodium	T	mg/L	16	93.8	No SLC			3.3	3.3	ND	59	23.5	22.3
Thallium	T	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Vanadium	T	mg/L	16	100	HH DW (HQ=1)	0.037	0			0.00083	0.0059	0.0019	0.0015
Zinc	T	mg/L	16	25	HH DW (HQ=1)	11	0	0.014	0.055	ND	0.053		
Aluminum	D	mg/L	16	0	HH DW (HQ=1)	37	0	0.01	0.63	ND	ND		
Antimony	D	mg/L	16	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	D	mg/L	16	31.3	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.0011		
Barium	D	mg/L	16	100	HH DW (HQ=1)	2.6	0			0.047	0.071	0.063	0.064

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-29
Groundwater-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	16	0	HH DW (HQ=1)	0.073	0	0.0002	0.00064	ND	ND		
Boron	D	mg/L	16	75	HH DW (HQ=1)	3.3	0	0.015	0.019	ND	0.022	0.016	0.017
Cadmium	D	mg/L	16	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	D	mg/L	16	100	No SLC					54.8	150	64.4	57.5
Chromium	D	mg/L	16	31.3	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0024		
Cobalt	D	mg/L	16	6.3	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.0039		
Copper	D	mg/L	16	6.3	HH DW (HQ=1)	1.4	0	0.0003	0.0038	ND	0.018		
Iron	D	mg/L	16	0	HH DW (HQ=1)	11	0	0.03	0.67	ND	ND		
Lead	D	mg/L	16	0	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	ND		
Magnesium	D	mg/L	16	100	No SLC					11	27.2	12.9	11.7
Manganese	D	mg/L	16	18.8	HH DW (HQ=1)	1.7	0	0.01	0.037	ND	0.2		
Mercury	D	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	16	75	HH DW (HQ=1)	0.18	0	0.0012	0.0034	ND	0.0076	0.0025	0.0023
Nickel	D	mg/L	16	6.3	HH DW (HQ=1)	0.73	0	0.0006	0.003	ND	0.00022		
Potassium	D	mg/L	16	75	No SLC			0.52	3.2	ND	1.7	1.3	1.4
Selenium	D	mg/L	16	93.8	HH DW (HQ=1)	0.18	0	0.0035	0.0035	ND	0.013	0.0033	0.0028
Silver	D	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	ND		
Sodium	D	mg/L	16	100	No SLC					16.8	58	23.8	22.3
Thallium	D	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Vanadium	D	mg/L	16	100	HH DW (HQ=1)	0.26	0			0.00061	0.001	0.00077	0.00077
Zinc	D	mg/L	16	18.8	HH DW (HQ=1)	11	0	0.014	0.061	ND	0.032		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-30
Groundwater-Basal Bedrock Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	8	NA	No SLC					2.7	5.8	4.2	4.3
Eh	T	millivolts	8	NA	No SLC					66.2	370	254	273
pH	T	SU	8	NA	No SLC					7	8.3	7.9	8
Specific Conductance	T	uS/cm	8	NA	No SLC					225	244	237	238
Temperature	T	Celsius	8	NA	No SLC					10.4	17.2	13.6	13.1
Turbidity	T	NTU	8	NA	No SLC					0	69.6	13.2	3.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	8	100	No SLC					79.6	88.4	84.3	85
Carbonate (as CaCO3)	T	mg/L	8	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	8	100	HH DW (HQ=1)	250	0			9.7	10.7	10.3	10.2
Cyanide	T	mg/L	8	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	8	100	HH DW (HQ=1)	2.2	0			1	1.1	1.1	1.1
Hardness	T	mg/L	8	100	No SLC					62.8	69.5	65.9	65.5
Hydroxide (as CaCO3)	T	mg/L	8	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	8	87.5	HH DW (HQ=1)	10	0	0.45	0.45	ND	0.54	0.41	0.41
Nitrite	T	mg/L	8	25	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.021		
pH	T	SU	8	100	No SLC					8	8.3	8.1	8.1
Phosphate, Ortho As P	T	mg/L	8	25	No SLC			0.01	0.049	ND	0.068		
Phosphorus	T	mg/L	8	87.5	No SLC			0.01	0.01	ND	0.026	0.015	0.014
Specific Conductance	T	umhos/cm	8	100	No SLC					189	237	214	216
Sulfate	T	mg/L	8	87.5	HH DW (HQ=1)	1500	0	18.7	18.7	ND	25.1	19.7	20.3
Total Alkalinity	T	mg/L	8	100	No SLC					79.6	88.4	84.3	85
Total Dissolved Solids	T	mg/L	8	75	No SLC			202	204	ND	208	167	178
Total Kjeldahl Nitrogen	T	mg/L	8	12.5	No SLC			0.24	0.27	ND	2.2		
Total Organic Carbon	T	mg/L	8	0	No SLC			1	1.5	ND	ND		
Total Suspended Solids	T	mg/L	8	25	No SLC			0.5	3	ND	11.4		
Hardness	D	mg/L	8	100	No SLC					62.6	69.3	65.5	65.4
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-30
Groundwater-Basal Bedrock Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	8	12.5	HH DW (HQ=1)	37	0	0.18	0.63	ND	0.67		
Antimony	T	mg/L	8	0	HH DW (HQ=1)	0.015	0	0.0008	0.0024	ND	ND		
Arsenic	T	mg/L	8	100	HH DW (HQ=1)	0.01	0			0.00087	0.0026	0.0018	0.002
Barium	T	mg/L	8	100	HH DW (HQ=1)	2.6	0			0.011	0.029	0.017	0.016
Beryllium	T	mg/L	8	0	HH DW (HQ=1)	0.073	0	0.0002	0.00095	ND	ND		
Boron	T	mg/L	8	100	HH DW (HQ=1)	3.3	0			0.039	0.049	0.044	0.045
Cadmium	T	mg/L	8	0	HH DW (HQ=1)	0.018	0	0.0003	0.0007	ND	ND		
Calcium	T	mg/L	8	100	No SLC					16.5	18.2	17.4	17.4
Chromium	T	mg/L	8	12.5	HH DW (HQ=1)	0.1	0	0.0013	0.0041	ND	0.0082		
Cobalt	T	mg/L	8	25	HH DW (HQ=1)	0.73	0	0.0011	0.0031	ND	0.0048		
Copper	T	mg/L	8	0	HH DW (HQ=1)	1.4	0	0.0007	0.0052	ND	ND		
Iron	T	mg/L	8	25	HH DW (HQ=1)	11	0	0.19	0.67	ND	3.1		
Lead	T	mg/L	8	12.5	HH DW (HQ=1)	0.015	0	0.0002	0.0008	ND	0.0013		
Magnesium	T	mg/L	8	100	No SLC					5.1	5.9	5.5	5.4
Manganese	T	mg/L	8	62.5	HH DW (HQ=1)	1.7	0	0.019	0.056	ND	0.1	0.037	0.024
Mercury	T	mg/L	8	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	8	100	HH DW (HQ=1)	0.18	0			0.0088	0.023	0.013	0.011
Nickel	T	mg/L	8	12.5	HH DW (HQ=1)	0.73	0	0.002	0.012	ND	0.0022		
Potassium	T	mg/L	8	87.5	No SLC			3.2	3.2	ND	3.3	2.4	2.6
Selenium	T	mg/L	8	62.5	HH DW (HQ=1)	0.18	0	0.0014	0.0016	ND	0.0011	0.0008	0.0008
Silver	T	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	T	mg/L	8	87.5	No SLC			18.4	18.4	ND	28.4	22.6	24.3
Thallium	T	mg/L	8	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	T	mg/L	8	100	HH DW (HQ=1)	0.037	0			0.0026	0.0075	0.0051	0.0052
Zinc	T	mg/L	8	12.5	HH DW (HQ=1)	11	0	0.015	0.091	ND	0.24		
Aluminum	D	mg/L	8	0	HH DW (HQ=1)	37	0	0.18	0.63	ND	ND		
Antimony	D	mg/L	8	0	HH DW (HQ=1)	0.015	0	0.0008	0.0024	ND	ND		
Arsenic	D	mg/L	8	100	HH DW (HQ=1)	0.01	0			0.00088	0.0022	0.0018	0.0019
Barium	D	mg/L	8	100	HH DW (HQ=1)	2.6	0			0.011	0.023	0.016	0.015

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-30
Groundwater-Basal Bedrock Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	8	0	HH DW (HQ=1)	0.073	0	0.0002	0.00052	ND	ND		
Boron	D	mg/L	8	100	HH DW (HQ=1)	3.3	0			0.042	0.049	0.045	0.045
Cadmium	D	mg/L	8	0	HH DW (HQ=1)	0.018	0	0.0003	0.0007	ND	ND		
Calcium	D	mg/L	8	100	No SLC					16.4	18.4	17.3	17.4
Chromium	D	mg/L	8	12.5	HH DW (HQ=1)	0.1	0	0.0006	0.0032	ND	0.0019		
Cobalt	D	mg/L	8	25	HH DW (HQ=1)	0.73	0	0.0018	0.0033	ND	0.0032		
Copper	D	mg/L	8	12.5	HH DW (HQ=1)	1.4	0	0.0007	0.003	ND	0.0097		
Iron	D	mg/L	8	0	HH DW (HQ=1)	11	0	0.19	0.67	ND	ND		
Lead	D	mg/L	8	0	HH DW (HQ=1)	0.015	0	0.0002	0.00095	ND	ND		
Magnesium	D	mg/L	8	100	No SLC					5.1	5.7	5.4	5.4
Manganese	D	mg/L	8	50	HH DW (HQ=1)	1.7	0	0.019	0.05	ND	0.079	0.028	0.016
Mercury	D	mg/L	8	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	8	100	HH DW (HQ=1)	0.18	0			0.0085	0.02	0.012	0.011
Nickel	D	mg/L	8	12.5	HH DW (HQ=1)	0.73	0	0.002	0.0028	ND	0.0023		
Potassium	D	mg/L	8	87.5	No SLC			3.1	3.1	ND	3.1	2.5	2.6
Selenium	D	mg/L	8	37.5	HH DW (HQ=1)	0.18	0	0.0006	0.0016	ND	0.00084		
Silver	D	mg/L	8	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	D	mg/L	8	87.5	No SLC			20.1	20.1	ND	29	22.3	23.6
Thallium	D	mg/L	8	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	D	mg/L	8	100	HH DW (HQ=1)	0.26	0			0.002	0.0066	0.0049	0.0051
Zinc	D	mg/L	8	0	HH DW (HQ=1)	11	0	0.015	0.13	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-31
Residential Tap Water-Upper Alluvial Aquifer
RI/FS Reference Tap Water
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	2	NA	No SLC					6.6	6.8	6.7	6.7
Eh	T	millivolts	2	NA	No SLC					488	575	531	531
pH	T	SU	2	NA	No SLC					7.6	7.8	7.7	7.7
Specific Conductance	T	uS/cm	2	NA	No SLC					382	394	388	388
Temperature	T	Celsius	2	NA	No SLC					17.1	17.3	17.2	17.2
Turbidity	T	NTU	2	NA	No SLC					4.5	8.6	6.6	6.6
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	2	100	No SLC					164	164	164	164
Carbonate (as CaCO3)	T	mg/L	2	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	2	100	HH DW (HQ=1)	250	0			1.9	2	1.9	1.9
Cyanide	T	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	2	100	HH DW (HQ=1)	2.2	0			0.69	0.74	0.72	0.72
Hardness	T	mg/L	2	100	No SLC					126	130	128	128
Hydroxide (as CaCO3)	T	mg/L	2	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	2	100	HH DW (HQ=1)	10	0			0.62	0.62	0.62	0.62
Nitrite	T	mg/L	2	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
Sulfate	T	mg/L	2	100	HH DW (HQ=1)	1500	0			31.3	35.4	33.4	33.4
Total Alkalinity	T	mg/L	2	100	No SLC					164	164	164	164
Total Dissolved Solids	T	mg/L	2	100	No SLC					190	254	222	222
Total Suspended Solids	T	mg/L	2	0	No SLC			0.5	0.5	ND	ND		
Hardness	D	mg/L	2	100	No SLC					126	127	127	127
Metals													
Aluminum	T	mg/L	2	0	HH DW (HQ=1)	37	0	0.024	0.024	ND	ND		
Antimony	T	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.0005	0.0005	ND	ND		
Arsenic	T	mg/L	2	100	HH DW (HQ=1)	0.01	0			0.00023	0.00029	0.00026	0.00026
Barium	T	mg/L	2	100	HH DW (HQ=1)	2.6	0			0.043	0.044	0.044	0.044
Beryllium	T	mg/L	2	0	HH DW (HQ=1)	0.073	0	0.0002	0.0002	ND	ND		
Boron	T	mg/L	2	100	HH DW (HQ=1)	3.3	0			0.056	0.058	0.057	0.057

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-31
Residential Tap Water-Upper Alluvial Aquifer
RI/FS Reference Tap Water
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	T	mg/L	2	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	T	mg/L	2	100	No SLC					38.7	40.1	39.4	39.4
Chromium	T	mg/L	2	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		
Cobalt	T	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	T	mg/L	2	100	HH DW (HQ=1)	1.4	0			0.005	0.0078	0.0064	0.0064
Iron	T	mg/L	2	0	HH DW (HQ=1)	11	0	0.033	0.033	ND	ND		
Lead	T	mg/L	2	100	HH DW (HQ=1)	0.015	0			0.00093	0.0014	0.0012	0.0012
Magnesium	T	mg/L	2	100	No SLC					7	7.3	7.1	7.1
Manganese	T	mg/L	2	0	HH DW (HQ=1)	1.7	0	0.0007	0.0007	ND	ND		
Mercury	T	mg/L	2	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	2	100	HH DW (HQ=1)	0.18	0			0.005	0.0051	0.0051	0.0051
Nickel	T	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	T	mg/L	2	100	No SLC					1.1	1.2	1.2	1.2
Selenium	T	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	T	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	T	mg/L	2	100	No SLC					33.5	34.5	34	34
Thallium	T	mg/L	2	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Uranium	T	mg/L	2	100	No SLC					0.0041	0.0041	0.0041	0.0041
Vanadium	T	mg/L	2	100	HH DW (HQ=1)	0.037	0			0.00082	0.00083	0.00082	0.00082
Zinc	T	mg/L	2	100	HH DW (HQ=1)	11	0			0.062	0.15	0.1	0.1
Aluminum	D	mg/L	2	0	HH DW (HQ=1)	37	0	0.024	0.024	ND	ND		
Antimony	D	mg/L	2	0	HH DW (HQ=1)	0.015	0	0.0005	0.0005	ND	ND		
Arsenic	D	mg/L	2	100	HH DW (HQ=1)	0.01	0			0.00023	0.00024	0.00023	0.00023
Barium	D	mg/L	2	100	HH DW (HQ=1)	2.6	0			0.043	0.043	0.043	0.043
Beryllium	D	mg/L	2	0	HH DW (HQ=1)	0.073	0	0.0002	0.0002	ND	ND		
Boron	D	mg/L	2	100	HH DW (HQ=1)	3.3	0			0.056	0.057	0.057	0.057
Cadmium	D	mg/L	2	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	D	mg/L	2	100	No SLC					38.7	39.3	39	39
Chromium	D	mg/L	2	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-31
Residential Tap Water-Upper Alluvial Aquifer
RI/FS Reference Tap Water
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cobalt	D	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	D	mg/L	2	100	HH DW (HQ=1)	1.4	0			0.0049	0.0051	0.005	0.005
Iron	D	mg/L	2	0	HH DW (HQ=1)	11	0	0.033	0.033	ND	ND		
Lead	D	mg/L	2	100	HH DW (HQ=1)	0.015	0			0.00078	0.001	0.00089	0.00089
Magnesium	D	mg/L	2	100	No SLC					7	7.1	7.1	7.1
Manganese	D	mg/L	2	50	HH DW (HQ=1)	1.7	0	0.0007	0.0007	ND	0.0023	0.0013	0.0013
Mercury	D	mg/L	2	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	2	100	HH DW (HQ=1)	0.18	0			0.0049	0.005	0.0049	0.0049
Nickel	D	mg/L	2	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	D	mg/L	2	100	No SLC					1.2	1.2	1.2	1.2
Selenium	D	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	D	mg/L	2	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	D	mg/L	2	100	No SLC					33.4	33.7	33.6	33.6
Thallium	D	mg/L	2	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Vanadium	D	mg/L	2	100	HH DW (HQ=1)	0.26	0			0.00081	0.00089	0.00085	0.00085
Zinc	D	mg/L	2	100	HH DW (HQ=1)	11	0			0.057	0.15	0.1	0.1

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-32
Residential Tap Water-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	1	NA	No SLC					8	8	8	8
EH	T	millivolts	1	NA	No SLC					192	192	192	192
pH	T	SU	1	NA	No SLC					7.4	7.4	7.4	7.4
Specific Conductance	T	uS/cm	1	NA	No SLC					149	149	149	149
Temperature	T	Celsius	1	NA	No SLC					11.5	11.5	11.5	11.5
Turbidity	T	NTU	1	NA	No SLC					3.4	3.4	3.4	3.4
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	1	100	No SLC					67.2	67.2	67.2	67.2
Carbonate (as CaCO3)	T	mg/L	1	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	1	100	HH DW (HQ=1)	250	0			1.7	1.7	1.7	1.7
Cyanide	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	1	100	HH DW (HQ=1)	2.2	0			0.24	0.24	0.24	0.24
Hardness	T	mg/L	1	100	No SLC					62.4	62.4	62.4	62.4
Hydroxide (as CaCO3)	T	mg/L	1	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	1	100	HH DW (HQ=1)	10	0			1.5	1.5	1.5	1.5
Nitrite	T	mg/L	1	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
Sulfate	T	mg/L	1	100	HH DW (HQ=1)	1500	0			5.9	5.9	5.9	5.9
Total Alkalinity	T	mg/L	1	100	No SLC					67.2	67.2	67.2	67.2
Total Dissolved Solids	T	mg/L	1	100	No SLC					144	144	144	144
Total Suspended Solids	T	mg/L	1	100	No SLC					0.6	0.6	0.6	0.6
Hardness	D	mg/L	1	100	No SLC					62.2	62.2	62.2	62.2
Metals													
Aluminum	T	mg/L	1	0	HH DW (HQ=1)	37	0	0.024	0.024	ND	ND		
Antimony	T	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.0005	0.0005	ND	ND		
Arsenic	T	mg/L	1	0	HH DW (HQ=1)	0.01	0	0.0002	0.0002	ND	ND		
Barium	T	mg/L	1	100	HH DW (HQ=1)	2.6	0			0.014	0.014	0.014	0.014
Beryllium	T	mg/L	1	0	HH DW (HQ=1)	0.073	0	0.00025	0.00025	ND	ND		
Boron	T	mg/L	1	0	HH DW (HQ=1)	3.3	0	0.0048	0.0048	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-32
Residential Tap Water-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cadmium	T	mg/L	1	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	T	mg/L	1	100	No SLC					19.9	19.9	19.9	19.9
Chromium	T	mg/L	1	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		
Cobalt	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	T	mg/L	1	100	HH DW (HQ=1)	1.4	0			0.017	0.017	0.017	0.017
Iron	T	mg/L	1	0	HH DW (HQ=1)	11	0	0.085	0.085	ND	ND		
Lead	T	mg/L	1	100	HH DW (HQ=1)	0.015	0			0.00037	0.00037	0.00037	0.00037
Magnesium	T	mg/L	1	100	No SLC					3.1	3.1	3.1	3.1
Manganese	T	mg/L	1	100	HH DW (HQ=1)	1.7	0			0.0022	0.0022	0.0022	0.0022
Mercury	T	mg/L	1	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	1	100	HH DW (HQ=1)	0.18	0			0.0005	0.0005	0.0005	0.0005
Nickel	T	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	T	mg/L	1	100	No SLC					0.6	0.6	0.6	0.6
Selenium	T	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	T	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	T	mg/L	1	100	No SLC					4.5	4.5	4.5	4.5
Thallium	T	mg/L	1	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Uranium	T	mg/L	1	100	No SLC					0.00064	0.00064	0.00064	0.00064
Vanadium	T	mg/L	1	100	HH DW (HQ=1)	0.037	0			0.00055	0.00055	0.00055	0.00055
Zinc	T	mg/L	1	100	HH DW (HQ=1)	11	0			0.13	0.13	0.13	0.13
Aluminum	D	mg/L	1	0	HH DW (HQ=1)	37	0	0.024	0.024	ND	ND		
Antimony	D	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.0005	0.0005	ND	ND		
Arsenic	D	mg/L	1	0	HH DW (HQ=1)	0.01	0	0.0002	0.0002	ND	ND		
Barium	D	mg/L	1	100	HH DW (HQ=1)	2.6	0			0.014	0.014	0.014	0.014
Beryllium	D	mg/L	1	0	HH DW (HQ=1)	0.073	0	0.0002	0.0002	ND	ND		
Boron	D	mg/L	1	0	HH DW (HQ=1)	3.3	0	0.0048	0.0048	ND	ND		
Cadmium	D	mg/L	1	0	HH DW (HQ=1)	0.018	0	0.0002	0.0002	ND	ND		
Calcium	D	mg/L	1	100	No SLC					19.8	19.8	19.8	19.8
Chromium	D	mg/L	1	0	HH DW (HQ=1)	0.1	0	0.0014	0.0014	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-32
Residential Tap Water-Basal Alluvial Aquifer
RI/FS Reference Tailings Facility Groundwater
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Cobalt	D	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.002	0.002	ND	ND		
Copper	D	mg/L	1	100	HH DW (HQ=1)	1.4	0			0.015	0.015	0.015	0.015
Iron	D	mg/L	1	0	HH DW (HQ=1)	11	0	0.033	0.033	ND	ND		
Lead	D	mg/L	1	0	HH DW (HQ=1)	0.015	0	0.0001	0.0001	ND	ND		
Magnesium	D	mg/L	1	100	No SLC					3.1	3.1	3.1	3.1
Manganese	D	mg/L	1	100	HH DW (HQ=1)	1.7	0			0.0021	0.0021	0.0021	0.0021
Mercury	D	mg/L	1	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	1	100	HH DW (HQ=1)	0.18	0			0.00055	0.00055	0.00055	0.00055
Nickel	D	mg/L	1	0	HH DW (HQ=1)	0.73	0	0.0006	0.0006	ND	ND		
Potassium	D	mg/L	1	100	No SLC					0.63	0.63	0.63	0.63
Selenium	D	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.0008	0.0008	ND	ND		
Silver	D	mg/L	1	0	HH DW (HQ=1)	0.18	0	0.0001	0.0001	ND	ND		
Sodium	D	mg/L	1	100	No SLC					4.3	4.3	4.3	4.3
Thallium	D	mg/L	1	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0001	ND	ND		
Vanadium	D	mg/L	1	100	HH DW (HQ=1)	0.26	0			0.00048	0.00048	0.00048	0.00048
Zinc	D	mg/L	1	100	HH DW (HQ=1)	11	0			0.12	0.12	0.12	0.12

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	16	NA	No SLC					1.8	9.2	4.5	4
Eh	T	millivolts	16	NA	No SLC					-245	418	226	254
pH	T	SU	16	NA	No SLC					7.3	7.7	7.5	7.4
Specific Conductance	T	uS/cm	16	NA	No SLC					87	768	667	698
Temperature	T	Celsius	16	NA	No SLC					7.2	22.7	12.5	12.3
Turbidity	T	NTU	16	NA	No SLC					6.4	58.4	27	22.8
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	16	100	No SLC					191	244	212	206
Carbonate (as CaCO3)	T	mg/L	16	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	16	68.8	HH DW (HQ=1)	250	0	0.52	10.9	ND	3	2.4	2.6
Cyanide	T	mg/L	16	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	16	100	HH DW (HQ=1)	2.2	0			0.98	1.1	1	1
Hardness	T	mg/L	16	100	No SLC					272	343	304	307
Hydroxide (as CaCO3)	T	mg/L	16	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	16	56.3	HH DW (HQ=1)	10	0	0.28	0.89	ND	0.47	0.31	0.33
Nitrite	T	mg/L	16	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	11	100	No SLC					7.4	7.8	7.6	7.6
Phosphate, Ortho As P	T	mg/L	16	31.3	No SLC			0.01	0.4	ND	0.15		
Phosphorus	T	mg/L	16	50	No SLC			0.01	0.039	ND	0.049	0.015	0.014
Specific Conductance	T	umhos/cm	11	100	No SLC					555	695	646	657
Sulfate	T	mg/L	16	100	HH DW (HQ=1)	1500	0			153	270	171	164
Total Alkalinity	T	mg/L	16	100	No SLC					191	244	212	206
Total Dissolved Solids	T	mg/L	16	93.8	No SLC			494	494	ND	576	489	505
Total Kjeldahl Nitrogen	T	mg/L	16	12.5	No SLC			0.24	0.48	ND	0.4		
Total Organic Carbon	T	mg/L	16	12.5	No SLC			1	2.1	ND	1.1		
Total Suspended Solids	T	mg/L	16	87.5	No SLC			1.8	4.8	ND	56.6	10.6	7.3
Hardness	D	mg/L	16	100	No SLC					286	336	310	310
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	16	18.8	HH DW (HQ=1)	37	0	0.14	0.63	ND	1.7		
Antimony	T	mg/L	16	0	HH DW (HQ=1)	0.015	0	0.0004	0.0024	ND	ND		
Arsenic	T	mg/L	16	6.3	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.00041		
Barium	T	mg/L	16	100	HH DW (HQ=1)	2.6	0			0.015	0.032	0.02	0.019
Beryllium	T	mg/L	16	0	HH DW (HQ=1)	0.073	0	0.0002	0.00072	ND	ND		
Boron	T	mg/L	16	100	HH DW (HQ=1)	3.3	0			0.063	0.1	0.077	0.071
Cadmium	T	mg/L	16	6.3	HH DW (HQ=1)	0.018	0	0.0002	0.00089	ND	0.00039		
Calcium	T	mg/L	16	100	No SLC					81.2	102	90.4	91.2
Chromium	T	mg/L	16	6.3	HH DW (HQ=1)	0.1	0	0.00061	0.0055	ND	0.0047		
Cobalt	T	mg/L	16	0	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	ND		
Copper	T	mg/L	16	18.8	HH DW (HQ=1)	1.4	0	0.0007	0.0043	ND	0.004		
Iron	T	mg/L	16	25	HH DW (HQ=1)	11	0	0.19	0.67	ND	1.6		
Lead	T	mg/L	16	18.8	HH DW (HQ=1)	0.015	0	0.0002	0.0011	ND	0.0011		
Magnesium	T	mg/L	16	100	No SLC					16.8	21.8	18.9	18.9
Manganese	T	mg/L	16	56.3	HH DW (HQ=1)	1.7	0	0.012	0.096	ND	0.52	0.091	0.049
Mercury	T	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	16	100	HH DW (HQ=1)	0.18	100			0.51	1.3	0.77	0.68
Nickel	T	mg/L	16	31.3	HH DW (HQ=1)	0.73	0	0.0015	0.0031	ND	0.0048		
Potassium	T	mg/L	16	62.5	No SLC			0.52	2	ND	2	1.1	1.1
Selenium	T	mg/L	16	25	HH DW (HQ=1)	0.18	0	0.0004	0.0016	ND	0.00091		
Silver	T	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	T	mg/L	16	100	No SLC					39.5	57.5	46.4	45
Thallium	T	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	T	mg/L	16	93.8	HH DW (HQ=1)	0.037	0	0.0039	0.0039	ND	0.0022	0.0016	0.0017
Zinc	T	mg/L	16	18.8	HH DW (HQ=1)	11	0	0.014	0.097	ND	0.27		
Aluminum	D	mg/L	16	0	HH DW (HQ=1)	37	0	0.006	0.63	ND	ND		
Antimony	D	mg/L	16	0	HH DW (HQ=1)	0.015	0	0.0004	0.0024	ND	ND		
Arsenic	D	mg/L	16	0	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	ND		
Barium	D	mg/L	16	100	HH DW (HQ=1)	2.6	0			0.014	0.02	0.017	0.017

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	16	0	HH DW (HQ=1)	0.073	0	0.0002	0.00041	ND	ND		
Boron	D	mg/L	16	100	HH DW (HQ=1)	3.3	0			0.064	0.094	0.076	0.071
Cadmium	D	mg/L	16	6.3	HH DW (HQ=1)	0.018	0	0.0002	0.0007	ND	0.0003		
Calcium	D	mg/L	16	100	No SLC					85.5	99.9	92.3	92.5
Chromium	D	mg/L	16	6.3	HH DW (HQ=1)	0.1	0	0.0006	0.0046	ND	0.0013		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	16	0	HH DW (HQ=1)	0.73	0	0.0016	0.0038	ND	ND		
Copper	D	mg/L	16	12.5	HH DW (HQ=1)	1.4	0	0.0007	0.013	ND	0.0016		
Iron	D	mg/L	16	0	HH DW (HQ=1)	11	0	0.023	0.67	ND	ND		
Lead	D	mg/L	16	6.3	HH DW (HQ=1)	0.015	0	0.0002	0.00091	ND	0.00032		
Magnesium	D	mg/L	16	100	No SLC					17.7	21	19.2	19.1
Manganese	D	mg/L	16	43.8	HH DW (HQ=1)	1.7	0	0.01	0.11	ND	0.42		
Mercury	D	mg/L	16	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	16	100	HH DW (HQ=1)	0.18	100			0.56	1.1	0.76	0.67
Nickel	D	mg/L	16	12.5	HH DW (HQ=1)	0.73	0	0.0014	0.003	ND	0.0019		
Potassium	D	mg/L	16	62.5	No SLC			0.52	2.1	ND	1.6	1.1	1.2
Selenium	D	mg/L	16	6.3	HH DW (HQ=1)	0.18	0	0.0004	0.0016	ND	0.00075		
Silver	D	mg/L	16	0	HH DW (HQ=1)	0.18	0	0.0002	0.0009	ND	ND		
Sodium	D	mg/L	16	100	No SLC					41.8	59.7	47.5	45.4
Thallium	D	mg/L	16	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	D	mg/L	16	93.8	HH DW (HQ=1)	0.26	0	0.0039	0.0039	ND	0.0016	0.0013	0.0012
Zinc	D	mg/L	16	12.5	HH DW (HQ=1)	11	0	0.014	0.039	ND	0.18		
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2,4-Dichlorophenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2,4-Dimethylphenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2,4-Dinitrophenol	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2,4-Dinitrotoluene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2,6-Dinitrotoluene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2-Chloronaphthalene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2-Chlorophenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2-Methylnaphthalene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2-Methylphenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
2-Nitroaniline	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
2-Nitrophenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
3-Nitroaniline	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
4-Chloroaniline	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
4-Methylphenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
4-Nitroaniline	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
4-Nitrophenol	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
Acenaphthene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Acenaphthylene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Anthracene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)anthracene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Benzo(a)pyrene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Benzo(b)fluoranthene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Benzo(k)fluoranthene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Carbazole	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Chrysene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Dibenzofuran	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Fluoranthene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Fluorene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobenzene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Hexachlorobutadiene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Hexachloroethane	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Isophorone	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Naphthalene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Nitrobenzene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Pentachlorophenol	T	mg/L	8	0	No SLC			0.025	0.029	ND	ND		
Phenanthrene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Phenol	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Pyrene	T	mg/L	8	0	No SLC			0.01	0.011	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	8	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	8	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	8	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,2-Dichlorobenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	8	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	8	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	8	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-33
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Vinyl chloride	T	mg/L	8	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34

Groundwater-Basal Alluvial Aquifer

RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	7	NA	No SLC					5.4	19.1	9.2	8.5
Eh	T	millivolts	7	NA	No SLC					11.7	402	224	219
pH	T	SU	7	NA	No SLC					6.6	7.9	7.3	7.3
Specific Conductance	T	uS/cm	7	NA	No SLC					454	526	498	498
Temperature	T	Celsius	7	NA	No SLC					8.1	21	12.7	12.1
Turbidity	T	NTU	7	NA	No SLC					0.9	30.2	8.2	2.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	7	100	No SLC					221	233	228	229
Carbonate (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	7	42.9	HH DW (HQ=1)	250	0	0.57	1.4	ND	1.3		
Cyanide	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	7	100	HH DW (HQ=1)	2.2	0			0.53	0.6	0.57	0.56
Hardness	T	mg/L	7	100	No SLC					111	123	117	117
Hydroxide (as CaCO3)	T	mg/L	7	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	7	42.9	HH DW (HQ=1)	10	0	0.4	0.57	ND	0.64		
Nitrite	T	mg/L	7	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	5	100	No SLC					7.5	7.9	7.7	7.7
Phosphate, Ortho As P	T	mg/L	7	14.3	No SLC			0.01	0.018	ND	0.011		
Phosphorus	T	mg/L	7	71.4	No SLC			0.01	0.027	ND	0.047	0.022	0.021
Specific Conductance	T	umhos/cm	5	100	No SLC					449	483	467	466
Sulfate	T	mg/L	7	100	HH DW (HQ=1)	1500	0			40.3	61.8	45.3	41.7
Total Alkalinity	T	mg/L	7	100	No SLC					221	233	228	229
Total Dissolved Solids	T	mg/L	7	85.7	No SLC			295	295	ND	352	301	314
Total Kjeldahl Nitrogen	T	mg/L	7	14.3	No SLC			0.24	0.24	ND	0.25		
Total Organic Carbon	T	mg/L	7	0	No SLC			1	2.1	ND	ND		
Total Suspended Solids	T	mg/L	7	28.6	No SLC			0.59	0.9	ND	8.4		
Hardness	D	mg/L	7	100	No SLC					111	124	116	114
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	7	0	HH DW (HQ=1)	37	0	0.0061	0.63	ND	ND		
Antimony	T	mg/L	7	0	HH DW (HQ=1)	0.015	0	0.0004	0.0024	ND	ND		
Arsenic	T	mg/L	7	0	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	ND		
Barium	T	mg/L	7	100	HH DW (HQ=1)	2.6	0			0.057	0.059	0.058	0.058
Beryllium	T	mg/L	7	0	HH DW (HQ=1)	0.073	0	0.0002	0.00059	ND	ND		
Boron	T	mg/L	7	100	HH DW (HQ=1)	3.3	0			0.19	0.21	0.2	0.2
Cadmium	T	mg/L	7	0	HH DW (HQ=1)	0.018	0	0.0002	0.0007	ND	ND		
Calcium	T	mg/L	7	100	No SLC					33.6	37.4	35.4	35.1
Chromium	T	mg/L	7	0	HH DW (HQ=1)	0.1	0	0.00082	0.0046	ND	ND		
Cobalt	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.0016	0.0038	ND	ND		
Copper	T	mg/L	7	100	HH DW (HQ=1)	1.4	0			0.0087	0.034	0.016	0.012
Iron	T	mg/L	7	28.6	HH DW (HQ=1)	11	0	0.29	0.67	ND	1.1		
Lead	T	mg/L	7	85.7	HH DW (HQ=1)	0.015	16.7	0.0019	0.0019	ND	0.015	0.0063	0.0036
Magnesium	T	mg/L	7	100	No SLC					6.7	7.2	6.9	6.8
Manganese	T	mg/L	7	0	HH DW (HQ=1)	1.7	0	0.0025	0.028	ND	ND		
Mercury	T	mg/L	7	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	7	42.9	HH DW (HQ=1)	0.18	0	0.0024	0.0046	ND	0.0057		
Nickel	T	mg/L	7	0	HH DW (HQ=1)	0.73	0	0.00076	0.003	ND	ND		
Potassium	T	mg/L	7	85.7	No SLC			1.2	1.2	ND	1.1	0.9	0.93
Selenium	T	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.0004	0.0016	ND	ND		
Silver	T	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.0001	0.0002	ND	ND		
Sodium	T	mg/L	7	85.7	No SLC			82.5	82.5	ND	75	68.3	71.6
Thallium	T	mg/L	7	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	T	mg/L	7	100	HH DW (HQ=1)	0.037	0			0.0006	0.0014	0.001	0.001
Zinc	T	mg/L	7	100	HH DW (HQ=1)	11	0			0.65	1.4	1	1.1
Aluminum	D	mg/L	7	14.3	HH DW (HQ=1)	37	0	0.2	0.63	ND	0.0065		
Antimony	D	mg/L	7	0	HH DW (HQ=1)	0.015	0	0.0004	0.0024	ND	ND		
Arsenic	D	mg/L	7	14.3	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.00051		
Barium	D	mg/L	7	100	HH DW (HQ=1)	2.6	0			0.052	0.058	0.056	0.057

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	7	0	HH DW (HQ=1)	0.073	0	0.0002	0.0004	ND	ND		
Boron	D	mg/L	7	100	HH DW (HQ=1)	3.3	0			0.19	0.21	0.2	0.2
Cadmium	D	mg/L	7	0	HH DW (HQ=1)	0.018	0	0.0002	0.0007	ND	ND		
Calcium	D	mg/L	7	100	No SLC					33.4	37.5	35.2	34.2
Chromium	D	mg/L	7	0	HH DW (HQ=1)	0.1	0	0.0006	0.0046	ND	ND		
Cobalt	D	mg/L	7	14.3	HH DW (HQ=1)	0.73	0	0.0016	0.0038	ND	0.0038		
Copper	D	mg/L	7	100	HH DW (HQ=1)	1.4	0			0.0061	0.011	0.0081	0.0082
Iron	D	mg/L	7	0	HH DW (HQ=1)	11	0	0.023	0.67	ND	ND		
Lead	D	mg/L	7	57.1	HH DW (HQ=1)	0.015	0	0.0003	0.0014	ND	0.00042	0.00037	0.0004
Magnesium	D	mg/L	7	100	No SLC					6.6	7.3	6.8	6.8
Manganese	D	mg/L	7	0	HH DW (HQ=1)	1.7	0	0.0025	0.028	ND	ND		
Mercury	D	mg/L	7	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	7	71.4	HH DW (HQ=1)	0.18	0	0.0048	0.0048	ND	0.0051	0.0035	0.0032
Nickel	D	mg/L	7	14.3	HH DW (HQ=1)	0.73	0	0.0015	0.003	ND	0.00076		
Potassium	D	mg/L	7	85.7	No SLC			1.1	1.1	ND	1	0.84	0.92
Selenium	D	mg/L	7	28.6	HH DW (HQ=1)	0.18	0	0.0004	0.0016	ND	0.0018		
Silver	D	mg/L	7	0	HH DW (HQ=1)	0.18	0	0.0002	0.0002	ND	ND		
Sodium	D	mg/L	7	85.7	No SLC			66.2	66.2	ND	76	66.8	71.1
Thallium	D	mg/L	7	0	HH DW (HQ=1)	0.0026	0	0.0002	0.00022	ND	ND		
Vanadium	D	mg/L	7	100	HH DW (HQ=1)	0.26	0			0.00059	0.0011	0.00091	0.00093
Zinc	D	mg/L	7	100	HH DW (HQ=1)	11	0			0.62	1.2	0.88	0.81
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2,4-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2,6-Dinitrotoluene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Chloronaphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
2-Nitrophenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chloroaniline	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Methylphenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
4-Nitrophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
Acenaphthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chrysene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Dibenz(a,h)anthracene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibenzofuran	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Nitrobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	3	0	No SLC			0.025	0.026	ND	ND		
Phenanthrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	3	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,1-Dichloroethane	T	mg/L	3	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-34
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 11 - Dry Maintenance Area and Downgradient
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,2-Dichloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	3	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	3	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,2-Dichloroethene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	3	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	3	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-35
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	194	NA	No SLC					0.03	26.8	5.2	5.1
Eh	T	millivolts	196	NA	No SLC					-382	688	200	234
Flow	T	gpm	1	NA	No SLC					85	85	85	85
pH	T	SU	196	NA	No SLC					5	12.7	7	7
Specific Conductance	T	uS/cm	195	NA	No SLC					235	3960	1300	1330
Temperature	T	Celsius	196	NA	No SLC					6.1	23.6	12.2	12.2
Turbidity	T	NTU	195	NA	No SLC					0	1320	31.4	4.1
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	180	100	No SLC					14.6	358	128	138
Carbonate (as CaCO3)	T	mg/L	180	1.7	No SLC			1	1	ND	73.4		
Chloride	T	mg/L	180	92.2	HH DW (HQ=1)	250	0	0.4	31.1	ND	31.9	12.3	13.6
Cyanide	T	mg/L	180	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	180	96.7	HH DW (HQ=1)	2.2	0	0.1	0.45	ND	2	0.6	0.44
Hardness	T	mg/L	177	100	No SLC					94.6	1160	656	729
Hydroxide (as CaCO3)	T	mg/L	180	1.1	No SLC			1	1	ND	73.4		
Nitrate	T	mg/L	179	43.6	HH DW (HQ=1)	10	1.3	0.2	1.1	ND	11.6		
Nitrite	T	mg/L	180	6.1	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.083		
pH	T	SU	141	98.6	No SLC			7.3	7.3	ND	9.2	7.3	7.3
Phosphate, Ortho As P	T	mg/L	180	33.9	No SLC			0.01	0.39	ND	12.8		
Phosphorus	T	mg/L	179	79.9	No SLC			0.01	0.035	ND	1.5	0.071	0.021
Specific Conductance	T	umhos/cm	141	100	No SLC					225	1920	1130	1240
Sulfate	T	mg/L	180	97.8	HH DW (HQ=1)	1500	0	135	1100	ND	1480	567	590
Total Alkalinity	T	mg/L	180	100	No SLC					14.6	358	128	138
Total Dissolved Solids	T	mg/L	180	96.7	No SLC			82	696	ND	1960	1010	1100
Total Kjeldahl Nitrogen	T	mg/L	179	12.3	No SLC			0.24	1.6	ND	5.4		
Total Organic Carbon	T	mg/L	180	33.3	No SLC			1	11.4	ND	21.9		
Total Suspended Solids	T	mg/L	180	52.2	No SLC			0.5	9.2	ND	4000	40.9	1.8
Hardness	D	mg/L	181	100	No SLC					93.7	1210	649	721

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-35
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	177	11.9	HH DW (HQ=1)	37	9.5	0.003	1.2	ND	128		
Antimony	T	mg/L	177	0	HH DW (HQ=1)	0.015	0	0.0002	0.003	ND	ND		
Arsenic	T	mg/L	177	39	HH DW (HQ=1)	0.01	1.4	0.0002	0.0004	ND	0.021		
Barium	T	mg/L	177	98.9	HH DW (HQ=1)	2.6	0	0.019	0.019	ND	1.4	0.055	0.032
Beryllium	T	mg/L	177	1.7	HH DW (HQ=1)	0.073	0	0.0002	0.0016	ND	0.0084		
Boron	T	mg/L	177	81.4	HH DW (HQ=1)	3.3	0	0.0027	0.038	ND	0.075	0.023	0.022
Cadmium	T	mg/L	177	2.8	HH DW (HQ=1)	0.018	0	0.0001	0.0013	ND	0.001		
Calcium	T	mg/L	177	100	No SLC					28.8	374	202	222
Chromium	T	mg/L	177	15.3	HH DW (HQ=1)	0.1	3.7	0.0006	0.0072	ND	0.14		
Cobalt	T	mg/L	177	7.9	HH DW (HQ=1)	0.73	0	0.0011	0.0048	ND	0.054		
Copper	T	mg/L	177	27.7	HH DW (HQ=1)	1.4	0	0.0003	0.016	ND	0.37		
Iron	T	mg/L	177	33.9	HH DW (HQ=1)	11	16.7	0.023	3.2	ND	155		
Lead	T	mg/L	177	32.8	HH DW (HQ=1)	0.015	12.1	0.0001	0.0059	ND	0.3		
Magnesium	T	mg/L	177	99.4	No SLC			2.9	2.9	ND	79.7	37	41.9
Manganese	T	mg/L	177	42.4	HH DW (HQ=1)	1.7	18.7	0.001	0.028	ND	6.2		
Mercury	T	mg/L	181	0.55	HH DW (HQ=1)	0.011	0	0.0001	0.00016	ND	0.0001		
Molybdenum	T	mg/L	177	88.7	HH DW (HQ=1)	0.18	27.4	0.001	0.0079	ND	3.2	0.33	0.03
Nickel	T	mg/L	177	22	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	0.12		
Potassium	T	mg/L	177	85.3	No SLC			0.39	4.5	ND	37.5	3.2	2.5
Selenium	T	mg/L	177	37.9	HH DW (HQ=1)	0.18	0	0.00037	0.0025	ND	0.0059		
Silver	T	mg/L	177	1.7	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	0.0023		
Sodium	T	mg/L	177	93.2	No SLC			3.3	61.4	ND	106	49.5	48.8
Thallium	T	mg/L	177	1.7	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	0.0013		
Vanadium	T	mg/L	177	74.6	HH DW (HQ=1)	0.037	1.5	0.0002	0.0004	ND	0.15	0.0025	0.00076
Zinc	T	mg/L	177	22.6	HH DW (HQ=1)	11	0	0.0069	0.11	ND	0.97		
Aluminum	D	mg/L	181	1.7	HH DW (HQ=1)	37	0	0.003	0.89	ND	1.5		
Antimony	D	mg/L	181	1.7	HH DW (HQ=1)	0.015	0	0.0002	0.0033	ND	0.0015		
Arsenic	D	mg/L	181	31.5	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0016		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-35
Groundwater-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	D	mg/L	181	97.8	HH DW (HQ=1)	2.6	0	0.0048	0.019	ND	0.33	0.037	0.031
Beryllium	D	mg/L	181	0	HH DW (HQ=1)	0.073	0	0.0002	0.0012	ND	ND		
Boron	D	mg/L	181	79	HH DW (HQ=1)	3.3	0	0.0027	0.038	ND	0.063	0.022	0.022
Cadmium	D	mg/L	181	2.2	HH DW (HQ=1)	0.018	0	0.0001	0.0013	ND	0.004		
Calcium	D	mg/L	181	100	No SLC					22.1	369	200	220
Chromium	D	mg/L	181	11	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.018		
Chromium, Hexavalent	D	mg/L	13	15.4	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0023		
Cobalt	D	mg/L	181	14.4	HH DW (HQ=1)	0.73	0	0.0011	0.0059	ND	0.013		
Copper	D	mg/L	181	19.3	HH DW (HQ=1)	1.4	0	0.0003	0.011	ND	0.022		
Iron	D	mg/L	181	14.4	HH DW (HQ=1)	11	11.5	0.023	0.67	ND	14.4		
Lead	D	mg/L	181	12.2	HH DW (HQ=1)	0.015	0	0.0001	0.0024	ND	0.006		
Magnesium	D	mg/L	181	99.4	No SLC			2.9	2.9	ND	70	36.4	41.4
Manganese	D	mg/L	181	34.8	HH DW (HQ=1)	1.7	23.8	0.001	0.04	ND	6.5		
Mercury	D	mg/L	181	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	181	92.8	HH DW (HQ=1)	0.18	26.2	0.0011	0.0081	ND	3.2	0.33	0.031
Nickel	D	mg/L	181	19.3	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	0.029		
Potassium	D	mg/L	181	84.5	No SLC			0.39	4.6	ND	26.2	2.9	2.6
Selenium	D	mg/L	181	40.9	HH DW (HQ=1)	0.18	0	0.00034	0.0027	ND	0.005		
Silver	D	mg/L	181	0	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	ND		
Sodium	D	mg/L	181	93.4	No SLC			3.3	64.4	ND	106	49.6	49.7
Thallium	D	mg/L	181	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	D	mg/L	181	69.6	HH DW (HQ=1)	0.26	0	0.0001	0.0016	ND	0.0038	0.0007	0.00064
Zinc	D	mg/L	181	17.1	HH DW (HQ=1)	11	0	0.0069	0.1	ND	0.54		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-36
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	46	NA	No SLC					0.27	8.5	5.7	6
EH	T	millivolts	46	NA	No SLC					-525	446	213	221
pH	T	SU	46	NA	No SLC					6.6	8.4	7.4	7.4
Specific Conductance	T	uS/cm	46	NA	No SLC					26	3190	575	364
Temperature	T	Celsius	46	NA	No SLC					3.4	23.9	12.3	12.2
Turbidity	T	NTU	45	NA	No SLC					0	1340	52.6	6.3
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	38	100	No SLC					70.1	166	93.1	85.2
Carbonate (as CaCO3)	T	mg/L	38	2.6	No SLC			1	1	ND	92.3		
Chloride	T	mg/L	38	81.6	HH DW (HQ=1)	250	0	0.4	21.7	ND	17.5	9	12.2
Cyanide	T	mg/L	38	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	38	84.2	HH DW (HQ=1)	2.2	0	0.43	2	ND	0.76	0.46	0.41
Hardness	T	mg/L	38	100	No SLC					70.9	1010	294	141
Hydroxide (as CaCO3)	T	mg/L	38	5.3	No SLC			1	1	ND	92.9		
Nitrate	T	mg/L	38	65.8	HH DW (HQ=1)	10	0	0.35	1.2	ND	1.8	0.74	0.62
Nitrite	T	mg/L	38	15.8	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.05		
pH	T	SU	27	100	No SLC					7	8.3	7.6	7.6
Phosphate, Ortho As P	T	mg/L	38	36.8	No SLC			0.01	0.71	ND	1.8		
Phosphorus	T	mg/L	38	86.8	No SLC			0.01	0.021	ND	0.86	0.096	0.035
Specific Conductance	T	umhos/cm	27	100	No SLC					203	1640	563	350
Sulfate	T	mg/L	38	100	HH DW (HQ=1)	1500	0			34.8	961	224	84.3
Total Alkalinity	T	mg/L	38	100	No SLC					70.1	166	93.1	85.2
Total Dissolved Solids	T	mg/L	38	89.5	No SLC			163	317	ND	1540	477	272
Total Kjeldahl Nitrogen	T	mg/L	38	7.9	No SLC			0.24	0.33	ND	2.3		
Total Organic Carbon	T	mg/L	39	15.4	No SLC			1	1.9	ND	6.9		
Total Suspended Solids	T	mg/L	38	57.9	No SLC			0.5	4.5	ND	1280	68.6	6
Hardness	D	mg/L	38	100	No SLC					71.3	1020	288	135
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-36
Groundwater-Basal Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	38	31.6	HH DW (HQ=1)	37	8.3	0.021	1.3	ND	57.6		
Antimony	T	mg/L	38	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	T	mg/L	38	55.3	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.0086	0.00068	0.00042
Barium	T	mg/L	38	100	HH DW (HQ=1)	2.6	0			0.02	0.42	0.074	0.057
Beryllium	T	mg/L	38	5.3	HH DW (HQ=1)	0.073	0	0.0002	0.0016	ND	0.0031		
Boron	T	mg/L	38	71.1	HH DW (HQ=1)	3.3	0	0.0084	0.033	ND	0.022	0.013	0.015
Cadmium	T	mg/L	38	5.3	HH DW (HQ=1)	0.018	0	0.0001	0.00076	ND	0.0016		
Calcium	T	mg/L	38	100	No SLC					22.5	310	89.6	42.2
Chromium	T	mg/L	38	36.8	HH DW (HQ=1)	0.1	7.1	0.0006	0.0088	ND	0.11		
Cobalt	T	mg/L	38	13.2	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.026		
Copper	T	mg/L	38	26.3	HH DW (HQ=1)	1.4	0	0.00087	0.0087	ND	0.09		
Iron	T	mg/L	38	36.8	HH DW (HQ=1)	11	14.3	0.028	0.67	ND	62.8		
Lead	T	mg/L	38	47.4	HH DW (HQ=1)	0.015	11.1	0.0002	0.0023	ND	0.33		
Magnesium	T	mg/L	38	100	No SLC					3.6	57.1	16.9	8.7
Manganese	T	mg/L	38	39.5	HH DW (HQ=1)	1.7	6.7	0.0025	0.028	ND	1.9		
Mercury	T	mg/L	38	2.6	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	0.00051		
Molybdenum	T	mg/L	38	78.9	HH DW (HQ=1)	0.18	0	0.0027	0.0088	ND	0.068	0.01	0.0041
Nickel	T	mg/L	38	28.9	HH DW (HQ=1)	0.73	0	0.0002	0.008	ND	0.082		
Potassium	T	mg/L	38	86.8	No SLC			0.52	2.5	ND	10.2	2.5	1.8
Selenium	T	mg/L	38	63.2	HH DW (HQ=1)	0.18	0	0.001	0.0019	ND	0.005	0.0018	0.0012
Silver	T	mg/L	38	2.6	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	0.00041		
Sodium	T	mg/L	38	92.1	No SLC			19.4	48.5	ND	63.1	26.1	24.5
Thallium	T	mg/L	38	2.6	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	0.00049		
Vanadium	T	mg/L	38	100	HH DW (HQ=1)	0.037	2.6			0.00066	0.083	0.005	0.0014
Zinc	T	mg/L	38	21.1	HH DW (HQ=1)	11	0	0.0069	0.13	ND	0.87		
Aluminum	D	mg/L	38	5.3	HH DW (HQ=1)	37	0	0.003	0.63	ND	0.018		
Antimony	D	mg/L	38	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	D	mg/L	38	39.5	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.00074		
Barium	D	mg/L	38	100	HH DW (HQ=1)	2.6	0			0.019	0.1	0.052	0.05

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-36

Groundwater-Basal Alluvial Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	38	0	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	ND		
Boron	D	mg/L	38	68.4	HH DW (HQ=1)	3.3	0	0.0084	0.027	ND	0.021	0.013	0.014
Cadmium	D	mg/L	38	2.6	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	0.001		
Calcium	D	mg/L	38	100	No SLC					23.7	312	88.7	40.9
Chromium	D	mg/L	38	26.3	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0022		
Chromium, Hexavalent	D	mg/L	3	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	38	13.2	HH DW (HQ=1)	0.73	0	0.0016	0.0039	ND	0.0049		
Copper	D	mg/L	38	5.3	HH DW (HQ=1)	1.4	0	0.0003	0.0062	ND	0.005		
Iron	D	mg/L	38	2.6	HH DW (HQ=1)	11	0	0.023	0.67	ND	0.76		
Lead	D	mg/L	38	10.5	HH DW (HQ=1)	0.015	0	0.0001	0.0013	ND	0.0032		
Magnesium	D	mg/L	38	97.4	No SLC			3.5	3.5	ND	57.5	16.2	8.2
Manganese	D	mg/L	38	42.1	HH DW (HQ=1)	1.7	0	0.0025	0.028	ND	0.55		
Mercury	D	mg/L	38	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	38	86.8	HH DW (HQ=1)	0.18	0	0.0038	0.011	ND	0.092	0.01	0.0042
Nickel	D	mg/L	38	10.5	HH DW (HQ=1)	0.73	0	0.0002	0.003	ND	0.0045		
Potassium	D	mg/L	38	89.5	No SLC			0.52	2.4	ND	4.4	2	1.4
Selenium	D	mg/L	38	63.2	HH DW (HQ=1)	0.18	0	0.00088	0.0035	ND	0.0049	0.0017	0.0014
Silver	D	mg/L	38	0	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	ND		
Sodium	D	mg/L	38	92.1	No SLC			20.1	51.5	ND	73.2	26.3	23.1
Thallium	D	mg/L	38	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	D	mg/L	38	92.1	HH DW (HQ=1)	0.26	0	0.0004	0.0039	ND	0.0034	0.0012	0.00078
Zinc	D	mg/L	38	10.5	HH DW (HQ=1)	11	0	0.0069	0.057	ND	0.062		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-37
Groundwater-Basal Bedrock Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	83	NA	No SLC					0	9.4	5.4	5.7
EH	T	millivolts	83	NA	No SLC					-115	562	195	183
pH	T	SU	83	NA	No SLC					6.5	8.3	7.6	7.8
Specific Conductance	T	uS/cm	83	NA	No SLC					82	1770	665	622
Temperature	T	Celsius	82	NA	No SLC					8.1	18.4	12.8	12.6
Turbidity	T	NTU	81	NA	No SLC					0	327	19.9	4.8
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	76	100	No SLC					77.8	214	119	110
Carbonate (as CaCO3)	T	mg/L	76	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	76	88.2	HH DW (HQ=1)	250	0	1.9	20.3	ND	17.5	10.3	11
Cyanide	T	mg/L	76	1.3	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	0.01		
Fluoride	T	mg/L	76	97.4	HH DW (HQ=1)	2.2	0	0.35	0.43	ND	2.1	0.65	0.45
Hardness	T	mg/L	76	100	No SLC					72.2	1010	319	194
Hydroxide (as CaCO3)	T	mg/L	76	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	76	76.3	HH DW (HQ=1)	10	0	0.2	0.92	ND	1.4	0.63	0.6
Nitrite	T	mg/L	76	3.9	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.011		
pH	T	SU	63	98.4	No SLC			7.6	7.6	ND	8.5	7.7	7.8
Phosphate, Ortho As P	T	mg/L	76	27.6	No SLC			0.01	0.38	ND	28.2		
Phosphorus	T	mg/L	76	75	No SLC			0.01	0.061	ND	0.45	0.033	0.018
Specific Conductance	T	umhos/cm	63	100	No SLC					224	1700	601	464
Sulfate	T	mg/L	76	97.4	HH DW (HQ=1)	1500	0	221	227	ND	1020	249	127
Total Alkalinity	T	mg/L	76	100	No SLC					77.8	214	119	110
Total Dissolved Solids	T	mg/L	76	92.1	No SLC			189	505	ND	1590	534	399
Total Kjeldahl Nitrogen	T	mg/L	75	6.7	No SLC			0.24	0.41	ND	3.2		
Total Organic Carbon	T	mg/L	76	17.1	No SLC			1	2.2	ND	2		
Total Suspended Solids	T	mg/L	76	56.6	No SLC			0.5	5.6	ND	101	7.5	2.3
Hardness	D	mg/L	76	100	No SLC					70.5	999	318	194
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-37

Groundwater-Basal Bedrock Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	76	6.6	HH DW (HQ=1)	37	0	0.0036	0.67	ND	6.1		
Antimony	T	mg/L	76	1.3	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	0.0011		
Arsenic	T	mg/L	76	57.9	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0022	0.00085	0.00087
Barium	T	mg/L	76	100	HH DW (HQ=1)	2.6	0			0.018	0.28	0.057	0.034
Beryllium	T	mg/L	76	1.3	HH DW (HQ=1)	0.073	0	0.0002	0.0011	ND	0.00032		
Boron	T	mg/L	76	89.5	HH DW (HQ=1)	3.3	0	0.0065	0.05	ND	0.056	0.031	0.033
Cadmium	T	mg/L	76	0	HH DW (HQ=1)	0.018	0	0.0001	0.00073	ND	ND		
Calcium	T	mg/L	76	100	No SLC					21.8	302	94.3	57
Chromium	T	mg/L	76	17.1	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0046		
Cobalt	T	mg/L	76	2.6	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.0085		
Copper	T	mg/L	76	13.2	HH DW (HQ=1)	1.4	0	0.0003	0.026	ND	0.015		
Iron	T	mg/L	76	27.6	HH DW (HQ=1)	11	4.8	0.031	2.7	ND	27.2		
Lead	T	mg/L	76	26.3	HH DW (HQ=1)	0.015	0	0.00014	0.0015	ND	0.0026		
Magnesium	T	mg/L	76	100	No SLC					4.3	61.8	20.4	14.8
Manganese	T	mg/L	76	34.2	HH DW (HQ=1)	1.7	7.7	0.0025	0.082	ND	2.7		
Mercury	T	mg/L	76	0	HH DW (HQ=1)	0.011	0	0.0001	0.00013	ND	ND		
Molybdenum	T	mg/L	76	93.4	HH DW (HQ=1)	0.18	25.4	0.0041	0.0063	ND	0.52	0.095	0.016
Nickel	T	mg/L	76	6.6	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	0.035		
Potassium	T	mg/L	76	85.5	No SLC			2.7	5.3	ND	5.8	3.1	3
Selenium	T	mg/L	76	34.2	HH DW (HQ=1)	0.18	0	0.00021	0.0016	ND	0.003		
Silver	T	mg/L	76	1.3	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	0.00071		
Sodium	T	mg/L	76	88.2	No SLC			15.6	56.8	ND	67.3	33.9	33.8
Thallium	T	mg/L	76	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	T	mg/L	76	98.7	HH DW (HQ=1)	0.037	0	0.0039	0.0039	ND	0.023	0.0047	0.0045
Zinc	T	mg/L	76	7.9	HH DW (HQ=1)	11	0	0.0039	0.091	ND	0.41		
Aluminum	D	mg/L	76	1.3	HH DW (HQ=1)	37	0	0.0042	0.85	ND	1.7		
Antimony	D	mg/L	76	1.3	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	0.0011		
Arsenic	D	mg/L	76	53.9	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0023	0.0008	0.00073
Barium	D	mg/L	76	100	HH DW (HQ=1)	2.6	0			0.016	0.13	0.051	0.031

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-37

Groundwater-Basal Bedrock Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	76	0	HH DW (HQ=1)	0.073	0	0.0002	0.0014	ND	ND		
Boron	D	mg/L	76	90.8	HH DW (HQ=1)	3.3	0	0.0061	0.041	ND	0.054	0.031	0.034
Cadmium	D	mg/L	76	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	D	mg/L	76	100	No SLC					21.2	301	93.9	56.4
Chromium	D	mg/L	76	13.2	HH DW (HQ=1)	0.1	0	0.0006	0.006	ND	0.0024		
Chromium, Hexavalent	D	mg/L	5	20	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	0.0023		
Cobalt	D	mg/L	76	3.9	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.0038		
Copper	D	mg/L	76	14.5	HH DW (HQ=1)	1.4	0	0.0003	0.0058	ND	0.0073		
Iron	D	mg/L	76	5.3	HH DW (HQ=1)	11	0	0.023	1.1	ND	1.8		
Lead	D	mg/L	76	2.6	HH DW (HQ=1)	0.015	0	0.0001	0.0041	ND	0.00036		
Magnesium	D	mg/L	76	100	No SLC					4.3	60.2	20.3	15.1
Manganese	D	mg/L	76	28.9	HH DW (HQ=1)	1.7	9.1	0.0025	0.066	ND	1.8		
Mercury	D	mg/L	76	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	76	94.7	HH DW (HQ=1)	0.18	25	0.0011	0.0052	ND	0.5	0.095	0.016
Nickel	D	mg/L	76	7.9	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	0.016		
Potassium	D	mg/L	76	84.2	No SLC			0.52	5.3	ND	5.6	3.1	2.9
Selenium	D	mg/L	76	30.3	HH DW (HQ=1)	0.18	0	0.00034	0.002	ND	0.0043		
Silver	D	mg/L	76	0	HH DW (HQ=1)	0.18	0	0.0001	0.0009	ND	ND		
Sodium	D	mg/L	76	88.2	No SLC			3.3	45.6	ND	63.2	32.9	33.9
Thallium	D	mg/L	76	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	D	mg/L	76	98.7	HH DW (HQ=1)	0.26	0	0.0039	0.0039	ND	0.0093	0.0038	0.004
Zinc	D	mg/L	76	10.5	HH DW (HQ=1)	11	0	0.0039	0.093	ND	0.37		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38

Seep/Spring-Upper Alluvial Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	39	NA	No SLC					0.43	12.2	7.5	7.6
Eh	T	millivolts	38	NA	No SLC					-102	411	167	152
Flow	T	gpm	23	NA	No SLC					0.1	63	8.3	2.3
pH	T	SU	39	NA	No SLC					6	7.8	7.2	7.3
Specific Conductance	T	uS/cm	39	NA	No SLC					256	2760	1700	1960
Temperature	T	Celsius	38	NA	No SLC					1.5	26.9	12.7	13.1
Turbidity	T	NTU	39	NA	No SLC					0	203	27.9	8.6
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	38	100	No SLC					85.5	215	154	161
Carbonate (as CaCO3)	T	mg/L	38	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	38	94.7	HH DW (HQ=1)	250	0	0.4	4.5	ND	39.9	14.1	13.2
Cyanide	T	mg/L	38	23.7	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	0.019		
Fluoride	T	mg/L	38	100	HH DW (HQ=1)	2.2	0			0.18	0.75	0.55	0.59
Hardness	T	mg/L	38	100	No SLC					165	1900	960	1040
Hydroxide (as CaCO3)	T	mg/L	38	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	38	39.5	HH DW (HQ=1)	10	0	0.2	0.52	ND	0.83		
Nitrite	T	mg/L	38	2.6	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.0087		
pH	T	SU	36	100	No SLC					7.2	8	7.5	7.5
Phosphate, Ortho As P	T	mg/L	38	39.5	No SLC			0.01	0.092	ND	0.37		
Phosphorus	T	mg/L	38	89.5	No SLC			0.01	0.022	ND	0.58	0.088	0.044
Specific Conductance	T	umhos/cm	36	100	No SLC					352	2720	1620	1760
Sulfate	T	mg/L	38	100	HH DW (HQ=1)	1500	5.3			84.1	1560	853	888
Total Alkalinity	T	mg/L	38	100	No SLC					85.5	215	154	161
Total Dissolved Solids	T	mg/L	38	97.4	No SLC			330	330	ND	2870	1510	1650
Total Kjeldahl Nitrogen	T	mg/L	38	39.5	No SLC			0.24	0.24	ND	3.3		
Total Organic Carbon	T	mg/L	38	47.4	No SLC			1	4.2	ND	6.4		
Total Suspended Solids	T	mg/L	38	78.9	No SLC			0.5	24.7	ND	383	52.6	9.3
Hardness	D	mg/L	38	100	No SLC					163	1910	966	1080

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38
Seep/Spring-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	38	28.9	HH DW (HQ=1)	37	0	0.003	1.8	ND	8.8		
Antimony	T	mg/L	38	0	HH DW (HQ=1)	0.015	0	0.0002	0.0025	ND	ND		
Arsenic	T	mg/L	38	68.4	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0039	0.00071	0.00058
Barium	T	mg/L	38	100	HH DW (HQ=1)	2.6	0			0.02	0.089	0.042	0.04
Beryllium	T	mg/L	38	5.3	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	0.0003		
Boron	T	mg/L	38	100	HH DW (HQ=1)	3.3	0			0.013	0.077	0.04	0.037
Cadmium	T	mg/L	38	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	T	mg/L	38	100	No SLC					51.6	576	293	323
Chromium	T	mg/L	38	31.6	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0075		
Cobalt	T	mg/L	38	15.8	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.0034		
Copper	T	mg/L	38	26.3	HH DW (HQ=1)	1.4	0	0.00087	0.0067	ND	0.012		
Iron	T	mg/L	38	34.2	HH DW (HQ=1)	11	0	0.03	1.9	ND	8.5		
Lead	T	mg/L	38	47.4	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	0.0082		
Magnesium	T	mg/L	38	100	No SLC					8.8	112	55.7	56.7
Manganese	T	mg/L	38	60.5	HH DW (HQ=1)	1.7	0	0.0007	0.045	ND	1.4	0.18	0.057
Mercury	T	mg/L	38	0	HH DW (HQ=1)	0.011	0	0.0001	0.00015	ND	ND		
Molybdenum	T	mg/L	38	76.3	HH DW (HQ=1)	0.18	31	0.0011	0.0056	ND	0.6	0.12	0.011
Nickel	T	mg/L	38	26.3	HH DW (HQ=1)	0.73	0	0.0014	0.017	ND	0.0083		
Potassium	T	mg/L	38	84.2	No SLC			0.39	3.1	ND	5.7	1.9	1.7
Selenium	T	mg/L	38	10.5	HH DW (HQ=1)	0.18	0	0.0002	0.0043	ND	0.0044		
Silver	T	mg/L	38	0	HH DW (HQ=1)	0.18	0	0.0002	0.0019	ND	ND		
Sodium	T	mg/L	38	94.7	No SLC			3.3	63.9	ND	135	68.8	74.4
Thallium	T	mg/L	38	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0005	ND	ND		
Vanadium	T	mg/L	38	81.6	HH DW (HQ=1)	0.037	0	0.0002	0.0004	ND	0.01	0.0024	0.0011
Zinc	T	mg/L	38	15.8	HH DW (HQ=1)	11	0	0.011	0.091	ND	0.028		
Aluminum	D	mg/L	38	5.3	HH DW (HQ=1)	37	0	0.003	0.63	ND	2.1		
Antimony	D	mg/L	38	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	D	mg/L	38	47.4	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0014		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38
Seep/Spring-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	D	mg/L	38	97.4	HH DW (HQ=1)	2.6	0	0.019	0.019	ND	0.06	0.033	0.03
Beryllium	D	mg/L	38	2.6	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	0.001		
Boron	D	mg/L	38	97.4	HH DW (HQ=1)	3.3	0	0.012	0.012	ND	0.082	0.039	0.037
Cadmium	D	mg/L	38	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	D	mg/L	38	100	No SLC					51.2	582	295	329
Chromium	D	mg/L	38	15.8	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0025		
Cobalt	D	mg/L	38	13.2	HH DW (HQ=1)	0.73	0	0.0011	0.0039	ND	0.0045		
Copper	D	mg/L	38	13.2	HH DW (HQ=1)	1.4	0	0.00051	0.0035	ND	0.0072		
Iron	D	mg/L	38	7.9	HH DW (HQ=1)	11	0	0.038	0.67	ND	0.9		
Lead	D	mg/L	38	2.6	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	0.00038		
Magnesium	D	mg/L	38	100	No SLC					8.6	112	55.9	57.9
Manganese	D	mg/L	38	52.6	HH DW (HQ=1)	1.7	0	0.0007	0.019	ND	1.4	0.11	0.011
Mercury	D	mg/L	38	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	38	76.3	HH DW (HQ=1)	0.18	31	0.0017	0.0044	ND	0.67	0.13	0.0099
Nickel	D	mg/L	38	7.9	HH DW (HQ=1)	0.73	0	0.0014	0.017	ND	0.026		
Potassium	D	mg/L	38	81.6	No SLC			0.39	3	ND	4.2	1.6	1.7
Selenium	D	mg/L	38	5.3	HH DW (HQ=1)	0.18	0	0.0002	0.0048	ND	0.0011		
Silver	D	mg/L	38	0	HH DW (HQ=1)	0.18	0	0.0002	0.0019	ND	ND		
Sodium	D	mg/L	38	94.7	No SLC			3.3	57.2	ND	135	69	74.8
Thallium	D	mg/L	38	0	HH DW (HQ=1)	0.0026	0	0.0001	0.00022	ND	ND		
Vanadium	D	mg/L	38	76.3	HH DW (HQ=1)	0.26	0	0.0001	0.0004	ND	0.004	0.00082	0.00069
Zinc	D	mg/L	38	15.8	HH DW (HQ=1)	11	0	0.01	0.091	ND	0.02		
Semi-Volatile Organics													
1,1`-Biphenyl	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4,5-Trichlorophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
2,4,6-Trichlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dichlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dimethylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,4-Dinitrophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38
Seep/Spring-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
2,4-Dinitrotoluene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2,6-Dinitrotoluene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Chloronaphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Chlorophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Methylnaphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
2-Nitrophenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
3,3-Dichlorobenzidine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
3-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4,6-Dinitro-2-methylphenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4-Bromophenyl phenyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chloro-3-methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chloroaniline	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Chlorophenyl phenyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Methylphenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Nitroaniline	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
4-Nitrophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
Acenaphthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Acenaphthylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(a)pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(b)fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(g,h,i)perylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzo(k)fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethoxy)methane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bis(2-chloroethyl)ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Carbazole	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38
Seep/Spring-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Chrysene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dibenz(a,h)anthracene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dibenzofuran	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dichlorodiisopropyl ether	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Fluoranthene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Fluorene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorobutadiene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachlorocyclopentadiene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Hexachloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Indeno(1,2,3-cd)pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Isophorone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Naphthalene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Nitrobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodi-n-propylamine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
N-Nitrosodiphenylamine	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Pentachlorophenol	T	mg/L	1	0	No SLC			0.026	0.026	ND	ND		
Phenanthrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Phenol	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Pyrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Total Pet Hydrocarbons													
Diesel Fuel (No. 2)	T	mg/L	1	0	No SLC			0.1	0.1	ND	ND		
Gasoline	T	mg/L	1	0	No SLC			0.05	0.05	ND	ND		
Motor Oil	T	mg/L	1	0	No SLC			0.26	0.26	ND	ND		
Volatile Organics													
1,1,1-Trichloroethane	T	mg/L	1	0	HH DW (HQ=1)	0.84	0	0.01	0.01	ND	ND		
1,1,2,2-Tetrachloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,1,2-Trichloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38
Seep/Spring-Upper Alluvial Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
1,1-Dichloroethane	T	mg/L	1	0	HH DW (HQ=1)	0.81	0	0.01	0.01	ND	ND		
1,1-Dichloroethene	T	mg/L	1	0	HH DW (HQ=1)	0.34	0	0.01	0.01	ND	ND		
1,2,4-Trichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dibromo-3-chloropropane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloroethene (total)	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,2-Dichloropropane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,3-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
1,4-Dichlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
2-Butanone	T	mg/L	1	0	HH DW (HQ=1)	7.1	0	0.01	0.01	ND	ND		
2-Hexanone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
4-Methyl-2-pentanone	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Benzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromodichloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromoform	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Bromomethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Carbon tetrachloride	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chlorobenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chloroethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Chloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
cis-1,2-Dichloroethene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
cis-1,3-Dichloropropene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dibromochloromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Dichlorodifluoromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Ethylbenzene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Styrene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Toluene	T	mg/L	1	0	HH DW (HQ=1)	0.72	0	0.01	0.01	ND	ND		
Total Xylene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-38

Seep/Spring-Upper Alluvial Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
trans-1,2-Dichloroethene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
trans-1,3-Dichloropropene	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Trichloroethene	T	mg/L	1	0	HH DW (HQ=1)	0.000028	0	0.01	0.01	ND	ND		
Trichlorofluoromethane	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		
Vinyl chloride	T	mg/L	1	0	No SLC			0.01	0.01	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-39

Seep/Spring-Basal Bedrock Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	51	NA	No SLC					4.7	11.9	7.5	7.3
Eh	T	millivolts	52	NA	No SLC					93	452	275	328
Flow	T	gpm	30	NA	No SLC					0.26	31.7	7.7	4.6
pH	T	SU	52	NA	No SLC					5.9	8.3	7.4	7.4
Specific Conductance	T	uS/cm	52	NA	No SLC					46	2590	623	473
Temperature	T	Celsius	52	NA	No SLC					6.4	21.3	14	15.1
Turbidity	T	NTU	50	NA	No SLC					0	57	5	0.8
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	52	100	No SLC					76.5	310	109	83.5
Carbonate (as CaCO3)	T	mg/L	52	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	52	96.2	HH DW (HQ=1)	250	0	0.4	5.6	ND	14.5	8.8	9.3
Cyanide	T	mg/L	51	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	52	100	HH DW (HQ=1)	2.2	0			0.34	1.1	0.78	0.84
Hardness	T	mg/L	52	100	No SLC					67.5	859	262	163
Hydroxide (as CaCO3)	T	mg/L	52	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	52	80.8	HH DW (HQ=1)	10	0	0.32	0.64	ND	1.6	0.53	0.48
Nitrite	T	mg/L	52	1.9	HH DW (HQ=1)	1	0	0.005	0.005	ND	0.0052		
pH	T	SU	40	100	No SLC					7.2	8.5	7.9	8
Phosphate, Ortho As P	T	mg/L	52	53.8	No SLC			0.01	1.2	ND	6.7	0.23	0.014
Phosphorus	T	mg/L	52	67.3	No SLC			0.01	0.017	ND	0.2	0.03	0.013
Specific Conductance	T	umhos/cm	40	100	No SLC					214	1450	572	451
Sulfate	T	mg/L	52	100	HH DW (HQ=1)	1500	0			17.2	809	197	123
Total Alkalinity	T	mg/L	52	100	No SLC					76.5	310	109	83.5
Total Dissolved Solids	T	mg/L	52	90.4	No SLC			164	448	ND	1340	427	309
Total Kjeldahl Nitrogen	T	mg/L	52	9.6	No SLC			0.24	0.33	ND	0.53		
Total Organic Carbon	T	mg/L	52	15.4	No SLC			1	3.3	ND	2.3		
Total Suspended Solids	T	mg/L	52	42.3	No SLC			0.5	2.4	ND	79.7		
Hardness	D	mg/L	52	100	No SLC					68.6	849	258	161

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-39
Seep/Spring-Basal Bedrock Aquifer
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	52	19.2	HH DW (HQ=1)	37	0	0.0033	0.63	ND	1.6		
Antimony	T	mg/L	52	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	T	mg/L	52	73.1	HH DW (HQ=1)	0.01	0	0.0002	0.0004	ND	0.0021	0.0012	0.0015
Barium	T	mg/L	52	98.1	HH DW (HQ=1)	2.6	0	0.019	0.019	ND	0.062	0.036	0.037
Beryllium	T	mg/L	52	1.9	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	0.00021		
Boron	T	mg/L	52	94.2	HH DW (HQ=1)	3.3	0	0.031	0.039	ND	0.07	0.042	0.044
Cadmium	T	mg/L	52	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	T	mg/L	52	100	No SLC					18.4	266	77.6	43.7
Chromium	T	mg/L	52	36.5	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0034		
Cobalt	T	mg/L	52	1.9	HH DW (HQ=1)	0.73	0	0.0011	0.0038	ND	0.0011		
Copper	T	mg/L	52	7.7	HH DW (HQ=1)	1.4	0	0.0003	0.0052	ND	0.0067		
Iron	T	mg/L	52	25	HH DW (HQ=1)	11	0	0.023	0.67	ND	1.4		
Lead	T	mg/L	52	21.2	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	0.0025		
Magnesium	T	mg/L	52	100	No SLC					5.3	47.3	16.5	12.5
Manganese	T	mg/L	52	19.2	HH DW (HQ=1)	1.7	0	0.0007	0.019	ND	0.045		
Mercury	T	mg/L	52	3.8	HH DW (HQ=1)	0.011	0	0.0001	0.00017	ND	0.00022		
Molybdenum	T	mg/L	52	100	HH DW (HQ=1)	0.18	0			0.0075	0.15	0.061	0.059
Nickel	T	mg/L	52	1.9	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	0.0004		
Potassium	T	mg/L	52	100	No SLC					1.7	6.8	3.2	3.1
Selenium	T	mg/L	52	13.5	HH DW (HQ=1)	0.18	0	0.0002	0.0016	ND	0.0019		
Silver	T	mg/L	52	0	HH DW (HQ=1)	0.18	0	0.0001	0.0019	ND	ND		
Sodium	T	mg/L	52	100	No SLC					18.4	50.2	32.6	31.6
Thallium	T	mg/L	52	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Vanadium	T	mg/L	52	84.6	HH DW (HQ=1)	0.037	0	0.0004	0.0064	ND	0.0092	0.0048	0.0061
Zinc	T	mg/L	52	7.7	HH DW (HQ=1)	11	0	0.0021	0.047	ND	0.074		
Aluminum	D	mg/L	52	1.9	HH DW (HQ=1)	37	0	0.003	0.63	ND	0.32		
Antimony	D	mg/L	52	0	HH DW (HQ=1)	0.015	0	0.0002	0.0024	ND	ND		
Arsenic	D	mg/L	52	71.2	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.0022	0.0011	0.0014

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-39

Seep/Spring-Basal Bedrock Aquifer

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Barium	D	mg/L	52	98.1	HH DW (HQ=1)	2.6	0	0.019	0.019	ND	0.055	0.034	0.036
Beryllium	D	mg/L	52	0	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	ND		
Boron	D	mg/L	52	94.2	HH DW (HQ=1)	3.3	0	0.031	0.038	ND	0.068	0.042	0.043
Cadmium	D	mg/L	52	0	HH DW (HQ=1)	0.018	0	0.0001	0.0007	ND	ND		
Calcium	D	mg/L	52	100	No SLC					18.7	264	76.8	43
Chromium	D	mg/L	52	40.4	HH DW (HQ=1)	0.1	0	0.0006	0.0057	ND	0.0036		
Chromium, Hexavalent	D	mg/L	2	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	52	7.7	HH DW (HQ=1)	0.73	0	0.0011	0.0048	ND	0.0056		
Copper	D	mg/L	52	9.6	HH DW (HQ=1)	1.4	0	0.0003	0.0042	ND	0.0063		
Iron	D	mg/L	52	1.9	HH DW (HQ=1)	11	0	0.023	0.67	ND	0.33		
Lead	D	mg/L	52	3.8	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	0.00039		
Magnesium	D	mg/L	52	100	No SLC					5.3	46.3	16.2	12.5
Manganese	D	mg/L	52	5.8	HH DW (HQ=1)	1.7	0	0.0007	0.019	ND	0.014		
Mercury	D	mg/L	52	0	HH DW (HQ=1)	0.011	0	0.0001	0.0002	ND	ND		
Molybdenum	D	mg/L	52	100	HH DW (HQ=1)	0.18	0			0.0078	0.15	0.062	0.061
Nickel	D	mg/L	52	0	HH DW (HQ=1)	0.73	0	0.0002	0.017	ND	ND		
Potassium	D	mg/L	52	100	No SLC					1.6	5.9	3.1	3
Selenium	D	mg/L	52	23.1	HH DW (HQ=1)	0.18	0	0.0002	0.0017	ND	0.0018		
Silver	D	mg/L	52	1.9	HH DW (HQ=1)	0.18	0	0.0001	0.0019	ND	0.00063		
Sodium	D	mg/L	52	100	No SLC					7.8	47.2	32	33.6
Thallium	D	mg/L	52	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Vanadium	D	mg/L	52	82.7	HH DW (HQ=1)	0.26	0	0.00029	0.0063	ND	0.0087	0.0045	0.006
Zinc	D	mg/L	52	3.8	HH DW (HQ=1)	11	0	0.0021	0.085	ND	0.05		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-40

Groundwater-Upper Alluvial Aquifer-Outfall 002

RI/FS Groundwater Area 13 - Groundwater for Tailings facility area

Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	12	NA	No SLC					5.6	11.1	8.2	8.2
Eh	T	millivolts	11	NA	No SLC					93.4	381	268	316
Flow	T	gpm	7	NA	No SLC					241	404	323	300
pH	T	SU	12	NA	No SLC					6.4	7.7	7.1	7.2
Specific Conductance	T	uS/cm	12	NA	No SLC					1550	3400	1790	1660
Temperature	T	Celsius	12	NA	No SLC					9.2	15.1	11.5	11.7
Turbidity	T	NTU	12	NA	No SLC					0	47.1	8.3	0.75
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	12	100	No SLC					148	157	154	155
Carbonate (as CaCO3)	T	mg/L	12	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	12	91.7	HH DW (HQ=1)	250	0	12.6	12.6	ND	14	11.9	12.8
Cyanide	T	mg/L	12	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	12	100	HH DW (HQ=1)	2.2	0			1.1	1.6	1.2	1.2
Hardness	T	mg/L	12	100	No SLC					833	936	885	889
Hydroxide (as CaCO3)	T	mg/L	12	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	12	16.7	HH DW (HQ=1)	10	0	0.2	0.46	ND	0.32		
Nitrite	T	mg/L	12	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	10	100	No SLC					7.3	7.9	7.6	7.6
Phosphate, Ortho As P	T	mg/L	12	41.7	No SLC			0.047	0.37	ND	0.057		
Phosphorus	T	mg/L	12	100	No SLC					0.054	0.066	0.061	0.061
Specific Conductance	T	umhos/cm	10	100	No SLC					1370	1640	1550	1590
Sulfate	T	mg/L	12	100	HH DW (HQ=1)	1500	0			697	989	824	832
Total Alkalinity	T	mg/L	12	100	No SLC					148	157	154	155
Total Dissolved Solids	T	mg/L	12	100	No SLC					1370	1500	1420	1420
Total Kjeldahl Nitrogen	T	mg/L	12	0	No SLC			0.24	0.24	ND	ND		
Total Organic Carbon	T	mg/L	12	41.7	No SLC			1.2	2.9	ND	2.6		
Total Suspended Solids	T	mg/L	12	25	No SLC			0.8	5	ND	10.7		
Hardness	D	mg/L	12	100	No SLC					819	962	887	884

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-40
Groundwater-Upper Alluvial Aquifer-Outfall 002
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Metals													
Aluminum	T	mg/L	12	16.7	HH DW (HQ=1)	37	0	0.02	0.63	ND	0.2		
Antimony	T	mg/L	12	16.7	HH DW (HQ=1)	0.015	0	0.0004	0.0012	ND	0.0014		
Arsenic	T	mg/L	12	75	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.00061	0.00041	0.00044
Barium	T	mg/L	12	100	HH DW (HQ=1)	2.6	0			0.024	0.032	0.029	0.029
Beryllium	T	mg/L	12	0	HH DW (HQ=1)	0.073	0	0.0002	0.0004	ND	ND		
Boron	T	mg/L	12	83.3	HH DW (HQ=1)	3.3	0	0.036	0.036	ND	0.035	0.029	0.03
Cadmium	T	mg/L	12	33.3	HH DW (HQ=1)	0.018	0	0.0002	0.0006	ND	0.00031		
Calcium	T	mg/L	12	100	No SLC					258	291	275	276
Chromium	T	mg/L	12	0	HH DW (HQ=1)	0.1	0	0.0006	0.0046	ND	ND		
Cobalt	T	mg/L	12	8.3	HH DW (HQ=1)	0.73	0	0.0011	0.0029	ND	0.0045		
Copper	T	mg/L	12	25	HH DW (HQ=1)	1.4	0	0.0007	0.0045	ND	0.0083		
Iron	T	mg/L	12	16.7	HH DW (HQ=1)	11	0	0.036	0.67	ND	0.17		
Lead	T	mg/L	12	16.7	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	0.00035		
Magnesium	T	mg/L	12	100	No SLC					45.5	51	48.2	48.4
Manganese	T	mg/L	12	100	HH DW (HQ=1)	1.7	0			0.46	0.74	0.61	0.63
Mercury	T	mg/L	12	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	12	100	HH DW (HQ=1)	0.18	100			1.2	1.4	1.2	1.2
Nickel	T	mg/L	12	41.7	HH DW (HQ=1)	0.73	0	0.0017	0.004	ND	0.0035		
Potassium	T	mg/L	12	100	No SLC					3.4	5.1	4.5	4.5
Selenium	T	mg/L	12	41.7	HH DW (HQ=1)	0.18	0	0.0014	0.0016	ND	0.002		
Silver	T	mg/L	12	0	HH DW (HQ=1)	0.18	0	0.0001	0.0002	ND	ND		
Sodium	T	mg/L	12	100	No SLC					70.4	81.2	74.9	75.1
Thallium	T	mg/L	12	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Uranium	T	mg/L	1	100	No SLC					0.037	0.037	0.037	0.037
Vanadium	T	mg/L	12	100	HH DW (HQ=1)	0.037	0			0.0013	0.0026	0.0016	0.0015
Zinc	T	mg/L	12	0	HH DW (HQ=1)	11	0	0.0023	0.039	ND	ND		
Aluminum	D	mg/L	12	0	HH DW (HQ=1)	37	0	0.006	0.63	ND	ND		
Antimony	D	mg/L	12	0	HH DW (HQ=1)	0.015	0	0.0004	0.0012	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-40
Groundwater-Upper Alluvial Aquifer-Outfall 002
RI/FS Groundwater Area 13 - Groundwater for Tailings facility area
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Arsenic	D	mg/L	12	50	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	0.00059	0.00033	0.00026
Barium	D	mg/L	12	100	HH DW (HQ=1)	2.6	0			0.023	0.03	0.028	0.028
Beryllium	D	mg/L	12	0	HH DW (HQ=1)	0.073	0	0.0002	0.0004	ND	ND		
Boron	D	mg/L	12	83.3	HH DW (HQ=1)	3.3	0	0.034	0.036	ND	0.034	0.027	0.029
Cadmium	D	mg/L	12	33.3	HH DW (HQ=1)	0.018	0	0.0002	0.0006	ND	0.00047		
Calcium	D	mg/L	12	100	No SLC					254	300	276	275
Chromium	D	mg/L	12	8.3	HH DW (HQ=1)	0.1	0	0.0006	0.0046	ND	0.0011		
Chromium, Hexavalent	D	mg/L	1	0	HH DW (HQ=1)	0.11	0	0.01	0.01	ND	ND		
Cobalt	D	mg/L	12	8.3	HH DW (HQ=1)	0.73	0	0.0011	0.0052	ND	0.002		
Copper	D	mg/L	12	16.7	HH DW (HQ=1)	1.4	0	0.0007	0.0024	ND	0.0019		
Iron	D	mg/L	12	0	HH DW (HQ=1)	11	0	0.023	0.67	ND	ND		
Lead	D	mg/L	12	0	HH DW (HQ=1)	0.015	0	0.0001	0.0008	ND	ND		
Magnesium	D	mg/L	12	100	No SLC					44.8	52.7	48.2	47.8
Manganese	D	mg/L	12	100	HH DW (HQ=1)	1.7	0			0.45	0.77	0.61	0.63
Mercury	D	mg/L	12	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	12	100	HH DW (HQ=1)	0.18	100			1.1	1.3	1.2	1.3
Nickel	D	mg/L	12	50	HH DW (HQ=1)	0.73	0	0.0014	0.0026	ND	0.0044	0.0022	0.0019
Potassium	D	mg/L	12	100	No SLC					2.9	5.3	4.5	4.5
Selenium	D	mg/L	12	33.3	HH DW (HQ=1)	0.18	0	0.001	0.0016	ND	0.0019		
Silver	D	mg/L	12	0	HH DW (HQ=1)	0.18	0	0.0001	0.0002	ND	ND		
Sodium	D	mg/L	12	100	No SLC					70.2	79.3	74.8	75.5
Thallium	D	mg/L	12	0	HH DW (HQ=1)	0.0026	0	0.0001	0.0002	ND	ND		
Vanadium	D	mg/L	12	100	HH DW (HQ=1)	0.26	0			0.0013	0.0018	0.0015	0.0014
Zinc	D	mg/L	12	0	HH DW (HQ=1)	11	0	0.0023	0.039	ND	ND		

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-41
Groundwater-Upper Alluvial Aquifer
RI/FS Residential Tap Water South of Tailings Facility
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Field													
DO	T	mg/L	5	NA	No SLC					5.5	8.2	7.2	7.5
Eh	T	millivolts	5	NA	No SLC					108	288	159	128
pH	T	SU	5	NA	No SLC					6.3	6.7	6.5	6.4
Specific Conductance	T	uS/cm	5	NA	No SLC					299	466	411	437
Temperature	T	Celsius	5	NA	No SLC					9.3	13.8	11.6	12.4
Turbidity	T	NTU	4	NA	No SLC					0	0.9	0.3	0.15
Inorganics													
Bicarbonate (as CaCO3)	T	mg/L	5	100	No SLC					46.1	102	66.3	56.9
Carbonate (as CaCO3)	T	mg/L	5	0	No SLC			1	1	ND	ND		
Chloride	T	mg/L	5	100	HH DW (HQ=1)	250	0			3.8	5.2	4.6	4.8
Cyanide	T	mg/L	5	0	HH DW (HQ=1)	0.73	0	0.01	0.01	ND	ND		
Fluoride	T	mg/L	5	100	HH DW (HQ=1)	2.2	0			1	1.2	1.1	1.1
Hardness	T	mg/L	5	100	No SLC					124	208	187	200
Hydroxide (as CaCO3)	T	mg/L	5	0	No SLC			1	1	ND	ND		
Nitrate	T	mg/L	5	80	HH DW (HQ=1)	10	0	0.2	0.2	ND	0.48	0.37	0.42
Nitrite	T	mg/L	5	0	HH DW (HQ=1)	1	0	0.005	0.005	ND	ND		
pH	T	SU	5	100	No SLC					6.7	7.2	6.9	6.9
Phosphate, Ortho As P	T	mg/L	5	0	No SLC			0.01	0.01	ND	ND		
Phosphorus	T	mg/L	5	20	No SLC			0.01	0.01	ND	0.017		
Specific Conductance	T	umhos/cm	5	100	No SLC					258	425	359	377
Sulfate	T	mg/L	5	100	HH DW (HQ=1)	1500	0			41.3	173	136	158
Total Alkalinity	T	mg/L	5	100	No SLC					46.1	102	66.3	56.9
Total Dissolved Solids	T	mg/L	5	100	No SLC					184	346	278	286
Total Kjeldahl Nitrogen	T	mg/L	5	0	No SLC			0.24	0.24	ND	ND		
Total Organic Carbon	T	mg/L	5	40	No SLC			1	1	ND	1.8		
Total Suspended Solids	T	mg/L	5	20	No SLC			0.5	0.7	ND	1.5		
Hardness	D	mg/L	5	100	No SLC					129	214	192	205
Metals													

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-41
Groundwater-Upper Alluvial Aquifer
RI/FS Residential Tap Water South of Tailings Facility
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Aluminum	T	mg/L	5	0	HH DW (HQ=1)	37	0	0.18	0.51	ND	ND		
Antimony	T	mg/L	5	0	HH DW (HQ=1)	0.015	0	0.0008	0.0024	ND	ND		
Arsenic	T	mg/L	5	0	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	ND		
Barium	T	mg/L	5	100	HH DW (HQ=1)	2.6	0			0.025	0.035	0.029	0.029
Beryllium	T	mg/L	5	0	HH DW (HQ=1)	0.073	0	0.0002	0.00077	ND	ND		
Boron	T	mg/L	5	80	HH DW (HQ=1)	3.3	0	0.0054	0.0054	ND	0.018	0.0088	0.0078
Cadmium	T	mg/L	5	0	HH DW (HQ=1)	0.018	0	0.0003	0.0007	ND	ND		
Calcium	T	mg/L	5	100	No SLC					38.1	66.2	57.6	60.9
Chromium	T	mg/L	5	0	HH DW (HQ=1)	0.1	0	0.0006	0.0015	ND	ND		
Cobalt	T	mg/L	5	0	HH DW (HQ=1)	0.73	0	0.0011	0.0023	ND	ND		
Copper	T	mg/L	5	80	HH DW (HQ=1)	1.4	0	0.0014	0.0014	ND	0.0094	0.0062	0.0079
Iron	T	mg/L	5	20	HH DW (HQ=1)	11	0	0.19	0.37	ND	0.59		
Lead	T	mg/L	5	20	HH DW (HQ=1)	0.015	0	0.0008	0.0008	ND	0.00038		
Magnesium	T	mg/L	5	100	No SLC					7	11.7	10.4	11.5
Manganese	T	mg/L	5	20	HH DW (HQ=1)	1.7	0	0.014	0.019	ND	0.021		
Mercury	T	mg/L	5	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	T	mg/L	5	80	HH DW (HQ=1)	0.18	0	0.0022	0.0022	ND	0.021	0.016	0.019
Nickel	T	mg/L	5	0	HH DW (HQ=1)	0.73	0	0.0015	0.0024	ND	ND		
Potassium	T	mg/L	5	80	No SLC			1.4	1.4	ND	1.7	1.4	1.6
Selenium	T	mg/L	5	0	HH DW (HQ=1)	0.18	0	0.0006	0.0014	ND	ND		
Silver	T	mg/L	5	0	HH DW (HQ=1)	0.18	0	0.0002	0.0002	ND	ND		
Sodium	T	mg/L	5	80	No SLC			6	6	ND	12.8	7.9	8.2
Thallium	T	mg/L	5	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	T	mg/L	5	0	HH DW (HQ=1)	0.037	0	0.0004	0.0004	ND	ND		
Zinc	T	mg/L	5	100	HH DW (HQ=1)	11	0			0.029	0.074	0.044	0.036
Aluminum	D	mg/L	5	0	HH DW (HQ=1)	37	0	0.18	0.51	ND	ND		
Antimony	D	mg/L	5	0	HH DW (HQ=1)	0.015	0	0.0008	0.0024	ND	ND		
Arsenic	D	mg/L	5	0	HH DW (HQ=1)	0.01	0	0.0004	0.0004	ND	ND		
Barium	D	mg/L	5	100	HH DW (HQ=1)	2.6	0			0.026	0.037	0.03	0.03

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

Table 6-41
Groundwater-Upper Alluvial Aquifer
RI/FS Residential Tap Water South of Tailings Facility
Summary of Results

Analyte	Sample Fraction	Units	Total Number of Samples	Percent Detects (%)	SLC	SLC Value	Percent Above SLC	Min RL for ND	Max RL for ND	Min Value	Max Value	Mean Value	Median Value
Beryllium	D	mg/L	5	0	HH DW (HQ=1)	0.073	0	0.0002	0.001	ND	ND		
Boron	D	mg/L	5	80	HH DW (HQ=1)	3.3	0	0.0055	0.0055	ND	0.015	0.0083	0.0097
Cadmium	D	mg/L	5	20	HH DW (HQ=1)	0.018	0	0.0003	0.0003	ND	0.00073		
Calcium	D	mg/L	5	100	No SLC					39.7	67.9	59.1	62.8
Chromium	D	mg/L	5	0	HH DW (HQ=1)	0.1	0	0.0006	0.0015	ND	ND		
Cobalt	D	mg/L	5	0	HH DW (HQ=1)	0.73	0	0.0016	0.0035	ND	ND		
Copper	D	mg/L	5	80	HH DW (HQ=1)	1.4	0	0.0014	0.0014	ND	0.02	0.0088	0.0091
Iron	D	mg/L	5	20	HH DW (HQ=1)	11	0	0.29	0.38	ND	0.67		
Lead	D	mg/L	5	0	HH DW (HQ=1)	0.015	0	0.0002	0.0008	ND	ND		
Magnesium	D	mg/L	5	100	No SLC					7.2	11.9	10.7	11.7
Manganese	D	mg/L	5	20	HH DW (HQ=1)	1.7	0	0.014	0.019	ND	0.02		
Mercury	D	mg/L	5	0	HH DW (HQ=1)	0.011	0	0.0001	0.0001	ND	ND		
Molybdenum	D	mg/L	5	100	HH DW (HQ=1)	0.18	0			0.0015	0.022	0.016	0.02
Nickel	D	mg/L	5	20	HH DW (HQ=1)	0.73	0	0.0015	0.0024	ND	0.0026		
Potassium	D	mg/L	5	100	No SLC					1.5	1.7	1.6	1.7
Selenium	D	mg/L	5	20	HH DW (HQ=1)	0.18	0	0.0014	0.0014	ND	0.00076		
Silver	D	mg/L	5	0	HH DW (HQ=1)	0.18	0	0.0002	0.0002	ND	ND		
Sodium	D	mg/L	5	80	No SLC			6.3	6.3	ND	14.2	8.9	9.1
Thallium	D	mg/L	5	0	HH DW (HQ=1)	0.0026	0	0.0002	0.0002	ND	ND		
Vanadium	D	mg/L	5	0	HH DW (HQ=1)	0.26	0	0.0004	0.0004	ND	ND		
Zinc	D	mg/L	5	100	HH DW (HQ=1)	11	0			0.041	0.39	0.13	0.086

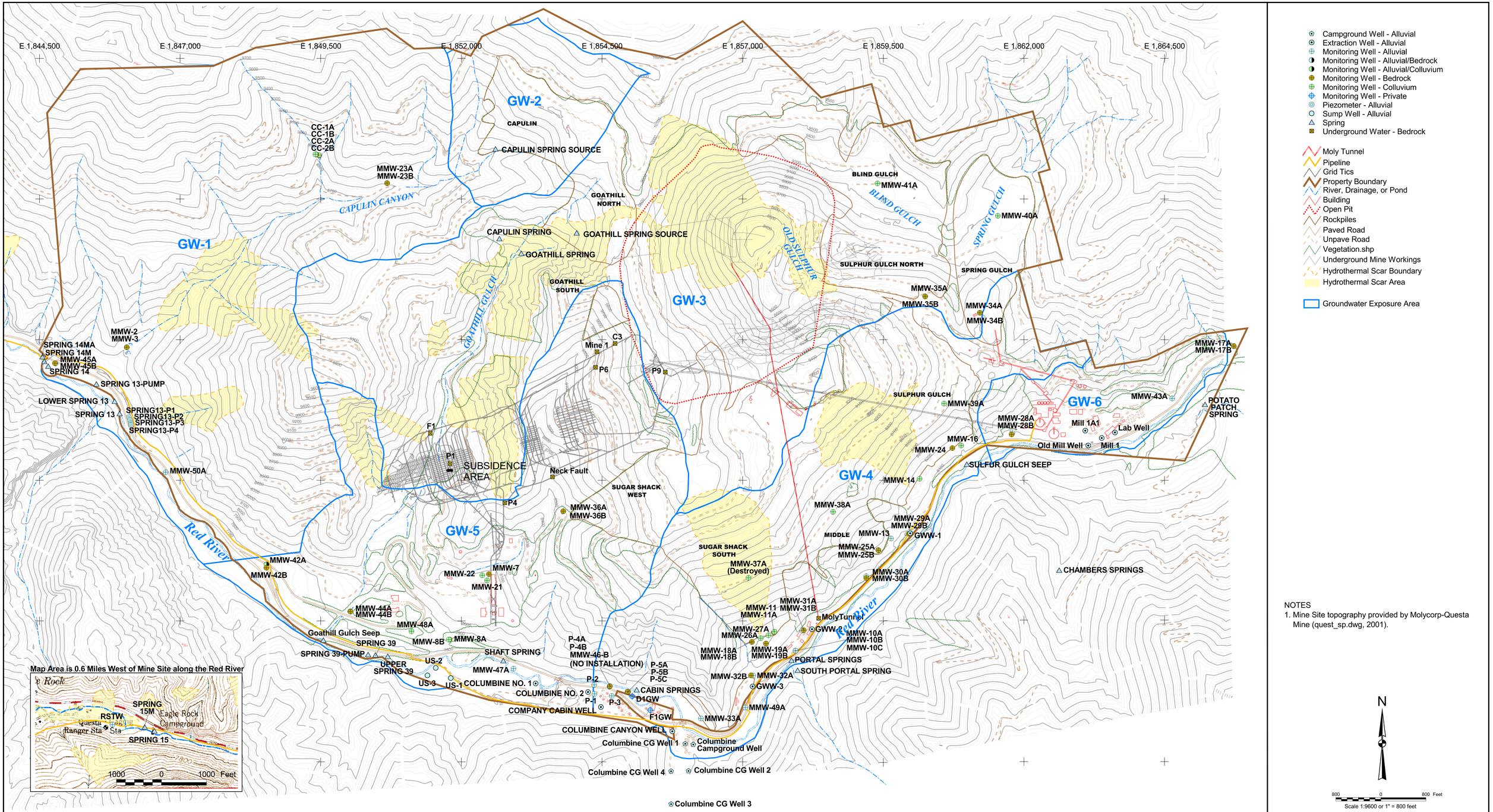
"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"HH DW (HQ=1)" EPA Region 6 RBSLs Human Health Tap Water (HQ=1)
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
D = Filtered Fraction (0.45 micron filter)
A = Filtered Fraction (0.1 micron filter)
ND = Non-Detected Value

SECTION 6

GROUNDWATER

FIGURES



NOTES
1. Mine Site topography provided by Molycorp-Questa Mine (quest_sp.dwg, 2001).

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8181 East Tufts Avenue
Denver, CO 80237-2637
(303) 694-2770

APPLICATION	ArcView GIS
FILE NAME	gw_techmemo.apr
DRAWN BY	Denver/GIS
DATE	3/24/05

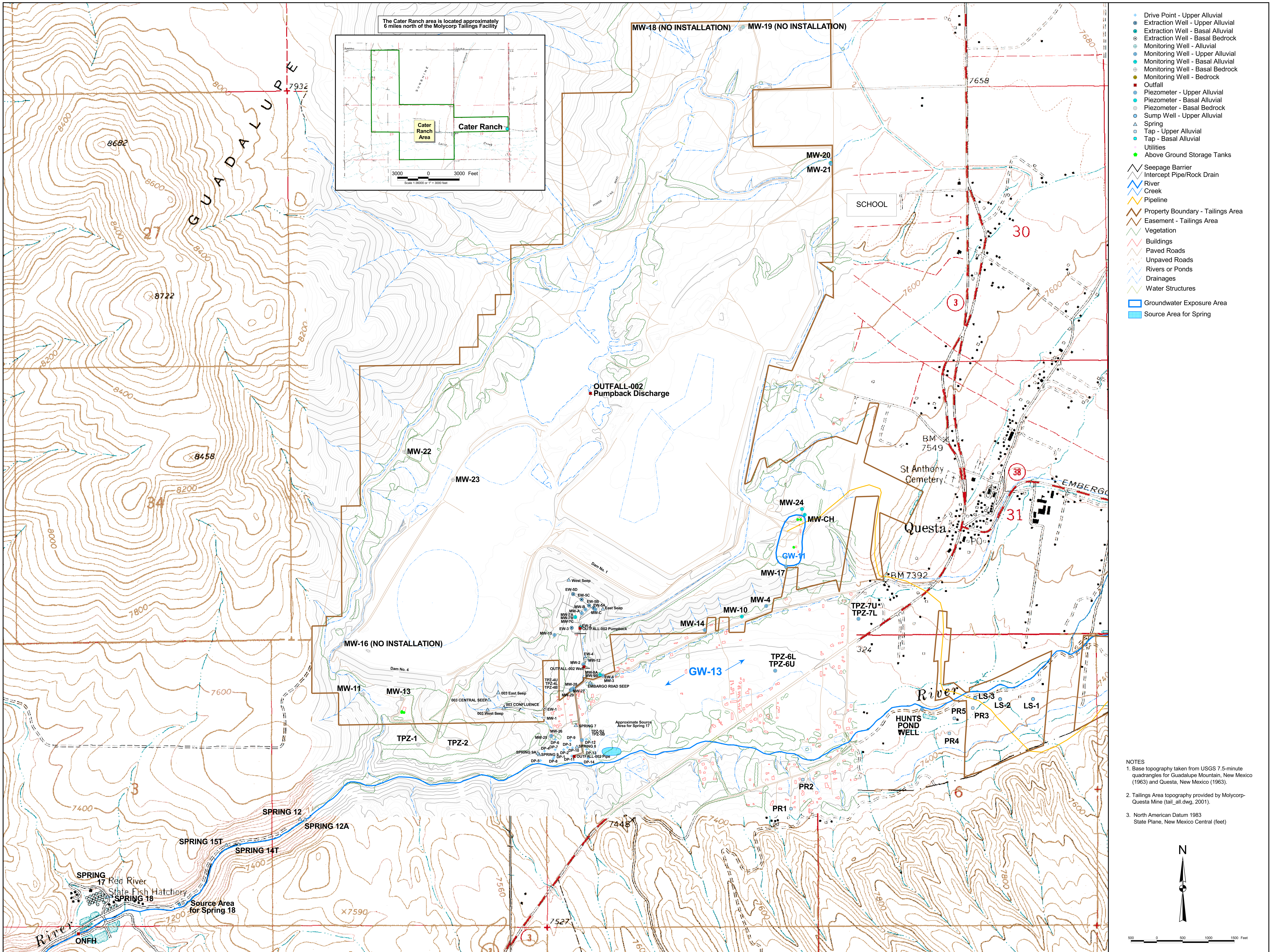
MOLYCORP - QUESTA MINE RI/FS

PROJECT 22236244

MINE SITE GROUNDWATER SAMPLING LOCATIONS AND ON-MINE SITE REFERENCE LOCATIONS

Figure 6-1

Preliminary Site Characterization Report



The Cater Ranch area is located approximately 6 miles north of the Molycorp Tailings Facility
Cater Ranch Area
Cater Ranch
3000 0 3000 Feet
MW-18 (NO INSTALLATION)
MW-19 (NO INSTALLATION)
MW-20
MW-21
SCHOOL
GUADALUPE
OUTFALL-002
Pumpback Discharge
MW-22
MW-23
MW-24
MW-CH
GW-11
MW-17
MW-4
MW-10
MW-14
MW-16 (NO INSTALLATION)
MW-11
MW-13
TPZ-1
TPZ-2
TPZ-7U
TPZ-7L
TPZ-6L
TPZ-6U
GW-13
St Anthony Cemetery
Questa
BM 7549
BM 7392
EMBARGO
River
LS-3
LS-2
LS-1
PR5
PR3
PR4
PR2
PR1
HUNTS POND WELL
SPRING 12
SPRING 12A
SPRING 15T
SPRING 14T
SPRING 17
SPRING 18
Red River State Fish Hatchery
Source Area for Spring 18
ONFH
Dam No. 1
Dam No. 4
Drive Point - Upper Alluvial
Extraction Well - Upper Alluvial
Extraction Well - Basal Alluvial
Extraction Well - Basal Bedrock
Monitoring Well - Alluvial
Monitoring Well - Upper Alluvial
Monitoring Well - Basal Alluvial
Monitoring Well - Basal Bedrock
Monitoring Well - Bedrock
Outfall
Piezometer - Upper Alluvial
Piezometer - Basal Alluvial
Piezometer - Basal Bedrock
Sump Well - Upper Alluvial
Spring
Tap - Upper Alluvial
Tap - Basal Alluvial
Utilities
Above Ground Storage Tanks
Seepage Barrier
Intercept Pipe/Rock Drain
River
Creek
Pipeline
Property Boundary - Tailings Area
Easement - Tailings Area
Vegetation
Buildings
Paved Roads
Unpaved Roads
Rivers or Ponds
Drainages
Water Structures
Groundwater Exposure Area
Source Area for Spring
NOTES
1. Base topography taken from USGS 7.5-minute quadrangles for Guadalupe Mountain, New Mexico (1963) and Questa, New Mexico (1963).
2. Tailings Area topography provided by Molycorp-Questa Mine (tail_all.dwg, 2001).
3. North American Datum 1983 State Plane, New Mexico Central (feet)
N
500 0 500 1000 1500 Feet

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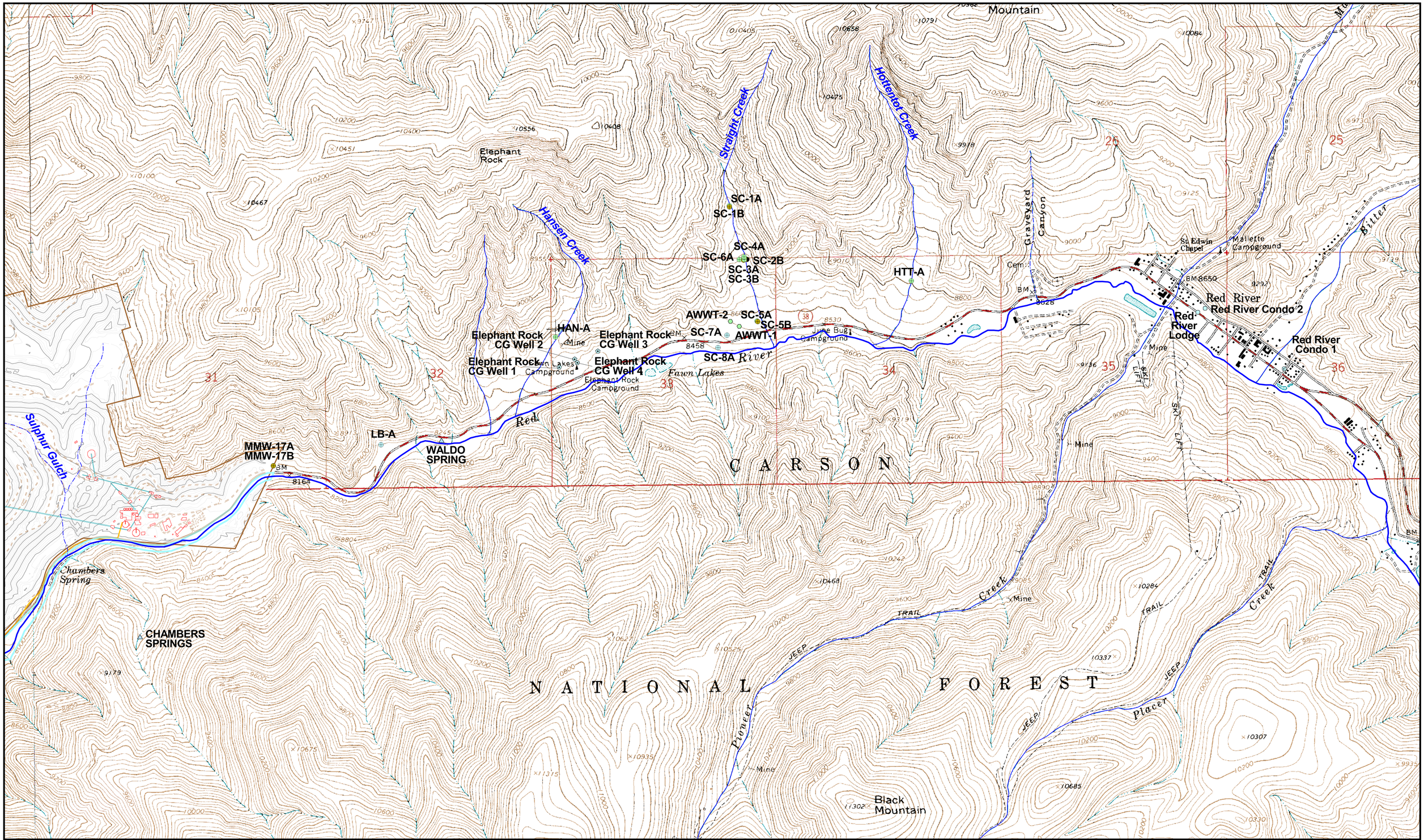
8181 East Tufts Avenue
Denver, CO 80237-2637
(303) 694-2770

APPLICATION: ArcView GIS	MOLYCORP - QUESTA MINE RI/FS	PROJECT: 22236244
FILE NAME: gw_techmemo.apr	TAILINGS FACILITY GROUNDWATER SAMPLING LOCATIONS AND REFERENCE LOCATIONS	Figure 6-2
DRAWN BY: GIS Denver		Preliminary Site Characterization Report
DATE: 3/21/2005		



Groundwater Features
- Campground Well - Alluvial
- Monitoring Well - Alluvial
- Monitoring Well - Bedrock
- Monitoring Well - Bedrock/Colluvium
- Monitoring Well - Colluvium
- Waste Water Treatment - Colluvium
- Spring
- Tap - Alluvial

Waterways
- Gulch
- River
- Creek

- Pipeline
- Paved Road
- Unpaved Road
- Mine Site Boundary

- Surface Water Exposure Area

N

1000 0 1000 Feet

Scale 1:12000 or 1" = 1000 feet

NOTES
1. Base topography taken from USGS 7.5-minute quadrangles for Questa, New Mexico (1963) and Red River, New Mexico (1963) and .
2. Mine Site topography provided by Molycorp-Questa Mine (quest_sp.dwg, 2001).

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APPLICATION	ArcView GIS
FILE NAME	gw_techmemo.apr
DRAWN BY	Denver/GIS
DATE	3/21/2005

MOLYCORP - QUESTA MINE RI/FS

PROJECT 22236244

OFF-MINE SITE REFERENCE GROUNDWATER SAMPLING LOCATIONS

Figure 6-3

Preliminary Site Characterization Report

Figure 6-4
Mine Site and Reference Alluvial Groundwater
Comparison of Mean Fluoride Concentrations

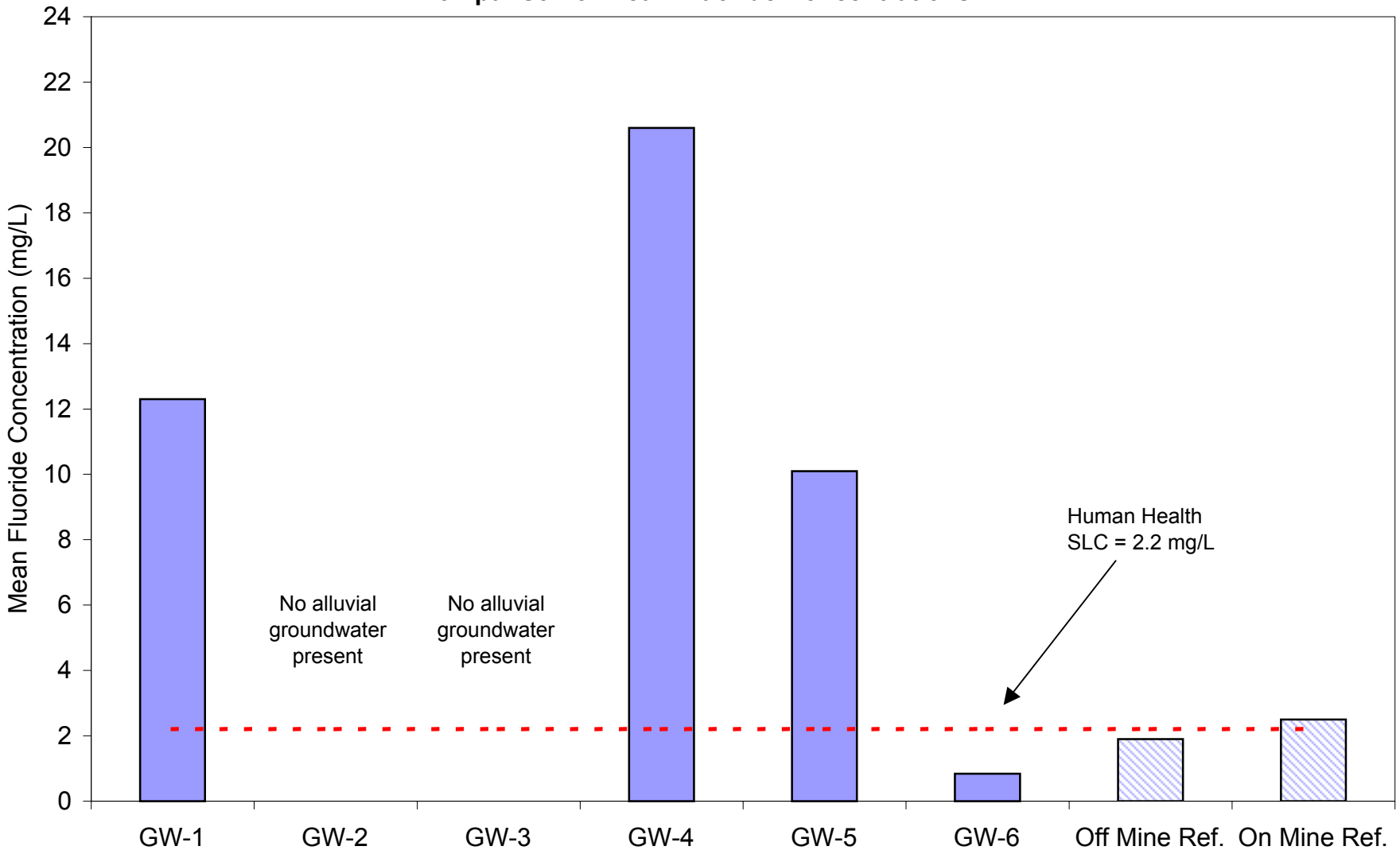

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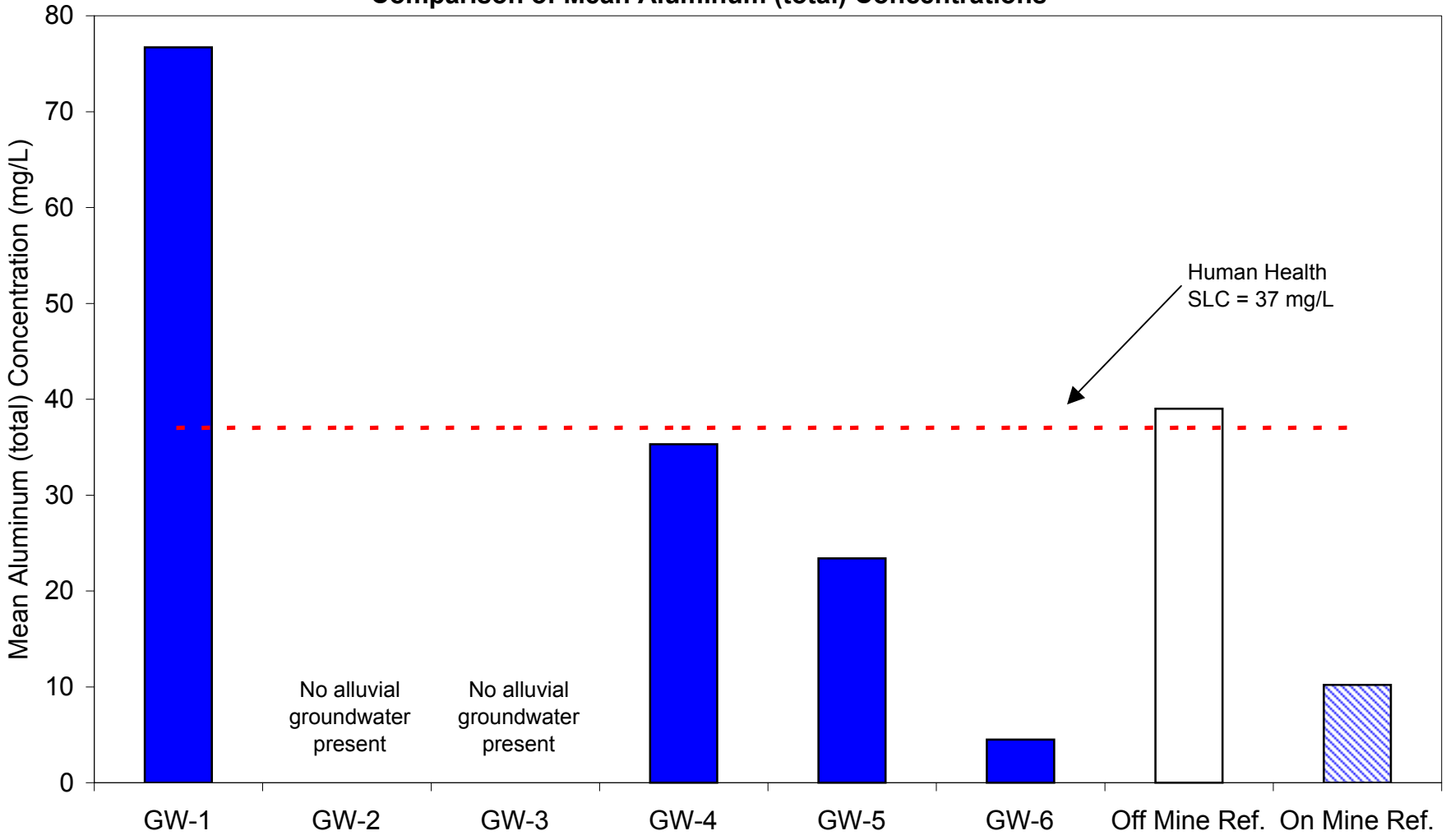
Figure 6-5
Mine Site and Reference Alluvial Groundwater
Comparison of Mean Aluminum (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-6
Mine Site and Reference Alluvial Groundwater
Comparison of Mean Manganese (total) Concentrations

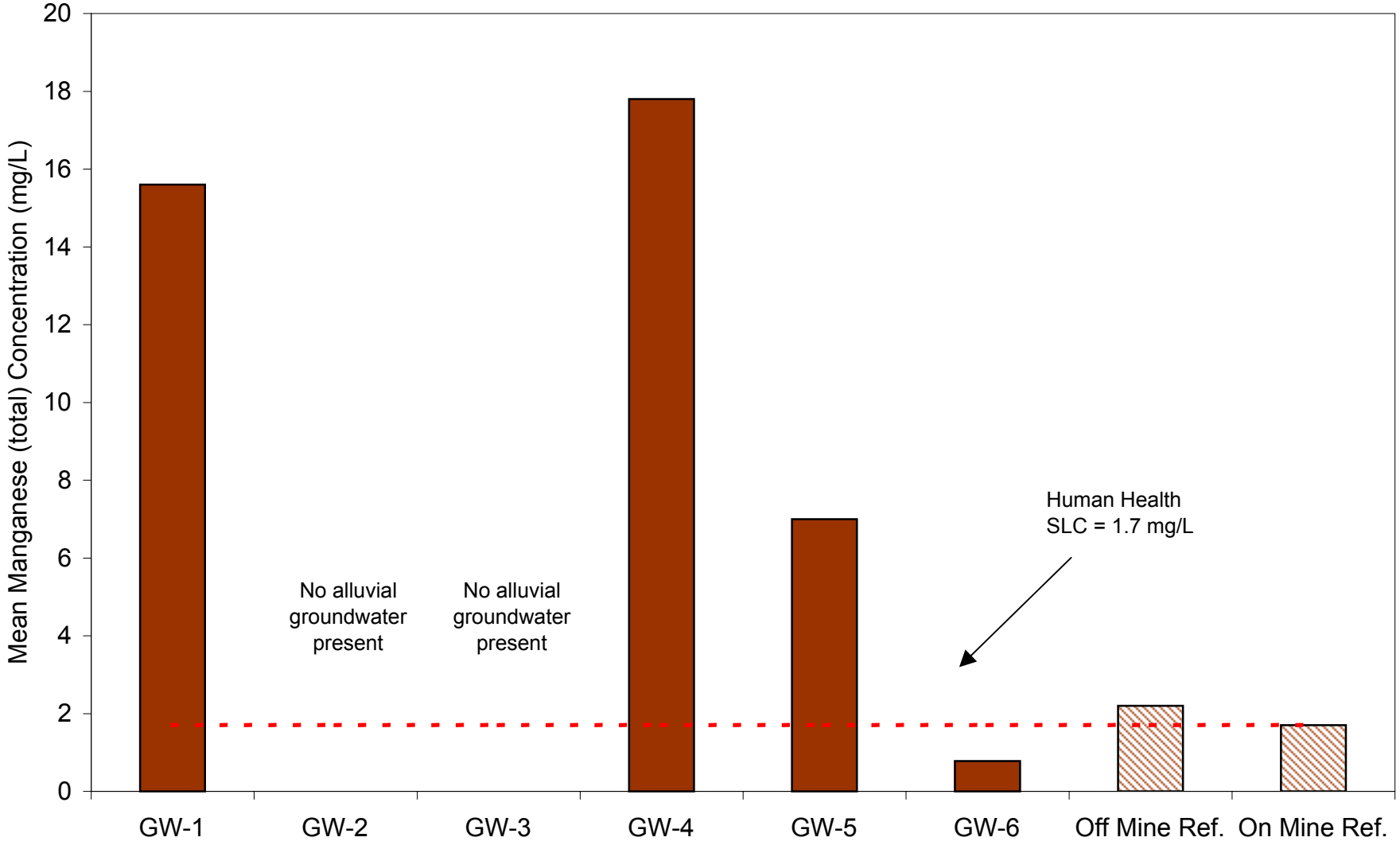


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Figure 6-7
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Fluoride Concentrations

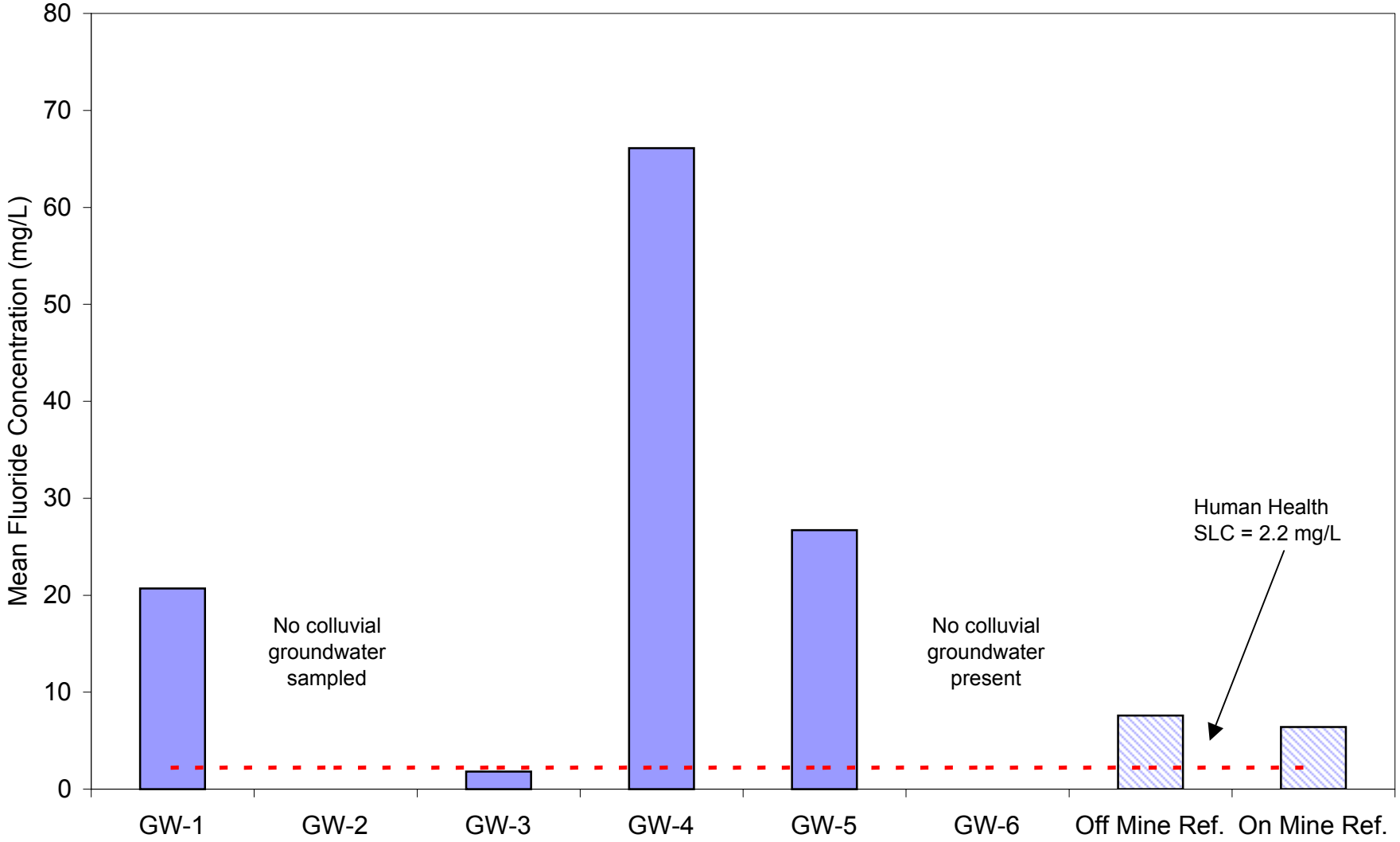

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Figure 6-8
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Sulfate Concentrations

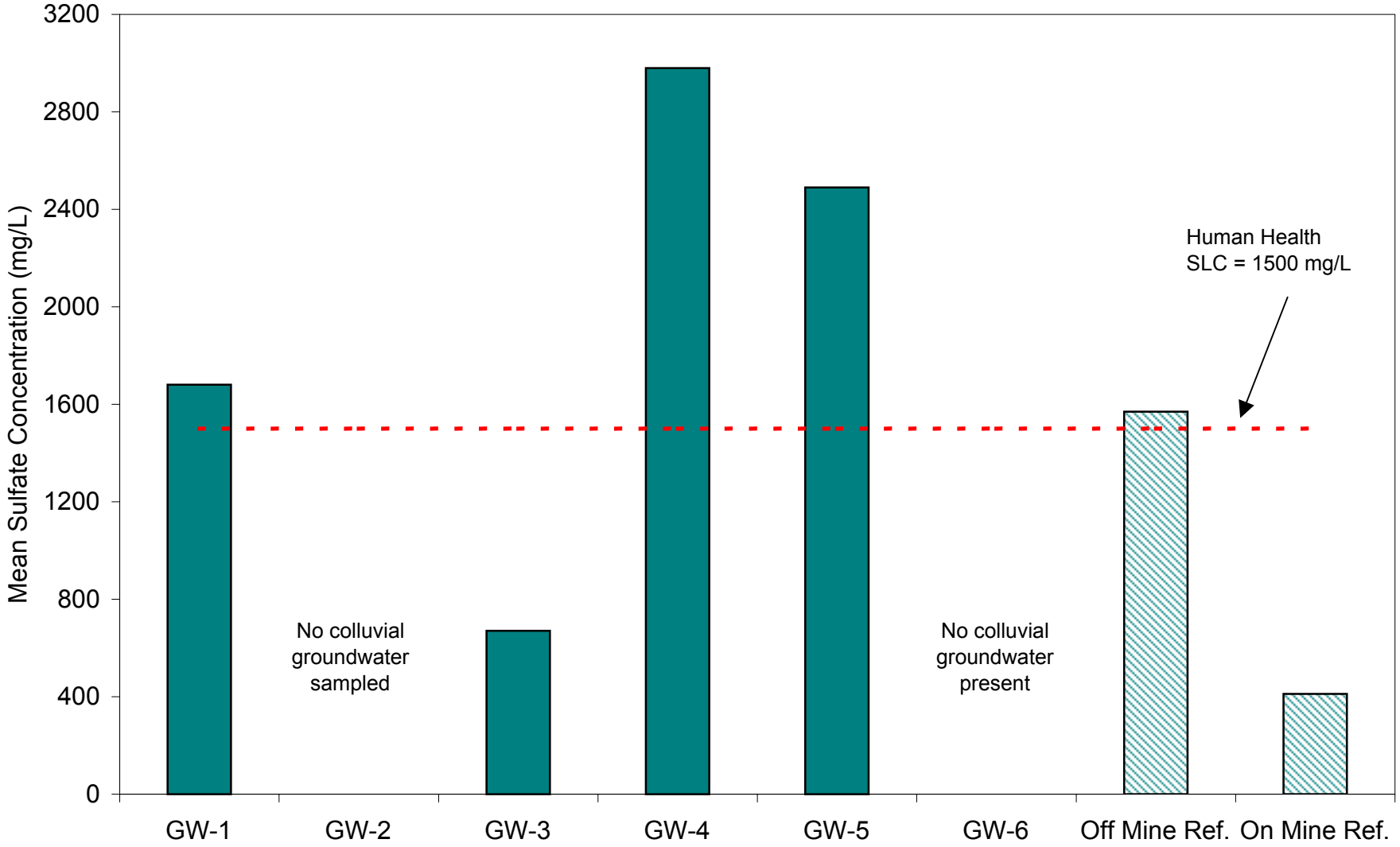

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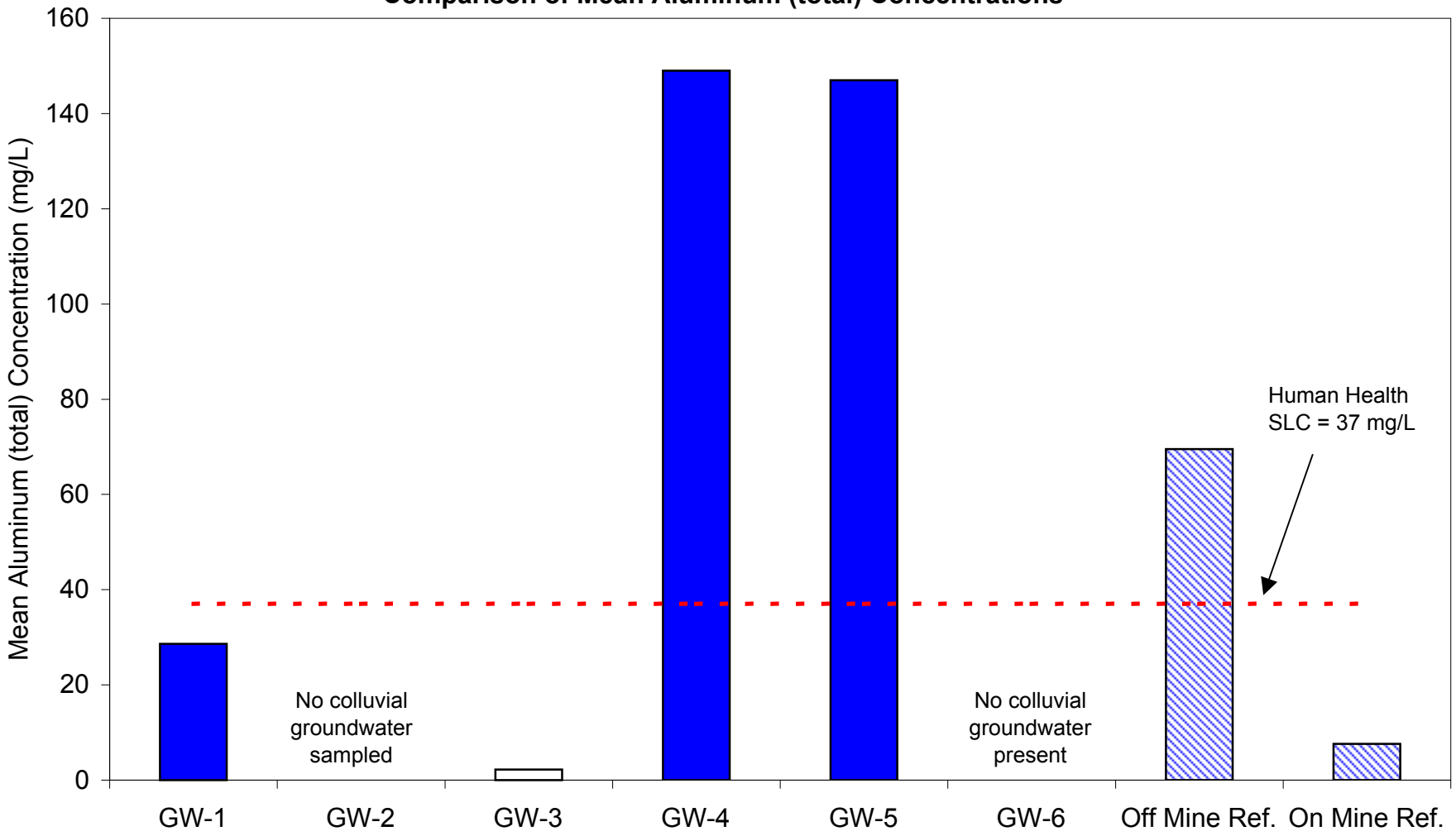
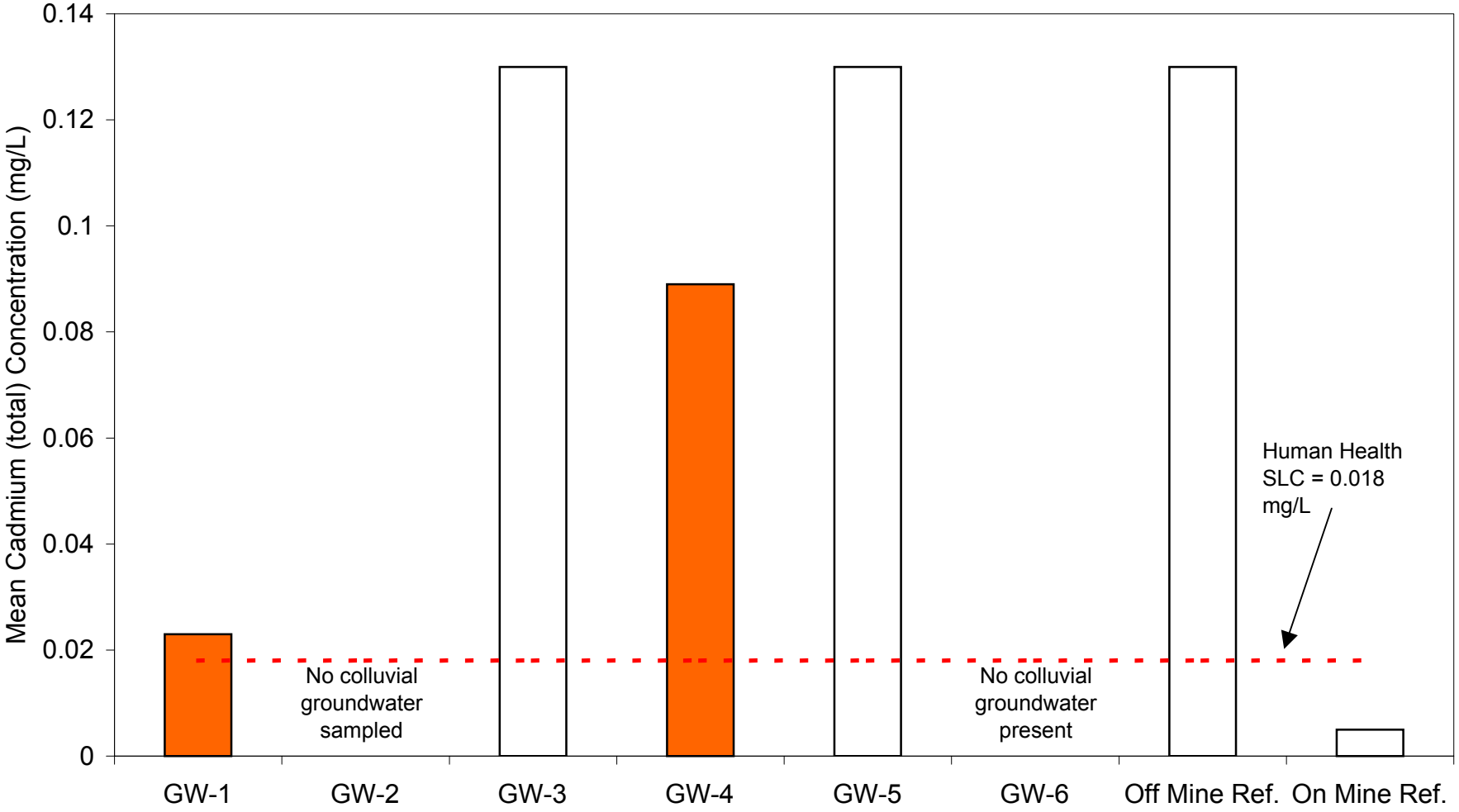
Figure 6-9
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Aluminum (total) Concentrations



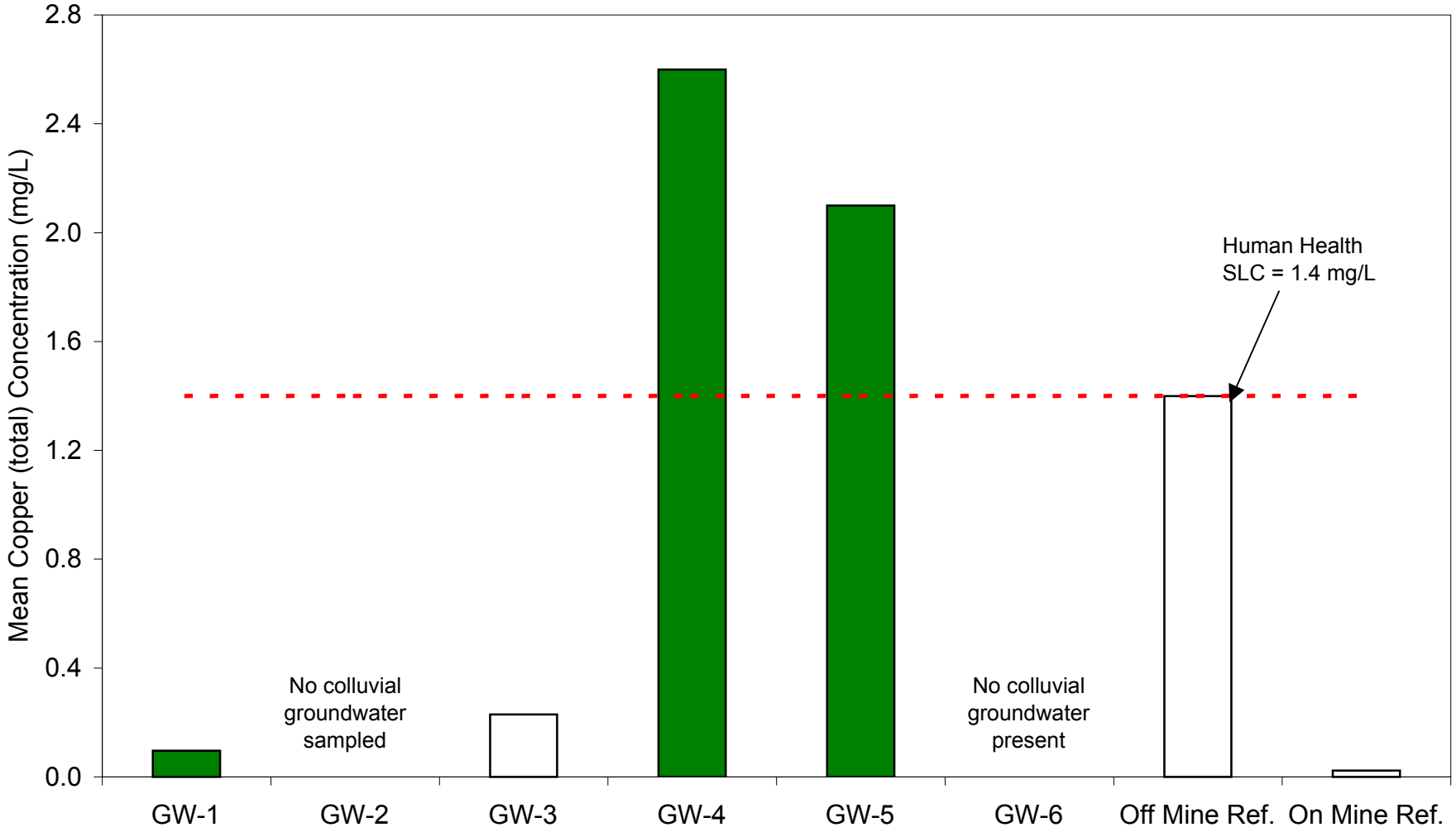
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-10
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Cadmium (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-11
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Copper (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

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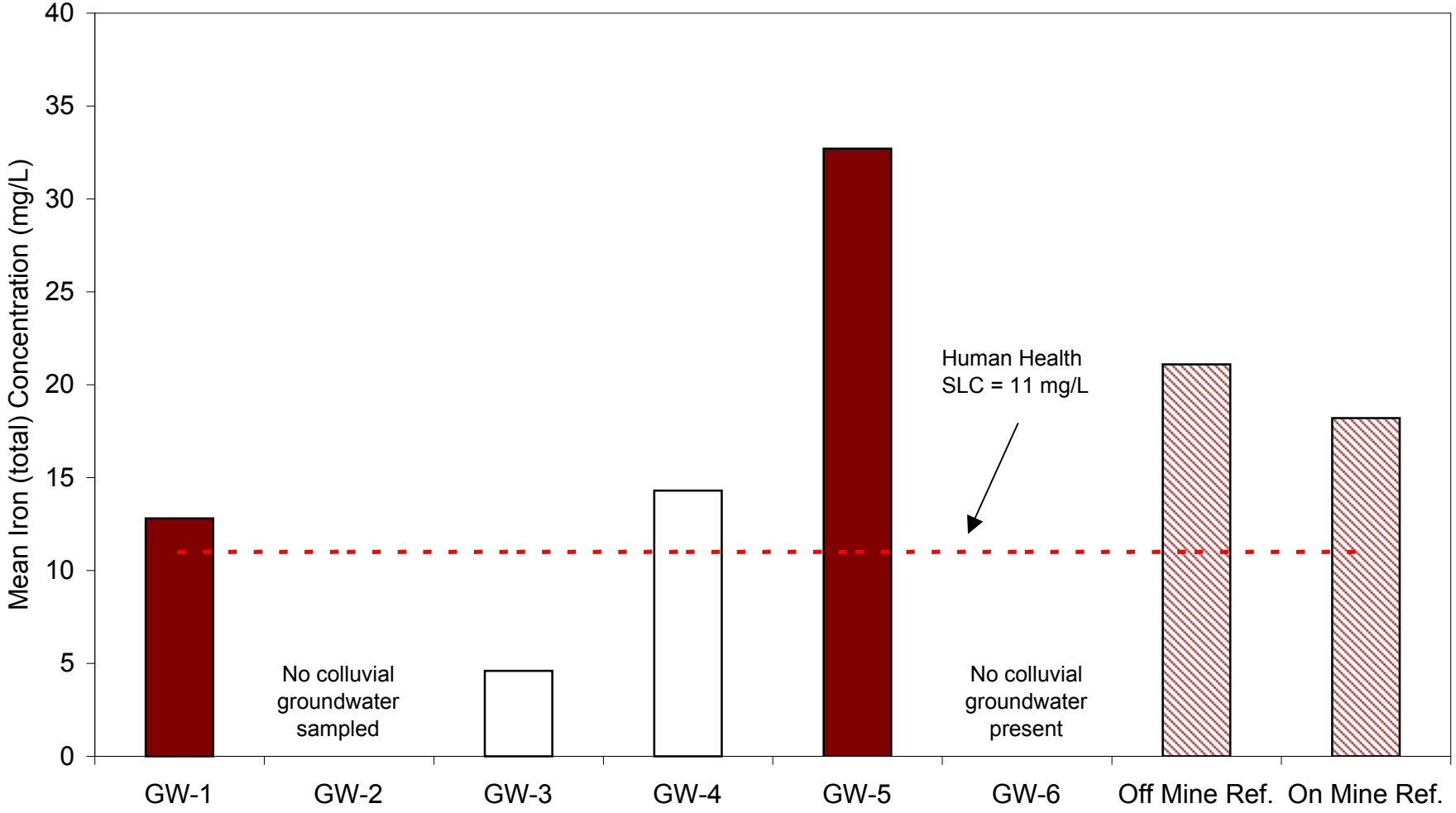
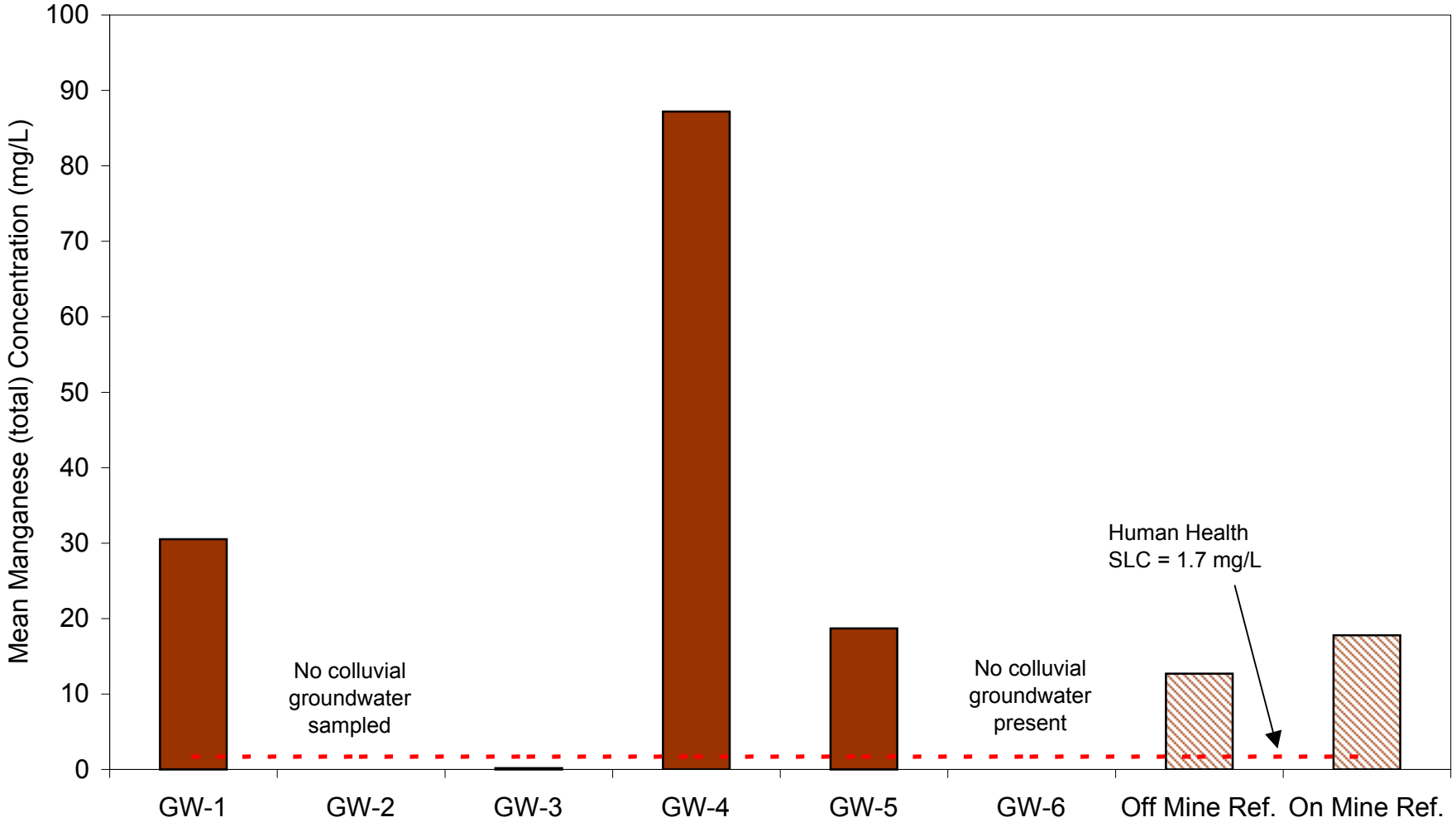
Figure 6-12
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Iron (total) Concentrations



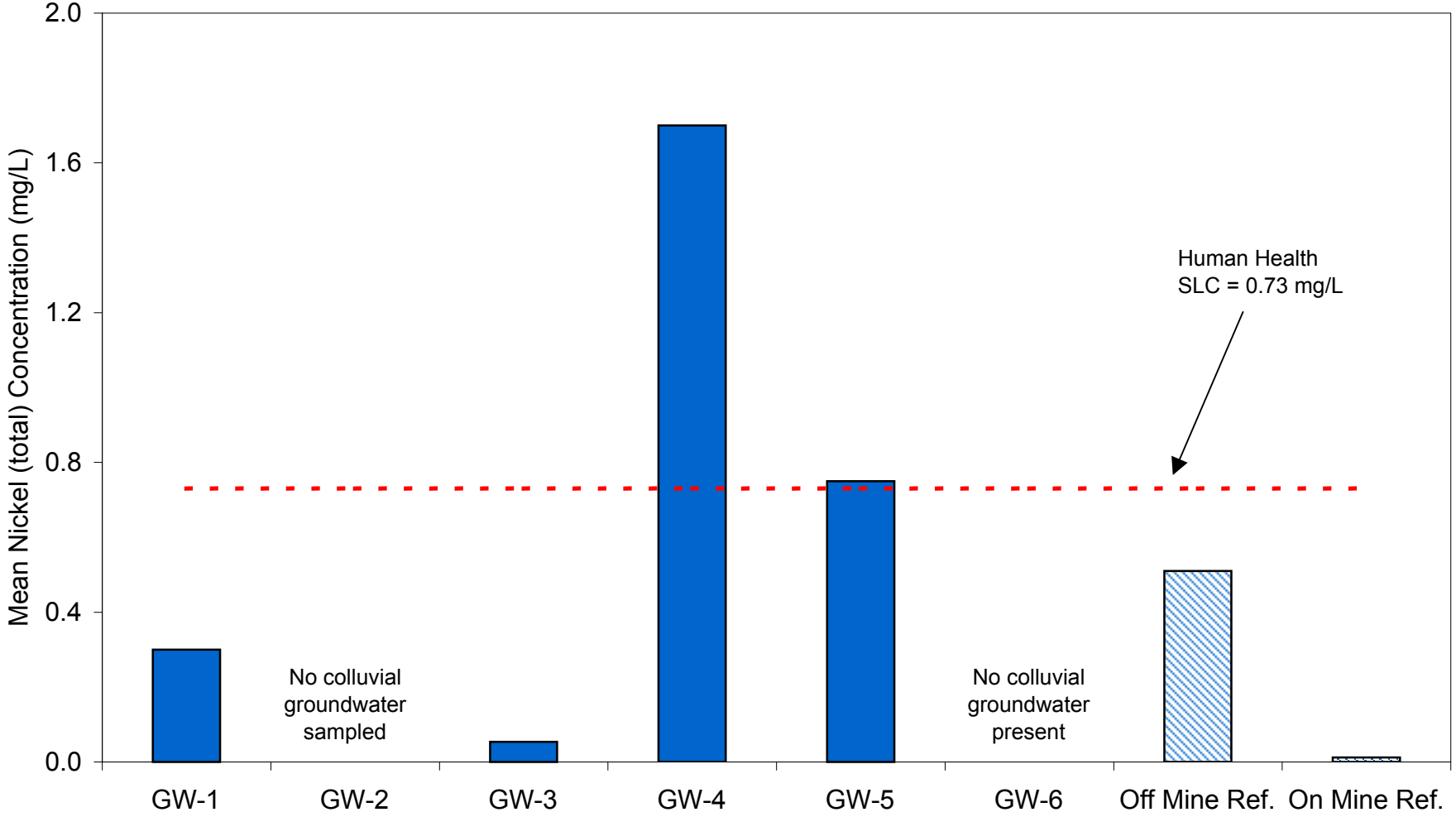
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-13
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Manganese (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-14
Mine Site and Reference Colluvial Groundwater
Comparison of Mean Nickel (total) Concentrations



Note: No bar indicates that greater than 50 percent of detected values were below the SLC and a mean concentration was not calculated.

Figure 6-15
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Fluoride Concentrations

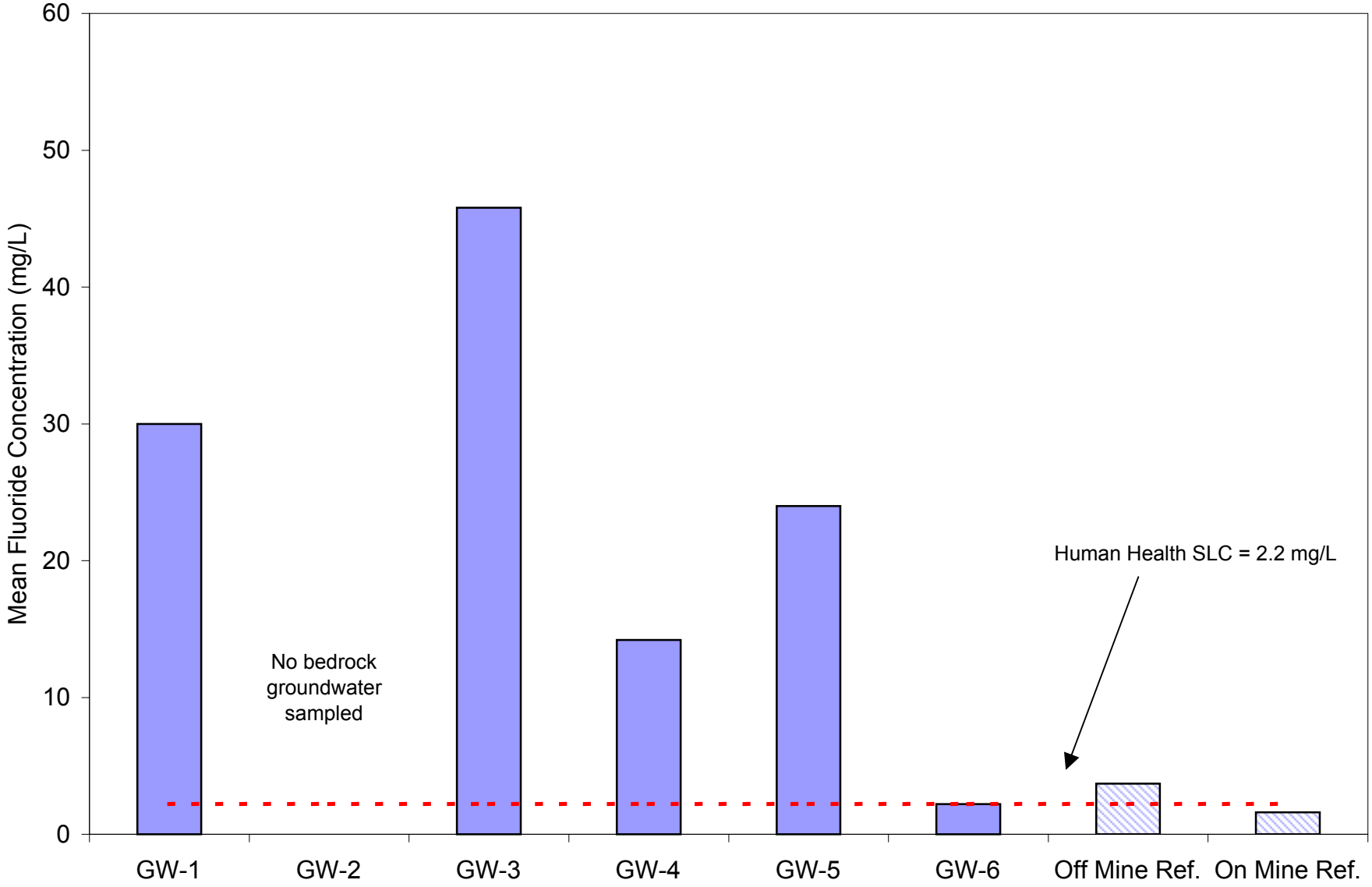


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Figure 6-16
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Sulfate Concentrations

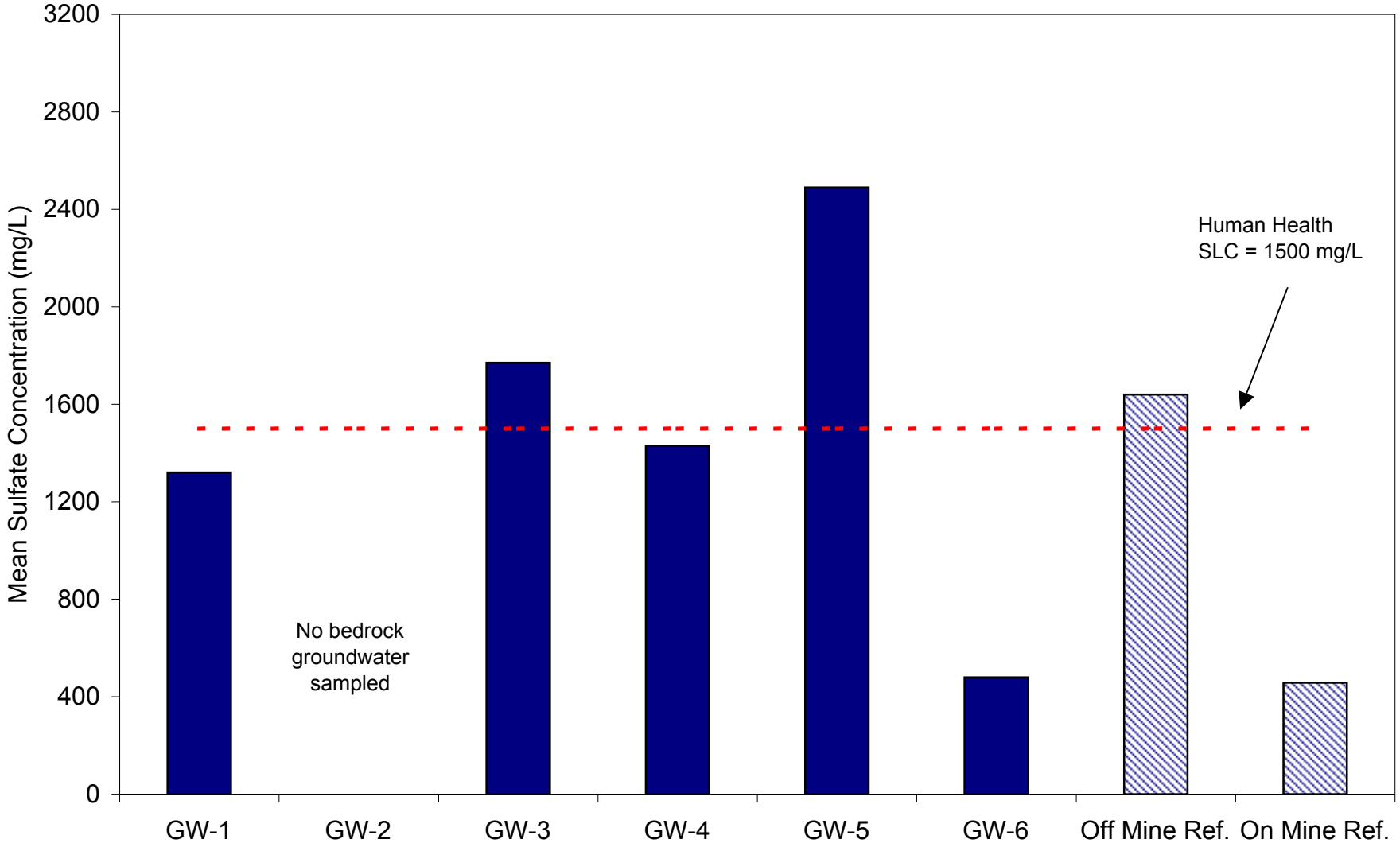

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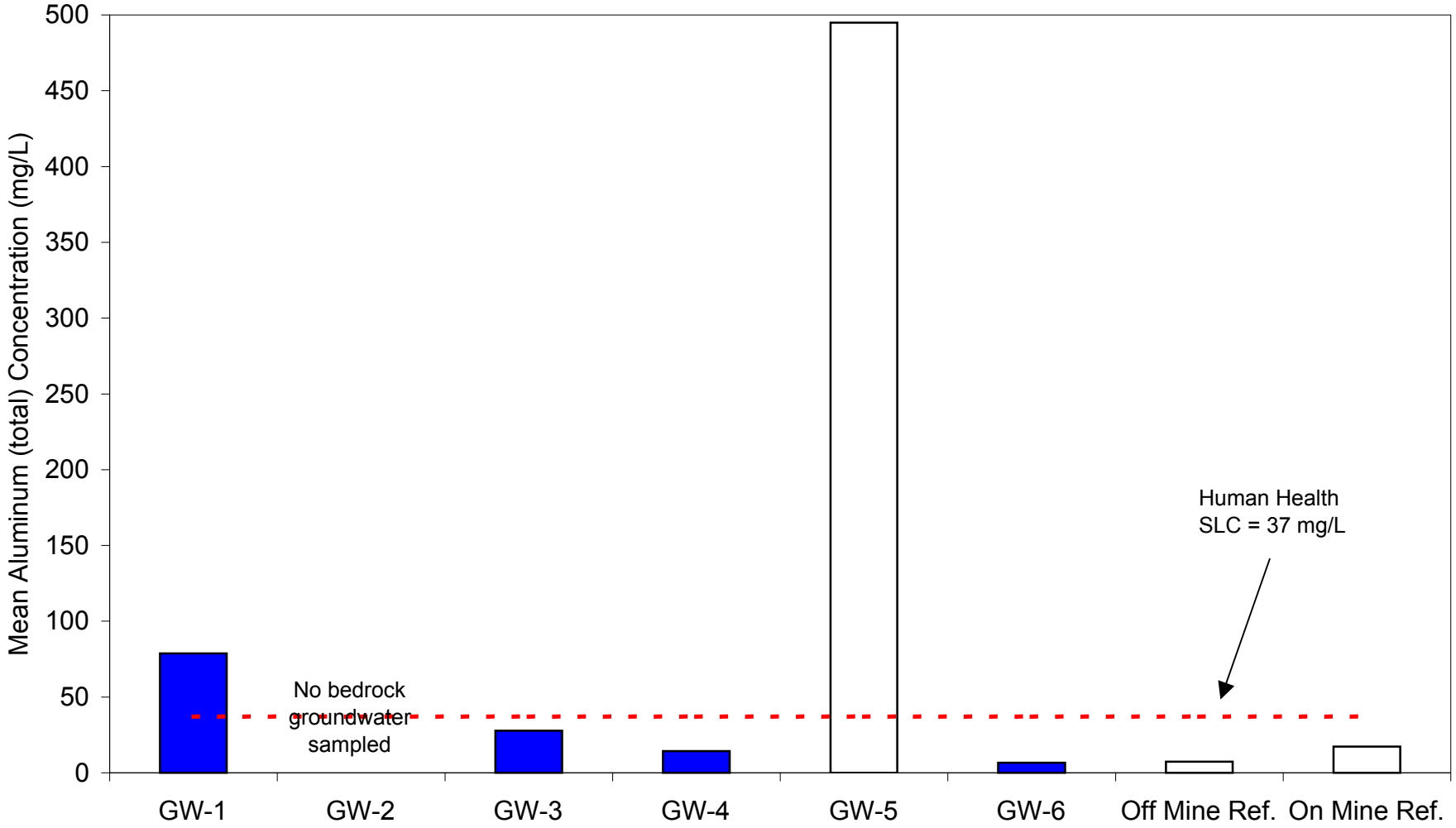
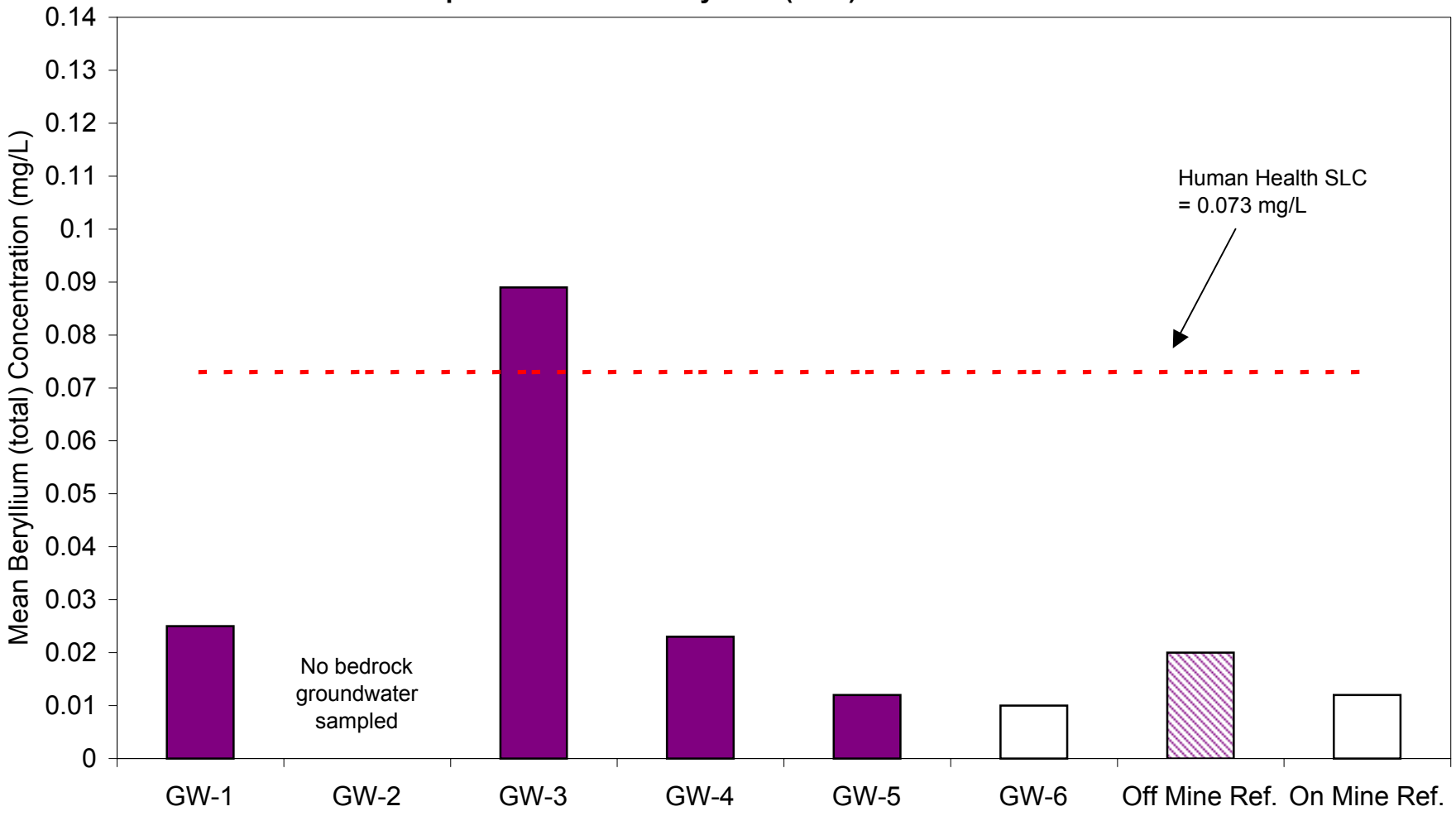
Figure 6-17
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Aluminum (total) Concentrations



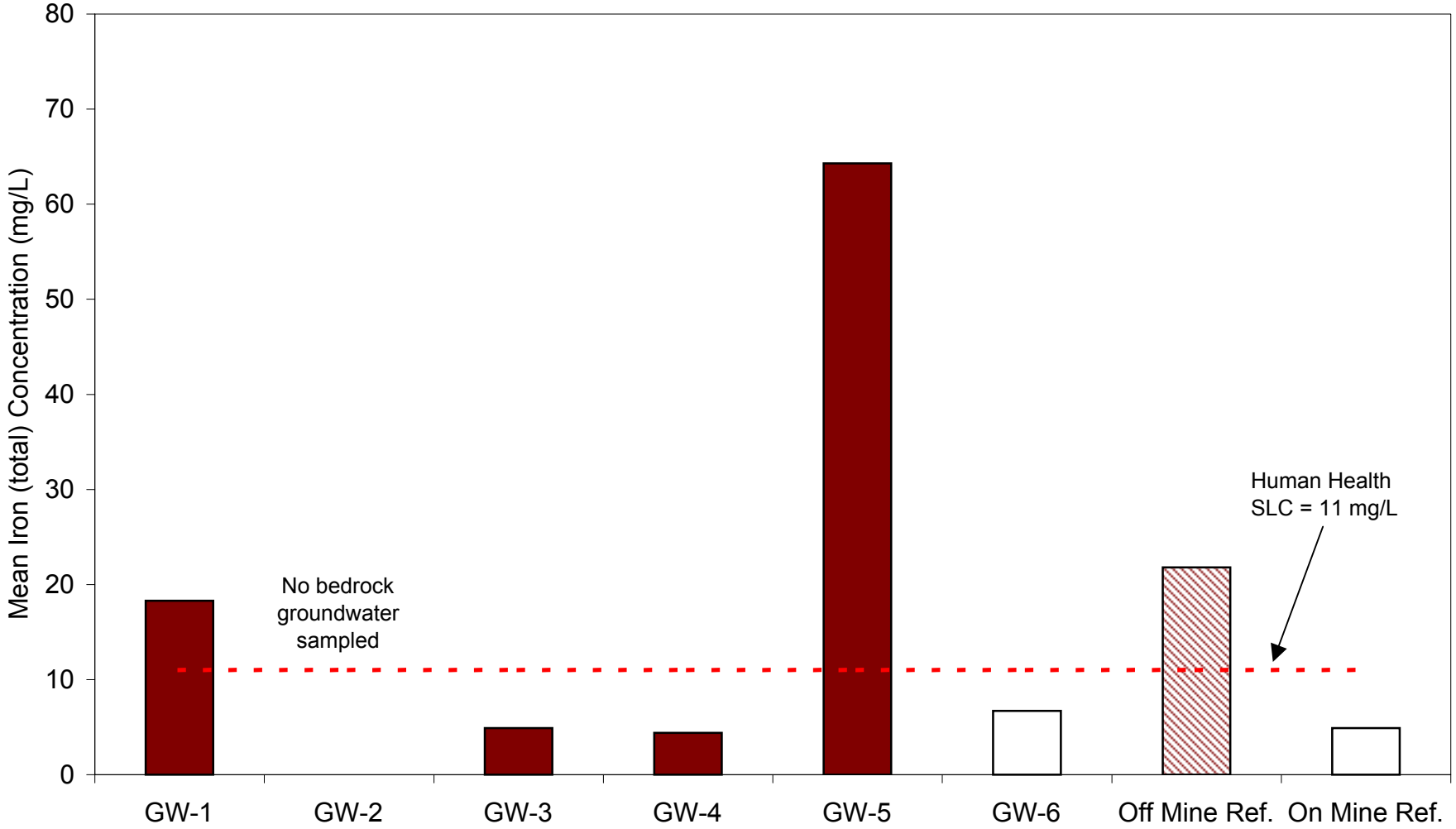
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-18
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Beryllium (total) Concentrations



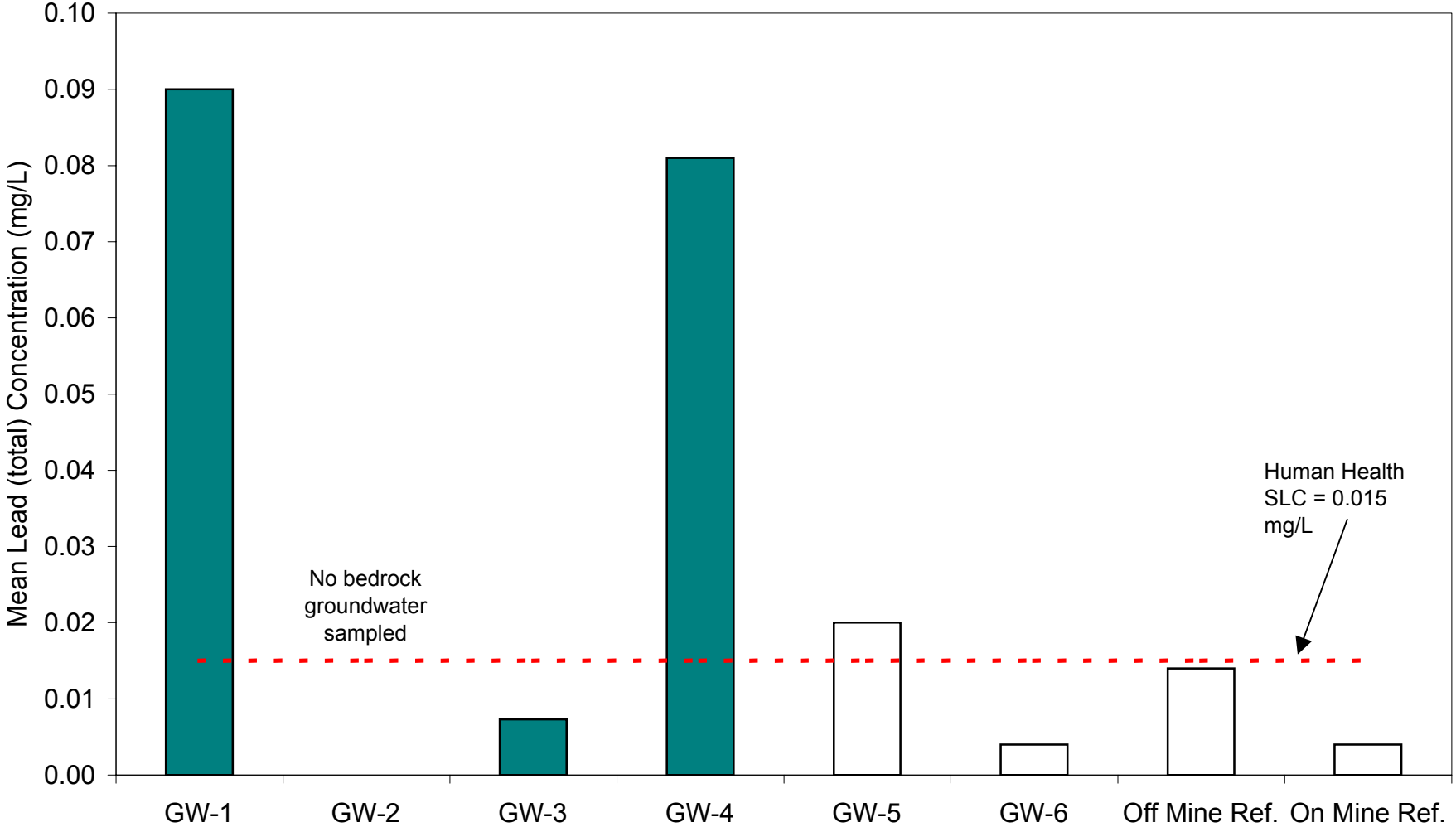
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-19
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Iron (total) Concentrations



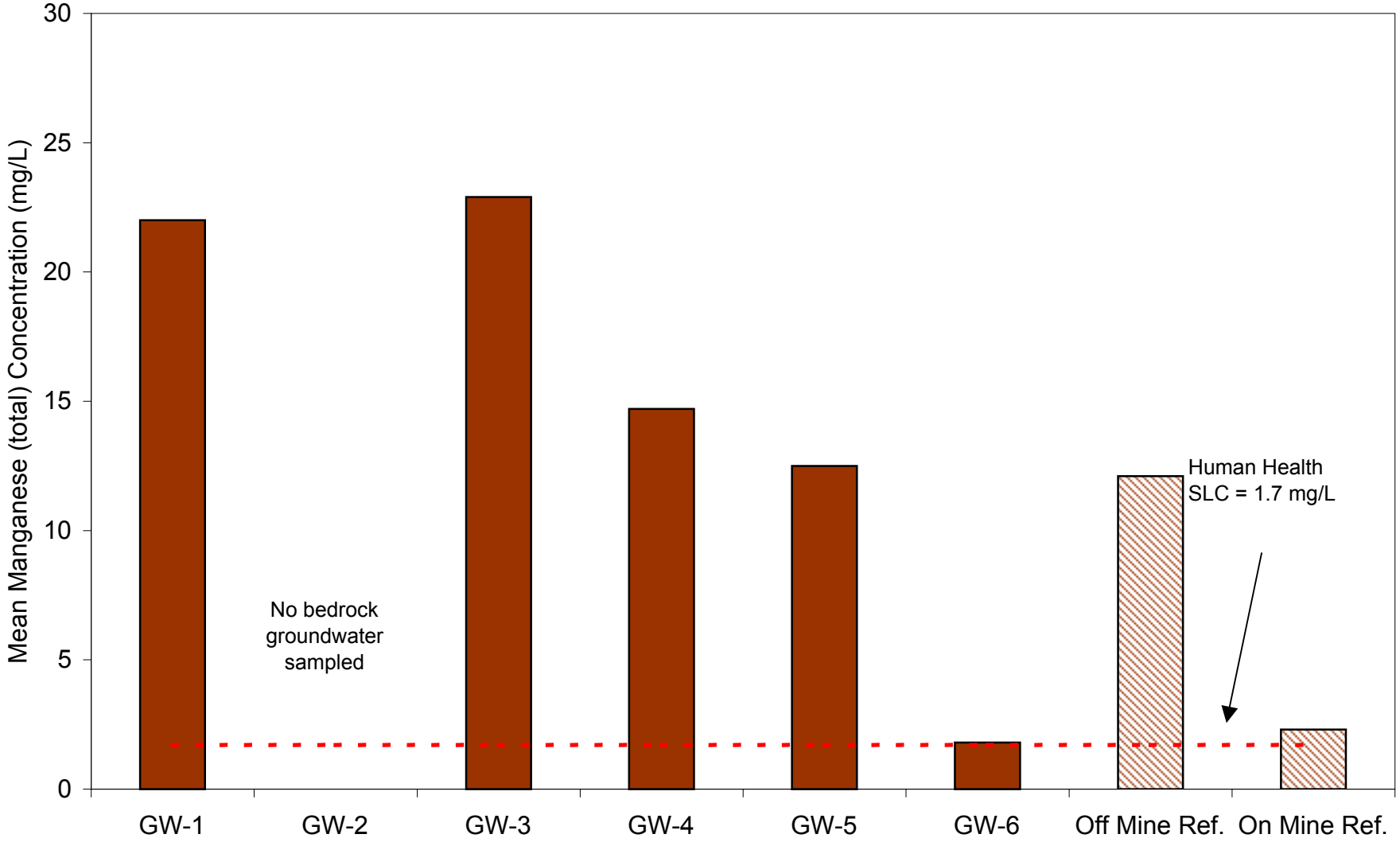
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-20
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Lead (total) Concentrations



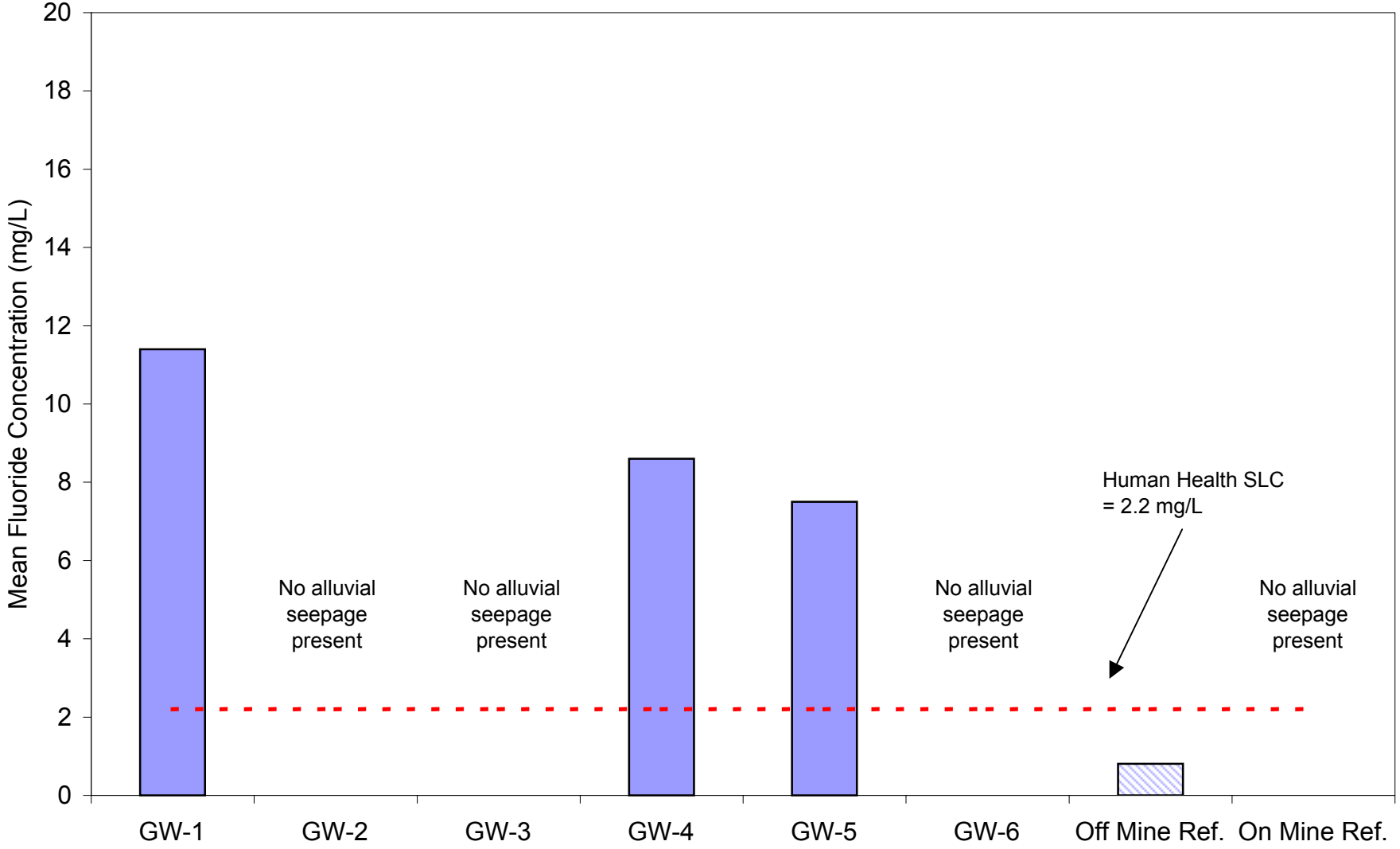
Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 6-21
Mine Site and Reference Bedrock Groundwater
Comparison of Mean Manganese (total) Concentrations



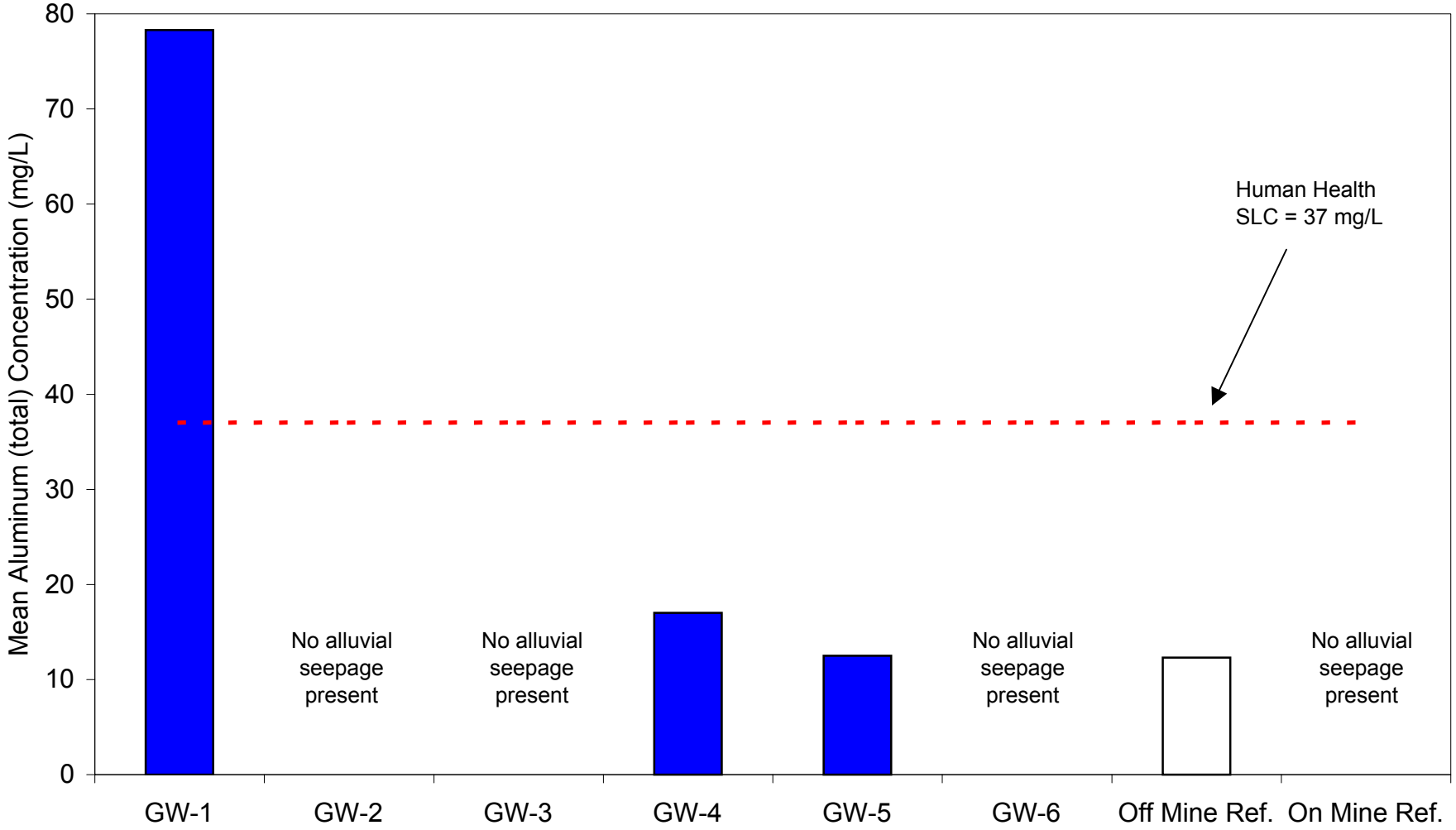
R:\Projects\22236242_Prelim_Site_Charact\Task_01\6.0_Proj_Deliv\Section 06 Groundwater\Figure\Rev0Comparison to HH SLC graphs 32105.xls

Figure 6-22
Mine Site and Reference Alluvial Seepage
Comparison of Mean Fluoride Concentrations



R:\Projects\22236242_Prelim_Site_Charact\Task_01\6.0_Proj_Deliv\Section 06 Groundwater\Figure\Rev0Comparison to HH SLC graphs 32105.xls

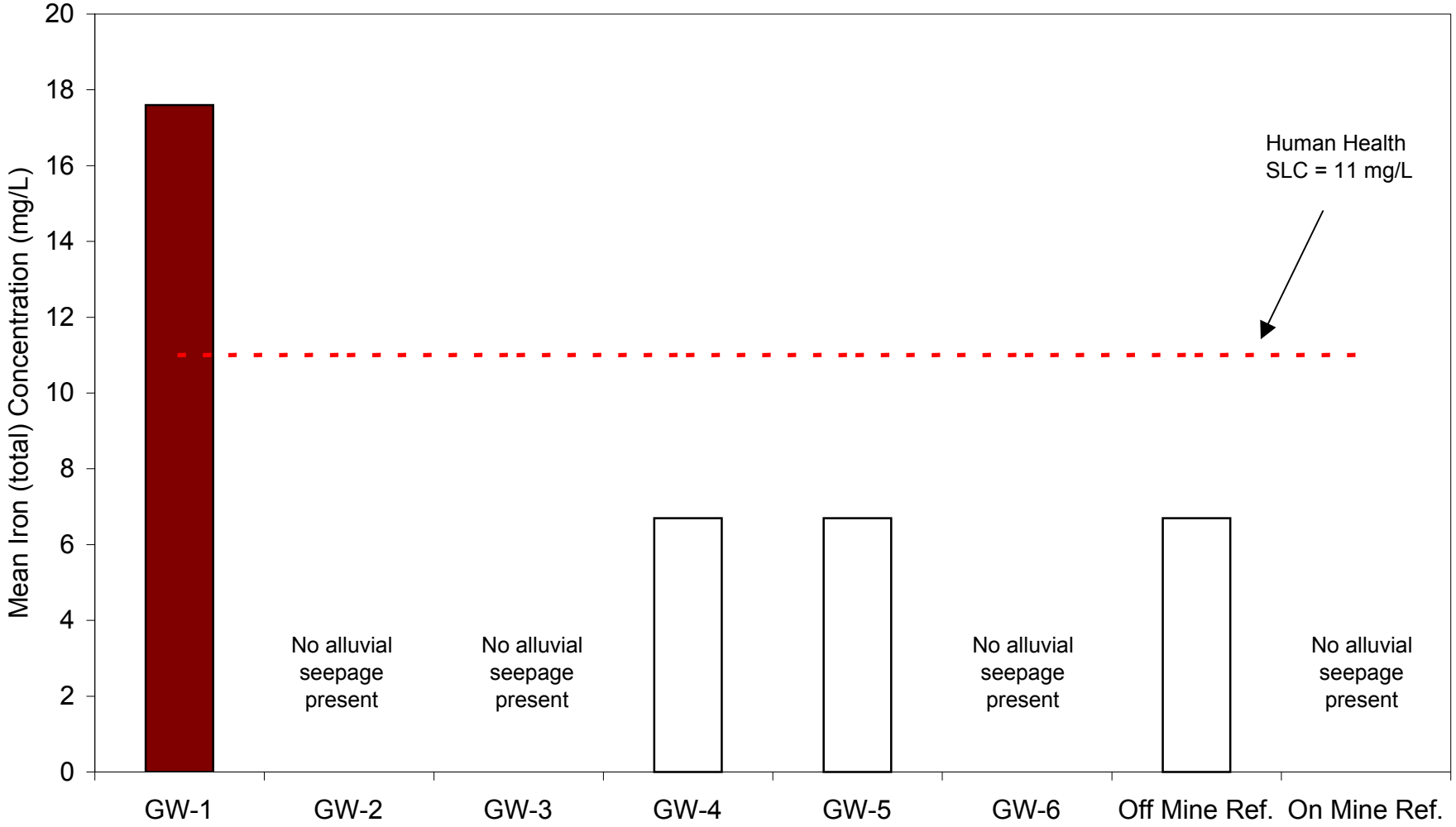
Figure 6-23
Mine Site and Reference Alluvial Seepage
Comparison of Mean Aluminum (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

R:\Projects\22236242_Prelim_Site_Charact\Task_01\6.0_Proj_Deliv\Section 06 Groundwater\Figure\Rev0Comparison to HH SLC graphs 32105.xls

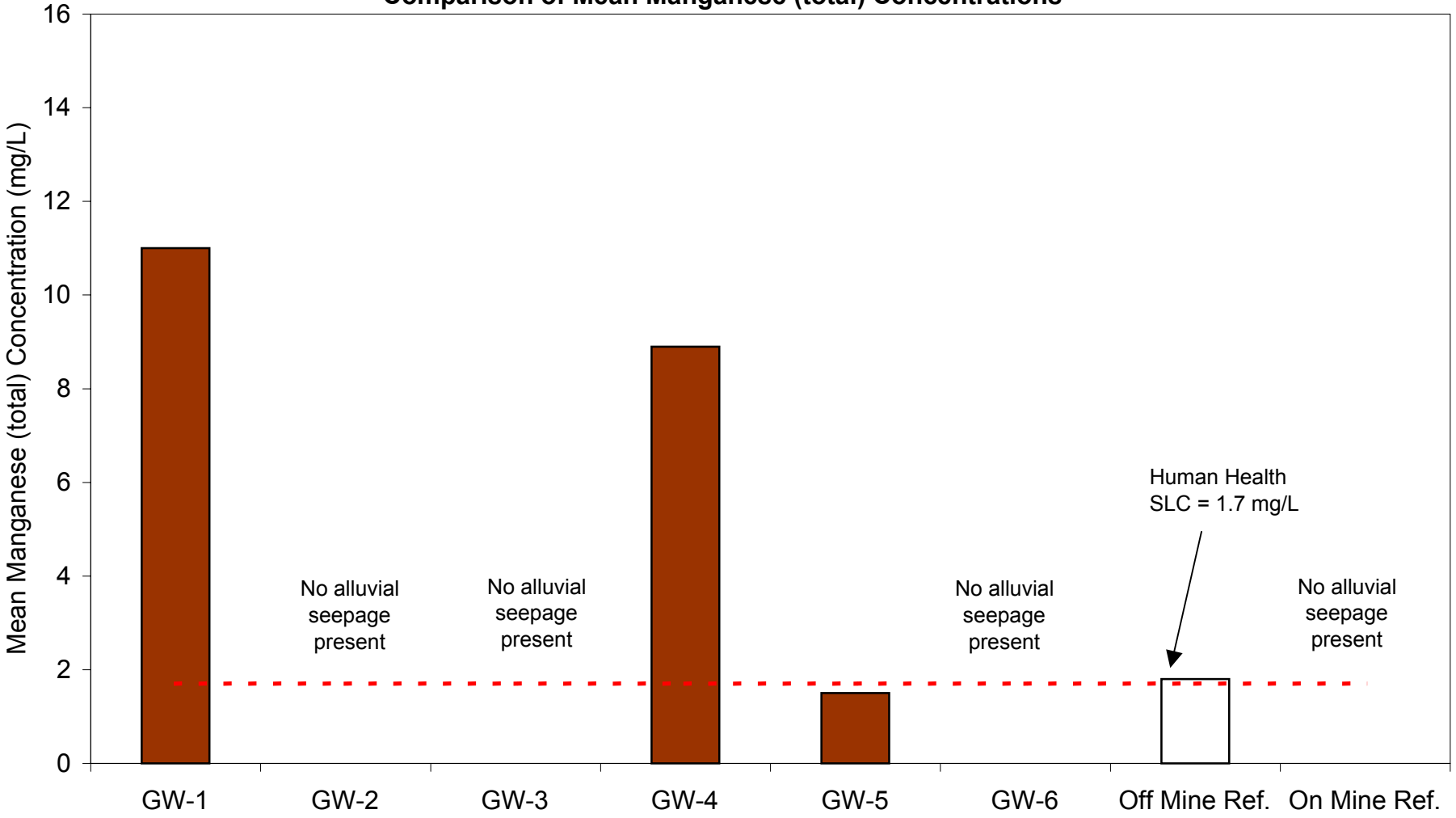
Figure 6-24
Mine Site and Reference Alluvial Seepage
Comparison of Mean Iron (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

R:\Projects\22236242_Prelim_Site_Charact\Task_01\6.0_Proj_Deliv\Section 06 Groundwater\Figure\Rev0Comparison to HH SLC graphs 32105.xls

Figure 6-25
Mine Site and Reference Alluvial Seepage
Comparison of Mean Manganese (total) Concentrations



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

APPENDIX A-6

GROUNDWATER

VALIDATED ANALYTICAL RESULTS

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine Canyon Well	Columbine Canyon Well	Columbine Canyon Well	Columbine Canyon Well	Columbine Canyon Well	Columbine Canyon Well
			Sample Date	12/12/2003	12/12/2003	12/17/2003	1/13/2004	1/13/2004	1/13/2004
			Sample ID	COLUMBINECANYON-T01N-GRW	COLUMBINECANYON-D01N-GRW	COLUMBINE1-T01N-GRW	ColumbineCanyonWell-T01N-GRW	COLUMBINECANYON-T01N-GRW	COLUMBINECANYON-D01N-GRW
				GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	-	9.12 :	10.46 :	-	-
Eh	millivolts	T		-	-	295.4 :	283.9 :	-	-
pH	SU	T		6.6 J	-	3.62 :	6.57 :	7.3 J	-
Specific Conductance	uS/cm	T		-	-	176. :	179. :	-	-
Temperature	Celsius	T		-	-	8.05 :	6.9 :	-	-
Turbidity	NTU	T		-	-	0.1 :	0.1 :	-	-
General Chemistry									
Ammonia	mg/L	T		0.044 :	-	-	-	<0.05 J	-
Bicarbonate (as CaCO3)	mg/L	T		77.5 :	-	-	-	77. J	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		0.93 :	-	-	-	<0.61 :	-
Fluoride	mg/L	T		<5. :	-	-	-	0.31 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		0.2 :	-	-	-	<0.4 J	-
Nitrite	mg/L	T		<0.005 :	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Phosphorus	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Sulfate	mg/L	T		13.1 :	-	-	-	11.7 :	-
Total Alkalinity	mg/L	T		77.5 :	-	-	-	77. J	-
Total Dissolved Solids	mg/L	T		88. :	-	-	-	130. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	-	-	<1. :	-
Total Suspended Solids	mg/L	T		1.1 :	-	-	-	<0.7 :	-
Laboratory Parameters									
pH	SU	T		6.6 J	-	3.62 :	6.57 :	7.3 J	-
Specific Conductance	umhos/cm	T		138. J	-	-	-	164. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		86.6 :	-	-	-	86.6 :	-
Hardness	mg/L	D		-	81.3 :	-	-	-	78.7 :
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine Canyon Well 12/12/2003 COLUMBINECANYON-T01N-GRW GW4		Columbine Canyon Well 12/12/2003 COLUMBINECANYON-D01N-GRW GW4		Columbine Canyon Well 12/17/2003 COLUMBINE1-T01N-GRW GW4		Columbine Canyon Well 1/13/2004 ColumbineCanyonWell-T01N-GRW GW4		Columbine Canyon Well 1/13/2004 COLUMBINECANYON-T01N-GRW GW4		Columbine Canyon Well 1/13/2004 COLUMBINECANYON-D01N-GRW GW4	
Aluminum	mg/L	T	<0.217	:	-		-		-		<0.621	:	-	
Aluminum	mg/L	D	-		<0.217	:	-		-		-		<0.621	:
Antimony	mg/L	T	<0.0024	:	-		-		-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		-		-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		-		-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		-		-		<0.0004	:
Barium	mg/L	T	0.0456	:	-		-		-		0.0419	:	-	
Barium	mg/L	D	-		0.0438	:	-		-		-		0.043	:
Beryllium	mg/L	T	<0.0004	:	-		-		-		<0.001	:	-	
Beryllium	mg/L	D	-		<0.0004	:	-		-		-		<0.001	:
Boron	mg/L	T	<0.0063	:	-		-		-		<0.0117	:	-	
Boron	mg/L	D	-		<0.0063	:	-		-		-		<0.0117	:
Cadmium	mg/L	T	<0.0005	:	-		-		-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0005	:	-		-		-		<0.0007	J
Calcium	mg/L	T	29.2	:	-		-		-		29.6	:	-	
Calcium	mg/L	D	-		27.7	:	-		-		-		27.3	:
Chromium	mg/L	T	<0.0011	:	-		-		-		<0.0057	:	-	
Chromium	mg/L	D	-		0.0012	:	-		-		-		<0.0057	:
Cobalt	mg/L	T	<0.0029	:	-		-		-		<0.0037	:	-	
Cobalt	mg/L	D	-		0.003	:	-		-		-		<0.0037	:
Copper	mg/L	T	0.011	:	-		-		-		<0.0035	J	-	
Copper	mg/L	D	-		0.0037	:	-		-		-		<0.0035	J
Iron	mg/L	T	<0.455	:	-		-		-		<0.423	:	-	
Iron	mg/L	D	-		<0.455	:	-		-		-		<0.423	:
Lead	mg/L	T	0.0021	:	-		-		-		<0.0002	:	-	
Lead	mg/L	D	-		0.0017	:	-		-		-		<0.0002	:
Magnesium	mg/L	T	3.33	:	-		-		-		<4.85	:	-	
Magnesium	mg/L	D	-		2.98	:	-		-		-		<4.85	:
Manganese	mg/L	T	0.0356	:	-		-		-		<0.019	:	-	
Manganese	mg/L	D	-		<0.016	:	-		-		-		<0.019	:
Mercury	mg/L	T	<0.0001	:	-		-		-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		<0.0001	J
Molybdenum	mg/L	T	<0.0034	:	-		-		-		0.0032	:	-	
Molybdenum	mg/L	D	-		<0.0032	:	-		-		-		0.0041	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine Canyon Well 12/12/2003 COLUMBINECANYON-T01N-GRW GW4	Columbine Canyon Well 12/12/2003 COLUMBINECANYON-D01N-GRW GW4	Columbine Canyon Well 12/17/2003 COLUMBINE1-T01N-GRW GW4	Columbine Canyon Well 1/13/2004 ColumbineCanyonWell-T01N-GRW GW4	Columbine Canyon Well 1/13/2004 COLUMBINECANYON-T01N-GRW GW4	Columbine Canyon Well 1/13/2004 COLUMBINECANYON-D01N-GRW GW4
Nickel	mg/L	T	0.0025 J	-	-	-	<0.0168 :	-
Nickel	mg/L	D	-	<0.0024 :	-	-	-	<0.0168 :
Potassium	mg/L	T	<1.23 :	-	-	-	0.991 :	-
Potassium	mg/L	D	-	<1.17 :	-	-	-	0.912 :
Selenium	mg/L	T	<0.0006 :	-	-	-	<0.0006 J	-
Selenium	mg/L	D	-	<0.0006 :	-	-	-	<0.0006 J
Silver	mg/L	T	<0.0002 :	-	-	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Sodium	mg/L	T	<9.91 :	-	-	-	<9.2 :	-
Sodium	mg/L	D	-	<9.91 :	-	-	-	<9.2 :
Thallium	mg/L	T	<0.0002 :	-	-	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Vanadium	mg/L	T	<0.0004 :	-	-	-	<0.0004 :	-
Vanadium	mg/L	D	-	<0.0004 :	-	-	-	<0.0004 :
Zinc	mg/L	T	0.0268 :	-	-	-	<0.091 :	-
Zinc	mg/L	D	-	<0.019 :	-	-	-	<0.091 :
Isotopes								
Lead	mg/L	T	0.0021 :	-	-	-	<0.0002 :	-
Lead	mg/L	D	-	0.0017 :	-	-	-	<0.0002 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine Canyon Well	Columbine Canyon Well	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1
			Sample Date	4/22/2004	4/22/2004	11/1/2002	11/1/2002	5/8/2003	5/8/2003
			Sample ID	COLUMBINECANYON-T01N-GRW GW4	COLUMBINECANYON-D01N-GRW GW4	COLUMBINECGWELL-T01N-GRW GW4	COLUMBINECGWELL-D01N-GRW GW4	COLUMBINECGWELL#1-T01N-GRW GW4	COLUMBINECGWELL#1-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		9.93 :	-	8.49 :	-	8.25 :	-
Eh	millivolts	T		174.9 :	-	79. :	-	180.1 :	-
pH	SU	T		7.9 J	-	7.12 :	-	7.1 J	-
Specific Conductance	uS/cm	T		183. :	-	190. :	-	168. :	-
Temperature	Celsius	T		8.71 :	-	6.41 :	-	7.26 :	-
Turbidity	NTU	T		-	-	18.9 :	-	3.7 :	-
General Chemistry									
Ammonia	mg/L	T		<0.067 :	-	<0.12 :	-	<0.053 :	-
Bicarbonate (as CaCO3)	mg/L	T		77.8 :	-	81.8 :	-	78.7 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<0.82 :	-	0.65 :	-	<0.63 :	-
Fluoride	mg/L	T		0.46 :	-	0.49 :	-	<1. :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.36 J	-	<0.4 J	-	<0.4 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Phosphorus	mg/L	T		<0.01 :	-	<0.01 :	-	<0.1 :	-
Sulfate	mg/L	T		20.6 :	-	12.8 :	-	19.7 :	-
Total Alkalinity	mg/L	T		77.8 :	-	81.8 :	-	78.7 :	-
Total Dissolved Solids	mg/L	T		152. :	-	102. :	-	<80. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.5 J	-	<1. :	-	<1. :	-
Total Suspended Solids	mg/L	T		<0.8 J	-	7.9 :	-	3.7 :	-
Laboratory Parameters									
pH	SU	T		7.9 J	-	7.12 :	-	7.1 J	-
Specific Conductance	umhos/cm	T		156. J	-	-	-	159. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		91.5 :	-	87.1 :	-	80.3 :	-
Hardness	mg/L	D		-	89. :	-	90.1 :	-	78.3 :
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine Canyon Well 4/22/2004 COLUMBINECANYON-T01N-GRW GW4		Columbine Canyon Well 4/22/2004 COLUMBINECANYON-D01N-GRW GW4		Columbine CG Well 1 11/1/2002 COLUMBINECGWELL-T01N-GRW GW4		Columbine CG Well 1 11/1/2002 COLUMBINECGWELL-D01N-GRW GW4		Columbine CG Well 1 5/8/2003 COLUMBINECGWELL#1-T01N-GRW GW4		Columbine CG Well 1 5/8/2003 COLUMBINECGWELL#1-D01N-GRW GW4	
Aluminum	mg/L	T	<0.201	:	-		<0.006	:	-		<0.426	:	-	
Aluminum	mg/L	D	-		<0.176	:	-		<0.006	:	-		<0.426	:
Antimony	mg/L	T	<0.0011	:	-		<0.0004	:	-		<0.00075	:	-	
Antimony	mg/L	D	-		<0.0012	:	-		<0.0004	:	-		<0.0006	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0394	:	-		0.0456	:	-		0.042	:	-	
Barium	mg/L	D	-		0.0395	:	-		0.0474	:	-		0.0403	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0002	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		<0.0003	:
Boron	mg/L	T	<0.0036	:	-		<0.0048	:	-		<0.0084	:	-	
Boron	mg/L	D	-		<0.0036	:	-		<0.0048	:	-		<0.0084	:
Cadmium	mg/L	T	<0.0003	:	-		0.00022	J	-		<0.00058	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		<0.0005	:
Calcium	mg/L	T	30.3	:	-		29.8	:	-		27.6	:	-	
Calcium	mg/L	D	-		29.4	:	-		30.9	:	-		26.9	:
Chromium	mg/L	T	<0.0006	:	-		<0.0046	:	-		<0.001	:	-	
Chromium	mg/L	D	-		<0.0006	:	-		<0.0046	:	-		<0.001	:
Chromium, Hexavalent	mg/L	D	-		-		0.0053	J	-		-		-	
Cobalt	mg/L	T	<0.0016	:	-		<0.0022	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0022	:	-		<0.0038	:
Copper	mg/L	T	0.0307	:	-		0.007	:	-		0.0083	:	-	
Copper	mg/L	D	-		0.0032	:	-		0.0074	:	-		0.0035	:
Iron	mg/L	T	<0.293	J	-		0.0479	:	-		0.558	J	-	
Iron	mg/L	D	-		<0.192	:	-		<0.0226	:	-		<0.422	J
Lead	mg/L	T	0.0282	:	-		0.0028	:	-		0.015	:	-	
Lead	mg/L	D	-		<0.0018	:	-		0.0018	:	-		<0.0002	J
Magnesium	mg/L	T	3.84	:	-		3.06	:	-		<3.52	:	-	
Magnesium	mg/L	D	-		3.77	:	-		3.16	:	-		<3.52	:
Manganese	mg/L	T	0.0932	:	-		<0.0025	:	-		<0.013	J	-	
Manganese	mg/L	D	-		0.0856	:	-		<0.0025	:	-		<0.013	J
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0025	:	-		0.0033	:	-		<0.0023	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine Canyon Well 4/22/2004 COLUMBINECANYON-T01N-GRW GW4		Columbine Canyon Well 4/22/2004 COLUMBINECANYON-D01N-GRW GW4		Columbine CG Well 1 11/1/2002 COLUMBINECGWELL-T01N-GRW GW4		Columbine CG Well 1 11/1/2002 COLUMBINECGWELL-D01N-GRW GW4		Columbine CG Well 1 5/8/2003 COLUMBINECGWELL#1-T01N-GRW GW4		Columbine CG Well 1 5/8/2003 COLUMBINECGWELL#1-D01N-GRW GW4	
Molybdenum	mg/L	D	-		0.002	:	-		0.0033	:	-		<0.0023	:
Nickel	mg/L	T	0.0106	:	-		<0.0004	J	-		<0.003	:	-	
Nickel	mg/L	D	-		0.0036	J	-		<0.0004	J	-		<0.003	:
Potassium	mg/L	T	0.835	:	-		0.975	:	-		0.916	:	-	
Potassium	mg/L	D	-		0.825	:	-		0.975	:	-		0.891	:
Selenium	mg/L	T	<0.0014	:	-		<0.0004	:	-		<0.001	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		0.00042	:	-		<0.001	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<7.04	:	-		2.44	:	-		<9.16	:	-	
Sodium	mg/L	D	-		<3.72	J	-		2.46	:	-		<9.16	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		<0.0002	:	-		0.00034	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.00024	:	-		<0.0002	:
Zinc	mg/L	T	0.0517	:	-		0.469	:	-		0.871	:	-	
Zinc	mg/L	D	-		0.0507	:	-		0.524	:	-		0.646	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		<0.00025	:	-		-		-	
2,6-Pyridinediamine,	mg/L	T	-		-		<0.00025	J	-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		<0.00025	:	-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		<0.00025	:	-		-		-	
Pentaerythritol tetranitrate	mg/L	T	-		-		<0.01	:	-		-		-	
Isotopes														
Lead	mg/L	T	0.0282	:	-		0.0028	:	-		0.015	:	-	
Lead	mg/L	D	-		<0.0018	:	-		0.0018	:	-		<0.0002	J

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine No. 1
			Sample Date	6/3/2003	6/3/2003	7/16/2003	7/16/2003	2/24/2004	11/8/2002
			Sample ID	COLCG1-T01N-GRW	COLCG1-D01N-GRW	COLUMBINECGWELL-T01N-GRW	COLUMBINECGWELL-D01N-GRW	COLUMBINECREEK-T01N-GRW	COLUMBINEWELLNO1-T01N-GRWRE
				GW4	GW4	GW4	GW4	GW4	GW5
Field Measurements									
DO	mg/L	T		10.46 :	-	4.2 :	-	-	-
Eh	millivolts	T		382.2 :	-	279.4 :	-	-	-
pH	SU	T		7.3 J	-	7.6 J	-	-	-
Specific Conductance	uS/cm	T		169. :	-	150. :	-	-	-
Temperature	Celsius	T		10.84 :	-	16.71 :	-	-	-
Turbidity	NTU	T		0. :	-	28.5 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.071 J	-	<0.11 J	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		75. :	-	73.4 :	-	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Chloride	mg/L	T		<9.1 :	-	<0.82 :	-	-	-
Fluoride	mg/L	T		0.33 :	-	0.34 :	-	-	17.2 J
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Nitrate	mg/L	T		<0.4 :	-	<1. J	-	-	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T		0.025 :	-	<0.01 J	-	-	-
Phosphorus	mg/L	T		-	-	<0.01 :	-	-	-
Sulfate	mg/L	T		13.3 J	-	<10.3 J	-	-	786. J
Total Alkalinity	mg/L	T		75. :	-	73.4 :	-	-	-
Total Dissolved Solids	mg/L	T		<88. :	-	<78. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		<1. :	-	<1.2 J	-	-	-
Total Suspended Solids	mg/L	T		<0.5 :	-	<0.6 :	-	-	-
Laboratory Parameters									
pH	SU	T		7.3 J	-	7.6 J	-	-	-
Specific Conductance	umhos/cm	T		154. J	-	129. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	-	-
Physical Properties									
Hardness	mg/L	T		74.1 :	-	74.1 :	-	-	-
Hardness	mg/L	D		-	74.7 :	-	72.9 :	-	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine CG Well 1 6/3/2003 COLCG1-T01N-GRW GW4	Columbine CG Well 1 6/3/2003 COLCG1-D01N-GRW GW4	Columbine CG Well 1 7/16/2003 COLUMBINECGWELL-T01N-GRW GW4	Columbine CG Well 1 7/16/2003 COLUMBINECGWELL-D01N-GRW GW4	Columbine CG Well 1 2/24/2004 COLUMBINECREEK-T01N-GRW GW4	Columbine No. 1 11/8/2002 COLUMBINEWELLNO1-T01N-GRWRE GW5
Aluminum	mg/L	T	<0.426 :	-	<0.631 :	-	-	-
Aluminum	mg/L	D	-	<0.426 :	-	<0.631 :	-	-
Antimony	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Antimony	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Arsenic	mg/L	T	<0.0004 :	-	<0.0004 :	-	-	-
Arsenic	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-
Barium	mg/L	T	0.0398 :	-	0.0376 :	-	-	-
Barium	mg/L	D	-	0.0395 :	-	0.0368 :	-	-
Beryllium	mg/L	T	<0.0003 :	-	<0.0002 :	-	-	-
Beryllium	mg/L	D	-	<0.0003 :	-	<0.0002 :	-	-
Boron	mg/L	T	<0.0084 :	-	<0.0046 :	-	-	-
Boron	mg/L	D	-	<0.0084 :	-	<0.0046 :	-	-
Cadmium	mg/L	T	<0.00091 :	-	0.00089 :	-	-	-
Cadmium	mg/L	D	-	<0.00065 :	-	0.00079 :	-	-
Calcium	mg/L	T	25.4 :	-	25.2 :	-	-	-
Calcium	mg/L	D	-	25.5 :	-	24.8 :	-	-
Chromium	mg/L	T	<0.0011 :	-	<0.0007 :	-	-	-
Chromium	mg/L	D	-	<0.001 :	-	<0.0006 :	-	-
Cobalt	mg/L	T	<0.0038 :	-	<0.0018 :	-	-	-
Cobalt	mg/L	D	-	<0.0038 :	-	<0.0018 :	-	-
Copper	mg/L	T	0.0025 :	-	<0.0019 :	-	-	-
Copper	mg/L	D	-	0.0018 :	-	0.0019 :	-	-
Iron	mg/L	T	<0.422 :	-	<0.667 :	-	-	-
Iron	mg/L	D	-	<0.422 :	-	<0.667 :	-	-
Lead	mg/L	T	0.0018 :	-	0.0064 :	-	-	-
Lead	mg/L	D	-	0.0012 :	-	0.0048 :	-	-
Magnesium	mg/L	T	<3.52 :	-	<2.93 :	-	-	-
Magnesium	mg/L	D	-	<3.52 :	-	<2.93 :	-	-
Manganese	mg/L	T	<0.013 :	-	<0.019 :	-	-	-
Manganese	mg/L	D	-	<0.013 :	-	<0.019 :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.00018 :	-	-	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.00017 :	-	-
Molybdenum	mg/L	T	0.0029 :	-	0.003 :	-	-	-
Molybdenum	mg/L	D	-	<0.0023 :	-	0.002 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine CG Well 1	Columbine No. 1
			Sample Date	6/3/2003	6/3/2003	7/16/2003	7/16/2003	2/24/2004	11/8/2002
			Sample ID	COLCG1-T01N-GRW	COLCG1-D01N-GRW	COLUMBINECGWELL-T01N-GRW	COLUMBINECGWELL-D01N-GRW	COLUMBINECREEK-T01N-GRW	COLUMBINEWELLNO1-T01N-GRWRE
				GW4	GW4	GW4	GW4	GW4	GW5
Nickel	mg/L	T		<0.003 :	-	<0.002 :	-	-	-
Nickel	mg/L	D		-	<0.003 :	-	<0.002 :	-	-
Potassium	mg/L	T		0.904 :	-	<1.16 :	-	-	-
Potassium	mg/L	D		-	0.899 :	-	<1.15 :	-	-
Selenium	mg/L	T		<0.0016 :	-	<0.0016 :	-	-	-
Selenium	mg/L	D		-	<0.0016 :	-	<0.0016 J	-	-
Silver	mg/L	T		<0.0002 :	-	<0.0002 J	-	-	-
Silver	mg/L	D		-	<0.0002 :	-	<0.0002 J	-	-
Sodium	mg/L	T		<9.16 :	-	<5.32 :	-	-	-
Sodium	mg/L	D		-	<9.16 :	-	<5.32 :	-	-
Thallium	mg/L	T		<0.0002 :	-	<0.0002 :	-	-	-
Thallium	mg/L	D		-	<0.0002 :	-	<0.0002 :	-	-
Vanadium	mg/L	T		<0.0004 :	-	<0.0004 :	-	-	-
Vanadium	mg/L	D		-	<0.0004 :	-	<0.0004 :	-	-
Zinc	mg/L	T		0.292 :	-	1.55 :	-	-	-
Zinc	mg/L	D		-	0.299 :	-	1.52 :	-	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		<0.00025 :	-	-	-	-	-
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T		<0.00025 :	-	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		<0.00025 :	-	-	-	-	-
Pentaerythritol tetranitrate	mg/L	T		<0.01 :	-	-	-	-	-
Isotopes									
Delta D	per mil	T		-	-	-	-	-97.5 :	-
Delta O-18	per mil	T		-	-	-	-	-13.8 :	-
Lead	mg/L	T		0.0018 :	-	0.0064 :	-	-	-
Lead	mg/L	D		-	0.0012 :	-	0.0048 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	Columbine No. 1		Columbine No. 1		Columbine No. 1		Columbine No. 1		Columbine No. 1		Columbine No. 1	
Sample Date			11/8/2002		11/8/2002		11/8/2002		1/20/2003		1/20/2003		4/10/2003	
Sample ID			ColumbineWellNo1-T01N-GRW		COLUMBINEWELLNO1-D01N-GRWRE		ColumbineWellNo1-D01N-GRW		COLUMBINE1-T01N-GRW		COLUMBINE1-D01N-GRW		COLUMBINENO1-T01N-GRW	
Exposure Area			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	6.23	:	-		-		9.93	:	-		5.37	:
Eh	millivolts	T	121.2	:	-		-		432.3	:	-		312.6	:
pH	SU	T	5.17	:	-		-		5.07	:	-		5.2	J
Specific Conductance	uS/cm	T	1633.	:	-		-		1323.	:	-		1806.	:
Temperature	Celsius	T	9.14	:	-		-		4.45	:	-		11.02	:
Turbidity	NTU	T	4.1	:	-		-		0.	:	-		1.7	:
General Chemistry														
Ammonia	mg/L	T	<0.13	:	-		-		<0.13	:	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	4.5	:	-		-		<5.5	:	-		<5.4	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Chloride	mg/L	T	16.1	:	-		-		12.8	:	-		16.7	J
Fluoride	mg/L	T	-		-		-		12.2	:	-		21.5	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Nitrate	mg/L	T	3.2	:	-		-		2.2	J	-		2.8	J
Nitrite	mg/L	T	<0.005	:	-		-		<0.005	:	-		0.052	:
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.016	:
Phosphorus	mg/L	T	<0.01	:	-		-		0.01	:	-		<0.01	:
Sulfate	mg/L	T	-		-		-		804.	J	-		978.	J
Total Alkalinity	mg/L	T	<4.5	:	-		-		<5.5	:	-		<5.4	:
Total Dissolved Solids	mg/L	T	1440.	:	-		-		1120.	:	-		1740.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		<0.24	J
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	J
Total Suspended Solids	mg/L	T	<0.7	:	-		-		<1.6	:	-		<2.	:
Laboratory Parameters														
pH	SU	T	5.17	:	-		-		5.07	:	-		5.2	J
Specific Conductance	umhos/cm	T	-		-		-		-		-		1630.	J
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		-		-		724.	:	-		971.	:
Hardness	mg/L	D	-		956.	:	-		-		708.	:	-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1
		Sample Date	11/8/2002	11/8/2002	11/8/2002	1/20/2003	1/20/2003	4/10/2003
		Sample ID	ColumbineWellNo1-T01N-GRW	COLUMBINEWELLNO1-D01N-GRWRE	ColumbineWellNo1-D01N-GRW	COLUMBINE1-T01N-GRW	COLUMBINE1-D01N-GRW	COLUMBINENO1-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T	-	-	-	13.4	-	20.6
Aluminum	mg/L	D	-	16.2	-	-	13.5	-
Antimony	mg/L	T	-	-	-	<0.028	-	<0.072
Antimony	mg/L	D	-	<0.028	-	-	<0.028	-
Arsenic	mg/L	T	-	-	-	<0.023	-	<0.04
Arsenic	mg/L	D	-	<0.023	-	-	<0.023	-
Barium	mg/L	T	-	-	-	<0.048	-	<0.123
Barium	mg/L	D	-	<0.048	-	-	<0.048	-
Beryllium	mg/L	T	-	-	-	0.0123	-	0.0242
Beryllium	mg/L	D	-	0.0142	-	-	0.0121	-
Boron	mg/L	T	-	-	-	<0.027	-	<0.084
Boron	mg/L	D	-	<0.027	-	-	<0.027	-
Cadmium	mg/L	T	-	-	-	<0.08	-	0.0477
Cadmium	mg/L	D	-	<0.08	-	-	<0.08	-
Calcium	mg/L	T	-	-	-	172.	-	226.
Calcium	mg/L	D	-	229.	-	-	168.	-
Chromium	mg/L	T	-	-	-	<0.16	-	<0.01
Chromium	mg/L	D	-	<0.16 J	-	-	<0.16	-
Cobalt	mg/L	T	-	-	-	<0.23	-	<0.038
Cobalt	mg/L	D	-	<0.23	-	-	<0.23	-
Copper	mg/L	T	-	-	-	0.244	-	0.285
Copper	mg/L	D	-	<0.254	-	-	0.25	-
Iron	mg/L	T	-	-	-	<2.66	-	<0.8
Iron	mg/L	D	-	<2.66	-	-	<2.66	-
Lead	mg/L	T	-	-	-	0.0018	-	<0.001 J
Lead	mg/L	D	-	<0.001	-	-	0.0014	-
Magnesium	mg/L	T	-	-	-	71.8	-	98.5
Magnesium	mg/L	D	-	93.2	-	-	70.5	-
Manganese	mg/L	T	-	-	-	6.91	-	10.6
Manganese	mg/L	D	-	8.03	-	-	6.8	-
Mercury	mg/L	T	<0.0001	-	-	<0.0001	-	<0.0001
Mercury	mg/L	D	-	-	<0.0001	-	<0.0001	-
Molybdenum	mg/L	T	-	-	-	<0.011	-	<0.023
Molybdenum	mg/L	D	-	<0.011	-	-	<0.011	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 11/8/2002 ColumbineWellNo1-T01N-GRW GW5	Columbine No. 1 11/8/2002 COLUMBINEWELLNO1-D01N-GRWRE GW5	Columbine No. 1 11/8/2002 ColumbineWellNo1-D01N-GRW GW5	Columbine No. 1 1/20/2003 COLUMBINE1-T01N-GRW GW5	Columbine No. 1 1/20/2003 COLUMBINE1-D01N-GRW GW5	Columbine No. 1 4/10/2003 COLUMBINENO1-T01N-GRW GW5
Nickel	mg/L	T	-	-	-	0.647 :	-	0.974 :
Nickel	mg/L	D	-	0.732 :	-	-	0.719 :	-
Potassium	mg/L	T	-	-	-	<31.4 :	-	3.28 :
Potassium	mg/L	D	-	<31.4 J	-	-	<31.4 :	-
Selenium	mg/L	T	-	-	-	<0.008 :	-	0.0095 :
Selenium	mg/L	D	-	<0.008 :	-	-	<0.008 :	-
Silver	mg/L	T	-	-	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Sodium	mg/L	T	-	-	-	<36.6 :	-	18.1 :
Sodium	mg/L	D	-	<36.6 :	-	-	<36.6 :	-
Thallium	mg/L	T	-	-	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T	-	-	-	<0.002 :	-	<0.001 :
Vanadium	mg/L	D	-	<0.002 :	-	-	<0.002 :	-
Zinc	mg/L	T	-	-	-	4.98 :	-	6.29 :
Zinc	mg/L	D	-	5.86 :	-	-	4.81 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,1-Dichloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,1-Dichloroethene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2-Dichloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,2-Dichloropropane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Butanone	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Hexanone	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 J
4-Methyl-2-pentanone	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 11/8/2002 ColumbineWellNo1-T01N-GRW GW5	Columbine No. 1 11/8/2002 COLUMBINEWELLNO1-D01N-GRWRE GW5	Columbine No. 1 11/8/2002 ColumbineWellNo1-D01N-GRW GW5	Columbine No. 1 1/20/2003 COLUMBINE1-T01N-GRW GW5	Columbine No. 1 1/20/2003 COLUMBINE1-D01N-GRW GW5	Columbine No. 1 4/10/2003 COLUMBINENO1-T01N-GRW GW5
Acetone	mg/L	T	<0.01 J	-	-	<0.01 :	-	<0.01 :
Benzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	<0.025 :	-	-	<0.026 :	-	<0.026 :
2,4,6-Trichlorophenol	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 J
2,4-Dinitrophenol	mg/L	T	<0.025 :	-	-	<0.026 J	-	<0.026 J
2,4-Dinitrotoluene	mg/L	T	<0.01 :	-	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1	Columbine No. 1
			Sample Date	11/8/2002	11/8/2002	11/8/2002	1/20/2003	1/20/2003	4/10/2003
			Sample ID	ColumbineWellNo1-T01N-GRW	COLUMBINEWELLNO1-D01N-GRWRE	ColumbineWellNo1-D01N-GRW	COLUMBINE1-T01N-GRW	COLUMBINE1-D01N-GRW	COLUMBINENO1-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
2,6-Dinitrotoluene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Chloronaphthalene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Chlorophenol	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Methylnaphthalene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Methylphenol	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
2-Nitroaniline	mg/L	T		<0.025 :	-	-	<0.026 :	-	<0.026 :
2-Nitrophenol	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 J
3-Nitroaniline	mg/L	T		<0.025 :	-	-	<0.026 :	-	<0.026 J
4,6-Dinitro-2-methylphenol	mg/L	T		<0.025 :	-	-	<0.026 :	-	<0.026 J
4-Bromophenyl phenyl ether	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
4-Chloroaniline	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
4-Methylphenol	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
4-Nitroaniline	mg/L	T		<0.025 :	-	-	<0.026 :	-	<0.026 J
4-Nitrophenol	mg/L	T		<0.025 :	-	-	<0.026 J	-	<0.026 J
Acenaphthene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Acenaphthylene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Anthracene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Benzaldehyde	mg/L	T		<0.01 J	-	-	<0.01 J	-	<0.01 :
Benzo(a)anthracene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Benzo(a)pyrene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T		<0.01 :	-	-	0.0009 J	-	<0.01 :
Butyl benzyl phthalate	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Carbazole	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Chrysene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 J
Dibenzofuran	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 11/8/2002 ColumbineWellNo1-T01N-GRW GW5		Columbine No. 1 11/8/2002 COLUMBINEWELLNO1-D01N-GRWRE GW5		Columbine No. 1 11/8/2002 ColumbineWellNo1-D01N-GRW GW5		Columbine No. 1 1/20/2003 COLUMBINE1-T01N-GRW GW5		Columbine No. 1 1/20/2003 COLUMBINE1-D01N-GRW GW5		Columbine No. 1 4/10/2003 COLUMBINENO1-T01N-GRW GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Diethylphthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dimethylphthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	J
Fluoranthene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Fluorene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Isophorone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Naphthalene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Nitrobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Pentachlorophenol	mg/L	T	<0.025	:	-		-		<0.026	:	-		<0.026	J
Phenanthrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Phenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Pyrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	<0.00025	:	-		-		<0.00025	J	-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		-		-		0.0018	:	-		<0.001	J
Lead	mg/L	D	-		<0.001	:	-		-		0.0014	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 1	Columbine No. 1	Columbine No. 1
			4/10/2003	7/16/2003	7/16/2003
			COLUMBINENO1-D01N-GRW GW5	COLUMBINENO1WELL-T01N-GRW GW5	COLUMBINENO1-T01N-GRW GW5
Field Measurements					
DO	mg/L	T	-	1.36 :	-
Eh	millivolts	T	-	334.1 :	-
pH	SU	T	-	5.33 :	5.2 J
Specific Conductance	uS/cm	T	-	1589. :	-
Temperature	Celsius	T	-	27.95 :	-
Turbidity	NTU	T	-	43. :	-
General Chemistry					
Ammonia	mg/L	T	-	-	<0.093 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	<5.9 :
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :
Chloride	mg/L	T	-	-	15.2 :
Fluoride	mg/L	T	-	-	19.2 :
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :
Nitrate	mg/L	T	-	-	2.7 J
Nitrite	mg/L	T	-	-	0.019 :
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 :
Phosphorus	mg/L	T	-	-	<0.01 :
Sulfate	mg/L	T	-	-	931. J
Total Alkalinity	mg/L	T	-	-	<5.9 :
Total Dissolved Solids	mg/L	T	-	-	1530. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	<1. J
Total Suspended Solids	mg/L	T	-	-	2.8 :
Laboratory Parameters					
pH	SU	T	-	5.33 :	5.2 J
Specific Conductance	umhos/cm	T	-	-	1440. J
Inorganics					
Cyanide	mg/L	T	-	-	<0.01 J
Physical Properties					
Hardness	mg/L	T	-	-	988. :
Hardness	mg/L	D	969. :	-	-
Metals					

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 1	Columbine No. 1	Columbine No. 1
			7/16/2003	10/16/2003	10/16/2003
			COLUMBINENO1-D01N-GRW GW5	COLUMBINENO1-T01N-GRW GW5	COLUMBINENO1-D01N-GRW GW5
Field Measurements					
DO	mg/L	T	-	4.37 :	-
Eh	millivolts	T	-	170.4 :	-
pH	SU	T	-	5.2 J	-
Specific Conductance	uS/cm	T	-	1452. :	-
Temperature	Celsius	T	-	9.93 :	-
Turbidity	NTU	T	-	4.4 :	-
General Chemistry					
Ammonia	mg/L	T	-	<0.098 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	<5.8 :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-
Chloride	mg/L	T	-	13.9 :	-
Fluoride	mg/L	T	-	19.6 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-
Nitrate	mg/L	T	-	2.3 J	-
Nitrite	mg/L	T	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-
Phosphorus	mg/L	T	-	<0.01 :	-
Sulfate	mg/L	T	-	959. J	-
Total Alkalinity	mg/L	T	-	<5.8 :	-
Total Dissolved Solids	mg/L	T	-	1490. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. J	-
Total Suspended Solids	mg/L	T	-	<1.8 :	-
Laboratory Parameters					
pH	SU	T	-	5.2 J	-
Specific Conductance	umhos/cm	T	-	1300. J	-
Inorganics					
Cyanide	mg/L	T	-	<0.01 J	-
Physical Properties					
Hardness	mg/L	T	-	879. :	-
Hardness	mg/L	D	-	-	882. :
Metals					

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 4/10/2003 COLUMBINENO1-D01N-GRW GW5	Columbine No. 1 7/16/2003 COLUMBINENO1WELL-T01N-GRW GW5	Columbine No. 1 7/16/2003 COLUMBINENO1-T01N-GRW GW5	Columbine No. 1 7/16/2003 COLUMBINENO1-D01N-GRW GW5	Columbine No. 1 10/16/2003 COLUMBINENO1-T01N-GRW GW5	Columbine No. 1 10/16/2003 COLUMBINENO1-D01N-GRW GW5
Aluminum	mg/L	T	-	-	<20.1 :	-	16.2 :	-
Aluminum	mg/L	D	20.5 :	-	-	<20.1 :	-	16.9 :
Antimony	mg/L	T	-	-	<0.038 :	-	<0.082 :	-
Antimony	mg/L	D	<0.072 :	-	-	<0.038 :	-	<0.082 :
Arsenic	mg/L	T	-	-	<0.024 :	-	<0.035 :	-
Arsenic	mg/L	D	<0.04 :	-	-	<0.024 :	-	<0.035 :
Barium	mg/L	T	-	-	<0.073 :	-	<0.117 :	-
Barium	mg/L	D	<0.123 :	-	-	<0.073 :	-	<0.117 :
Beryllium	mg/L	T	-	-	0.0243 J	-	0.0229 J	-
Beryllium	mg/L	D	0.0245 :	-	-	<0.0195 J	-	0.0231 J
Boron	mg/L	T	-	-	<0.046 :	-	<0.064 :	-
Boron	mg/L	D	<0.084 :	-	-	<0.046 :	-	<0.064 :
Cadmium	mg/L	T	-	-	0.0535 :	-	<0.0967 :	-
Cadmium	mg/L	D	0.0465 :	-	-	0.0454 :	-	<0.0901 :
Calcium	mg/L	T	-	-	231. :	-	205. :	-
Calcium	mg/L	D	227. :	-	-	240. :	-	206. :
Chromium	mg/L	T	-	-	<0.06 :	-	<0.13 J	-
Chromium	mg/L	D	<0.01 :	-	-	<0.06 :	-	<0.13 J
Cobalt	mg/L	T	-	-	<0.18 :	-	<0.31 :	-
Cobalt	mg/L	D	<0.038 :	-	-	<0.18 :	-	<0.31 :
Copper	mg/L	T	-	-	0.28 :	-	<0.2 :	-
Copper	mg/L	D	0.285 :	-	-	0.265 :	-	<0.2 :
Iron	mg/L	T	-	-	<1.68 :	-	<4.55 :	-
Iron	mg/L	D	<0.601 :	-	-	<1.68 :	-	<4.55 :
Lead	mg/L	T	-	-	<0.001 :	-	<0.002 :	-
Lead	mg/L	D	<0.001 J	-	-	<0.001 :	-	<0.002 :
Magnesium	mg/L	T	-	-	100. :	-	89.1 :	-
Magnesium	mg/L	D	97.7 :	-	-	104. :	-	89.4 :
Manganese	mg/L	T	-	-	11. :	-	10.5 :	-
Manganese	mg/L	D	10.5 :	-	-	11.5 :	-	10.5 :
Mercury	mg/L	T	-	-	0.00018 :	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.016 :	-	<0.012 J	-
Molybdenum	mg/L	D	<0.023 :	-	-	<0.016 :	-	<0.012 J

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 4/10/2003 COLUMBINENO1-D01N-GRW GW5		Columbine No. 1 7/16/2003 COLUMBINENO1WELL-T01N-GRW GW5		Columbine No. 1 7/16/2003 COLUMBINENO1-T01N-GRW GW5		Columbine No. 1 7/16/2003 COLUMBINENO1-D01N-GRW GW5		Columbine No. 1 10/16/2003 COLUMBINENO1-T01N-GRW GW5		Columbine No. 1 10/16/2003 COLUMBINENO1-D01N-GRW GW5	
Nickel	mg/L	T	-		-		0.97	:	-		1.01	:	-	
Nickel	mg/L	D	0.964	:	-		-		0.946	:	-		1.12	:
Potassium	mg/L	T	-		-		<25.	:	-		<52.2	:	-	
Potassium	mg/L	D	<3.26	:	-		-		<25.	:	-		<52.2	:
Selenium	mg/L	T	-		-		0.0083	:	-		<0.0077	:	-	
Selenium	mg/L	D	0.009	:	-		-		<0.008	J	-		<0.0075	:
Silver	mg/L	T	-		-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	<0.001	:	-		-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	-		-		<21.9	:	-		<50.2	:	-	
Sodium	mg/L	D	17.	:	-		-		28.1	:	-		<50.2	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	-		-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	<0.001	:	-		-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	-		-		6.35	:	-		5.92	:	-	
Zinc	mg/L	D	6.27	:	-		-		6.55	:	-		5.48	:
Isotopes														
Lead	mg/L	T	-		-		<0.001	:	-		<0.002	:	-	
Lead	mg/L	D	<0.001	J	-		-		<0.001	:	-		<0.002	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 1	Columbine No. 1	Columbine No. 1
			1/11/2004	1/11/2004	1/11/2004
			COLUMBINENO1-T01N-GRW	COLUMBINENO1-D01N-GRW	COLUMBINE1-T01N-GRW
			GW5	GW5	GW5
Field Measurements					
DO	mg/L	T	-	-	8.41 :
Eh	millivolts	T	-	-	378. :
pH	SU	T	4.9 J	-	5.35 :
Specific Conductance	uS/cm	T	-	-	1098. :
Temperature	Celsius	T	-	-	7.94 :
Turbidity	NTU	T	-	-	0. :
General Chemistry					
Ammonia	mg/L	T	<0.13 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	<4.8 :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-
Chloride	mg/L	T	10.5 :	-	-
Fluoride	mg/L	T	13.7 :	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-
Nitrate	mg/L	T	<1.7 :	-	-
Nitrite	mg/L	T	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-
Phosphorus	mg/L	T	<0.01 :	-	-
Sulfate	mg/L	T	555. J	-	-
Total Alkalinity	mg/L	T	<4.8 :	-	-
Total Dissolved Solids	mg/L	T	982. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-
Total Organic Carbon	mg/L	T	<1.8 :	-	-
Total Suspended Solids	mg/L	T	<1. :	-	-
Laboratory Parameters					
pH	SU	T	4.9 J	-	5.35 :
Specific Conductance	umhos/cm	T	1060. J	-	-
Inorganics					
Cyanide	mg/L	T	<0.01 J	-	-
Physical Properties					
Hardness	mg/L	T	587. :	-	-
Hardness	mg/L	D	-	570. :	-
Metals					

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 1	Columbine No. 1	Columbine No. 1
			4/21/2004	4/21/2004	4/21/2004
			COLUMBINE1-T01N-GRW	COLUMBINE01-T01N-GRW	COLUMBINE01-D01N-GRW
			GW5	GW5	GW5
Field Measurements					
DO	mg/L	T	6.04 :	-	-
Eh	millivolts	T	233.7 :	-	-
pH	SU	T	5.37 :	6. J	-
Specific Conductance	uS/cm	T	1167. :	-	-
Temperature	Celsius	T	9.13 :	-	-
Turbidity	NTU	T	-	-	-
General Chemistry					
Ammonia	mg/L	T	-	<0.076 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	<7.5 :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-
Chloride	mg/L	T	-	10.9 :	-
Fluoride	mg/L	T	-	5.7 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-
Nitrate	mg/L	T	-	1.6 J	-
Nitrite	mg/L	T	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-
Phosphorus	mg/L	T	-	0.014 :	-
Sulfate	mg/L	T	-	703. :	-
Total Alkalinity	mg/L	T	-	<7.5 :	-
Total Dissolved Solids	mg/L	T	-	942. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. J	-
Total Suspended Solids	mg/L	T	-	<0.7 J	-
Laboratory Parameters					
pH	SU	T	5.37 :	6. J	-
Specific Conductance	umhos/cm	T	-	1060. J	-
Inorganics					
Cyanide	mg/L	T	-	<0.01 :	-
Physical Properties					
Hardness	mg/L	T	-	611. :	-
Hardness	mg/L	D	-	-	620. :
Metals					

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 1/11/2004 COLUMBINENO1-T01N-GRW GW5		Columbine No. 1 1/11/2004 COLUMBINENO1-D01N-GRW GW5		Columbine No. 1 1/11/2004 COLUMBINE1-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE1-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE01-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE01-D01N-GRW GW5	
Aluminum	mg/L	T	12.	:	-		-		-		12.6	:	-	
Aluminum	mg/L	D	-		10.7	:	-		-		-		12.6	:
Antimony	mg/L	T	<0.029	:	-		-		-		<0.0014	:	-	
Antimony	mg/L	D	-		<0.029	:	-		-		-		<0.0016	:
Arsenic	mg/L	T	<0.028	:	-		-		-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.028	:	-		-		-		<0.0004	:
Barium	mg/L	T	<0.053	:	-		-		-		0.0113	:	-	
Barium	mg/L	D	-		<0.053	:	-		-		-		0.0114	:
Beryllium	mg/L	T	0.0108	:	-		-		-		0.0104	:	-	
Beryllium	mg/L	D	-		0.0104	:	-		-		-		0.0104	:
Boron	mg/L	T	<0.023	:	-		-		-		<0.0069	:	-	
Boron	mg/L	D	-		<0.023	:	-		-		-		<0.0068	:
Cadmium	mg/L	T	<0.07	J	-		-		-		0.0225	:	-	
Cadmium	mg/L	D	-		<0.07	:	-		-		-		0.0226	J
Calcium	mg/L	T	138.	:	-		-		-		145.	:	-	
Calcium	mg/L	D	-		133.	:	-		-		-		147.	:
Chromium	mg/L	T	<0.11	:	-		-		-		<0.0011	:	-	
Chromium	mg/L	D	-		<0.11	:	-		-		-		0.0012	:
Cobalt	mg/L	T	<0.31	:	-		-		-		<0.0011	J	-	
Cobalt	mg/L	D	-		<0.31	:	-		-		-		0.0061	J
Copper	mg/L	T	<0.24	:	-		-		-		0.17	:	-	
Copper	mg/L	D	-		<0.24	:	-		-		-		0.161	:
Iron	mg/L	T	<3.73	:	-		-		-		<0.192	J	-	
Iron	mg/L	D	-		<3.73	:	-		-		-		<0.192	:
Lead	mg/L	T	0.01	:	-		-		-		0.0015	:	-	
Lead	mg/L	D	-		0.01	:	-		-		-		0.00095	:
Magnesium	mg/L	T	59.2	:	-		-		-		60.7	:	-	
Magnesium	mg/L	D	-		57.4	:	-		-		-		61.6	:
Manganese	mg/L	T	6.42	:	-		-		-		6.1	:	-	
Manganese	mg/L	D	-		6.15	:	-		-		-		6.17	:
Mercury	mg/L	T	<0.0001	:	-		-		-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		<0.0001	:
Molybdenum	mg/L	T	<0.024	:	-		-		-		<0.001	:	-	
Molybdenum	mg/L	D	-		<0.024	:	-		-		-		<0.001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 1 1/11/2004 COLUMBINENO1-T01N-GRW GW5		Columbine No. 1 1/11/2004 COLUMBINENO1-D01N-GRW GW5		Columbine No. 1 1/11/2004 COLUMBINE1-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE1-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE01-T01N-GRW GW5		Columbine No. 1 4/21/2004 COLUMBINE01-D01N-GRW GW5	
Nickel	mg/L	T	0.51	:	-		-		-		0.467	:	-	
Nickel	mg/L	D	-		0.554	:	-		-		-		0.465	:
Potassium	mg/L	T	<24.3	:	-		-		-		1.95	:	-	
Potassium	mg/L	D	-		<24.3	:	-		-		-		2.04	:
Selenium	mg/L	T	0.0032	J	-		-		-		0.0039	:	-	
Selenium	mg/L	D	-		0.0068	:	-		-		-		0.0036	:
Silver	mg/L	T	<0.001	:	-		-		-		<0.0002	:	-	
Silver	mg/L	D	-		<0.001	:	-		-		-		<0.0002	:
Sodium	mg/L	T	<49.	:	-		-		-		<18.4	:	-	
Sodium	mg/L	D	-		<49.	:	-		-		-		<17.1	:
Thallium	mg/L	T	<0.001	:	-		-		-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.0002	:
Vanadium	mg/L	T	<0.002	:	-		-		-		0.00044	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		-		-		0.00042	:
Zinc	mg/L	T	3.74	:	-		-		-		3.88	:	-	
Zinc	mg/L	D	-		3.66	:	-		-		-		3.84	:
Isotopes														
Lead	mg/L	T	0.01	:	-		-		-		0.0015	:	-	
Lead	mg/L	D	-		0.01	:	-		-		-		0.00095	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2
			Sample Date	11/7/2002	11/7/2002	11/7/2002	11/7/2002	11/7/2002	11/8/2002
			Sample ID	COLUMBINENO2-T01N-GRW	COLUMBINE2-T01N-GRWRE	Columbine2-T01N-GRW	COLUMBINE2-D01N-GRWRE	Columbine2-D01N-GRW	ColumbineWellNo2-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		-	-	10.38 :	-	-	-
Eh	millivolts	T		-	-	143.9 :	-	-	-
pH	SU	T		-	-	5.54 :	-	-	-
Specific Conductance	uS/cm	T		-	-	1217. :	-	-	-
Temperature	Celsius	T		-	-	7.18 :	-	-	-
Turbidity	NTU	T		-	-	5.6 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		-	-	<0.095 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	4.2 :	-	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Chloride	mg/L	T		-	-	10.8 :	-	-	-
Fluoride	mg/L	T		-	11.2 J	-	-	-	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Nitrate	mg/L	T		-	-	2.3 :	-	-	-
Nitrite	mg/L	T		-	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T		-	-	<0.01 J	-	-	-
Phosphorus	mg/L	T		-	-	0.014 :	-	-	-
Sulfate	mg/L	T		-	631. J	-	-	-	-
Total Alkalinity	mg/L	T		-	-	<4.2 :	-	-	-
Total Dissolved Solids	mg/L	T		-	-	944. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		-	-	<1. :	-	-	-
Total Suspended Solids	mg/L	T		-	-	10.1 :	-	-	-
Laboratory Parameters									
pH	SU	T		-	-	5.54 :	-	-	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 :	-	-	-
Physical Properties									
Hardness	mg/L	D		-	-	-	670. :	-	-
Metals									
Aluminum	mg/L	D		-	-	-	11.5 :	-	-
Antimony	mg/L	D		-	-	-	<0.028 :	-	-

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 11/7/2002 COLUMBINENO2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-T01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-D01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-D01N-GRW GW5	Columbine No. 2 11/8/2002 ColumbineWellNo2-T01N-GRW GW5
Arsenic	mg/L	D	-	-	-	<0.023 :	-	-
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	D	-	-	-	0.0143 :	-	-
Boron	mg/L	D	-	-	-	<0.027 :	-	-
Cadmium	mg/L	D	-	-	-	<0.08 :	-	-
Calcium	mg/L	D	-	-	-	159. :	-	-
Chromium	mg/L	D	-	-	-	<0.16 J	-	-
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	D	-	-	-	<0.23 :	-	-
Copper	mg/L	D	-	-	-	<0.17 :	-	-
Iron	mg/L	D	-	-	-	<2.66 :	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-
Magnesium	mg/L	D	-	-	-	66.3 :	-	-
Manganese	mg/L	D	-	-	-	6.28 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	-	<0.0001 :	-
Molybdenum	mg/L	D	-	-	-	<0.011 :	-	-
Nickel	mg/L	D	-	-	-	0.363 :	-	-
Potassium	mg/L	D	-	-	-	<31.4 J	-	-
Selenium	mg/L	D	-	-	-	<0.008 :	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	D	-	-	-	<36.6 :	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	-
Zinc	mg/L	D	-	-	-	3.58 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1-Dichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	-	-	<0.01 :

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction						
		Site ID	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2	Columbine No. 2
		Sample Date	11/7/2002	11/7/2002	11/7/2002	11/7/2002	11/7/2002	11/8/2002
		Sample ID	COLUMBINENO2-T01N-GRW	COLUMBINE2-T01N-GRWRE	Columbine2-T01N-GRW	COLUMBINE2-D01N-GRWRE	Columbine2-D01N-GRW	ColumbineWellNo2-T01N-GRW
		Exposure Area Fraction	GW5	GW5	GW5	GW5	GW5	GW5
1,2-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloropropane	mg/L	T	-	-	-	-	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
2-Butanone	mg/L	T	-	-	-	-	-	<0.01 :
2-Hexanone	mg/L	T	-	-	-	-	-	<0.01 :
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	-	<0.01 :
Acetone	mg/L	T	-	-	-	-	-	<0.01 J
Benzene	mg/L	T	-	-	-	-	-	<0.01 :
Bromodichloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Bromoform	mg/L	T	-	-	-	-	-	<0.01 :
Bromomethane	mg/L	T	-	-	-	-	-	<0.01 :
Carbon disulfide	mg/L	T	-	-	-	-	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	-	-	-	-	<0.01 :
Chlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Chloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Chloroform	mg/L	T	-	-	-	-	-	<0.01 :
Chloromethane	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Dibromochloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	-	-	-	-	<0.01 :
Ethylbenzene	mg/L	T	-	-	-	-	-	<0.01 :
Methylene chloride	mg/L	T	-	-	-	-	-	<0.01 :
Styrene	mg/L	T	-	-	-	-	-	<0.01 :
Tetrachloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Toluene	mg/L	T	-	-	-	-	-	<0.01 :
Total Xylene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Trichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	-	-	-	-	<0.01 :

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 11/7/2002 COLUMBINENO2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-T01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-D01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-D01N-GRW GW5	Columbine No. 2 11/8/2002 ColumbineWellNo2-T01N-GRW GW5	
Vinyl chloride	mg/L	T	-	-	-	-	-	<0.01	:
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T	-	-	-	-	-	<0.01	:
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.025	:
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.01	:
2,4-Dichlorophenol	mg/L	T	-	-	-	-	-	<0.01	:
2,4-Dimethylphenol	mg/L	T	-	-	-	-	-	<0.01	:
2,4-Dinitrophenol	mg/L	T	-	-	-	-	-	<0.025	:
2,4-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01	:
2,6-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01	:
2-Chloronaphthalene	mg/L	T	-	-	-	-	-	<0.01	:
2-Chlorophenol	mg/L	T	-	-	-	-	-	<0.01	:
2-Methylnaphthalene	mg/L	T	-	-	-	-	-	<0.01	:
2-Methylphenol	mg/L	T	-	-	-	-	-	<0.01	:
2-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025	:
2-Nitrophenol	mg/L	T	-	-	-	-	-	<0.01	:
3,3-Dichlorobenzidine	mg/L	T	-	-	-	-	-	<0.01	:
3-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025	:
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	-	-	<0.025	:
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01	:
4-Chloro-3-methylphenol	mg/L	T	-	-	-	-	-	<0.01	:
4-Chloroaniline	mg/L	T	-	-	-	-	-	<0.01	:
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01	:
4-Methylphenol	mg/L	T	-	-	-	-	-	<0.01	:
4-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025	:
4-Nitrophenol	mg/L	T	-	-	-	-	-	<0.025	:
Acenaphthene	mg/L	T	-	-	-	-	-	<0.01	:
Acenaphthylene	mg/L	T	-	-	-	-	-	<0.01	:
Anthracene	mg/L	T	-	-	-	-	-	<0.01	:
Benzaldehyde	mg/L	T	-	-	-	-	-	<0.01	J
Benzo(a)anthracene	mg/L	T	-	-	-	-	-	<0.01	:
Benzo(a)pyrene	mg/L	T	-	-	-	-	-	<0.01	:
Benzo(b)fluoranthene	mg/L	T	-	-	-	-	-	<0.01	:
Benzo(g,h,i)perylene	mg/L	T	-	-	-	-	-	<0.01	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 11/7/2002 COLUMBINENO2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-T01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-T01N-GRW GW5	Columbine No. 2 11/7/2002 COLUMBINE2-D01N-GRWRE GW5	Columbine No. 2 11/7/2002 Columbine2-D01N-GRW GW5	Columbine No. 2 11/8/2002 ColumbineWellNo2-T01N-GRW GW5
Benzo(k)fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Butyl benzyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Carbazole	mg/L	T	-	-	-	-	-	<0.01 :
Chrysene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenzofuran	mg/L	T	-	-	-	-	-	<0.01 :
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	-	<0.01 :
Diethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Dimethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Fluorene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobutadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Isophorone	mg/L	T	-	-	-	-	-	<0.01 :
Naphthalene	mg/L	T	-	-	-	-	-	<0.01 :
Nitrobenzene	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	-	<0.01 :
Pentachlorophenol	mg/L	T	-	-	-	-	-	<0.025 :
Phenanthrene	mg/L	T	-	-	-	-	-	<0.01 :
Phenol	mg/L	T	-	-	-	-	-	<0.01 :
Pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	-	<0.00025 :
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	-	<0.00025 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 2	11/7/2002	COLUMBINENO2-T01N-GRW GW5
			Columbine No. 2	11/7/2002	COLUMBINE2-T01N-GRWRE GW5
			Columbine No. 2	11/7/2002	Columbine2-T01N-GRW GW5
			Columbine No. 2	11/7/2002	COLUMBINE2-D01N-GRWRE GW5
			Columbine No. 2	11/7/2002	Columbine2-D01N-GRW GW5
			Columbine No. 2	11/8/2002	ColumbineWellNo2-T01N-GRW GW5
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	-	<0.01 :
Isotopes								
Lead	mg/L	D	-	-	-	<0.001 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			Columbine No. 2		Columbine No. 2		Columbine No. 2		Columbine No. 2		Columbine No. 2		Columbine No. 2	
			1/10/2003		1/10/2003		4/10/2003		4/10/2003		7/16/2003		7/16/2003	
			COLUMBINE2-T01N-GRW		COLUMBINE2-D01N-GRW		COLUMBINENO2-T01N-GRW		COLUMBINENO2-D01N-GRW		COLUMBINENO2-T01N-GRW		COLUMBINENO2-D01N-GRW	
			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	10.18	:	-		6.51	:	-		1.73	:	-	
Eh	millivolts	T	280.2	:	-		305.	:	-		343.8	:	-	
pH	SU	T	5.21	:	-		5.1	J	-		5.4	J	-	
Specific Conductance	uS/cm	T	1307.	:	-		1474.	:	-		967.	:	-	
Temperature	Celsius	T	6.25	:	-		9.39	:	-		9.71	:	-	
Turbidity	NTU	T	26.2	:	-		0.3	:	-		35.3	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.11	:	-		<0.17	:	-		<0.1	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<8.3	:	-		<4.7	:	-		<8.4	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	11.2	:	-		13.7	:	-		8.3	:	-	
Fluoride	mg/L	T	9.9	:	-		16.4	:	-		10.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	2.1	J	-		2.5	J	-		1.5	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.039	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.011	J	-		<0.01	J	-		<0.01	:	-	
Sulfate	mg/L	T	697.	J	-		741.	J	-		451.	J	-	
Total Alkalinity	mg/L	T	<8.3	:	-		<4.7	:	-		<8.4	:	-	
Total Dissolved Solids	mg/L	T	2770.	:	-		1330.	:	-		834.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	J	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.6	J	-		<1.	J	-	
Total Suspended Solids	mg/L	T	3.3	:	-		<4.3	:	-		4.8	:	-	
Laboratory Parameters														
pH	SU	T	5.21	:	-		5.1	J	-		5.4	J	-	
Specific Conductance	umhos/cm	T	-		-		1320.	J	-		894.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	651.	:	-		713.	:	-		536.	:	-	
Hardness	mg/L	D	-		612.	:	-		741.	:	-		554.	:
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 1/10/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/10/2003 COLUMBINE2-D01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-D01N-GRW GW5	
Aluminum	mg/L	T	12.1	:	-		16.9	:	-		<10.3	:	-	
Aluminum	mg/L	D	-		9.71	:	-		16.9	:	-		<11.1	:
Antimony	mg/L	T	<0.028	:	-		<0.072	:	-		<0.038	:	-	
Antimony	mg/L	D	-		<0.028	:	-		<0.072	:	-		<0.038	:
Arsenic	mg/L	T	<0.023	:	-		<0.04	:	-		<0.024	:	-	
Arsenic	mg/L	D	-		<0.023	:	-		<0.04	:	-		<0.024	:
Barium	mg/L	T	<0.048	:	-		<0.123	:	-		<0.073	:	-	
Barium	mg/L	D	-		<0.048	:	-		<0.123	:	-		<0.073	:
Beryllium	mg/L	T	0.0149	:	-		0.034	:	-		<0.0195	:	-	
Beryllium	mg/L	D	-		0.015	:	-		0.0349	:	-		0.0205	:
Boron	mg/L	T	<0.027	:	-		<0.084	:	-		<0.046	:	-	
Boron	mg/L	D	-		<0.027	:	-		<0.084	:	-		<0.046	:
Cadmium	mg/L	T	<0.04	:	-		0.0344	:	-		<0.03	:	-	
Cadmium	mg/L	D	-		<0.04	:	-		0.0309	:	-		<0.03	:
Calcium	mg/L	T	156.	:	-		165.	:	-		127.	:	-	
Calcium	mg/L	D	-		146.	:	-		172.	:	-		132.	:
Chromium	mg/L	T	<0.37	:	-		<0.01	:	-		<0.06	:	-	
Chromium	mg/L	D	-		<0.37	:	-		<0.01	:	-		<0.06	:
Cobalt	mg/L	T	<0.16	:	-		<0.038	:	-		<0.18	:	-	
Cobalt	mg/L	D	-		<0.16	:	-		<0.038	:	-		<0.18	:
Copper	mg/L	T	<0.17	:	-		0.144	:	-		<0.14	:	-	
Copper	mg/L	D	-		<0.17	:	-		0.143	:	-		<0.14	:
Iron	mg/L	T	<4.89	:	-		<0.311	:	-		<1.68	:	-	
Iron	mg/L	D	-		<4.89	:	-		<0.311	:	-		<1.68	:
Lead	mg/L	T	<0.001	:	-		<0.001	J	-		0.0032	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Magnesium	mg/L	T	63.8	:	-		73.1	:	-		53.	:	-	
Magnesium	mg/L	D	-		59.8	:	-		75.8	:	-		54.5	:
Manganese	mg/L	T	5.93	:	-		8.6	:	-		4.78	:	-	
Manganese	mg/L	D	-		5.61	:	-		8.6	:	-		4.89	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		0.00016	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		0.00016	:
Molybdenum	mg/L	T	<0.011	:	-		<0.023	:	-		<0.016	:	-	
Molybdenum	mg/L	D	-		<0.011	:	-		<0.023	:	-		<0.016	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 1/10/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/10/2003 COLUMBINE2-D01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-D01N-GRW GW5	
Nickel	mg/L	T	0.348	:	-		0.499	:	-		0.378	:	-	
Nickel	mg/L	D	-		0.328	:	-		0.496	:	-		0.395	:
Potassium	mg/L	T	<20.2	:	-		<3.26	:	-		<25.	:	-	
Potassium	mg/L	D	-		<20.2	:	-		<3.26	:	-		<25.	:
Selenium	mg/L	T	<0.008	:	-		0.01	:	-		<0.008	:	-	
Selenium	mg/L	D	-		<0.008	J	-		0.0102	:	-		<0.008	J
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<32.7	:	-		13.9	:	-		24.7	:	-	
Sodium	mg/L	D	-		<32.7	:	-		13.8	:	-		<21.9	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.002	:
Zinc	mg/L	T	3.5	:	-		4.57	:	-		3.14	:	-	
Zinc	mg/L	D	-		3.28	:	-		4.57	:	-		3.21	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Hexanone	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 1/10/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/10/2003 COLUMBINE2-D01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-D01N-GRW GW5	
Acetone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4,5-Trichlorophenol	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
2,4-Dinitrophenol	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 1/10/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/10/2003 COLUMBINE2-D01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-D01N-GRW GW5	
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Chlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Methylnaphthalene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
2-Nitrophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
3-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chloroaniline	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
4-Nitrophenol	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
Acenaphthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Acenaphthylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Anthracene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzaldehyde	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(a)anthracene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(a)pyrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	0.0005	J	-		<0.01	:	-		-		-	
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbazole	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chrysene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
Dibenzofuran	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 1/10/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/10/2003 COLUMBINE2-D01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 4/10/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 7/16/2003 COLUMBINENO2-D01N-GRW GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Diethylphthalate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dimethylphthalate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Di-n-Octyl phthalate	mg/L	T	<0.01	J	-		<0.01	J	-		-		-	
Fluoranthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Fluorene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Hexachlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Hexachlorobutadiene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Hexachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
Isophorone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Naphthalene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Nitrobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Pentachlorophenol	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
Phenanthrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Phenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Pyrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.001	J	-		0.0032	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 2	Columbine No. 2	Columbine No. 2
			10/16/2003	10/16/2003	10/16/2003
			COLUMBINENO2-T01N-GRW	COLUMBINENO2-D01N-GRW	COLUMBINE2-T01N-GRW
			GW5	GW5	GW5
Field Measurements					
DO	mg/L	T	-	-	8.85 :
Eh	millivolts	T	-	-	142.7 :
pH	SU	T	5.4 J	-	5.09 :
Specific Conductance	uS/cm	T	-	-	991. :
Temperature	Celsius	T	-	-	7.8 :
Turbidity	NTU	T	-	-	0.6 :
General Chemistry					
Ammonia	mg/L	T	<0.1 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	<6.9 :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-
Chloride	mg/L	T	9.1 :	-	-
Fluoride	mg/L	T	11.2 :	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-
Nitrate	mg/L	T	1.5 J	-	-
Nitrite	mg/L	T	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	-
Phosphorus	mg/L	T	<0.01 :	-	-
Sulfate	mg/L	T	693. J	-	-
Total Alkalinity	mg/L	T	<6.9 :	-	-
Total Dissolved Solids	mg/L	T	898. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.26 :	-	-
Total Organic Carbon	mg/L	T	<1. J	-	-
Total Suspended Solids	mg/L	T	2.6 :	-	-
Laboratory Parameters					
pH	SU	T	5.4 J	-	5.09 :
Specific Conductance	umhos/cm	T	901. J	-	-
Inorganics					
Cyanide	mg/L	T	<0.01 J	-	-
Physical Properties					
Hardness	mg/L	T	569. :	-	-
Hardness	mg/L	D	-	547. :	-
Metals					

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Columbine No. 2	Columbine No. 2	Columbine No. 2
			1/11/2004	1/11/2004	1/11/2004
			COLUMBINENO2-T01N-GRW	COLUMBINENO2-D01N-GRW	COLUMBINE2-T01N-GRW
			GW5	GW5	GW5
Field Measurements					
DO	mg/L	T	-	-	8.95 :
Eh	millivolts	T	-	-	353.2 :
pH	SU	T	5.6 J	-	5.37 :
Specific Conductance	uS/cm	T	-	-	912. :
Temperature	Celsius	T	-	-	8.08 :
Turbidity	NTU	T	-	-	0. :
General Chemistry					
Ammonia	mg/L	T	<0.071 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	<9.8 :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-
Chloride	mg/L	T	8. :	-	-
Fluoride	mg/L	T	9.2 :	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-
Nitrate	mg/L	T	1.3 :	-	-
Nitrite	mg/L	T	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-
Phosphorus	mg/L	T	<0.01 :	-	-
Sulfate	mg/L	T	446. J	-	-
Total Alkalinity	mg/L	T	<9.8 :	-	-
Total Dissolved Solids	mg/L	T	762. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-
Total Organic Carbon	mg/L	T	<1. :	-	-
Total Suspended Solids	mg/L	T	5.7 :	-	-
Laboratory Parameters					
pH	SU	T	5.6 J	-	5.37 :
Specific Conductance	umhos/cm	T	858. J	-	-
Inorganics					
Cyanide	mg/L	T	<0.01 J	-	-
Physical Properties					
Hardness	mg/L	T	488. :	-	-
Hardness	mg/L	D	-	478. :	-
Metals					

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 10/16/2003 COLUMBINENO2-T01N-GRW GW5	Columbine No. 2 10/16/2003 COLUMBINENO2-D01N-GRW GW5	Columbine No. 2 10/16/2003 COLUMBINE2-T01N-GRW GW5	Columbine No. 2 1/11/2004 COLUMBINENO2-T01N-GRW GW5	Columbine No. 2 1/11/2004 COLUMBINENO2-D01N-GRW GW5	Columbine No. 2 1/11/2004 COLUMBINE2-T01N-GRW GW5
Aluminum	mg/L	T	9.91 :	-	-	9.34 :	-	-
Aluminum	mg/L	D	-	8.78 :	-	-	8.79 :	-
Antimony	mg/L	T	<0.082 :	-	-	<0.029 :	-	-
Antimony	mg/L	D	-	<0.082 :	-	-	<0.029 :	-
Arsenic	mg/L	T	<0.035 :	-	-	<0.028 :	-	-
Arsenic	mg/L	D	-	<0.035 :	-	-	<0.028 :	-
Barium	mg/L	T	<0.117 :	-	-	<0.053 :	-	-
Barium	mg/L	D	-	<0.117 :	-	-	<0.053 :	-
Beryllium	mg/L	T	<0.013 J	-	-	0.0126 :	-	-
Beryllium	mg/L	D	-	0.0236 J	-	-	0.0117 :	-
Boron	mg/L	T	<0.064 :	-	-	<0.023 :	-	-
Boron	mg/L	D	-	<0.064 :	-	-	<0.023 :	-
Cadmium	mg/L	T	<0.0824 :	-	-	<0.07 J	-	-
Cadmium	mg/L	D	-	<0.07 :	-	-	<0.07 :	-
Calcium	mg/L	T	135. :	-	-	116. :	-	-
Calcium	mg/L	D	-	130. :	-	-	114. :	-
Chromium	mg/L	T	<0.13 J	-	-	0.118 :	-	-
Chromium	mg/L	D	-	<0.13 J	-	-	<0.11 :	-
Cobalt	mg/L	T	<0.31 :	-	-	<0.31 :	-	-
Cobalt	mg/L	D	-	<0.31 :	-	-	<0.31 :	-
Copper	mg/L	T	<0.2 :	-	-	<0.24 :	-	-
Copper	mg/L	D	-	<0.2 :	-	-	<0.24 :	-
Iron	mg/L	T	<4.55 :	-	-	<3.73 :	-	-
Iron	mg/L	D	-	<4.55 :	-	-	<3.73 :	-
Lead	mg/L	T	<0.002 :	-	-	0.0028 :	-	-
Lead	mg/L	D	-	<0.002 :	-	-	<0.001 :	-
Magnesium	mg/L	T	56.1 :	-	-	48.3 :	-	-
Magnesium	mg/L	D	-	54.2 :	-	-	46.9 :	-
Manganese	mg/L	T	5.76 :	-	-	4.26 :	-	-
Manganese	mg/L	D	-	5.55 :	-	-	4.18 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T	<0.012 J	-	-	<0.024 :	-	-
Molybdenum	mg/L	D	-	<0.012 J	-	-	<0.024 :	-

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 10/16/2003 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 10/16/2003 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 10/16/2003 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 1/11/2004 COLUMBINENO2-T01N-GRW GW5		Columbine No. 2 1/11/2004 COLUMBINENO2-D01N-GRW GW5		Columbine No. 2 1/11/2004 COLUMBINE2-T01N-GRW GW5	
Nickel	mg/L	T	0.549	:	-		-		0.449	:	-		-	
Nickel	mg/L	D	-		0.443	:	-		-		<0.27	:	-	
Potassium	mg/L	T	<52.2	:	-		-		<24.3	:	-		-	
Potassium	mg/L	D	-		<52.2	:	-		-		<24.3	:	-	
Selenium	mg/L	T	<0.0073	:	-		-		0.0058	J	-		-	
Selenium	mg/L	D	-		<0.0042	:	-		-		0.0065	:	-	
Silver	mg/L	T	<0.001	:	-		-		<0.001	:	-		-	
Silver	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Sodium	mg/L	T	<50.2	:	-		-		<49.	:	-		-	
Sodium	mg/L	D	-		<50.2	:	-		-		<49.	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		-	
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.001	:	-		-		<0.002	:	-		-	
Vanadium	mg/L	D	-		<0.001	:	-		-		<0.002	:	-	
Zinc	mg/L	T	3.3	:	-		-		2.85	:	-		-	
Zinc	mg/L	D	-		3.09	:	-		-		2.85	:	-	
Isotopes														
Lead	mg/L	T	<0.002	:	-		-		0.0028	:	-		-	
Lead	mg/L	D	-		<0.002	:	-		-		<0.001	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Columbine No. 2	Columbine No. 2	Columbine No. 2	Company Cabin Well	Company Cabin Well	Company Cabin Well
			Sample Date	4/21/2004	4/21/2004	4/21/2004	11/6/2002	11/6/2002	1/11/2003
			Sample ID	COLUMBINE2-T01N-GRW	COLUMBINE02-T01N-GRW	COLUMBINE02-D01N-GRW	COMPANYCABINS-T01N-GRW	COMPANYCABINS-D01N-GRW	COMPANYCABIN-T01N-GRW
				GW5	GW5	GW5	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		9.01 :	-	-	10.11 :	-	-
Eh	millivolts	T		225.2 :	-	-	341.3 :	-	-
pH	SU	T		5.62 :	6.1 J	-	7.29 :	-	-
Specific Conductance	uS/cm	T		886. :	-	-	258. :	-	-
Temperature	Celsius	T		7.74 :	-	-	5.93 :	-	-
Turbidity	NTU	T		-	-	-	20.4 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.067 :	-	<0.07 J	-	<0.099 :
Bicarbonate (as CaCO3)	mg/L	T		-	<7.1 :	-	72.5 :	-	71.1 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	10.1 :	-	1.1 :	-	30.5 :
Fluoride	mg/L	T		-	8.5 :	-	0.98 :	-	0.8 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	1.2 J	-	<0.4 J	-	<0.83 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.47 J
Phosphorus	mg/L	T		-	0.024 :	-	<0.01 :	-	<0.01 J
Sulfate	mg/L	T		-	473. :	-	57.7 :	-	68.6 J
Total Alkalinity	mg/L	T		-	<7.1 :	-	72.5 :	-	71.1 :
Total Dissolved Solids	mg/L	T		-	646. :	-	130. :	-	<173. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	1.5 :	-	<1. :
Total Suspended Solids	mg/L	T		-	<5.9 J	-	<1.4 :	-	2.2 :
Laboratory Parameters									
pH	SU	T		5.62 :	6.1 J	-	7.29 :	-	-
Specific Conductance	umhos/cm	T		-	793. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	410. :	-	122. :	-	127. :
Hardness	mg/L	D		-	-	414. :	-	127. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 4/21/2004 COLUMBINE2-T01N-GRW GW5		Columbine No. 2 4/21/2004 COLUMBINE02-T01N-GRW GW5		Columbine No. 2 4/21/2004 COLUMBINE02-D01N-GRW GW5		Company Cabin Well 11/6/2002 COMPANYCABINS-T01N-GRW GW4		Company Cabin Well 11/6/2002 COMPANYCABINS-D01N-GRW GW4		Company Cabin Well 1/11/2003 COMPANYCABIN-T01N-GRW GW4	
Aluminum	mg/L	T	-		8.95	:	-		0.284	J	-		<0.226	:
Aluminum	mg/L	D	-		-		6.56	:	-		0.257	J	-	
Antimony	mg/L	T	-		<0.053	:	-		<0.0004	:	-		<0.0006	:
Antimony	mg/L	D	-		-		<0.053	:	-		<0.0004	:	-	
Arsenic	mg/L	T	-		<0.037	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	-		-		<0.037	:	-		<0.0004	:	-	
Barium	mg/L	T	-		<0.049	:	-		0.0556	:	-		0.0575	:
Barium	mg/L	D	-		-		<0.049	:	-		0.0573	:	-	
Beryllium	mg/L	T	-		0.0112	J	-		0.00072	:	-		0.00054	:
Beryllium	mg/L	D	-		-		0.009	J	-		0.00082	:	-	
Boron	mg/L	T	-		<0.036	:	-		<0.0062	:	-		<0.0046	:
Boron	mg/L	D	-		-		<0.036	:	-		<0.005	:	-	
Cadmium	mg/L	T	-		<0.1	:	-		0.00045	J	-		0.00048	:
Cadmium	mg/L	D	-		-		<0.1	:	-		0.00054	J	-	
Calcium	mg/L	T	-		97.7	:	-		37.7	:	-		39.6	:
Calcium	mg/L	D	-		-		98.8	:	-		38.8	:	-	
Chromium	mg/L	T	-		<0.13	:	-		<0.0046	:	-		<0.0037	:
Chromium	mg/L	D	-		-		<0.13	:	-		<0.0046	:	-	
Cobalt	mg/L	T	-		<0.18	:	-		<0.0022	:	-		<0.0016	:
Cobalt	mg/L	D	-		-		<0.18	:	-		<0.0022	:	-	
Copper	mg/L	T	-		<0.27	:	-		0.0196	J	-		<0.0071	:
Copper	mg/L	D	-		-		<0.27	:	-		0.003	:	-	
Iron	mg/L	T	-		<2.93	J	-		<0.112	:	-		<0.489	:
Iron	mg/L	D	-		-		<2.93	:	-		<0.0893	:	-	
Lead	mg/L	T	-		0.168	:	-		0.0182	:	-		0.0024	:
Lead	mg/L	D	-		-		0.0221	:	-		<0.00032	:	-	
Magnesium	mg/L	T	-		40.3	:	-		6.66	:	-		6.9	:
Magnesium	mg/L	D	-		-		40.6	:	-		7.42	:	-	
Manganese	mg/L	T	-		3.75	:	-		<0.005	:	-		0.005	:
Manganese	mg/L	D	-		-		3.74	:	-		0.0066	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.014	:	-		0.0021	:	-		<0.0033	:
Molybdenum	mg/L	D	-		-		<0.014	:	-		0.0021	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Columbine No. 2 4/21/2004 COLUMBINE2-T01N-GRW GW5	Columbine No. 2 4/21/2004 COLUMBINE02-T01N-GRW GW5	Columbine No. 2 4/21/2004 COLUMBINE02-D01N-GRW GW5	Company Cabin Well 11/6/2002 COMPANYCABINS-T01N-GRW GW4	Company Cabin Well 11/6/2002 COMPANYCABINS-D01N-GRW GW4	Company Cabin Well 1/11/2003 COMPANYCABIN-T01N-GRW GW4
Nickel	mg/L	T	-	0.425 :	-	0.0174 J	-	0.0122 :
Nickel	mg/L	D	-	-	<0.33 :	-	0.0175 J	-
Potassium	mg/L	T	-	<15.5 :	-	0.699 :	-	1.06 :
Potassium	mg/L	D	-	-	<15.5 :	-	0.619 :	-
Selenium	mg/L	T	-	<0.007 :	-	<0.0004 J	-	<0.0016 :
Selenium	mg/L	D	-	-	<0.007 :	-	<0.0004 :	-
Silver	mg/L	T	-	<0.001 J	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	-	-	<0.001 J	-	<0.0002 :	-
Sodium	mg/L	T	-	<32.8 :	-	3.25 :	-	<3.27 :
Sodium	mg/L	D	-	-	<32.8 :	-	3.31 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.0002 :	-	<0.0004 :
Vanadium	mg/L	D	-	-	<0.002 :	-	<0.0002 :	-
Zinc	mg/L	T	-	2.5 :	-	0.156 :	-	0.105 :
Zinc	mg/L	D	-	-	2.34 :	-	0.188 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	<0.00025 J	-	<0.00025 J
2,6-Pyridinediamine,	mg/L	T	-	-	-	<0.00025 J	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	<0.00025 J	-	<0.00025 J
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	<0.00025 J	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T	-	-	-	<0.01 J	-	<0.01 J
Isotopes								
Lead	mg/L	T	-	0.168 :	-	0.0182 :	-	0.0024 :
Lead	mg/L	D	-	-	0.0221 :	-	<0.00032 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well
			Sample Date	1/11/2003	4/3/2003	4/3/2003	7/16/2003	7/16/2003	10/16/2003
			Sample ID	COMPANYCABIN-D01N-GRW	COMPANYCABINS-T01N-GRW	COMPANYCABINS-D01N-GRW	COMPANYCABINSWELL-T01N-GRW	COMPANYCABINSWELL-D01N-GRW	COMPANYCABINSWELL-T01N-GRW
				GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	10.82 :	-	4.17 :	-	9.03 :
Eh	millivolts	T		-	135.6 :	-	286. :	-	125.2 :
pH	SU	T		-	7.3 J	-	7.4 J	-	7.5 J
Specific Conductance	uS/cm	T		-	188. :	-	181. :	-	161. :
Temperature	Celsius	T		-	6.47 :	-	7.44 :	-	5.4 :
Turbidity	NTU	T		-	0. :	-	30.4 :	-	2. :
General Chemistry									
Ammonia	mg/L	T		-	<0.049 :	-	<0.28 J	-	<0.057 J
Bicarbonate (as CaCO3)	mg/L	T		-	68.6 :	-	71.7 :	-	79.6 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	<0.78 :	-	<0.94 :	-	<0.52 :
Fluoride	mg/L	T		-	0.34 :	-	0.63 :	-	0.41 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.42 J	-	<1. J	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Phosphorus	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Sulfate	mg/L	T		-	20.2 J	-	27. J	-	<14.2 J
Total Alkalinity	mg/L	T		-	68.6 :	-	71.7 :	-	79.6 :
Total Dissolved Solids	mg/L	T		-	<144. :	-	<90. :	-	160. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	<1. J	-	<1. J
Total Suspended Solids	mg/L	T		-	<0.8 :	-	<0.7 :	-	<1. :
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.4 J	-	7.5 J
Specific Conductance	umhos/cm	T		-	184. J	-	153. J	-	321. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	95.5 :	-	86.2 :	-	82.7 :
Hardness	mg/L	D		127. :	-	93.6 :	-	86.7 :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Company Cabin Well 1/11/2003 COMPANYCABIN-D01N-GRW GW4		Company Cabin Well 4/3/2003 COMPANYCABINS-T01N-GRW GW4		Company Cabin Well 4/3/2003 COMPANYCABINS-D01N-GRW GW4		Company Cabin Well 7/16/2003 COMPANYCABINSWELL-T01N-GRW GW4		Company Cabin Well 7/16/2003 COMPANYCABINSWELL-D01N-GRW GW4		Company Cabin Well 10/16/2003 COMPANYCABINSWELL-T01N-GRW GW4	
Aluminum	mg/L	T	-		<0.0277	:	-		<0.631	:	-		<0.217	:
Aluminum	mg/L	D	<0.142	:	-		<0.0277	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.0006	J	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	J	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0504	:	-		0.0445	:	-		0.0447	:
Barium	mg/L	D	0.0572	:	-		0.0492	:	-		0.0437	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0002	:	-		<0.0004	:
Beryllium	mg/L	D	<0.00048	:	-		<0.0003	:	-		<0.0002	:	-	
Boron	mg/L	T	-		<0.0075	:	-		<0.0046	:	-		<0.0063	:
Boron	mg/L	D	<0.0045	:	-		<0.0075	:	-		<0.0046	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0003	:	-		<0.0005	:
Cadmium	mg/L	D	0.00049	:	-		<0.0004	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		32.4	:	-		27.9	:	-		27.7	:
Calcium	mg/L	D	39.5	:	-		31.7	:	-		28.3	:	-	
Chromium	mg/L	T	-		<0.0011	:	-		<0.0006	:	-		<0.0011	J
Chromium	mg/L	D	<0.0037	:	-		<0.00094	:	-		<0.0006	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0018	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0029	:	-		<0.0018	:	-	
Copper	mg/L	T	-		<0.0024	:	-		0.0581	:	-		0.0087	:
Copper	mg/L	D	0.0079	:	-		<0.0024	:	-		0.0015	:	-	
Iron	mg/L	T	-		0.104	:	-		<0.667	:	-		<0.455	:
Iron	mg/L	D	<0.489	:	-		0.0315	:	-		<0.667	:	-	
Lead	mg/L	T	-		0.00059	:	-		0.0089	:	-		0.0043	:
Lead	mg/L	D	<0.0002	:	-		0.0003	:	-		0.003	:	-	
Magnesium	mg/L	T	-		3.56	:	-		3.99	:	-		3.28	:
Magnesium	mg/L	D	6.95	:	-		3.49	:	-		3.9	:	-	
Manganese	mg/L	T	-		0.0023	:	-		<0.019	:	-		<0.016	:
Manganese	mg/L	D	<0.005	:	-		0.0021	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.00014	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.00012	:	-	
Molybdenum	mg/L	T	-		<0.0062	:	-		0.0024	:	-		<0.0039	:
Molybdenum	mg/L	D	<0.0033	:	-		<0.0048	:	-		0.0024	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Company Cabin Well 1/11/2003 COMPANYCABIN-D01N-GRW GW4		Company Cabin Well 4/3/2003 COMPANYCABINS-T01N-GRW GW4		Company Cabin Well 4/3/2003 COMPANYCABINS-D01N-GRW GW4		Company Cabin Well 7/16/2003 COMPANYCABINSWELL-T01N-GRW GW4		Company Cabin Well 7/16/2003 COMPANYCABINSWELL-D01N-GRW GW4		Company Cabin Well 10/16/2003 COMPANYCABINSWELL-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.0026	:	-		<0.002	:	-		0.011	:
Nickel	mg/L	D	0.0087	:	-		<0.0026	:	-		0.0024	:	-	
Potassium	mg/L	T	-		1.18	:	-		<1.17	:	-		<0.494	J
Potassium	mg/L	D	1.08	:	-		1.12	:	-		<1.5	:	-	
Selenium	mg/L	T	-		<0.001	:	-		<0.0016	:	-		0.00061	:
Selenium	mg/L	D	<0.0016	:	-		<0.001	:	-		<0.0016	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		2.69	:	-		<5.32	:	-		<9.91	:
Sodium	mg/L	D	<3.27	:	-		2.63	:	-		<5.32	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0186	:	-		<0.0969	:	-		0.057	:
Zinc	mg/L	D	<0.101	:	-		0.0241	:	-		<0.0766	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	:	-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		-		-		-	
Isotopes														
Lead	mg/L	T	-		0.00059	:	-		0.0089	:	-		0.0043	:
Lead	mg/L	D	<0.0002	:	-		0.0003	:	-		0.003	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well	Company Cabin Well
			Sample Date	10/16/2003	1/9/2004	1/9/2004	4/16/2004	4/16/2004	4/16/2004
			Sample ID	COMPANYCABINSWELL-D01N-GRW GW4	COMPANYCABINSWELL-T01N-GRW GW4	COMPANYCABINSWELL-D01N-GRW GW4	COMPANYCABINSWELL-T01N-GRW GW4	COMPANYCABINSWELL-D01N-GRW GW4	COMPANYCABINS-T01N-GRW GW4
Field Measurements									
DO	mg/L	T		-	7.42 :	-	-	-	9.37 :
Eh	millivolts	T		-	270.4 :	-	-	-	158.9 :
pH	SU	T		-	7.4 J	-	7.3 J	-	6.94 :
Specific Conductance	uS/cm	T		-	188. :	-	-	-	195. :
Temperature	Celsius	T		-	6.59 :	-	-	-	10.06 :
Turbidity	NTU	T		-	2.1 :	-	-	-	0.7 :
General Chemistry									
Ammonia	mg/L	T		-	<0.072 J	-	<0.04 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	72.1 :	-	66.3 :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	<0.67 :	-	<1.4 :	-	-
Fluoride	mg/L	T		-	0.61 :	-	1.1 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.22 :	-	0.38 J	-	-
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	-
Phosphorus	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Sulfate	mg/L	T		-	21.4 :	-	27.6 :	-	-
Total Alkalinity	mg/L	T		-	72.1 :	-	66.3 :	-	-
Total Dissolved Solids	mg/L	T		-	110. :	-	118. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	<1.9 :	-	-
Total Suspended Solids	mg/L	T		-	<0.8 :	-	<0.9 :	-	-
Laboratory Parameters									
pH	SU	T		-	7.4 J	-	7.3 J	-	6.94 :
Specific Conductance	umhos/cm	T		-	159. J	-	174. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	86.2 :	-	90.4 :	-	-
Hardness	mg/L	D		82.6 :	-	87.4 :	-	88. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Company Cabin Well 10/16/2003 COMPANYCABINSWELL-D01N-GRW GW4	Company Cabin Well 1/9/2004 COMPANYCABINSWELL-T01N-GRW GW4	Company Cabin Well 1/9/2004 COMPANYCABINSWELL-D01N-GRW GW4	Company Cabin Well 4/16/2004 COMPANYCABINSWELL-T01N-GRW GW4	Company Cabin Well 4/16/2004 COMPANYCABINSWELL-D01N-GRW GW4	Company Cabin Well 4/16/2004 COMPANYCABINS-T01N-GRW GW4
Aluminum	mg/L	T	-	<0.514 :	-	<0.176 :	-	-
Aluminum	mg/L	D	<0.217 :	-	<0.514 :	-	<0.191 :	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.0008 :	-	-
Antimony	mg/L	D	<0.001 :	-	<0.0024 :	-	<0.0008 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0428 :	-	0.0368 :	-	-
Barium	mg/L	D	0.0465 :	-	0.0442 :	-	0.037 :	-
Beryllium	mg/L	T	-	<0.001 J	-	<0.00038 :	-	-
Beryllium	mg/L	D	<0.0004 :	-	<0.001 J	-	<0.00044 :	-
Boron	mg/L	T	-	<0.0117 :	-	0.0031 :	-	-
Boron	mg/L	D	<0.0063 :	-	<0.0117 :	-	0.0034 :	-
Cadmium	mg/L	T	-	<0.0007 J	-	<0.00058 :	-	-
Cadmium	mg/L	D	<0.0005 :	-	<0.0007 J	-	<0.0005 :	-
Calcium	mg/L	T	-	27.7 :	-	27.6 :	-	-
Calcium	mg/L	D	27.8 :	-	28.2 :	-	26.9 :	-
Chromium	mg/L	T	-	<0.0057 :	-	<0.0012 :	-	-
Chromium	mg/L	D	<0.0011 J	-	<0.0057 :	-	<0.00088 :	-
Cobalt	mg/L	T	-	<0.0037 :	-	<0.0011 :	-	-
Cobalt	mg/L	D	<0.0029 :	-	<0.0037 :	-	<0.0021 :	-
Copper	mg/L	T	-	<0.0035 :	-	<0.0032 :	-	-
Copper	mg/L	D	0.0077 :	-	<0.0035 :	-	<0.002 :	-
Iron	mg/L	T	-	<0.373 :	-	<0.192 J	-	-
Iron	mg/L	D	<0.455 :	-	<0.373 :	-	<0.192 J	-
Lead	mg/L	T	-	0.0054 :	-	0.0028 :	-	-
Lead	mg/L	D	0.0028 :	-	0.0065 :	-	0.0027 :	-
Magnesium	mg/L	T	-	4.12 :	-	5.22 :	-	-
Magnesium	mg/L	D	3.22 :	-	4.11 :	-	5.06 :	-
Manganese	mg/L	T	-	<0.015 :	-	<0.019 :	-	-
Manganese	mg/L	D	<0.016 :	-	<0.015 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.003 :	-	<0.0032 :	-	-
Molybdenum	mg/L	D	<0.0048 :	-	0.0034 :	-	<0.0036 :	-

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Company Cabin Well 10/16/2003 COMPANYCABINSWELL-D01N-GRW GW4		Company Cabin Well 1/9/2004 COMPANYCABINSWELL-T01N-GRW GW4		Company Cabin Well 1/9/2004 COMPANYCABINSWELL-D01N-GRW GW4		Company Cabin Well 4/16/2004 COMPANYCABINSWELL-T01N-GRW GW4		Company Cabin Well 4/16/2004 COMPANYCABINSWELL-D01N-GRW GW4		Company Cabin Well 4/16/2004 COMPANYCABINS-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.0168	:	-		0.0043	:	-		-	
Nickel	mg/L	D	0.0045	:	-		<0.0168	:	-		0.0044	:	-	
Potassium	mg/L	T	-		<1.18	:	-		<0.978	:	-		-	
Potassium	mg/L	D	<0.538	J	-		<2.49	:	-		<0.91	:	-	
Selenium	mg/L	T	-		<0.0006	J	-		<0.0014	:	-		-	
Selenium	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.00088	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00088	:	-	
Sodium	mg/L	T	-		<4.9	:	-		<5.78	J	-		-	
Sodium	mg/L	D	<9.91	:	-		<4.9	:	-		<3.28	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		-	
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.048	:	-		0.111	:	-		-	
Zinc	mg/L	D	0.053	:	-		0.0439	:	-		0.0877	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-95.4	:	-		-	
Delta O-18	per mil	T	-		-		-		-13.6	:	-		-	
Lead	mg/L	T	-		0.0054	:	-		0.0028	:	-		-	
Lead	mg/L	D	0.0028	:	-		0.0065	:	-		0.0027	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRWRE GW4		Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRWRE GW4		Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 1/23/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 1/23/2003 DOUGLASWELL-D01 N-GRW GW4	
Field Measurements														
DO	mg/L	T	-		6.59	:	-		-		7.76	:	-	
Eh	millivolts	T	-		13.	:	-		-		161.5	:	-	
pH	SU	T	-		4.95	:	-		-		5.05	:	-	
Specific Conductance	uS/cm	T	-		1225.	:	-		-		1170.	:	-	
Temperature	Celsius	T	-		7.07	:	-		-		7.95	:	-	
Turbidity	NTU	T	-		10.9	:	-		-		35.8	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.17	:	-		-		<0.21	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.8	:	-		-		<5.1	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		11.2	:	-		-		12.8	:	-	
Fluoride	mg/L	T	14.3	J	-		-		-		21.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		1.9	J	-		-		1.9	J	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
Sulfate	mg/L	T	649.	J	-		-		-		644.	J	-	
Total Alkalinity	mg/L	T	-		<1.8	:	-		-		<5.1	:	-	
Total Dissolved Solids	mg/L	T	-		1040.	:	-		-		1020.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		<1.2	:	-		-		5.9	:	-	
Laboratory Parameters														
pH	SU	T	-		4.95	:	-		-		5.05	:	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		-		-		-		605.	:	-	
Hardness	mg/L	D	-		-		687.	:	-		-		591.	:
Metals														
Aluminum	mg/L	T	-		-		-		-		20.4	:	-	

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRWRE GW4	Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRW GW4	Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRWRE GW4	Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRW GW4	Douglas Well 1/23/2003 DOUGLASWELL-T01 N-GRW GW4	Douglas Well 1/23/2003 DOUGLASWELL-D01 N-GRW GW4
Aluminum	mg/L	D	-	-	<17.2 :	-	-	18.6 :
Antimony	mg/L	T	-	-	-	-	<0.003 :	-
Antimony	mg/L	D	-	-	<0.028 :	-	-	<0.003 :
Arsenic	mg/L	T	-	-	-	-	<0.002 :	-
Arsenic	mg/L	D	-	-	<0.023 :	-	-	<0.002 :
Barium	mg/L	T	-	-	-	-	0.0289 :	-
Barium	mg/L	D	-	-	<0.048 :	-	-	0.0323 :
Beryllium	mg/L	T	-	-	-	-	0.0072 J	-
Beryllium	mg/L	D	-	-	0.0072 :	-	-	0.0063 J
Boron	mg/L	T	-	-	-	-	<0.2 :	-
Boron	mg/L	D	-	-	<0.027 :	-	-	<0.2 :
Cadmium	mg/L	T	-	-	-	-	<0.08 :	-
Cadmium	mg/L	D	-	-	<0.08 :	-	-	<0.08 :
Calcium	mg/L	T	-	-	-	-	132. :	-
Calcium	mg/L	D	-	-	151. :	-	-	130. :
Chromium	mg/L	T	-	-	-	-	<0.16 :	-
Chromium	mg/L	D	-	-	<0.16 J	-	-	<0.16 :
Cobalt	mg/L	T	-	-	-	-	<0.23 :	-
Cobalt	mg/L	D	-	-	<0.23 :	-	-	<0.23 :
Copper	mg/L	T	-	-	-	-	<0.17 :	-
Copper	mg/L	D	-	-	<0.2 :	-	-	<0.17 :
Iron	mg/L	T	-	-	-	-	9.26 :	-
Iron	mg/L	D	-	-	<3.56 :	-	-	2.96 :
Lead	mg/L	T	-	-	-	-	0.0024 :	-
Lead	mg/L	D	-	-	0.001 :	-	-	<0.001 :
Magnesium	mg/L	T	-	-	-	-	66.9 :	-
Magnesium	mg/L	D	-	-	75.4 :	-	-	65. :
Manganese	mg/L	T	-	-	-	-	8.38 :	-
Manganese	mg/L	D	-	-	8.73 :	-	-	8.23 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	-	-	<0.002 :	-
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	<0.002 :
Nickel	mg/L	T	-	-	-	-	<0.34 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRWRE GW4	Douglas Well 11/10/2002 DOUGLASWELL-T01 N-GRW GW4	Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRWRE GW4	Douglas Well 11/10/2002 DOUGLASWELL-D01 N-GRW GW4	Douglas Well 1/23/2003 DOUGLASWELL-T01 N-GRW GW4	Douglas Well 1/23/2003 DOUGLASWELL-D01 N-GRW GW4
Nickel	mg/L	D	-	-	<0.34 :	-	-	<0.34 :
Potassium	mg/L	T	-	-	-	-	<31.4 :	-
Potassium	mg/L	D	-	-	<31.4 J	-	-	<31.4 :
Selenium	mg/L	T	-	-	-	-	<0.008 :	-
Selenium	mg/L	D	-	-	<0.008 :	-	-	<0.008 :
Silver	mg/L	T	-	-	-	-	<0.001 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T	-	-	-	-	42.3 :	-
Sodium	mg/L	D	-	-	<36.6 :	-	-	<36.6 :
Thallium	mg/L	T	-	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	-	-	-	<0.002 :	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	<0.002 :
Zinc	mg/L	T	-	-	-	-	4.32 :	-
Zinc	mg/L	D	-	-	4.36 :	-	-	3.92 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 J	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	-	-	-	0.0024 :	-
Lead	mg/L	D	-	-	0.001 :	-	-	<0.001 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			Douglas Well		Douglas Well		Douglas Well		Douglas Well		Douglas Well		Douglas Well				
			4/10/2003		4/10/2003		7/7/2003		7/7/2003		10/20/2003		10/20/2003				
			DOUGLASWELL-T01		DOUGLASWELL-D01		DOUGLASWELL-T01		DOUGLASWELL-D01		DOUGLASWELL-T01		DOUGLASWELL-D01				
			N-GRW		N-GRW		N-GRW		N-GRW		N-GRW		N-GRW				
			GW4		GW4		GW4		GW4		GW4		GW4				
Field Measurements																	
DO	mg/L	T	6.71	:	-		6.9	:	-		7.46	:	-				
Eh	millivolts	T	293.	:	-		168.4	:	-		242.7	:	-				
pH	SU	T	5.	J	-		5.2	J	-		5.7	J	-				
Specific Conductance	uS/cm	T	1116.	:	-		688.	:	-		522.	:	-				
Temperature	Celsius	T	9.75	:	-		10.66	:	-		8.83	:	-				
Turbidity	NTU	T	2.7	:	-		20.2	:	-		2.3	:	-				
General Chemistry																	
Ammonia	mg/L	T	<0.22	:	-		<0.11	J	-		<0.041	J	-				
Bicarbonate (as CaCO3)	mg/L	T	<4.8	:	-		<6.3	:	-		<7.1	:	-				
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-				
Chloride	mg/L	T	9.8	:	-		5.1	:	-		4.7	:	-				
Fluoride	mg/L	T	14.6	:	-		9.1	J	-		6.6	:	-				
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-				
Nitrate	mg/L	T	1.7	J	-		0.69	:	-		0.64	J	-				
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	J	-				
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-				
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		0.01	:	-				
Sulfate	mg/L	T	487.	J	-		285.	J	-		214.	J	-				
Total Alkalinity	mg/L	T	<4.8	:	-		<6.3	:	-		<7.1	:	-				
Total Dissolved Solids	mg/L	T	966.	:	-		594.	:	-		406.	:	-				
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		<0.24	:	-		<0.24	:	-				
Total Organic Carbon	mg/L	T	<1.8	J	-		<1.	J	-		1.2	J	-				
Total Suspended Solids	mg/L	T	<1.5	:	-		3.1	:	-		<0.9	:	-				
Laboratory Parameters																	
pH	SU	T	5.	J	-		5.2	J	-		5.7	J	-				
Specific Conductance	umhos/cm	T	1010.	J	-		620.	J	-		489.	J	-				
Inorganics																	
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-				
Physical Properties																	
Hardness	mg/L	T	551.	:	-		317.	:	-		237.	:	-				
Hardness	mg/L	D	-		514.	:	-		359.	:	-		250.	:			
Metals																	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Douglas Well 4/10/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 4/10/2003 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 7/7/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 7/7/2003 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 10/20/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 10/20/2003 DOUGLASWELL-D01 N-GRW GW4	
Aluminum	mg/L	T	16.	:	-		8.78	:	-		6.69	:	-	
Aluminum	mg/L	D	-		16.7	:	-		10.4	:	-		6.36	:
Antimony	mg/L	T	<0.072	:	-		<0.038	:	-		<0.052	:	-	
Antimony	mg/L	D	-		<0.072	:	-		<0.038	:	-		<0.052	:
Arsenic	mg/L	T	<0.04	:	-		<0.024	:	-		<0.002	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.024	:	-		<0.002	:
Barium	mg/L	T	<0.123	:	-		<0.073	:	-		<0.115	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.073	:	-		<0.115	:
Beryllium	mg/L	T	<0.0165	:	-		0.0062	:	-		0.0051	:	-	
Beryllium	mg/L	D	-		<0.0118	:	-		0.005	:	-		0.0058	:
Boron	mg/L	T	<0.084	:	-		<0.046	:	-		<0.063	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.046	:	-		<0.063	:
Cadmium	mg/L	T	0.0208	:	-		0.0124	:	-		<0.13	:	-	
Cadmium	mg/L	D	-		0.0223	:	-		0.0111	:	-		<0.13	:
Calcium	mg/L	T	120.	:	-		72.8	:	-		53.9	:	-	
Calcium	mg/L	D	-		113.	:	-		80.5	:	-		57.2	:
Chromium	mg/L	T	<0.01	:	-		<0.006	J	-		<0.23	J	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.006	J	-		<0.23	J
Cobalt	mg/L	T	<0.038	:	-		<0.018	:	-		<0.32	:	-	
Cobalt	mg/L	D	-		<0.038	:	-		0.0231	:	-		<0.32	:
Copper	mg/L	T	0.19	:	-		0.119	:	-		0.269	:	-	
Copper	mg/L	D	-		0.198	:	-		0.116	:	-		<0.23	:
Iron	mg/L	T	2.89	:	-		2.93	:	-		<4.55	:	-	
Iron	mg/L	D	-		<1.16	:	-		2.26	:	-		<4.55	:
Lead	mg/L	T	<0.001	J	-		<0.001	:	-		0.0065	:	-	
Lead	mg/L	D	-		<0.001	J	-		0.0016	:	-		0.0023	:
Magnesium	mg/L	T	61.	:	-		32.9	:	-		24.9	:	-	
Magnesium	mg/L	D	-		56.3	:	-		38.4	:	-		26.	:
Manganese	mg/L	T	7.11	:	-		3.38	J	-		2.07	:	-	
Manganese	mg/L	D	-		7.28	:	-		4.94	J	-		2.18	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.016	:	-		<0.011	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.016	:	-		<0.011	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Douglas Well 4/10/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 4/10/2003 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 7/7/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 7/7/2003 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 10/20/2003 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 10/20/2003 DOUGLASWELL-D01 N-GRW GW4	
Nickel	mg/L	T	0.337	:	-		0.154	:	-		<0.45	:	-	
Nickel	mg/L	D	-		0.357	:	-		0.173	:	-		0.63	:
Potassium	mg/L	T	<3.26	:	-		<2.5	:	-		<63.8	:	-	
Potassium	mg/L	D	-		<3.26	:	-		<2.5	:	-		<63.8	:
Selenium	mg/L	T	0.0052	:	-		<0.008	:	-		<0.003	:	-	
Selenium	mg/L	D	-		<0.005	:	-		<0.008	J	-		<0.003	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	12.	:	-		<11.4	:	-		<99.1	:	-	
Sodium	mg/L	D	-		12.8	:	-		<10.1	:	-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	3.14	:	-		1.59	:	-		<1.28	:	-	
Zinc	mg/L	D	-		3.08	:	-		1.77	:	-		<1.33	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	<0.001	J	-		<0.001	:	-		0.0065	:	-	
Lead	mg/L	D	-		<0.001	J	-		0.0016	:	-		0.0023	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Douglas Well	Douglas Well	Douglas Well	Douglas Well	Elephant Rock CG Well 1	Elephant Rock CG Well 1
			Sample Date	1/12/2004	1/12/2004	5/9/2004	5/9/2004	6/3/2003	6/3/2003
			Sample ID	DOUGLASWELL-T01N-GRW	DOUGLASWELL-D01N-GRW	DOUGLASWELL-T01N-GRW	DOUGLASWELL-D01N-GRW	ELEROCKCGWELL1-T01N-GRW	ELEROCKCGWELL1-D01N-GRW
				GW4	GW4	GW4	GW4	OMR	OMR
Field Measurements									
DO	mg/L	T		7.57 :	-	2.52 :	-	-	-
Eh	millivolts	T		328.4 :	-	5.3 :	-	-	-
pH	SU	T		5.4 J	-	5.4 J	-	6.9 J	-
Specific Conductance	uS/cm	T		614. :	-	562. :	-	-	-
Temperature	Celsius	T		7.01 :	-	14.31 :	-	-	-
Turbidity	NTU	T		0. :	-	22.1 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.065 J	-	<0.06 :	-	<0.068 J	-
Bicarbonate (as CaCO3)	mg/L	T		<2.6 :	-	<5.2 :	-	54.2 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		5. :	-	6.1 :	-	<12.7 :	-
Fluoride	mg/L	T		7.2 :	-	4.8 :	-	0.32 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.81 J	-	0.55 J	-	<0.4 :	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 :	-	0.036 J	-
Phosphorus	mg/L	T		<0.01 :	-	<0.01 :	-	-	-
Sulfate	mg/L	T		317. :	-	280. :	-	68.2 J	-
Total Alkalinity	mg/L	T		<2.6 :	-	<5.2 :	-	54.2 :	-
Total Dissolved Solids	mg/L	T		514. :	-	430. :	-	638. J	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		<1. :	-	<1. :	-	1.4 J	-
Total Suspended Solids	mg/L	T		<0.7 :	-	6.1 :	-	<0.7 J	-
Laboratory Parameters									
pH	SU	T		5.4 J	-	5.4 J	-	6.9 J	-
Specific Conductance	umhos/cm	T		624. J	-	531. J	-	267. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		282. :	-	233. :	-	123. :	-
Hardness	mg/L	D		-	277. :	-	217. :	-	119. :
Metals									

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Douglas Well 1/12/2004 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 1/12/2004 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 5/9/2004 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 5/9/2004 DOUGLASWELL-D01 N-GRW GW4		Elephant Rock CG Well 1 6/3/2003 ELEROCKCGWELL1-T01N-GRW OMR		Elephant Rock CG Well 1 6/3/2003 ELEROCKCGWELL1-D01N-GRW OMR	
Aluminum	mg/L	T	6.72	:	-		5.68	:	-		<0.426	:	-	
Aluminum	mg/L	D	-		6.54	:	-		4.53	:	-		<0.426	:
Antimony	mg/L	T	<0.029	:	-		<0.027	:	-		<0.0005	:	-	
Antimony	mg/L	D	-		<0.029	:	-		<0.027	:	-		<0.001	:
Arsenic	mg/L	T	<0.028	J	-		<0.026	:	-		<0.0002	:	-	
Arsenic	mg/L	D	-		<0.028	J	-		<0.026	:	-		<0.0004	:
Barium	mg/L	T	<0.053	:	-		0.0173	:	-		0.0219	:	-	
Barium	mg/L	D	-		<0.053	:	-		0.0178	:	-		0.0212	:
Beryllium	mg/L	T	0.0053	:	-		0.0043	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		0.0051	:	-		0.0034	:	-		<0.0003	:
Boron	mg/L	T	<0.023	:	-		<0.018	:	-		<0.0084	:	-	
Boron	mg/L	D	-		<0.023	:	-		<0.018	:	-		<0.0084	:
Cadmium	mg/L	T	<0.07	J	-		<0.1	:	-		<0.0011	:	-	
Cadmium	mg/L	D	-		<0.07	:	-		<0.1	:	-		<0.00095	:
Calcium	mg/L	T	62.2	:	-		53.3	:	-		36.8	:	-	
Calcium	mg/L	D	-		61.1	:	-		48.9	:	-		35.6	:
Chromium	mg/L	T	<0.57	:	-		<0.13	:	-		<0.0012	:	-	
Chromium	mg/L	D	-		<0.57	:	-		<0.13	:	-		<0.001	:
Cobalt	mg/L	T	<0.37	:	-		<0.18	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.37	:	-		<0.18	:	-		<0.0038	:
Copper	mg/L	T	<0.35	:	-		<0.27	:	-		0.0112	:	-	
Copper	mg/L	D	-		<0.35	:	-		<0.27	:	-		0.0083	:
Iron	mg/L	T	<4.23	:	-		24.1	:	-		<0.422	:	-	
Iron	mg/L	D	-		<4.23	:	-		13.6	:	-		<0.422	:
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		<0.00024	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-		<0.0002	:
Magnesium	mg/L	T	<48.5	:	-		24.2	:	-		7.62	:	-	
Magnesium	mg/L	D	-		<48.5	:	-		23.1	:	-		7.36	:
Manganese	mg/L	T	3.76	:	-		3.05	:	-		<0.013	:	-	
Manganese	mg/L	D	-		3.72	:	-		2.88	:	-		<0.013	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.024	:	-		<0.01	:	-		<0.0023	:	-	
Molybdenum	mg/L	D	-		<0.024	:	-		<0.01	:	-		<0.0023	:

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Douglas Well 1/12/2004 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 1/12/2004 DOUGLASWELL-D01 N-GRW GW4		Douglas Well 5/9/2004 DOUGLASWELL-T01 N-GRW GW4		Douglas Well 5/9/2004 DOUGLASWELL-D01 N-GRW GW4		Elephant Rock CG Well 1 6/3/2003 ELEROCKCGWELL1-T01N-GRW OMR		Elephant Rock CG Well 1 6/3/2003 ELEROCKCGWELL1-D01N-GRW OMR	
Nickel	mg/L	T	<1.68	:	-		<0.33	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<1.68	:	-		<0.33	:	-		<0.003	:
Potassium	mg/L	T	<110.	:	-		<15.5	:	-		1.15	:	-	
Potassium	mg/L	D	-		<110.	:	-		<15.5	:	-		1.12	:
Selenium	mg/L	T	<0.003	J	-		<0.007	:	-		<0.0008	:	-	
Selenium	mg/L	D	-		<0.003	:	-		<0.007	:	-		<0.0016	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.00022	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.00024	:
Sodium	mg/L	T	<92.	:	-		<32.8	:	-		<9.16	:	-	
Sodium	mg/L	D	-		<92.	:	-		<32.8	:	-		<9.16	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		<0.0002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.0004	:
Zinc	mg/L	T	1.58	:	-		3.21	:	-		0.0873	:	-	
Zinc	mg/L	D	-		1.49	:	-		2.94	:	-		0.0766	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		<0.00024	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-		<0.0002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Elephant Rock CG Well 1	Elephant Rock CG Well 1	Elephant Rock CG Well 1
			6/3/2003	7/16/2003	7/16/2003
			Elephant Rock CG Well 1-T01N-GRW OMR	ELEPHANTROCKCG WELL-T01N-GRW OMR	ELEPHANTROCKCG WELL-D01N-GRW OMR
Field Measurements					
DO	mg/L	T	7.91 :	7.08 :	-
Eh	millivolts	T	341.2 :	272.4 :	-
pH	SU	T	6.79 :	7.1 J	-
Specific Conductance	uS/cm	T	280. :	254. :	-
Temperature	Celsius	T	12.44 :	17.74 :	-
Turbidity	NTU	T	0.7 :	22.2 :	-
General Chemistry					
Ammonia	mg/L	T	-	<0.13 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	52. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-
Chloride	mg/L	T	-	4.1 :	-
Fluoride	mg/L	T	-	0.33 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-
Nitrate	mg/L	T	-	<1. J	-
Nitrite	mg/L	T	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-
Phosphorus	mg/L	T	-	<0.01 :	-
Sulfate	mg/L	T	-	71.7 J	-
Total Alkalinity	mg/L	T	-	52. :	-
Total Dissolved Solids	mg/L	T	-	144. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. J	-
Total Suspended Solids	mg/L	T	-	<0.5 :	-
Laboratory Parameters					
pH	SU	T	6.79 :	7.1 J	-
Specific Conductance	umhos/cm	T	-	225. J	-
Inorganics					
Cyanide	mg/L	T	-	<0.01 J	-
Physical Properties					
Hardness	mg/L	T	-	120. :	-
Hardness	mg/L	D	-	-	119. :
Metals					

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Fagerquist Well	Fagerquist Well	Fagerquist Well
			11/10/2002	11/10/2002	1/20/2003
			FAGERQUISTWELL-T01N-GRW GW4	FAGERQUISTWELL-D01N-GRW GW4	FAGERQUISTWELL-T01N-GRW GW4
Field Measurements					
DO	mg/L	T	9.65 :	-	9.48 :
Eh	millivolts	T	314.5 :	-	392.4 :
pH	SU	T	7.12 :	-	6.53 :
Specific Conductance	uS/cm	T	175. :	-	173. :
Temperature	Celsius	T	7.45 :	-	6.82 :
Turbidity	NTU	T	7.3 :	-	0. :
General Chemistry					
Ammonia	mg/L	T	<0.12 :	-	<0.057 :
Bicarbonate (as CaCO3)	mg/L	T	79.3 :	-	77.3 :
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :
Chloride	mg/L	T	0.67 :	-	<0.67 :
Fluoride	mg/L	T	0.26 :	-	0.33 :
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :
Nitrate	mg/L	T	<0.4 J	-	<0.4 :
Nitrite	mg/L	T	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T	<0.01 J	-	0.013 :
Sulfate	mg/L	T	10.5 :	-	9.9 J
Total Alkalinity	mg/L	T	79.3 :	-	77.3 :
Total Dissolved Solids	mg/L	T	<94. :	-	<98. :
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	<1. :	-	<1. :
Total Suspended Solids	mg/L	T	<0.5 :	-	<1.1 :
Laboratory Parameters					
pH	SU	T	7.12 :	-	6.53 :
Specific Conductance	umhos/cm	T	-	-	-
Inorganics					
Cyanide	mg/L	T	<0.01 :	-	<0.01 J
Physical Properties					
Hardness	mg/L	T	87.3 :	-	87.6 :
Hardness	mg/L	D	-	86. :	-
Metals					

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Elephant Rock CG Well 1 6/3/2003 Elephant Rock CG Well 1-T01N-GRW OMR	Elephant Rock CG Well 1 7/16/2003 ELEPHANTROCKCG WELL-T01N-GRW OMR	Elephant Rock CG Well 1 7/16/2003 ELEPHANTROCKCG WELL-D01N-GRW OMR	Fagerquist Well 11/10/2002 FAGERQUISTWELL-T01N-GRW GW4	Fagerquist Well 11/10/2002 FAGERQUISTWELL-D01N-GRW GW4	Fagerquist Well 1/20/2003 FAGERQUISTWELL-T01N-GRW GW4
Aluminum	mg/L	T	-	<0.631 :	-	<0.006 :	-	<0.226 :
Aluminum	mg/L	D	-	-	<0.631 :	-	<0.006 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.0004 :	-	<0.0006 :
Antimony	mg/L	D	-	-	<0.001 :	-	<0.0004 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	-	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0197 :	-	0.0512 :	-	0.0492 :
Barium	mg/L	D	-	-	0.0193 :	-	0.0507 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0059 :	-	<0.0048 :	-	<0.0027 :
Boron	mg/L	D	-	-	0.0052 :	-	<0.0048 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0002 :	-	<0.0004 :
Cadmium	mg/L	D	-	-	<0.0003 :	-	<0.0002 :	-
Calcium	mg/L	T	-	35.7 :	-	30. :	-	30. :
Calcium	mg/L	D	-	-	35.2 :	-	29.6 :	-
Chromium	mg/L	T	-	<0.0006 :	-	<0.0046 :	-	<0.0037 :
Chromium	mg/L	D	-	-	<0.0006 :	-	<0.0046 :	-
Cobalt	mg/L	T	-	<0.0018 :	-	<0.0022 :	-	<0.0016 :
Cobalt	mg/L	D	-	-	<0.0018 :	-	<0.0022 :	-
Copper	mg/L	T	-	0.0136 :	-	0.0028 :	-	0.017 :
Copper	mg/L	D	-	-	0.0073 :	-	0.0035 :	-
Iron	mg/L	T	-	<0.667 :	-	<0.0226 :	-	<0.512 :
Iron	mg/L	D	-	-	<0.667 :	-	<0.0226 :	-
Lead	mg/L	T	-	<0.00026 :	-	<0.0002 :	-	0.0084 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	7.51 :	-	3. :	-	3.06 :
Magnesium	mg/L	D	-	-	7.42 :	-	2.95 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.0086 :	-	<0.028 :
Manganese	mg/L	D	-	-	<0.019 :	-	<0.0013 :	-
Mercury	mg/L	T	-	<0.00015 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.00015 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0016 :	-	<0.0033 J	-	<0.0041 :
Molybdenum	mg/L	D	-	-	<0.0016 :	-	<0.0027 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Elephant Rock CG Well 1 6/3/2003 Elephant Rock CG Well 1-T01N-GRW OMR		Elephant Rock CG Well 1 7/16/2003 ELEPHANTROCKCG WELL-T01N-GRW OMR		Elephant Rock CG Well 1 7/16/2003 ELEPHANTROCKCG WELL-D01N-GRW OMR		Fagerquist Well 11/10/2002 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 11/10/2002 FAGERQUISTWELL-D01N-GRW GW4		Fagerquist Well 1/20/2003 FAGERQUISTWELL-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.002	:	-		<0.0004	J	-		<0.0015	:
Nickel	mg/L	D	-		-		<0.002	:	-		<0.0004	J	-	
Potassium	mg/L	T	-		<1.45	:	-		0.997	:	-		1.42	:
Potassium	mg/L	D	-		-		<1.44	:	-		1.02	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0004	:	-		<0.0016	:
Selenium	mg/L	D	-		-		<0.0016	J	-		0.00044	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		<5.32	:	-		2.18	:	-		<5.75	:
Sodium	mg/L	D	-		-		<5.32	:	-		2.11	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		0.00022	:	-		0.00062	:
Vanadium	mg/L	D	-		-		<0.0004	:	-		0.00025	:	-	
Zinc	mg/L	T	-		<0.073	:	-		0.0108	:	-		0.0356	:
Zinc	mg/L	D	-		-		<0.076	:	-		0.0116	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		-		-		<0.00025	J	-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		<0.00026	:	-		<0.0002	:	-		0.0084	:
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Fagerquist Well	Fagerquist Well	Fagerquist Well
			1/20/2003	4/3/2003	4/3/2003
			FAGERQUISTWELL-D01N-GRW	FAGERQUIST-T01N-GRW	FAGERQUIST-D01N-GRW
			GW4	GW4	GW4
Field Measurements					
DO	mg/L	T	-	11.32 :	-
Eh	millivolts	T	-	70. :	-
pH	SU	T	-	7.2 J	-
Specific Conductance	uS/cm	T	-	166. :	-
Temperature	Celsius	T	-	5.64 :	-
Turbidity	NTU	T	-	0. :	-
General Chemistry					
Ammonia	mg/L	T	-	<0.057 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	72.4 :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-
Chloride	mg/L	T	-	<1.2 :	-
Fluoride	mg/L	T	-	0.26 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-
Nitrate	mg/L	T	-	<0.4 J	-
Nitrite	mg/L	T	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-
Phosphorus	mg/L	T	-	<0.01 :	-
Sulfate	mg/L	T	-	11.2 J	-
Total Alkalinity	mg/L	T	-	72.4 :	-
Total Dissolved Solids	mg/L	T	-	<136. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<5. J	-
Total Suspended Solids	mg/L	T	-	<0.5 :	-
Laboratory Parameters					
pH	SU	T	-	7.2 J	-
Specific Conductance	umhos/cm	T	-	162. J	-
Inorganics					
Cyanide	mg/L	T	-	<0.01 J	-
Physical Properties					
Hardness	mg/L	T	-	84.4 :	-
Hardness	mg/L	D	85.8 :	-	86.4 :
Metals					

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			Fagerquist Well	Fagerquist Well	Fagerquist Well
			7/16/2003	7/16/2003	7/16/2003
			FAGERQUISTWELL-T01N-GRW	FAGERQUISTWELL-D01N-GRW	FAGERQUIST-T01N-GRW
			GW4	GW4	GW4
Field Measurements					
DO	mg/L	T	-	-	5.73 :
Eh	millivolts	T	-	-	294. :
pH	SU	T	7.3 J	-	7.35 :
Specific Conductance	uS/cm	T	-	-	139. :
Temperature	Celsius	T	-	-	6.29 :
Turbidity	NTU	T	-	-	24.7 :
General Chemistry					
Ammonia	mg/L	T	<0.17 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	69.4 :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-
Chloride	mg/L	T	<0.77 :	-	-
Fluoride	mg/L	T	0.27 :	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-
Nitrate	mg/L	T	<1. J	-	-
Nitrite	mg/L	T	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-
Phosphorus	mg/L	T	<0.01 :	-	-
Sulfate	mg/L	T	<9.2 J	-	-
Total Alkalinity	mg/L	T	69.4 :	-	-
Total Dissolved Solids	mg/L	T	<82. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-
Total Organic Carbon	mg/L	T	<1. J	-	-
Total Suspended Solids	mg/L	T	<0.5 :	-	-
Laboratory Parameters					
pH	SU	T	7.3 J	-	7.35 :
Specific Conductance	umhos/cm	T	123. J	-	-
Inorganics					
Cyanide	mg/L	T	<0.01 J	-	-
Physical Properties					
Hardness	mg/L	T	71.3 :	-	-
Hardness	mg/L	D	-	72.6 :	-
Metals					

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Fagerquist Well 1/20/2003 FAGERQUISTWELL-D01N-GRW GW4	Fagerquist Well 4/3/2003 FAGERQUIST-T01N-GRW GW4	Fagerquist Well 4/3/2003 FAGERQUIST-D01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUISTWELL-T01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUISTWELL-D01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUIST-T01N-GRW GW4
Aluminum	mg/L	T	-	<0.0277 :	-	<0.631 :	-	-
Aluminum	mg/L	D	<0.226 :	-	<0.0277 :	-	<0.631 :	-
Antimony	mg/L	T	-	<0.0006 J	-	<0.001 :	-	-
Antimony	mg/L	D	<0.0006 :	-	<0.0006 J	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0469 :	-	0.0427 :	-	-
Barium	mg/L	D	0.0468 :	-	0.0479 :	-	0.0436 :	-
Beryllium	mg/L	T	-	<0.0003 :	-	<0.0002 :	-	-
Beryllium	mg/L	D	<0.0002 :	-	<0.0003 :	-	<0.0002 :	-
Boron	mg/L	T	-	<0.0075 :	-	<0.0046 :	-	-
Boron	mg/L	D	<0.0027 :	-	<0.0075 :	-	<0.0046 :	-
Cadmium	mg/L	T	-	<0.0004 :	-	<0.0003 :	-	-
Cadmium	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0003 :	-
Calcium	mg/L	T	-	29. :	-	<2.94 :	-	-
Calcium	mg/L	D	29.4 :	-	29.7 :	-	24.8 :	-
Chromium	mg/L	T	-	<0.0009 :	-	<0.0011 :	-	-
Chromium	mg/L	D	<0.0037 :	-	<0.0014 :	-	<0.0006 :	-
Cobalt	mg/L	T	-	<0.0029 :	-	<0.0018 :	-	-
Cobalt	mg/L	D	<0.0016 :	-	<0.0029 :	-	<0.0018 :	-
Copper	mg/L	T	-	0.0029 :	-	<0.0031 :	-	-
Copper	mg/L	D	<0.0017 :	-	0.0027 :	-	0.0028 :	-
Iron	mg/L	T	-	<0.0299 :	-	<0.667 :	-	-
Iron	mg/L	D	<0.266 :	-	0.043 :	-	<0.667 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	2.9 :	-	<2.93 :	-	-
Magnesium	mg/L	D	3. :	-	2.98 :	-	<2.93 :	-
Manganese	mg/L	T	-	<0.0009 :	-	<0.019 :	-	-
Manganese	mg/L	D	<0.028 :	-	<0.0009 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.00016 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.00015 :	-
Molybdenum	mg/L	T	-	<0.004 :	-	<0.0016 :	-	-
Molybdenum	mg/L	D	<0.0043 :	-	<0.0035 :	-	0.0018 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Fagerquist Well 1/20/2003 FAGERQUISTWELL-D01N-GRW GW4	Fagerquist Well 4/3/2003 FAGERQUIST-T01N-GRW GW4	Fagerquist Well 4/3/2003 FAGERQUIST-D01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUISTWELL-T01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUISTWELL-D01N-GRW GW4	Fagerquist Well 7/16/2003 FAGERQUIST-T01N-GRW GW4
Nickel	mg/L	T	-	<0.0026 :	-	<0.002 :	-	-
Nickel	mg/L	D	<0.0015 :	-	<0.0026 :	-	<0.002 :	-
Potassium	mg/L	T	-	1.08 :	-	<1.24 :	-	-
Potassium	mg/L	D	1.26 :	-	1.12 :	-	<1.19 :	-
Selenium	mg/L	T	-	<0.001 :	-	<0.0016 :	-	-
Selenium	mg/L	D	<0.0016 :	-	<0.001 :	-	<0.0016 J	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 J	-	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 J	-
Sodium	mg/L	T	-	2.44 :	-	<5.32 :	-	-
Sodium	mg/L	D	<5.18 :	-	2.57 :	-	<5.32 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0002 :	-	<0.0004 :	-	-
Vanadium	mg/L	D	<0.0004 :	-	<0.0002 :	-	<0.0004 :	-
Zinc	mg/L	T	-	0.0106 :	-	<0.016 :	-	-
Zinc	mg/L	D	<0.028 :	-	0.0104 :	-	<0.0332 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 :	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	-	-
Isotopes								
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Fagerquist Well	Fagerquist Well	Fagerquist Well	Fagerquist Well	Fagerquist Well	Fagerquist Well
			Sample Date	10/16/2003	10/16/2003	1/9/2004	1/9/2004	4/16/2004	4/16/2004
			Sample ID	FAGERQUISTWELL-T01N-GRW GW4	FAGERQUISTWELL-D01N-GRW GW4	FAGERQUISTWELL-T01N-GRW GW4	FAGERQUISTWELL-D01N-GRW GW4	FAGERQUISTWELL-T01N-GRW GW4	FAGERQUISTWELL-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		8.59 :	-	7.65 :	-	-	-
Eh	millivolts	T		105.1 :	-	264.3 :	-	-	-
pH	SU	T		7.3 J	-	7.2 J	-	7.5 J	-
Specific Conductance	uS/cm	T		160. :	-	166. :	-	-	-
Temperature	Celsius	T		7.45 :	-	6.45 :	-	-	-
Turbidity	NTU	T		0. :	-	2.8 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.074 J	-	<0.045 J	-	<0.04 :	-
Bicarbonate (as CaCO3)	mg/L	T		80.4 :	-	76.7 :	-	75.5 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<0.57 :	-	<0.73 :	-	<1.8 :	-
Fluoride	mg/L	T		0.29 :	-	0.28 :	-	0.29 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 J	-	<0.24 :	-	0.44 :	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Phosphorus	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
Sulfate	mg/L	T		<8.8 J	-	9.8 :	-	10.4 J	-
Total Alkalinity	mg/L	T		80.4 :	-	76.7 :	-	75.5 :	-
Total Dissolved Solids	mg/L	T		108. J	-	100. :	-	114. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. J	-	<1. :	-	<1. J	-
Total Suspended Solids	mg/L	T		<0.5 :	-	<0.5 :	-	<1.4 J	-
Laboratory Parameters									
pH	SU	T		7.3 J	-	7.2 J	-	7.5 J	-
Specific Conductance	umhos/cm	T		198. J	-	145. J	-	155. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		84. :	-	80.9 :	-	76.5 :	-
Hardness	mg/L	D		-	84.9 :	-	81.6 :	-	72.6 :
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Fagerquist Well 10/16/2003 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 10/16/2003 FAGERQUISTWELL-D01N-GRW GW4		Fagerquist Well 1/9/2004 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 1/9/2004 FAGERQUISTWELL-D01N-GRW GW4		Fagerquist Well 4/16/2004 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 4/16/2004 FAGERQUISTWELL-D01N-GRW GW4	
Aluminum	mg/L	T	<0.217	:	-		<0.514	:	-		<0.236	:	-	
Aluminum	mg/L	D	-		<0.217	:	-		<0.514	:	-		<0.201	:
Antimony	mg/L	T	<0.001	:	-		<0.0024	:	-		<0.00096	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0024	:	-		<0.0011	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0519	:	-		0.0478	:	-		0.0457	:	-	
Barium	mg/L	D	-		0.0508	:	-		0.048	:	-		0.0447	:
Beryllium	mg/L	T	<0.0004	:	-		<0.0003	:	-		<0.0003	J	-	
Beryllium	mg/L	D	-		<0.0004	:	-		<0.0003	:	-		<0.0003	J
Boron	mg/L	T	<0.0063	:	-		<0.0044	:	-		<0.0036	:	-	
Boron	mg/L	D	-		<0.0063	:	-		<0.0057	:	-		0.004	:
Cadmium	mg/L	T	<0.0005	:	-		<0.0007	J	-		<0.0003	:	-	
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0007	:	-		<0.0003	:
Calcium	mg/L	T	28.7	:	-		27.7	:	-		26.4	:	-	
Calcium	mg/L	D	-		29.	:	-		28.	:	-		25.4	:
Chromium	mg/L	T	<0.0011	J	-		<0.0015	J	-		<0.0008	:	-	
Chromium	mg/L	D	-		<0.0011	J	-		<0.0015	J	-		<0.0006	:
Cobalt	mg/L	T	<0.0029	:	-		<0.0023	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0023	:	-		<0.0016	:
Copper	mg/L	T	0.0039	:	-		0.008	:	-		0.0053	:	-	
Copper	mg/L	D	-		0.0036	:	-		0.005	:	-		0.0061	:
Iron	mg/L	T	<0.455	:	-		<0.373	:	-		<0.293	J	-	
Iron	mg/L	D	-		<0.455	:	-		<0.373	:	-		<0.293	:
Lead	mg/L	T	<0.0004	:	-		0.0003	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Magnesium	mg/L	T	2.97	:	-		2.85	:	-		2.58	:	-	
Magnesium	mg/L	D	-		3.03	:	-		2.83	:	-		2.24	:
Manganese	mg/L	T	<0.016	:	-		<0.015	:	-		<0.014	J	-	
Manganese	mg/L	D	-		<0.016	:	-		<0.015	:	-		<0.014	J
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.003	:	-		0.0039	:	-		0.0057	J	-	
Molybdenum	mg/L	D	-		<0.0024	:	-		0.0033	:	-		<0.004	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Fagerquist Well 10/16/2003 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 10/16/2003 FAGERQUISTWELL-D01N-GRW GW4		Fagerquist Well 1/9/2004 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 1/9/2004 FAGERQUISTWELL-D01N-GRW GW4		Fagerquist Well 4/16/2004 FAGERQUISTWELL-T01N-GRW GW4		Fagerquist Well 4/16/2004 FAGERQUISTWELL-D01N-GRW GW4	
Nickel	mg/L	T	<0.0024	:	-		<0.0024	J	-		<0.0014	J	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.0024	J	-		<0.0015	J
Potassium	mg/L	T	<0.925	J	-		0.927	:	-		1.	:	-	
Potassium	mg/L	D	-		<1.28	J	-		0.884	:	-		0.938	:
Selenium	mg/L	T	<0.0006	:	-		0.00066	J	-		<0.0014	:	-	
Selenium	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0014	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	<9.91	:	-		<4.9	:	-		<3.28	J	-	
Sodium	mg/L	D	-		<9.91	:	-		<4.9	:	-		<3.28	J
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.00021	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00021	:
Vanadium	mg/L	T	<0.0002	:	-		<0.0004	:	-		0.00044	:	-	
Vanadium	mg/L	D	-		0.00032	:	-		<0.0004	:	-		0.00042	:
Zinc	mg/L	T	0.0223	:	-		0.0297	:	-		0.0345	:	-	
Zinc	mg/L	D	-		0.0206	:	-		0.0354	:	-		0.235	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-97.7	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.7	:	-	
Lead	mg/L	T	<0.0004	:	-		0.0003	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Fagerquist Well	GWW-1	GWW-1	GWW-1	GWW-1	GWW-1
			Sample Date	4/16/2004	2/8/2003	2/8/2003	2/8/2003	3/5/2003	3/5/2003
			Sample ID	FAGERQUIST-T01N-GRW	GWW-1-T01N-GRWRE	GWW-1-T01N-GRW	GWW-1-D01N-GRW	GWW-1-T01N-GRWRE	GWW-1-T01N-GRW
				GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		9.55 :	-	5.35 :	-	-	8.62 :
Eh	millivolts	T		154.9 :	-	349.5 :	-	-	424. :
pH	SU	T		7.93 :	-	4.47 :	-	-	4.52 :
Specific Conductance	uS/cm	T		173. :	-	227. :	-	-	1910. :
Temperature	Celsius	T		7.31 :	-	7.57 :	-	-	7.3 :
Turbidity	NTU	T		1.9 :	-	15.5 :	-	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	-	0.14 :	-	-	<0.056 J
Bicarbonate (as CaCO3)	mg/L	T		-	-	<1.5 :	-	-	<1.6 :
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	-	<1. :
Chloride	mg/L	T		-	-	22.6 :	-	-	20.7 :
Fluoride	mg/L	T		-	39.2 J	-	-	37. J	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T		-	-	5. J	-	-	4.6 :
Nitrite	mg/L	T		-	-	<0.005 J	-	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	-	0.018 J	-	-	0.017 :
Phosphorus	mg/L	T		-	-	<0.028 :	-	-	<0.02 J
Sulfate	mg/L	T		-	-	1090. J	-	-	1090. :
Total Alkalinity	mg/L	T		-	-	<1.5 :	-	-	<1.6 :
Total Dissolved Solids	mg/L	T		-	-	1750. :	-	-	1790. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	-	<1. :	-	-	<1.1 J
Total Suspended Solids	mg/L	T		-	-	1.5 :	-	-	1.4 J
Laboratory Parameters									
pH	SU	T		7.93 :	-	4.47 :	-	-	4.52 :
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	-	1090. :	-	-	1030. :
Hardness	mg/L	D		-	-	-	1120. :	-	-
Metals									
Aluminum	mg/L	T		-	-	55.9 :	-	-	48.9 :

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Fagerquist Well 4/16/2004 FAGERQUIST-T01N-GRW GW4	GWW-1 2/8/2003 GWW-1-T01N-GRWRE GW4	GWW-1 2/8/2003 GWW-1-T01N-GRW GW4	GWW-1 2/8/2003 GWW-1-D01N-GRW GW4	GWW-1 3/5/2003 GWW-1-T01N-GRWRE GW4	GWW-1 3/5/2003 GWW-1-T01N-GRW GW4
Aluminum	mg/L	D	-	-	-	55.8 :	-	-
Antimony	mg/L	T	-	-	0.0324 :	-	-	<0.028 :
Antimony	mg/L	D	-	-	-	<0.028 :	-	-
Arsenic	mg/L	T	-	-	<0.023 J	-	-	<0.023 :
Arsenic	mg/L	D	-	-	-	<0.023 J	-	-
Barium	mg/L	T	-	-	<0.048 :	-	-	<0.048 :
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	T	-	-	0.0115 :	-	-	0.0106 :
Beryllium	mg/L	D	-	-	-	0.0109 :	-	-
Boron	mg/L	T	-	-	<0.0386 :	-	-	<0.027 :
Boron	mg/L	D	-	-	-	<0.027 :	-	-
Cadmium	mg/L	T	-	-	0.0974 :	-	-	<0.08 :
Cadmium	mg/L	D	-	-	-	0.0895 :	-	-
Calcium	mg/L	T	-	-	216. :	-	-	204. J
Calcium	mg/L	D	-	-	-	223. :	-	-
Chromium	mg/L	T	-	-	<0.16 :	-	-	<0.16 :
Chromium	mg/L	D	-	-	-	<0.16 :	-	-
Cobalt	mg/L	T	-	-	<0.23 :	-	-	<0.23 :
Cobalt	mg/L	D	-	-	-	<0.23 :	-	-
Copper	mg/L	T	-	-	0.637 :	-	-	0.714 :
Copper	mg/L	D	-	-	-	0.67 :	-	-
Iron	mg/L	T	-	-	<2.66 J	-	-	<2.66 :
Iron	mg/L	D	-	-	-	<2.66 J	-	-
Lead	mg/L	T	-	-	0.0123 :	-	-	<0.001 :
Lead	mg/L	D	-	-	-	0.0039 :	-	-
Magnesium	mg/L	T	-	-	134. :	-	-	127. :
Magnesium	mg/L	D	-	-	-	138. :	-	-
Manganese	mg/L	T	-	-	23.8 J	-	-	23.2 :
Manganese	mg/L	D	-	-	-	25.1 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 J	-	-	<0.011 J
Molybdenum	mg/L	D	-	-	-	<0.011 J	-	-
Nickel	mg/L	T	-	-	0.721 :	-	-	0.544 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Fagerquist Well 4/16/2004 FAGERQUIST-T01N-GRW GW4	GWW-1 2/8/2003 GWW-1-T01N-GRW RE GW4	GWW-1 2/8/2003 GWW-1-T01N-GRW GW4	GWW-1 2/8/2003 GWW-1-D01N-GRW GW4	GWW-1 3/5/2003 GWW-1-T01N-GRWR E GW4	GWW-1 3/5/2003 GWW-1-T01N-GRW GW4
Nickel	mg/L	D	-	-	-	0.796 :	-	-
Potassium	mg/L	T	-	-	<8.83 :	-	-	<31.4 :
Potassium	mg/L	D	-	-	-	<6.75 :	-	-
Selenium	mg/L	T	-	-	<0.008 :	-	-	<0.008 J
Selenium	mg/L	D	-	-	-	<0.008 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<36.6 :	-	-	<36.6 :
Sodium	mg/L	D	-	-	-	<36.6 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	<0.002 :	-	-	0.0027 :
Vanadium	mg/L	D	-	-	-	<0.002 :	-	-
Zinc	mg/L	T	-	-	7.06 :	-	-	6.85 J
Zinc	mg/L	D	-	-	-	7.39 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 J	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 J	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 J	-	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0123 :	-	-	<0.001 :
Lead	mg/L	D	-	-	-	0.0039 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-1	3/5/2003	GWW-1-D01N-GRW		GWW-1	4/1/2003	GWW-1-T01N-GRW RE		GWW-1	4/1/2003	GWW-1-T01N-GRW		GWW-1	4/1/2003	GWW-1-D01N-GRW		GWW-1	5/5/2003	GWW-1-T01N-GRW		GWW-1	5/5/2003	GWW-1-D01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				-				6.49		:		-				10.92		:		-			
Eh	millivolts	T	-				-				459.6		:		-				419.3		:		-			
pH	SU	T	-				-				4.9	J			-				4.7	J			-			
Specific Conductance	uS/cm	T	-				-				1792.		:		-				1724.		:		-			
Temperature	Celsius	T	-				-				9.35		:		-				9.63		:		-			
Turbidity	NTU	T	-				-				2.6		:		-				12.2		:		-			
General Chemistry																										
Ammonia	mg/L	T	-				-				<0.17		:		-				<0.081		:		-			
Bicarbonate (as CaCO3)	mg/L	T	-				-				<1.3		:		-				<1.5		:		-			
Carbonate (as CaCO3)	mg/L	T	-				-				<1.		:		-				<1.		:		-			
Chloride	mg/L	T	-				-				29.9		:		-				<12.6		:		-			
Fluoride	mg/L	T	-				40.	J			-				-				34.4		:		-			
Hydroxide (as CaCO3)	mg/L	T	-				-				<1.		:		-				<1.		:		-			
Nitrate	mg/L	T	-				-				4.2	J			-				4.1	J			-			
Nitrite	mg/L	T	-				-				<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	-				-				<0.018	J			-				0.017	J			-			
Phosphorus	mg/L	T	-				-				0.034		:		-				<0.031		:		-			
Sulfate	mg/L	T	-				-				1040.	J			-				983.		:		-			
Total Alkalinity	mg/L	T	-				-				<1.3		:		-				<1.5		:		-			
Total Dissolved Solids	mg/L	T	-				-				1770.		:		-				1460.		:		-			
Total Kjeldahl Nitrogen	mg/L	T	-				-				<0.24		:		-				<0.24		:		-			
Total Organic Carbon	mg/L	T	-				-				<1.5	J			-				1.2		:		-			
Total Suspended Solids	mg/L	T	-				-				<0.7		:		-				2.8		:		-			
Laboratory Parameters																										
pH	SU	T	-				-				4.9	J			-				4.7	J			-			
Specific Conductance	umhos/cm	T	-				-				1600.	J			-				1620.	J			-			
Inorganics																										
Cyanide	mg/L	T	-				-				-				-				<0.01	J			-			
Physical Properties																										
Hardness	mg/L	T	-				-				900.		:		-				863.		:		-			
Hardness	mg/L	D	981.		:		-				-				878.		:		-				899.		:	
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			GWW-1	GWW-1	GWW-1	GWW-1	GWW-1	GWW-1		
			3/5/2003	4/1/2003	4/1/2003	4/1/2003	5/5/2003	5/5/2003		
			GWW-1-D01N-GRW	GWW-1-T01N-GRW RE	GWW-1-T01N-GRW	GWW-1-D01N-GRW	GWW-1-T01N-GRW	GWW-1-D01N-GRW		
			GW4	GW4	GW4	GW4	GW4	GW4		
Aluminum	mg/L	T	-	-	38.8	-	39.6	-		
Aluminum	mg/L	D	45.5	-	-	36.5	-	41.6		
Antimony	mg/L	T	-	-	<0.072	-	<0.048	-		
Antimony	mg/L	D	<0.0318	-	-	<0.072	-	<0.048		
Arsenic	mg/L	T	-	-	<0.04	-	<0.047	-		
Arsenic	mg/L	D	<0.04	-	-	<0.04	-	<0.047		
Barium	mg/L	T	-	-	<0.123	-	<0.135	-		
Barium	mg/L	D	<0.048	-	-	<0.123	-	<0.135		
Beryllium	mg/L	T	-	-	<0.025	-	0.0107	-		
Beryllium	mg/L	D	0.0113	-	-	<0.0299	-	0.0103		
Boron	mg/L	T	-	-	<0.084	-	<0.075	-		
Boron	mg/L	D	<0.027	-	-	<0.084	-	<0.075		
Cadmium	mg/L	T	-	-	<0.07	-	0.0459	-		
Cadmium	mg/L	D	<0.08	-	-	0.0934	-	0.0484		
Calcium	mg/L	T	-	-	180.	-	172.	-		
Calcium	mg/L	D	195. J	-	-	176.	-	179.		
Chromium	mg/L	T	-	-	<0.19	-	<0.009	-		
Chromium	mg/L	D	<0.16	-	-	<0.19	-	<0.009		
Cobalt	mg/L	T	-	-	<0.36	-	0.115	-		
Cobalt	mg/L	D	<0.23	-	-	<0.36	-	0.127		
Copper	mg/L	T	-	-	0.463	-	0.54	-		
Copper	mg/L	D	0.644	-	-	0.48 J	-	0.585		
Iron	mg/L	T	-	-	<4.22	-	<0.299	-		
Iron	mg/L	D	<2.66 J	-	-	<4.22	-	<0.299		
Lead	mg/L	T	-	-	0.0033	-	0.0039	-		
Lead	mg/L	D	<0.001	-	-	0.0043 J	-	0.0054		
Magnesium	mg/L	T	-	-	109.	-	106.	-		
Magnesium	mg/L	D	120.	-	-	106.	-	110.		
Manganese	mg/L	T	-	-	20.5	-	18.9	-		
Manganese	mg/L	D	22.3	-	-	19.9	-	19.7		
Mercury	mg/L	T	-	-	<0.0001	-	<0.0001	-		
Mercury	mg/L	D	<0.0001	-	-	<0.0001	-	<0.0001		
Molybdenum	mg/L	T	-	-	<0.023	-	<0.016	-		
Molybdenum	mg/L	D	<0.011 J	-	-	<0.023	-	<0.016		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 3/5/2003 GWW-1-D01N-GRW GW4	GWW-1 4/1/2003 GWW-1-T01N-GRW RE GW4	GWW-1 4/1/2003 GWW-1-T01N-GRW GW4	GWW-1 4/1/2003 GWW-1-D01N-GRW GW4	GWW-1 5/5/2003 GWW-1-T01N-GRW GW4	GWW-1 5/5/2003 GWW-1-D01N-GRW GW4
Nickel	mg/L	T	-	-	<0.73 :	-	0.451 :	-
Nickel	mg/L	D	0.568 :	-	-	<0.73 :	-	0.467 :
Potassium	mg/L	T	-	-	<40.5 :	-	4.3 :	-
Potassium	mg/L	D	<31.4 :	-	-	<40.5 :	-	3.61 :
Selenium	mg/L	T	-	-	<0.0157 :	-	<0.008 :	-
Selenium	mg/L	D	0.011 :	-	-	<0.005 :	-	<0.008 :
Silver	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	-	-	<91.6 :	-	22.8 :	-
Sodium	mg/L	D	<36.6 :	-	-	<91.6 :	-	23.3 :
Thallium	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T	-	-	0.0037 :	-	<0.002 :	-
Vanadium	mg/L	D	0.0026 :	-	-	0.0036 :	-	<0.002 :
Zinc	mg/L	T	-	-	6.02 :	-	5.68 :	-
Zinc	mg/L	D	6.59 :	-	-	5.82 :	-	6.11 :
Isotopes								
Lead	mg/L	T	-	-	0.0033 :	-	0.0039 :	-
Lead	mg/L	D	<0.001 :	-	-	0.0043 J	-	0.0054 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	GWW-1	GWW-1	GWW-1	GWW-1	GWW-1	GWW-1
			Sample Date	6/3/2003	6/3/2003	7/22/2003	7/22/2003	8/11/2003	8/11/2003
			Sample ID	GWW-1-T01N-GRW	GWW-1-D01N-GRW	GWW-1-T01N-GRW	GWW-1-D01N-GRW	GWW-1-T01N-GRW	GWW-1-D01N-GRW
				GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		7.11 :	-	5.02 :	-	76.2 :	-
Eh	millivolts	T		506.3 :	-	440.8 :	-	338.2 :	-
pH	SU	T		4.6 J	-	4.7 J	-	4.6 J	-
Specific Conductance	uS/cm	T		1631. :	-	1558. :	-	1606. :	-
Temperature	Celsius	T		10.36 :	-	11.34 :	-	12.85 :	-
Turbidity	NTU	T		0. :	-	0. :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		<0.24 J	-	<0.083 J	-	<0.04 :	-
Bicarbonate (as CaCO3)	mg/L	T		<1.8 :	-	<2. :	-	<1.9 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<29.4 :	-	18.1 :	-	16.7 :	-
Fluoride	mg/L	T		32.5 :	-	16.1 :	-	30. :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		3.9 J	-	3.6 J	-	3.8 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		0.071 J	-	<0.015 J	-	0.016 J	-
Phosphorus	mg/L	T		0.031 J	-	0.024 :	-	0.029 :	-
Sulfate	mg/L	T		897. J	-	835. J	-	791. J	-
Total Alkalinity	mg/L	T		<1.8 :	-	<2. :	-	<1.9 :	-
Total Dissolved Solids	mg/L	T		1510. :	-	1440. :	-	1770. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		1.4 J	-	<1.7 J	-	<1.6 J	-
Total Suspended Solids	mg/L	T		<0.7 :	-	<0.9 :	-	<1.1 :	-
Laboratory Parameters									
pH	SU	T		4.6 J	-	4.7 J	-	4.6 J	-
Specific Conductance	umhos/cm	T		-	-	1510. J	-	1380. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		712. :	-	734. :	-	763. :	-
Hardness	mg/L	D		-	741. :	-	726. :	-	739. :
Metals									

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 6/3/2003 GWW-1-T01N-GRW GW4		GWW-1 6/3/2003 GWW-1-D01N-GRW GW4		GWW-1 7/22/2003 GWW-1-T01N-GRW GW4		GWW-1 7/22/2003 GWW-1-D01N-GRW GW4		GWW-1 8/11/2003 GWW-1-T01N-GRW GW4		GWW-1 8/11/2003 GWW-1-D01N-GRW GW4	
Aluminum	mg/L	T	33.	:	-		31.	:	-		34.6	:	-	
Aluminum	mg/L	D	-		34.3	:	-		29.5	:	-		34.6	J
Antimony	mg/L	T	<0.044	:	-		<0.047	:	-		<0.136	:	-	
Antimony	mg/L	D	-		<0.044	:	-		<0.047	:	-		<0.038	:
Arsenic	mg/L	T	<0.043	:	-		<0.048	:	-		<0.024	:	-	
Arsenic	mg/L	D	-		<0.043	:	-		<0.048	:	-		<0.024	:
Barium	mg/L	T	<0.125	:	-		<0.059	:	-		<0.073	:	-	
Barium	mg/L	D	-		<0.125	:	-		<0.059	:	-		<0.073	:
Beryllium	mg/L	T	0.0084	:	-		<0.0121	:	-		0.0079	J	-	
Beryllium	mg/L	D	-		0.0083	:	-		<0.0123	:	-		0.0101	J
Boron	mg/L	T	<0.048	:	-		<0.048	:	-		<0.046	:	-	
Boron	mg/L	D	-		<0.048	:	-		<0.048	:	-		<0.046	:
Cadmium	mg/L	T	0.038	:	-		<0.12	:	-		<0.12	:	-	
Cadmium	mg/L	D	-		0.0366	:	-		<0.12	:	-		<0.12	:
Calcium	mg/L	T	141.	:	-		145.	:	-		152.	:	-	
Calcium	mg/L	D	-		146.	:	-		144.	:	-		146.	:
Chromium	mg/L	T	<0.019	:	-		<0.19	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.019	:	-		<0.19	:	-		<0.19	:
Cobalt	mg/L	T	0.105	:	-		<0.37	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		0.107	:	-		<0.37	:	-		<0.37	:
Copper	mg/L	T	0.477	:	-		0.508	:	-		0.417	:	-	
Copper	mg/L	D	-		0.482	:	-		0.33	:	-		0.602	:
Iron	mg/L	T	<0.422	:	-		<6.67	:	-		<6.67	:	-	
Iron	mg/L	D	-		<0.422	:	-		<6.67	:	-		<6.67	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		0.0011	:	-		<0.001	:
Magnesium	mg/L	T	87.4	:	-		90.	:	-		93.3	:	-	
Magnesium	mg/L	D	-		91.1	:	-		88.6	:	-		90.8	:
Manganese	mg/L	T	15.6	:	-		15.7	:	-		16.2	:	-	
Manganese	mg/L	D	-		16.2	:	-		15.5	:	-		15.7	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.022	:	-		<0.017	:	-		<0.016	:	-	
Molybdenum	mg/L	D	-		<0.022	:	-		<0.017	:	-		<0.016	:

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 6/3/2003 GWW-1-T01N-GRW GW4		GWW-1 6/3/2003 GWW-1-D01N-GRW GW4		GWW-1 7/22/2003 GWW-1-T01N-GRW GW4		GWW-1 7/22/2003 GWW-1-D01N-GRW GW4		GWW-1 8/11/2003 GWW-1-T01N-GRW GW4		GWW-1 8/11/2003 GWW-1-D01N-GRW GW4	
Nickel	mg/L	T	0.382	:	-		0.506	:	-		<0.44	:	-	
Nickel	mg/L	D	-		0.388	:	-		<0.44	:	-		0.726	J
Potassium	mg/L	T	4.39	:	-		<37.1	:	-		<37.1	:	-	
Potassium	mg/L	D	-		4.2	:	-		<37.1	:	-		<37.1	:
Selenium	mg/L	T	<0.008	:	-		<0.008	:	-		<0.008	:	-	
Selenium	mg/L	D	-		<0.008	:	-		<0.008	J	-		<0.008	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	23.	:	-		<62.9	:	-		<53.2	J	-	
Sodium	mg/L	D	-		20.5	:	-		<58.7	:	-		<53.2	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	4.67	:	-		4.88	:	-		5.09	:	-	
Zinc	mg/L	D	-		4.84	:	-		4.81	:	-		5.04	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		0.0011	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			GWW-1	9/9/2003	GWW-1-T01N-GRW	GWW-1	9/10/2003	GWW-1-T01N-GRW	GWW-1	9/10/2003	GWW-1-D01N-GRW	GWW-1	11/3/2003	GWW-1-T01N-GRW	GWW-1	11/3/2003	GWW-1-D01N-GRW	GWW-1	12/11/2003	GWW-1-T01N-GRW
Field Measurements																				
DO	mg/L	T	1.15	:	GW4	-		GW4	-		GW4	7.45	:	GW4	-		GW4	6.52	:	GW4
Eh	millivolts	T	376.	:		-			-			421.2	:		-			291.5	:	
pH	SU	T	4.38	:		4.6	J		-			4.8	J		-			4.5	J	
Specific Conductance	uS/cm	T	1586.	:		-			-			1476.	:		-			1397.	:	
Temperature	Celsius	T	9.8	:		-			-			8.23	:		-			8.68	:	
Turbidity	NTU	T	9.3	:		-			-			0.	:		-			0.1	:	
General Chemistry																				
Ammonia	mg/L	T	-			<0.046	:		-			<0.1	:		-			0.078	:	
Bicarbonate (as CaCO3)	mg/L	T	-			<2.6	:		-			<2.1	:		-			5.1	:	
Carbonate (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			<1.	:	
Chloride	mg/L	T	-			18.3	:		-			18.6	:		-			16.2	:	
Fluoride	mg/L	T	-			29.3	:		-			27.3	:		-			27.5	:	
Hydroxide (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			<1.	:	
Nitrate	mg/L	T	-			3.5	J		-			3.3	J		-			3.	:	
Nitrite	mg/L	T	-			<0.005	J		-			<0.005	J		-			<0.005	:	
Phosphate, Ortho As P	mg/L	T	-			<1.3	J		-			0.021	J		-			0.023	:	
Phosphorus	mg/L	T	-			0.023	J		-			0.043	:		-			0.021	:	
Sulfate	mg/L	T	-			979.	J		-			852.	:		-			801.	:	
Total Alkalinity	mg/L	T	-			<2.6	:		-			<2.1	:		-			5.1	:	
Total Dissolved Solids	mg/L	T	-			1490.	:		-			1440.	:		-			1350.	J	
Total Kjeldahl Nitrogen	mg/L	T	-			<0.24	:		-			<0.26	:		-			<0.24	:	
Total Organic Carbon	mg/L	T	-			<1.	:		-			<1.	:		-			<1.	:	
Total Suspended Solids	mg/L	T	-			1.2	:		-			<1.3	:		-			1.4	:	
Laboratory Parameters																				
pH	SU	T	4.38	:		4.6	J		-			4.8	J		-			4.5	J	
Specific Conductance	umhos/cm	T	-			1400.	J		-			1460.	J		-			1270.	J	
Inorganics																				
Cyanide	mg/L	T	-			<0.01	:		-			<0.01	:		-			<0.01	:	
Physical Properties																				
Hardness	mg/L	T	-			775.	:		-			765.	:		-			712.	:	
Hardness	mg/L	D	-			-			779.	:		-			778.	:		-		
Metals																				

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 9/9/2003 GWW-1-T01N-GRW GW4	GWW-1 9/10/2003 GWW-1-T01N-GRW GW4	GWW-1 9/10/2003 GWW-1-D01N-GRW GW4	GWW-1 11/3/2003 GWW-1-T01N-GRW GW4	GWW-1 11/3/2003 GWW-1-D01N-GRW GW4	GWW-1 12/11/2003 GWW-1-T01N-GRW GW4
Aluminum	mg/L	T	-	36.2 :	-	35.2 :	-	31.5 :
Aluminum	mg/L	D	-	-	37.2 :	-	36.2 :	-
Antimony	mg/L	T	-	<0.082 :	-	<0.082 J	-	<0.082 :
Antimony	mg/L	D	-	-	<0.082 :	-	<0.082 J	-
Arsenic	mg/L	T	-	<0.035 :	-	<0.035 :	-	0.0388 :
Arsenic	mg/L	D	-	-	<0.035 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.117 :	-	<0.117 :
Barium	mg/L	D	-	-	<0.117 :	-	<0.117 :	-
Beryllium	mg/L	T	-	0.0116 :	-	<0.0139 :	-	<0.0106 :
Beryllium	mg/L	D	-	-	0.0108 :	-	<0.0169 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.064 :	-	<0.064 :
Boron	mg/L	D	-	-	<0.064 :	-	<0.064 :	-
Cadmium	mg/L	T	-	<0.13 :	-	<0.13 :	-	<0.13 :
Cadmium	mg/L	D	-	-	<0.13 :	-	<0.13 :	-
Calcium	mg/L	T	-	152. :	-	154. :	-	144. :
Calcium	mg/L	D	-	-	153. :	-	156. :	-
Chromium	mg/L	T	-	<0.23 :	-	<0.23 :	-	<0.23 :
Chromium	mg/L	D	-	-	<0.23 :	-	<0.23 :	-
Cobalt	mg/L	T	-	<0.32 :	-	<0.32 :	-	<0.32 :
Cobalt	mg/L	D	-	-	<0.32 :	-	<0.32 :	-
Copper	mg/L	T	-	0.343 :	-	<0.622 :	-	0.429 J
Copper	mg/L	D	-	-	0.495 :	-	<0.82 :	-
Iron	mg/L	T	-	<4.55 :	-	<4.55 :	-	<4.55 :
Iron	mg/L	D	-	-	<4.55 :	-	<4.55 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	0.0025 :
Lead	mg/L	D	-	-	<0.002 :	-	<0.002 :	-
Magnesium	mg/L	T	-	95.8 :	-	92.2 :	-	85.7 :
Magnesium	mg/L	D	-	-	96.4 :	-	94. :	-
Manganese	mg/L	T	-	16.7 :	-	15.4 J	-	15. :
Manganese	mg/L	D	-	-	16.8 :	-	14.4 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 J	-
Molybdenum	mg/L	T	-	<0.012 :	-	<0.012 :	-	<0.0207 :
Molybdenum	mg/L	D	-	-	<0.012 :	-	<0.0166 :	-

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 9/9/2003 GWW-1-T01N-GRW GW4	GWW-1 9/10/2003 GWW-1-T01N-GRW GW4	GWW-1 9/10/2003 GWW-1-D01N-GRW GW4	GWW-1 11/3/2003 GWW-1-T01N-GRW GW4	GWW-1 11/3/2003 GWW-1-D01N-GRW GW4	GWW-1 12/11/2003 GWW-1-T01N-GRW GW4
Nickel	mg/L	T	-	<0.45 :	-	<0.45 :	-	<0.45 :
Nickel	mg/L	D	-	-	0.526 :	-	<0.45 :	-
Potassium	mg/L	T	-	<63.8 :	-	<63.8 :	-	<63.8 :
Potassium	mg/L	D	-	-	<63.8 :	-	<63.8 :	-
Selenium	mg/L	T	-	<0.003 :	-	0.0043 :	-	0.0032 :
Selenium	mg/L	D	-	-	<0.003 :	-	0.0049 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<99.1 :	-	<99.1 :	-	<99.1 :
Sodium	mg/L	D	-	-	<99.1 :	-	<99.1 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.0051 :
Vanadium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T	-	5.35 :	-	5. :	-	4.71 :
Zinc	mg/L	D	-	-	5.18 :	-	4.97 :	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	0.0025 :
Lead	mg/L	D	-	-	<0.002 :	-	<0.002 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			GWW-1	12/11/2003	GWW-1-D01N-GRW	GWW-1	1/13/2004	GWW-1-T01N-GRW	GWW-1	1/13/2004	GWW-1-D01N-GRW	GWW-1	4/13/2004	GWW1-T01N-GRW	GWW-1	4/13/2004	GWW-1-T01N-GRW	GWW-1	4/13/2004	GWW1-D01N-GRW
Field Measurements																	
DO	mg/L	T	-			7.	:		-			-			6.96	:		-		
Eh	millivolts	T	-			471.4	:		-			-			262.5	:		-		
pH	SU	T	-			4.8	J		-			5.	J		4.62	:		-		
Specific Conductance	uS/cm	T	-			1484.	:		-			-			1628.	:		-		
Temperature	Celsius	T	-			7.25	:		-			-			8.47	:		-		
Turbidity	NTU	T	-			0.2	:		-			-			0.	:		-		
General Chemistry																				
Ammonia	mg/L	T	-			<0.081	J		-			<0.053	:		-			-		
Bicarbonate (as CaCO3)	mg/L	T	-			<1.9	:		-			<1.3	:		-			-		
Carbonate (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			-		
Chloride	mg/L	T	-			19.3	:		-			19.1	:		-			-		
Fluoride	mg/L	T	-			29.1	:		-			29.1	:		-			-		
Hydroxide (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			-		
Nitrate	mg/L	T	-			3.2	J		-			3.6	J		-			-		
Nitrite	mg/L	T	-			<0.005	J		-			<0.005	:		-			-		
Phosphate, Ortho As P	mg/L	T	-			<0.023	J		-			0.023	J		-			-		
Phosphorus	mg/L	T	-			<0.02	:		-			0.026	J		-			-		
Sulfate	mg/L	T	-			910.	:		-			1050.	:		-			-		
Total Alkalinity	mg/L	T	-			<1.9	:		-			<1.3	:		-			-		
Total Dissolved Solids	mg/L	T	-			1310.	:		-			1620.	:		-			-		
Total Kjeldahl Nitrogen	mg/L	T	-			<0.24	:		-			<0.24	:		-			-		
Total Organic Carbon	mg/L	T	-			<1.	J		-			1.9	J		-			-		
Total Suspended Solids	mg/L	T	-			<1.5	:		-			<1.9	J		-			-		
Laboratory Parameters																				
pH	SU	T	-			4.8	J		-			5.	J		4.62	:		-		
Specific Conductance	umhos/cm	T	-			1540.	J		-			1450.	J		-			-		
Inorganics																				
Cyanide	mg/L	T	-			<0.01	J		-			<0.01	:		-			-		
Physical Properties																				
Hardness	mg/L	T	-			762.	:		-			856.	:		-			-		
Hardness	mg/L	D	743.	:		-			737.	:		-			-			840.	:	
Metals																				

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 12/11/2003 GWW-1-D01N-GRW GW4		GWW-1 1/13/2004 GWW-1-T01N-GRW GW4		GWW-1 1/13/2004 GWW-1-D01N-GRW GW4		GWW-1 4/13/2004 GWW1-T01N-GRW GW4		GWW-1 4/13/2004 GWW-1-T01N-GRW GW4		GWW-1 4/13/2004 GWW1-D01N-GRW GW4	
Aluminum	mg/L	T	-		33.	:	-		36.6	:	-		-	
Aluminum	mg/L	D	32.9	:	-		33.7	:	-		-		36.4	:
Antimony	mg/L	T	-		<0.097	:	-		<0.053	:	-		-	
Antimony	mg/L	D	<0.082	:	-		<0.097	:	-		-		<0.053	:
Arsenic	mg/L	T	-		<0.052	:	-		<0.037	:	-		-	
Arsenic	mg/L	D	<0.035	:	-		<0.052	:	-		-		<0.037	:
Barium	mg/L	T	-		<0.188	:	-		<0.049	:	-		-	
Barium	mg/L	D	<0.117	:	-		<0.188	:	-		-		<0.049	:
Beryllium	mg/L	T	-		0.0112	:	-		0.0136	:	-		-	
Beryllium	mg/L	D	<0.0174	:	-		0.0111	:	-		-		0.0129	:
Boron	mg/L	T	-		<0.117	:	-		<0.036	:	-		-	
Boron	mg/L	D	<0.064	:	-		<0.117	:	-		-		<0.036	:
Cadmium	mg/L	T	-		<0.07	J	-		<0.1	:	-		-	
Cadmium	mg/L	D	<0.13	:	-		<0.07	:	-		-		<0.1	:
Calcium	mg/L	T	-		157.	:	-		173.	:	-		-	
Calcium	mg/L	D	150.	:	-		150.	:	-		-		170.	:
Chromium	mg/L	T	-		<0.124	:	-		<0.13	:	-		-	
Chromium	mg/L	D	<0.23	:	-		<0.132	:	-		-		<0.13	:
Cobalt	mg/L	T	-		<0.31	:	-		0.186	:	-		-	
Cobalt	mg/L	D	<0.32	:	-		<0.31	:	-		-		<0.18	:
Copper	mg/L	T	-		0.462	:	-		0.582	:	-		-	
Copper	mg/L	D	0.527	J	-		0.544	:	-		-		0.59	:
Iron	mg/L	T	-		<3.73	:	-		<2.93	J	-		-	
Iron	mg/L	D	<4.55	:	-		<3.73	:	-		-		<2.93	:
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.004	:
Magnesium	mg/L	T	-		90.2	:	-		103.	:	-		-	
Magnesium	mg/L	D	89.6	:	-		88.1	:	-		-		101.	:
Manganese	mg/L	T	-		15.7	:	-		17.5	:	-		-	
Manganese	mg/L	D	15.6	:	-		15.4	:	-		-		17.1	:
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	J
Molybdenum	mg/L	T	-		<0.03	:	-		<0.014	:	-		-	
Molybdenum	mg/L	D	<0.0194	:	-		<0.03	:	-		-		<0.017	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-1 12/11/2003 GWW-1-D01N-GRW GW4		GWW-1 1/13/2004 GWW-1-T01N-GRW GW4		GWW-1 1/13/2004 GWW-1-D01N-GRW GW4		GWW-1 4/13/2004 GWW1-T01N-GRW GW4		GWW-1 4/13/2004 GWW-1-T01N-GRW GW4		GWW-1 4/13/2004 GWW1-D01N-GRW GW4	
Nickel	mg/L	T	-		0.31	:	-		0.532	:	-		-	
Nickel	mg/L	D	<0.45	:	-		0.38	:	-		-		0.644	:
Potassium	mg/L	T	-		<24.3	:	-		<15.5	:	-		-	
Potassium	mg/L	D	<63.8	:	-		<24.3	:	-		-		<15.5	:
Selenium	mg/L	T	-		0.006	J	-		<0.007	:	-		-	
Selenium	mg/L	D	<0.003	:	-		0.0063	:	-		-		<0.007	:
Silver	mg/L	T	-		<0.001	:	-		<0.001	J	-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	J
Sodium	mg/L	T	-		<49.	:	-		<47.1	J	-		-	
Sodium	mg/L	D	<99.1	:	-		<49.	:	-		-		<32.8	J
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		-	
Vanadium	mg/L	D	<0.0024	:	-		<0.002	:	-		-		<0.002	:
Zinc	mg/L	T	-		5.59	:	-		5.52	:	-		-	
Zinc	mg/L	D	5.	:	-		5.48	:	-		-		5.4	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-95.2	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.1	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.004	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			GWW-2	2/8/2003	GWW-2-T01N-GRWRE	GW4
			GWW-2	2/8/2003	GWW-2-T01N-GRW	GW4
			GWW-2	2/8/2003	GWW-2-D01N-GRW	GW4
			GWW-2	3/5/2003	GWW-2-T01N-GRWRE	GW4
			GWW-2	3/5/2003	GWW-2-T01N-GRW	GW4
			GWW-2	3/5/2003	GWW-2-D01N-GRW	GW4
Field Measurements						
DO	mg/L	T	-	5.74 :	-	-	8.14 :	-
Eh	millivolts	T	-	363.3 :	-	-	427.2 :	-
pH	SU	T	-	4.23 :	-	-	4.21 :	-
Specific Conductance	uS/cm	T	-	283. :	-	-	2348. :	-
Temperature	Celsius	T	-	8.07 :	-	-	8.02 :	-
Turbidity	NTU	T	-	40.5 :	-	-	0. :	-
General Chemistry						
Ammonia	mg/L	T	-	<0.12 :	-	-	<0.076 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	32.3 :	-	-	25.8 :	-
Fluoride	mg/L	T	39.3 J	-	-	44.1 J	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	4.3 J	-	-	4.7 :	-
Nitrite	mg/L	T	-	<0.005 J	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	0.025 J	-	-	0.025 :	-
Phosphorus	mg/L	T	-	<0.041 :	-	-	<0.026 J	-
Sulfate	mg/L	T	-	1550. J	-	-	1540. :	-
Total Alkalinity	mg/L	T	-	<1. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	2400. :	-	-	1670. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. :	-	-	<1.6 J	-
Total Suspended Solids	mg/L	T	-	1.3 :	-	-	1.2 J	-
Laboratory Parameters						
pH	SU	T	-	4.23 :	-	-	4.21 :	-
Inorganics						
Cyanide	mg/L	T	-	<0.01 J	-	-	<0.01 J	-
Physical Properties						
Hardness	mg/L	T	-	1390. :	-	-	1190. :	-
Hardness	mg/L	D	-	-	1360. :	-	-	1130. :
Metals						
Aluminum	mg/L	T	-	87.9 :	-	-	71.5 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-2	2/8/2003	GWW-2-T01N-GRWRE		GWW-2	2/8/2003	GWW-2-T01N-GRW		GWW-2	2/8/2003	GWW-2-D01N-GRW		GWW-2	3/5/2003	GWW-2-T01N-GRWRE		GWW-2	3/5/2003	GWW-2-T01N-GRW		GWW-2	3/5/2003	GWW-2-D01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Aluminum	mg/L	D	-				-				85.6		:		-				-				68.1		:	
Antimony	mg/L	T	-				<0.028		:		-				-				<0.028		:		-			
Antimony	mg/L	D	-				-				<0.028		:		-				-				<0.028		:	
Arsenic	mg/L	T	-				<0.023	J			-				-				<0.0436		:		-			
Arsenic	mg/L	D	-				-				<0.023	J			-				-				<0.023		:	
Barium	mg/L	T	-				<0.048		:		-				-				<0.048		:		-			
Barium	mg/L	D	-				-				<0.048		:		-				-				<0.048		:	
Beryllium	mg/L	T	-				0.0208		:		-				-				0.0198		:		-			
Beryllium	mg/L	D	-				-				0.02		:		-				-				0.0192		:	
Boron	mg/L	T	-				<0.027		:		-				-				<0.027		:		-			
Boron	mg/L	D	-				-				<0.027		:		-				-				<0.027		:	
Cadmium	mg/L	T	-				0.0832		:		-				-				<0.08		:		-			
Cadmium	mg/L	D	-				-				0.0986		:		-				-				<0.08		:	
Calcium	mg/L	T	-				238.		:		-				-				204.	J			-			
Calcium	mg/L	D	-				-				235.		:		-				-				194.	J		
Chromium	mg/L	T	-				<0.16		:		-				-				<0.16		:		-			
Chromium	mg/L	D	-				-				<0.16		:		-				-				<0.16		:	
Cobalt	mg/L	T	-				0.382		:		-				-				0.327		:		-			
Cobalt	mg/L	D	-				-				0.338		:		-				-				0.37		:	
Copper	mg/L	T	-				1.23		:		-				-				1.1		:		-			
Copper	mg/L	D	-				-				1.15		:		-				-				1.1		:	
Iron	mg/L	T	-				<2.66	J			-				-				<2.66		:		-			
Iron	mg/L	D	-				-				<2.66	J			-				-				<2.66	J		
Lead	mg/L	T	-				0.0022		:		-				-				<0.001		:		-			
Lead	mg/L	D	-				-				0.0017		:		-				-				<0.001		:	
Magnesium	mg/L	T	-				192.		:		-				-				164.		:		-			
Magnesium	mg/L	D	-				-				188.		:		-				-				157.		:	
Manganese	mg/L	T	-				44.5	J			-				-				38.6		:		-			
Manganese	mg/L	D	-				-				43.5		:		-				-				36.7		:	
Mercury	mg/L	T	-				<0.0001		:		-				-				<0.0001		:		-			
Mercury	mg/L	D	-				-				<0.0001		:		-				-				<0.0001		:	
Molybdenum	mg/L	T	-				<0.011	J			-				-				<0.011	J			-			
Molybdenum	mg/L	D	-				-				<0.011	J			-				-				<0.011	J		
Nickel	mg/L	T	-				1.1		:		-				-				0.718		:		-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-2	2/8/2003	GWW-2-T01N-GRWRE		GWW-2	2/8/2003	GWW-2-T01N-GRW		GWW-2	2/8/2003	GWW-2-D01N-GRW		GWW-2	3/5/2003	GWW-2-T01N-GRWRE		GWW-2	3/5/2003	GWW-2-T01N-GRW		GWW-2	3/5/2003	GWW-2-D01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Nickel	mg/L	D	-				-				1.1		:		-				-				0.854		:	
Potassium	mg/L	T	-				<5.28		:		-				-				<31.4		:		-			
Potassium	mg/L	D	-				-				<5.65		:		-				-				<31.4		:	
Selenium	mg/L	T	-				0.0094		:		-				-				0.0105	J			-			
Selenium	mg/L	D	-				-				0.0085		:		-				-				0.0093		:	
Silver	mg/L	T	-				<0.001		:		-				-				<0.001		:		-			
Silver	mg/L	D	-				-				<0.001		:		-				-				<0.001		:	
Sodium	mg/L	T	-				<36.6		:		-				-				<36.6		:		-			
Sodium	mg/L	D	-				-				<36.6		:		-				-				<36.6		:	
Thallium	mg/L	T	-				<0.001		:		-				-				<0.001		:		-			
Thallium	mg/L	D	-				-				<0.001		:		-				-				<0.001		:	
Vanadium	mg/L	T	-				<0.002		:		-				-				0.0027		:		-			
Vanadium	mg/L	D	-				-				<0.002		:		-				-				0.0025		:	
Zinc	mg/L	T	-				8.82		:		-				-				7.63	J			-			
Zinc	mg/L	D	-				-				8.6		:		-				-				7.29		:	
Explosives																										
2,4,6-Trinitrotoluene	mg/L	T	-				<0.00025	J			-				-				-				-			
2,6-Pyridinediamine,	mg/L	T	-				<0.00025	J			-				-				-				-			
Cyclotetramethylenetetranitramine	mg/L	T	-				<0.00025	J			-				-				-				-			
Cyclotrimethylenetrinitramine	mg/L	T	-				<0.00025	J			-				-				-				-			
Pentaerythritol tetranitrate	mg/L	T	-				<0.01	J			-				-				-				-			
Isotopes																										
Lead	mg/L	T	-				0.0022		:		-				-				<0.001		:		-			
Lead	mg/L	D	-				-				0.0017		:		-				-				<0.001		:	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-2	4/1/2003	GWW-2-T01N-GRWRE		GWW-2	4/1/2003	GWW-2-T01N-GRW		GWW-2	4/1/2003	GWW-2-D01N-GRW		GWW-2	5/5/2003	GWW-2-T01N-GRW		GWW-2	5/5/2003	GWW-2-D01N-GRW		GWW-2	6/3/2003	GWW-2-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				8.04		:		-				7.24		:		-				7.82		:	
Eh	millivolts	T	-				482.7		:		-				458.6		:		-				531.7		:	
pH	SU	T	-				4.4	J			-				4.7	J			-				4.4	J		
Specific Conductance	uS/cm	T	-				2233.		:		-				2274.		:		-				2188.		:	
Temperature	Celsius	T	-				9.46		:		-				11.2		:		-				10.8		:	
Turbidity	NTU	T	-				0.		:		-				12.2		:		-				0.		:	
General Chemistry																										
Ammonia	mg/L	T	-				<0.24		:		-				<0.053		:		-				<0.086	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				30.8		:		-				25.6		:		-				<11.1		:	
Fluoride	mg/L	T	37.1	J			-				-				36.2		:		-				32.3		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				3.9	J			-				4.1	J			-				3.7	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				<0.053	J			-				0.022	J			-				0.027	J		
Phosphorus	mg/L	T	-				0.031	J			-				<0.037		:		-				0.034	J		
Sulfate	mg/L	T	-				1360.	J			-				1330.		:		-				1360.	J		
Total Alkalinity	mg/L	T	-				<1.		:		-				<1.	J			-				<1.		:	
Total Dissolved Solids	mg/L	T	-				2260.		:		-				2380.		:		-				2300.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24	J			-				<0.24		:	
Total Organic Carbon	mg/L	T	-				<1.	J			-				<1.		:		-				<1.		:	
Total Suspended Solids	mg/L	T	-				<1.5		:		-				<1.1		:		-				<0.9		:	
Laboratory Parameters																										
pH	SU	T	-				4.4	J			-				4.7	J			-				4.4	J		
Specific Conductance	umhos/cm	T	-				1940.	J			-				2100.	J			-				-			
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	J			-				<0.01		:	
Physical Properties																										
Hardness	mg/L	T	-				1090.		:		-				1120.		:		-				975.		:	
Hardness	mg/L	D	-				-				1130.		:		-				1120.		:		-			
Metals																										

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 4/1/2003 GWW-2-T01N-GRWRE GW4		GWW-2 4/1/2003 GWW-2-T01N-GRW GW4		GWW-2 4/1/2003 GWW-2-D01N-GRW GW4		GWW-2 5/5/2003 GWW-2-T01N-GRW GW4		GWW-2 5/5/2003 GWW-2-D01N-GRW GW4		GWW-2 6/3/2003 GWW-2-T01N-GRW GW4	
Aluminum	mg/L	T	-		64.3	:	-		67.5	:	-		57.5	:
Aluminum	mg/L	D	-		-		66.1	:	-		66.9	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.072	:	-		<0.044	:
Antimony	mg/L	D	-		-		<0.072	:	-		<0.072	:	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.04	:	-		<0.043	:
Arsenic	mg/L	D	-		-		<0.04	:	-		<0.04	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.123	:	-		<0.125	:
Barium	mg/L	D	-		-		<0.123	:	-		<0.123	:	-	
Beryllium	mg/L	T	-		<0.0322	:	-		<0.0238	:	-		0.0147	:
Beryllium	mg/L	D	-		-		<0.0342	:	-		<0.0218	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.084	:	-		<0.048	:
Boron	mg/L	D	-		-		<0.084	:	-		<0.084	:	-	
Cadmium	mg/L	T	-		<0.085	:	-		0.0547	:	-		0.0399	:
Cadmium	mg/L	D	-		-		<0.07	:	-		0.0545	:	-	
Calcium	mg/L	T	-		190.	:	-		193.	:	-		167.	:
Calcium	mg/L	D	-		-		196.	:	-		193.	:	-	
Chromium	mg/L	T	-		<0.19	J	-		<0.01	:	-		<0.019	:
Chromium	mg/L	D	-		-		<0.19	J	-		<0.01	:	-	
Cobalt	mg/L	T	-		<0.36	:	-		0.302	:	-		0.262	:
Cobalt	mg/L	D	-		-		0.379	:	-		0.299	:	-	
Copper	mg/L	T	-		0.865	:	-		0.99	J	-		0.843	:
Copper	mg/L	D	-		-		0.868	:	-		0.992	:	-	
Iron	mg/L	T	-		<4.22	:	-		0.32	:	-		<0.422	:
Iron	mg/L	D	-		-		<4.22	:	-		<0.311	:	-	
Lead	mg/L	T	-		0.0038	:	-		0.0033	:	-		0.0012	:
Lead	mg/L	D	-		-		0.0037	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		151.	:	-		156.	:	-		136.	:
Magnesium	mg/L	D	-		-		155.	:	-		156.	:	-	
Manganese	mg/L	T	-		35.4	:	-		36.1	:	-		30.3	:
Manganese	mg/L	D	-		-		36.5	:	-		36.3	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.023	:	-		<0.022	:
Molybdenum	mg/L	D	-		-		<0.023	:	-		<0.023	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 4/1/2003 GWW-2-T01N-GRWRE GW4	GWW-2 4/1/2003 GWW-2-T01N-GRW GW4	GWW-2 4/1/2003 GWW-2-D01N-GRW GW4	GWW-2 5/5/2003 GWW-2-T01N-GRW GW4	GWW-2 5/5/2003 GWW-2-D01N-GRW GW4	GWW-2 6/3/2003 GWW-2-T01N-GRW GW4
Nickel	mg/L	T	-	0.765 :	-	0.76 :	-	0.645 :
Nickel	mg/L	D	-	-	<0.73 :	-	0.75 :	-
Potassium	mg/L	T	-	<40.5 :	-	<40.5 :	-	4.17 :
Potassium	mg/L	D	-	-	<40.5 :	-	<40.5 :	-
Selenium	mg/L	T	-	<0.0074 :	-	0.0115 :	-	0.0083 :
Selenium	mg/L	D	-	-	<0.0191 :	-	0.0089 :	-
Silver	mg/L	T	-	<0.001 :	-	0.0031 :	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<91.6 :	-	<91.6 :	-	25.6 :
Sodium	mg/L	D	-	-	<91.6 :	-	<91.6 :	-
Thallium	mg/L	T	-	<0.001 :	-	0.0032 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	0.0036 :	-	0.0056 :	-	<0.002 :
Vanadium	mg/L	D	-	-	0.0042 :	-	<0.001 :	-
Zinc	mg/L	T	-	7.06 :	-	7.36 :	-	6.08 :
Zinc	mg/L	D	-	-	7.24 :	-	7.29 :	-
Isotopes								
Lead	mg/L	T	-	0.0038 :	-	0.0033 :	-	0.0012 :
Lead	mg/L	D	-	-	0.0037 :	-	<0.001 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-2	6/3/2003	GWW-2-D01N-GRW		GWW-2	7/22/2003	GWW-2-T01N-GRW		GWW-2	7/22/2003	GWW-2-D01N-GRW		GWW-2	8/11/2003	GWW-2-T01N-GRW		GWW-2	8/11/2003	GWW-2-D01N-GRW		GWW-2	9/9/2003	GWW-2-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				6.63	:			-				9.29	:			-				68.6	:		
Eh	millivolts	T	-				510.7	:			-				354.9	:			-				428.4	:		
pH	SU	T	-				4.5	J			-				4.3	J			-				4.4	J		
Specific Conductance	uS/cm	T	-				1989.	:			-				1104.	:			-				2563.	:		
Temperature	Celsius	T	-				11.73	:			-				14.07	:			-				9.82	:		
Turbidity	NTU	T	-				0.5	:			-				0.	:			-				8.7	:		
General Chemistry																										
Ammonia	mg/L	T	-				<0.062	J			-				0.045	:			-				<0.044	:		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				19.	:			-				22.4	:			-				18.8	:		
Fluoride	mg/L	T	-				32.9	:			-				31.2	:			-				32.3	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.3	J			-				3.4	J			-				3.2	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				<0.022	J			-				0.019	J			-				0.023	J		
Phosphorus	mg/L	T	-				0.028	:			-				0.073	:			-				0.027	:		
Sulfate	mg/L	T	-				1150.	J			-				1030.	J			-				1190.	J		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				2580.	:			-				2320.	:			-				1810.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.3	J			-				<2.5	J			-				<1.	:		
Total Suspended Solids	mg/L	T	-				<1.	:			-				<1.1	:			-				1.7	:		
Laboratory Parameters																										
pH	SU	T	-				4.5	J			-				4.3	J			-				4.4	J		
Specific Conductance	umhos/cm	T	-				1940.	J			-				1700.	J			-				1710.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	:			-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	-				912.	:			-				1000.	:			-				972.	:		
Hardness	mg/L	D	958.	:			-				946.	:			-				982.	:			-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			GWW-2	6/3/2003	GWW-2-D01N-GRW	GWW-2	7/22/2003	GWW-2-T01N-GRW	GWW-2	7/22/2003	GWW-2-D01N-GRW	GWW-2	8/11/2003	GWW-2-T01N-GRW	GWW-2	8/11/2003	GWW-2-D01N-GRW	GWW-2	9/9/2003	GWW-2-T01N-GRW
			GW4			GW4			GW4			GW4			GW4			GW4		
Aluminum	mg/L	T	-			48.5		:	-			59.6		:	-			58.7		:
Aluminum	mg/L	D	56.3		:	-			49.1		:	-			57.7	J		-		
Antimony	mg/L	T	-			<0.047		:	-			<0.038		:	-			<0.082		:
Antimony	mg/L	D	<0.044		:	-			<0.047		:	-			<0.038		:	-		
Arsenic	mg/L	T	-			<0.048		:	-			<0.024		:	-			<0.035		:
Arsenic	mg/L	D	<0.043		:	-			<0.048		:	-			<0.024		:	-		
Barium	mg/L	T	-			<0.059		:	-			<0.073		:	-			<0.117		:
Barium	mg/L	D	<0.125		:	-			<0.059		:	-			<0.073		:	-		
Beryllium	mg/L	T	-			<0.0186		:	-			0.0135	J		-			0.0183		:
Beryllium	mg/L	D	0.0148		:	-			<0.019		:	-			0.0136	J		-		
Boron	mg/L	T	-			<0.048		:	-			<0.046		:	-			<0.064		:
Boron	mg/L	D	<0.048		:	-			<0.048		:	-			<0.046		:	-		
Cadmium	mg/L	T	-			<0.12		:	-			<0.12		:	-			<0.13		:
Cadmium	mg/L	D	0.0394		:	-			<0.12		:	-			<0.12		:	-		
Calcium	mg/L	T	-			156.		:	-			171.		:	-			164.		:
Calcium	mg/L	D	164.		:	-			162.		:	-			166.		:	-		
Chromium	mg/L	T	-			<0.19		:	-			<0.19		:	-			<0.23		:
Chromium	mg/L	D	<0.019		:	-			<0.19		:	-			<0.19		:	-		
Cobalt	mg/L	T	-			<0.37		:	-			<0.37		:	-			<0.32		:
Cobalt	mg/L	D	0.252		:	-			<0.37		:	-			<0.37		:	-		
Copper	mg/L	T	-			0.686		:	-			1.07		:	-			0.752		:
Copper	mg/L	D	0.824		:	-			0.606		:	-			0.946		:	-		
Iron	mg/L	T	-			<6.67		:	-			<6.67		:	-			<4.55		:
Iron	mg/L	D	<0.422		:	-			<6.67		:	-			<6.67		:	-		
Lead	mg/L	T	-			0.0013		:	-			<0.001		:	-			<0.002		:
Lead	mg/L	D	<0.001		:	-			0.001		:	-			<0.001		:	-		
Magnesium	mg/L	T	-			127.		:	-			140.		:	-			137.		:
Magnesium	mg/L	D	133.		:	-			132.		:	-			138.		:	-		
Manganese	mg/L	T	-			28.		:	-			30.7		:	-			29.9		:
Manganese	mg/L	D	29.8		:	-			29.		:	-			30.		:	-		
Mercury	mg/L	T	-			<0.0001		:	-			<0.0001		:	-			<0.0001		:
Mercury	mg/L	D	<0.0001		:	-			<0.0001		:	-			<0.0001		:	-		
Molybdenum	mg/L	T	-			<0.017		:	-			<0.016		:	-			<0.012		:
Molybdenum	mg/L	D	<0.022		:	-			<0.017		:	-			<0.016		:	-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 6/3/2003 GWW-2-D01N-GRW GW4		GWW-2 7/22/2003 GWW-2-T01N-GRW GW4		GWW-2 7/22/2003 GWW-2-D01N-GRW GW4		GWW-2 8/11/2003 GWW-2-T01N-GRW GW4		GWW-2 8/11/2003 GWW-2-D01N-GRW GW4		GWW-2 9/9/2003 GWW-2-T01N-GRW GW4	
Nickel	mg/L	T	-		0.54	:	-		0.84	:	-		0.631	:
Nickel	mg/L	D	0.636	:	-		<0.44	:	-		0.729	:	-	
Potassium	mg/L	T	-		<37.1	:	-		<37.1	:	-		<63.8	:
Potassium	mg/L	D	4.54	:	-		<37.1	:	-		<37.1	:	-	
Selenium	mg/L	T	-		<0.008	:	-		<0.008	:	-		0.0059	:
Selenium	mg/L	D	<0.008	:	-		<0.008	J	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	J	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Sodium	mg/L	T	-		<59.	:	-		<53.2	J	-		<99.1	:
Sodium	mg/L	D	28.4	:	-		<126.	:	-		<53.2	J	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		5.78	:	-		6.55	:	-		6.2	:
Zinc	mg/L	D	6.	:	-		6.04	:	-		6.29	:	-	
Isotopes														
Lead	mg/L	T	-		0.0013	:	-		<0.001	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		0.001	:	-		<0.001	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-2	9/9/2003	GWW-2-D01N-GRW		GWW-2	11/3/2003	GWW-2-T01N-GRW		GWW-2	11/3/2003	GWW-2-D01N-GRW		GWW-2	12/11/2003	GWW-2-T01N-GRW	
			GW4				GW4				GW4				GW4			
Field Measurements																		
DO	mg/L	T	-				6.81	:			-				6.94	:		
Eh	millivolts	T	-				420.3	:			-				369.	:		
pH	SU	T	-				4.5	J			-				4.4	J		
Specific Conductance	uS/cm	T	-				1949.	:			-				1801.	:		
Temperature	Celsius	T	-				8.97	:			-				7.01	:		
Turbidity	NTU	T	-				0.5	:			-				62.1	:		
General Chemistry																		
Ammonia	mg/L	T	-				<0.25	:			-				0.054	:		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				18.5	:			-				17.6	:		
Fluoride	mg/L	T	-				32.3	:			-				32.9	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.1	J			-				3.	:		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				0.022	J			-				0.025	:		
Phosphorus	mg/L	T	-				0.03	:			-				0.028	:		
Sulfate	mg/L	T	-				1170.	:			-				1240.	:		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				2140.	:			-				1890.	J		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				1.4	:		
Total Suspended Solids	mg/L	T	-				2.1	:			-				1.5	:		
Laboratory Parameters																		
pH	SU	T	-				4.5	J			-				4.4	J		
Specific Conductance	umhos/cm	T	-				1910.	J			-				1720.	J		
Inorganics																		
Cyanide	mg/L	T	-				<0.01	:			-				<0.01	:		
Physical Properties																		
Hardness	mg/L	T	-				998.	:			-				1000.	:		
Hardness	mg/L	D	961.	:			-				1050.	:			-			
Metals																		

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 9/9/2003 GWW-2-D01N-GRW GW4	GWW-2 11/3/2003 GWW-2-T01N-GRW GW4	GWW-2 11/3/2003 GWW-2-D01N-GRW GW4	GWW-2 12/11/2003 GWW-2-T01N-GRW GW4	GWW-2 12/11/2003 GWW-2-D01N-GRW GW4	GWW-2 1/13/2004 GWW-2-T01N-GRW GW4
Aluminum	mg/L	T	-	60.3 :	-	58.4 :	-	51.5 :
Aluminum	mg/L	D	57.9 :	-	64. :	-	58.4 :	-
Antimony	mg/L	T	-	<0.082 J	-	<0.082 :	-	<0.097 :
Antimony	mg/L	D	<0.082 :	-	<0.082 J	-	<0.082 :	-
Arsenic	mg/L	T	-	<0.035 :	-	<0.035 :	-	<0.052 :
Arsenic	mg/L	D	<0.035 :	-	<0.035 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.117 :	-	<0.188 :
Barium	mg/L	D	<0.117 :	-	<0.117 :	-	<0.117 :	-
Beryllium	mg/L	T	-	<0.0141 :	-	<0.0281 :	-	0.0172 :
Beryllium	mg/L	D	0.0173 :	-	<0.0223 :	-	<0.0318 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.064 :	-	<0.117 :
Boron	mg/L	D	<0.064 :	-	<0.064 :	-	<0.064 :	-
Cadmium	mg/L	T	-	<0.13 :	-	<0.13 :	-	<0.07 J
Cadmium	mg/L	D	<0.13 :	-	0.25 :	-	<0.13 :	-
Calcium	mg/L	T	-	171. :	-	171. :	-	156. :
Calcium	mg/L	D	162. :	-	178. :	-	170. :	-
Chromium	mg/L	T	-	<0.23 :	-	<0.23 :	-	<0.11 :
Chromium	mg/L	D	<0.23 :	-	0.368 :	-	<0.23 :	-
Cobalt	mg/L	T	-	<0.32 :	-	<0.32 :	-	<0.31 :
Cobalt	mg/L	D	<0.32 :	-	0.558 :	-	<0.32 :	-
Copper	mg/L	T	-	<0.852 :	-	0.928 J	-	0.683 :
Copper	mg/L	D	0.637 :	-	<1.19 :	-	0.838 J	-
Iron	mg/L	T	-	<4.55 :	-	<4.55 :	-	<3.73 :
Iron	mg/L	D	<4.55 :	-	6.31 :	-	<4.55 :	-
Lead	mg/L	T	-	<0.002 :	-	0.0014 :	-	<0.001 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	0.0011 :	-
Magnesium	mg/L	T	-	139. :	-	140. :	-	126. :
Magnesium	mg/L	D	135. :	-	148. :	-	138. :	-
Manganese	mg/L	T	-	28.6 J	-	31.4 :	-	28.7 :
Manganese	mg/L	D	30. :	-	31. :	-	31.3 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0162 :	-	<0.013 :	-	<0.03 :
Molybdenum	mg/L	D	<0.012 :	-	<0.012 :	-	<0.012 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 9/9/2003 GWW-2-D01N-GRW GW4		GWW-2 11/3/2003 GWW-2-T01N-GRW GW4		GWW-2 11/3/2003 GWW-2-D01N-GRW GW4		GWW-2 12/11/2003 GWW-2-T01N-GRW GW4		GWW-2 12/11/2003 GWW-2-D01N-GRW GW4		GWW-2 1/13/2004 GWW-2-T01N-GRW GW4	
Nickel	mg/L	T	-		0.537	:	-		0.711	J	-		0.511	:
Nickel	mg/L	D	0.569	:	-		1.23	:	-		0.638	J	-	
Potassium	mg/L	T	-		<63.8	:	-		<63.8	:	-		<24.3	:
Potassium	mg/L	D	<63.8	:	-		<63.8	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0053	:	-		0.0064	:	-		0.0102	J
Selenium	mg/L	D	0.0066	:	-		0.0055	:	-		0.0068	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<99.1	:	-		<49.	:
Sodium	mg/L	D	<99.1	:	-		262.	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.0027	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.002	:	-	
Zinc	mg/L	T	-		6.1	:	-		6.44	:	-		5.96	:
Zinc	mg/L	D	6.09	:	-		6.63	:	-		6.39	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		0.0014	:	-		<0.001	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		0.0011	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			GWW-2	GWW-2	GWW-2	GWW-2
			1/13/2004	4/13/2004	4/13/2004	4/13/2004
			GWW-2-D01N-GRW	GWW2-T01N-GRW	GWW-2-T01N-GRW	GWW2-D01N-GRW
			GW4	GW4	GW4	GW4
Field Measurements						
DO	mg/L	T	-	-	6.55 :	-
Eh	millivolts	T	-	-	305.1 :	-
pH	SU	T	-	4.7 J	4.27 :	-
Specific Conductance	uS/cm	T	-	-	1848. :	-
Temperature	Celsius	T	-	-	9.18 :	-
Turbidity	NTU	T	-	-	0. :	-
General Chemistry						
Ammonia	mg/L	T	-	<0.054 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-
Chloride	mg/L	T	-	19.3 :	-	-
Fluoride	mg/L	T	-	30. :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-
Nitrate	mg/L	T	-	2.6 J	-	-
Nitrite	mg/L	T	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	-	0.023 J	-	-
Phosphorus	mg/L	T	-	0.032 :	-	-
Sulfate	mg/L	T	-	1270. :	-	-
Total Alkalinity	mg/L	T	-	<1. :	-	-
Total Dissolved Solids	mg/L	T	-	1930. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	1.7 J	-	-
Total Suspended Solids	mg/L	T	-	20.6 J	-	-
Laboratory Parameters						
pH	SU	T	-	4.7 J	4.27 :	-
Specific Conductance	umhos/cm	T	-	1620. J	-	-
Inorganics						
Cyanide	mg/L	T	-	<0.01 :	-	-
Physical Properties						
Hardness	mg/L	T	-	913. :	-	-
Hardness	mg/L	D	903. :	-	-	884. :
Metals						

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			GWW-3	GWW-3		
			2/8/2003	2/8/2003		
			GWW-3-T01N-GRWRE	GWW-3-T01N-GRW		
			GW4	GW4		
Field Measurements						
DO	mg/L	T	-	4.9 :		
Eh	millivolts	T	-	352.3 :		
pH	SU	T	-	4.27 :		
Specific Conductance	uS/cm	T	-	254. :		
Temperature	Celsius	T	-	8.27 :		
Turbidity	NTU	T	-	30.3 :		
General Chemistry						
Ammonia	mg/L	T	-	<0.077 :		
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :		
Carbonate (as CaCO3)	mg/L	T	-	<1. :		
Chloride	mg/L	T	-	26.5 :		
Fluoride	mg/L	T	27.3 J	-		
Hydroxide (as CaCO3)	mg/L	T	-	<1. :		
Nitrate	mg/L	T	-	4.2 J		
Nitrite	mg/L	T	-	<0.005 J		
Phosphate, Ortho As P	mg/L	T	-	0.03 J		
Phosphorus	mg/L	T	-	0.05 :		
Sulfate	mg/L	T	-	1360. J		
Total Alkalinity	mg/L	T	-	<1. :		
Total Dissolved Solids	mg/L	T	-	2060. :		
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :		
Total Organic Carbon	mg/L	T	-	<1. :		
Total Suspended Solids	mg/L	T	-	1.1 :		
Laboratory Parameters						
pH	SU	T	-	4.27 :		
Specific Conductance	umhos/cm	T	-	-		
Inorganics						
Cyanide	mg/L	T	-	<0.01 J		
Physical Properties						
Hardness	mg/L	T	-	1210. :		
Hardness	mg/L	D	-	-		
Metals						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-2 1/13/2004 GWW-2-D01N-GRW GW4	GWW-2 4/13/2004 GWW2-T01N-GRW GW4	GWW-2 4/13/2004 GWW-2-T01N-GRW GW4	GWW-2 4/13/2004 GWW2-D01N-GRW GW4	GWW-3 2/8/2003 GWW-3-T01N-GRWRE GW4	GWW-3 2/8/2003 GWW-3-T01N-GRW GW4
Aluminum	mg/L	T	-	52.1 :	-	-	-	66. :
Aluminum	mg/L	D	51.7 :	-	-	49.8 :	-	-
Antimony	mg/L	T	-	<0.053 :	-	-	-	<0.028 :
Antimony	mg/L	D	<0.097 :	-	-	<0.053 :	-	-
Arsenic	mg/L	T	-	<0.037 :	-	-	-	<0.023 J
Arsenic	mg/L	D	<0.052 :	-	-	<0.037 :	-	-
Barium	mg/L	T	-	<0.049 :	-	-	-	<0.048 :
Barium	mg/L	D	<0.188 :	-	-	<0.049 :	-	-
Beryllium	mg/L	T	-	0.0188 :	-	-	-	0.0132 :
Beryllium	mg/L	D	0.0161 :	-	-	0.0185 :	-	-
Boron	mg/L	T	-	<0.036 :	-	-	-	<0.027 :
Boron	mg/L	D	<0.117 :	-	-	<0.036 :	-	-
Cadmium	mg/L	T	-	<0.1 :	-	-	-	0.111 :
Cadmium	mg/L	D	<0.07 :	-	-	<0.1 :	-	-
Calcium	mg/L	T	-	156. :	-	-	-	244. :
Calcium	mg/L	D	155. :	-	-	152. :	-	-
Chromium	mg/L	T	-	<0.13 :	-	-	-	<0.16 :
Chromium	mg/L	D	<0.169 :	-	-	<0.13 :	-	-
Cobalt	mg/L	T	-	0.34 :	-	-	-	0.324 :
Cobalt	mg/L	D	<0.31 :	-	-	0.212 :	-	-
Copper	mg/L	T	-	0.8 :	-	-	-	0.82 :
Copper	mg/L	D	0.849 :	-	-	0.809 :	-	-
Iron	mg/L	T	-	<2.93 J	-	-	-	<2.66 J
Iron	mg/L	D	<3.73 :	-	-	<2.93 :	-	-
Lead	mg/L	T	-	<0.004 :	-	-	-	0.0026 :
Lead	mg/L	D	<0.001 :	-	-	<0.004 :	-	-
Magnesium	mg/L	T	-	127. :	-	-	-	146. :
Magnesium	mg/L	D	125. :	-	-	123. :	-	-
Manganese	mg/L	T	-	28.4 :	-	-	-	31.8 J
Manganese	mg/L	D	28.2 :	-	-	27.6 :	-	-
Mercury	mg/L	T	-	<0.0001 J	-	-	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 J	-	-
Molybdenum	mg/L	T	-	<0.014 :	-	-	-	<0.011 J
Molybdenum	mg/L	D	<0.03 :	-	-	<0.014 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	GWW-2	GWW-2	GWW-2	GWW-2	GWW-3	GWW-3
Sample Date			1/13/2004	4/13/2004	4/13/2004	4/13/2004	2/8/2003	2/8/2003
Sample ID			GWW-2-D01N-GRW	GWW2-T01N-GRW	GWW-2-T01N-GRW	GWW2-D01N-GRW	GWW-3-T01N-GRWRE	GWW-3-T01N-GRW
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Nickel	mg/L	T	-	0.794 :	-	-	-	0.869 :
Nickel	mg/L	D	0.727 :	-	-	0.695 :	-	-
Potassium	mg/L	T	-	<15.5 :	-	-	-	4.38 :
Potassium	mg/L	D	<24.3 :	-	-	<15.5 :	-	-
Selenium	mg/L	T	-	<0.007 :	-	-	-	0.0087 :
Selenium	mg/L	D	0.0087 :	-	-	<0.007 :	-	-
Silver	mg/L	T	-	<0.001 J	-	-	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	-	<0.001 J	-	-
Sodium	mg/L	T	-	<32.8 J	-	-	-	43.1 :
Sodium	mg/L	D	53.7 :	-	-	<32.8 J	-	-
Thallium	mg/L	T	-	<0.001 :	-	-	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	<0.002 :	-	-	-	<0.002 :
Vanadium	mg/L	D	<0.002 :	-	-	<0.002 :	-	-
Zinc	mg/L	T	-	5.81 :	-	-	-	5.91 :
Zinc	mg/L	D	7.12 :	-	-	5.73 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	-	<0.00025 J
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	-	<0.00025 J
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	-	<0.01 J
Isotopes								
Lead	mg/L	T	-	<0.004 :	-	-	-	0.0026 :
Lead	mg/L	D	<0.001 :	-	-	<0.004 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			GWW-3		2/8/2003	GWW-3-D01N-GRW		GWW-3	3/5/2003	GWW-3-T01N-GRW RE		GWW-3	3/5/2003	GWW-3-T01N-GRW		GWW-3	3/5/2003	GWW-3-D01N-GRW		GWW-3	4/1/2003	GWW-3-T01N-GRWR E		GWW-3	4/1/2003	GWW-3-T01N-GRW	
Field Measurements																											
DO	mg/L	T			-				-			8.74	:		-				-			6.55	:			
Eh	millivolts	T			-				-			399.6	:		-				-			454.6	:			
pH	SU	T			-				-			4.25	:		-				-			4.5	J			
Specific Conductance	uS/cm	T			-				-			2063.	:		-				-			1961.	:			
Temperature	Celsius	T			-				-			7.98	:		-				-			8.55	:			
Turbidity	NTU	T			-				-			0.	:		-				-			0.9	:			
General Chemistry																											
Ammonia	mg/L	T			-				-			<0.078	J		-				-			<0.22	:			
Bicarbonate (as CaCO3)	mg/L	T			-				-			<1.	:		-				-			<1.	:			
Carbonate (as CaCO3)	mg/L	T			-				-			<1.	:		-				-			<1.	:			
Chloride	mg/L	T			-				-			21.1	:		-				-			28.1	:			
Fluoride	mg/L	T			-				26.8	J		-			-				26.3	J		-				
Hydroxide (as CaCO3)	mg/L	T			-				-			<1.	:		-				-			<1.	:			
Nitrate	mg/L	T			-				-			4.	:		-				-			3.5	J			
Nitrite	mg/L	T			-				-			<0.005	:		-				-			<0.005	J			
Phosphate, Ortho As P	mg/L	T			-				-			0.028	:		-				-			<0.03	J			
Phosphorus	mg/L	T			-				-			<0.033	J		-				-			0.12	:			
Sulfate	mg/L	T			-				-			1250.	:		-				-			1190.	J			
Total Alkalinity	mg/L	T			-				-			<1.	:		-				-			<1.	:			
Total Dissolved Solids	mg/L	T			-				-			1950.	:		-				-			1920.	:			
Total Kjeldahl Nitrogen	mg/L	T			-				-			<0.24	:		-				-			<0.24	:			
Total Organic Carbon	mg/L	T			-				-			<1.5	J		-				-			<1.2	J			
Total Suspended Solids	mg/L	T			-				-			1.4	J		-				-			<1.	:			
Laboratory Parameters																											
pH	SU	T			-				-			4.25	:		-				-			4.5	J			
Specific Conductance	umhos/cm	T			-				-			-			-				-			1740.	J			
Inorganics																											
Cyanide	mg/L	T			-				-			<0.01	J		-				-			<0.01	J			
Physical Properties																											
Hardness	mg/L	T			-				-			1040.	:		-				-			1010.	:			
Hardness	mg/L	D			1190.	:			-			-			1090.	:			-			-				
Metals																											

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 2/8/2003 GWW-3-D01N-GRW GW4	GWW-3 3/5/2003 GWW-3-T01N-GRW RE GW4	GWW-3 3/5/2003 GWW-3-T01N-GRW GW4	GWW-3 3/5/2003 GWW-3-D01N-GRW GW4	GWW-3 4/1/2003 GWW-3-T01N-GRWR E GW4	GWW-3 4/1/2003 GWW-3-T01N-GRW GW4
Aluminum	mg/L	T	-	-	52.7 :	-	-	48.2 :
Aluminum	mg/L	D	64.6 :	-	-	54.9 :	-	-
Antimony	mg/L	T	-	-	<0.028 :	-	-	<0.072 :
Antimony	mg/L	D	<0.028 :	-	-	<0.028 :	-	-
Arsenic	mg/L	T	-	-	<0.0363 :	-	-	<0.04 :
Arsenic	mg/L	D	<0.023 J	-	-	<0.0308 :	-	-
Barium	mg/L	T	-	-	<0.048 :	-	-	<0.123 :
Barium	mg/L	D	<0.048 :	-	-	<0.048 :	-	-
Beryllium	mg/L	T	-	-	0.0124 :	-	-	<0.0263 :
Beryllium	mg/L	D	0.013 :	-	-	0.0126 :	-	-
Boron	mg/L	T	-	-	<0.027 :	-	-	<0.084 :
Boron	mg/L	D	<0.027 :	-	-	<0.027 :	-	-
Cadmium	mg/L	T	-	-	<0.08 :	-	-	<0.0934 :
Cadmium	mg/L	D	<0.08 :	-	-	<0.08 :	-	-
Calcium	mg/L	T	-	-	209. J	-	-	205. :
Calcium	mg/L	D	240. :	-	-	219. J	-	-
Chromium	mg/L	T	-	-	<0.16 :	-	-	<0.19 :
Chromium	mg/L	D	<0.16 :	-	-	<0.16 :	-	-
Cobalt	mg/L	T	-	-	0.263 :	-	-	<0.36 :
Cobalt	mg/L	D	0.318 :	-	-	0.265 :	-	-
Copper	mg/L	T	-	-	0.78 :	-	-	0.601 :
Copper	mg/L	D	0.836 :	-	-	0.847 :	-	-
Iron	mg/L	T	-	-	<2.66 :	-	-	<4.22 :
Iron	mg/L	D	<2.66 J	-	-	<2.66 J	-	-
Lead	mg/L	T	-	-	<0.001 :	-	-	0.0043 :
Lead	mg/L	D	0.0022 :	-	-	<0.001 :	-	-
Magnesium	mg/L	T	-	-	125. :	-	-	122. :
Magnesium	mg/L	D	144. :	-	-	131. :	-	-
Manganese	mg/L	T	-	-	27.3 :	-	-	26.8 :
Manganese	mg/L	D	31.3 :	-	-	28.6 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 J	-	-	<0.023 :
Molybdenum	mg/L	D	<0.011 J	-	-	<0.011 J	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	GWW-3 2/8/2003 GWW-3-D01N-GRW GW4	GWW-3 3/5/2003 GWW-3-T01N-GRW RE GW4	GWW-3 3/5/2003 GWW-3-T01N-GRW GW4	GWW-3 3/5/2003 GWW-3-D01N-GRW GW4	GWW-3 4/1/2003 GWW-3-T01N-GRWR E GW4	GWW-3 4/1/2003 GWW-3-T01N-GRW GW4
Nickel	mg/L	T	-	-	0.572 :	-	-	0.737 :
Nickel	mg/L	D	0.845 :	-	-	0.572 :	-	-
Potassium	mg/L	T	-	-	<31.4 :	-	-	<40.5 :
Potassium	mg/L	D	<2.85 :	-	-	<31.4 :	-	-
Selenium	mg/L	T	-	-	<0.008 J	-	-	<0.005 :
Selenium	mg/L	D	<0.008 :	-	-	0.0106 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<36.6 :	-	-	<91.6 :
Sodium	mg/L	D	<36.6 :	-	-	<36.6 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	0.0027 :	-	-	0.004 :
Vanadium	mg/L	D	<0.002 :	-	-	0.0028 :	-	-
Zinc	mg/L	T	-	-	5.16 J	-	-	5.12 :
Zinc	mg/L	D	5.92 :	-	-	5.41 :	-	-
Isotopes								
Lead	mg/L	T	-	-	<0.001 :	-	-	0.0043 :
Lead	mg/L	D	0.0022 :	-	-	<0.001 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-3	4/1/2003	GWW-3-D01N-GRW		GWW-3	5/5/2003	GWW-3-T01N-GRW		GWW-3	5/5/2003	GWW-3-D01N-GRW		GWW-3	6/3/2003	GWW-3-T01N-GRW		GWW-3	6/3/2003	GWW-3-D01N-GRW		GWW-3	7/22/2003	GWW-3-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				8.84	:			-				7.08	:			-				5.14	:		
Eh	millivolts	T	-				455.2	:			-				547.	:			-				412.9	:		
pH	SU	T	-				4.6	J			-				4.4	J			-				4.5	J		
Specific Conductance	uS/cm	T	-				1981.	:			-				2000.	:			-				1974.	:		
Temperature	Celsius	T	-				10.35	:			-				9.88	:			-				14.25	:		
Turbidity	NTU	T	-				12.5	:			-				0.	:			-				0.	:		
General Chemistry																										
Ammonia	mg/L	T	-				<0.073	:			-				<0.14	J			-				<0.04	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				<13.9	:			-				<18.3	:			-				20.1	:		
Fluoride	mg/L	T	-				25.3	:			-				26.9	:			-				26.7	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.4	J			-				3.3	J			-				3.4	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				0.028	J			-				0.1	J			-				<0.029	J		
Phosphorus	mg/L	T	-				0.043	:			-				0.04	J			-				0.041	:		
Sulfate	mg/L	T	-				1320.	:			-				1080.	J			-				1280.	J		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				1930.	:			-				2040.	:			-				2580.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				0.28	:			-				-				-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				<1.	:			-				<1.3	J		
Total Suspended Solids	mg/L	T	-				<1.1	:			-				<1.8	:			-				<0.9	:		
Laboratory Parameters																										
pH	SU	T	-				4.6	J			-				4.4	J			-				4.5	J		
Specific Conductance	umhos/cm	T	-				1830.	J			-				1900.	J			-				1920.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	:			-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	-				990.	:			-				910.	:			-				1040.	:		
Hardness	mg/L	D	977.	:			-				1010.	:			-				944.	:			-			
Metals																										

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			GWW-3	4/1/2003	GWW-3-D01N-GRW	GWW-3	5/5/2003	GWW-3-T01N-GRW	GWW-3	5/5/2003	GWW-3-D01N-GRW	GWW-3	6/3/2003	GWW-3-T01N-GRW	GWW-3	6/3/2003	GWW-3-D01N-GRW	GWW-3	7/22/2003	GWW-3-T01N-GRW
					GW4			GW4			GW4			GW4			GW4			GW4
Aluminum	mg/L	T		-			49.4			-			46.2			-			52.1	
Aluminum	mg/L	D		47.7			-			50.			-			48.1			-	
Antimony	mg/L	T		-			<0.048			-			<0.072			-			<0.047	
Antimony	mg/L	D		<0.072			-			<0.048			-			<0.072			-	
Arsenic	mg/L	T		-			<0.047			-			<0.04			-			<0.048	
Arsenic	mg/L	D		0.0436			-			<0.047			-			<0.04			-	
Barium	mg/L	T		-			<0.135			-			<0.123			-			<0.059	
Barium	mg/L	D		<0.123			-			<0.135			-			<0.123			-	
Beryllium	mg/L	T		-			0.0114			-			<0.0149			-			0.0117	
Beryllium	mg/L	D		<0.0294			-			0.0115			-			<0.0145			-	
Boron	mg/L	T		-			<0.075			-			<0.084			-			<0.048	
Boron	mg/L	D		<0.084			-			<0.075			-			<0.084			-	
Cadmium	mg/L	T		-			0.0398			-			0.0396			-			<0.12	J
Cadmium	mg/L	D		<0.07			-			0.0401			-			0.0395			-	
Calcium	mg/L	T		-			199.			-			183.			-			203.	
Calcium	mg/L	D		198.			-			202.			-			190.			-	
Chromium	mg/L	T		-			<0.009			-			<0.01			-			<0.19	J
Chromium	mg/L	D		<0.19			-			<0.009			-			<0.01			-	
Cobalt	mg/L	T		-			0.21			-			0.208			-			<0.37	J
Cobalt	mg/L	D		<0.36			-			0.217			-			0.212			-	
Copper	mg/L	T		-			0.719			-			0.692			-			0.459	J
Copper	mg/L	D		0.581			-			0.736			-			0.719			-	
Iron	mg/L	T		-			<0.299			-			<0.311			-			<6.67	
Iron	mg/L	D		<4.22			-			<0.299			-			<0.311			-	
Lead	mg/L	T		-			0.0021	J		-			<0.001			-			<0.001	
Lead	mg/L	D		0.0033			-			0.0138	J		-			<0.001			-	
Magnesium	mg/L	T		-			120.			-			110.			-			129.	
Magnesium	mg/L	D		118.			-			122.			-			114.			-	
Manganese	mg/L	T		-			25.2			-			24.4			-			25.9	
Manganese	mg/L	D		25.8			-			25.6			-			25.3			-	
Mercury	mg/L	T		-			<0.0001			-			<0.00012			-			<0.0001	J
Mercury	mg/L	D		<0.0001			-			<0.0001			-			<0.0001			-	
Molybdenum	mg/L	T		-			<0.016			-			<0.023			-			<0.017	
Molybdenum	mg/L	D		<0.023			-			<0.016			-			<0.023			-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 4/1/2003 GWW-3-D01N-GRW GW4		GWW-3 5/5/2003 GWW-3-T01N-GRW GW4		GWW-3 5/5/2003 GWW-3-D01N-GRW GW4		GWW-3 6/3/2003 GWW-3-T01N-GRW GW4		GWW-3 6/3/2003 GWW-3-D01N-GRW GW4		GWW-3 7/22/2003 GWW-3-T01N-GRW GW4	
Nickel	mg/L	T	-		0.524	:	-		0.517	:	-		<0.44	:
Nickel	mg/L	D	<0.73	:	-		0.543	:	-		0.53	:	-	
Potassium	mg/L	T	-		<3.27	:	-		<3.26	:	-		<37.1	:
Potassium	mg/L	D	<40.5	:	-		<3.27	:	-		<3.26	:	-	
Selenium	mg/L	T	-		0.0084	:	-		<0.008	:	-		<0.0081	:
Selenium	mg/L	D	<0.0072	:	-		<0.008	:	-		0.0089	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	J
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		25.4	:	-		19.	:	-		<53.2	:
Sodium	mg/L	D	<91.6	:	-		20.5	:	-		19.4	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	0.004	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		4.86	:	-		4.45	:	-		5.	:
Zinc	mg/L	D	4.91	:	-		4.96	:	-		4.58	:	-	
Isotopes														
Lead	mg/L	T	-		0.0021	J	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	0.0033	:	-		0.0138	J	-		<0.001	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-3	7/22/2003	GWW-3-D01N-GRW		GWW-3	8/11/2003	GWW-3-T01N-GRW		GWW-3	8/11/2003	GWW-3-D01N-GRW		GWW-3	9/9/2003	GWW-3-T01N-GRW		GWW-3	9/9/2003	GWW-3-D01N-GRW		GWW-3	11/3/2003	GWW-3-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				9.87	:			-				6.21	:			-				5.65	:		
Eh	millivolts	T	-				370.2	:			-				426.4	:			-				411.3	:		
pH	SU	T	-				4.4	J			-				4.3	J			-				4.3	J		
Specific Conductance	uS/cm	T	-				2015.	:			-				1896.	:			-				1778.	:		
Temperature	Celsius	T	-				12.05	:			-				9.3	:			-				8.5	:		
Turbidity	NTU	T	-				0.5	:			-				8.8	:			-				0.	:		
General Chemistry																										
Ammonia	mg/L	T	-				0.044	:			-				<0.048	:			-				<0.12	:		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				21.8	:			-				18.1	:			-				20.6	:		
Fluoride	mg/L	T	-				25.2	:			-				25.6	:			-				23.2	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.4	J			-				3.	J			-				3.2	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				0.029	J			-				<0.029	J			-				0.026	J		
Phosphorus	mg/L	T	-				0.038	:			-				0.031	:			-				0.032	:		
Sulfate	mg/L	T	-				942.	J			-				1200.	J			-				1060.	:		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				2370.	:			-				1800.	:			-				1680.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.7	J			-				<1.1	:			-				<1.	:		
Total Suspended Solids	mg/L	T	-				<1.	:			-				1.4	:			-				<1.	:		
Laboratory Parameters																										
pH	SU	T	-				4.4	J			-				4.3	J			-				4.3	J		
Specific Conductance	umhos/cm	T	-				1670.	J			-				1670.	J			-				1770.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	:			-				<0.01	:			-				<0.01	:		
Physical Properties																										
Hardness	mg/L	T	-				975.	:			-				959.	:			-				913.	:		
Hardness	mg/L	D	1010.	:			-				957.	:			-				944.	:			-			
Metals																										

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 7/22/2003 GWW-3-D01N-GRW GW4	GWW-3 8/11/2003 GWW-3-T01N-GRW GW4	GWW-3 8/11/2003 GWW-3-D01N-GRW GW4	GWW-3 9/9/2003 GWW-3-T01N-GRW GW4	GWW-3 9/9/2003 GWW-3-D01N-GRW GW4	GWW-3 11/3/2003 GWW-3-T01N-GRW GW4
Aluminum	mg/L	T	-	51.2 :	-	50.4 :	-	47.7 :
Aluminum	mg/L	D	51.6 :	-	51. J	-	49.8 :	-
Antimony	mg/L	T	-	<0.038 :	-	<0.082 :	-	<0.082 J
Antimony	mg/L	D	<0.047 :	-	<0.038 :	-	<0.082 :	-
Arsenic	mg/L	T	-	<0.024 :	-	<0.035 :	-	<0.035 :
Arsenic	mg/L	D	<0.048 :	-	0.0338 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.073 :	-	<0.117 :	-	<0.117 :
Barium	mg/L	D	<0.059 :	-	<0.073 :	-	<0.117 :	-
Beryllium	mg/L	T	-	0.011 J	-	0.0136 :	-	<0.0132 :
Beryllium	mg/L	D	0.0119 :	-	0.0108 J	-	0.0132 :	-
Boron	mg/L	T	-	<0.046 :	-	<0.064 :	-	<0.064 :
Boron	mg/L	D	<0.048 :	-	<0.046 :	-	<0.064 :	-
Cadmium	mg/L	T	-	<0.12 :	-	<0.13 :	-	<0.13 :
Cadmium	mg/L	D	<0.12 J	-	<0.12 :	-	<0.13 :	-
Calcium	mg/L	T	-	193. :	-	190. :	-	183. :
Calcium	mg/L	D	199. :	-	189. :	-	186. :	-
Chromium	mg/L	T	-	<0.19 :	-	<0.23 :	-	<0.23 :
Chromium	mg/L	D	<0.19 J	-	<0.19 :	-	<0.23 :	-
Cobalt	mg/L	T	-	<0.37 :	-	<0.32 :	-	<0.32 :
Cobalt	mg/L	D	<0.37 J	-	<0.37 :	-	<0.32 :	-
Copper	mg/L	T	-	0.985 :	-	0.594 :	-	<1.26 :
Copper	mg/L	D	0.52 J	-	0.938 :	-	0.534 :	-
Iron	mg/L	T	-	<6.67 :	-	<4.55 :	-	<4.55 :
Iron	mg/L	D	<6.67 :	-	<6.67 :	-	<4.55 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D	<0.001 :	-	<0.001 :	-	<0.002 :	-
Magnesium	mg/L	T	-	120. :	-	118. :	-	111. :
Magnesium	mg/L	D	124. :	-	118. :	-	116. :	-
Manganese	mg/L	T	-	24.9 :	-	24.8 :	-	22.7 J
Manganese	mg/L	D	25.5 :	-	24.5 :	-	24.5 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.016 :	-	<0.012 :	-	<0.0158 :
Molybdenum	mg/L	D	<0.017 :	-	<0.016 :	-	<0.012 :	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-3	7/22/2003	GWW-3-D01N-GRW		GWW-3	8/11/2003	GWW-3-T01N-GRW		GWW-3	8/11/2003	GWW-3-D01N-GRW		GWW-3	9/9/2003	GWW-3-T01N-GRW		GWW-3	9/9/2003	GWW-3-D01N-GRW		GWW-3	11/3/2003	GWW-3-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Nickel	mg/L	T	-				0.774	:			-				0.53	:			-				<0.45	:		
Nickel	mg/L	D	<0.44	:			-				0.823	:			-				<0.45	:			-			
Potassium	mg/L	T	-				<37.1	:			-				<63.8	:			-				<63.8	:		
Potassium	mg/L	D	<37.1	:			-				<37.1	:			-				<63.8	:			-			
Selenium	mg/L	T	-				<0.008	:			-				0.0069	:			-				0.007	:		
Selenium	mg/L	D	<0.0089	J			-				<0.008	:			-				0.0076	:			-			
Silver	mg/L	T	-				<0.001	:			-				<0.001	:			-				<0.001	:		
Silver	mg/L	D	<0.001	J			-				<0.001	:			-				<0.001	:			-			
Sodium	mg/L	T	-				<53.2	J			-				<99.1	:			-				<99.1	:		
Sodium	mg/L	D	<53.2	:			-				<53.2	J			-				<99.1	:			-			
Thallium	mg/L	T	-				<0.001	:			-				<0.001	:			-				<0.001	:		
Thallium	mg/L	D	<0.001	:			-				<0.001	:			-				<0.001	:			-			
Vanadium	mg/L	T	-				<0.002	:			-				<0.001	:			-				<0.001	:		
Vanadium	mg/L	D	<0.002	:			-				<0.002	:			-				<0.001	:			-			
Zinc	mg/L	T	-				5.	:			-				5.09	:			-				4.9	:		
Zinc	mg/L	D	4.95	:			-				5.18	:			-				4.78	:			-			
Isotopes																										
Lead	mg/L	T	-				<0.001	:			-				<0.002	:			-				<0.002	:		
Lead	mg/L	D	<0.001	:			-				<0.001	:			-				<0.002	:			-			

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			GWW-3	11/3/2003	GWW-3-D01N-GRW		GWW-3	12/11/2003	GWW-3-T01N-GRW		GWW-3	12/11/2003	GWW-3-D01N-GRW		GWW-3	1/13/2004	GWW-3-T01N-GRW		GWW-3	1/13/2004	GWW-3-D01N-GRW		GWW-3	4/13/2004	GWW-3-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Field Measurements																										
DO	mg/L	T	-				6.86	:			-				6.42	:			-				6.47	:		
Eh	millivolts	T	-				330.6	:			-				432.2	:			-				222.4	:		
pH	SU	T	-				4.4	J			-				4.5	J			-				4.9	J		
Specific Conductance	uS/cm	T	-				1629.	:			-				1681.	:			-				1617.	:		
Temperature	Celsius	T	-				7.29	:			-				7.25	:			-				9.24	:		
Turbidity	NTU	T	-				0.1	:			-				0.9	:			-				0.	:		
General Chemistry																										
Ammonia	mg/L	T	-				0.073	:			-				<0.1	J			-				<0.057	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				19.1	:			-				19.7	:			-				17.3	:		
Fluoride	mg/L	T	-				23.2	:			-				22.5	:			-				20.	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.	:			-				2.7	J			-				2.4	J		
Nitrite	mg/L	T	-				<0.005	:			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				0.031	:			-				<0.05	J			-				0.024	J		
Phosphorus	mg/L	T	-				0.032	:			-				0.04	:			-				0.033	:		
Sulfate	mg/L	T	-				1030.	:			-				1100.	:			-				1040.	:		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				1610.	J			-				1600.	:			-				1550.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				1.8	:			-				<1.	J			-				1.5	J		
Total Suspended Solids	mg/L	T	-				1.2	:			-				<1.6	:			-				<1.1	J		
Laboratory Parameters																										
pH	SU	T	-				4.4	J			-				4.5	J			-				4.9	J		
Specific Conductance	umhos/cm	T	-				1550.	J			-				1810.	J			-				1420.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	:			-				-				-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	-				829.	:			-				817.	:			-				784.	:		
Hardness	mg/L	D	940.	:			-				834.	:			-				854.	:			-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 11/3/2003 GWW-3-D01N-GRW GW4		GWW-3 12/11/2003 GWW-3-T01N-GRW GW4		GWW-3 12/11/2003 GWW-3-D01N-GRW GW4		GWW-3 1/13/2004 GWW-3-T01N-GRW GW4		GWW-3 1/13/2004 GWW-3-D01N-GRW GW4		GWW-3 4/13/2004 GWW-3-T01N-GRW GW4	
Aluminum	mg/L	T	-		42.1	:	-		41.1	:	-		38.5	:
Aluminum	mg/L	D	49.1	:	-		42.2	:	-		44.1	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.097	:	-		<0.053	:
Antimony	mg/L	D	<0.082	J	-		<0.082	:	-		<0.097	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.052	:	-		<0.037	J
Arsenic	mg/L	D	<0.035	:	-		<0.035	:	-		<0.052	J	-	
Barium	mg/L	T	-		<0.117	:	-		<0.188	:	-		<0.049	:
Barium	mg/L	D	<0.117	:	-		<0.117	:	-		<0.188	:	-	
Beryllium	mg/L	T	-		<0.0237	:	-		0.0113	:	-		<0.0132	:
Beryllium	mg/L	D	<0.0171	:	-		<0.0228	:	-		0.0118	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.117	:	-		<0.036	:
Boron	mg/L	D	<0.064	:	-		<0.064	:	-		<0.117	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		0.0796	J	-		<0.1	:
Cadmium	mg/L	D	<0.13	:	-		<0.13	:	-		0.0874	J	-	
Calcium	mg/L	T	-		166.	:	-		164.	:	-		158.	:
Calcium	mg/L	D	188.	:	-		167.	:	-		171.	:	-	
Chromium	mg/L	T	-		<0.23	:	-		<0.11	:	-		<0.13	:
Chromium	mg/L	D	<0.23	:	-		<0.23	:	-		<0.206	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.31	:	-		<0.18	:
Cobalt	mg/L	D	<0.32	:	-		<0.32	:	-		<0.31	:	-	
Copper	mg/L	T	-		0.652	J	-		0.746	:	-		0.682	:
Copper	mg/L	D	<1.06	:	-		0.731	J	-		0.864	J	-	
Iron	mg/L	T	-		<4.55	:	-		<3.73	:	-		<2.93	J
Iron	mg/L	D	<4.55	:	-		<4.55	:	-		<3.73	:	-	
Lead	mg/L	T	-		0.001	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.002	:	-		0.001	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		101.	:	-		99.1	:	-		94.5	:
Magnesium	mg/L	D	115.	:	-		101.	:	-		104.	:	-	
Manganese	mg/L	T	-		21.3	:	-		20.9	:	-		19.6	:
Manganese	mg/L	D	22.4	:	-		21.5	:	-		21.8	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0235	:	-		<0.03	:	-		<0.014	:
Molybdenum	mg/L	D	<0.012	:	-		<0.0124	:	-		<0.03	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			GWW-3	11/3/2003	GWW-3-D01N-GRW	GWW-3	12/11/2003	GWW-3-T01N-GRW	GWW-3	12/11/2003	GWW-3-D01N-GRW	GWW-3	1/13/2004	GWW-3-T01N-GRW	GWW-3	1/13/2004	GWW-3-D01N-GRW	GWW-3	4/13/2004	GWW-3-T01N-GRW
			GW4			GW4			GW4			GW4			GW4			GW4		
Nickel	mg/L	T	-			0.473	J		-			0.5	:		-			0.501	:	
Nickel	mg/L	D	<0.45	:		-			0.605	J		-			0.544	:		-		
Potassium	mg/L	T	-			<63.8	:		-			<24.3	:		-			<15.5	:	
Potassium	mg/L	D	<63.8	:		-			<63.8	:		-			<24.3	:		-		
Selenium	mg/L	T	-			0.007	:		-			0.0091	J		-			<0.007	:	
Selenium	mg/L	D	0.0069	:		-			0.004	:		-			0.0081	:		-		
Silver	mg/L	T	-			<0.001	:		-			<0.001	:		-			<0.001	J	
Silver	mg/L	D	<0.001	:		-			<0.001	:		-			<0.001	:		-		
Sodium	mg/L	T	-			<99.1	:		-			<49.	:		-			<32.8	J	
Sodium	mg/L	D	<99.1	:		-			<99.1	:		-			<49.	:		-		
Thallium	mg/L	T	-			<0.001	:		-			<0.001	:		-			<0.001	:	
Thallium	mg/L	D	<0.001	:		-			<0.001	:		-			<0.001	:		-		
Vanadium	mg/L	T	-			<0.0043	:		-			<0.002	:		-			<0.002	:	
Vanadium	mg/L	D	<0.001	:		-			<0.0057	:		-			<0.002	:		-		
Zinc	mg/L	T	-			4.3	:		-			4.46	:		-			4.08	:	
Zinc	mg/L	D	4.69	:		-			4.3	:		-			4.78	:		-		
Isotopes																				
Delta D	per mil	T	-			-			-			-			-			-95.4	:	
Delta O-18	per mil	T	-			-			-			-			-			-13.1	:	
Lead	mg/L	T	-			0.001	:		-			<0.001	:		-			<0.004	:	
Lead	mg/L	D	<0.002	:		-			0.001	:		-			<0.001	:		-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	GWW-3		Lab Well		Lab Well		Lab Well		LAB WELL		Lab Well	
			Sample Date	4/13/2004		11/8/2002		11/8/2002		1/10/2003		1/10/2003		4/3/2003	
			Sample ID	GWW-3-D01N-GRW		LABWELL-T01N-GRW		LABWELL-D01N-GRW		LABWELL-T01N-GRW		LABWELL-D01N-GRW		LABWELL-T01N-GRW	
				GW4		GW6		GW6		GW6		GW6		GW6	
Field Measurements															
DO	mg/L	T		-		6.63	:	-		8.76	:	-		8.15	:
Eh	millivolts	T		-		65.5	:	-		317.1	:	-		40.	:
pH	SU	T		-		6.87	:	-		6.58	:	-		7.2	J
Specific Conductance	uS/cm	T		-		288.	:	-		351.	:	-		303.	:
Temperature	Celsius	T		-		12.85	:	-		11.76	:	-		8.52	:
Turbidity	NTU	T		-		6.2	:	-		41.3	:	-		0.	:
General Chemistry															
Ammonia	mg/L	T		-		<0.094	:	-		<0.06	:	-		<0.045	:
Bicarbonate (as CaCO3)	mg/L	T		-		98.1	:	-		93.4	:	-		92.1	:
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T		-		1.9	:	-		<2.	:	-		<2.2	:
Fluoride	mg/L	T		-		0.29	:	-		0.43	:	-		0.28	:
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T		-		<0.4	:	-		<0.4	J	-		<0.4	J
Nitrite	mg/L	T		-		<0.005	:	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T		-		<0.01	:	-		0.13	J	-		<0.01	J
Phosphorus	mg/L	T		-		<0.01	:	-		<0.01	J	-		<0.01	:
Sulfate	mg/L	T		-		52.2	:	-		70.8	J	-		59.3	J
Total Alkalinity	mg/L	T		-		98.1	:	-		93.4	:	-		92.1	:
Total Dissolved Solids	mg/L	T		-		181.	:	-		<210.	J	-		<240.	:
Total Kjeldahl Nitrogen	mg/L	T		-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T		-		<1.	:	-		<1.	:	-		<5.	J
Total Suspended Solids	mg/L	T		-		<0.56	:	-		<1.	:	-		<0.8	:
Laboratory Parameters															
pH	SU	T		-		6.87	:	-		6.58	:	-		7.2	J
Specific Conductance	umhos/cm	T		-		-		-		-		-		294.	J
Inorganics															
Cyanide	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties															
Hardness	mg/L	T		-		142.	:	-		149.	:	-		161.	:
Hardness	mg/L	D		806.	:	-		142.	:	-		158.	:	-	
Metals															

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	GWW-3	Lab Well	Lab Well	Lab Well	LAB WELL	Lab Well
			Sample Date	4/13/2004	11/8/2002	11/8/2002	1/10/2003	1/10/2003	4/3/2003
			Sample ID	GWW-3-D01N-GRW	LABWELL-T01N-GRW	LABWELL-D01N-GRW	LABWELL-T01N-GRW	LABWELL-D01N-GRW	LABWELL-T01N-GRW
				GW4	GW6	GW6	GW6	GW6	GW6
Aluminum	mg/L	T		-	<0.006 :	-	<0.142 :	-	<0.0277 :
Aluminum	mg/L	D		39.2 :	-	0.0085 :	-	<0.142 :	-
Antimony	mg/L	T		-	<0.0004 :	-	<0.0014 :	-	<0.0006 J
Antimony	mg/L	D		<0.053 :	-	<0.0004 :	-	<0.0006 :	-
Arsenic	mg/L	T		-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D		<0.037 J	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T		-	0.0433 :	-	0.0488 :	-	0.0466 :
Barium	mg/L	D		<0.049 :	-	0.0439 :	-	0.0474 :	-
Beryllium	mg/L	T		-	<0.0002 :	-	<0.0002 :	-	<0.0003 :
Beryllium	mg/L	D		<0.0128 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T		-	0.0058 :	-	0.0054 :	-	<0.0075 :
Boron	mg/L	D		<0.036 :	-	0.0053 :	-	0.0042 :	-
Cadmium	mg/L	T		-	<0.0002 :	-	<0.0004 :	-	<0.0004 :
Cadmium	mg/L	D		<0.1 :	-	<0.0002 :	-	<0.0004 :	-
Calcium	mg/L	T		-	45.6 :	-	47.6 :	-	51.6 :
Calcium	mg/L	D		162. :	-	45.7 :	-	50.5 :	-
Chromium	mg/L	T		-	<0.0046 :	-	<0.0037 :	-	<0.00093 :
Chromium	mg/L	D		<0.13 :	-	<0.0046 :	-	<0.0037 :	-
Cobalt	mg/L	T		-	<0.0022 :	-	<0.0016 :	-	<0.0029 :
Cobalt	mg/L	D		0.198 :	-	<0.0022 :	-	<0.0016 :	-
Copper	mg/L	T		-	0.073 :	-	0.216 :	-	0.0633 :
Copper	mg/L	D		0.635 :	-	0.063 :	-	0.093 :	-
Iron	mg/L	T		-	<0.0226 :	-	<0.489 :	-	<0.0299 :
Iron	mg/L	D		<2.93 :	-	<0.0226 :	-	<0.489 :	-
Lead	mg/L	T		-	<0.0002 :	-	0.00036 :	-	<0.0002 :
Lead	mg/L	D		<0.004 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T		-	6.8 :	-	7.3 :	-	7.69 :
Magnesium	mg/L	D		97.1 :	-	6.85 :	-	7.84 :	-
Manganese	mg/L	T		-	<0.0025 :	-	<0.005 :	-	0.001 :
Manganese	mg/L	D		20. :	-	0.0034 :	-	<0.0052 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.0044 :	-	0.0046 :	-	<0.0055 :
Molybdenum	mg/L	D		<0.014 :	-	0.0045 :	-	0.0046 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 4/13/2004 GWW-3-D01N-GRW GW4	Lab Well 11/8/2002 LABWELL-T01N-GRW GW6	Lab Well 11/8/2002 LABWELL-D01N-GRW GW6	Lab Well 1/10/2003 LABWELL-T01N-GRW GW6	LAB WELL 1/10/2003 LABWELL-D01N-GRW GW6	Lab Well 4/3/2003 LABWELL-T01N-GRW GW6
Nickel	mg/L	T	-	<0.0004 J	-	<0.0015 :	-	<0.0026 :
Nickel	mg/L	D	0.616 :	-	0.00054 J	-	<0.0015 :	-
Potassium	mg/L	T	-	<1.27 :	-	0.994 :	-	1.19 :
Potassium	mg/L	D	<15.5 :	-	<1.17 :	-	0.986 :	-
Selenium	mg/L	T	-	<0.0004 :	-	<0.0016 :	-	<0.001 :
Selenium	mg/L	D	<0.007 :	-	<0.0004 :	-	<0.0016 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.001 J	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	3.64 :	-	<3.27 :	-	4.09 :
Sodium	mg/L	D	<32.8 J	-	3.56 :	-	3.7 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.001 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0002 :	-	<0.0004 :	-	<0.0002 :
Vanadium	mg/L	D	<0.002 :	-	<0.0002 :	-	<0.0004 :	-
Zinc	mg/L	T	-	0.0518 :	-	0.049 :	-	0.0406 :
Zinc	mg/L	D	4.15 :	-	0.0364 :	-	<0.0393 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Butanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Hexanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 4/13/2004 GWW-3-D01N-GRW GW4	Lab Well 11/8/2002 LABWELL-T01N-GRW GW6	Lab Well 11/8/2002 LABWELL-D01N-GRW GW6	Lab Well 1/10/2003 LABWELL-T01N-GRW GW6	LAB WELL 1/10/2003 LABWELL-D01N-GRW GW6	Lab Well 4/3/2003 LABWELL-T01N-GRW GW6
Acetone	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	<0.025 :	-	<0.025 :	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
2,4-Dinitrophenol	mg/L	T	-	<0.025 :	-	<0.025 :	-	<0.025 J
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 4/13/2004 GWW-3-D01N-GRW GW4		Lab Well 11/8/2002 LABWELL-T01N-GRW GW6		Lab Well 11/8/2002 LABWELL-D01N-GRW GW6		Lab Well 1/10/2003 LABWELL-T01N-GRW GW6		LAB WELL 1/10/2003 LABWELL-D01N-GRW GW6		Lab Well 4/3/2003 LABWELL-T01N-GRW GW6	
2,6-Dinitrotoluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Chloronaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Chlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Methylnaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Nitroaniline	mg/L	T	-		<0.025	:	-		<0.025	:	-		<0.025	:
2-Nitrophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
3,3-Dichlorobenzidine	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
3-Nitroaniline	mg/L	T	-		<0.025	:	-		<0.025	:	-		<0.025	J
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.025	:	-		<0.025	:	-		<0.025	:
4-Bromophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Chloro-3-methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Chloroaniline	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Nitroaniline	mg/L	T	-		<0.025	:	-		<0.025	:	-		<0.025	:
4-Nitrophenol	mg/L	T	-		<0.025	:	-		<0.025	:	-		<0.025	J
Acenaphthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Acenaphthylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzaldehyde	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Benzo(a)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(a)pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(b)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(g,h,i)perylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(k)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-chloroethyl)ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-ethylhexyl)phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Butyl benzyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Carbazole	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Chrysene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Dibenz(a,h)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Dibenzofuran	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	GWW-3 4/13/2004 GWW-3-D01N-GRW GW4	Lab Well 11/8/2002 LABWELL-T01N-GRW GW6	Lab Well 11/8/2002 LABWELL-D01N-GRW GW6	Lab Well 1/10/2003 LABWELL-T01N-GRW GW6	LAB WELL 1/10/2003 LABWELL-D01N-GRW GW6	Lab Well 4/3/2003 LABWELL-T01N-GRW GW6
Dichlorodiisopropyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Diethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dimethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Fluorene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Hexachlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Hexachlorobutadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Hexachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Isophorone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Naphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Nitrobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Pentachlorophenol	mg/L	T	-	<0.025 :	-	<0.025 :	-	<0.025 :
Phenanthrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Phenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Isotopes								
Lead	mg/L	T	-	<0.0002 :	-	0.00036 :	-	<0.0002 :
Lead	mg/L	D	<0.004 :	-	<0.0002 :	-	<0.0002 :	-

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			LAB WELL	4/3/2003	LABWELL-D01N-GRW GW6	Lab Well	7/16/2003	LABWELL-T01N-GRW GW6	LAB WELL	7/16/2003	LABWELL-D01N-GRW GW6	Lab Well	10/16/2003	LABWELL-T01N-GRW GW6	LAB WELL	10/16/2003	LABWELL-D01N-GRW GW6	Lab Well	1/8/2004	LABWELL-T01N-GRW GW6
Field Measurements																				
DO	mg/L	T	-			2.44	:		-			3.58	:		-			1.22	:	
Eh	millivolts	T	-			292.	:		-			106.6	:		-			320.5	:	
pH	SU	T	-			7.2	J		-			7.2	J		-			6.8	J	
Specific Conductance	uS/cm	T	-			307.	:		-			307.	:		-			344.	:	
Temperature	Celsius	T	-			15.73	:		-			17.96	:		-			9.03	:	
Turbidity	NTU	T	-			33.7	:		-			3.9	:		-			0.2	:	
General Chemistry																				
Ammonia	mg/L	T	-			<0.11	J		-			<0.04	J		-			<0.052	J	
Bicarbonate (as CaCO3)	mg/L	T	-			93.8	:		-			95.8	:		-			91.	:	
Carbonate (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			<1.	:	
Chloride	mg/L	T	-			2.9	:		-			2.2	:		-			2.4	:	
Fluoride	mg/L	T	-			0.31	:		-			0.29	:		-			0.26	:	
Hydroxide (as CaCO3)	mg/L	T	-			<1.	:		-			<1.	:		-			<1.	:	
Nitrate	mg/L	T	-			<1.	J		-			0.23	J		-			<0.23	:	
Nitrite	mg/L	T	-			<0.005	J		-			<0.005	J		-			<0.005	:	
Phosphate, Ortho As P	mg/L	T	-			<0.01	J		-			<0.01	J		-			<0.01	:	
Phosphorus	mg/L	T	-			<0.01	:		-			<0.01	:		-			<0.01	:	
Sulfate	mg/L	T	-			68.1	J		-			69.9	J		-			71.1	:	
Total Alkalinity	mg/L	T	-			93.8	:		-			95.8	:		-			91.	:	
Total Dissolved Solids	mg/L	T	-			168.	:		-			270.	:		-			208.	:	
Total Kjeldahl Nitrogen	mg/L	T	-			<0.24	:		-			<0.24	:		-			<0.24	:	
Total Organic Carbon	mg/L	T	-			<1.3	J		-			<1.	J		-			<1.2	:	
Total Suspended Solids	mg/L	T	-			<0.8	:		-			<0.5	:		-			<0.5	:	
Laboratory Parameters																				
pH	SU	T	-			7.2	J		-			7.2	J		-			6.8	J	
Specific Conductance	umhos/cm	T	-			281.	J		-			299.	J		-			292.	J	
Inorganics																				
Cyanide	mg/L	T	-			<0.01	J		-			<0.01	J		-			<0.01	J	
Physical Properties																				
Hardness	mg/L	T	-			159.	:		-			159.	:		-			164.	:	
Hardness	mg/L	D	157.	:		-			158.	:		-			160.	:		-		
Metals																				

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LAB WELL 4/3/2003 LABWELL-D01N-GRW GW6		Lab Well 7/16/2003 LABWELL-T01N-GRW GW6		LAB WELL 7/16/2003 LABWELL-D01N-GRW GW6		Lab Well 10/16/2003 LABWELL-T01N-GRW GW6		LAB WELL 10/16/2003 LABWELL-D01N-GRW GW6		Lab Well 1/8/2004 LABWELL-T01N-GRW GW6	
Aluminum	mg/L	T	-		<0.631	:	-		<0.217	:	-		<0.514	:
Aluminum	mg/L	D	<0.0277	:	-		<0.631	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.0018	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	J	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0482	:	-		0.0474	:	-		0.0468	:
Barium	mg/L	D	0.0461	:	-		0.0466	:	-		0.048	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0004	:	-	
Boron	mg/L	T	-		<0.0046	:	-		<0.0089	:	-		<0.0069	:
Boron	mg/L	D	<0.0075	:	-		0.0057	:	-		<0.0088	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0005	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0004	:	-		<0.0003	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		50.7	:	-		50.8	:	-		52.5	:
Calcium	mg/L	D	50.6	:	-		50.6	:	-		51.	:	-	
Chromium	mg/L	T	-		<0.0006	:	-		<0.0011	J	-		<0.0015	J
Chromium	mg/L	D	<0.0009	:	-		0.00076	:	-		<0.0011	J	-	
Cobalt	mg/L	T	-		<0.0018	:	-		<0.0029	:	-		<0.0023	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0018	:	-		<0.0029	:	-	
Copper	mg/L	T	-		0.07	:	-		0.062	:	-		0.0505	:
Copper	mg/L	D	0.0586	:	-		0.0698	:	-		0.0741	:	-	
Iron	mg/L	T	-		<0.667	:	-		<0.455	:	-		<0.373	:
Iron	mg/L	D	0.0306	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		0.0012	:	-		0.0012	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		7.81	:	-		7.87	:	-		8.04	:
Magnesium	mg/L	D	7.53	:	-		7.78	:	-		7.83	:	-	
Manganese	mg/L	T	-		<0.019	:	-		<0.016	:	-		<0.015	:
Manganese	mg/L	D	<0.0009	:	-		<0.019	:	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.00014	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.00014	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0046	:	-		<0.0049	:	-		0.0063	:
Molybdenum	mg/L	D	<0.0051	:	-		0.0045	:	-		<0.0068	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LAB WELL 4/3/2003 LABWELL-D01N-GRW GW6		Lab Well 7/16/2003 LABWELL-T01N-GRW GW6		LAB WELL 7/16/2003 LABWELL-D01N-GRW GW6		Lab Well 10/16/2003 LABWELL-T01N-GRW GW6		LAB WELL 10/16/2003 LABWELL-D01N-GRW GW6		Lab Well 1/8/2004 LABWELL-T01N-GRW GW6	
Nickel	mg/L	T	-		<0.002	:	-		<0.0024	:	-		<0.0024	J
Nickel	mg/L	D	<0.0026	:	-		<0.002	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		<1.31	:	-		<1.79	:	-		0.954	:
Potassium	mg/L	D	1.2	:	-		<1.29	:	-		<1.63	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0006	J	-		<0.0006	J
Selenium	mg/L	D	<0.001	:	-		<0.0016	J	-		0.00062	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		<5.32	:	-		<9.91	:	-		<4.9	:
Sodium	mg/L	D	3.9	:	-		<5.32	:	-		<9.91	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		<0.0548	:	-		0.0348	:	-		<0.026	:
Zinc	mg/L	D	0.0222	:	-		<0.0508	:	-		0.056	J	-	
Isotopes														
Lead	mg/L	T	-		0.0012	:	-		0.0012	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			LAB WELL	1/8/2004	LABWELL-D01N-GRW GW6		Lab Well	4/16/2004	LABWELL-T01N-GRW GW6		LAB WELL	4/16/2004	LABWELL-D01N-GRW GW6		LB-A	10/23/2003	LABOBITA-T01N-GRW OMR		LB-A	10/23/2003	LABOBITA-D01N-GRW OMR		LB-A	2/23/2004	LABOBITA-T01N-GRW OMR	
Field Measurements																										
DO	mg/L	T		-			8.67			:		-			3.16			:		-			2.97			:
Eh	millivolts	T		-			169.8			:		-			167.3			:		-			427.			:
pH	SU	T		-			7.3	J				-			4.6	J				-			4.8	J		
Specific Conductance	uS/cm	T		-			333.			:		-			773.			:		-			867.			:
Temperature	Celsius	T		-			16.81			:		-			15.43			:		-			7.22			:
Turbidity	NTU	T		-			0.			:		-			6.			:		-			2.2			:
General Chemistry																										
Ammonia	mg/L	T		-			<0.04			:		-			<0.085	J				-			<0.051			:
Bicarbonate (as CaCO3)	mg/L	T		-			92.2			:		-			<1.1			:		-			<1.			:
Carbonate (as CaCO3)	mg/L	T		-			<1.			:		-			<1.			:		-			<1.			:
Chloride	mg/L	T		-			2.5			:		-			6.7			:		-			5.7			:
Fluoride	mg/L	T		-			0.29			:		-			2.7			:		-			2.8			:
Hydroxide (as CaCO3)	mg/L	T		-			<1.			:		-			<1.			:		-			<1.			:
Nitrate	mg/L	T		-			0.46	J				-			<0.2			:		-			0.32			:
Nitrite	mg/L	T		-			<0.005			:		-			<0.005			:		-			<0.005			:
Phosphate, Ortho As P	mg/L	T		-			<0.01			:		-			<0.01			:		-			<0.01			:
Phosphorus	mg/L	T		-			<0.01			:		-			0.011			:		-			<0.01			:
Sulfate	mg/L	T		-			81.7			:		-			556.	J				-			473.			:
Total Alkalinity	mg/L	T		-			92.2			:		-			<1.1			:		-			<1.			:
Total Dissolved Solids	mg/L	T		-			234.			:		-			694.			:		-			766.			:
Total Kjeldahl Nitrogen	mg/L	T		-			<0.24			:		-			<2.2			:		-			<0.24			:
Total Organic Carbon	mg/L	T		-			<1.7	J				-			1.2	J				-			<1.			:
Total Suspended Solids	mg/L	T		-			<0.5	J				-			<1.			:		-			<0.9			:
Laboratory Parameters																										
pH	SU	T		-			7.3	J				-			4.6	J				-			4.8	J		
Specific Conductance	umhos/cm	T		-			322.	J				-			830.	J				-			736.	J		
Inorganics																										
Cyanide	mg/L	T		-			<0.01			:		-			<0.01	J				-			<0.01			:
Physical Properties																										
Hardness	mg/L	T		-			176.			:		-			395.			:		-			416.			:
Hardness	mg/L	D		169.		:	-					176.		:	-					390.		:	-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LAB WELL 1/8/2004 LABWELL-D01N-GRW GW6		Lab Well 4/16/2004 LABWELL-T01N-GRW GW6		LAB WELL 4/16/2004 LABWELL-D01N-GRW GW6		LB-A 10/23/2003 LABOBITA-T01N-GRW OMR		LB-A 10/23/2003 LABOBITA-D01N-GRW OMR		LB-A 2/23/2004 LABOBITA-T01N-GRW OMR	
Aluminum	mg/L	T	-	:	<0.201	:	-		<16.4	:	-		13.1	:
Aluminum	mg/L	D	<0.514	:	-		<0.201	:	-		<16.1	:	-	
Antimony	mg/L	T	-		<0.00096	:	-		0.153	:	-		<0.029	:
Antimony	mg/L	D	<0.0024	:	-		<0.0012	:	-		<0.082	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.035	:	-		<0.028	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.035	:	-	
Barium	mg/L	T	-		0.0484	:	-		<0.117	:	-		<0.053	:
Barium	mg/L	D	0.0484	:	-		0.0493	:	-		<0.117	:	-	
Beryllium	mg/L	T	-		<0.0003	J	-		<0.0191	:	-		0.0064	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0003	J	-		<0.0117	:	-	
Boron	mg/L	T	-		0.0045	:	-		<0.064	:	-		<0.023	:
Boron	mg/L	D	<0.0059	:	-		0.0044	:	-		<0.064	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.07	:	-		<0.07	J
Cadmium	mg/L	D	<0.0007	:	-		<0.0003	:	-		<0.07	:	-	
Calcium	mg/L	T	-		56.	:	-		107.	:	-		113.	:
Calcium	mg/L	D	54.1	:	-		56.2	:	-		105.	:	-	
Chromium	mg/L	T	-		<0.0006	:	-		<0.134	J	-		<0.11	:
Chromium	mg/L	D	<0.0015	J	-		<0.0006	:	-		<0.149	J	-	
Cobalt	mg/L	T	-		<0.0016	:	-		<0.31	:	-		<0.31	:
Cobalt	mg/L	D	<0.0023	:	-		<0.0039	:	-		<0.31	:	-	
Copper	mg/L	T	-		0.0564	:	-		<0.2	J	-		<0.24	:
Copper	mg/L	D	0.0515	:	-		0.0501	:	-		<0.2	J	-	
Iron	mg/L	T	-		<0.293	J	-		<3.66	:	-		<3.73	:
Iron	mg/L	D	<0.373	:	-		<0.293	:	-		<3.1	:	-	
Lead	mg/L	T	-		<0.0008	:	-		<0.002	:	-		<0.003	:
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		8.66	:	-		31.3	:	-		32.3	:
Magnesium	mg/L	D	8.28	:	-		8.66	:	-		30.8	:	-	
Manganese	mg/L	T	-		<0.014	:	-		2.49	:	-		2.16	:
Manganese	mg/L	D	<0.015	:	-		<0.014	:	-		2.45	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0049	:	-		<0.012	:	-		<0.024	:
Molybdenum	mg/L	D	0.0055	:	-		<0.0044	:	-		<0.012	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LAB WELL 1/8/2004 LABWELL-D01N-GRW GW6		Lab Well 4/16/2004 LABWELL-T01N-GRW GW6		LAB WELL 4/16/2004 LABWELL-D01N-GRW GW6		LB-A 10/23/2003 LABOBITA-T01N-GRW OMR		LB-A 10/23/2003 LABOBITA-D01N-GRW OMR		LB-A 2/23/2004 LABOBITA-T01N-GRW OMR	
Nickel	mg/L	T	-		<0.0015	J	-		0.31	:	-		<0.27	:
Nickel	mg/L	D	<0.0024	J	-		<0.0015	J	-		<0.28	:	-	
Potassium	mg/L	T	-		1.03	:	-		<52.2	:	-		<24.3	:
Potassium	mg/L	D	0.994	:	-		1.11	:	-		<52.2	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.003	:	-		0.003	:
Selenium	mg/L	D	0.00061	:	-		<0.0014	:	-		<0.003	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.001	:	-	
Sodium	mg/L	T	-		<5.39	J	-		<68.5	:	-		<49.	:
Sodium	mg/L	D	<4.9	:	-		<10.1	J	-		<82.8	:	-	
Thallium	mg/L	T	-		<0.00021	:	-		<0.001	:	-		<0.0017	:
Thallium	mg/L	D	<0.0002	:	-		<0.00022	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.001	:	-		<0.0049	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.001	:	-	
Zinc	mg/L	T	-		<0.024	:	-		<1.03	J	-		1.12	:
Zinc	mg/L	D	<0.026	:	-		<0.024	:	-		<1.7	J	-	
Isotopes														
Lead	mg/L	T	-		<0.0008	:	-		<0.002	:	-		<0.003	:
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		<0.002	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	LB-A		LB-A		LB-A		MMW-10A		MMW-10A		MMW-10A	
Sample Date			2/23/2004		4/22/2004		4/22/2004		11/4/2002		11/4/2002		11/4/2002	
Sample ID			LABOBITA-D01N-GRW		LABOBITA-T01N-GRW		LABOBITA-D01N-GRW		MMW-10A-T01N-GRWRE		MMW-10A-T01N-GRW		MMW-10A-D01N-GRWRE	
Exposure Area			OMR		OMR		OMR		GW4		GW4		GW4	
Field Measurements														
DO	mg/L	T	-		4.21	:	-		-		2.77	:	-	
Eh	millivolts	T	-		453.	:	-		-		382.6	:	-	
pH	SU	T	-		5.2	J	-		-		4.18	:	-	
Specific Conductance	uS/cm	T	-		863.	:	-		-		2296.	:	-	
Temperature	Celsius	T	-		9.26	:	-		-		7.77	:	-	
Turbidity	NTU	T	-		3.1	:	-		-		10.4	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.2	:	-		-		0.064	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		6.7	:	-		-		27.6	:	-	
Fluoride	mg/L	T	-		2.5	:	-		22.7	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.33	J	-		-		5.4	J	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		0.03	J	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		0.052	:	-	
Sulfate	mg/L	T	-		504.	:	-		1360.	J	-		-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		734.	:	-		-		2340.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		1.3	J	-		-		1.1	:	-	
Total Suspended Solids	mg/L	T	-		<1.5	J	-		-		2.1	:	-	
Laboratory Parameters														
pH	SU	T	-		5.2	J	-		-		4.18	:	-	
Specific Conductance	umhos/cm	T	-		796.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		389.	:	-		-		-		-	
Hardness	mg/L	D	418.	:	-		388.	:	-		-		1120.	:
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LB-A 2/23/2004 LABOBITA-D01N-GRW OMR	LB-A 4/22/2004 LABOBITA-T01N-GRW OMR	LB-A 4/22/2004 LABOBITA-D01N-GRW OMR	MMW-10A 11/4/2002 MMW-10A-T01N-GRWRE GW4	MMW-10A 11/4/2002 MMW-10A-T01N-GRW GW4	MMW-10A 11/4/2002 MMW-10A-D01N-GRWRE GW4
Aluminum	mg/L	T	-	13. :	-	-	-	-
Aluminum	mg/L	D	13.2 :	-	12.9 :	-	-	47.8 :
Antimony	mg/L	T	-	<0.027 :	-	-	-	-
Antimony	mg/L	D	<0.029 :	-	<0.027 :	-	-	<0.028 :
Arsenic	mg/L	T	-	<0.026 :	-	-	-	-
Arsenic	mg/L	D	<0.028 :	-	<0.026 :	-	-	<0.054 :
Barium	mg/L	T	-	0.0179 :	-	-	-	-
Barium	mg/L	D	<0.053 :	-	0.0156 :	-	-	<0.048 :
Beryllium	mg/L	T	-	0.0072 :	-	-	-	-
Beryllium	mg/L	D	0.0057 :	-	0.0068 :	-	-	0.0111 :
Boron	mg/L	T	-	<0.018 :	-	-	-	-
Boron	mg/L	D	<0.023 :	-	<0.018 :	-	-	<0.027 :
Cadmium	mg/L	T	-	<0.1 :	-	-	-	-
Cadmium	mg/L	D	<0.07 J	-	<0.1 :	-	-	<0.08 :
Calcium	mg/L	T	-	107. :	-	-	-	-
Calcium	mg/L	D	114. :	-	106. :	-	-	282. :
Chromium	mg/L	T	-	<0.13 :	-	-	-	-
Chromium	mg/L	D	<0.11 :	-	<0.13 :	-	-	<0.16 J
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	-	<0.18 :	-	-	-	-
Cobalt	mg/L	D	<0.31 :	-	<0.18 :	-	-	<0.23 :
Copper	mg/L	T	-	<0.27 :	-	-	-	-
Copper	mg/L	D	<0.24 :	-	<0.27 :	-	-	<0.694 :
Iron	mg/L	T	-	<2.93 J	-	-	-	-
Iron	mg/L	D	<3.73 :	-	<2.93 :	-	-	<2.66 :
Lead	mg/L	T	-	<0.004 :	-	-	-	-
Lead	mg/L	D	<0.0019 :	-	<0.004 :	-	-	0.001 :
Magnesium	mg/L	T	-	29.9 :	-	-	-	-
Magnesium	mg/L	D	32.5 :	-	29.8 :	-	-	102. :
Manganese	mg/L	T	-	2.44 :	-	-	-	-
Manganese	mg/L	D	2.18 :	-	2.49 :	-	-	21.2 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.01 :	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	LB-A 2/23/2004 LABOBITA-D01N-GR W OMR		LB-A 4/22/2004 LABOBITA-T01N-GR W OMR		LB-A 4/22/2004 LABOBITA-D01N-GR W OMR		MMW-10A 11/4/2002 MMW-10A-T01N-GR WRE GW4		MMW-10A 11/4/2002 MMW-10A-T01N-GR W GW4		MMW-10A 11/4/2002 MMW-10A-D01N-GR WRE GW4	
Molybdenum	mg/L		D	<0.024	:	-		<0.01	:	-		-		<0.011	:
Nickel	mg/L		T	-		<0.33	:	-		-		-		-	
Nickel	mg/L		D	<0.27	:	-		<0.33	:	-		-		<0.34	:
Potassium	mg/L		T	-		<15.5	:	-		-		-		-	
Potassium	mg/L		D	<24.3	:	-		<15.5	:	-		-		<31.4	J
Selenium	mg/L		T	-		<0.007	:	-		-		-		-	
Selenium	mg/L		D	<0.002	:	-		<0.007	:	-		-		0.009	:
Silver	mg/L		T	-		<0.001	:	-		-		-		-	
Silver	mg/L		D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Sodium	mg/L		T	-		<32.8	:	-		-		-		-	
Sodium	mg/L		D	<49.	:	-		<32.8	:	-		-		38.8	:
Thallium	mg/L		T	-		<0.001	:	-		-		-		-	
Thallium	mg/L		D	<0.0017	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L		T	-		<0.002	:	-		-		-		-	
Vanadium	mg/L		D	<0.0044	:	-		<0.002	:	-		-		<0.002	:
Zinc	mg/L		T	-		0.716	J	-		-		-		-	
Zinc	mg/L		D	1.17	:	-		0.728	J	-		-		3.3	:
Explosives															
2,4,6-Trinitrotoluene	mg/L		T	-		-		-		-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L		T	-		-		-		-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L		T	-		-		-		-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L		T	-		-		-		-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L		T	-		-		-		-		<0.01	:	-	
Isotopes															
Lead	mg/L		T	-		<0.004	:	-		-		-		-	
Lead	mg/L		D	<0.0019	:	-		<0.004	:	-		-		0.001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10A 11/4/2002 MMW-10A-D01N-GR W GW4		MMW-10A 1/15/2003 MMW-10A-T01N-GR W GW4		MMW-10A 1/15/2003 MMW-10A-D01N-GR W GW4		MMW-10A 2/8/2003 MMW-10A-T01N-GR W GW4		MMW-10A 2/8/2003 MMW-10A-D01N-GR W GW4		MMW-10A 3/5/2003 MMW-10A-T01N-GR W GW4	
Field Measurements														
DO	mg/L	T	-		2.1	:	-		1.89	:	-		2.92	:
Eh	millivolts	T	-		481.3	:	-		312.7	:	-		387.1	:
pH	SU	T	-		4.18	:	-		4.15	:	-		4.04	:
Specific Conductance	uS/cm	T	-		2237.	:	-		274.	:	-		2220.	:
Temperature	Celsius	T	-		7.57	:	-		7.37	:	-		7.09	:
Turbidity	NTU	T	-		0.	:	-		1.	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.1	:	-		<0.077	:	-		<0.086	J
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		32.4	:	-		28.6	:	-		28.7	:
Fluoride	mg/L	T	-		22.3	:	-		24.6	:	-		23.7	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		5.1	:	-		5.4	J	-		5.4	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.029	J	-		0.48	J	-		0.029	:
Phosphorus	mg/L	T	-		0.052	:	-		0.05	:	-		<0.035	J
Sulfate	mg/L	T	-		1630.	J	-		1520.	J	-		1530.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		2280.	:	-		2270.	:	-		2300.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	:	-		<1.5	J
Total Suspended Solids	mg/L	T	-		4.6	:	-		4.6	:	-		2.8	J
Laboratory Parameters														
pH	SU	T	-		4.18	:	-		4.15	:	-		4.04	:
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1310.	:	-		1410.	:	-		1390.	:
Hardness	mg/L	D	-		-		1290.	:	-		1390.	:	-	
Metals														
Aluminum	mg/L	T	-		57.4	:	-		67.2	:	-		59.8	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-10A 11/4/2002 MMW-10A-D01N-GRW GW4		MMW-10A 1/15/2003 MMW-10A-T01N-GRW GW4		MMW-10A 1/15/2003 MMW-10A-D01N-GRW GW4		MMW-10A 2/8/2003 MMW-10A-T01N-GRW GW4		MMW-10A 2/8/2003 MMW-10A-D01N-GRW GW4		MMW-10A 3/5/2003 MMW-10A-T01N-GRW GW4	
Aluminum	mg/L		D	-		-		57.1	:	-		67.1	:	-	
Antimony	mg/L		T	-		<0.028	:	-		<0.028	:	-		<0.028	:
Antimony	mg/L		D	-		-		<0.028	:	-		<0.028	:	-	
Arsenic	mg/L		T	-		<0.0361	:	-		<0.023	:	-		<0.023	:
Arsenic	mg/L		D	-		-		<0.023	:	-		<0.023	:	-	
Barium	mg/L		T	-		<0.048	:	-		<0.048	:	-		<0.048	:
Barium	mg/L		D	-		-		<0.048	:	-		<0.048	:	-	
Beryllium	mg/L		T	-		0.0117	:	-		0.0122	:	-		0.012	:
Beryllium	mg/L		D	-		-		0.012	:	-		0.0117	:	-	
Boron	mg/L		T	-		<0.027	:	-		<0.027	:	-		<0.027	:
Boron	mg/L		D	-		-		<0.027	:	-		<0.027	:	-	
Cadmium	mg/L		T	-		<0.08	:	-		0.102	:	-		<0.08	:
Cadmium	mg/L		D	-		-		<0.08	:	-		0.0802	:	-	
Calcium	mg/L		T	-		328.	:	-		349.	:	-		345.	J
Calcium	mg/L		D	-		-		320.	:	-		346.	:	-	
Chromium	mg/L		T	-		<0.16	:	-		<0.16	:	-		<0.16	:
Chromium	mg/L		D	-		-		<0.16	:	-		<0.16	:	-	
Cobalt	mg/L		T	-		<0.23	:	-		0.269	:	-		<0.23	:
Cobalt	mg/L		D	-		-		0.26	:	-		0.335	:	-	
Copper	mg/L		T	-		0.833	:	-		0.85	:	-		0.922	:
Copper	mg/L		D	-		-		0.861	:	-		0.828	:	-	
Iron	mg/L		T	-		<2.66	:	-		<2.66	J	-		<2.66	:
Iron	mg/L		D	-		-		<2.66	:	-		<2.66	J	-	
Lead	mg/L		T	-		0.0016	:	-		0.0014	:	-		0.0012	:
Lead	mg/L		D	-		-		0.0011	:	-		0.0011	:	-	
Magnesium	mg/L		T	-		120.	:	-		131.	:	-		128.	:
Magnesium	mg/L		D	-		-		119.	:	-		129.	:	-	
Manganese	mg/L		T	-		25.1	:	-		27.2	J	-		26.6	:
Manganese	mg/L		D	-		-		24.9	:	-		26.7	:	-	
Mercury	mg/L		T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L		D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L		T	-		<0.011	J	-		<0.011	J	-		<0.011	J
Molybdenum	mg/L		D	-		-		<0.011	J	-		<0.011	J	-	
Nickel	mg/L		T	-		0.573	J	-		0.762	:	-		0.541	:

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 11/4/2002 MMW-10A-D01N-GR W GW4	MMW-10A 1/15/2003 MMW-10A-T01N-GR W GW4	MMW-10A 1/15/2003 MMW-10A-D01N-GR W GW4	MMW-10A 2/8/2003 MMW-10A-T01N-GR W GW4	MMW-10A 2/8/2003 MMW-10A-D01N-GR W GW4	MMW-10A 3/5/2003 MMW-10A-T01N-GR W GW4
Nickel	mg/L	D	-	-	1.26 J	-	0.771 :	-
Potassium	mg/L	T	-	<31.4 :	-	5.99 :	-	<31.4 :
Potassium	mg/L	D	-	-	<31.4 :	-	6.36 :	-
Selenium	mg/L	T	-	0.0144 :	-	0.0102 :	-	0.0181 J
Selenium	mg/L	D	-	-	<0.008 :	-	0.0095 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<36.6 :	-	<36.6 :	-	<36.6 :
Sodium	mg/L	D	-	-	57.9 :	-	58.2 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.002 :	-	0.003 :
Vanadium	mg/L	D	-	-	<0.002 :	-	<0.002 :	-
Zinc	mg/L	T	-	4.53 :	-	4.18 :	-	4.02 J
Zinc	mg/L	D	-	-	3.97 :	-	4.26 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 J
Isotopes								
Lead	mg/L	T	-	0.0016 :	-	0.0014 :	-	0.0012 :
Lead	mg/L	D	-	-	0.0011 :	-	0.0011 :	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-10A 3/5/2003 MMW-10A-D01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRWRE GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-D01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-T01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-D01N-GRW GW4
Field Measurements								
DO	mg/L	T	-	-	1.58 :	-	1.33 :	-
Eh	millivolts	T	-	-	318.8 :	-	391.6 :	-
pH	SU	T	-	-	4.4 J	-	4.5 J	-
Specific Conductance	uS/cm	T	-	-	2247. :	-	2237. :	-
Temperature	Celsius	T	-	-	7.88 :	-	7.7 :	-
Turbidity	NTU	T	-	-	71.3 :	-	0. :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.2 :	-	<0.13 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Chloride	mg/L	T	-	-	31.5 :	-	25.5 :	-
Fluoride	mg/L	T	-	-	9.8 :	-	26. :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	-	-	4.6 J	-	4.4 J	-
Nitrite	mg/L	T	-	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.028 J	-	0.029 J	-
Phosphorus	mg/L	T	-	-	0.057 :	-	0.084 :	-
Sulfate	mg/L	T	-	-	1410. J	-	1340. :	-
Total Alkalinity	mg/L	T	-	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	-	2300. :	-	2220. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	-	<1.5 J	-	1.9 :	-
Total Suspended Solids	mg/L	T	-	-	<3. :	-	15.3 :	-
Laboratory Parameters								
pH	SU	T	-	-	4.4 J	-	4.5 J	-
Specific Conductance	umhos/cm	T	-	-	1960. J	-	2150. J	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	1170. :	-	1200. :	-
Hardness	mg/L	D	1380. :	-	-	1250. :	-	1230. :
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 3/5/2003 MMW-10A-D01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRWRE GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-D01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-T01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-D01N-GRW GW4
Aluminum	mg/L	T	-	-	49.1 :	-	53.4 :	-
Aluminum	mg/L	D	61. :	-	-	50.5 :	-	54.7 :
Antimony	mg/L	T	-	-	<0.072 :	-	<0.072 :	-
Antimony	mg/L	D	<0.028 :	-	-	<0.072 :	-	<0.072 :
Arsenic	mg/L	T	-	-	<0.04 :	-	<0.04 :	-
Arsenic	mg/L	D	<0.0417 :	-	-	<0.04 :	-	<0.04 :
Barium	mg/L	T	-	-	<0.123 :	-	<0.123 :	-
Barium	mg/L	D	<0.048 :	-	-	<0.123 :	-	<0.123 :
Beryllium	mg/L	T	-	-	<0.0227 :	-	<0.0141 :	-
Beryllium	mg/L	D	0.0124 :	-	-	<0.0219 :	-	<0.0135 :
Boron	mg/L	T	-	-	<0.084 :	-	<0.084 :	-
Boron	mg/L	D	<0.027 :	-	-	<0.084 :	-	<0.084 :
Cadmium	mg/L	T	-	-	<0.0942 :	-	0.0404 :	-
Cadmium	mg/L	D	<0.08 :	-	-	<0.0757 :	-	0.0403 :
Calcium	mg/L	T	-	-	292. :	-	298. :	-
Calcium	mg/L	D	343. J	-	-	311. :	-	305. :
Chromium	mg/L	T	-	-	<0.19 J	-	<0.01 :	-
Chromium	mg/L	D	<0.16 :	-	-	<0.19 J	-	<0.01 :
Cobalt	mg/L	T	-	-	<0.36 :	-	0.218 :	-
Cobalt	mg/L	D	0.25 :	-	-	<0.36 :	-	0.215 :
Copper	mg/L	T	-	-	0.626 :	-	0.758 :	-
Copper	mg/L	D	0.928 :	-	-	0.684 :	-	0.768 :
Iron	mg/L	T	-	-	<4.22 :	-	0.338 :	-
Iron	mg/L	D	<2.66 J	-	-	<4.22 :	-	<0.311 :
Lead	mg/L	T	-	-	0.0015 :	-	0.0014 :	-
Lead	mg/L	D	0.0011 :	-	-	0.0013 :	-	<0.001 :
Magnesium	mg/L	T	-	-	106. :	-	112. :	-
Magnesium	mg/L	D	127. :	-	-	114. :	-	114. :
Manganese	mg/L	T	-	-	22.5 :	-	23.7 :	-
Manganese	mg/L	D	26.6 :	-	-	24. :	-	24.2 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.023 :	-	<0.023 :	-
Molybdenum	mg/L	D	<0.011 J	-	-	<0.023 :	-	<0.023 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 3/5/2003 MMW-10A-D01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRWRE GW4	MMW-10A 4/1/2003 MMW-10A-T01N-GRW GW4	MMW-10A 4/1/2003 MMW-10A-D01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-T01N-GRW GW4	MMW-10A 5/5/2003 MMW-10A-D01N-GRW GW4
Nickel	mg/L	T	-	-	<0.73 :	-	0.489 :	-
Nickel	mg/L	D	0.493 :	-	-	<0.73 :	-	0.493 :
Potassium	mg/L	T	-	-	<40.5 :	-	<40.5 :	-
Potassium	mg/L	D	<31.4 :	-	-	<40.5 :	-	<40.5 :
Selenium	mg/L	T	-	-	<0.005 :	-	0.008 :	-
Selenium	mg/L	D	0.0099 :	-	-	<0.0318 :	-	0.0093 :
Silver	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	-	-	<91.6 :	-	<91.6 :	-
Sodium	mg/L	D	<36.6 :	-	-	<91.6 :	-	<91.6 :
Thallium	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T	-	-	0.0039 :	-	<0.001 :	-
Vanadium	mg/L	D	0.0027 :	-	-	0.0035 :	-	<0.001 :
Zinc	mg/L	T	-	-	3.48 :	-	3.72 :	-
Zinc	mg/L	D	4.03 :	-	-	3.69 :	-	4.13 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 J	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 J	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	-	0.0015 :	-	0.0014 :	-
Lead	mg/L	D	0.0011 :	-	-	0.0013 :	-	<0.001 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-10A		MMW-10A		MMW-10A		MMW-10A		MMW-10A		MMW-10A			
			6/3/2003		6/3/2003		7/22/2003		7/22/2003		8/11/2003		8/11/2003			
			MMW-10A-T01N-GRW		MMW-10A-D01N-GRW		MMW-10A-T01N-GRW		MMW-10A-D01N-GRW		MMW-10A-T01N-GRW		MMW-10A-D01N-GRW			
			GW4		GW4		GW4		GW4		GW4		GW4			
Field Measurements																
DO	mg/L	T	1.45	:	-		1.45	:	-		1.57	:	-			
Eh	millivolts	T	527.7	:	-		528.9	:	-		371.3	:	-			
pH	SU	T	4.5	J	-		4.4	J	-		4.3	J	-			
Specific Conductance	uS/cm	T	2351.	:	-		2264.	:	-		2104.	:	-			
Temperature	Celsius	T	12.76	:	-		9.01	:	-		9.48	:	-			
Turbidity	NTU	T	0.	:	-		5.3	:	-		38.	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.085	J	-		<0.07	J	-		<0.04	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	82.4	:	-		27.2	:	-		25.1	:	-			
Fluoride	mg/L	T	25.	:	-		26.4	:	-		26.2	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	4.8	J	-		4.8	J	-		5.1	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	0.1	J	-		<0.028	J	-		0.028	J	-			
Phosphorus	mg/L	T	0.039	J	-		0.039	:	-		0.064	:	-			
Sulfate	mg/L	T	1410.	J	-		1440.	J	-		1380.	J	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	2410.	:	-		2640.	:	-		2780.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	1.	J	-		<1.4	J	-		<1.8	J	-			
Total Suspended Solids	mg/L	T	<1.3	:	-		<1.2	:	-		<1.8	:	-			
Laboratory Parameters																
pH	SU	T	4.5	J	-		4.4	J	-		4.3	J	-			
Specific Conductance	umhos/cm	T	2270.	J	-		2260.	J	-		2040.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	1210.	:	-		1170.	:	-		1260.	:	-			
Hardness	mg/L	D	-		1200.	:	-		1170.	:	-		1220.	:		
Metals																

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 6/3/2003 MMW-10A-T01N-GRW GW4		MMW-10A 6/3/2003 MMW-10A-D01N-GRW GW4		MMW-10A 7/22/2003 MMW-10A-T01N-GRW GW4		MMW-10A 7/22/2003 MMW-10A-D01N-GRW GW4		MMW-10A 8/11/2003 MMW-10A-T01N-GRW GW4		MMW-10A 8/11/2003 MMW-10A-D01N-GRW GW4	
Aluminum	mg/L	T	52.9	:	-		47.7	:	-		57.2	:	-	
Aluminum	mg/L	D	-		52.	:	-		47.2	:	-		55.9	J
Antimony	mg/L	T	<0.072	:	-		<0.047	:	-		<0.038	:	-	
Antimony	mg/L	D	-		<0.072	:	-		<0.047	:	-		<0.038	:
Arsenic	mg/L	T	<0.04	:	-		<0.048	:	-		0.0304	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.048	:	-		<0.024	:
Barium	mg/L	T	<0.123	:	-		<0.059	:	-		<0.073	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.059	:	-		<0.073	:
Beryllium	mg/L	T	<0.0142	:	-		<0.0142	:	-		0.0106	J	-	
Beryllium	mg/L	D	-		<0.0148	:	-		<0.0132	:	-		0.0104	J
Boron	mg/L	T	<0.084	:	-		<0.048	:	-		<0.046	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.048	:	-		<0.046	:
Cadmium	mg/L	T	0.0407	:	-		<0.12	:	-		<0.12	:	-	
Cadmium	mg/L	D	-		0.0419	:	-		<0.12	:	-		<0.12	:
Calcium	mg/L	T	302.	:	-		287.	:	-		307.	:	-	
Calcium	mg/L	D	-		298.	:	-		288.	:	-		298.	:
Chromium	mg/L	T	0.0103	:	-		<0.19	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.19	:	-		<0.19	:
Cobalt	mg/L	T	0.218	:	-		<0.37	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		0.215	:	-		<0.37	:	-		<0.37	:
Copper	mg/L	T	0.786	:	-		0.575	:	-		<0.978	J	-	
Copper	mg/L	D	-		0.771	:	-		0.573	:	-		<0.988	:
Iron	mg/L	T	<0.311	:	-		<6.67	:	-		<6.67	:	-	
Iron	mg/L	D	-		<0.311	:	-		<6.67	:	-		<6.67	:
Lead	mg/L	T	<0.001	:	-		0.0014	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		0.0016	:	-		0.0011	:
Magnesium	mg/L	T	111.	:	-		109.	:	-		120.	:	-	
Magnesium	mg/L	D	-		110.	:	-		110.	:	-		116.	:
Manganese	mg/L	T	23.9	:	-		22.4	:	-		24.5	:	-	
Manganese	mg/L	D	-		23.6	:	-		22.5	:	-		23.8	:
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.017	:	-		<0.016	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.017	:	-		<0.016	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 6/3/2003 MMW-10A-T01N-GRW GW4		MMW-10A 6/3/2003 MMW-10A-D01N-GRW GW4		MMW-10A 7/22/2003 MMW-10A-T01N-GRW GW4		MMW-10A 7/22/2003 MMW-10A-D01N-GRW GW4		MMW-10A 8/11/2003 MMW-10A-T01N-GRW GW4		MMW-10A 8/11/2003 MMW-10A-D01N-GRW GW4	
Nickel	mg/L	T	0.504	:	-		<0.44	:	-		0.568	:	-	
Nickel	mg/L	D	-		0.497	:	-		<0.44	:	-		0.667	:
Potassium	mg/L	T	<3.26	:	-		<37.1	:	-		<37.1	:	-	
Potassium	mg/L	D	-		<3.26	:	-		<37.1	:	-		<37.1	:
Selenium	mg/L	T	0.0118	:	-		0.0094	:	-		0.0081	:	-	
Selenium	mg/L	D	-		<0.008	:	-		<0.008	J	-		0.0083	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	25.3	:	-		<53.2	:	-		<53.2	J	-	
Sodium	mg/L	D	-		23.4	:	-		<53.2	:	-		<53.2	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	3.57	:	-		3.65	:	-		3.96	:	-	
Zinc	mg/L	D	-		3.52	:	-		3.58	:	-		3.87	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		0.0014	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		0.0016	:	-		0.0011	:

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-10A 9/9/2003 MMW-10A-T01N-GRW GW4		MMW-10A 9/9/2003 MMW-10A-D01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-T01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-D01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-T01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-D01N-GRW GW4	
Field Measurements															
DO	mg/L		T	1.5	:	-		1.3	:	-		1.33	:	-	
Eh	millivolts		T	435.2	:	-		539.1	:	-		277.	:	-	
pH	SU		T	4.2	J	-		4.4	J	-		4.6	J	-	
Specific Conductance	uS/cm		T	2243.	:	-		2103.	:	-		2105.	:	-	
Temperature	Celsius		T	8.29	:	-		8.63	:	-		7.7	:	-	
Turbidity	NTU		T	24.5	:	-		1.2	:	-		8.1	:	-	
General Chemistry															
Ammonia	mg/L		T	<0.055	:	-		<0.12	J	-		<0.19	:	-	
Bicarbonate (as CaCO3)	mg/L		T	<1.	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L		T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L		T	26.3	:	-		26.6	:	-		26.6	:	-	
Fluoride	mg/L		T	26.6	:	-		26.	:	-		25.6	:	-	
Hydroxide (as CaCO3)	mg/L		T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L		T	4.7	J	-		4.9	:	-		5.	J	-	
Nitrite	mg/L		T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L		T	<0.033	J	-		<0.031	:	-		0.031	J	-	
Phosphorus	mg/L		T	0.04	:	-		0.044	:	-		0.032	:	-	
Sulfate	mg/L		T	1520.	J	-		1480.	J	-		1400.	:	-	
Total Alkalinity	mg/L		T	<1.	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L		T	2290.	:	-		2170.	:	-		2440.	:	-	
Total Kjeldahl Nitrogen	mg/L		T	<0.24	:	-		4.6	:	-		<0.24	:	-	
Total Organic Carbon	mg/L		T	<1.7	:	-		<1.	J	-		<1.	:	-	
Total Suspended Solids	mg/L		T	1.6	:	-		2.	:	-		1.8	:	-	
Laboratory Parameters															
pH	SU		T	4.2	J	-		4.4	J	-		4.6	J	-	
Specific Conductance	umhos/cm		T	2050.	J	-		2010.	J	-		2170.	J	-	
Inorganics															
Cyanide	mg/L		T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Physical Properties															
Hardness	mg/L		T	1240.	:	-		1240.	:	-		1260.	:	-	
Hardness	mg/L		D	-		1270.	:	-		1150.	:	-		1270.	:
Metals															

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 9/9/2003 MMW-10A-T01N-GRW GW4		MMW-10A 9/9/2003 MMW-10A-D01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-T01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-D01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-T01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-D01N-GRW GW4	
Aluminum	mg/L	T	57.6	:	-		60.4	:	-		57.1	:	-	
Aluminum	mg/L	D	-		59.6	:	-		54.8	:	-		58.2	:
Antimony	mg/L	T	<0.082	:	-		<0.082	:	-		<0.082	J	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.082	:	-		<0.082	J
Arsenic	mg/L	T	<0.035	:	-		<0.035	:	-		<0.035	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.035	:	-		<0.035	:
Barium	mg/L	T	<0.117	:	-		<0.117	:	-		<0.117	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.117	:	-		<0.117	:
Beryllium	mg/L	T	<0.0144	:	-		<0.0216	:	-		<0.0284	:	-	
Beryllium	mg/L	D	-		<0.0152	:	-		<0.019	:	-		<0.0231	:
Boron	mg/L	T	<0.064	:	-		<0.064	:	-		<0.064	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.064	:	-		<0.064	:
Cadmium	mg/L	T	<0.13	:	-		0.128	:	-		<0.13	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		0.0778	:	-		<0.13	:
Calcium	mg/L	T	300.	:	-		304.	:	-		308.	:	-	
Calcium	mg/L	D	-		307.	:	-		282.	:	-		312.	:
Chromium	mg/L	T	<0.23	:	-		<0.234	J	-		<0.23	:	-	
Chromium	mg/L	D	-		<0.23	:	-		<0.13	J	-		<0.23	:
Cobalt	mg/L	T	<0.32	:	-		0.466	:	-		<0.32	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.31	:	-		<0.32	:
Copper	mg/L	T	0.549	:	-		0.748	J	-		<0.958	:	-	
Copper	mg/L	D	-		0.553	:	-		0.51	J	-		<1.25	:
Iron	mg/L	T	<4.55	:	-		<4.53	:	-		<4.55	:	-	
Iron	mg/L	D	-		<4.55	:	-		<3.	:	-		<4.55	:
Lead	mg/L	T	0.0031	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Magnesium	mg/L	T	120.	:	-		118.	:	-		119.	:	-	
Magnesium	mg/L	D	-		123.	:	-		108.	:	-		120.	:
Manganese	mg/L	T	24.5	:	-		24.5	:	-		25.	J	-	
Manganese	mg/L	D	-		25.1	:	-		22.8	:	-		23.9	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	<0.012	:	-		<0.012	:	-		<0.012	:	-	
Molybdenum	mg/L	D	-		<0.012	:	-		<0.012	:	-		<0.012	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 9/9/2003 MMW-10A-T01N-GRW GW4		MMW-10A 9/9/2003 MMW-10A-D01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-T01N-GRW GW4		MMW-10A 10/23/2003 MMW-10A-D01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-T01N-GRW GW4		MMW-10A 11/3/2003 MMW-10A-D01N-GRW GW4	
Nickel	mg/L	T	<0.45	:	-		0.713	:	-		<0.45	:	-	
Nickel	mg/L	D	-		0.452	:	-		0.694	:	-		<0.45	:
Potassium	mg/L	T	<63.8	:	-		<52.2	:	-		<63.8	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<52.2	:	-		<63.8	:
Selenium	mg/L	T	0.0101	:	-		0.0091	:	-		0.012	:	-	
Selenium	mg/L	D	-		0.009	:	-		0.0107	:	-		0.0104	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		<64.6	:	-		<99.1	:	-	
Sodium	mg/L	D	-		<99.1	:	-		<106.	:	-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	3.85	:	-		3.93	:	-		4.17	:	-	
Zinc	mg/L	D	-		3.94	:	-		3.67	:	-		4.17	:
Isotopes														
Lead	mg/L	T	0.0031	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-10A		MMW-10A		MMW-10A		MMW-10A		MMW-10A		MMW-10A			
			12/11/2003		12/11/2003		1/13/2004		1/13/2004		4/22/2004		4/22/2004			
			MMW-10A-T01N-GRW		MMW-10A-D01N-GRW		MMW-10A-T01N-GRW		MMW-10A-D01N-GRW		MMW-10A-T01N-GRW		MMW-10A-D01N-GRW			
			GW4		GW4		GW4		GW4		GW4		GW4			
Field Measurements																
DO	mg/L	T	1.36	:	-		1.73	:	-		1.2	:	-			
Eh	millivolts	T	457.1	:	-		499.9	:	-		365.8	:	-			
pH	SU	T	4.4	J	-		4.5	J	-		5.	J	-			
Specific Conductance	uS/cm	T	2271.	:	-		2283.	:	-		2165.	:	-			
Temperature	Celsius	T	6.46	:	-		7.88	:	-		8.02	:	-			
Turbidity	NTU	T	13.3	:	-		3.3	:	-		-		-			
General Chemistry																
Ammonia	mg/L	T	0.14	:	-		<0.1	J	-		<0.07	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	25.7	:	-		26.5	:	-		28.8	:	-			
Fluoride	mg/L	T	25.6	:	-		24.7	:	-		22.4	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	5.	:	-		4.7	J	-		4.3	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	0.033	:	-		<0.05	J	-		0.029	J	-			
Phosphorus	mg/L	T	0.035	:	-		0.044	:	-		0.038	:	-			
Sulfate	mg/L	T	1190.	:	-		1480.	:	-		1490.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	2090.	J	-		2140.	:	-		2130.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		1.5	J	-			
Total Suspended Solids	mg/L	T	2.3	:	-		4.9	:	-		<3.1	J	-			
Laboratory Parameters																
pH	SU	T	4.4	J	-		4.5	J	-		5.	J	-			
Specific Conductance	umhos/cm	T	1940.	J	-		2260.	J	-		1910.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	1140.	:	-		1120.	:	-		1110.	:	-			
Hardness	mg/L	D	-		1120.	:	-		1130.	:	-		1120.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 12/11/2003 MMW-10A-T01N-GRW GW4		MMW-10A 12/11/2003 MMW-10A-D01N-GRW GW4		MMW-10A 1/13/2004 MMW-10A-T01N-GRW GW4		MMW-10A 1/13/2004 MMW-10A-D01N-GRW GW4		MMW-10A 4/22/2004 MMW-10A-T01N-GRW GW4		MMW-10A 4/22/2004 MMW-10A-D01N-GRW GW4	
Aluminum	mg/L	T	51.3	:	-		49.9	:	-		52.2	:	-	
Aluminum	mg/L	D	-		50.2	:	-		50.9	:	-		52.5	:
Antimony	mg/L	T	<0.082	:	-		<0.097	:	-		<0.027	:	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.097	:	-		<0.027	:
Arsenic	mg/L	T	<0.035	:	-		<0.052	:	-		<0.026	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.052	:	-		<0.026	:
Barium	mg/L	T	<0.117	:	-		<0.188	:	-		<0.012	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.188	:	-		<0.012	:
Beryllium	mg/L	T	<0.0135	:	-		0.0129	:	-		0.0119	:	-	
Beryllium	mg/L	D	-		<0.0126	J	-		0.0107	:	-		0.0124	:
Boron	mg/L	T	<0.064	:	-		<0.117	:	-		<0.018	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.117	:	-		<0.018	:
Cadmium	mg/L	T	<0.13	:	-		<0.07	J	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		0.0727	:	-		<0.1	:
Calcium	mg/L	T	279.	:	-		272.	:	-		270.	:	-	
Calcium	mg/L	D	-		273.	:	-		274.	:	-		272.	:
Chromium	mg/L	T	<0.23	:	-		<0.11	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.23	:	-		<0.128	:	-		<0.13	:
Cobalt	mg/L	T	<0.32	:	-		0.338	J	-		<0.18	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.31	:	-		<0.18	:
Copper	mg/L	T	0.796	:	-		0.796	:	-		0.505	:	-	
Copper	mg/L	D	-		0.704	:	-		0.837	:	-		0.562	:
Iron	mg/L	T	<4.55	:	-		<3.73	:	-		<2.93	J	-	
Iron	mg/L	D	-		<4.55	:	-		<3.73	:	-		<2.93	:
Lead	mg/L	T	0.0013	:	-		0.0014	:	-		<0.004	:	-	
Lead	mg/L	D	-		0.0013	:	-		0.0012	:	-		<0.004	:
Magnesium	mg/L	T	109.	:	-		107.	:	-		107.	:	-	
Magnesium	mg/L	D	-		106.	:	-		108.	:	-		108.	:
Manganese	mg/L	T	23.1	:	-		22.7	:	-		23.6	:	-	
Manganese	mg/L	D	-		22.5	:	-		23.	:	-		23.7	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.012	:	-		<0.03	:	-		<0.01	:	-	
Molybdenum	mg/L	D	-		<0.012	:	-		<0.03	:	-		<0.01	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10A 12/11/2003 MMW-10A-T01N-GRW GW4		MMW-10A 12/11/2003 MMW-10A-D01N-GRW GW4		MMW-10A 1/13/2004 MMW-10A-T01N-GRW GW4		MMW-10A 1/13/2004 MMW-10A-D01N-GRW GW4		MMW-10A 4/22/2004 MMW-10A-T01N-GRW GW4		MMW-10A 4/22/2004 MMW-10A-D01N-GRW GW4	
Nickel	mg/L	T	0.473	J	-		0.596	:	-		0.565	:	-	
Nickel	mg/L	D	-		0.509	J	-		0.701	:	-		0.519	:
Potassium	mg/L	T	<63.8	:	-		<24.3	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<24.3	:	-		<15.5	:
Selenium	mg/L	T	0.0077	:	-		0.0154	J	-		<0.007	:	-	
Selenium	mg/L	D	-		0.009	:	-		0.0117	:	-		<0.007	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		<49.	:	-		<32.8	J	-	
Sodium	mg/L	D	-		<99.1	:	-		<49.	:	-		<32.8	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.0042	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.0045	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	3.66	:	-		3.93	:	-		3.38	:	-	
Zinc	mg/L	D	-		3.63	:	-		3.9	:	-		3.35	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-94.8	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.1	:	-	
Lead	mg/L	T	0.0013	:	-		0.0014	:	-		<0.004	:	-	
Lead	mg/L	D	-		0.0013	:	-		0.0012	:	-		<0.004	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction											
Site ID			MMW-10C		MMW-10C		MMW-10C		MMW-10C		MMW-10C		MMW-10C	
Sample Date			11/4/2002		11/4/2002		11/4/2002		11/4/2002		1/15/2003		1/15/2003	
Sample ID			MMW-10C-T01N-GRWRE		MMW-10C-T01N-GRW		MMW-10C-D01N-GRWRE		MMW-10C-D01N-GRW		MMW-10C-T01N-GW		MMW-10C-T01N-GRW	
Exposure Area			GW4		GW4		GW4		GW4		GW4		GW4	
Field Measurements														
DO	mg/L	T	-		5.02	:	-		-		5.32	:	5.32	:
Eh	millivolts	T	-		349.9	:	-		-		427.5	:	427.5	:
pH	SU	T	-		4.74	:	-		-		4.75	:	4.75	:
Specific Conductance	uS/cm	T	-		1153.	:	-		-		1122.	:	1122.	:
Temperature	Celsius	T	-		7.3	:	-		-		7.4	:	7.4	:
Turbidity	NTU	T	-		-		-		-		1.4	:	1.4	:
General Chemistry														
Ammonia	mg/L	T	-		<0.12	:	-		-		-		<0.092	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.3	:	-		-		-		<4.9	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		12.9	:	-		-		-		14.6	:
Fluoride	mg/L	T	13.4	J	-		-		-		-		12.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<4.9	:
Nitrate	mg/L	T	-		2.9	:	-		-		-		2.8	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Phosphorus	mg/L	T	-		<0.01	:	-		-		-		<0.01	:
Sulfate	mg/L	T	-		838.	:	-		-		-		718.	J
Total Alkalinity	mg/L	T	-		<1.3	:	-		-		-		<4.9	:
Total Dissolved Solids	mg/L	T	-		979.	:	-		-		-		950.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.1	:	-		-		-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.9	:	-		-		-		<0.9	:
Laboratory Parameters														
pH	SU	T	-		4.74	:	-		-		4.75	:	4.75	:
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		-		-		-		-		593.	:
Hardness	mg/L	D	-		-		628.	:	-		-		-	
Metals														
Aluminum	mg/L	T	-		-		-		-		-		18.3	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-10C 11/4/2002 MMW-10C-T01N-GRWRE GW4		MMW-10C 11/4/2002 MMW-10C-T01N-GRW GW4		MMW-10C 11/4/2002 MMW-10C-D01N-GRWRE GW4		MMW-10C 11/4/2002 MMW-10C-D01N-GRW GW4		MMW-10C 1/15/2003 MMW-10C-T01N-GW GW4		MMW-10C 1/15/2003 MMW-10C-T01N-GRW GW4	
Aluminum	mg/L	D		-		-		18.4	:	-		-		-	
Antimony	mg/L	T		-		-		-		-		-		<0.028	:
Antimony	mg/L	D		-		-		<0.028	:	-		-		-	
Arsenic	mg/L	T		-		-		-		-		-		<0.023	:
Arsenic	mg/L	D		-		-		<0.023	:	-		-		-	
Barium	mg/L	T		-		-		-		-		-		<0.048	:
Barium	mg/L	D		-		-		<0.048	:	-		-		-	
Beryllium	mg/L	T		-		-		-		-		-		0.0055	:
Beryllium	mg/L	D		-		-		0.0052	:	-		-		-	
Boron	mg/L	T		-		-		-		-		-		<0.027	:
Boron	mg/L	D		-		-		<0.027	:	-		-		-	
Cadmium	mg/L	T		-		-		-		-		-		<0.08	:
Cadmium	mg/L	D		-		-		<0.04	:	-		-		-	
Calcium	mg/L	T		-		-		-		-		-		138.	:
Calcium	mg/L	D		-		-		148.	:	-		-		-	
Chromium	mg/L	T		-		-		-		-		-		<0.16	:
Chromium	mg/L	D		-		-		<0.37	:	-		-		-	
Chromium, Hexavalent	mg/L	D		-		<0.01	:	-		-		-		-	
Cobalt	mg/L	T		-		-		-		-		-		<0.23	:
Cobalt	mg/L	D		-		-		<0.16	:	-		-		-	
Copper	mg/L	T		-		-		-		-		-		0.513	:
Copper	mg/L	D		-		-		<0.274	:	-		-		-	
Iron	mg/L	T		-		-		-		-		-		<2.66	:
Iron	mg/L	D		-		-		<4.89	:	-		-		-	
Lead	mg/L	T		-		-		-		-		-		<0.001	:
Lead	mg/L	D		-		-		<0.001	:	-		-		-	
Magnesium	mg/L	T		-		-		-		-		-		60.1	:
Magnesium	mg/L	D		-		-		63.1	:	-		-		-	
Manganese	mg/L	T		-		-		-		-		-		8.97	:
Manganese	mg/L	D		-		-		9.16	:	-		-		-	
Mercury	mg/L	T		-		<0.0001	:	-		-		-		<0.0001	:
Mercury	mg/L	D		-		-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T		-		-		-		-		-		<0.011	J
Molybdenum	mg/L	D		-		-		<0.0147	:	-		-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10C 11/4/2002 MMW-10C-T01N-GRWRE GW4	MMW-10C 11/4/2002 MMW-10C-T01N-GRW GW4	MMW-10C 11/4/2002 MMW-10C-D01N-GRWRE GW4	MMW-10C 11/4/2002 MMW-10C-D01N-GRW GW4	MMW-10C 1/15/2003 MMW-10C-T01N-GW GW4	MMW-10C 1/15/2003 MMW-10C-T01N-GRW GW4
Nickel	mg/L	T	-	-	-	-	-	<0.34 :
Nickel	mg/L	D	-	-	0.333 :	-	-	-
Potassium	mg/L	T	-	-	-	-	-	<31.4 :
Potassium	mg/L	D	-	-	<20.2 :	-	-	-
Selenium	mg/L	T	-	-	-	-	-	0.0085 :
Selenium	mg/L	D	-	-	<0.008 :	-	-	-
Silver	mg/L	T	-	-	-	-	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	-	-	-	-	-	<36.6 :
Sodium	mg/L	D	-	-	44.9 :	-	-	-
Thallium	mg/L	T	-	-	-	-	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	-	-	-	-	<0.002 :
Vanadium	mg/L	D	-	-	<0.002 :	-	-	-
Zinc	mg/L	T	-	-	-	-	-	2.13 :
Zinc	mg/L	D	-	-	<2.3 :	-	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	-	<0.01 :
Isotopes								
Lead	mg/L	T	-	-	-	-	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID													
			MMW-10C	1/15/2003	MMW-10C-D01N-GRW	GW4	MMW-10C	4/9/2003	MMW-10C-T01N-GRW	GW4	MMW-10C	4/9/2003	MMW-10C-D01N-GRW	GW4	MMW-10C	7/22/2003	MMW-10C-T01N-GRW	GW4
Field Measurements																		
DO	mg/L	T	-				5.14	:			-				5.23	:		
Eh	millivolts	T	-				295.	:			-				627.1	:		
pH	SU	T	-				4.4	J			-				4.9	J		
Specific Conductance	uS/cm	T	-				1111.	:			-				1084.	:		
Temperature	Celsius	T	-				6.49	:			-				9.08	:		
Turbidity	NTU	T	-				4.4	:			-				2.9	:		
General Chemistry																		
Ammonia	mg/L	T	-				<0.087	:			-				<0.05	J		
Bicarbonate (as CaCO3)	mg/L	T	-				85.8	:			-				<4.7	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				12.7	:			-				11.5	:		
Fluoride	mg/L	T	-				11.6	:			-				12.4	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				2.5	J			-				2.2	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				<0.37	J			-				<0.01	J		
Phosphorus	mg/L	T	-				<0.01	J			-				<0.01	:		
Sulfate	mg/L	T	-				524.	J			-				557.	J		
Total Alkalinity	mg/L	T	-				85.8	:			-				<4.7	:		
Total Dissolved Solids	mg/L	T	-				922.	:			-				976.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<2.	J			-				<1.4	J		
Total Suspended Solids	mg/L	T	-				<0.9	:			-				<0.6	:		
Laboratory Parameters																		
pH	SU	T	-				4.4	J			-				4.9	J		
Specific Conductance	umhos/cm	T	-				990.	J			-				1080.	J		
Inorganics																		
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	J		
Physical Properties																		
Hardness	mg/L	T	-				493.	:			-				512.	:		
Hardness	mg/L	D	557.	:			-				501.	:			-			
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID													
			MMW-10C	7/22/2003	MMW-10C-D01N-GRW	GW4	MMW-10C	10/20/2003	MMW-10C-T01N-GRW	GW4								
Field Measurements																		
DO	mg/L	T	-				5.56	:										
Eh	millivolts	T	-				733.	:										
pH	SU	T	-				4.9	J										
Specific Conductance	uS/cm	T	-				966.	:										
Temperature	Celsius	T	-				9.26	:										
Turbidity	NTU	T	-				0.	:										
General Chemistry																		
Ammonia	mg/L	T	-				<0.075	J										
Bicarbonate (as CaCO3)	mg/L	T	-				<4.4	:										
Carbonate (as CaCO3)	mg/L	T	-				<1.	:										
Chloride	mg/L	T	-				13.	:										
Fluoride	mg/L	T	-				10.8	:										
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:										
Nitrate	mg/L	T	-				1.9	:										
Nitrite	mg/L	T	-				<0.005	:										
Phosphate, Ortho As P	mg/L	T	-				<0.01	:										
Phosphorus	mg/L	T	-				0.02	:										
Sulfate	mg/L	T	-				817.	J										
Total Alkalinity	mg/L	T	-				<4.4	:										
Total Dissolved Solids	mg/L	T	-				1020.	:										
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:										
Total Organic Carbon	mg/L	T	-				<1.	J										
Total Suspended Solids	mg/L	T	-				<0.5	:										
Laboratory Parameters																		
pH	SU	T	-				4.9	J										
Specific Conductance	umhos/cm	T	-				931.	J										
Inorganics																		
Cyanide	mg/L	T	-				<0.01	J										
Physical Properties																		
Hardness	mg/L	T	-				467.	:										
Hardness	mg/L	D	511.	:			-											
Metals																		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10C 1/15/2003 MMW-10C-D01N-GRW GW4		MMW-10C 4/9/2003 MMW-10C-T01N-GRW GW4		MMW-10C 4/9/2003 MMW-10C-D01N-GRW GW4		MMW-10C 7/22/2003 MMW-10C-T01N-GRW GW4		MMW-10C 7/22/2003 MMW-10C-D01N-GRW GW4		MMW-10C 10/20/2003 MMW-10C-T01N-GRW GW4	
Aluminum	mg/L	T	-		13.7	:	-		14.2	:	-		14.6	:
Aluminum	mg/L	D	17.2	:	-		14.6	:	-		14.2	:	-	
Antimony	mg/L	T	-		<0.003	:	-		<0.047	:	-		<0.052	:
Antimony	mg/L	D	<0.028	:	-		<0.003	:	-		<0.047	:	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.048	:	-		<0.002	:
Arsenic	mg/L	D	<0.023	:	-		<0.04	:	-		<0.048	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.059	:	-		<0.115	:
Barium	mg/L	D	<0.048	:	-		<0.123	:	-		<0.059	:	-	
Beryllium	mg/L	T	-		<0.003	J	-		<0.0054	:	-		<0.004	:
Beryllium	mg/L	D	0.0049	:	-		<0.003	J	-		<0.0054	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.048	:	-		<0.063	:
Boron	mg/L	D	<0.027	:	-		<0.084	:	-		<0.048	:	-	
Cadmium	mg/L	T	-		0.02	:	-		<0.12	:	-		<0.13	:
Cadmium	mg/L	D	<0.08	:	-		0.0192	:	-		<0.12	:	-	
Calcium	mg/L	T	-		118.	:	-		120.	:	-		109.	:
Calcium	mg/L	D	130.	:	-		120.	:	-		119.	:	-	
Chromium	mg/L	T	-		<0.01	:	-		<0.19	:	-		<0.23	J
Chromium	mg/L	D	<0.16	:	-		<0.01	:	-		<0.19	:	-	
Cobalt	mg/L	T	-		0.0507	:	-		<0.37	:	-		<0.32	:
Cobalt	mg/L	D	<0.23	:	-		0.0516	:	-		<0.37	:	-	
Copper	mg/L	T	-		0.225	:	-		<0.33	:	-		<0.23	:
Copper	mg/L	D	0.198	:	-		0.209	:	-		<0.33	:	-	
Iron	mg/L	T	-		<0.311	:	-		<6.67	:	-		<4.55	:
Iron	mg/L	D	<2.66	:	-		<0.311	:	-		<6.67	:	-	
Lead	mg/L	T	-		<0.001	J	-		<0.001	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Magnesium	mg/L	T	-		48.4	:	-		51.8	:	-		47.	:
Magnesium	mg/L	D	56.3	:	-		49.2	:	-		52.	:	-	
Manganese	mg/L	T	-		6.93	:	-		7.42	:	-		6.5	:
Manganese	mg/L	D	8.46	:	-		7.05	:	-		7.45	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		0.00011	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		0.00011	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.017	:	-		<0.011	:
Molybdenum	mg/L	D	<0.011	J	-		<0.023	:	-		<0.017	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10C 1/15/2003 MMW-10C-D01N-GRW GW4	MMW-10C 4/9/2003 MMW-10C-T01N-GRW GW4	MMW-10C 4/9/2003 MMW-10C-D01N-GRW GW4	MMW-10C 7/22/2003 MMW-10C-T01N-GRW GW4	MMW-10C 7/22/2003 MMW-10C-D01N-GRW GW4	MMW-10C 10/20/2003 MMW-10C-T01N-GRW GW4
Nickel	mg/L	T	-	0.186 :	-	<0.44 :	-	<0.45 :
Nickel	mg/L	D	<0.34 :	-	0.166 :	-	<0.44 :	-
Potassium	mg/L	T	-	<3.26 :	-	<37.1 :	-	<63.8 :
Potassium	mg/L	D	<31.4 :	-	<3.26 :	-	<37.1 :	-
Selenium	mg/L	T	-	<0.005 :	-	<0.008 :	-	0.0038 :
Selenium	mg/L	D	<0.008 :	-	<0.005 :	-	<0.008 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 J	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 J	-
Sodium	mg/L	T	-	14. :	-	<53.2 :	-	<99.1 :
Sodium	mg/L	D	<36.6 :	-	12.5 :	-	<82.9 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.002 :	-	<0.001 :
Vanadium	mg/L	D	<0.002 :	-	<0.001 :	-	<0.002 :	-
Zinc	mg/L	T	-	1.77 :	-	1.82 :	-	<1.74 :
Zinc	mg/L	D	2.02 :	-	2.13 :	-	1.87 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	-	-
Isotopes								
Lead	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.002 :
Lead	mg/L	D	<0.001 :	-	<0.001 J	-	<0.001 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-10C	10/20/2003	MMW-10C-D01N-GRW		MMW-10C	1/11/2004	MMW-10C-T01N-GRW		MMW-10C	1/11/2004	MMW-10C-D01N-GRW		MMW-10C	4/21/2004	MMW-10C-T01N-GRW		MMW-10C	4/21/2004	MMW-10C-D01N-GRW	
					GW4				GW4				GW4				GW4				GW4	
Field Measurements																						
DO	mg/L	T	-					5.08	:		-				4.89	:		-			0.46	:
Eh	millivolts	T	-					462.5	:		-				238.9	:		-			138.5	:
pH	SU	T	-					5.	J		-				5.3	J		-			7.13	:
Specific Conductance	uS/cm	T	-					932.	:		-				800.	:		-			1961.	:
Temperature	Celsius	T	-					7.63	:		-				7.69	:		-			8.6	:
Turbidity	NTU	T	-					0.5	:		-				1.7	:		-			18.4	:
General Chemistry																						
Ammonia	mg/L	T	-					<0.11	J		-				<0.076	:		-			<0.12	:
Bicarbonate (as CaCO3)	mg/L	T	-					<4.1	:		-				<5.4	:		-			210.	:
Carbonate (as CaCO3)	mg/L	T	-					<1.	:		-				<1.	:		-			<1.	:
Chloride	mg/L	T	-					10.6	:		-				<11.1	:		-			12.7	:
Fluoride	mg/L	T	-					10.	:		-				7.7	:		-			2.1	:
Hydroxide (as CaCO3)	mg/L	T	-					<1.	:		-				<1.	:		-			<1.	:
Nitrate	mg/L	T	-					1.8	:		-				1.5	:		-			2.4	J
Nitrite	mg/L	T	-					<0.005	:		-				<0.005	:		-			0.035	J
Phosphate, Ortho As P	mg/L	T	-					<0.01	:		-				<0.01	:		-			0.014	J
Phosphorus	mg/L	T	-					<0.01	:		-				0.012	:		-			0.12	:
Sulfate	mg/L	T	-					455.	J		-				436.	:		-			886.	:
Total Alkalinity	mg/L	T	-					<4.1	:		-				<5.4	:		-			210.	:
Total Dissolved Solids	mg/L	T	-					784.	:		-				644.	:		-			1660.	:
Total Kjeldahl Nitrogen	mg/L	T	-					<0.24	:		-				<0.24	:		-			<0.24	:
Total Organic Carbon	mg/L	T	-					<1.1	:		-				<1.	J		-			1.1	:
Total Suspended Solids	mg/L	T	-					<0.6	:		-				<0.5	J		-			<0.7	:
Laboratory Parameters																						
pH	SU	T	-					5.	J		-				5.3	J		-			7.13	:
Specific Conductance	umhos/cm	T	-					867.	J		-				739.	J		-			-	
Inorganics																						
Cyanide	mg/L	T	-					<0.01	J		-				<0.01	:		-			<0.01	J
Physical Properties																						
Hardness	mg/L	T	-					467.	:		-				360.	:		-			1120.	:
Hardness	mg/L	D	440.	:				-			406.	:			-			377.	:		-	
Metals																						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10C 10/20/2003 MMW-10C-D01N-GRW GW4		MMW-10C 1/11/2004 MMW-10C-T01N-GRW GW4		MMW-10C 1/11/2004 MMW-10C-D01N-GRW GW4		MMW-10C 4/21/2004 MMW-10C-T01N-GRW GW4		MMW-10C 4/21/2004 MMW-10C-D01N-GRW GW4		MMW-13 11/3/2002 MMW-13-T01N-GRW GW4	
Aluminum	mg/L	T	-		14.6	:	-		8.25	:	-		<0.0123	:
Aluminum	mg/L	D	13.7	:	-		11.8	:	-		10.3	:	-	
Antimony	mg/L	T	-		<0.029	:	-		<0.053	:	-		<0.0002	:
Antimony	mg/L	D	<0.052	:	-		<0.029	:	-		<0.053	:	-	
Arsenic	mg/L	T	-		<0.028	:	-		<0.037	:	-		<0.00061	J
Arsenic	mg/L	D	<0.002	:	-		<0.028	:	-		<0.037	:	-	
Barium	mg/L	T	-		<0.053	:	-		<0.049	:	-		<0.0092	:
Barium	mg/L	D	<0.115	:	-		<0.053	:	-		<0.049	:	-	
Beryllium	mg/L	T	-		0.0036	:	-		<0.003	J	-		0.00023	:
Beryllium	mg/L	D	<0.004	:	-		<0.003	:	-		0.0038	J	-	
Boron	mg/L	T	-		<0.023	:	-		<0.036	:	-		0.0122	:
Boron	mg/L	D	<0.063	:	-		<0.023	:	-		<0.036	:	-	
Cadmium	mg/L	T	-		<0.07	J	-		<0.1	:	-		<0.0001	:
Cadmium	mg/L	D	<0.13	:	-		<0.07	:	-		<0.1	:	-	
Calcium	mg/L	T	-		110.	:	-		89.8	:	-		375.	:
Calcium	mg/L	D	103.	:	-		96.1	:	-		92.7	:	-	
Chromium	mg/L	T	-		<0.11	:	-		<0.13	:	-		<0.0046	:
Chromium	mg/L	D	<0.23	J	-		<0.11	:	-		<0.13	:	-	
Cobalt	mg/L	T	-		<0.31	:	-		<0.18	:	-		0.0047	:
Cobalt	mg/L	D	<0.32	:	-		<0.31	:	-		<0.18	:	-	
Copper	mg/L	T	-		<0.24	:	-		<0.27	:	-		<0.0003	J
Copper	mg/L	D	<0.23	:	-		<0.24	:	-		<0.27	:	-	
Iron	mg/L	T	-		<3.73	:	-		<2.93	J	-		0.0344	:
Iron	mg/L	D	<4.55	:	-		<3.73	:	-		<2.93	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		<0.0001	:
Lead	mg/L	D	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Magnesium	mg/L	T	-		47.	:	-		32.9	:	-		44.5	:
Magnesium	mg/L	D	44.1	:	-		40.3	:	-		35.4	:	-	
Manganese	mg/L	T	-		6.4	:	-		4.04	:	-		0.114	:
Manganese	mg/L	D	6.14	:	-		5.55	:	-		4.33	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.024	:	-		<0.014	:	-		0.0497	:
Molybdenum	mg/L	D	<0.011	:	-		<0.024	:	-		<0.014	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-10C 10/20/2003 MMW-10C-D01N-GRW GW4		MMW-10C 1/11/2004 MMW-10C-T01N-GRW GW4		MMW-10C 1/11/2004 MMW-10C-D01N-GRW GW4		MMW-10C 4/21/2004 MMW-10C-T01N-GRW GW4		MMW-10C 4/21/2004 MMW-10C-D01N-GRW GW4		MMW-13 11/3/2002 MMW-13-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.27	:	-		<0.33	:	-		<0.0002	J
Nickel	mg/L	D	<0.45	:	-		<0.27	:	-		<0.33	:	-	
Potassium	mg/L	T	-		<24.3	:	-		<15.5	:	-		5.59	:
Potassium	mg/L	D	<63.8	:	-		<24.3	:	-		<15.5	:	-	
Selenium	mg/L	T	-		0.0038	J	-		<0.007	:	-		0.0021	:
Selenium	mg/L	D	<0.003	:	-		0.006	:	-		<0.007	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	J	-		<0.0001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Sodium	mg/L	T	-		<49.	:	-		<32.8	:	-		32.	:
Sodium	mg/L	D	<99.1	:	-		<49.	:	-		<32.8	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.0001	:
Vanadium	mg/L	D	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		1.78	:	-		1.18	:	-		0.0176	:
Zinc	mg/L	D	<1.66	:	-		1.47	:	-		1.17	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-		-		<0.00025	J
2,6-Pyridinediamine,	mg/L	T	-		-		-		-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-		-		<0.00025	J
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-		-		<0.00025	J
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-		-		<0.01	J
Isotopes														
Delta D	per mil	T	-		-		-		-96.4	:	-		-	
Delta O-18	per mil	T	-		-		-		-13.4	:	-		-	
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		<0.0001	:
Lead	mg/L	D	<0.002	:	-		<0.001	:	-		<0.004	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-13	11/3/2002	MMW-13-D01N-GRW	MMW-13	11/4/2002	MMW-13-T01N-GRW	MMW-13	1/15/2003	MMW-13-T01N-GW	MMW-13	1/15/2003	MMW-13-T01N-GRW	MMW-13	1/15/2003	MMW-13-D01N-GRW	MMW-13	4/9/2003	MMW-13-T01N-GRW
			GW4			GW4			GW4			GW4			GW4			GW4		
Field Measurements																				
DO	mg/L	T	-			-			7.48	:		7.48	:		-			3.91	:	
Eh	millivolts	T	-			-			194.	:		194.	:		-			208.	:	
pH	SU	T	-			-			7.23	:		7.23	:		-			5.9		J
Specific Conductance	uS/cm	T	-			-			1786.	:		1786.	:		-			1831.	:	
Temperature	Celsius	T	-			-			9.29	:		9.29	:		-			9.53	:	
Turbidity	NTU	T	-			-			46.1	:		46.1	:		-			4.8	:	
General Chemistry																				
Ammonia	mg/L	T	-			-			-			0.072	:		-			<0.064	:	
Bicarbonate (as CaCO3)	mg/L	T	-			-			-			174.		J	-			182.	:	
Carbonate (as CaCO3)	mg/L	T	-			-			-			<1.		J	-			<1.	:	
Chloride	mg/L	T	-			-			-			13.3	:		-			11.3	:	
Fluoride	mg/L	T	-			-			-			1.6	:		-			1.6	:	
Hydroxide (as CaCO3)	mg/L	T	-			-			-			174.		J	-			<1.	:	
Nitrate	mg/L	T	-			-			-			6.2		J	-			2.5		J
Nitrite	mg/L	T	-			-			-			<0.005		J	-			<0.005	:	
Phosphate, Ortho As P	mg/L	T	-			-			-			<0.011		J	-			<0.019	:	
Phosphorus	mg/L	T	-			-			-			0.016	:		-			0.023	:	
Sulfate	mg/L	T	-			-			-			834.		J	-			850.		J
Total Alkalinity	mg/L	T	-			-			-			174.		J	-			182.	:	
Total Dissolved Solids	mg/L	T	-			-			-			1450.	:		-			1640.	:	
Total Kjeldahl Nitrogen	mg/L	T	-			-			-			<0.24	:		-			<0.24	:	
Total Organic Carbon	mg/L	T	-			-			-			1.4	:		-			<1.		J
Total Suspended Solids	mg/L	T	-			-			-			<1.5	:		-			<7.7	:	
Laboratory Parameters																				
pH	SU	T	-			-			7.23	:		7.23	:		-			5.9		J
Specific Conductance	umhos/cm	T	-			-			-			-			-			1690.		J
Inorganics																				
Cyanide	mg/L	T	-			-			-			<0.01		J	-			<0.01		J
Physical Properties																				
Hardness	mg/L	T	-			-			-			1000.	:		-			1060.	:	
Hardness	mg/L	D	1120.	:		-			-			-			1010.	:		-		
Metals																				

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-13	11/3/2002	MMW-13-D01N-GRW		MMW-13	11/4/2002	MMW-13-T01N-GRW		MMW-13	1/15/2003	MMW-13-T01N-GW		MMW-13	1/15/2003	MMW-13-T01N-GRW		MMW-13	1/15/2003	MMW-13-D01N-GRW		MMW-13	4/9/2003	MMW-13-T01N-GRW	
Aluminum	mg/L	T	-				-				-				<0.142			:	-				<4.26			:
Aluminum	mg/L	D	<0.0042			:	-				-				-				<0.142			:	-			
Antimony	mg/L	T	-				-				-				<0.0006			:	-				<0.003			:
Antimony	mg/L	D	<0.0002			:	-				-				-				<0.00073			:	-			
Arsenic	mg/L	T	-				-				-				<0.0004			:	-				<0.04		J	
Arsenic	mg/L	D	<0.00041		J		-				-				-				0.00042			:	-			
Barium	mg/L	T	-				-				-				0.008			:	-				<0.123			:
Barium	mg/L	D	<0.0092			:	-				-				-				0.008			:	-			
Beryllium	mg/L	T	-				-				-				<0.0003			:	-				<0.003		J	
Beryllium	mg/L	D	0.00021			:	-				-				-				<0.0003			:	-			
Boron	mg/L	T	-				-				-				<0.0097			:	-				<0.084			:
Boron	mg/L	D	0.0113			:	-				-				-				<0.0106			:	-			
Cadmium	mg/L	T	-				-				-				<0.0004			:	-				<0.005			:
Cadmium	mg/L	D	<0.0001			:	-				-				-				<0.0004			:	-			
Calcium	mg/L	T	-				-				-				343.			:	-				350.			:
Calcium	mg/L	D	374.			:	-				-				-				346.			:	-			
Chromium	mg/L	T	-				-				-				<0.0037			:	-				<0.01			:
Chromium	mg/L	D	<0.0046			:	-				-				-				<0.0037			:	-			
Chromium, Hexavalent	mg/L	D	-				<0.01			:	-				-				-				-			
Cobalt	mg/L	T	-				-				-				<0.0039			:	-				<0.038			:
Cobalt	mg/L	D	0.0043			:	-				-				-				0.0038			:	-			
Copper	mg/L	T	-				-				-				<0.0018			:	-				<0.015		J	
Copper	mg/L	D	<0.0003		J		-				-				-				<0.0024			:	-			
Iron	mg/L	T	-				-				-				<0.489			:	-				0.444			:
Iron	mg/L	D	<0.0226			:	-				-				-				<0.489			:	-			
Lead	mg/L	T	-				-				-				<0.0002			:	-				<0.001		J	
Lead	mg/L	D	<0.0001			:	-				-				-				<0.0002			:	-			
Magnesium	mg/L	T	-				-				-				35.8			:	-				44.7			:
Magnesium	mg/L	D	44.2			:	-				-				-				36.			:	-			
Manganese	mg/L	T	-				-				-				<0.0332			:	-				0.208			:
Manganese	mg/L	D	0.11			:	-				-				-				<0.033			:	-			
Mercury	mg/L	T	-				-				-				<0.0001			:	-				<0.0001			:
Mercury	mg/L	D	<0.0001			:	-				-				-				<0.0001			:	-			
Molybdenum	mg/L	T	-				-				-				0.0416			:	-				0.0624			:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-13	11/3/2002	MMW-13-D01N-GRW		MMW-13	11/4/2002	MMW-13-T01N-GRW		MMW-13	1/15/2003	MMW-13-T01N-GW		MMW-13	1/15/2003	MMW-13-T01N-GRW		MMW-13	1/15/2003	MMW-13-D01N-GRW		MMW-13	4/9/2003	MMW-13-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Molybdenum	mg/L	D	0.0508		:		-				-				-				0.0421		:		-			
Nickel	mg/L	T	-				-				-				<0.0015		:		-				<0.03		:	
Nickel	mg/L	D	<0.0002		J		-				-				-				<0.0015		:		-			
Potassium	mg/L	T	-				-				-				6.48		:		-				3.98		:	
Potassium	mg/L	D	5.61		:		-				-				-				6.4		:		-			
Selenium	mg/L	T	-				-				-				0.003		:		-				<0.005		:	
Selenium	mg/L	D	0.0025		:		-				-				-				0.0027		:		-			
Silver	mg/L	T	-				-				-				<0.0002		:		-				<0.001		:	
Silver	mg/L	D	<0.0001		:		-				-				-				<0.0002		:		-			
Sodium	mg/L	T	-				-				-				28.6		:		-				30.9		:	
Sodium	mg/L	D	31.8		:		-				-				-				29.6		:		-			
Thallium	mg/L	T	-				-				-				<0.0002		:		-				<0.001		:	
Thallium	mg/L	D	<0.0001		:		-				-				-				<0.0002		:		-			
Vanadium	mg/L	T	-				-				-				<0.0004		:		-				<0.001		:	
Vanadium	mg/L	D	0.00011		:		-				-				-				<0.0004		:		-			
Zinc	mg/L	T	-				-				-				<0.039		:		-				<0.39		:	
Zinc	mg/L	D	0.0175		:		-				-				-				<0.039		:		-			
Explosives																										
2,4,6-Trinitrotoluene	mg/L	T	-				-				-				<0.00025		:		-				<0.00025		:	
2,6-Pyridinediamine,	mg/L	T	-				-				-				<0.00025		J		-				<0.00025		J	
Cyclotetramethylenetetranitramine	mg/L	T	-				-				-				<0.00025		:		-				<0.00025		:	
Cyclotrimethylenetrinitramine	mg/L	T	-				-				-				<0.00025		:		-				<0.00025		:	
Pentaerythritol tetranitrate	mg/L	T	-				-				-				<0.01		:		-				<0.01		:	
Isotopes																										
Lead	mg/L	T	-				-				-				<0.0002		:		-				<0.001		J	
Lead	mg/L	D	<0.0001		:		-				-				-				<0.0002		:		-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction	
			MMW-13	4/9/2003	MMW-13-D01N-GRW	GW4		MMW-13	7/20/2003	MMW-13-T01N-GRW	GW4		MMW-13	7/20/2003	MMW-13-D01N-GRW	GW4		MMW-13	10/19/2003	MMW-13-T01N-GRW	GW4		MMW-13	10/19/2003	MMW-13-D01N-GRW	GW4	
Field Measurements																											
DO	mg/L	T	-					0.47		:			-					0.3		:			-				
Eh	millivolts	T	-					368.		:			-					267.6		:			-				
pH	SU	T	-					7.1	J				-					7.2	J				-				
Specific Conductance	uS/cm	T	-					1834.		:			-					1949.		:			-				
Temperature	Celsius	T	-					18.35		:			-					9.95		:			-				
Turbidity	NTU	T	-					1.4		:			-					0.3		:			-				
General Chemistry																											
Ammonia	mg/L	T	-					<0.23	J				-					<0.25	J				-				
Bicarbonate (as CaCO3)	mg/L	T	-					208.		:			-					197.		:			-				
Carbonate (as CaCO3)	mg/L	T	-					<1.		:			-					<1.		:			-				
Chloride	mg/L	T	-					10.8		:			-					14.2		:			-				
Fluoride	mg/L	T	-					1.6		:			-					1.7		:			-				
Hydroxide (as CaCO3)	mg/L	T	-					<1.		:			-					<1.		:			-				
Nitrate	mg/L	T	-					0.3	J				-					4.7		:			-				
Nitrite	mg/L	T	-					0.024	J				-					0.069		:			-				
Phosphate, Ortho As P	mg/L	T	-					<0.01	J				-					<0.027		:			-				
Phosphorus	mg/L	T	-					0.018		:			-					0.037		:			-				
Sulfate	mg/L	T	-					914.	J				-					881.	J				-				
Total Alkalinity	mg/L	T	-					208.		:			-					197.		:			-				
Total Dissolved Solids	mg/L	T	-					1740.		:			-					1580.		:			-				
Total Kjeldahl Nitrogen	mg/L	T	-					0.25		:			-					<0.24		:			-				
Total Organic Carbon	mg/L	T	-					<1.	J				-					<1.	J				-				
Total Suspended Solids	mg/L	T	-					2.9		:			-					<1.4		:			-				
Laboratory Parameters																											
pH	SU	T	-					7.1	J				-					7.2	J				-				
Specific Conductance	umhos/cm	T	-					1790.	J				-					1630.	J				-				
Inorganics																											
Cyanide	mg/L	T	-					<0.01	J				-					<0.01	J				-				
Physical Properties																											
Hardness	mg/L	T	-					1150.		:			-					1140.		:			-				
Hardness	mg/L	D	1020.		:			-					1160.		:			-					1110.		:		
Metals																											

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-13	MMW-13	MMW-13	MMW-13	MMW-13	MMW-13
			Sample Date	4/9/2003	7/20/2003	7/20/2003	10/19/2003	10/19/2003	1/15/2004
			Sample ID	MMW-13-D01N-GRW	MMW-13-T01N-GRW	MMW-13-D01N-GRW	MMW-13-T01N-GRW	MMW-13-D01N-GRW	MMW-13-T01N-GRW
				GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	T		-	<0.631 :	-	<0.217 :	-	<0.621 :
Aluminum	mg/L	D		<4.26 :	-	<0.631 :	-	<0.217 :	-
Antimony	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.0032 :
Antimony	mg/L	D		<0.003 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T		-	0.0011 :	-	0.00049 :	-	0.00035 :
Arsenic	mg/L	D		<0.04 J	-	0.0012 :	-	<0.0004 :	-
Barium	mg/L	T		-	<0.0073 :	-	0.012 :	-	<0.0188 :
Barium	mg/L	D		<0.123 :	-	0.008 :	-	<0.0115 :	-
Beryllium	mg/L	T		-	<0.00028 :	-	<0.0004 J	-	<0.001 :
Beryllium	mg/L	D		<0.003 J	-	<0.0002 J	-	<0.0004 J	-
Boron	mg/L	T		-	0.012 :	-	<0.0144 :	-	<0.0117 :
Boron	mg/L	D		<0.084 :	-	0.0125 :	-	<0.0155 :	-
Cadmium	mg/L	T		-	<0.0003 :	-	<0.0005 :	-	<0.0007 J
Cadmium	mg/L	D		<0.005 :	-	<0.0003 :	-	<0.0005 :	-
Calcium	mg/L	T		-	378. :	-	388. :	-	380. :
Calcium	mg/L	D		340. :	-	379. :	-	378. :	-
Chromium	mg/L	T		-	<0.0019 :	-	<0.0011 J	-	<0.0057 :
Chromium	mg/L	D		<0.01 :	-	<0.0019 :	-	<0.0011 J	-
Cobalt	mg/L	T		-	0.0082 :	-	<0.0029 J	-	0.0039 J
Cobalt	mg/L	D		<0.038 :	-	0.0077 :	-	<0.0029 J	-
Copper	mg/L	T		-	<0.0022 :	-	<0.0022 :	-	<0.0035 :
Copper	mg/L	D		<0.015 J	-	0.0017 :	-	<0.0022 :	-
Iron	mg/L	T		-	<0.667 :	-	<0.455 :	-	<0.423 :
Iron	mg/L	D		<0.311 :	-	<0.667 :	-	<0.455 :	-
Lead	mg/L	T		-	<0.0002 :	-	<0.00057 :	-	0.00038 :
Lead	mg/L	D		<0.001 J	-	<0.0002 :	-	<0.0004 :	-
Magnesium	mg/L	T		-	50.8 :	-	42.3 :	-	43.6 :
Magnesium	mg/L	D		41.7 :	-	51. :	-	41.1 :	-
Manganese	mg/L	T		-	0.376 :	-	0.138 :	-	0.188 :
Manganese	mg/L	D		<0.13 :	-	0.372 :	-	0.128 :	-
Mercury	mg/L	T		-	<0.0002 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.00022 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.0543 :	-	0.0449 :	-	0.0471 :
Molybdenum	mg/L	D		0.0494 :	-	0.054 :	-	0.0444 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			MMW-13	MMW-13	MMW-13	MMW-13
			4/9/2003	7/20/2003	7/20/2003	10/19/2003
			MMW-13-D01N-GRW	MMW-13-T01N-GRW	MMW-13-D01N-GRW	MMW-13-T01N-GRW
			GW4	GW4	GW4	GW4
Nickel	mg/L	T	-	<0.002 J	-	<0.0024 J
Nickel	mg/L	D	<0.03 :	-	<0.002 J	-
Potassium	mg/L	T	-	4.53 :	-	<7.59 :
Potassium	mg/L	D	3.99 :	-	4.61 :	-
Selenium	mg/L	T	-	<0.0016 :	-	0.0025 :
Selenium	mg/L	D	<0.005 :	-	<0.0016 J	-
Silver	mg/L	T	-	<0.0002 J	-	<0.0002 :
Silver	mg/L	D	<0.001 :	-	<0.0002 J	-
Sodium	mg/L	T	-	24. J	-	30.9 :
Sodium	mg/L	D	29.9 :	-	28.9 J	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.001 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0004 :	-	0.00021 :
Vanadium	mg/L	D	<0.001 :	-	<0.0004 :	-
Zinc	mg/L	T	-	<0.016 :	-	<0.0507 :
Zinc	mg/L	D	<0.39 :	-	<0.016 :	-
Isotopes						
Lead	mg/L	T	-	<0.0002 :	-	<0.00057 :
Lead	mg/L	D	<0.001 J	-	<0.0002 :	-

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			MMW-13	MMW-13	MMW-13	MMW-13
			10/19/2003	1/15/2004		
			MMW-13-D01N-GRW	MMW-13-T01N-GRW		
			GW4	GW4		
Nickel	mg/L	T	-	<0.0168 :		
Nickel	mg/L	D	0.0031 J	-		
Potassium	mg/L	T	-	4.38 J		
Potassium	mg/L	D	<7.82 :	-		
Selenium	mg/L	T	-	0.0014 J		
Selenium	mg/L	D	0.0019 :	-		
Silver	mg/L	T	-	<0.0002 J		
Silver	mg/L	D	<0.0002 :	-		
Sodium	mg/L	T	-	27. :		
Sodium	mg/L	D	30.1 :	-		
Thallium	mg/L	T	-	<0.00028 :		
Thallium	mg/L	D	<0.0002 :	-		
Vanadium	mg/L	T	-	<0.00043 :		
Vanadium	mg/L	D	<0.0002 :	-		
Zinc	mg/L	T	-	<0.091 :		
Zinc	mg/L	D	<0.043 :	-		
Isotopes						
Lead	mg/L	T	-	0.00038 :		
Lead	mg/L	D	<0.0004 :	-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID		MMW-13		MMW-13		MMW-13		MMW-17A		MMW-17A		MMW-17A	
			Sample Date		1/15/2004		4/22/2004		4/22/2004		11/4/2002		11/4/2002		11/4/2002	
			Sample ID		MMW-13-D01N-GRW		MMW-13-T01N-GRW		MMW-13-D01N-GRW		MMW-17A-T01N-GRWRE		MMW-17A-T01N-GRW		MMW-17A-D01N-GRWRE	
					GW4		GW4		GW4		MR		MR		MR	
Field Measurements																
DO	mg/L	T		-		4.56	:	-		-		7.64	:	-	
Eh	millivolts	T		-		140.2	:	-		-		458.4	:	-	
pH	SU	T		-		7.4	J	-		-		4.56	:	-	
Specific Conductance	uS/cm	T		-		1786.	:	-		-		771.	:	-	
Temperature	Celsius	T		-		9.96	:	-		-		6.41	:	-	
Turbidity	NTU	T		-		2.6	:	-		-		17.4	:	-	
General Chemistry																
Ammonia	mg/L	T		-		<0.075	:	-		-		<0.064	:	-	
Bicarbonate (as CaCO3)	mg/L	T		-		175.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T		-		13.6	:	-		-		5.1	:	-	
Fluoride	mg/L	T		-		1.6	:	-		1.7	J	-		-	
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		-		<1.	J	-	
Nitrate	mg/L	T		-		3.	J	-		-		<0.4	J	-	
Nitrite	mg/L	T		-		<0.005	J	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T		-		<0.01	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T		-		<0.01	:	-		-		0.01	:	-	
Sulfate	mg/L	T		-		980.	:	-		355.	J	-		-	
Total Alkalinity	mg/L	T		-		175.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T		-		1660.	:	-		-		641.	:	-	
Total Kjeldahl Nitrogen	mg/L	T		-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T		-		<1.3	J	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T		-		<1.9	:	-		-		<0.6	:	-	
Laboratory Parameters																
pH	SU	T		-		7.4	J	-		-		4.56	:	-	
Specific Conductance	umhos/cm	T		-		1550.	J	-		-		-		-	
Inorganics																
Cyanide	mg/L	T		-		<0.01	:	-		-		<0.01	J	-	
Physical Properties																
Hardness	mg/L	T		-		1080.	:	-		-		361.	:	-	
Hardness	mg/L	D		1070.	:	-		1060.	:	-		-		319.	:
Metals																

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-13	MMW-13	MMW-13	MMW-17A	MMW-17A	MMW-17A
		Sample Date	1/15/2004	4/22/2004	4/22/2004	11/4/2002	11/4/2002	11/4/2002
		Sample ID	MMW-13-D01N-GRW	MMW-13-T01N-GRW	MMW-13-D01N-GRW	MMW-17A-T01N-GRWRE	MMW-17A-T01N-GRW	MMW-17A-D01N-GRWRE
		Exposure Area	GW4	GW4	GW4	MR	MR	MR
Aluminum	mg/L	T	-	<0.273 :	-	-	-	-
Aluminum	mg/L	D	<0.621 :	-	<0.213 :	-	-	<7.62 :
Antimony	mg/L	T	-	<0.0014 :	-	-	-	-
Antimony	mg/L	D	<0.0032 :	-	<0.0014 :	-	-	<0.028 :
Arsenic	mg/L	T	-	<0.0004 :	-	-	-	-
Arsenic	mg/L	D	0.00031 :	-	<0.0004 :	-	-	<0.023 :
Barium	mg/L	T	-	0.0068 :	-	-	-	-
Barium	mg/L	D	<0.0188 :	-	0.0067 :	-	-	<0.048 :
Beryllium	mg/L	T	-	<0.0003 :	-	-	-	-
Beryllium	mg/L	D	<0.001 :	-	<0.0003 :	-	-	<0.002 :
Boron	mg/L	T	-	0.0123 :	-	-	-	-
Boron	mg/L	D	0.0118 :	-	0.0115 :	-	-	<0.027 :
Cadmium	mg/L	T	-	<0.0003 :	-	-	-	-
Cadmium	mg/L	D	<0.0007 :	-	<0.0003 :	-	-	<0.08 :
Calcium	mg/L	T	-	361. :	-	-	-	-
Calcium	mg/L	D	362. :	-	356. :	-	-	87.7 :
Chromium	mg/L	T	-	<0.0006 J	-	-	-	-
Chromium	mg/L	D	<0.0057 :	-	<0.0006 J	-	-	<0.16 J
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	-	<0.0016 :	-	-	-	-
Cobalt	mg/L	D	0.006 :	-	<0.0028 :	-	-	<0.23 :
Copper	mg/L	T	-	<0.0019 :	-	-	-	-
Copper	mg/L	D	<0.0035 :	-	0.0019 :	-	-	<0.17 :
Iron	mg/L	T	-	<0.3 J	-	-	-	-
Iron	mg/L	D	<0.423 :	-	<0.192 :	-	-	<2.66 :
Lead	mg/L	T	-	<0.0008 :	-	-	-	-
Lead	mg/L	D	<0.00021 :	-	<0.0008 :	-	-	<0.001 :
Magnesium	mg/L	T	-	42.5 :	-	-	-	-
Magnesium	mg/L	D	41.5 :	-	42. :	-	-	<26.9 :
Manganese	mg/L	T	-	0.0712 :	-	-	-	-
Manganese	mg/L	D	0.178 :	-	0.0555 :	-	-	1.65 :
Mercury	mg/L	T	-	<0.0001 J	-	-	0.0002 :	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	-	-
Molybdenum	mg/L	T	-	0.0473 :	-	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-13	1/15/2004	MMW-13-D01N-GRW		MMW-13	4/22/2004	MMW-13-T01N-GRW		MMW-13	4/22/2004	MMW-13-D01N-GRW		MMW-17A	11/4/2002	MMW-17A-T01N-GRWRE		MMW-17A	11/4/2002	MMW-17A-T01N-GRW		MMW-17A	11/4/2002	MMW-17A-D01N-GRWRE	
			GW4				GW4				GW4				MR				MR				MR			
Molybdenum	mg/L	D	0.0461	:			-				0.0468	:			-				-				<0.011	:		
Nickel	mg/L	T	-				<0.0015	J			-				-				-				-			
Nickel	mg/L	D	<0.0168	:			-				<0.0015	J			-				-				<0.34	J		
Potassium	mg/L	T	-				5.58	:			-				-				-				-			
Potassium	mg/L	D	4.36	J			-				5.4	:			-				-				<31.4	J		
Selenium	mg/L	T	-				0.0021	:			-				-				-				-			
Selenium	mg/L	D	0.0015	:			-				0.002	:			-				-				<0.008	:		
Silver	mg/L	T	-				<0.0002	J			-				-				-				-			
Silver	mg/L	D	<0.0002	J			-				<0.0002	J			-				-				<0.001	:		
Sodium	mg/L	T	-				29.4	:			-				-				-				-			
Sodium	mg/L	D	28.4	:			-				28.2	:			-				-				<36.6	:		
Thallium	mg/L	T	-				<0.0002	:			-				-				-				-			
Thallium	mg/L	D	<0.00027	:			-				<0.0002	:			-				-				<0.001	:		
Vanadium	mg/L	T	-				<0.0004	:			-				-				-				-			
Vanadium	mg/L	D	<0.0004	:			-				<0.0004	:			-				-				<0.002	:		
Zinc	mg/L	T	-				0.0164	:			-				-				-				-			
Zinc	mg/L	D	<0.091	:			-				0.016	:			-				-				0.547	:		
Explosives																										
2,4,6-Trinitrotoluene	mg/L	T	-				-				-				-				<0.00025	:			-			
Cyclotetramethylenetetranitramine	mg/L	T	-				-				-				-				<0.00025	:			-			
Cyclotrimethylenetrinitramine	mg/L	T	-				-				-				-				<0.00025	:			-			
Pentaerythritol tetranitrate	mg/L	T	-				-				-				-				<0.01	:			-			
Isotopes																										
Lead	mg/L	T	-				<0.0008	:			-				-				-				-			
Lead	mg/L	D	<0.00021	:			-				<0.0008	:			-				-				<0.001	:		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			MMW-17A	MMW-17A	MMW-17A
			11/4/2002	12/3/2002	12/3/2002
			MMW-17A-D01N-GRW	MMW-17A-T01N-GRWRE	MMW-17A-D01N-GRWRE
			MR	MR	MR
Field Measurements					
DO	mg/L	T	-	4.64 :	-
Eh	millivolts	T	-	442.4 :	-
pH	SU	T	-	4.39 :	-
Specific Conductance	uS/cm	T	-	793. :	-
Temperature	Celsius	T	-	6.99 :	-
Turbidity	NTU	T	-	44.9 :	-
General Chemistry					
Ammonia	mg/L	T	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	-
Chloride	mg/L	T	-	-	-
Fluoride	mg/L	T	-	1.7 J	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-
Nitrate	mg/L	T	-	-	-
Nitrite	mg/L	T	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	-
Phosphorus	mg/L	T	-	-	-
Sulfate	mg/L	T	-	379. J	-
Total Alkalinity	mg/L	T	-	-	-
Total Dissolved Solids	mg/L	T	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-
Total Organic Carbon	mg/L	T	-	-	-
Total Suspended Solids	mg/L	T	-	-	-
Laboratory Parameters					
pH	SU	T	-	4.39 :	-
Inorganics					
Cyanide	mg/L	T	-	-	-
Physical Properties					
Hardness	mg/L	T	-	-	-
Hardness	mg/L	D	-	-	369. :
Metals					
Aluminum	mg/L	T	-	-	-

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID
			MMW-17A	MMW-17A	MMW-17A
			12/3/2002	12/4/2002	2/8/2003
			MMW-17A-D01N-GRW	MMW-17A-T01N-GRW	MMW-17A-T01N-GRW
			MR	MR	MR
Field Measurements					
DO	mg/L	T	-	-	3.56 :
Eh	millivolts	T	-	-	491. :
pH	SU	T	-	-	4.46 :
Specific Conductance	uS/cm	T	-	-	735. :
Temperature	Celsius	T	-	-	7.18 :
Turbidity	NTU	T	-	-	0. :
General Chemistry					
Ammonia	mg/L	T	-	<0.08 :	<0.089 :
Bicarbonate (as CaCO3)	mg/L	T	-	<3.2 J	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	<1. :
Chloride	mg/L	T	-	5.1 :	5.1 :
Fluoride	mg/L	T	-	-	1.6 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	<1. :
Nitrate	mg/L	T	-	0.42 :	0.41 J
Nitrite	mg/L	T	-	<0.005 :	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	0.082 J
Phosphorus	mg/L	T	-	<0.018 J	<0.01 J
Sulfate	mg/L	T	-	-	419. J
Total Alkalinity	mg/L	T	-	<3.2 J	<1. :
Total Dissolved Solids	mg/L	T	-	630. :	632. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 J	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	<1. :
Total Suspended Solids	mg/L	T	-	<0.5 J	0.9 :
Laboratory Parameters					
pH	SU	T	-	-	4.46 :
Inorganics					
Cyanide	mg/L	T	-	<0.01 J	<0.01 J
Physical Properties					
Hardness	mg/L	T	-	341. :	389. :
Hardness	mg/L	D	-	-	-
Metals					
Aluminum	mg/L	T	-	-	<18. :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 11/4/2002 MMW-17A-D01N-GR W MR	MMW-17A 12/3/2002 MMW-17A-T01N-GR WRE MR	MMW-17A 12/3/2002 MMW-17A-D01N-GR WRE MR	MMW-17A 12/3/2002 MMW-17A-D01N-GR W MR	MMW-17A 12/4/2002 MMW-17A-T01N-GR W MR	MMW-17A 2/8/2003 MMW-17A-T01N-GR W MR
Aluminum	mg/L	D	-	-	<11.2 :	-	-	-
Antimony	mg/L	T	-	-	-	-	-	<0.028 :
Antimony	mg/L	D	-	-	<0.028 :	-	-	-
Arsenic	mg/L	T	-	-	-	-	-	<0.023 :
Arsenic	mg/L	D	-	-	<0.023 :	-	-	-
Barium	mg/L	T	-	-	-	-	-	<0.048 :
Barium	mg/L	D	-	-	<0.048 :	-	-	-
Beryllium	mg/L	T	-	-	-	-	-	0.0032 :
Beryllium	mg/L	D	-	-	0.0028 :	-	-	-
Boron	mg/L	T	-	-	-	-	-	<0.027 :
Boron	mg/L	D	-	-	<0.0348 :	-	-	-
Cadmium	mg/L	T	-	-	-	-	-	<0.08 :
Cadmium	mg/L	D	-	-	<0.08 :	-	-	-
Calcium	mg/L	T	-	-	-	-	-	106. :
Calcium	mg/L	D	-	-	99.5 :	-	-	-
Chromium	mg/L	T	-	-	-	-	-	<0.16 :
Chromium	mg/L	D	-	-	<0.16 J	-	-	-
Cobalt	mg/L	T	-	-	-	-	-	<0.23 :
Cobalt	mg/L	D	-	-	<0.23 :	-	-	-
Copper	mg/L	T	-	-	-	-	-	<0.17 :
Copper	mg/L	D	-	-	<0.17 :	-	-	-
Iron	mg/L	T	-	-	-	-	-	<2.66 J
Iron	mg/L	D	-	-	<2.66 :	-	-	-
Lead	mg/L	T	-	-	-	-	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-
Magnesium	mg/L	T	-	-	-	-	-	30.6 :
Magnesium	mg/L	D	-	-	29.2 :	-	-	-
Manganese	mg/L	T	-	-	-	-	-	2.05 J
Manganese	mg/L	D	-	-	1.88 J	-	-	-
Mercury	mg/L	T	-	-	-	-	<0.0001 J	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	-	-	-	<0.011 J
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	-
Nickel	mg/L	T	-	-	-	-	-	<0.34 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	MMW-17A 11/4/2002 MMW-17A-D01N-GR W MR	MMW-17A 12/3/2002 MMW-17A-T01N-GR WRE MR	MMW-17A 12/3/2002 MMW-17A-D01N-GR WRE MR	MMW-17A 12/3/2002 MMW-17A-D01N-GR W MR	MMW-17A 12/4/2002 MMW-17A-T01N-GR W MR	MMW-17A 2/8/2003 MMW-17A-T01N-GR W MR
Nickel	mg/L	D	-	-	<0.34 J	-	-	-
Potassium	mg/L	T	-	-	-	-	-	<2.02 :
Potassium	mg/L	D	-	-	<31.4 J	-	-	-
Selenium	mg/L	T	-	-	-	-	-	<0.008 :
Selenium	mg/L	D	-	-	<0.008 :	-	-	-
Silver	mg/L	T	-	-	-	-	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	-	-	-	-	-	<36.6 :
Sodium	mg/L	D	-	-	<36.6 :	-	-	-
Thallium	mg/L	T	-	-	-	-	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	-	-	-	-	<0.002 :
Vanadium	mg/L	D	-	-	<0.002 :	-	-	-
Zinc	mg/L	T	-	-	-	-	-	0.62 :
Zinc	mg/L	D	-	-	0.693 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	-	-	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-17A 2/8/2003 MMW-17A-D01N-GR W MR		MMW-17A 3/3/2003 MMW-17A-T01N-GR W MR		MMW-17A 3/3/2003 MMW-17A-D01N-GR W MR		MMW-17A 4/9/2003 MMW-17A-T01N-GR W MR		MMW-17A 4/9/2003 MMW-17A-D01N-GR W MR		MMW-17A 5/7/2003 MMW-17A-T01N-GR W MR	
Field Measurements														
DO	mg/L	T	-		3.28	:	-		2.76	:	-		3.36	:
Eh	millivolts	T	-		338.	:	-		306.8	:	-		408.3	:
pH	SU	T	-		4.46	:	-		4.2	J	-		4.7	J
Specific Conductance	uS/cm	T	-		96.	:	-		789.	:	-		799.	:
Temperature	Celsius	T	-		7.35	:	-		8.24	:	-		8.12	:
Turbidity	NTU	T	-		0.	:	-		0.	:	-		11.6	:
General Chemistry														
Ammonia	mg/L	T	-		<0.069	:	-		<0.12	:	-		<0.068	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		5.8	:	-		3.7	:	-		<3.8	:
Fluoride	mg/L	T	-		1.6	:	-		1.2	:	-		1.7	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	:	-		<0.47	J	-		<0.4	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		<0.018	J	-		<0.01	J
Phosphorus	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.014	:
Sulfate	mg/L	T	-		430.	:	-		401.	J	-		389.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		622.	:	-		952.	:	-		678.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.2	J	-		<1.	J	-		<1.	:
Total Suspended Solids	mg/L	T	-		0.6	J	-		<0.5	:	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		4.46	:	-		4.2	J	-		4.7	J
Specific Conductance	umhos/cm	T	-		-		-		728.	J	-		737.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		385.	:	-		331.	:	-		362.	:
Hardness	mg/L	D	390.	:	-		379.	:	-		342.	:	-	
Metals														

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T = Total Fraction D = Dissolved Fracton
R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-17A		MMW-17A		MMW-17A		MMW-17A		MMW-17A		MMW-17A			
			2/8/2003		3/3/2003		3/3/2003		4/9/2003		4/9/2003		5/7/2003			
			MMW-17A-D01N-GRW		MMW-17A-T01N-GRW		MMW-17A-D01N-GRW		MMW-17A-T01N-GRW		MMW-17A-D01N-GRW		MMW-17A-T01N-GRW			
			MR		MR		MR		MR		MR		MR			
Aluminum	mg/L	T	-		14.2	:	-		9.48	:	-		10.5	:		
Aluminum	mg/L	D	<17.7	:	-		11.4	:	-		10.2	:	-			
Antimony	mg/L	T	-		<0.028	:	-		<0.003	:	-		<0.048	:		
Antimony	mg/L	D	<0.028	:	-		<0.028	:	-		<0.003	:	-			
Arsenic	mg/L	T	-		<0.023	J	-		<0.04	:	-		<0.047	:		
Arsenic	mg/L	D	<0.023	:	-		<0.023	J	-		<0.04	:	-			
Barium	mg/L	T	-		<0.048	:	-		<0.123	:	-		<0.135	:		
Barium	mg/L	D	<0.048	:	-		<0.048	:	-		<0.123	:	-			
Beryllium	mg/L	T	-		0.0032	:	-		<0.003	J	-		<0.003	:		
Beryllium	mg/L	D	0.0028	:	-		0.0031	:	-		<0.003	J	-			
Boron	mg/L	T	-		<0.027	:	-		<0.084	:	-		<0.075	:		
Boron	mg/L	D	<0.027	:	-		<0.027	:	-		<0.084	:	-			
Cadmium	mg/L	T	-		<0.08	:	-		<0.005	:	-		<0.004	:		
Cadmium	mg/L	D	<0.08	:	-		<0.08	J	-		<0.005	:	-			
Calcium	mg/L	T	-		102.	J	-		90.2	:	-		99.7	:		
Calcium	mg/L	D	106.	:	-		104.	J	-		92.7	:	-			
Chromium	mg/L	T	-		<0.16	:	-		<0.01	:	-		<0.009	:		
Chromium	mg/L	D	<0.16	:	-		<0.16	:	-		<0.01	:	-			
Cobalt	mg/L	T	-		<0.23	:	-		0.0413	:	-		0.0292	:		
Cobalt	mg/L	D	<0.23	:	-		<0.23	:	-		0.0449	:	-			
Copper	mg/L	T	-		<0.17	:	-		<0.0519	:	-		0.0562	:		
Copper	mg/L	D	<0.17	:	-		<0.17	:	-		<0.0543	:	-			
Iron	mg/L	T	-		<3.29	:	-		<0.311	:	-		<0.299	J		
Iron	mg/L	D	<2.66	J	-		<2.66	J	-		<0.311	:	-			
Lead	mg/L	T	-		<0.001	:	-		<0.001	J	-		<0.001	J		
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-			
Magnesium	mg/L	T	-		31.4	:	-		<35.2	:	-		27.6	:		
Magnesium	mg/L	D	30.3	:	-		29.4	:	-		<35.2	:	-			
Manganese	mg/L	T	-		1.93	:	-		1.75	:	-		1.93	:		
Manganese	mg/L	D	2.03	:	-		1.98	:	-		1.82	:	-			
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:		
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-			
Molybdenum	mg/L	T	-		<0.041	:	-		<0.023	:	-		<0.016	:		
Molybdenum	mg/L	D	<0.011	J	-		<0.0222	:	-		<0.023	:	-			

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 2/8/2003 MMW-17A-D01N-GR W MR		MMW-17A 3/3/2003 MMW-17A-T01N-GR W MR		MMW-17A 3/3/2003 MMW-17A-D01N-GR W MR		MMW-17A 4/9/2003 MMW-17A-T01N-GR W MR		MMW-17A 4/9/2003 MMW-17A-D01N-GR W MR		MMW-17A 5/7/2003 MMW-17A-T01N-GR W MR	
Nickel	mg/L	T	-		<0.34	:	-		0.0991	:	-		0.0854	:
Nickel	mg/L	D	<0.34	:	-		<0.34	:	-		0.108	:	-	
Potassium	mg/L	T	-		<31.4	:	-		<3.26	:	-		<3.27	:
Potassium	mg/L	D	3.42	:	-		<31.4	:	-		<3.26	:	-	
Selenium	mg/L	T	-		<0.008	J	-		<0.005	:	-		<0.005	:
Selenium	mg/L	D	<0.008	:	-		<0.008	:	-		<0.005	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<36.6	:	-		7.05	:	-		7.57	:
Sodium	mg/L	D	<36.6	:	-		<36.6	:	-		7.9	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		<0.001	:	-	
Zinc	mg/L	T	-		0.699	J	-		0.486	:	-		0.615	:
Zinc	mg/L	D	0.613	:	-		0.671	:	-		0.554	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	J	-		<0.001	J
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-17A 5/7/2003 MMW-17A-D01N-GR W MR		MMW-17A 6/2/2003 MMW-17A-T01N-GR W MR		MMW-17A 6/2/2003 MMW-17A-D01N-GR W MR		MMW-17A 7/23/2003 MMW-17A-T01N-GR W MR		MMW-17A 7/23/2003 MMW-17A-D01N-GR W MR		MMW-17A 8/11/2003 MMW-17A-T01N-GR W MR	
Field Measurements														
DO	mg/L	T	-		3.25	:	-		4.54	:	-		4.01	:
Eh	millivolts	T	-		290.6	:	-		619.9	:	-		492.3	:
pH	SU	T	-		4.6	J	-		4.7	J	-		4.2	J
Specific Conductance	uS/cm	T	-		1434.	:	-		747.	:	-		767.	:
Temperature	Celsius	T	-		8.63	:	-		9.26	:	-		11.37	:
Turbidity	NTU	T	-		0.5	:	-		0.	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.21	J	-		<0.043	J	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.1	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<13.8	:	-		6.3	:	-		5.8	:
Fluoride	mg/L	T	-		<1.	:	-		1.9	:	-		1.5	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	:	-		<0.4	:	-		0.21	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.078	J	-		<0.01	J	-		<0.01	J
Phosphorus	mg/L	T	-		-		-		<0.01	:	-		0.012	:
Sulfate	mg/L	T	-		410.	J	-		387.	J	-		367.	J
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.1	:
Total Dissolved Solids	mg/L	T	-		738.	:	-		908.	:	-		694.	:
Total Kjeldahl Nitrogen	mg/L	T	-		0.28	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.4	J	-		<1.1	J
Total Suspended Solids	mg/L	T	-		<0.9	:	-		<0.6	:	-		<0.8	:
Laboratory Parameters														
pH	SU	T	-		4.6	J	-		4.7	J	-		4.2	J
Specific Conductance	umhos/cm	T	-		780.	J	-		733.	J	-		672.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		368.	:	-		328.	:	-		327.	:
Hardness	mg/L	D	377.	:	-		360.	:	-		336.	:	-	
Metals														

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 5/7/2003 MMW-17A-D01N-GR W MR	MMW-17A 6/2/2003 MMW-17A-T01N-GR W MR	MMW-17A 6/2/2003 MMW-17A-D01N-GR W MR	MMW-17A 7/23/2003 MMW-17A-T01N-GR W MR	MMW-17A 7/23/2003 MMW-17A-D01N-GR W MR	MMW-17A 8/11/2003 MMW-17A-T01N-GR W MR
Aluminum	mg/L	T	-	12.5 :	-	12.3 :	-	9.36 :
Aluminum	mg/L	D	10.9 :	-	9.89 :	-	12.1 :	-
Antimony	mg/L	T	-	<0.072 :	-	<0.047 :	-	<0.038 :
Antimony	mg/L	D	<0.048 :	-	<0.072 :	-	<0.047 :	-
Arsenic	mg/L	T	-	<0.04 :	-	<0.048 :	-	<0.024 :
Arsenic	mg/L	D	<0.047 :	-	<0.04 :	-	<0.048 :	-
Barium	mg/L	T	-	<0.123 :	-	<0.059 :	-	<0.073 :
Barium	mg/L	D	<0.135 :	-	<0.123 :	-	<0.059 :	-
Beryllium	mg/L	T	-	0.0034 :	-	0.0026 :	-	0.0035 :
Beryllium	mg/L	D	<0.003 :	-	0.0036 :	-	0.0032 :	-
Boron	mg/L	T	-	<0.084 :	-	<0.048 :	-	<0.046 :
Boron	mg/L	D	<0.075 :	-	<0.084 :	-	<0.048 :	-
Cadmium	mg/L	T	-	<0.07 :	-	<0.12 :	-	<0.06 :
Cadmium	mg/L	D	<0.004 :	-	<0.07 :	-	<0.12 :	-
Calcium	mg/L	T	-	100. :	-	89.6 :	-	93.6 :
Calcium	mg/L	D	104. :	-	97.9 :	-	91.7 :	-
Chromium	mg/L	T	-	<0.19 :	-	<0.19 :	-	<0.14 :
Chromium	mg/L	D	<0.009 :	-	<0.19 :	-	<0.19 :	-
Cobalt	mg/L	T	-	<0.36 :	-	<0.37 :	-	<0.2 :
Cobalt	mg/L	D	0.0351 :	-	<0.36 :	-	<0.37 :	-
Copper	mg/L	T	-	<0.2 :	-	<0.33 J	-	<0.24 :
Copper	mg/L	D	0.0481 :	-	<0.2 :	-	<0.33 J	-
Iron	mg/L	T	-	<4.22 :	-	<0.333 :	-	<3.33 :
Iron	mg/L	D	<0.299 J	-	<4.22 :	-	<0.333 :	-
Lead	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.002 :
Lead	mg/L	D	<0.001 J	-	<0.001 J	-	<0.001 :	-
Magnesium	mg/L	T	-	<35.2 :	-	<29.3 :	-	22.6 :
Magnesium	mg/L	D	28.6 :	-	<35.2 :	-	<29.3 :	-
Manganese	mg/L	T	-	1.87 :	-	1.43 :	-	1.59 :
Manganese	mg/L	D	2. :	-	1.81 :	-	1.42 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.023 :	-	<0.017 :	-	<0.026 :
Molybdenum	mg/L	D	<0.016 :	-	<0.023 :	-	<0.017 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 5/7/2003 MMW-17A-D01N-GR W MR	MMW-17A 6/2/2003 MMW-17A-T01N-GR W MR	MMW-17A 6/2/2003 MMW-17A-D01N-GR W MR	MMW-17A 7/23/2003 MMW-17A-T01N-GR W MR	MMW-17A 7/23/2003 MMW-17A-D01N-GR W MR	MMW-17A 8/11/2003 MMW-17A-T01N-GR W MR
Nickel	mg/L	T	-	<0.73 :	-	<0.44 J	-	<0.21 :
Nickel	mg/L	D	0.0884 :	-	<0.73 :	-	<0.44 J	-
Potassium	mg/L	T	-	<40.5 :	-	<37.1 :	-	<39.3 :
Potassium	mg/L	D	<3.27 :	-	<40.5 :	-	<37.1 :	-
Selenium	mg/L	T	-	<0.008 :	-	<0.008 :	-	<0.003 :
Selenium	mg/L	D	<0.005 :	-	<0.008 :	-	<0.008 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 J	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 J	-
Sodium	mg/L	T	-	<91.6 :	-	<53.2 :	-	<47.3 :
Sodium	mg/L	D	9.53 :	-	<91.6 :	-	<53.2 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.001 :
Vanadium	mg/L	D	<0.001 :	-	<0.002 :	-	<0.002 :	-
Zinc	mg/L	T	-	0.677 :	-	0.426 J	-	<0.712 :
Zinc	mg/L	D	0.64 :	-	0.637 :	-	0.442 J	-
Isotopes								
Lead	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.002 :
Lead	mg/L	D	<0.001 J	-	<0.001 J	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-17A	MMW-17A	MMW-17A	MMW-17A	MMW-17A	MMW-17A
		Sample Date	8/11/2003	9/8/2003	9/8/2003	10/17/2003	10/17/2003	11/3/2003
		Sample ID	MMW-17A-D01N-GR	MMW-17A-T01N-GR	MMW-17A-D01N-GR	MMW-17A-T01N-GR	MMW-17A-D01N-GR	MMW-17A-T01N-GR
		Exposure Area	W	W	W	W	W	W
			MR	MR	MR	MR	MR	MR
Field Measurements								
DO	mg/L	T	-	0.87 :	-	2.3 :	-	3.56 :
Eh	millivolts	T	-	215.7 :	-	207.4 :	-	405.3 :
pH	SU	T	-	4.7 J	-	4.7 J	-	4.4 J
Specific Conductance	uS/cm	T	-	701. :	-	741. :	-	725. :
Temperature	Celsius	T	-	9.33 :	-	7.38 :	-	8.25 :
Turbidity	NTU	T	-	52.6 :	-	8.2 :	-	3.1 :
General Chemistry								
Ammonia	mg/L	T	-	<0.068 :	-	<0.048 J	-	<0.13 :
Bicarbonate (as CaCO3)	mg/L	T	-	<1.2 :	-	<1. :	-	<1.6 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	5.6 :	-	5.7 :	-	6.6 :
Fluoride	mg/L	T	-	3.8 :	-	1.7 :	-	13.4 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.2 J	-	0.22 :	-	0.25 J
Nitrite	mg/L	T	-	<0.005 :	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
Phosphorus	mg/L	T	-	<0.01 :	-	0.01 :	-	0.012 :
Sulfate	mg/L	T	-	391. J	-	366. J	-	397. J
Total Alkalinity	mg/L	T	-	<1.2 :	-	<1. :	-	<1.6 :
Total Dissolved Solids	mg/L	T	-	774. :	-	678. :	-	812. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.25 :
Total Organic Carbon	mg/L	T	-	<1. :	-	<1. J	-	<1. :
Total Suspended Solids	mg/L	T	-	<0.5 :	-	<0.5 :	-	<0.7 :
Laboratory Parameters								
pH	SU	T	-	4.7 J	-	4.7 J	-	4.4 J
Specific Conductance	umhos/cm	T	-	674. J	-	660. J	-	766. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	356. :	-	325. :	-	304. :
Hardness	mg/L	D	314. :	-	353. :	-	328. :	-
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 8/11/2003 MMW-17A-D01N-GR W MR		MMW-17A 9/8/2003 MMW-17A-T01N-GR W MR		MMW-17A 9/8/2003 MMW-17A-D01N-GR W MR		MMW-17A 10/17/2003 MMW-17A-T01N-GR W MR		MMW-17A 10/17/2003 MMW-17A-D01N-GR W MR		MMW-17A 11/3/2003 MMW-17A-T01N-GR W MR	
Aluminum	mg/L	T	-		11.	:	-		9.26	:	-		9.82	:
Aluminum	mg/L	D	7.47	J	-		11.1	:	-		10.	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.052	:	-		<0.082	J
Antimony	mg/L	D	<0.038	:	-		<0.082	:	-		<0.052	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.041	:	-		<0.035	:
Arsenic	mg/L	D	<0.0344	:	-		<0.035	:	-		<0.041	:	-	
Barium	mg/L	T	-		<0.117	:	-		<0.115	:	-		<0.117	:
Barium	mg/L	D	<0.073	:	-		<0.117	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		<0.004	:	-		<0.004	:	-		<0.0154	:
Beryllium	mg/L	D	0.0047	:	-		<0.0035	:	-		<0.004	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.063	:	-		<0.064	:
Boron	mg/L	D	<0.046	:	-		<0.064	:	-		<0.063	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.13	:	-		<0.13	:
Cadmium	mg/L	D	<0.06	:	-		<0.13	:	-		<0.13	:	-	
Calcium	mg/L	T	-		97.5	:	-		87.3	:	-		83.3	:
Calcium	mg/L	D	89.9	:	-		96.6	:	-		88.	:	-	
Chromium	mg/L	T	-		<0.23	:	-		-		-		<0.23	:
Chromium	mg/L	D	<0.14	:	-		<0.23	:	-		-		-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.32	:	-		<0.32	:
Cobalt	mg/L	D	<0.2	:	-		<0.32	:	-		<0.32	:	-	
Copper	mg/L	T	-		<0.23	:	-		<0.23	:	-		<0.2	:
Copper	mg/L	D	<0.24	:	-		<0.23	:	-		<0.23	:	-	
Iron	mg/L	T	-		<4.55	:	-		<4.55	:	-		<4.55	:
Iron	mg/L	D	<3.33	:	-		<4.55	:	-		<4.55	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		27.3	:	-		23.4	:	-		23.4	:
Magnesium	mg/L	D	21.6	:	-		27.2	:	-		24.2	:	-	
Manganese	mg/L	T	-		1.67	:	-		1.46	:	-		1.65	J
Manganese	mg/L	D	1.58	:	-		1.67	:	-		1.51	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.011	:	-		<0.012	:
Molybdenum	mg/L	D	<0.016	:	-		<0.012	:	-		<0.011	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 8/11/2003 MMW-17A-D01N-GR W MR	MMW-17A 9/8/2003 MMW-17A-T01N-GR W MR	MMW-17A 9/8/2003 MMW-17A-D01N-GR W MR	MMW-17A 10/17/2003 MMW-17A-T01N-GR W MR	MMW-17A 10/17/2003 MMW-17A-D01N-GR W MR	MMW-17A 11/3/2003 MMW-17A-T01N-GR W MR
Nickel	mg/L	T	-	<0.45 :	-	<0.45 J	-	<0.45 :
Nickel	mg/L	D	<0.21 :	-	<0.45 :	-	-	-
Potassium	mg/L	T	-	<63.8 :	-	<63.8 :	-	<63.8 :
Potassium	mg/L	D	<39.3 :	-	<63.8 :	-	<63.8 :	-
Selenium	mg/L	T	-	<0.003 :	-	<0.003 :	-	<0.003 :
Selenium	mg/L	D	<0.003 :	-	<0.003 :	-	<0.003 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<99.1 :	-	<99.1 :	-	<99.1 :
Sodium	mg/L	D	<47.3 :	-	<99.1 :	-	<99.1 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T	-	0.828 :	-	<0.704 :	-	<0.695 :
Zinc	mg/L	D	<0.597 :	-	0.688 :	-	<0.559 :	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	<0.002 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-17A	11/3/2003	MMW-17A-D01N-GRW MR		MMW-17A	12/8/2003	MMW-17A-T01N-GRW MR		MMW-17A	12/8/2003	MMW-17A-D01N-GRW MR		MMW-17A	1/7/2004	MMW-17A-T01N-GRW MR		MMW-17A	1/7/2004	MMW-17A-D01N-GRW MR		MMW-17A	4/20/2004	MMW-17A-T01N-GRW MR	
Field Measurements																										
DO	mg/L	T		-				3.43		:		-				4.44		:		-				4.32		:
Eh	millivolts	T		-				256.6		:		-				355.1		:		-				477.3		:
pH	SU	T		-				4.7		J		-				3.8		J		-				4.7		J
Specific Conductance	uS/cm	T		-				763.		:		-				749.		:		-				744.		:
Temperature	Celsius	T		-				6.68		:		-				7.25		:		-				8.39		:
Turbidity	NTU	T		-				0.1		:		-				9.8		:		-				11.		:
General Chemistry																										
Ammonia	mg/L	T		-				0.068		:		-				<0.065		J		-				<0.044		:
Bicarbonate (as CaCO3)	mg/L	T		-				1.2		:		-				<2.4		:		-				<1.		:
Carbonate (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Chloride	mg/L	T		-				5.9		:		-				4.8		:		-				5.6		:
Fluoride	mg/L	T		-				1.6		:		-				1.6		:		-				1.8		:
Hydroxide (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Nitrate	mg/L	T		-				0.21		:		-				<0.2		:		-				0.3		J
Nitrite	mg/L	T		-				<0.005		:		-				<0.005		:		-				<0.005		:
Phosphate, Ortho As P	mg/L	T		-				<0.01		:		-				<0.01		J		-				<0.01		:
Phosphorus	mg/L	T		-				0.011		:		-				0.034		:		-				0.014		:
Sulfate	mg/L	T		-				375.		:		-				384.		:		-				444.		:
Total Alkalinity	mg/L	T		-				1.2		:		-				<2.4		:		-				<1.		:
Total Dissolved Solids	mg/L	T		-				532.		:		-				610.		:		-				638.		:
Total Kjeldahl Nitrogen	mg/L	T		-				<0.24		:		-				<0.24		:		-				<0.24		J
Total Organic Carbon	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		J
Total Suspended Solids	mg/L	T		-				0.9		:		-				5.6		:		-				<6.5		J
Laboratory Parameters																										
pH	SU	T		-				4.7		J		-				3.8		J		-				4.7		J
Specific Conductance	umhos/cm	T		-				628.		J		-				685.		J		-				653.		J
Inorganics																										
Cyanide	mg/L	T		-				<0.01		:		-				<0.01		J		-				<0.01		:
Physical Properties																										
Hardness	mg/L	T		-				334.		:		-				339.		:		-				339.		:
Hardness	mg/L	D		349.		:		-				330.		:		-				331.		:		-		
Metals																										

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 11/3/2003 MMW-17A-D01N-GR W MR	MMW-17A 12/8/2003 MMW-17A-T01N-GR W MR	MMW-17A 12/8/2003 MMW-17A-D01N-GR W MR	MMW-17A 1/7/2004 MMW-17A-T01N-GR W MR	MMW-17A 1/7/2004 MMW-17A-D01N-GR W MR	MMW-17A 4/20/2004 MMW-17A-T01N-GR W MR
Aluminum	mg/L	T	-	8.35 :	-	10. :	-	<12.9 :
Aluminum	mg/L	D	11.6 :	-	7.68 :	-	10.2 :	-
Antimony	mg/L	T	-	<0.052 :	-	<0.029 :	-	<0.053 :
Antimony	mg/L	D	<0.082 J	-	<0.052 :	-	<0.029 :	-
Arsenic	mg/L	T	-	<0.041 :	-	<0.028 :	-	<0.037 :
Arsenic	mg/L	D	<0.035 :	-	<0.041 :	-	<0.028 :	-
Barium	mg/L	T	-	<0.115 :	-	<0.053 :	-	<0.049 :
Barium	mg/L	D	<0.117 :	-	<0.115 :	-	<0.053 :	-
Beryllium	mg/L	T	-	<0.004 :	-	0.0031 :	-	<0.003 :
Beryllium	mg/L	D	<0.0078 :	-	<0.004 :	-	0.0032 :	-
Boron	mg/L	T	-	<0.064 J	-	<0.117 :	-	<0.036 :
Boron	mg/L	D	<0.064 :	-	<0.064 J	-	<0.117 :	-
Cadmium	mg/L	T	-	<0.05 :	-	<0.07 J	-	<0.03 :
Cadmium	mg/L	D	<0.13 :	-	<0.05 :	-	<0.07 :	-
Calcium	mg/L	T	-	93.2 :	-	94.8 :	-	92.6 :
Calcium	mg/L	D	95.6 :	-	92.4 :	-	91.4 :	-
Chromium	mg/L	T	-	<0.11 :	-	<0.11 :	-	<0.08 :
Chromium	mg/L	D	<0.23 :	-	<0.11 :	-	<0.11 :	-
Cobalt	mg/L	T	-	<0.29 :	-	<0.31 :	-	<0.11 :
Cobalt	mg/L	D	<0.32 :	-	<0.29 :	-	<0.31 :	-
Copper	mg/L	T	-	<0.22 :	-	<0.24 :	-	<0.191 :
Copper	mg/L	D	<0.366 :	-	<0.22 :	-	<0.24 :	-
Iron	mg/L	T	-	<2.78 :	-	<3.73 :	-	<1.92 J
Iron	mg/L	D	<4.55 :	-	<2.78 :	-	<3.73 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.004 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	<0.001 :	-
Magnesium	mg/L	T	-	<30.1 :	-	<24.9 :	-	26.2 :
Magnesium	mg/L	D	26.8 :	-	<30.1 :	-	<24.9 :	-
Manganese	mg/L	T	-	1.6 :	-	1.8 :	-	1.72 :
Manganese	mg/L	D	1.53 :	-	1.58 :	-	1.73 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 J	-
Molybdenum	mg/L	T	-	<0.011 J	-	<0.024 :	-	<0.014 :
Molybdenum	mg/L	D	<0.012 :	-	<0.011 J	-	<0.024 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 11/3/2003 MMW-17A-D01N-GR W MR		MMW-17A 12/8/2003 MMW-17A-T01N-GR W MR		MMW-17A 12/8/2003 MMW-17A-D01N-GR W MR		MMW-17A 1/7/2004 MMW-17A-T01N-GR W MR		MMW-17A 1/7/2004 MMW-17A-D01N-GR W MR		MMW-17A 4/20/2004 MMW-17A-T01N-GR W MR	
Nickel	mg/L	T	-		<0.265	:	-		0.276	:	-		<0.14	:
Nickel	mg/L	D	<0.45	:	-		<0.298	:	-		0.302	:	-	
Potassium	mg/L	T	-		<31.8	:	-		<24.3	:	-		<10.9	J
Potassium	mg/L	D	<63.8	:	-		<31.8	:	-		<24.3	:	-	
Selenium	mg/L	T	-		<0.003	:	-		<0.003	J	-		<0.007	:
Selenium	mg/L	D	<0.003	:	-		<0.003	:	-		<0.003	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<45.4	:	-		<92.	:	-		<51.6	:
Sodium	mg/L	D	<99.1	:	-		<45.4	:	-		<92.	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.002	:	-	
Zinc	mg/L	T	-		<0.604	:	-		0.696	:	-		0.675	:
Zinc	mg/L	D	<0.739	:	-		<0.558	:	-		0.701	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-		-		-97.9	:
Delta O-18	per mil	T	-		-		-		-		-		-13.6	:
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.001	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GR W MR	MMW-28A 11/5/2002 MMW-28A-T01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-T01N-GR W GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR W GW6	MMW-28A 12/4/2002 MMW-28A-T01N-GR W GW6
Field Measurements								
DO	mg/L	T	-	-	3.23 :	-	-	4.36 :
Eh	millivolts	T	-	-	383.2 :	-	-	79.6 :
pH	SU	T	-	-	5.88 :	-	-	6.1 :
Specific Conductance	uS/cm	T	-	-	903. :	-	-	884. :
Temperature	Celsius	T	-	-	8.47 :	-	-	7.89 :
Turbidity	NTU	T	-	-	23.2 :	-	-	42.3 :
General Chemistry								
Ammonia	mg/L	T	-	-	<0.15 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	52.9 :	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Chloride	mg/L	T	-	-	9.5 :	-	-	-
Fluoride	mg/L	T	-	-	0.65 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Nitrate	mg/L	T	-	-	0.56 J	-	-	-
Nitrite	mg/L	T	-	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 J	-	-	-
Phosphorus	mg/L	T	-	-	<0.01 :	-	-	-
Sulfate	mg/L	T	-	423. J	-	-	-	-
Total Alkalinity	mg/L	T	-	-	52.9 :	-	-	-
Total Dissolved Solids	mg/L	T	-	-	695. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	-	-	<1. :	-	-	-
Total Suspended Solids	mg/L	T	-	-	<0.7 :	-	-	-
Laboratory Parameters								
pH	SU	T	-	-	5.88 :	-	-	6.1 :
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 :	-	-	-
Physical Properties								
Hardness	mg/L	T	-	-	492. :	-	-	-
Hardness	mg/L	D	332. :	-	-	484. :	-	-
Metals								
Aluminum	mg/L	T	-	-	0.434 :	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GRW MR D		MMW-28A 11/5/2002 MMW-28A-T01N-GRWRE GW6 T		MMW-28A 11/5/2002 MMW-28A-T01N-GRW GW6 D		MMW-28A 11/5/2002 MMW-28A-D01N-GRWRE GW6 D		MMW-28A 11/5/2002 MMW-28A-D01N-GRW GW6 T		MMW-28A 12/4/2002 MMW-28A-T01N-GRW GW6 T	
Aluminum	mg/L		<11.8	:	-		-		0.301	:	-		-	
Antimony	mg/L		-		-		<0.0004	:	-		-		-	
Antimony	mg/L		<0.053	:	-		-		<0.0006	:	-		-	
Arsenic	mg/L		-		-		<0.0004	:	-		-		-	
Arsenic	mg/L		<0.037	:	-		-		<0.0004	:	-		-	
Barium	mg/L		-		-		0.014	:	-		-		-	
Barium	mg/L		<0.049	:	-		-		0.013	:	-		-	
Beryllium	mg/L		-		-		<0.00045	J	-		-		-	
Beryllium	mg/L		<0.003	:	-		-		0.00025	:	-		-	
Boron	mg/L		-		-		0.0115	:	-		-		-	
Boron	mg/L		<0.036	:	-		-		<0.0124	:	-		-	
Cadmium	mg/L		-		-		0.00096	:	-		-		-	
Cadmium	mg/L		<0.0394	:	-		-		0.0009	:	-		-	
Calcium	mg/L		-		-		143.	:	-		-		-	
Calcium	mg/L		90.3	:	-		-		141.	:	-		-	
Chromium	mg/L		-		-		<0.0046	:	-		-		-	
Chromium	mg/L		<0.08	:	-		-		<0.0037	:	-		-	
Cobalt	mg/L		-		-		<0.0022	:	-		-		-	
Cobalt	mg/L		<0.11	:	-		-		<0.0016	:	-		-	
Copper	mg/L		-		-		0.0035	:	-		-		-	
Copper	mg/L		<0.247	:	-		-		<0.0017	:	-		-	
Iron	mg/L		-		-		<0.0914	:	-		-		-	
Iron	mg/L		<2.5	:	-		-		<0.489	:	-		-	
Lead	mg/L		-		-		<0.0002	:	-		-		-	
Lead	mg/L		<0.004	:	-		-		<0.0002	:	-		-	
Magnesium	mg/L		-		-		32.5	:	-		-		-	
Magnesium	mg/L		25.9	:	-		-		32.2	:	-		-	
Manganese	mg/L		-		-		0.0816	J	-		-		-	
Manganese	mg/L		1.67	:	-		-		0.0776	:	-		-	
Mercury	mg/L		-		-		<0.0001	:	-		-		-	
Mercury	mg/L		<0.0001	:	-		-		-		<0.0001	:	-	
Molybdenum	mg/L		-		-		0.0072	:	-		-		-	
Molybdenum	mg/L		<0.014	:	-		-		0.0059	:	-		-	
Nickel	mg/L		-		-		0.0149	:	-		-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GR W MR	MMW-28A 11/5/2002 MMW-28A-T01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-T01N-GR W GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR W GW6	MMW-28A 12/4/2002 MMW-28A-T01N-GR W GW6
Nickel	mg/L	D	0.21 :	-	-	0.0146 :	-	-
Potassium	mg/L	T	-	-	2.42 :	-	-	-
Potassium	mg/L	D	<10.9 J	-	-	2.18 :	-	-
Selenium	mg/L	T	-	-	<0.0016 J	-	-	-
Selenium	mg/L	D	<0.007 :	-	-	0.0017 :	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	-
Silver	mg/L	D	<0.001 :	-	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	15. :	-	-	-
Sodium	mg/L	D	<17.3 :	-	-	12.1 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	-
Thallium	mg/L	D	<0.001 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	<0.0002 :	-	-	-
Vanadium	mg/L	D	<0.002 :	-	-	<0.0004 :	-	-
Zinc	mg/L	T	-	-	0.194 J	-	-	-
Zinc	mg/L	D	0.664 :	-	-	0.183 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T	-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T	-	-	<0.01 :	-	-	-
4-Methyl-2-pentanone	mg/L	T	-	-	<0.01 :	-	-	-
Acetone	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GRW MR	MMW-28A 11/5/2002 MMW-28A-T01N-GRWRE GW6	MMW-28A 11/5/2002 MMW-28A-T01N-GRW GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GRWRE GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GRW GW6	MMW-28A 12/4/2002 MMW-28A-T01N-GRW GW6
Benzene	mg/L	T	-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Bromoform	mg/L	T	-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T	-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T	-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T	-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Chloroform	mg/L	T	-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T	-	-	<0.01 :	-	-	-
Methylene chloride	mg/L	T	-	-	<0.01 :	-	-	-
Styrene	mg/L	T	-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Toluene	mg/L	T	-	-	<0.01 :	-	-	-
Total Xylene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T	-	-	<0.01 :	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	<0.01 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T	-	-	<0.026 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dimethylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dinitrophenol	mg/L	T	-	-	<0.026 :	-	-	-
2,4-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-
2,6-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GR W MR	MMW-28A 11/5/2002 MMW-28A-T01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-T01N-GR W GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR WRE GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GR W GW6	MMW-28A 12/4/2002 MMW-28A-T01N-GR W GW6
2-Chloronaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Chlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylnaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Nitroaniline	mg/L	T	-	-	<0.026 :	-	-	-
2-Nitrophenol	mg/L	T	-	-	<0.01 :	-	-	-
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.01 :	-	-	-
3-Nitroaniline	mg/L	T	-	-	<0.026 :	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.026 :	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloroaniline	mg/L	T	-	-	<0.01 :	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Nitroaniline	mg/L	T	-	-	<0.026 :	-	-	-
4-Nitrophenol	mg/L	T	-	-	<0.026 :	-	-	-
Acenaphthene	mg/L	T	-	-	<0.01 :	-	-	-
Acenaphthylene	mg/L	T	-	-	<0.01 :	-	-	-
Anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzaldehyde	mg/L	T	-	-	<0.01 J	-	-	-
Benzo(a)anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(a)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(b)fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(k)fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Butyl benzyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Carbazole	mg/L	T	-	-	<0.01 :	-	-	-
Chrysene	mg/L	T	-	-	<0.01 :	-	-	-
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Dibenzofuran	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodiisopropyl ether	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17A 4/20/2004 MMW-17A-D01N-GRW MR	MMW-28A 11/5/2002 MMW-28A-T01N-GRWRE GW6	MMW-28A 11/5/2002 MMW-28A-T01N-GRW GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GRWRE GW6	MMW-28A 11/5/2002 MMW-28A-D01N-GRW GW6	MMW-28A 12/4/2002 MMW-28A-T01N-GRW GW6
Diethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Dimethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Butyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Octyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Fluorene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorocyclopentadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Isophorone	mg/L	T	-	-	<0.01 :	-	-	-
Naphthalene	mg/L	T	-	-	<0.01 :	-	-	-
Nitrobenzene	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodiphenylamine	mg/L	T	-	-	<0.01 :	-	-	-
Pentachlorophenol	mg/L	T	-	-	<0.026 :	-	-	-
Phenanthrene	mg/L	T	-	-	<0.01 :	-	-	-
Phenol	mg/L	T	-	-	<0.01 :	-	-	-
Pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	<0.0002 :	-	-	-
Lead	mg/L	D	<0.004 :	-	-	<0.0002 :	-	-

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GR W GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR WRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GR W GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GR W GW6	
Field Measurements														
DO	mg/L	T	105.6	:	-		-		5.56	:	-		3.41	:
Eh	millivolts	T	104.8	:	-		-		279.	:	-		301.7	:
pH	SU	T	5.67	:	-		-		5.9	:	-		5.84	:
Specific Conductance	uS/cm	T	938.	:	-		-		110.	:	-		885.	:
Temperature	Celsius	T	8.11	:	-		-		7.1	:	-		7.96	:
Turbidity	NTU	T	1.4	:	-		-		15.2	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	<0.12	:	-		-		<0.05	:	-		<0.082	J
Bicarbonate (as CaCO3)	mg/L	T	57.	:	-		-		56.8	:	-		53.2	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Chloride	mg/L	T	9.8	:	-		-		9.6	:	-		9.6	:
Fluoride	mg/L	T	0.59	:	-		-		0.77	:	-		0.65	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Nitrate	mg/L	T	<0.84	J	-		-		0.79	:	-		<0.7	J
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	14.1	J	-		-		<0.01	:	-		0.02	J
Phosphorus	mg/L	T	<0.01	J	-		-		<0.01	:	-		<0.01	J
Sulfate	mg/L	T	397.	J	-		-		437.	J	-		452.	:
Total Alkalinity	mg/L	T	57.	:	-		-		56.8	:	-		53.2	:
Total Dissolved Solids	mg/L	T	<636.	J	-		-		707.	:	-		726.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	J
Total Suspended Solids	mg/L	T	<1.5	:	-		-		0.7	:	-		1.4	J
Laboratory Parameters														
pH	SU	T	5.67	:	-		-		5.9	:	-		5.84	:
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	429.	:	-		-		529.	:	-		539.	:
Hardness	mg/L	D	-		439.	:	-		-		517.	:	-	
Metals														
Aluminum	mg/L	T	<0.307	:	-		-		<2.26	:	-		0.48	J

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GRW GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GRW GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GRWRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GRW GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GRW GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GRW GW6	
Aluminum	mg/L	D	-		0.203	:	-		-		<2.26	:	-	
Antimony	mg/L	T	<0.0006	:	-		-		<0.028	:	-		<0.0006	:
Antimony	mg/L	D	-		<0.0006	:	-		-		<0.028	:	-	
Arsenic	mg/L	T	<0.0004	:	-		-		<0.023	J	-		<0.0004	:
Arsenic	mg/L	D	-		<0.0004	:	-		-		<0.023	J	-	
Barium	mg/L	T	0.0146	:	-		-		<0.048	:	-		<0.0174	:
Barium	mg/L	D	-		0.0144	:	-		-		<0.048	:	-	
Beryllium	mg/L	T	<0.0002	:	-		-		<0.002	:	-		0.00023	:
Beryllium	mg/L	D	-		<0.0002	:	-		-		<0.002	:	-	
Boron	mg/L	T	0.0115	:	-		-		<0.027	:	-		0.0172	:
Boron	mg/L	D	-		0.0108	:	-		-		<0.027	:	-	
Cadmium	mg/L	T	0.00081	:	-		-		<0.08	:	-		0.00097	:
Cadmium	mg/L	D	-		0.00077	:	-		-		<0.08	:	-	
Calcium	mg/L	T	125.	:	-		-		153.	:	-		156.	J
Calcium	mg/L	D	-		128.	:	-		-		150.	:	-	
Chromium	mg/L	T	<0.0037	:	-		-		<0.16	:	-		<0.0037	:
Chromium	mg/L	D	-		<0.0037	:	-		-		<0.16	:	-	
Cobalt	mg/L	T	<0.0016	:	-		-		<0.23	:	-		<0.0016	:
Cobalt	mg/L	D	-		<0.0016	:	-		-		<0.23	:	-	
Copper	mg/L	T	0.0147	:	-		-		<0.17	:	-		<0.0017	J
Copper	mg/L	D	-		0.0078	:	-		-		<0.17	:	-	
Iron	mg/L	T	<0.489	:	-		-		<2.66	J	-		<0.299	:
Iron	mg/L	D	-		<0.489	:	-		-		<2.66	J	-	
Lead	mg/L	T	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Lead	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Magnesium	mg/L	T	28.3	:	-		-		35.8	:	-		36.2	:
Magnesium	mg/L	D	-		<29.	:	-		-		34.9	:	-	
Manganese	mg/L	T	<0.044	:	-		-		<0.28	J	-		0.0655	:
Manganese	mg/L	D	-		0.037	:	-		-		<0.28	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	0.0075	:	-		-		<0.011	J	-		<0.0101	:
Molybdenum	mg/L	D	-		0.0073	:	-		-		<0.011	J	-	
Nickel	mg/L	T	0.0103	:	-		-		<0.34	:	-		0.0142	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GR W GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR WRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GR W GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GR W GW6	
Nickel	mg/L	D	-		0.0107	:	-		-		<0.34	:	-	
Potassium	mg/L	T	2.32	:	-		-		<31.4	:	-		2.25	:
Potassium	mg/L	D	-		2.36	:	-		-		<31.4	:	-	
Selenium	mg/L	T	<0.0016	J	-		-		<0.008	:	-		0.0021	J
Selenium	mg/L	D	-		<0.0016	:	-		-		<0.008	:	-	
Silver	mg/L	T	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Sodium	mg/L	T	13.8	:	-		-		<36.6	:	-		20.8	:
Sodium	mg/L	D	-		12.4	:	-		-		<36.6	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.0004	J	-		-		<0.002	:	-		<0.0004	:
Vanadium	mg/L	D	-		<0.0004	:	-		-		<0.002	:	-	
Zinc	mg/L	T	0.132	:	-		-		<0.28	:	-		0.231	J
Zinc	mg/L	D	-		<0.131	:	-		-		<0.28	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	0.002	J	-		-		0.002	J	-		0.002	J
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloropropane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Butanone	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:
2-Hexanone	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Acetone	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	J

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GR W GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR WRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GR W GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GR W GW6	
Benzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Bromodichloromethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Bromoform	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Bromomethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Carbon disulfide	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Carbon tetrachloride	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Chlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Chloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Chloroform	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Chloromethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dibromochloromethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Ethylbenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Methylene chloride	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Styrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Tetrachloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Toluene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Total Xylene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Trichloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Trichlorofluoromethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Vinyl chloride	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2,4,5-Trichlorophenol	mg/L	T	<0.025	:	-		-		<0.025	:	-		<0.026	:
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2,4-Dinitrophenol	mg/L	T	<0.025	:	-		-		<0.025	J	-		<0.026	:
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GRW GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GRW GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GRWRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GRW GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GRW GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GRW GW6	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Chlorophenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Methylnaphthalene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Methylphenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Nitroaniline	mg/L	T	<0.025	:	-		-		<0.025	:	-		<0.026	:
2-Nitrophenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:
3-Nitroaniline	mg/L	T	<0.025	:	-		-		<0.025	:	-		<0.026	:
4,6-Dinitro-2-methylphenol	mg/L	T	<0.025	:	-		-		<0.025	J	-		<0.026	:
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Chloroaniline	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Methylphenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Nitroaniline	mg/L	T	<0.025	:	-		-		<0.025	:	-		<0.026	:
4-Nitrophenol	mg/L	T	<0.025	:	-		-		<0.025	:	-		<0.026	:
Acenaphthene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Acenaphthylene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Anthracene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Benzaldehyde	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:
Benzo(a)anthracene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Benzo(a)pyrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Carbazole	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Chrysene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dibenzofuran	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 1/10/2003 MMW-28A-T01N-GR W GW6		MMW-28A 1/10/2003 MMW-28A-D01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR WRE GW6		MMW-28A 2/7/2003 MMW-28A-T01N-GR W GW6		MMW-28A 2/7/2003 MMW-28A-D01N-GR W GW6		MMW-28A 3/4/2003 MMW-28A-T01N-GR W GW6	
Diethylphthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Dimethylphthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Fluoranthene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Fluorene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	J
Hexachloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Isophorone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Naphthalene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Nitrobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Pentachlorophenol	mg/L	T	<0.025	:	-		-		<0.025	J	-		<0.026	:
Phenanthrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Phenol	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Pyrene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Isotopes														
Lead	mg/L	T	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Lead	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-28A	3/4/2003	MMW-28A-D01N-GRW GW6		MMW-28A	4/1/2003	MMW-28A-T01N-GRW GW6		MMW-28A	4/1/2003	MMW-28A-D01N-GRW GW6		MMW-28A	5/5/2003	MMW-28A-T01N-GRW GW6		MMW-28A	5/5/2003	MMW-28A-D01N-GRW GW6		MMW-28A	6/3/2003	MMW-28A-T01N-GRW GW6	
Field Measurements																										
DO	mg/L	T		-				3.44		:		-				4.07		:		-				3.92		:
Eh	millivolts	T		-				218.7		:		-				287.9		:		-				393.4		:
pH	SU	T		-				6.1	J			-				5.8	J			-				6.3	J	
Specific Conductance	uS/cm	T		-				871.		:		-				884.		:		-				866.		:
Temperature	Celsius	T		-				9.05		:		-				8.95		:		-				9.53		:
Turbidity	NTU	T		-				70.3		:		-				0.		:		-				46.8		:
General Chemistry																										
Ammonia	mg/L	T		-				<0.18		:		-				<0.043		:		-				<0.25	J	
Bicarbonate (as CaCO3)	mg/L	T		-				54.6		:		-				61.1		:		-				67.9		:
Carbonate (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Chloride	mg/L	T		-				8.5		:		-				<8.3		:		-				<9.1		:
Fluoride	mg/L	T		-				0.68		:		-				0.69		:		-				0.7		:
Hydroxide (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Nitrate	mg/L	T		-				<0.73	J			-				0.58	J			-				0.55	J	
Nitrite	mg/L	T		-				<0.005	J			-				<0.005	J			-				<0.005	J	
Phosphate, Ortho As P	mg/L	T		-				<0.01	J			-				<0.01	J			-				0.072	J	
Phosphorus	mg/L	T		-				<0.01		:		-				<0.01		:		-				-		
Sulfate	mg/L	T		-				434.	J			-				381.		:		-				372.	J	
Total Alkalinity	mg/L	T		-				54.6		:		-				61.1		:		-				67.9		:
Total Dissolved Solids	mg/L	T		-				732.		:		-				744.		:		-				680.		:
Total Kjeldahl Nitrogen	mg/L	T		-				<0.24		:		-				<0.24		:		-				-		
Total Organic Carbon	mg/L	T		-				<1.	J			-				<1.		:		-				1.2	J	
Total Suspended Solids	mg/L	T		-				<0.5		:		-				<0.7		:		-				<0.7		:
Laboratory Parameters																										
pH	SU	T		-				6.1	J			-				5.8	J			-				6.3	J	
Specific Conductance	umhos/cm	T		-				810.	J			-				841.	J			-				864.	J	
Inorganics																										
Cyanide	mg/L	T		-				<0.01	J			-				<0.01	J			-				<0.01		:
Physical Properties																										
Hardness	mg/L	T		-				473.		:		-				469.		:		-				449.		:
Hardness	mg/L	D		544.		:		-				470.		:		-				470.		:		-		
Metals																										

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 3/4/2003 MMW-28A-D01N-GRW GW6		MMW-28A 4/1/2003 MMW-28A-T01N-GRW GW6		MMW-28A 4/1/2003 MMW-28A-D01N-GRW GW6		MMW-28A 5/5/2003 MMW-28A-T01N-GRW GW6		MMW-28A 5/5/2003 MMW-28A-D01N-GRW GW6		MMW-28A 6/3/2003 MMW-28A-T01N-GRW GW6	
Aluminum	mg/L	T	-		<4.26	:	-		0.295	:	-		<0.426	:
Aluminum	mg/L	D	0.441	J	-		<4.26	:	-		<0.277	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.048	J	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.072	:	-		<0.048	J	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.047	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.04	:	-		<0.047	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.135	:	-		0.0147	:
Barium	mg/L	D	<0.0152	:	-		<0.123	:	-		<0.135	:	-	
Beryllium	mg/L	T	-		<0.0109	:	-		<0.003	:	-		<0.00046	:
Beryllium	mg/L	D	0.00021	:	-		<0.0116	:	-		<0.003	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.075	:	-		0.0142	:
Boron	mg/L	D	0.0143	:	-		<0.084	:	-		<0.075	:	-	
Cadmium	mg/L	T	-		<0.07	:	-		<0.004	:	-		<0.0011	:
Cadmium	mg/L	D	0.00093	:	-		<0.07	:	-		<0.004	:	-	
Calcium	mg/L	T	-		138.	:	-		136.	:	-		130.	:
Calcium	mg/L	D	158.	J	-		137.	:	-		136.	:	-	
Chromium	mg/L	T	-		<0.19	:	-		<0.009	:	-		<0.001	:
Chromium	mg/L	D	<0.0037	:	-		<0.19	:	-		<0.009	:	-	
Cobalt	mg/L	T	-		<0.36	:	-		<0.029	:	-		<0.0038	:
Cobalt	mg/L	D	<0.0016	:	-		<0.36	:	-		<0.029	:	-	
Copper	mg/L	T	-		<0.2	:	-		<0.024	:	-		<0.0015	:
Copper	mg/L	D	<0.0017	J	-		<0.2	:	-		<0.024	:	-	
Iron	mg/L	T	-		<4.22	:	-		<0.299	:	-		<0.422	:
Iron	mg/L	D	<0.299	J	-		<4.22	:	-		<0.299	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.001	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		<35.2	:	-		31.4	:	-		29.9	:
Magnesium	mg/L	D	36.4	:	-		<35.2	:	-		31.5	:	-	
Manganese	mg/L	T	-		<0.131	:	-		<0.0443	:	-		0.0256	:
Manganese	mg/L	D	0.0654	:	-		<0.13	:	-		<0.0423	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0243	:	-		<0.016	:	-		0.0075	:
Molybdenum	mg/L	D	<0.0109	:	-		<0.023	:	-		<0.016	:	-	

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-28A	MMW-28A	MMW-28A	
			3/4/2003	4/1/2003	4/1/2003	
			MMW-28A-D01N-GRW	MMW-28A-T01N-GRW	MMW-28A-D01N-GRW	
			GW6	GW6	GW6	
Nickel	mg/L	T	-	<0.73 :	-	
Nickel	mg/L	D	0.0146 :	-	<0.73 :	
Potassium	mg/L	T	-	<40.5 :	-	
Potassium	mg/L	D	2.1 :	-	<40.5 :	
Selenium	mg/L	T	-	<0.006 :	-	
Selenium	mg/L	D	0.0017 J	-	<0.005 :	
Silver	mg/L	T	-	<0.001 :	-	
Silver	mg/L	D	<0.0002 :	-	<0.001 :	
Sodium	mg/L	T	-	<91.6 :	-	
Sodium	mg/L	D	16.3 :	-	<91.6 :	
Thallium	mg/L	T	-	<0.001 :	-	
Thallium	mg/L	D	<0.0002 :	-	<0.001 :	
Vanadium	mg/L	T	-	<0.001 :	-	
Vanadium	mg/L	D	<0.0004 :	-	<0.001 :	
Zinc	mg/L	T	-	<0.39 :	-	
Zinc	mg/L	D	0.234 :	-	<0.39 :	
Volatile Organics						
1,1,1-Trichloroethane	mg/L	T	-	0.002 J	-	
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	
2-Butanone	mg/L	T	-	<0.01 :	-	
2-Hexanone	mg/L	T	-	<0.01 J	-	
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-28A	MMW-28A	MMW-28A	
			5/5/2003	5/5/2003	6/3/2003	
			MMW-28A-T01N-GRW	MMW-28A-D01N-GRW	MMW-28A-T01N-GRW	
			GW6	GW6	GW6	
Nickel	mg/L	T	<0.026 :	-	0.0084 :	
Nickel	mg/L	D	-	<0.026 :	-	
Potassium	mg/L	T	<3.27 :	-	2.38 :	
Potassium	mg/L	D	-	<3.27 :	-	
Selenium	mg/L	T	<0.008 :	-	<0.0016 :	
Selenium	mg/L	D	-	<0.008 :	-	
Silver	mg/L	T	<0.001 :	-	<0.0002 :	
Silver	mg/L	D	-	<0.001 :	-	
Sodium	mg/L	T	12.1 :	-	10.6 :	
Sodium	mg/L	D	-	9.59 :	-	
Thallium	mg/L	T	<0.001 :	-	<0.0002 :	
Thallium	mg/L	D	-	<0.001 :	-	
Vanadium	mg/L	T	<0.002 :	-	<0.0004 :	
Vanadium	mg/L	D	-	<0.002 :	-	
Zinc	mg/L	T	<0.167 :	-	0.139 :	
Zinc	mg/L	D	-	<0.166 :	-	
Volatile Organics						
1,1,1-Trichloroethane	mg/L	T	0.001 J	-	0.001 J	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01 :	-	<0.01 :	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01 :	-	<0.01 :	
1,1,2-Trichloroethane	mg/L	T	<0.01 :	-	<0.01 :	
1,1-Dichloroethane	mg/L	T	<0.01 :	-	<0.01 :	
1,1-Dichloroethene	mg/L	T	<0.01 :	-	<0.01 :	
1,2,4-Trichlorobenzene	mg/L	T	<0.01 J	-	<0.01 :	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01 J	-	<0.01 :	
1,2-Dichlorobenzene	mg/L	T	<0.01 :	-	<0.01 :	
1,2-Dichloroethane	mg/L	T	<0.01 :	-	<0.01 :	
1,2-Dichloroethene (total)	mg/L	T	<0.01 :	-	<0.01 :	
1,2-Dichloropropane	mg/L	T	<0.01 :	-	<0.01 :	
1,3-Dichlorobenzene	mg/L	T	<0.01 :	-	<0.01 :	
1,4-Dichlorobenzene	mg/L	T	<0.01 :	-	<0.01 :	
2-Butanone	mg/L	T	<0.01 :	-	<0.01 J	
2-Hexanone	mg/L	T	<0.01 :	-	<0.01 :	
4-Methyl-2-pentanone	mg/L	T	<0.01 :	-	<0.01 :	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 3/4/2003 MMW-28A-D01N-GRW GW6	MMW-28A 4/1/2003 MMW-28A-T01N-GRW GW6	MMW-28A 4/1/2003 MMW-28A-D01N-GRW GW6	MMW-28A 5/5/2003 MMW-28A-T01N-GRW GW6	MMW-28A 5/5/2003 MMW-28A-D01N-GRW GW6	MMW-28A 6/3/2003 MMW-28A-T01N-GRW GW6
Acetone	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 J
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 :
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	<0.026 :	-	<0.026 :	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
2,4-Dinitrophenol	mg/L	T	-	<0.026 J	-	<0.026 :	-	<0.025 :
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 3/4/2003 MMW-28A-D01N-GR W GW6		MMW-28A 4/1/2003 MMW-28A-T01N-GR W GW6		MMW-28A 4/1/2003 MMW-28A-D01N-GR W GW6		MMW-28A 5/5/2003 MMW-28A-T01N-GR W GW6		MMW-28A 5/5/2003 MMW-28A-D01N-GR W GW6		MMW-28A 6/3/2003 MMW-28A-T01N-GR W GW6	
2,6-Dinitrotoluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Chloronaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Chlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Methylnaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.025	:
2-Nitrophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
3,3-Dichlorobenzidine	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
3-Nitroaniline	mg/L	T	-		<0.026	J	-		<0.026	J	-		<0.025	:
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.025	:
4-Bromophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Chloro-3-methylphenol	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
4-Chloroaniline	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
4-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.025	:
4-Nitrophenol	mg/L	T	-		<0.026	J	-		<0.026	J	-		<0.025	:
Acenaphthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Acenaphthylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzaldehyde	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Benzo(a)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(a)pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(b)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzo(g,h,i)perylene	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Benzo(k)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-chloroethyl)ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Bis(2-ethylhexyl)phthalate	mg/L	T	-		0.031	:	-		<0.01	:	-		<0.01	:
Butyl benzyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Carbazole	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Chrysene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Dibenz(a,h)anthracene	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Dibenzofuran	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 3/4/2003 MMW-28A-D01N-GR W GW6		MMW-28A 4/1/2003 MMW-28A-T01N-GR W GW6		MMW-28A 4/1/2003 MMW-28A-D01N-GR W GW6		MMW-28A 5/5/2003 MMW-28A-T01N-GR W GW6		MMW-28A 5/5/2003 MMW-28A-D01N-GR W GW6		MMW-28A 6/3/2003 MMW-28A-T01N-GR W GW6	
Dichlorodiisopropyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Diethylphthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Dimethylphthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Di-n-Butyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Di-n-Octyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Fluorene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Hexachlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Hexachlorocyclopentadiene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Hexachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Indeno(1,2,3-cd)pyrene	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Isophorone	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Naphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Nitrobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
N-Nitrosodi-n-propylamine	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
N-Nitrosodiphenylamine	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Pentachlorophenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.025	:
Phenanthrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Phenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.001	:	-		<0.001	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-28A	6/3/2003	MMW-28A-D01N-GRW GW6		MMW-28A	7/22/2003	MMW-28A-T01N-GRW GW6		MMW-28A	7/22/2003	MMW-28A-D01N-GRW GW6		MMW-28A	8/11/2003	MMW-28A-T01N-GRW GW6		MMW-28A	8/11/2003	MMW-28A-D01N-GRW GW6		MMW-28A	9/9/2003	MMW-28A-T01N-GRW GW6	
Field Measurements																										
DO	mg/L	T	-				3.16		:		-				3.56		:		-				3.89		:	
Eh	millivolts	T	-				608.5		:		-				172.8		:		-				266.4		:	
pH	SU	T	-				6.2	J			-				6.1	J			-				6.1	J		
Specific Conductance	uS/cm	T	-				870.		:		-				803.		:		-				842.		:	
Temperature	Celsius	T	-				11.6		:		-				10.84		:		-				9.07		:	
Turbidity	NTU	T	-				7.9		:		-				0.		:		-				0.7		:	
General Chemistry																										
Ammonia	mg/L	T	-				<0.04	J			-				0.055		:		-				<0.052		:	
Bicarbonate (as CaCO3)	mg/L	T	-				66.8		:		-				61.		:		-				61.3		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				8.2		:		-				8.		:		-				8.		:	
Fluoride	mg/L	T	-				0.6		:		-				0.57		:		-				0.62		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				0.62	J			-				0.48	J			-				0.47	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				0.12	J			-				<0.01	J			-				<0.01	J		
Phosphorus	mg/L	T	-				<0.01	J			-				<0.01		:		-				<0.01		:	
Sulfate	mg/L	T	-				383.	J			-				362.	J			-				383.	J		
Total Alkalinity	mg/L	T	-				66.8		:		-				61.		:		-				61.3		:	
Total Dissolved Solids	mg/L	T	-				732.		:		-				<1140.	J			-				698.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	-				<1.2	J			-				<1.	J			-				<2.1		:	
Total Suspended Solids	mg/L	T	-				<0.5		:		-				<0.8		:		-				1.		:	
Laboratory Parameters																										
pH	SU	T	-				6.2	J			-				6.1	J			-				6.1	J		
Specific Conductance	umhos/cm	T	-				871.	J			-				837.	J			-				799.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01		:		-				<0.01		:	
Physical Properties																										
Hardness	mg/L	T	-				445.		:		-				453.		:		-				454.		:	
Hardness	mg/L	D	454.		:		-				481.		:		-				480.		:		-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 6/3/2003 MMW-28A-D01N-GRW GW6	MMW-28A 7/22/2003 MMW-28A-T01N-GRW GW6	MMW-28A 7/22/2003 MMW-28A-D01N-GRW GW6	MMW-28A 8/11/2003 MMW-28A-T01N-GRW GW6	MMW-28A 8/11/2003 MMW-28A-D01N-GRW GW6	MMW-28A 9/9/2003 MMW-28A-T01N-GRW GW6
Aluminum	mg/L	T	-	<0.183 J	-	<0.631 :	-	0.266 :
Aluminum	mg/L	D	<0.426 :	-	<0.183 J	-	<0.631 :	-
Antimony	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D	<0.001 :	-	<0.001 J	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0164 :	-	0.0142 :	-	0.0148 :
Barium	mg/L	D	0.015 :	-	0.0152 :	-	0.0154 :	-
Beryllium	mg/L	T	-	<0.0015 :	-	<0.0002 :	-	<0.0004 :
Beryllium	mg/L	D	<0.0003 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0184 :	-	0.0132 :	-	0.0115 :
Boron	mg/L	D	0.0166 :	-	0.0184 :	-	0.0109 :	-
Cadmium	mg/L	T	-	<0.0023 :	-	0.00054 :	-	0.00081 J
Cadmium	mg/L	D	<0.0013 :	-	<0.001 :	-	0.00074 :	-
Calcium	mg/L	T	-	130. :	-	130. :	-	130. :
Calcium	mg/L	D	132. :	-	140. :	-	138. :	-
Chromium	mg/L	T	-	<0.0014 :	-	<0.0006 :	-	<0.0011 :
Chromium	mg/L	D	<0.001 :	-	0.0013 :	-	<0.0006 :	-
Cobalt	mg/L	T	-	<0.0018 :	-	<0.0018 :	-	<0.0029 :
Cobalt	mg/L	D	<0.0038 :	-	0.0029 :	-	<0.0018 :	-
Copper	mg/L	T	-	<0.0043 J	-	<0.0025 :	-	<0.0026 :
Copper	mg/L	D	<0.0015 :	-	0.0014 J	-	0.0028 :	-
Iron	mg/L	T	-	<0.168 :	-	<0.667 :	-	<0.455 :
Iron	mg/L	D	<0.422 :	-	<0.168 :	-	<0.667 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0004 :
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	29.3 :	-	30.9 :	-	31.2 :
Magnesium	mg/L	D	30.1 :	-	31.8 :	-	32.8 :	-
Manganese	mg/L	T	-	<0.0246 :	-	0.0491 :	-	0.0322 :
Manganese	mg/L	D	0.0292 :	-	0.0279 :	-	0.0328 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0115 :	-	<0.0086 :	-	0.0078 J
Molybdenum	mg/L	D	0.0075 :	-	<0.011 :	-	0.0085 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 6/3/2003 MMW-28A-D01N-GRW GW6		MMW-28A 7/22/2003 MMW-28A-T01N-GRW GW6		MMW-28A 7/22/2003 MMW-28A-D01N-GRW GW6		MMW-28A 8/11/2003 MMW-28A-T01N-GRW GW6		MMW-28A 8/11/2003 MMW-28A-D01N-GRW GW6		MMW-28A 9/9/2003 MMW-28A-T01N-GRW GW6	
Nickel	mg/L	T	-		0.0129	:	-		<0.0116	:	-		<0.0085	:
Nickel	mg/L	D	0.009	:	-		0.0112	:	-		0.0104	:	-	
Potassium	mg/L	T	-		2.6	:	-		2.3	:	-		<1.65	:
Potassium	mg/L	D	2.41	:	-		2.53	:	-		2.35	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0016	:	-		0.00089	:
Selenium	mg/L	D	<0.0016	:	-		<0.0016	J	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0009	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0009	:	-	
Sodium	mg/L	T	-		9.61	J	-		<21.	:	-		14.6	:
Sodium	mg/L	D	12.8	:	-		10.9	J	-		<17.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.076	:	-		<0.159	:	-		0.14	:
Zinc	mg/L	D	0.146	:	-		0.107	:	-		<0.162	:	-	
Isotopes														
Lead	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-28A	9/9/2003	MMW-28A-D01N-GRW GW6		MMW-28A	10/23/2003	MMW-28A-T01N-GRW GW6		MMW-28A	10/23/2003	MMW-28A-D01N-GRW GW6		MMW-28A	11/3/2003	MMW-28A-T01N-GRW GW6		MMW-28A	11/3/2003	MMW-28A-D01N-GRW GW6		MMW-28A	12/11/2003	MMW-28A-T01N-GRW GW6	
Field Measurements																										
DO	mg/L	T			-			3.49		:		-				3.38		:		-				-		
Eh	millivolts	T			-			489.2		:		-				261.8		:		-				-		
pH	SU	T			-			6.	J			-				6.1	J			-				6.2	J	
Specific Conductance	uS/cm	T			-			778.		:		-				772.		:		-				-		
Temperature	Celsius	T			-			10.02		:		-				9.02		:		-				-		
Turbidity	NTU	T			-			14.		:		-				4.5		:		-				-		
General Chemistry																										
Ammonia	mg/L	T			-			<0.079	J			-				<0.04		:		-				0.043		:
Bicarbonate (as CaCO3)	mg/L	T			-			67.4		:		-				63.		:		-				74.4		:
Carbonate (as CaCO3)	mg/L	T			-			<1.		:		-				<1.		:		-				<1.		:
Chloride	mg/L	T			-			7.8		:		-				8.3		:		-				8.6		:
Fluoride	mg/L	T			-			0.62		:		-				0.57		:		-				0.54		:
Hydroxide (as CaCO3)	mg/L	T			-			<1.		:		-				<1.		:		-				<1.		:
Nitrate	mg/L	T			-			0.49		:		-				0.51	J			-				0.6		:
Nitrite	mg/L	T			-			<0.005		:		-				<0.005	J			-				<0.005		:
Phosphate, Ortho As P	mg/L	T			-			<0.01		:		-				<0.01	J			-				<0.01		:
Phosphorus	mg/L	T			-			<0.01		:		-				<0.01		:		-				<0.01		:
Sulfate	mg/L	T			-			388.	J			-				350.		:		-				345.		:
Total Alkalinity	mg/L	T			-			67.4		:		-				63.		:		-				74.4		:
Total Dissolved Solids	mg/L	T			-			694.		:		-				714.		:		-				636.		:
Total Kjeldahl Nitrogen	mg/L	T			-			3.2		:		-				<0.24	J			-				<0.24		:
Total Organic Carbon	mg/L	T			-			1.4	J			-				<1.		:		-				1.2		:
Total Suspended Solids	mg/L	T			-			<1.2		:		-				<1.2		:		-				1.6		:
Laboratory Parameters																										
pH	SU	T			-			6.	J			-				6.1	J			-				6.2	J	
Specific Conductance	umhos/cm	T			-			758.	J			-				804.	J			-				659.	J	
Inorganics																										
Cyanide	mg/L	T			-			<0.01	J			-				<0.01		:		-				<0.01		:
Physical Properties																										
Hardness	mg/L	T			-			440.		:		-				447.		:		-				408.		:
Hardness	mg/L	D			443.	:		-				430.	:			-				426.	:			-		
Metals																										

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 9/9/2003 MMW-28A-D01N-GRW GW6		MMW-28A 10/23/2003 MMW-28A-T01N-GRW GW6		MMW-28A 10/23/2003 MMW-28A-D01N-GRW GW6		MMW-28A 11/3/2003 MMW-28A-T01N-GRW GW6		MMW-28A 11/3/2003 MMW-28A-D01N-GRW GW6		MMW-28A 12/11/2003 MMW-28A-T01N-GRW GW6	
Aluminum	mg/L	T	-		<4.48	:	-		<0.442	:	-		0.265	:
Aluminum	mg/L	D	<0.217	:	-		<3.35	:	-		<0.448	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		<0.082	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.035	:	-		<0.0004	:	-	
Barium	mg/L	T	-		<0.117	:	-		0.0132	:	-		0.0136	:
Barium	mg/L	D	0.0143	:	-		<0.117	:	-		0.0145	:	-	
Beryllium	mg/L	T	-		<0.0074	:	-		<0.0003	:	-		<0.0004	:
Beryllium	mg/L	D	<0.0004	:	-		<0.0075	:	-		<0.0003	:	-	
Boron	mg/L	T	-		<0.064	:	-		0.0138	:	-		0.0148	:
Boron	mg/L	D	0.0113	:	-		<0.064	:	-		0.0141	:	-	
Cadmium	mg/L	T	-		<0.07	:	-		0.0011	J	-		<0.0005	:
Cadmium	mg/L	D	0.00081	J	-		<0.07	:	-		0.00096	:	-	
Calcium	mg/L	T	-		127.	:	-		131.	:	-		120.	:
Calcium	mg/L	D	127.	:	-		126.	:	-		124.	:	-	
Chromium	mg/L	T	-		<0.176	J	-		0.0013	:	-		<0.0011	:
Chromium	mg/L	D	<0.0011	:	-		<0.13	J	-		<0.0013	:	-	
Cobalt	mg/L	T	-		<0.31	:	-		<0.0031	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0029	:	-		<0.31	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.2	J	-		<0.0031	:	-		0.0027	:
Copper	mg/L	D	<0.0022	:	-		<0.2	J	-		<0.0034	:	-	
Iron	mg/L	T	-		<3.44	:	-		<0.455	:	-		<0.455	:
Iron	mg/L	D	<0.455	:	-		<3.	:	-		<0.455	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.0004	:	-		0.0002	:
Lead	mg/L	D	<0.0004	:	-		<0.002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		<30.7	:	-		29.4	:	-		26.	:
Magnesium	mg/L	D	30.3	:	-		<30.7	:	-		28.	:	-	
Manganese	mg/L	T	-		<0.1	:	-		0.0221	J	-		<0.016	:
Manganese	mg/L	D	<0.0161	:	-		<0.1	:	-		0.0207	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.012	:	-		0.009	:	-		0.0083	:
Molybdenum	mg/L	D	0.0064	J	-		0.0134	:	-		0.0081	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 9/9/2003 MMW-28A-D01N-GRW GW6	MMW-28A 10/23/2003 MMW-28A-T01N-GRW GW6	MMW-28A 10/23/2003 MMW-28A-D01N-GRW GW6	MMW-28A 11/3/2003 MMW-28A-T01N-GRW GW6	MMW-28A 11/3/2003 MMW-28A-D01N-GRW GW6	MMW-28A 12/11/2003 MMW-28A-T01N-GRW GW6
Nickel	mg/L	T	-	<0.28 :	-	0.0088 :	-	0.0069 J
Nickel	mg/L	D	0.0074 :	-	<0.28 :	-	0.0097 :	-
Potassium	mg/L	T	-	<52.2 :	-	2.38 J	-	2.12 :
Potassium	mg/L	D	1.65 J	-	<52.2 :	-	0.966 J	-
Selenium	mg/L	T	-	<0.003 :	-	<0.0015 :	-	0.0012 :
Selenium	mg/L	D	0.00087 :	-	<0.003 :	-	<0.0015 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.001 :	-	<0.0002 :	-
Sodium	mg/L	T	-	<68.4 :	-	<11.6 :	-	14.6 :
Sodium	mg/L	D	13.2 :	-	<50.2 :	-	<16.3 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.001 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.0004 :
Vanadium	mg/L	D	<0.0002 :	-	<0.001 :	-	<0.0002 :	-
Zinc	mg/L	T	-	<0.252 :	-	<0.153 :	-	0.112 :
Zinc	mg/L	D	0.137 :	-	<0.2 :	-	<0.147 :	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	<0.0004 :	-	0.0002 :
Lead	mg/L	D	<0.0004 :	-	<0.002 :	-	<0.0004 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-28A	MMW-28A	MMW-28A	MMW-28A	MMW-28A	MMW-28A
Sample Date			12/11/2003	1/13/2004	1/13/2004	2/23/2004	2/23/2004	3/22/2004
Sample ID			MMW-28A-D01N-GRW	MMW-28A-T01N-GRW	MMW-28A-D01N-GRW	MMW-28A-T01N-GRW	MMW-28A-D01N-GRW	MMW-28-A
Exposure Area			GW6	GW6	GW6	GW6	GW6	GW6
Field Measurements								
DO	mg/L	T	-	3.06 :	-	3.25 :	-	-
Eh	millivolts	T	-	381.1 :	-	339.4 :	-	-
pH	SU	T	-	6.4 J	-	5.89 :	-	-
Specific Conductance	uS/cm	T	-	764. :	-	823. :	-	-
Temperature	Celsius	T	-	6.94 :	-	7. :	-	-
Turbidity	NTU	T	-	1.1 :	-	1.8 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	<0.048 J	-	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	70.2 J	-	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	-
Chloride	mg/L	T	-	8.6 :	-	-	-	-
Fluoride	mg/L	T	-	0.61 :	-	0.6 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	-	-
Nitrate	mg/L	T	-	0.66 J	-	-	-	-
Nitrite	mg/L	T	-	<0.005 J	-	-	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	-	-	-
Phosphorus	mg/L	T	-	<0.01 :	-	-	-	-
Sulfate	mg/L	T	-	365. :	-	395. :	-	-
Total Alkalinity	mg/L	T	-	70.2 J	-	-	-	-
Total Dissolved Solids	mg/L	T	-	636. :	-	664. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	-	-
Total Organic Carbon	mg/L	T	-	<1. :	-	-	-	-
Total Suspended Solids	mg/L	T	-	3.4 :	-	<0.5 :	-	-
Laboratory Parameters								
pH	SU	T	-	6.4 J	-	5.89 :	-	-
Specific Conductance	umhos/cm	T	-	769. J	-	-	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	-	-
Physical Properties								
Hardness	mg/L	T	-	429. :	-	436. :	-	-
Hardness	mg/L	D	415. :	-	436. :	-	440. :	-
Metals								

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 12/11/2003 MMW-28A-D01N-GRW GW6	MMW-28A 1/13/2004 MMW-28A-T01N-GRW GW6	MMW-28A 1/13/2004 MMW-28A-D01N-GRW GW6	MMW-28A 2/23/2004 MMW-28A-T01N-GRW GW6	MMW-28A 2/23/2004 MMW-28A-D01N-GRW GW6	MMW-28A 3/22/2004 MMW-28-A GW6
Aluminum	mg/L	T	-	<0.621 :	-	<0.514 :	-	-
Aluminum	mg/L	D	<0.217 :	-	<0.621 :	-	<0.514 :	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.00098 :	-	-
Antimony	mg/L	D	<0.0024 :	-	<0.0024 :	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.00041 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0002 :	-
Barium	mg/L	T	-	<0.0188 :	-	0.0134 J	-	-
Barium	mg/L	D	0.0173 :	-	<0.0188 :	-	0.0126 J	-
Beryllium	mg/L	T	-	<0.001 :	-	<0.0003 :	-	-
Beryllium	mg/L	D	<0.0004 :	-	<0.001 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0134 :	-	0.0106 :	-	-
Boron	mg/L	D	0.0141 :	-	<0.0117 :	-	0.0108 :	-
Cadmium	mg/L	T	-	<0.0007 J	-	<0.0007 :	-	-
Cadmium	mg/L	D	<0.0005 :	-	<0.0007 J	-	<0.0007 J	-
Calcium	mg/L	T	-	125. :	-	126. :	-	-
Calcium	mg/L	D	122. :	-	127. :	-	127. :	-
Chromium	mg/L	T	-	<0.0057 :	-	<0.0015 :	-	-
Chromium	mg/L	D	<0.0011 :	-	<0.0057 :	-	<0.0015 :	-
Cobalt	mg/L	T	-	<0.0037 :	-	<0.0023 :	-	-
Cobalt	mg/L	D	<0.0029 :	-	<0.0037 :	-	<0.0023 :	-
Copper	mg/L	T	-	<0.0035 J	-	<0.003 :	-	-
Copper	mg/L	D	<0.0022 :	-	<0.0035 J	-	<0.003 :	-
Iron	mg/L	T	-	<0.423 :	-	<0.373 :	-	-
Iron	mg/L	D	<0.455 :	-	<0.423 :	-	<0.373 :	-
Lead	mg/L	T	-	0.00035 :	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.00023 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	28.7 :	-	29.5 :	-	-
Magnesium	mg/L	D	26.5 :	-	29.1 :	-	29.7 :	-
Manganese	mg/L	T	-	0.0264 :	-	0.0246 :	-	-
Manganese	mg/L	D	<0.016 :	-	0.0246 :	-	0.0281 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0088 :	-	0.0073 :	-	-
Molybdenum	mg/L	D	0.0076 :	-	0.0069 :	-	0.0076 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 12/11/2003 MMW-28A-D01N-GRW GW6	MMW-28A 1/13/2004 MMW-28A-T01N-GRW GW6	MMW-28A 1/13/2004 MMW-28A-D01N-GRW GW6	MMW-28A 2/23/2004 MMW-28A-T01N-GRW GW6	MMW-28A 2/23/2004 MMW-28A-D01N-GRW GW6	MMW-28A 3/22/2004 MMW-28-A GW6
Nickel	mg/L	T	-	<0.0168 :	-	0.0098 :	-	-
Nickel	mg/L	D	0.0066 J	-	<0.0168 :	-	0.0091 :	-
Potassium	mg/L	T	-	2.17 :	-	2.16 :	-	-
Potassium	mg/L	D	1.97 :	-	2.09 :	-	2.17 :	-
Selenium	mg/L	T	-	<0.0006 J	-	<0.0022 J	-	-
Selenium	mg/L	D	0.00089 :	-	0.001 J	-	<0.0004 J	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	11.8 :	-	13.2 :	-	-
Sodium	mg/L	D	14.1 :	-	12.5 :	-	16.8 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0004 :	-	<0.0002 :	-	-
Vanadium	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0002 :	-
Zinc	mg/L	T	-	0.125 :	-	0.17 :	-	-
Zinc	mg/L	D	0.118 :	-	0.13 :	-	0.169 :	-
Isotopes								
Delta D	per mil	T	-	-	-	-97.3 :	-	-
Delta O-18	per mil	T	-	-	-	-13.4 :	-	-
Lead	mg/L	T	-	0.00035 :	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.00023 :	-	<0.0002 :	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	-	-	24.01 :
DEL He3	%	T	-	-	-	-	-	57.4 :
DEL He4	%	T	-	-	-	-	-	50. :
He Corr	1E-8cc/g	T	-	-	-	-	-	7.156 :
Tritium TU	TU	T	-	-	-	-	-	5.331 :
Uncert Age	Years	T	-	-	-	-	-	0.63 :
Uncert TU	TU	T	-	-	-	-	-	0.29 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 4/13/2004 MMW-28A-T01N-GR W GW6		MMW-28A 4/13/2004 MMW-28A-D01N-GR W GW6		MMW-29A 11/1/2002 MMW-29A-T01N-GR WRE GW4		MMW-29A 11/1/2002 MMW-29A-T01N-GR W GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GR WRE GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GR W GW4	
Field Measurements														
DO	mg/L	T	4.01	:	-		-		6.22	:	-		-	
Eh	millivolts	T	393.7	:	-		-		400.3	:	-		-	
pH	SU	T	6.8	J	-		-		4.59	:	-		-	
Specific Conductance	uS/cm	T	798.	:	-		-		1844.	:	-		-	
Temperature	Celsius	T	8.91	:	-		-		9.64	:	-		-	
Turbidity	NTU	T	2.	:	-		-		32.7	:	-		-	
General Chemistry														
Ammonia	mg/L	T	<0.059	:	-		-		<0.17	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	73.2	:	-		-		<1.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	9.9	:	-		-		22.5	:	-		-	
Fluoride	mg/L	T	0.57	:	-		40.	J	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	0.59	J	-		-		4.4	J	-		-	
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		0.016	J	-		-	
Phosphorus	mg/L	T	<0.01	:	-		-		0.033	:	-		-	
Sulfate	mg/L	T	380.	:	-		-		1430.	:	-		-	
Total Alkalinity	mg/L	T	73.2	:	-		-		<1.	:	-		-	
Total Dissolved Solids	mg/L	T	648.	:	-		-		1760.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	J	-		-	
Total Organic Carbon	mg/L	T	<1.5	J	-		-		<1.	:	-		-	
Total Suspended Solids	mg/L	T	<1.5	J	-		-		<0.9	:	-		-	
Laboratory Parameters														
pH	SU	T	6.8	J	-		-		4.59	:	-		-	
Specific Conductance	umhos/cm	T	752.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	457.	:	-		-		-		-		-	
Hardness	mg/L	D	-		458.	:	-		-		1030.	:	-	
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28A 4/13/2004 MMW-28A-T01N-GRW GW6		MMW-28A 4/13/2004 MMW-28A-D01N-GRW GW6		MMW-29A 11/1/2002 MMW-29A-T01N-GRWRE GW4		MMW-29A 11/1/2002 MMW-29A-T01N-GRW GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GRWRE GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GRW GW4	
Aluminum	mg/L	T	<0.176	:	-		-		-		-		-	
Aluminum	mg/L	D	-		<0.176	:	-		-		44.3	:	-	
Antimony	mg/L	T	<0.0008	:	-		-		-		-		-	
Antimony	mg/L	D	-		<0.0008	:	-		-		<0.028	:	-	
Arsenic	mg/L	T	<0.0004	:	-		-		-		-		-	
Arsenic	mg/L	D	-		<0.0004	:	-		-		0.0294	:	-	
Barium	mg/L	T	0.0148	:	-		-		-		-		-	
Barium	mg/L	D	-		0.0148	:	-		-		<0.048	:	-	
Beryllium	mg/L	T	0.00023	:	-		-		-		-		-	
Beryllium	mg/L	D	-		<0.0002	:	-		-		0.0182	:	-	
Boron	mg/L	T	0.0156	:	-		-		-		-		-	
Boron	mg/L	D	-		0.0155	:	-		-		<0.0319	:	-	
Cadmium	mg/L	T	<0.00072	:	-		-		-		-		-	
Cadmium	mg/L	D	-		<0.00051	:	-		-		0.0612	:	-	
Calcium	mg/L	T	134.	:	-		-		-		-		-	
Calcium	mg/L	D	-		135.	:	-		-		200.	:	-	
Chromium	mg/L	T	<0.0008	:	-		-		-		-		-	
Chromium	mg/L	D	-		<0.0008	:	-		-		<0.37	:	-	
Chromium, Hexavalent	mg/L	D	-		-		-		<0.01	:	-		-	
Cobalt	mg/L	T	<0.0011	:	-		-		-		-		-	
Cobalt	mg/L	D	-		<0.0011	:	-		-		<0.16	:	-	
Copper	mg/L	T	<0.00077	:	-		-		-		-		-	
Copper	mg/L	D	-		0.0011	:	-		-		<0.722	:	-	
Iron	mg/L	T	<0.192	J	-		-		-		-		-	
Iron	mg/L	D	-		<0.192	:	-		-		<4.89	:	-	
Lead	mg/L	T	<0.0008	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.0008	:	-		-		<0.001	:	-	
Magnesium	mg/L	T	29.5	:	-		-		-		-		-	
Magnesium	mg/L	D	-		29.5	:	-		-		127.	:	-	
Manganese	mg/L	T	<0.019	:	-		-		-		-		-	
Manganese	mg/L	D	-		<0.019	:	-		-		22.3	:	-	
Mercury	mg/L	T	<0.0001	J	-		-		<0.0001	:	-		-	
Mercury	mg/L	D	-		<0.0001	J	-		-		-		<0.0001	:
Molybdenum	mg/L	T	0.0113	:	-		-		-		-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-28A 4/13/2004 MMW-28A-T01N-GRW GW6		MMW-28A 4/13/2004 MMW-28A-D01N-GRW GW6		MMW-29A 11/1/2002 MMW-29A-T01N-GRWRE GW4		MMW-29A 11/1/2002 MMW-29A-T01N-GRW GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GRWRE GW4		MMW-29A 11/1/2002 MMW-29A-D01N-GRW GW4	
Molybdenum	mg/L	D	-		0.0114	:	-		-		<0.011	:	-	
Nickel	mg/L	T	0.0084	:	-		-		-		-		-	
Nickel	mg/L	D	-		0.0076	:	-		-		0.645	:	-	
Potassium	mg/L	T	2.39	:	-		-		-		-		-	
Potassium	mg/L	D	-		2.43	:	-		-		<20.2	:	-	
Selenium	mg/L	T	<0.0014	:	-		-		-		-		-	
Selenium	mg/L	D	-		<0.0014	:	-		-		<0.008	:	-	
Silver	mg/L	T	<0.0002	:	-		-		-		-		-	
Silver	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Sodium	mg/L	T	13.	:	-		-		-		-		-	
Sodium	mg/L	D	-		13.8	:	-		-		55.3	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		-		-		-	
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.0004	:	-		-		-		-		-	
Vanadium	mg/L	D	-		<0.0004	:	-		-		<0.002	:	-	
Zinc	mg/L	T	0.118	:	-		-		-		-		-	
Zinc	mg/L	D	-		0.13	:	-		-		7.25	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		<0.00025	:	-		-	
2,6-Pyridinediamine,	mg/L	T	-		-		-		<0.00025	J	-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		<0.00025	:	-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		<0.00025	:	-		-	
Pentaerythritol tetranitrate	mg/L	T	-		-		-		<0.01	:	-		-	
Isotopes														
Lead	mg/L	T	<0.0008	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.0008	:	-		-		<0.001	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 1/13/2003 MMW-29A-T01N-GR W GW4		MMW-29A 1/13/2003 MMW-29A-D01N-GR W GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GR WRE GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GR W GW4		MMW-29A 2/7/2003 MMW-29A-D01N-GR W GW4		MMW-29A 3/4/2003 MMW-29A-T01N-GR W GW4	
Field Measurements														
DO	mg/L	T	5.33	:	-		-		4.84	:	-		7.5	:
Eh	millivolts	T	368.7	:	-		-		345.8	:	-		447.7	:
pH	SU	T	4.58	:	-		-		4.66	:	-		4.5	:
Specific Conductance	uS/cm	T	1803.	:	-		-		212.	:	-		1796.	:
Temperature	Celsius	T	7.56	:	-		-		7.01	:	-		7.79	:
Turbidity	NTU	T	40.9	:	-		-		0.	:	-		38.2	:
General Chemistry														
Ammonia	mg/L	T	<0.084	:	-		-		<0.076	:	-		<0.066	J
Bicarbonate (as CaCO3)	mg/L	T	<2.1	:	-		-		<2.8	:	-		<2.5	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Chloride	mg/L	T	18.9	J	-		-		23.1	:	-		21.9	:
Fluoride	mg/L	T	34.7	J	-		-		35.8	:	-		37.1	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Nitrate	mg/L	T	4.3	:	-		-		4.3	:	-		4.6	J
Nitrite	mg/L	T	<0.005	:	-		-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	<0.097	J	-		-		0.021	:	-		0.46	J
Phosphorus	mg/L	T	0.016	J	-		-		<0.021	:	-		0.019	J
Sulfate	mg/L	T	1080.	J	-		-		1070.	J	-		1000.	:
Total Alkalinity	mg/L	T	<2.1	:	-		-		<2.8	:	-		<2.5	:
Total Dissolved Solids	mg/L	T	1650.	:	-		-		1660.	:	-		1620.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	:	-		<1.4	J
Total Suspended Solids	mg/L	T	<0.8	:	-		-		1.1	:	-		1.2	J
Laboratory Parameters														
pH	SU	T	4.58	:	-		-		4.66	:	-		4.5	:
Inorganics														
Cyanide	mg/L	T	-		-		-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	959.	:	-		-		949.	:	-		883.	:
Hardness	mg/L	D	-		950.	:	-		-		1000.	:	-	
Metals														
Aluminum	mg/L	T	44.9	:	-		-		36.9	:	-		38.5	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-29A 1/13/2003 MMW-29A-T01N-GRW GW4		MMW-29A 1/13/2003 MMW-29A-D01N-GRW GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GRWRE GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GRW GW4		MMW-29A 2/7/2003 MMW-29A-D01N-GRW GW4		MMW-29A 3/4/2003 MMW-29A-T01N-GRW GW4	
Aluminum	mg/L	D		-		41.8	:	-		-		42.	:	-	
Antimony	mg/L	T		<0.028	:	-		-		<0.028	:	-		<0.028	:
Antimony	mg/L	D		-		<0.028	:	-		-		<0.028	:	-	
Arsenic	mg/L	T		<0.023	:	-		-		<0.023	J	-		<0.023	:
Arsenic	mg/L	D		-		<0.023	J	-		-		<0.023	J	-	
Barium	mg/L	T		<0.048	:	-		-		<0.048	:	-		<0.048	:
Barium	mg/L	D		-		<0.048	:	-		-		<0.048	:	-	
Beryllium	mg/L	T		0.0158	:	-		-		0.0169	:	-		0.0179	:
Beryllium	mg/L	D		-		0.0153	:	-		-		0.0173	:	-	
Boron	mg/L	T		<0.0673	:	-		-		<0.027	:	-		<0.027	:
Boron	mg/L	D		-		<0.0326	:	-		-		<0.027	:	-	
Cadmium	mg/L	T		<0.08	:	-		-		<0.08	:	-		<0.08	:
Cadmium	mg/L	D		-		<0.08	:	-		-		0.0976	:	-	
Calcium	mg/L	T		184.	:	-		-		186.	:	-		169.	J
Calcium	mg/L	D		-		183.	:	-		-		193.	:	-	
Chromium	mg/L	T		<0.16	:	-		-		<0.16	:	-		<0.16	:
Chromium	mg/L	D		-		<0.16	:	-		-		<0.16	:	-	
Cobalt	mg/L	T		<0.23	:	-		-		<0.23	:	-		<0.23	:
Cobalt	mg/L	D		-		<0.23	:	-		-		<0.23	:	-	
Copper	mg/L	T		0.679	:	-		-		0.179	J	-		0.663	:
Copper	mg/L	D		-		0.702	:	-		-		0.77	J	-	
Iron	mg/L	T		<2.66	:	-		-		<2.66	J	-		<2.66	:
Iron	mg/L	D		-		<2.66	:	-		-		<2.66	J	-	
Lead	mg/L	T		0.001	:	-		-		<0.001	:	-		0.001	:
Lead	mg/L	D		-		<0.001	:	-		-		<0.001	:	-	
Magnesium	mg/L	T		121.	:	-		-		118.	:	-		112.	:
Magnesium	mg/L	D		-		120.	:	-		-		127.	:	-	
Manganese	mg/L	T		20.8	:	-		-		20.8	J	-		19.9	:
Manganese	mg/L	D		-		21.3	:	-		-		21.8	:	-	
Mercury	mg/L	T		<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D		-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T		<0.011	:	-		-		<0.011	J	-		<0.011	J
Molybdenum	mg/L	D		-		<0.011	:	-		-		<0.011	J	-	
Nickel	mg/L	T		0.546	:	-		-		<0.34	:	-		0.487	:

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29A 1/13/2003 MMW-29A-T01N-GRW GW4		MMW-29A 1/13/2003 MMW-29A-D01N-GRW GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GRWRE GW4		MMW-29A 2/7/2003 MMW-29A-T01N-GRW GW4		MMW-29A 2/7/2003 MMW-29A-D01N-GRW GW4		MMW-29A 3/4/2003 MMW-29A-T01N-GRW GW4	
Nickel	mg/L	D	-		0.591	:	-		-		0.579	:	-	
Potassium	mg/L	T	<31.4	:	-		-		<31.4	:	-		<31.4	:
Potassium	mg/L	D	-		<31.4	:	-		-		<31.4	:	-	
Selenium	mg/L	T	<0.008	:	-		-		<0.008	:	-		<0.008	J
Selenium	mg/L	D	-		<0.008	:	-		-		<0.008	:	-	
Silver	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Sodium	mg/L	T	<36.6	:	-		-		44.1	:	-		<36.6	:
Sodium	mg/L	D	-		<36.6	:	-		-		39.5	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.002	:	-		-		<0.002	:	-		0.0028	:
Vanadium	mg/L	D	-		<0.002	:	-		-		<0.002	:	-	
Zinc	mg/L	T	6.68	:	-		-		6.59	:	-		6.24	J
Zinc	mg/L	D	-		6.77	:	-		-		7.03	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	J
Isotopes														
Lead	mg/L	T	0.001	:	-		-		<0.001	:	-		0.001	:
Lead	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29A 3/4/2003 MMW-29A-D01N-GR W GW4		MMW-29A 4/1/2003 MMW-29A-T01N-GR W GW4		MMW-29A 4/1/2003 MMW-29A-D01N-GR W GW4		MMW-29A 5/5/2003 MMW-29A-T01N-GR W GW4		MMW-29A 5/5/2003 MMW-29A-D01N-GR W GW4		MMW-29A 6/3/2003 MMW-29A-T01N-GR W GW4	
Field Measurements														
DO	mg/L	T	-		5.43	:	-		5.92	:	-		6.06	:
Eh	millivolts	T	-		250.2	:	-		427.4	:	-		533.	:
pH	SU	T	-		4.7	J	-		5.1	J	-		4.9	J
Specific Conductance	uS/cm	T	-		1649.	:	-		1596.	:	-		1448.	:
Temperature	Celsius	T	-		8.79	:	-		8.84	:	-		10.48	:
Turbidity	NTU	T	-		70.1	:	-		0.	:	-		1.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.23	:	-		<0.083	:	-		<0.082	J
Bicarbonate (as CaCO3)	mg/L	T	-		<2.9	:	-		<4.1	:	-		<4.7	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		20.3	:	-		<10.5	:	-		74.1	:
Fluoride	mg/L	T	-		36.5	:	-		35.1	:	-		26.	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		4.2	J	-		3.9	J	-		3.7	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.016	J	-		0.011	J	-		0.068	J
Phosphorus	mg/L	T	-		0.028	:	-		<0.023	:	-		0.019	J
Sulfate	mg/L	T	-		995.	J	-		792.	:	-		768.	J
Total Alkalinity	mg/L	T	-		<2.9	:	-		<4.1	:	-		<4.7	:
Total Dissolved Solids	mg/L	T	-		1510.	:	-		1420.	:	-		1490.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.2	J	-		1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.9	:	-		<1.1	:	-		<1.3	:
Laboratory Parameters														
pH	SU	T	-		4.7	J	-		5.1	J	-		4.9	J
Specific Conductance	umhos/cm	T	-		1480.	J	-		1490.	J	-		1450.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		846.	:	-		810.	:	-		706.	:
Hardness	mg/L	D	907.	:	-		839.	:	-		813.	:	-	
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 3/4/2003 MMW-29A-D01N-GRW GW4		MMW-29A 4/1/2003 MMW-29A-T01N-GRW GW4		MMW-29A 4/1/2003 MMW-29A-D01N-GRW GW4		MMW-29A 5/5/2003 MMW-29A-T01N-GRW GW4		MMW-29A 5/5/2003 MMW-29A-D01N-GRW GW4		MMW-29A 6/3/2003 MMW-29A-T01N-GRW GW4	
Aluminum	mg/L	T	-		33.8	:	-		34.9	:	-		29.9	:
Aluminum	mg/L	D	39.4	:	-		34.8	:	-		35.	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.048	J	-		<0.072	:
Antimony	mg/L	D	<0.028	:	-		<0.072	:	-		<0.048	J	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.047	:	-		<0.04	:
Arsenic	mg/L	D	<0.0284	:	-		<0.04	:	-		<0.047	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.135	:	-		<0.123	:
Barium	mg/L	D	<0.048	:	-		<0.123	:	-		<0.135	:	-	
Beryllium	mg/L	T	-		<0.028	:	-		0.015	:	-		<0.0144	:
Beryllium	mg/L	D	0.0173	:	-		<0.0297	:	-		0.0152	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.075	:	-		<0.084	:
Boron	mg/L	D	<0.027	:	-		<0.084	:	-		<0.075	:	-	
Cadmium	mg/L	T	-		<0.0759	:	-		0.0435	:	-		0.0402	:
Cadmium	mg/L	D	<0.08	:	-		<0.123	:	-		0.0439	:	-	
Calcium	mg/L	T	-		163.	:	-		154.	:	-		136.	:
Calcium	mg/L	D	174.	J	-		162.	:	-		154.	:	-	
Chromium	mg/L	T	-		<0.19	J	-		<0.009	:	-		<0.01	:
Chromium	mg/L	D	<0.16	:	-		<0.19	J	-		<0.009	:	-	
Cobalt	mg/L	T	-		<0.36	:	-		0.0996	:	-		0.0969	:
Cobalt	mg/L	D	<0.23	:	-		<0.36	:	-		0.104	:	-	
Copper	mg/L	T	-		0.513	:	-		0.583	:	-		0.523	:
Copper	mg/L	D	0.719	:	-		0.554	:	-		0.595	:	-	
Iron	mg/L	T	-		<4.22	:	-		<0.299	:	-		<0.311	:
Iron	mg/L	D	<2.66	J	-		<4.22	:	-		<0.299	:	-	
Lead	mg/L	T	-		0.0016	:	-		0.0012	:	-		<0.001	:
Lead	mg/L	D	0.001	:	-		0.0013	:	-		0.0012	:	-	
Magnesium	mg/L	T	-		107.	:	-		103.	:	-		89.1	:
Magnesium	mg/L	D	115.	:	-		106.	:	-		104.	:	-	
Manganese	mg/L	T	-		19.	:	-		17.4	:	-		15.3	:
Manganese	mg/L	D	20.4	:	-		18.8	:	-		17.4	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.016	:	-		<0.023	:
Molybdenum	mg/L	D	<0.011	J	-		<0.023	:	-		<0.016	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 3/4/2003 MMW-29A-D01N-GRW GW4		MMW-29A 4/1/2003 MMW-29A-T01N-GRW GW4		MMW-29A 4/1/2003 MMW-29A-D01N-GRW GW4		MMW-29A 5/5/2003 MMW-29A-T01N-GRW GW4		MMW-29A 5/5/2003 MMW-29A-D01N-GRW GW4		MMW-29A 6/3/2003 MMW-29A-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.73	:	-		0.429	:	-		0.382	:
Nickel	mg/L	D	0.499	:	-		<0.73	:	-		0.441	:	-	
Potassium	mg/L	T	-		<40.5	:	-		4.16	:	-		4.34	:
Potassium	mg/L	D	<31.4	:	-		<40.5	:	-		4.16	:	-	
Selenium	mg/L	T	-		<0.005	:	-		<0.008	:	-		<0.008	:
Selenium	mg/L	D	0.0095	:	-		<0.0069	:	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<91.6	:	-		20.1	:	-		15.7	:
Sodium	mg/L	D	<36.6	:	-		<91.6	:	-		18.3	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0038	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	0.003	:	-		0.0033	:	-		<0.002	:	-	
Zinc	mg/L	T	-		5.99	:	-		5.61	:	-		4.77	:
Zinc	mg/L	D	6.39	:	-		5.93	:	-		5.63	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		0.0016	:	-		0.0012	:	-		<0.001	:
Lead	mg/L	D	0.001	:	-		0.0013	:	-		0.0012	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-29A	6/3/2003	MMW-29A-D01N-GRW GW4		MMW-29A	7/22/2003	MMW-29A-T01N-GRW GW4		MMW-29A	7/22/2003	MMW-29A-D01N-GRW GW4		MMW-29A	8/11/2003	MMW-29A-T01N-GRW GW4		MMW-29A	8/11/2003	MMW-29A-D01N-GRW GW4		MMW-29A	9/9/2003	MMW-29A-T01N-GRW GW4	
Field Measurements																										
DO	mg/L	T	-				2.68		:		-				4.53		:		-				8.66		:	
Eh	millivolts	T	-				742.6		:		-				269.9		:		-				262.6		:	
pH	SU	T	-				5.	J			-				4.6	J			-				4.8	J		
Specific Conductance	uS/cm	T	-				1460.		:		-				1357.		:		-				1450.		:	
Temperature	Celsius	T	-				9.83		:		-				9.8		:		-				8.43		:	
Turbidity	NTU	T	-				0.		:		-				26.3		:		-				0.		:	
General Chemistry																										
Ammonia	mg/L	T	-				<0.045	J			-				0.046		:		-				<0.077		:	
Bicarbonate (as CaCO3)	mg/L	T	-				4.9		:		-				<2.7		:		-				<4.3		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				16.1		:		-				19.8		:		-				16.6		:	
Fluoride	mg/L	T	-				28.3		:		-				26.7		:		-				25.5		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				3.3	J			-				3.5	J			-				3.1	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				<0.018	J			-				0.013	J			-				<0.014	J		
Phosphorus	mg/L	T	-				0.018		:		-				0.036		:		-				<0.01		:	
Sulfate	mg/L	T	-				766.	J			-				755.	J			-				913.	J		
Total Alkalinity	mg/L	T	-				4.9		:		-				<2.7		:		-				<4.3		:	
Total Dissolved Solids	mg/L	T	-				1360.		:		-				1730.		:		-				1320.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	-				<1.	J			-				<1.4	J			-				<1.4		:	
Total Suspended Solids	mg/L	T	-				<0.6		:		-				<1.3		:		-				0.8		:	
Laboratory Parameters																										
pH	SU	T	-				5.	J			-				4.6	J			-				4.8	J		
Specific Conductance	umhos/cm	T	-				1440.	J			-				1310.	J			-				1320.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01		:		-				<0.01		:	
Physical Properties																										
Hardness	mg/L	T	-				780.		:		-				734.		:		-				757.		:	
Hardness	mg/L	D	691.		:		-				759.		:		-				734.		:		-			
Metals																										

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 6/3/2003 MMW-29A-D01N-GRW GW4	MMW-29A 7/22/2003 MMW-29A-T01N-GRW GW4	MMW-29A 7/22/2003 MMW-29A-D01N-GRW GW4	MMW-29A 8/11/2003 MMW-29A-T01N-GRW GW4	MMW-29A 8/11/2003 MMW-29A-D01N-GRW GW4	MMW-29A 9/9/2003 MMW-29A-T01N-GRW GW4
Aluminum	mg/L	T	- :	31.3 :	- :	32.2 :	- :	31.3 :
Aluminum	mg/L	D	29.4 :	- :	30. :	- :	31.8 :	- :
Antimony	mg/L	T	- :	<0.001 J	- :	<0.038 :	- :	<0.082 :
Antimony	mg/L	D	<0.072 :	- :	<0.001 J	- :	<0.038 :	- :
Arsenic	mg/L	T	- :	<0.0004 :	- :	0.0429 :	- :	<0.035 :
Arsenic	mg/L	D	<0.04 :	- :	<0.0004 :	- :	<0.024 :	- :
Barium	mg/L	T	- :	0.0087 :	- :	<0.073 :	- :	<0.117 :
Barium	mg/L	D	<0.123 :	- :	0.0091 :	- :	<0.073 :	- :
Beryllium	mg/L	T	- :	0.0123 :	- :	0.0121 :	- :	<0.0153 :
Beryllium	mg/L	D	0.0162 :	- :	0.0129 :	- :	0.0138 :	- :
Boron	mg/L	T	- :	0.0125 :	- :	<0.046 :	- :	<0.064 :
Boron	mg/L	D	<0.084 :	- :	0.0137 :	- :	<0.046 :	- :
Cadmium	mg/L	T	- :	0.0351 :	- :	<0.06 :	- :	<0.13 :
Cadmium	mg/L	D	0.0387 :	- :	0.0373 :	- :	<0.06 :	- :
Calcium	mg/L	T	- :	149. :	- :	143. :	- :	146. :
Calcium	mg/L	D	133. :	- :	145. :	- :	143. :	- :
Chromium	mg/L	T	- :	<0.0006 :	- :	<0.14 :	- :	<0.23 :
Chromium	mg/L	D	<0.01 :	- :	<0.0006 :	- :	<0.14 :	- :
Cobalt	mg/L	T	- :	0.0856 :	- :	<0.2 :	- :	<0.32 :
Cobalt	mg/L	D	0.0906 :	- :	0.0929 :	- :	<0.2 :	- :
Copper	mg/L	T	- :	0.493 :	- :	0.484 :	- :	0.451 :
Copper	mg/L	D	0.509 :	- :	0.534 :	- :	0.453 :	- :
Iron	mg/L	T	- :	<0.168 :	- :	<3.33 :	- :	<4.55 :
Iron	mg/L	D	<0.311 :	- :	<0.168 :	- :	<3.33 :	- :
Lead	mg/L	T	- :	<0.00087 :	- :	<0.002 :	- :	<0.002 :
Lead	mg/L	D	<0.001 :	- :	0.00087 :	- :	<0.002 :	- :
Magnesium	mg/L	T	- :	98.9 :	- :	91.5 :	- :	95.5 :
Magnesium	mg/L	D	87.1 :	- :	96.1 :	- :	91.2 :	- :
Manganese	mg/L	T	- :	15.2 :	- :	14.7 :	- :	14.6 :
Manganese	mg/L	D	15. :	- :	14.8 :	- :	14.7 :	- :
Mercury	mg/L	T	- :	<0.0001 :	- :	<0.0001 :	- :	<0.0001 :
Mercury	mg/L	D	<0.0001 J	- :	<0.0001 :	- :	<0.0001 :	- :
Molybdenum	mg/L	T	- :	<0.0016 :	- :	<0.016 :	- :	<0.012 :
Molybdenum	mg/L	D	<0.023 :	- :	<0.0016 :	- :	<0.016 :	- :

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 6/3/2003 MMW-29A-D01N-GRW GW4		MMW-29A 7/22/2003 MMW-29A-T01N-GRW GW4		MMW-29A 7/22/2003 MMW-29A-D01N-GRW GW4		MMW-29A 8/11/2003 MMW-29A-T01N-GRW GW4		MMW-29A 8/11/2003 MMW-29A-D01N-GRW GW4		MMW-29A 9/9/2003 MMW-29A-T01N-GRW GW4	
Nickel	mg/L	T	-		0.345	:	-		0.396	:	-		<0.45	:
Nickel	mg/L	D	0.379	:	-		0.36	:	-		0.376	:	-	
Potassium	mg/L	T	-		4.33	:	-		<39.3	:	-		<63.8	:
Potassium	mg/L	D	3.52	:	-		4.69	:	-		41.	:	-	
Selenium	mg/L	T	-		0.0027	:	-		0.0031	:	-		<0.003	:
Selenium	mg/L	D	<0.008	:	-		0.0029	J	-		0.0038	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.0002	J	-		<0.001	:	-	
Sodium	mg/L	T	-		15.4	:	-		<47.3	:	-		<99.1	:
Sodium	mg/L	D	15.3	:	-		14.7	J	-		<47.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		<0.0004	:	-		<0.001	:	-	
Zinc	mg/L	T	-		4.88	:	-		4.96	:	-		4.88	:
Zinc	mg/L	D	4.64	:	-		4.76	:	-		4.94	:	-	
Isotopes														
Lead	mg/L	T	-		<0.00087	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		0.00087	:	-		<0.002	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-29A	MMW-29A	MMW-29A	
			9/9/2003	10/23/2003	10/23/2003	
			MMW-29A-D01N-GRW	MMW-29A-T01N-GRW	MMW-29A-D01N-GRW	
			GW4	GW4	GW4	
Field Measurements						
DO	mg/L	T	-	4.56 :	-	
Eh	millivolts	T	-	786.8 :	-	
pH	SU	T	-	4.7 J	-	
Specific Conductance	uS/cm	T	-	1442. :	-	
Temperature	Celsius	T	-	8.99 :	-	
Turbidity	NTU	T	-	0. :	-	
General Chemistry						
Ammonia	mg/L	T	-	<0.11 J	-	
Bicarbonate (as CaCO3)	mg/L	T	-	<3.8 :	-	
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	
Chloride	mg/L	T	-	15.7 :	-	
Fluoride	mg/L	T	-	25.2 :	-	
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	
Nitrate	mg/L	T	-	2.7 :	-	
Nitrite	mg/L	T	-	<0.005 :	-	
Phosphate, Ortho As P	mg/L	T	-	<0.018 :	-	
Phosphorus	mg/L	T	-	0.024 :	-	
Sulfate	mg/L	T	-	889. J	-	
Total Alkalinity	mg/L	T	-	<3.8 :	-	
Total Dissolved Solids	mg/L	T	-	1190. :	-	
Total Kjeldahl Nitrogen	mg/L	T	-	2.7 :	-	
Total Organic Carbon	mg/L	T	-	<1. J	-	
Total Suspended Solids	mg/L	T	-	<0.6 :	-	
Laboratory Parameters						
pH	SU	T	-	4.7 J	-	
Specific Conductance	umhos/cm	T	-	1190. J	-	
Inorganics						
Cyanide	mg/L	T	-	<0.01 J	-	
Physical Properties						
Hardness	mg/L	T	-	640. :	-	
Hardness	mg/L	D	773. :	-	668. :	-
Metals						

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-29A	MMW-29A	MMW-29A	
			11/3/2003	11/3/2003	12/11/2003	
			MMW-29A-T01N-GRW	MMW-29A-D01N-GRW	MMW-29A-T01N-GRW	
			GW4	GW4	GW4	
Field Measurements						
DO	mg/L	T	3.34 :	-	-	
Eh	millivolts	T	270.6 :	-	-	
pH	SU	T	3.5 J	-	4.7	J
Specific Conductance	uS/cm	T	1287. :	-	-	
Temperature	Celsius	T	8.23 :	-	-	
Turbidity	NTU	T	4. :	-	-	
General Chemistry						
Ammonia	mg/L	T	<0.053 J	-	0.073	:
Bicarbonate (as CaCO3)	mg/L	T	<4.6 :	-	1.8	:
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1.	:
Chloride	mg/L	T	16. :	-	17.8	:
Fluoride	mg/L	T	24. :	-	25.	:
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1.	:
Nitrate	mg/L	T	3. J	-	3.	:
Nitrite	mg/L	T	<0.005 J	-	<0.005	:
Phosphate, Ortho As P	mg/L	T	0.016 J	-	0.018	:
Phosphorus	mg/L	T	0.045 :	-	0.014	:
Sulfate	mg/L	T	786. :	-	767.	:
Total Alkalinity	mg/L	T	<4.6 J	-	1.8	:
Total Dissolved Solids	mg/L	T	1490. :	-	1290.	J
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24	:
Total Organic Carbon	mg/L	T	<1. :	-	1.	:
Total Suspended Solids	mg/L	T	<1.3 :	-	1.2	:
Laboratory Parameters						
pH	SU	T	3.5 J	-	4.7	J
Specific Conductance	umhos/cm	T	1440. J	-	1240.	J
Inorganics						
Cyanide	mg/L	T	<0.01 J	-	<0.01	:
Physical Properties						
Hardness	mg/L	T	595. :	-	667.	:
Hardness	mg/L	D	-	605. :	-	
Metals						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 9/9/2003 MMW-29A-D01N-GRW GW4		MMW-29A 10/23/2003 MMW-29A-T01N-GRW GW4		MMW-29A 10/23/2003 MMW-29A-D01N-GRW GW4		MMW-29A 11/3/2003 MMW-29A-T01N-GRW GW4		MMW-29A 11/3/2003 MMW-29A-D01N-GRW GW4		MMW-29A 12/11/2003 MMW-29A-T01N-GRW GW4	
Aluminum	mg/L	T	-		<28.6	:	-		24.4	:	-		26.2	:
Aluminum	mg/L	D	31.6	:	-		<29.9	:	-		25.	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.052	:	-		<0.082	:
Antimony	mg/L	D	<0.082	:	-		<0.082	:	-		<0.052	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.041	:	-		<0.035	:
Arsenic	mg/L	D	<0.035	:	-		<0.035	:	-		<0.041	J	-	
Barium	mg/L	T	-		<0.117	:	-		<0.115	:	-		<0.117	:
Barium	mg/L	D	<0.117	:	-		<0.117	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		<0.0226	:	-		0.0137	:	-		<0.0085	J
Beryllium	mg/L	D	<0.0164	:	-		<0.0207	:	-		0.012	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.063	:	-		<0.064	:
Boron	mg/L	D	<0.064	:	-		<0.064	:	-		<0.063	:	-	
Cadmium	mg/L	T	-		0.0823	:	-		<0.05	:	-		<0.13	:
Cadmium	mg/L	D	<0.13	:	-		<0.07	:	-		<0.05	:	-	
Calcium	mg/L	T	-		124.	:	-		106.	:	-		130.	:
Calcium	mg/L	D	149.	:	-		130.	:	-		109.	:	-	
Chromium	mg/L	T	-		<0.13	J	-		-		-		<0.23	:
Chromium	mg/L	D	<0.23	:	-		<0.154	J	-		-		-	
Cobalt	mg/L	T	-		<0.31	:	-		<0.29	:	-		<0.32	:
Cobalt	mg/L	D	<0.32	:	-		<0.31	:	-		<0.29	:	-	
Copper	mg/L	T	-		0.229	J	-		0.405	:	-		0.447	:
Copper	mg/L	D	0.466	:	-		0.261	J	-		0.331	J	-	
Iron	mg/L	T	-		<3.	:	-		<2.78	:	-		<4.55	:
Iron	mg/L	D	<4.55	:	-		<3.	:	-		<2.78	:	-	
Lead	mg/L	T	-		<0.002	:	-		0.0022	:	-		0.0011	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		80.	:	-		80.1	:	-		83.	:
Magnesium	mg/L	D	97.5	:	-		83.4	:	-		81.	:	-	
Manganese	mg/L	T	-		12.3	:	-		12.	J	-		12.7	:
Manganese	mg/L	D	15.	:	-		12.8	:	-		12.5	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.011	:	-		<0.012	:
Molybdenum	mg/L	D	<0.012	:	-		<0.012	:	-		<0.011	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-29A 9/9/2003 MMW-29A-D01N-GRW GW4	MMW-29A 10/23/2003 MMW-29A-T01N-GRW GW4	MMW-29A 10/23/2003 MMW-29A-D01N-GRW GW4	MMW-29A 11/3/2003 MMW-29A-T01N-GRW GW4	MMW-29A 11/3/2003 MMW-29A-D01N-GRW GW4	MMW-29A 12/11/2003 MMW-29A-T01N-GRW GW4
Nickel	mg/L	T	-	0.406 :	-	0.404 J	-	<0.45 :
Nickel	mg/L	D	<0.45 :	-	0.386 :	-	<0.24 J	-
Potassium	mg/L	T	-	<52.2 :	-	<31.8 :	-	<63.8 :
Potassium	mg/L	D	<63.8 :	-	<52.2 :	-	<31.8 :	-
Selenium	mg/L	T	-	<0.003 :	-	0.0051 :	-	0.0043 :
Selenium	mg/L	D	<0.003 :	-	<0.003 :	-	0.0032 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<84. :	-	<45.4 :	-	<99.1 :
Sodium	mg/L	D	<99.1 :	-	<66.7 :	-	<45.4 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.002 :
Vanadium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T	-	4.07 :	-	4.06 :	-	4.25 :
Zinc	mg/L	D	4.94 :	-	4.37 :	-	3.61 J	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	0.0022 :	-	0.0011 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	<0.002 :	-

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-29A		MMW-29A		MMW-29A		MMW-29A		MMW-29A		MMW-29A	
Sample Date			12/11/2003		1/13/2004		1/13/2004		2/24/2004		2/24/2004		3/22/2004	
Sample ID			MMW-29A-D01N-GRW		MMW-29A-T01N-GRW		MMW-29A-D01N-GRW		MMW-29A-T01N-GRW		MMW-29A-D01N-GRW		MMW-29-A	
Exposure Area			GW4		GW4		GW4		GW4		GW4		GW4	
Field Measurements														
DO	mg/L	T	-		4.35	:	-		3.62	:	-		-	
Eh	millivolts	T	-		396.6	:	-		287.6	:	-		-	
pH	SU	T	-		5.	J	-		4.38	:	-		-	
Specific Conductance	uS/cm	T	-		1382.	:	-		1694.	:	-		-	
Temperature	Celsius	T	-		7.98	:	-		7.11	:	-		-	
Turbidity	NTU	T	-		0.1	:	-		0.8	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.069	J	-		-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		<4.	J	-		-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Chloride	mg/L	T	-		18.4	:	-		-		-		-	
Fluoride	mg/L	T	-		27.	:	-		32.8	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Nitrate	mg/L	T	-		3.1	J	-		-		-		-	
Nitrite	mg/L	T	-		<0.005	J	-		-		-		-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		-	
Phosphorus	mg/L	T	-		<0.024	:	-		-		-		-	
Sulfate	mg/L	T	-		886.	:	-		1050.	:	-		-	
Total Alkalinity	mg/L	T	-		<4.	J	-		-		-		-	
Total Dissolved Solids	mg/L	T	-		1340.	:	-		1680.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		-		-	
Total Suspended Solids	mg/L	T	-		<1.2	:	-		2.3	:	-		-	
Laboratory Parameters														
pH	SU	T	-		5.	J	-		4.38	:	-		-	
Specific Conductance	umhos/cm	T	-		1390.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		-	
Physical Properties														
Hardness	mg/L	T	-		775.	:	-		882.	:	-		-	
Hardness	mg/L	D	684.	:	-		749.	:	-		940.	:	-	
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Exposure Area Fraction	MMW-29A 12/11/2003 MMW-29A-D01N-GRW GW4		MMW-29A 1/13/2004 MMW-29A-T01N-GRW GW4		MMW-29A 1/13/2004 MMW-29A-D01N-GRW GW4		MMW-29A 2/24/2004 MMW-29A-T01N-GRW GW4		MMW-29A 2/24/2004 MMW-29A-D01N-GRW GW4		MMW-29A 3/22/2004 MMW-29-A GW4	
Aluminum	mg/L	T		-		29.3	:	-		35.6	:	-		-	
Aluminum	mg/L	D		27.2	:	-		28.	:	-		38.2	:	-	
Antimony	mg/L	T		-		<0.0024	:	-		<0.029	:	-		-	
Antimony	mg/L	D		<0.082	:	-		<0.0024	:	-		<0.029	:	-	
Arsenic	mg/L	T		-		0.00045	:	-		<0.028	:	-		-	
Arsenic	mg/L	D		<0.035	:	-		<0.0004	:	-		<0.028	:	-	
Barium	mg/L	T		-		<0.0188	:	-		<0.053	:	-		-	
Barium	mg/L	D		<0.117	:	-		<0.0188	:	-		<0.053	:	-	
Beryllium	mg/L	T		-		0.013	:	-		0.0168	:	-		-	
Beryllium	mg/L	D		<0.0116	J	-		0.0125	:	-		0.0159	:	-	
Boron	mg/L	T		-		<0.0117	:	-		<0.023	:	-		-	
Boron	mg/L	D		<0.064	:	-		<0.0117	:	-		<0.023	:	-	
Cadmium	mg/L	T		-		0.0336	J	-		<0.07	:	-		-	
Cadmium	mg/L	D		<0.13	:	-		0.0329	:	-		<0.07	J	-	
Calcium	mg/L	T		-		154.	:	-		176.	:	-		-	
Calcium	mg/L	D		134.	:	-		149.	:	-		188.	:	-	
Chromium	mg/L	T		-		<0.0057	:	-		<0.15	:	-		-	
Chromium	mg/L	D		<0.23	:	-		<0.0057	:	-		<0.15	:	-	
Cobalt	mg/L	T		-		0.0814	J	-		<0.23	:	-		-	
Cobalt	mg/L	D		<0.32	:	-		0.0808	:	-		<0.23	:	-	
Copper	mg/L	T		-		0.488	:	-		0.674	:	-		-	
Copper	mg/L	D		0.489	:	-		0.474	:	-		0.687	:	-	
Iron	mg/L	T		-		<0.423	:	-		<3.57	:	-		-	
Iron	mg/L	D		<4.55	:	-		<0.423	:	-		<3.57	:	-	
Lead	mg/L	T		-		0.00094	:	-		0.0013	:	-		-	
Lead	mg/L	D		<0.001	:	-		0.00093	:	-		0.0012	:	-	
Magnesium	mg/L	T		-		94.4	:	-		107.	:	-		-	
Magnesium	mg/L	D		84.9	:	-		91.4	:	-		114.	:	-	
Manganese	mg/L	T		-		14.4	:	-		17.3	:	-		-	
Manganese	mg/L	D		13.	:	-		14.	:	-		18.5	:	-	
Mercury	mg/L	T		-		<0.0001	J	-		<0.0001	:	-		-	
Mercury	mg/L	D		<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T		-		<0.003	:	-		<0.024	:	-		-	
Molybdenum	mg/L	D		<0.0159	:	-		<0.003	:	-		<0.024	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29A 12/11/2003 MMW-29A-D01N-GRW GW4		MMW-29A 1/13/2004 MMW-29A-T01N-GRW GW4		MMW-29A 1/13/2004 MMW-29A-D01N-GRW GW4		MMW-29A 2/24/2004 MMW-29A-T01N-GRW GW4		MMW-29A 2/24/2004 MMW-29A-D01N-GRW GW4		MMW-29A 3/22/2004 MMW-29-A GW4	
Nickel	mg/L	T	-		0.335	:	-		0.439	:	-		-	
Nickel	mg/L	D	<0.45	:	-		0.329	:	-		0.437	:	-	
Potassium	mg/L	T	-		4.72	:	-		<39.1	:	-		-	
Potassium	mg/L	D	<63.8	:	-		4.66	:	-		<39.1	:	-	
Selenium	mg/L	T	-		0.0047	J	-		0.0035	J	-		-	
Selenium	mg/L	D	0.0036	:	-		0.0064	J	-		0.0046	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.001	:	-		-	
Silver	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.001	:	-	
Sodium	mg/L	T	-		17.5	:	-		<51.5	:	-		-	
Sodium	mg/L	D	<99.1	:	-		18.4	:	-		<51.5	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.001	:	-		-	
Vanadium	mg/L	D	<0.0068	:	-		<0.0004	:	-		<0.001	:	-	
Zinc	mg/L	T	-		4.69	:	-		5.74	:	-		-	
Zinc	mg/L	D	4.39	:	-		4.56	:	-		6.15	:	-	
Lanthanides														
Cerium	mg/L	T	-		-		-		0.0553	:	-		-	
Cerium	mg/L	D	-		-		-		-		0.0623	:	-	
Dysprosium	mg/L	T	-		-		-		0.00769	:	-		-	
Dysprosium	mg/L	D	-		-		-		-		0.00745	:	-	
Erbium	mg/L	T	-		-		-		0.00331	:	-		-	
Erbium	mg/L	D	-		-		-		-		0.00317	:	-	
Europium	mg/L	T	-		-		-		0.00219	:	-		-	
Europium	mg/L	D	-		-		-		-		0.00221	:	-	
Gadolinium	mg/L	T	-		-		-		0.0097	:	-		-	
Gadolinium	mg/L	D	-		-		-		-		0.0103	:	-	
Holmium	mg/L	T	-		-		-		0.00137	:	-		-	
Holmium	mg/L	D	-		-		-		-		0.00133	:	-	
Lanthanum	mg/L	T	-		-		-		0.0233	:	-		-	
Lanthanum	mg/L	D	-		-		-		-		0.0267	:	-	
Lutetium	mg/L	T	-		-		-		0.00029	:	-		-	
Lutetium	mg/L	D	-		-		-		-		0.00029	:	-	
Neodymium	mg/L	T	-		-		-		0.0392	:	-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-29A	MMW-29A	MMW-29A	MMW-29A	MMW-29A	MMW-29A
Sample Date			12/11/2003	1/13/2004	1/13/2004	2/24/2004	2/24/2004	3/22/2004
Sample ID			MMW-29A-D01N-GRW	MMW-29A-T01N-GRW	MMW-29A-D01N-GRW	MMW-29A-T01N-GRW	MMW-29A-D01N-GRW	MMW-29-A
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Neodymium	mg/L	D	-	-	-	-	0.0424 :	-
Praseodymium	mg/L	T	-	-	-	0.00861 :	-	-
Praseodymium	mg/L	D	-	-	-	-	0.0096 :	-
Samarium	mg/L	T	-	-	-	0.00901 :	-	-
Samarium	mg/L	D	-	-	-	-	0.00908 :	-
Terbium	mg/L	T	-	-	-	0.00148 :	-	-
Terbium	mg/L	D	-	-	-	-	0.0015 :	-
Thulium	mg/L	T	-	-	-	0.00037 :	-	-
Thulium	mg/L	D	-	-	-	-	0.00037 :	-
Ytterbium	mg/L	T	-	-	-	0.00207 :	-	-
Ytterbium	mg/L	D	-	-	-	-	0.00209 :	-
Yttrium	mg/L	T	-	-	-	0.0445 :	-	-
Yttrium	mg/L	D	-	-	-	-	0.049 :	-
Isotopes								
Delta D	per mil	T	-	-	-	-95. :	-	-
Delta O-18	per mil	T	-	-	-	-13.1 :	-	-
Lead	mg/L	T	-	0.00094 :	-	0.0013 :	-	-
Lead	mg/L	D	<0.001 :	-	0.00093 :	-	0.0012 :	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	-	-	14.03 :
DEL He3	%	T	-	-	-	-	-	38.6 :
DEL He4	%	T	-	-	-	-	-	62.3 :
He Corr	1E-8cc/g	T	-	-	-	-	-	7.738 :
Tritium TU	TU	T	-	-	-	-	-	8.492 :
Uncert Age	Years	T	-	-	-	-	-	0.54 :
Uncert TU	TU	T	-	-	-	-	-	0.255 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-29A	4/13/2004	MMW-29A-T01N-GRW GW4		MMW-29A	4/13/2004	MMW-29A-D01N-GRW GW4		MMW-30A	11/2/2002	MMW-30A-T01N-GRWRE GW4		MMW-30A	11/2/2002	MMW-30A-T01N-GRW GW4		MMW-30A	11/2/2002	MMW-30A-D01N-GRWRE GW4		MMW-30A	11/2/2002	MMW-30A-D01N-GRW GW4	
Field Measurements																										
DO	mg/L	T	5.52	:			-				-				3.42	:			-				-			
Eh	millivolts	T	411.9	:			-				-				42.1	:			-				-			
pH	SU	T	5.1	J			-				-				5.27	:			-				-			
Specific Conductance	uS/cm	T	1483.	:			-				-				2239.	:			-				-			
Temperature	Celsius	T	8.43	:			-				-				11.46	:			-				-			
Turbidity	NTU	T	43.	:			-				-				1.9	:			-				-			
General Chemistry																										
Ammonia	mg/L	T	<0.058	:			-				-				<0.14	:			-				-			
Bicarbonate (as CaCO3)	mg/L	T	<2.5	:			-				-				<1.8	:			-				-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				-				<1.	:			-				-			
Chloride	mg/L	T	19.3	:			-				-				19.6	:			-				-			
Fluoride	mg/L	T	26.5	:			-				28.9	J			-				-				-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				-				<1.	:			-				-			
Nitrate	mg/L	T	3.4	J			-				-				3.1	J			-				-			
Nitrite	mg/L	T	<0.005	J			-				-				<0.005	J			-				-			
Phosphate, Ortho As P	mg/L	T	0.022	J			-				-				<0.01	J			-				-			
Phosphorus	mg/L	T	0.021	:			-				-				0.023	:			-				-			
Sulfate	mg/L	T	956.	:			-				-				1450.	:			-				-			
Total Alkalinity	mg/L	T	<2.5	:			-				-				<1.8	:			-				-			
Total Dissolved Solids	mg/L	T	1480.	:			-				-				2290.	:			-				-			
Total Kjeldahl Nitrogen	mg/L	T	<0.25	:			-				-				<0.24	J			-				-			
Total Organic Carbon	mg/L	T	2.5	J			-				-				<1.	:			-				-			
Total Suspended Solids	mg/L	T	<1.3	J			-				-				3.3	:			-				-			
Laboratory Parameters																										
pH	SU	T	5.1	J			-				-				5.27	:			-				-			
Specific Conductance	umhos/cm	T	1410.	J			-				-				-				-				-			
Inorganics																										
Cyanide	mg/L	T	<0.01	:			-				-				<0.01	J			-				-			
Physical Properties																										
Hardness	mg/L	T	826.	:			-				-				1140.	:			-				-			
Hardness	mg/L	D	-				844.	:			-				-				1400.	:			-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29A 4/13/2004 MMW-29A-T01N-GR W GW4		MMW-29A 4/13/2004 MMW-29A-D01N-GR W GW4		MMW-30A 11/2/2002 MMW-30A-T01N-GR WRE GW4		MMW-30A 11/2/2002 MMW-30A-T01N-GR W GW4		MMW-30A 11/2/2002 MMW-30A-D01N-GR WRE GW4		MMW-30A 11/2/2002 MMW-30A-D01N-GR W GW4	
Aluminum	mg/L	T	32.6	:	-		-		-		-		-	
Aluminum	mg/L	D	-		32.6	:	-		-		52.1	:	-	
Antimony	mg/L	T	<0.053	:	-		-		-		-		-	
Antimony	mg/L	D	-		<0.053	:	-		-		<0.028	:	-	
Arsenic	mg/L	T	<0.037	:	-		-		-		-		-	
Arsenic	mg/L	D	-		<0.037	:	-		-		<0.023	:	-	
Barium	mg/L	T	<0.049	:	-		-		-		-		-	
Barium	mg/L	D	-		<0.049	:	-		-		<0.048	:	-	
Beryllium	mg/L	T	<0.0188	:	-		-		-		-		-	
Beryllium	mg/L	D	-		<0.0152	:	-		-		0.0164	:	-	
Boron	mg/L	T	<0.036	:	-		-		-		-		-	
Boron	mg/L	D	-		<0.036	:	-		-		<0.027	:	-	
Cadmium	mg/L	T	0.111	:	-		-		-		-		-	
Cadmium	mg/L	D	-		0.119	J	-		-		0.0604	:	-	
Calcium	mg/L	T	166.	:	-		-		-		-		-	
Calcium	mg/L	D	-		169.	:	-		-		301.	:	-	
Chromium	mg/L	T	<0.13	:	-		-		-		-		-	
Chromium	mg/L	D	-		<0.13	:	-		-		<0.37	:	-	
Cobalt	mg/L	T	0.235	:	-		-		-		-		-	
Cobalt	mg/L	D	-		0.219	:	-		-		0.264	:	-	
Copper	mg/L	T	0.768	:	-		-		-		-		-	
Copper	mg/L	D	-		0.801	:	-		-		<0.716	:	-	
Iron	mg/L	T	<2.93	J	-		-		-		-		-	
Iron	mg/L	D	-		<2.93	:	-		-		<4.89	:	-	
Lead	mg/L	T	<0.004	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.004	:	-		-		<0.001	:	-	
Magnesium	mg/L	T	100.	:	-		-		-		-		-	
Magnesium	mg/L	D	-		103.	:	-		-		157.	:	-	
Manganese	mg/L	T	16.1	:	-		-		-		-		-	
Manganese	mg/L	D	-		16.3	:	-		-		34.5	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		<0.0001	:
Molybdenum	mg/L	T	<0.014	:	-		-		-		-		-	
Molybdenum	mg/L	D	-		<0.014	:	-		-		<0.011	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-29A 4/13/2004 MMW-29A-T01N-GR W GW4		MMW-29A 4/13/2004 MMW-29A-D01N-GR W GW4		MMW-30A 11/2/2002 MMW-30A-T01N-GR WRE GW4		MMW-30A 11/2/2002 MMW-30A-T01N-GR W GW4		MMW-30A 11/2/2002 MMW-30A-D01N-GR WRE GW4		MMW-30A 11/2/2002 MMW-30A-D01N-GR W GW4	
Nickel	mg/L		T	0.727	:	-		-		-		-		-	
Nickel	mg/L		D	-		0.756	:	-		-		0.734	:	-	
Potassium	mg/L		T	<15.5	:	-		-		-		-		-	
Potassium	mg/L		D	-		<15.5	:	-		-		<31.	:	-	
Selenium	mg/L		T	<0.007	:	-		-		-		-		-	
Selenium	mg/L		D	-		<0.007	:	-		-		<0.008	:	-	
Silver	mg/L		T	<0.001	J	-		-		-		-		-	
Silver	mg/L		D	-		<0.001	J	-		-		<0.001	:	-	
Sodium	mg/L		T	<32.8	J	-		-		-		-		-	
Sodium	mg/L		D	-		<32.8	J	-		-		40.2	:	-	
Thallium	mg/L		T	<0.001	:	-		-		-		-		-	
Thallium	mg/L		D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L		T	<0.002	:	-		-		-		-		-	
Vanadium	mg/L		D	-		<0.002	:	-		-		<0.002	:	-	
Zinc	mg/L		T	5.3	:	-		-		-		-		-	
Zinc	mg/L		D	-		5.47	:	-		-		6.54	:	-	
Explosives															
2,4,6-Trinitrotoluene	mg/L		T	-		-		-		<0.00025	J	-		-	
2,6-Pyridinediamine,	mg/L		T	-		-		-		<0.00025	J	-		-	
Cyclotetramethylenetetranitramine	mg/L		T	-		-		-		<0.00025	J	-		-	
Cyclotrimethylenetrinitramine	mg/L		T	-		-		-		<0.00025	J	-		-	
Pentaerythritol tetranitrate	mg/L		T	-		-		-		<0.01	J	-		-	
Isotopes															
Lead	mg/L		T	<0.004	:	-		-		-		-		-	
Lead	mg/L		D	-		<0.004	:	-		-		<0.001	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-30A	11/3/2002	MMW-30A-T01N-GRW GW4		MMW-30A	1/14/2003	MMW-30A-T01N-GRW GW4		MMW-30A	1/14/2003	MMW-30A-D01N-GRW GW4		MMW-30A	4/10/2003	MMW-30A-T01N-GRW GW4		MMW-30A	4/10/2003	MMW-30A-D01N-GRW GW4		MMW-30A	7/21/2003	MMW-30A-T01N-GRW GW4	
Field Measurements																										
DO	mg/L	T		-				3.67		:		-				5.9		:		-				6.86		:
Eh	millivolts	T		-				235.3		:		-				277.6		:		-				196.9		:
pH	SU	T		-				4.66		:		-				5.6		:		-				4.5		J
Specific Conductance	uS/cm	T		-				2523.		:		-				2339.		:		-				2021.		:
Temperature	Celsius	T		-				9.2		:		-				8.93		:		-				16.91		:
Turbidity	NTU	T		-				139.8		:		-				174.3		:		-				5.6		:
General Chemistry																										
Ammonia	mg/L	T		-				<0.1		:		-				<0.04		:		-				<0.062		J
Bicarbonate (as CaCO3)	mg/L	T		-				<1.		:		-				38.4		:		-				<1.		:
Carbonate (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Chloride	mg/L	T		-				16.8		:		-				10.5		:		-				21.5		:
Fluoride	mg/L	T		-				42.5		:		-				7.4		:		-				31.9		:
Hydroxide (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Nitrate	mg/L	T		-				4.1		:		-				<0.98		J		-				3.4		J
Nitrite	mg/L	T		-				<0.005		:		-				<0.005		:		-				<0.005		J
Phosphate, Ortho As P	mg/L	T		-				<0.02		J		-				<0.44		J		-				<0.014		J
Phosphorus	mg/L	T		-				0.03		:		-				0.08		J		-				0.034		:
Sulfate	mg/L	T		-				1340.		J		-				1370.		J		-				1270.		J
Total Alkalinity	mg/L	T		-				<1.		:		-				38.4		:		-				<1.		:
Total Dissolved Solids	mg/L	T		-				2230.		:		-				2260.		:		-				2610.		:
Total Kjeldahl Nitrogen	mg/L	T		-				<0.24		:		-				0.45		J		-				<0.24		:
Total Organic Carbon	mg/L	T		-				<1.		:		-				<1.		J		-				<1.5		J
Total Suspended Solids	mg/L	T		-				9.		:		-				45.2		:		-				<1.6		J
Laboratory Parameters																										
pH	SU	T		-				4.66		:		-				5.6		:		-				4.5		J
Specific Conductance	umhos/cm	T		-				-				-				2110.		:		-				1950.		J
Inorganics																										
Cyanide	mg/L	T		-				<0.01		J		-				<0.01		J		-				<0.01		J
Physical Properties																										
Hardness	mg/L	T		-				1110.		:		-				1440.		:		-				1050.		:
Hardness	mg/L	D		-				-				1060.		:		-				1390.		:		-		
Metals																										

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-30A 11/3/2002 MMW-30A-T01N-GRW GW4	MMW-30A 1/14/2003 MMW-30A-T01N-GRW GW4	MMW-30A 1/14/2003 MMW-30A-D01N-GRW GW4	MMW-30A 4/10/2003 MMW-30A-T01N-GRW GW4	MMW-30A 4/10/2003 MMW-30A-D01N-GRW GW4	MMW-30A 7/21/2003 MMW-30A-T01N-GRW GW4
Aluminum	mg/L	T	-	57.1 :	-	6.77 :	-	61.1 :
Aluminum	mg/L	D	-	-	53.1 :	-	<4.26 :	-
Antimony	mg/L	T	-	<0.028 :	-	<0.072 :	-	<0.038 :
Antimony	mg/L	D	-	-	<0.028 :	-	<0.072 :	-
Arsenic	mg/L	T	-	<0.023 J	-	<0.04 :	-	0.0332 :
Arsenic	mg/L	D	-	-	<0.023 J	-	<0.04 :	-
Barium	mg/L	T	-	<0.048 :	-	<0.123 :	-	<0.073 :
Barium	mg/L	D	-	-	<0.048 :	-	<0.123 :	-
Beryllium	mg/L	T	-	0.0169 :	-	0.005 :	-	0.0205 :
Beryllium	mg/L	D	-	-	0.0162 :	-	0.0039 :	-
Boron	mg/L	T	-	<0.027 :	-	<0.084 :	-	<0.046 :
Boron	mg/L	D	-	-	<0.027 :	-	<0.084 :	-
Cadmium	mg/L	T	-	<0.08 :	-	0.0118 :	-	<0.12 :
Cadmium	mg/L	D	-	-	<0.08 :	-	0.0106 :	-
Calcium	mg/L	T	-	207. :	-	444. :	-	183. :
Calcium	mg/L	D	-	-	200. :	-	425. :	-
Chromium	mg/L	T	-	<0.16 :	-	<0.01 :	-	<0.19 J
Chromium	mg/L	D	-	-	<0.16 :	-	<0.01 :	-
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	-	<0.23 :	-	0.0476 :	-	<0.37 :
Cobalt	mg/L	D	-	-	<0.23 :	-	0.044 :	-
Copper	mg/L	T	-	0.709 :	-	0.0718 :	-	0.682 :
Copper	mg/L	D	-	-	0.693 :	-	0.0486 :	-
Iron	mg/L	T	-	<2.66 :	-	0.922 :	-	<6.67 :
Iron	mg/L	D	-	-	<2.66 :	-	<0.311 :	-
Lead	mg/L	T	-	0.0011 :	-	<0.0054 :	-	0.0016 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.0011 :	-
Magnesium	mg/L	T	-	144. :	-	80.7 :	-	144. :
Magnesium	mg/L	D	-	-	136. :	-	79.7 :	-
Manganese	mg/L	T	-	31. :	-	16.4 :	-	31.9 :
Manganese	mg/L	D	-	-	29.4 :	-	15.5 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.011 J	-	0.0281 :	-	<0.016 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-30A 11/3/2002 MMW-30A-T01N-GRW GW4	MMW-30A 1/14/2003 MMW-30A-T01N-GRW GW4	MMW-30A 1/14/2003 MMW-30A-D01N-GRW GW4	MMW-30A 4/10/2003 MMW-30A-T01N-GRW GW4	MMW-30A 4/10/2003 MMW-30A-D01N-GRW GW4	MMW-30A 7/21/2003 MMW-30A-T01N-GRW GW4
Molybdenum	mg/L	D	-	-	<0.011 J	-	<0.023 :	-
Nickel	mg/L	T	-	0.543 :	-	0.177 :	-	0.684 :
Nickel	mg/L	D	-	-	0.595 :	-	0.173 :	-
Potassium	mg/L	T	-	<31.4 :	-	4.98 :	-	<37.1 :
Potassium	mg/L	D	-	-	<31.4 :	-	3.66 :	-
Selenium	mg/L	T	-	<0.008 :	-	<0.001 :	-	0.0102 :
Selenium	mg/L	D	-	-	<0.008 :	-	0.0016 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.001 J
Silver	mg/L	D	-	-	<0.001 :	-	<0.0002 :	-
Sodium	mg/L	T	-	55.7 :	-	28.6 :	-	<55.8 :
Sodium	mg/L	D	-	-	60. :	-	30.6 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.0002 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.002 :	-	0.00074 :	-	<0.002 :
Vanadium	mg/L	D	-	-	<0.002 :	-	<0.0002 :	-
Zinc	mg/L	T	-	6.82 :	-	<0.936 :	-	5.9 :
Zinc	mg/L	D	-	-	6.46 :	-	<0.868 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	0.0011 :	-	<0.0054 :	-	0.0016 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.0011 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-30A	7/21/2003	MMW-30A-D01N-GRW		MMW-30A	10/19/2003	MMW-30A-T01N-GRW		MMW-30A	10/19/2003	MMW-30A-D01N-GRW		MMW-30A	1/12/2004	MMW-30A-T01N-GRW		MMW-30A	1/12/2004	MMW-30A-D01N-GRW	
					GW4				GW4				GW4				GW4				GW4	
Field Measurements																						
DO	mg/L	T			-				4.37	:			-				5.41	:			-	
Eh	millivolts	T			-				390.5	:			-				249.7	:			-	
pH	SU	T			-				4.5	J			-				4.7	J			-	
Specific Conductance	uS/cm	T			-				2237.	:			-				1773.	:			-	
Temperature	Celsius	T			-				10.95	:			-				8.3	:			-	
Turbidity	NTU	T			-				0.9	:			-				2.8	:			-	
General Chemistry																						
Ammonia	mg/L	T			-				<0.077	J			-				<0.067	J			-	
Bicarbonate (as CaCO3)	mg/L	T			-				<1.	:			-				<1.	:			-	
Carbonate (as CaCO3)	mg/L	T			-				<1.	:			-				<1.	:			-	
Chloride	mg/L	T			-				22.9	:			-				17.3	:			-	
Fluoride	mg/L	T			-				30.6	:			-				24.4	:			-	
Hydroxide (as CaCO3)	mg/L	T			-				<1.	:			-				<1.	:			-	
Nitrate	mg/L	T			-				2.8	J			-				2.8	J			-	
Nitrite	mg/L	T			-				<0.005	:			-				<0.005	:			-	
Phosphate, Ortho As P	mg/L	T			-				<0.022	:			-				<0.015	J			-	
Phosphorus	mg/L	T			-				0.03	:			-				<0.03	:			-	
Sulfate	mg/L	T			-				1280.	J			-				1110.	:			-	
Total Alkalinity	mg/L	T			-				<1.	:			-				<1.	:			-	
Total Dissolved Solids	mg/L	T			-				2330.	:			-				1630.	:			-	
Total Kjeldahl Nitrogen	mg/L	T			-				<0.24	:			-				<0.24	:			-	
Total Organic Carbon	mg/L	T			-				1.3	J			-				<1.3	:			-	
Total Suspended Solids	mg/L	T			-				2.7	:			-				<1.2	:			-	
Laboratory Parameters																						
pH	SU	T			-				4.5	J			-				4.7	J			-	
Specific Conductance	umhos/cm	T			-				1760.	J			-				1710.	J			-	
Inorganics																						
Cyanide	mg/L	T			-				<0.01	J			-				<0.01	J			-	
Physical Properties																						
Hardness	mg/L	T			-				1060.	:			-				852.	:			-	
Hardness	mg/L	D			1010.	:			-				1100.	:			-				888.	:
Metals																						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-30A 7/21/2003 MMW-30A-D01N-GRW GW4		MMW-30A 10/19/2003 MMW-30A-T01N-GRW GW4		MMW-30A 10/19/2003 MMW-30A-D01N-GRW GW4		MMW-30A 1/12/2004 MMW-30A-T01N-GRW GW4		MMW-30A 1/12/2004 MMW-30A-D01N-GRW GW4		MMW-30A 2/24/2004 MMW-30A-T01N-GRW GW4	
Aluminum	mg/L	T	-		53.	:	-		39.1	:	-		<3.29	:
Aluminum	mg/L	D	57.6	:	-		56.5	:	-		41.7	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.029	:	-		<0.029	:
Antimony	mg/L	D	<0.038	:	-		<0.052	:	-		<0.029	:	-	
Arsenic	mg/L	T	-		<0.0543	:	-		<0.028	J	-		<0.028	:
Arsenic	mg/L	D	0.0347	:	-		<0.0807	:	-		<0.028	J	-	
Barium	mg/L	T	-		<0.115	:	-		<0.053	:	-		<0.053	:
Barium	mg/L	D	<0.073	:	-		<0.115	:	-		<0.053	:	-	
Beryllium	mg/L	T	-		0.012	J	-		0.0129	:	-		<0.003	:
Beryllium	mg/L	D	0.0202	:	-		0.0129	J	-		0.013	:	-	
Boron	mg/L	T	-		<0.063	:	-		<0.023	:	-		<0.023	:
Boron	mg/L	D	<0.046	:	-		<0.063	:	-		<0.023	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		<0.07	:
Cadmium	mg/L	D	<0.12	:	-		<0.13	:	-		<0.07	:	-	
Calcium	mg/L	T	-		194.	:	-		165.	:	-		528.	:
Calcium	mg/L	D	177.	:	-		200.	:	-		173.	:	-	
Chromium	mg/L	T	-		<0.23	J	-		<0.57	:	-		<0.15	:
Chromium	mg/L	D	<0.19	J	-		<0.23	J	-		<0.57	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.37	:	-		<0.23	:
Cobalt	mg/L	D	<0.37	:	-		<0.32	:	-		<0.37	:	-	
Copper	mg/L	T	-		0.74	:	-		0.514	:	-		<0.3	:
Copper	mg/L	D	0.507	:	-		0.754	:	-		0.577	:	-	
Iron	mg/L	T	-		<4.55	:	-		<4.23	:	-		<3.57	:
Iron	mg/L	D	<6.67	:	-		<4.55	:	-		<4.23	:	-	
Lead	mg/L	T	-		<0.002	:	-		0.001	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		139.	:	-		107.	:	-		72.4	:
Magnesium	mg/L	D	139.	:	-		145.	:	-		110.	:	-	
Manganese	mg/L	T	-		30.7	:	-		23.	:	-		10.3	:
Manganese	mg/L	D	30.8	:	-		32.1	:	-		23.1	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	J	-		<0.024	:	-		0.0508	:
Molybdenum	mg/L	D	<0.016	:	-		<0.011	J	-		<0.024	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-30A	MMW-30A	MMW-30A	
			7/21/2003	10/19/2003	10/19/2003	
			MMW-30A-D01N-GRW	MMW-30A-T01N-GRW	MMW-30A-D01N-GRW	
			GW4	GW4	GW4	
Nickel	mg/L	T	-	<0.45 J	-	
Nickel	mg/L	D	0.543 :	-	<0.45 J	
Potassium	mg/L	T	-	<63.8 :	-	
Potassium	mg/L	D	<37.1 :	-	<63.8 :	
Selenium	mg/L	T	-	0.0079 :	-	
Selenium	mg/L	D	<0.008 J	-	0.0054 :	
Silver	mg/L	T	-	<0.001 :	-	
Silver	mg/L	D	<0.001 J	-	<0.001 :	
Sodium	mg/L	T	-	<99.1 :	-	
Sodium	mg/L	D	<53.2 :	-	<99.1 :	
Thallium	mg/L	T	-	<0.001 :	-	
Thallium	mg/L	D	<0.001 :	-	<0.001 :	
Vanadium	mg/L	T	-	<0.001 :	-	
Vanadium	mg/L	D	<0.002 :	-	<0.001 :	
Zinc	mg/L	T	-	<6.53 :	-	
Zinc	mg/L	D	5.7 :	-	<6.85 :	
Lanthanides						
Cerium	mg/L	T	-	-	-	
Dysprosium	mg/L	T	-	-	-	
Erbium	mg/L	T	-	-	-	
Europium	mg/L	T	-	-	-	
Gadolinium	mg/L	T	-	-	-	
Holmium	mg/L	T	-	-	-	
Lanthanum	mg/L	T	-	-	-	
Lutetium	mg/L	T	-	-	-	
Neodymium	mg/L	T	-	-	-	
Praseodymium	mg/L	T	-	-	-	
Samarium	mg/L	T	-	-	-	
Terbium	mg/L	T	-	-	-	
Thulium	mg/L	T	-	-	-	
Ytterbium	mg/L	T	-	-	-	
Yttrium	mg/L	T	-	-	-	
Isotopes						
204Pb/206Pb	mg/L	T	-	-	-	

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			MMW-30A	MMW-30A	MMW-30A	
			1/12/2004	1/12/2004	2/24/2004	
			MMW-30A-T01N-GRW	MMW-30A-D01N-GRW	MMW-30A-T01N-GRW	
			GW4	GW4	GW4	
Nickel	mg/L	T	<1.68 :	-	<0.24 :	
Nickel	mg/L	D	-	<1.68 :	-	
Potassium	mg/L	T	<110. :	-	<39.1 :	
Potassium	mg/L	D	-	<110. :	-	
Selenium	mg/L	T	0.0066 J	-	<0.002 J	
Selenium	mg/L	D	-	0.0107 :	-	
Silver	mg/L	T	<0.001 :	-	<0.001 :	
Silver	mg/L	D	-	<0.001 :	-	
Sodium	mg/L	T	<92. :	-	<51.5 :	
Sodium	mg/L	D	-	<92. :	-	
Thallium	mg/L	T	<0.001 :	-	<0.001 :	
Thallium	mg/L	D	-	<0.001 :	-	
Vanadium	mg/L	T	<0.002 :	-	<0.001 :	
Vanadium	mg/L	D	-	<0.002 :	-	
Zinc	mg/L	T	5.29 :	-	<0.4 :	
Zinc	mg/L	D	-	5.5 :	-	
Lanthanides						
Cerium	mg/L	T	-	-	0.037 :	
Dysprosium	mg/L	T	-	-	0.00438 :	
Erbium	mg/L	T	-	-	0.00191 :	
Europium	mg/L	T	-	-	0.00105 :	
Gadolinium	mg/L	T	-	-	0.00687 :	
Holmium	mg/L	T	-	-	0.00083 :	
Lanthanum	mg/L	T	-	-	0.0403 :	
Lutetium	mg/L	T	-	-	0.00015 :	
Neodymium	mg/L	T	-	-	0.0268 :	
Praseodymium	mg/L	T	-	-	0.00723 :	
Samarium	mg/L	T	-	-	0.00433 :	
Terbium	mg/L	T	-	-	0.00091 :	
Thulium	mg/L	T	-	-	0.0002 :	
Ytterbium	mg/L	T	-	-	0.00102 :	
Yttrium	mg/L	T	-	-	0.0345 :	
Isotopes						
204Pb/206Pb	mg/L	T	-	-	0.00005 :	

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-30A	MMW-30A	MMW-30A	MMW-30A
			7/21/2003	10/19/2003	10/19/2003	1/12/2004
			MMW-30A-D01N-GRW	MMW-30A-T01N-GRW	MMW-30A-D01N-GRW	MMW-30A-T01N-GRW
			GW4	GW4	GW4	GW4
207Pb/206Pb	mg/L	T	-	-	-	-
208Pb/206Pb	mg/L	T	-	-	-	-
Delta D	per mil	T	-	-	-	-
Delta O-18	per mil	T	-	-	-	-
Lead	mg/L	T	-	<0.002 :	-	0.001 :
Lead	mg/L	D	<0.001 :	-	<0.002 :	-

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-30A	MMW-30A	MMW-30A	MMW-30A
			1/12/2004	2/24/2004		
			MMW-30A-D01N-GRW	MMW-30A-T01N-GRW		
			GW4	GW4		
207Pb/206Pb	mg/L	T	-	0.00047 J		
208Pb/206Pb	mg/L	T	-	0.00074 J		
Delta D	per mil	T	-	-82.8 :		
Delta O-18	per mil	T	-	-11.1 :		
Lead	mg/L	T	-	<0.001 :		
Lead	mg/L	D	<0.001 :	-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units		Site ID	MMW-30A	MMW-30A	MMW-30A	MMW-30A	MMW-31A	MMW-31A
			Sample Date	2/24/2004	3/22/2004	4/18/2004	4/18/2004	11/2/2002	11/2/2002
			Sample ID	MMW-30A-D01N-GRW	MMW-30-A	MMW-30A-T01N-GRW	MMW-30A-D01N-GRW	MMW-31A-T01N-GRWRE	MMW-31A-T01N-GRW
		Exposure Area	Fraction	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L		T	-	-	5.06 :	-	-	6.7 :
Eh	millivolts		T	-	-	65.4 :	-	-	453.8 :
pH	SU		T	-	-	6.5 J	-	-	4.21 :
Specific Conductance	uS/cm		T	-	-	2395. :	-	-	2358. :
Temperature	Celsius		T	-	-	10.76 :	-	-	8.89 :
Turbidity	NTU		T	-	-	81. :	-	-	9.9 :
General Chemistry									
Ammonia	mg/L		T	-	-	<0.041 :	-	-	<0.24 J
Bicarbonate (as CaCO3)	mg/L		T	-	-	87.4 :	-	-	<1. :
Carbonate (as CaCO3)	mg/L		T	-	-	<1. :	-	-	<1. :
Chloride	mg/L		T	-	-	9.3 :	-	-	26.2 :
Fluoride	mg/L		T	-	-	38.5 :	-	33.4 J	-
Hydroxide (as CaCO3)	mg/L		T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L		T	-	-	0.38 J	-	-	5.2 J
Nitrite	mg/L		T	-	-	<0.005 J	-	-	<0.005 J
Phosphate, Ortho As P	mg/L		T	-	-	<0.01 J	-	-	0.017 J
Phosphorus	mg/L		T	-	-	0.58 :	-	-	0.035 :
Sulfate	mg/L		T	-	-	1440. :	-	1630. J	-
Total Alkalinity	mg/L		T	-	-	87.4 :	-	-	<1. :
Total Dissolved Solids	mg/L		T	-	-	2180. :	-	-	2510. :
Total Kjeldahl Nitrogen	mg/L		T	-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L		T	-	-	<2.3 J	-	-	<1. :
Total Suspended Solids	mg/L		T	-	-	1300. J	-	-	3.7 J
Laboratory Parameters									
pH	SU		T	-	-	6.5 J	-	-	4.21 :
Specific Conductance	umhos/cm		T	-	-	2010. J	-	-	-
Inorganics									
Cyanide	mg/L		T	-	-	<0.01 :	-	-	<0.01 J
Physical Properties									
Hardness	mg/L		T	-	-	1490. :	-	-	-
Hardness	mg/L		D	1570. :	-	-	1380. :	-	-
Metals									

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-30A 2/24/2004 MMW-30A-D01N-GRW GW4	MMW-30A 3/22/2004 MMW-30-A GW4	MMW-30A 4/18/2004 MMW-30A-T01N-GRW GW4	MMW-30A 4/18/2004 MMW-30A-D01N-GRW GW4	MMW-31A 11/2/2002 MMW-31A-T01N-GRWRE GW4	MMW-31A 11/2/2002 MMW-31A-T01N-GRW GW4
Aluminum	mg/L	T	-	-	2.52 :	-	-	-
Aluminum	mg/L	D	<3.29 :	-	-	2.46 :	-	-
Antimony	mg/L	T	-	-	<0.0008 :	-	-	-
Antimony	mg/L	D	<0.029 :	-	-	<0.0008 :	-	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	-
Arsenic	mg/L	D	<0.028 :	-	-	<0.0004 :	-	-
Barium	mg/L	T	-	-	0.016 :	-	-	-
Barium	mg/L	D	<0.053 :	-	-	0.0114 :	-	-
Beryllium	mg/L	T	-	-	<0.0003 J	-	-	-
Beryllium	mg/L	D	<0.003 :	-	-	0.00077 J	-	-
Boron	mg/L	T	-	-	0.0103 :	-	-	-
Boron	mg/L	D	<0.023 :	-	-	0.0102 :	-	-
Cadmium	mg/L	T	-	-	0.0031 J	-	-	-
Cadmium	mg/L	D	<0.07 J	-	-	0.0069 J	-	-
Calcium	mg/L	T	-	-	484. :	-	-	-
Calcium	mg/L	D	515. :	-	-	431. :	-	-
Chromium	mg/L	T	-	-	<0.0006 :	-	-	-
Chromium	mg/L	D	<0.15 :	-	-	<0.0006 :	-	-
Cobalt	mg/L	T	-	-	0.0305 :	-	-	-
Cobalt	mg/L	D	<0.23 :	-	-	0.029 :	-	-
Copper	mg/L	T	-	-	0.0343 J	-	-	-
Copper	mg/L	D	<0.3 :	-	-	0.0491 J	-	-
Iron	mg/L	T	-	-	0.69 J	-	-	-
Iron	mg/L	D	<3.57 :	-	-	<0.293 :	-	-
Lead	mg/L	T	-	-	0.0024 :	-	-	-
Lead	mg/L	D	<0.001 :	-	-	<0.0008 :	-	-
Magnesium	mg/L	T	-	-	68.4 :	-	-	-
Magnesium	mg/L	D	69.2 :	-	-	73.9 :	-	-
Manganese	mg/L	T	-	-	11.1 :	-	-	-
Manganese	mg/L	D	10.1 :	-	-	9.72 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	0.0299 :	-	-	-
Molybdenum	mg/L	D	0.0305 :	-	-	0.0164 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-30A 2/24/2004 MMW-30A-D01N-GRW GW4	MMW-30A 3/22/2004 MMW-30-A GW4	MMW-30A 4/18/2004 MMW-30A-T01N-GRW GW4	MMW-30A 4/18/2004 MMW-30A-D01N-GRW GW4	MMW-31A 11/2/2002 MMW-31A-T01N-GRWRE GW4	MMW-31A 11/2/2002 MMW-31A-T01N-GRW GW4
Nickel	mg/L	T	-	-	0.053 J	-	-	-
Nickel	mg/L	D	<0.24 :	-	-	0.122 J	-	-
Potassium	mg/L	T	-	-	5.98 :	-	-	-
Potassium	mg/L	D	<39.1 :	-	-	5.16 :	-	-
Selenium	mg/L	T	-	-	<0.0014 :	-	-	-
Selenium	mg/L	D	<0.002 J	-	-	0.0017 :	-	-
Silver	mg/L	T	-	-	<0.0002 J	-	-	-
Silver	mg/L	D	<0.001 :	-	-	<0.0002 J	-	-
Sodium	mg/L	T	-	-	<31.3 :	-	-	-
Sodium	mg/L	D	<51.5 :	-	-	<22.2 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	-
Thallium	mg/L	D	<0.001 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	0.00097 :	-	-	-
Vanadium	mg/L	D	<0.001 :	-	-	0.00061 :	-	-
Zinc	mg/L	T	-	-	0.289 J	-	-	-
Zinc	mg/L	D	<0.4 :	-	-	0.621 J	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	-	<0.01 :
Lanthanides								
Cerium	mg/L	D	0.00804 :	-	-	-	-	-
Dysprosium	mg/L	D	0.00072 :	-	-	-	-	-
Erbium	mg/L	D	0.00032 :	-	-	-	-	-
Europium	mg/L	D	0.00018 :	-	-	-	-	-
Gadolinium	mg/L	D	0.00117 :	-	-	-	-	-
Holmium	mg/L	D	0.00014 :	-	-	-	-	-
Lanthanum	mg/L	D	0.00888 :	-	-	-	-	-
Lutetium	mg/L	D	0.00002 :	-	-	-	-	-
Neodymium	mg/L	D	0.00495 :	-	-	-	-	-
Praseodymium	mg/L	D	0.00133 :	-	-	-	-	-
Samarium	mg/L	D	0.00076 :	-	-	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MMW-30A	MMW-30A	MMW-30A	MMW-30A	MMW-31A	MMW-31A
			2/24/2004	3/22/2004	4/18/2004	4/18/2004	11/2/2002	11/2/2002
			MMW-30A-D01N-GRW	MMW-30-A	MMW-30A-T01N-GRW	MMW-30A-D01N-GRW	MMW-31A-T01N-GRWRE	MMW-31A-T01N-GRW
			GW4	GW4	GW4	GW4	GW4	GW4
Terbium	mg/L	D	0.00015 :	-	-	-	-	-
Thulium	mg/L	D	0.00004 :	-	-	-	-	-
Ytterbium	mg/L	D	0.00018 :	-	-	-	-	-
Yttrium	mg/L	D	0.00698 :	-	-	-	-	-
Isotopes								
204Pb/206Pb	mg/L	D	0.00005 :	-	-	-	-	-
207Pb/206Pb	mg/L	D	0.00083 :	-	-	-	-	-
208Pb/206Pb	mg/L	D	0.00201 :	-	-	-	-	-
Delta 34S	per mil	D	-0.4 :	-	-	-	-	-
Lead	mg/L	T	-	-	0.0024 :	-	-	-
Lead	mg/L	D	<0.001 :	-	-	<0.0008 :	-	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	90.61 :	-	-	-	-
DEL He3	%	T	-	8.4 :	-	-	-	-
DEL He4	%	T	-	88.3 :	-	-	-	-
He Corr	1E-8cc/g	T	-	8.918 :	-	-	-	-
Tritium TU	TU	T	-	0.014 :	-	-	-	-
Uncert Age	Years	T	-	2.66 :	-	-	-	-
Uncert TU	TU	T	-	0.01 :	-	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-31A	MMW-31A	MMW-31A	MMW-31A	MMW-31A	MMW-31A
Sample Date			11/2/2002	11/2/2002	11/3/2002	1/10/2003	1/10/2003	4/8/2003
Sample ID			MMW-31A-D01N-GR WRE	MMW-31A-D01N-GR W	MMW-31A-T01N-GR W	MMW-31A-T01N-GR W	MMW-31A-D01N-GR W	MMW-31A-T01N-GR W
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements								
DO	mg/L	T	-	-	-	5.78 :	-	6.36 :
Eh	millivolts	T	-	-	-	428.6 :	-	406.3 :
pH	SU	T	-	-	-	4.11 :	-	4.4 J
Specific Conductance	uS/cm	T	-	-	-	2632. :	-	2509. :
Temperature	Celsius	T	-	-	-	8.77 :	-	9.06 :
Turbidity	NTU	T	-	-	-	1.1 :	-	6.3 :
General Chemistry								
Ammonia	mg/L	T	-	-	-	<0.11 :	-	<0.08 :
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Chloride	mg/L	T	-	-	-	32.2 :	-	37.2 :
Fluoride	mg/L	T	-	-	-	7.4 :	-	41.7 :
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	-	-	4.2 J	-	4.1 J
Nitrite	mg/L	T	-	-	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	-	-	0.029 J	-	<0.027 :
Phosphorus	mg/L	T	-	-	-	0.036 :	-	0.037 :
Sulfate	mg/L	T	-	-	-	1720. J	-	1520. J
Total Alkalinity	mg/L	T	-	-	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T	-	-	-	2620. J	-	2480. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	<0.24 J
Total Organic Carbon	mg/L	T	-	-	-	1. :	-	<1. J
Total Suspended Solids	mg/L	T	-	-	-	2.2 :	-	<6.7 :
Laboratory Parameters								
pH	SU	T	-	-	-	4.11 :	-	4.4 J
Specific Conductance	umhos/cm	T	-	-	-	-	-	2200. J
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	-	1340. :	-	1290. :
Hardness	mg/L	D	1180. :	-	-	-	1350. :	-
Metals								

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-31A		MMW-31A		MMW-31A		MMW-31A		MMW-31A		MMW-31A	
Sample Date			11/2/2002		11/2/2002		11/3/2002		1/10/2003		1/10/2003		4/8/2003	
Sample ID			MMW-31A-D01N-GRWRE		MMW-31A-D01N-GRW		MMW-31A-T01N-GRW		MMW-31A-T01N-GRW		MMW-31A-D01N-GRW		MMW-31A-T01N-GRW	
Exposure Area			GW4		GW4		GW4		GW4		GW4		GW4	
Aluminum	mg/L	T	-		-		-		82.5	:	-		74.9	:
Aluminum	mg/L	D	70.3	:	-		-		-		82.8	:	-	
Antimony	mg/L	T	-		-		-		<0.028	:	-		<0.003	:
Antimony	mg/L	D	<0.028	:	-		-		-		<0.028	:	-	
Arsenic	mg/L	T	-		-		-		<0.023	:	-		<0.04	:
Arsenic	mg/L	D	<0.023	:	-		-		-		0.027	:	-	
Barium	mg/L	T	-		-		-		<0.048	:	-		<0.123	:
Barium	mg/L	D	<0.048	:	-		-		-		<0.048	:	-	
Beryllium	mg/L	T	-		-		-		0.0233	:	-		<0.0328	:
Beryllium	mg/L	D	0.0216	:	-		-		-		0.023	:	-	
Boron	mg/L	T	-		-		-		<0.027	:	-		<0.084	:
Boron	mg/L	D	<0.027	:	-		-		-		<0.027	:	-	
Cadmium	mg/L	T	-		-		-		0.0585	:	-		0.0535	:
Cadmium	mg/L	D	<0.08	:	-		-		-		0.0626	:	-	
Calcium	mg/L	T	-		-		-		237.	:	-		227.	:
Calcium	mg/L	D	206.	:	-		-		-		238.	:	-	
Chromium	mg/L	T	-		-		-		<0.37	:	-		<0.01	:
Chromium	mg/L	D	<0.16	J	-		-		-		<0.37	:	-	
Chromium, Hexavalent	mg/L	D	-		-		0.0023	J	-		-		-	
Cobalt	mg/L	T	-		-		-		0.34	:	-		0.326	:
Cobalt	mg/L	D	0.266	:	-		-		-		0.37	:	-	
Copper	mg/L	T	-		-		-		1.28	:	-		1.19	:
Copper	mg/L	D	<1.05	:	-		-		-		1.32	:	-	
Iron	mg/L	T	-		-		-		<4.89	:	-		<3.11	:
Iron	mg/L	D	<2.66	:	-		-		-		<4.89	:	-	
Lead	mg/L	T	-		-		-		0.0172	:	-		<0.0182	:
Lead	mg/L	D	0.0215	:	-		-		-		0.0168	:	-	
Magnesium	mg/L	T	-		-		-		183.	:	-		175.	:
Magnesium	mg/L	D	161.	:	-		-		-		184.	:	-	
Manganese	mg/L	T	-		-		-		43.2	:	-		40.7	:
Manganese	mg/L	D	37.3	:	-		-		-		43.2	:	-	
Mercury	mg/L	T	-		-		-		<0.00024	:	-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	-		-		-		<0.011	:	-		<0.023	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-31A 11/2/2002 MMW-31A-D01N-GRWRE GW4	MMW-31A 11/2/2002 MMW-31A-D01N-GRW GW4	MMW-31A 11/3/2002 MMW-31A-T01N-GRW GW4	MMW-31A 1/10/2003 MMW-31A-T01N-GRW GW4	MMW-31A 1/10/2003 MMW-31A-D01N-GRW GW4	MMW-31A 4/8/2003 MMW-31A-T01N-GRW GW4
Molybdenum	mg/L	D	<0.011 :	-	-	-	<0.011 :	-
Nickel	mg/L	T	-	-	-	0.802 :	-	0.841 :
Nickel	mg/L	D	0.625 :	-	-	-	0.857 :	-
Potassium	mg/L	T	-	-	-	<20.2 :	-	3.26 :
Potassium	mg/L	D	<31.4 J	-	-	-	<20.2 :	-
Selenium	mg/L	T	-	-	-	0.0144 :	-	0.0051 J
Selenium	mg/L	D	<0.008 :	-	-	-	0.0128 :	-
Silver	mg/L	T	-	-	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	-	-	<0.001 :	-
Sodium	mg/L	T	-	-	-	<32.7 :	-	37.2 :
Sodium	mg/L	D	<36.6 :	-	-	-	<32.7 :	-
Thallium	mg/L	T	-	-	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	-	-	<0.001 :	-
Vanadium	mg/L	T	-	-	-	<0.002 :	-	<0.001 :
Vanadium	mg/L	D	<0.002 :	-	-	-	<0.002 :	-
Zinc	mg/L	T	-	-	-	8.58 :	-	8.09 :
Zinc	mg/L	D	7.45 :	-	-	-	8.57 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	<0.00025 :	-	<0.00025 J
2,6-Pyridinediamine,	mg/L	T	-	-	-	<0.00025 J	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	<0.00025 :	-	<0.00025 J
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	<0.00025 :	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T	-	-	-	<0.01 :	-	<0.01 J
Isotopes								
Lead	mg/L	T	-	-	-	0.0172 :	-	<0.0182 :
Lead	mg/L	D	0.0215 :	-	-	-	0.0168 :	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-31A	4/8/2003	MMW-31A-D01N-GRW	GW4		MMW-31A	7/21/2003	MMW-31A-T01N-GRW	GW4		MMW-31A	7/21/2003	MMW-31A-D01N-GRW	GW4	
			MMW-31A	10/17/2003	MMW-31A-T01N-GRW	GW4		MMW-31A	10/17/2003	MMW-31A-D01N-GRW	GW4		MMW-31A	1/12/2004	MMW-31A-T01N-GRW	GW4	
Field Measurements																	
DO	mg/L	T	-					6.81	:				-				
Eh	millivolts	T	-					217.	:				-				
pH	SU	T	-					4.4	J				-				
Specific Conductance	uS/cm	T	-					2126.	:				-				
Temperature	Celsius	T	-					10.49	:				-				
Turbidity	NTU	T	-					0.	:				-				
General Chemistry																	
Ammonia	mg/L	T	-					<0.04	J				-				
Bicarbonate (as CaCO3)	mg/L	T	-					<1.	:				-				
Carbonate (as CaCO3)	mg/L	T	-					<1.	:				-				
Chloride	mg/L	T	-					23.5	:				-				
Fluoride	mg/L	T	-					35.5	:				-				
Hydroxide (as CaCO3)	mg/L	T	-					<1.	:				-				
Nitrate	mg/L	T	-					3.9	J				-				
Nitrite	mg/L	T	-					<0.005	:				-				
Phosphate, Ortho As P	mg/L	T	-					<0.018	:				-				
Phosphorus	mg/L	T	-					0.03	:				-				
Sulfate	mg/L	T	-					1270.	J				-				
Total Alkalinity	mg/L	T	-					<1.	:				-				
Total Dissolved Solids	mg/L	T	-					2850.	:				-				
Total Kjeldahl Nitrogen	mg/L	T	-					<0.24	:				-				
Total Organic Carbon	mg/L	T	-					<1.3	J				-				
Total Suspended Solids	mg/L	T	-					<0.7	:				-				
Laboratory Parameters																	
pH	SU	T	-					4.4	J				-				
Specific Conductance	umhos/cm	T	-					2100.	J				-				
Inorganics																	
Cyanide	mg/L	T	-					<0.01	J				-				
Physical Properties																	
Hardness	mg/L	T	-					1110.	:				-				
Hardness	mg/L	D	1340.	:				-		1140.	:		-		1210.	:	
Metals																	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-31A 4/8/2003 MMW-31A-D01N-GRW GW4	MMW-31A 7/21/2003 MMW-31A-T01N-GRW GW4	MMW-31A 7/21/2003 MMW-31A-D01N-GRW GW4	MMW-31A 10/17/2003 MMW-31A-T01N-GRW GW4	MMW-31A 10/17/2003 MMW-31A-D01N-GRW GW4	MMW-31A 1/12/2004 MMW-31A-T01N-GRW GW4
Aluminum	mg/L	T	-	67. :	-	53.8 :	-	55.4 :
Aluminum	mg/L	D	78.6 :	-	67.7 :	-	54.3 :	-
Antimony	mg/L	T	-	<0.038 :	-	0.174 :	-	<0.029 :
Antimony	mg/L	D	<0.003 :	-	<0.038 :	-	<0.052 :	-
Arsenic	mg/L	T	-	<0.024 :	-	0.0946 :	-	<0.028 J
Arsenic	mg/L	D	<0.04 :	-	0.0404 :	-	<0.041 :	-
Barium	mg/L	T	-	<0.073 :	-	<0.115 :	-	<0.053 :
Barium	mg/L	D	<0.123 :	-	<0.073 :	-	<0.115 :	-
Beryllium	mg/L	T	-	0.0221 :	-	0.052 :	-	0.019 :
Beryllium	mg/L	D	<0.038 :	-	0.0219 :	-	0.0158 :	-
Boron	mg/L	T	-	<0.046 :	-	0.0778 :	-	<0.0355 :
Boron	mg/L	D	<0.084 :	-	<0.046 :	-	<0.063 :	-
Cadmium	mg/L	T	-	<0.12 :	-	<0.13 :	-	<0.07 J
Cadmium	mg/L	D	0.0521 :	-	<0.12 :	-	<0.13 :	-
Calcium	mg/L	T	-	192. :	-	160. J	-	180. :
Calcium	mg/L	D	236. :	-	197. :	-	262. J	-
Chromium	mg/L	T	-	<0.19 J	-	<0.23 J	-	<0.57 :
Chromium	mg/L	D	<0.01 :	-	<0.19 J	-	<0.23 J	-
Cobalt	mg/L	T	-	<0.37 :	-	<0.32 :	-	<0.37 :
Cobalt	mg/L	D	0.306 :	-	<0.37 :	-	<0.32 :	-
Copper	mg/L	T	-	0.937 :	-	0.818 :	-	0.95 :
Copper	mg/L	D	1.34 :	-	0.871 :	-	0.873 :	-
Iron	mg/L	T	-	<6.67 :	-	<4.55 :	-	<4.23 :
Iron	mg/L	D	<3.11 :	-	<6.67 :	-	<4.55 :	-
Lead	mg/L	T	-	0.0141 :	-	0.0126 :	-	0.0106 :
Lead	mg/L	D	0.0218 :	-	0.0129 :	-	0.0136 :	-
Magnesium	mg/L	T	-	154. :	-	122. :	-	136. :
Magnesium	mg/L	D	182. :	-	157. :	-	128. :	-
Manganese	mg/L	T	-	35. :	-	27.1 :	-	30.8 :
Manganese	mg/L	D	42.2 :	-	35.9 :	-	29.2 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.016 :	-	0.0724 :	-	<0.024 :
Molybdenum	mg/L	D	<0.023 :	-	<0.016 :	-	<0.011 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-31A 4/8/2003 MMW-31A-D01N-GRW GW4	MMW-31A 7/21/2003 MMW-31A-T01N-GRW GW4	MMW-31A 7/21/2003 MMW-31A-D01N-GRW GW4	MMW-31A 10/17/2003 MMW-31A-T01N-GRW GW4	MMW-31A 10/17/2003 MMW-31A-D01N-GRW GW4	MMW-31A 1/12/2004 MMW-31A-T01N-GRW GW4
Nickel	mg/L	T	-	0.796 :	-	<0.45 J	-	<1.68 :
Nickel	mg/L	D	0.781 :	-	0.634 :	-	<0.45 J	-
Potassium	mg/L	T	-	<37.1 :	-	<63.8 :	-	<110. :
Potassium	mg/L	D	<3.26 :	-	<37.1 :	-	<63.8 :	-
Selenium	mg/L	T	-	0.0102 :	-	0.0086 :	-	0.0114 J
Selenium	mg/L	D	<0.005 J	-	0.009 J	-	0.0089 :	-
Silver	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 J	-	<0.001 :	-
Sodium	mg/L	T	-	<53.2 :	-	<99.1 :	-	<92. :
Sodium	mg/L	D	36.9 :	-	<53.2 :	-	<99.1 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.002 :
Vanadium	mg/L	D	<0.001 :	-	<0.002 :	-	<0.001 :	-
Zinc	mg/L	T	-	6.34 :	-	5.81 J	-	6.48 :
Zinc	mg/L	D	8.45 :	-	6.6 :	-	9.55 J	-
Isotopes								
Lead	mg/L	T	-	0.0141 :	-	0.0126 :	-	0.0106 :
Lead	mg/L	D	0.0218 :	-	0.0129 :	-	0.0136 :	-

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-31A	1/12/2004	MMW-31A-D01N-GRW GW4		MMW-31A	4/21/2004	MMW-31A-T01N-GRW GW4		MMW-31A	4/21/2004	MMW-31A-D01N-GRW GW4		MMW-32A	11/3/2002	MMW-32A-T01N-GRWRE GW4		MMW-32A	11/3/2002	MMW-32A-T01N-GRW GW4		MMW-32A	11/3/2002	MMW-32A-D01N-GRWRE GW4	
Field Measurements																						
DO	mg/L	T		-				5.54	:			-			-				7.44	:		-	
Eh	millivolts	T		-				309.6	:			-			-				490.7	:		-	
pH	SU	T		-				4.7	J			-			-				4.28	:		-	
Specific Conductance	uS/cm	T		-				2021.	:			-			-				2385.	:		-	
Temperature	Celsius	T		-				9.03	:			-			-				8.46	:		-	
Turbidity	NTU	T		-				-				-			-				27.2	:		-	
General Chemistry																						
Ammonia	mg/L	T		-				<0.059	:			-			-				<0.19	:		-	
Bicarbonate (as CaCO3)	mg/L	T		-				<1.	:			-			-				<1.	:		-	
Carbonate (as CaCO3)	mg/L	T		-				<1.	:			-			-				<1.	:		-	
Chloride	mg/L	T		-				<4.7	:			-			-				26.7	:		-	
Fluoride	mg/L	T		-				27.4	:			-			30.	J			-			-	
Hydroxide (as CaCO3)	mg/L	T		-				<1.	:			-			-				<1.	:		-	
Nitrate	mg/L	T		-				2.6	J			-			-				5.1	:		-	
Nitrite	mg/L	T		-				<0.005	J			-			-				<0.005	J		-	
Phosphate, Ortho As P	mg/L	T		-				0.018	J			-			-				0.017	J		-	
Phosphorus	mg/L	T		-				0.032	:			-			-				0.096	:		-	
Sulfate	mg/L	T		-				1380.	:			-			1460.	J			-			-	
Total Alkalinity	mg/L	T		-				<1.	:			-			-				<1.	:		-	
Total Dissolved Solids	mg/L	T		-				1920.	:			-			-				2530.	:		-	
Total Kjeldahl Nitrogen	mg/L	T		-				<0.24	:			-			-				<0.24	J		-	
Total Organic Carbon	mg/L	T		-				<1.	J			-			-				<1.	:		-	
Total Suspended Solids	mg/L	T		-				27.9	J			-			-				6.8	:		-	
Laboratory Parameters																						
pH	SU	T		-				4.7	J			-			-				4.28	:		-	
Specific Conductance	umhos/cm	T		-				1800.	J			-			-				-			-	
Inorganics																						
Cyanide	mg/L	T		-				<0.01	:			-			-				<0.01	J		-	
Physical Properties																						
Hardness	mg/L	T		-				954.	:			-			-				-			-	
Hardness	mg/L	D		986.	:			-				959.	:		-				-			1220.	:
Metals																						

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	MMW-31A 1/12/2004 MMW-31A-D01N-GRW GW4		MMW-31A 4/21/2004 MMW-31A-T01N-GRW GW4		MMW-31A 4/21/2004 MMW-31A-D01N-GRW GW4		MMW-32A 11/3/2002 MMW-32A-T01N-GRWRE GW4		MMW-32A 11/3/2002 MMW-32A-T01N-GRW GW4		MMW-32A 11/3/2002 MMW-32A-D01N-GRWRE GW4	
Aluminum	mg/L	T	-		54.4	:	-		-		-		-	
Aluminum	mg/L	D	54.2	:	-		54.5	:	-		-		67.6	:
Antimony	mg/L	T	-		<0.053	:	-		-		-		-	
Antimony	mg/L	D	<0.029	:	-		<0.053	:	-		-		<0.028	:
Arsenic	mg/L	T	-		<0.037	:	-		-		-		-	
Arsenic	mg/L	D	<0.028	J	-		<0.037	:	-		-		<0.0274	J
Barium	mg/L	T	-		<0.049	:	-		-		-		-	
Barium	mg/L	D	<0.053	:	-		<0.049	:	-		-		<0.048	:
Beryllium	mg/L	T	-		0.0173	:	-		-		-		-	
Beryllium	mg/L	D	0.0176	:	-		0.0159	:	-		-		0.0166	:
Boron	mg/L	T	-		0.0439	:	-		-		-		-	
Boron	mg/L	D	<0.0244	:	-		<0.036	:	-		-		<0.027	:
Cadmium	mg/L	T	-		<0.1	:	-		-		-		-	
Cadmium	mg/L	D	<0.07	:	-		<0.1	:	-		-		<0.08	:
Calcium	mg/L	T	-		169.	:	-		-		-		-	
Calcium	mg/L	D	176.	:	-		170.	:	-		-		222.	:
Chromium	mg/L	T	-		<0.13	:	-		-		-		-	
Chromium	mg/L	D	<0.57	:	-		<0.13	:	-		-		<0.16	J
Cobalt	mg/L	T	-		0.265	:	-		-		-		-	
Cobalt	mg/L	D	<0.37	:	-		0.235	:	-		-		0.259	:
Copper	mg/L	T	-		0.924	:	-		-		-		-	
Copper	mg/L	D	0.894	:	-		0.939	:	-		-		<0.946	:
Iron	mg/L	T	-		<2.93	J	-		-		-		-	
Iron	mg/L	D	<4.23	:	-		<2.93	:	-		-		<2.66	:
Lead	mg/L	T	-		0.013	:	-		-		-		-	
Lead	mg/L	D	0.01	:	-		0.0122	:	-		-		<0.001	:
Magnesium	mg/L	T	-		129.	:	-		-		-		-	
Magnesium	mg/L	D	133.	:	-		130.	:	-		-		162.	:
Manganese	mg/L	T	-		29.4	:	-		-		-		-	
Manganese	mg/L	D	30.3	:	-		29.6	:	-		-		36.8	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		<0.014	:	-		-		-		-	
Molybdenum	mg/L	D	<0.024	:	-		<0.014	:	-		-		<0.011	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31A 1/12/2004 MMW-31A-D01N-GRW GW4		MMW-31A 4/21/2004 MMW-31A-T01N-GRW GW4		MMW-31A 4/21/2004 MMW-31A-D01N-GRW GW4		MMW-32A 11/3/2002 MMW-32A-T01N-GRWRE GW4		MMW-32A 11/3/2002 MMW-32A-T01N-GRW GW4		MMW-32A 11/3/2002 MMW-32A-D01N-GRWRE GW4	
Nickel	mg/L	T	-		0.732	:	-		-		-		-	
Nickel	mg/L	D	<1.68	:	-		0.563	:	-		-		0.656	:
Potassium	mg/L	T	-		<15.5	:	-		-		-		-	
Potassium	mg/L	D	<110.	:	-		<15.5	:	-		-		<31.4	J
Selenium	mg/L	T	-		<0.007	:	-		-		-		-	
Selenium	mg/L	D	0.009	:	-		<0.007	:	-		-		0.0093	J
Silver	mg/L	T	-		<0.001	J	-		-		-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		-		<0.001	:
Sodium	mg/L	T	-		<32.8	:	-		-		-		-	
Sodium	mg/L	D	<92.	:	-		<32.8	:	-		-		<36.6	:
Thallium	mg/L	T	-		<0.001	:	-		-		-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.002	:	-		-		-		-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		-		<0.002	:
Zinc	mg/L	T	-		5.78	:	-		-		-		-	
Zinc	mg/L	D	6.31	:	-		5.77	:	-		-		6.53	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	-		-		-		-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	-		0.013	:	-		-		-		-	
Lead	mg/L	D	0.01	:	-		0.0122	:	-		-		<0.001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-32A	MMW-32A	MMW-32A	MMW-32A	MMW-32A	MMW-32A
Sample Date			11/3/2002	11/4/2002	1/16/2003	1/16/2003	4/8/2003	4/8/2003
Sample ID			MMW-32A-D01N-GRW	MMW-32A-T01N-GRW	MMW-32A-T01N-GRW	MMW-32A-D01N-GRW	MMW-32A-T01N-GRW	MMW-32A-D01N-GRW
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements								
DO	mg/L	T	-	-	8.95 :	-	5. :	-
Eh	millivolts	T	-	-	402.3 :	-	296.4 :	-
pH	SU	T	-	-	4.81 :	-	5. J	-
Specific Conductance	uS/cm	T	-	-	2387. :	-	2473. :	-
Temperature	Celsius	T	-	-	8.36 :	-	8.66 :	-
Turbidity	NTU	T	-	-	-	-	32.8 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.085 J	-	<0.085 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<3.1 :	-	<4.3 :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Chloride	mg/L	T	-	-	17.1 :	-	25.6 :	-
Fluoride	mg/L	T	-	-	37.3 :	-	32.9 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	-	-	4.1 J	-	3.3 J	-
Nitrite	mg/L	T	-	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 J	-	<0.036 :	-
Phosphorus	mg/L	T	-	-	0.059 :	-	0.043 :	-
Sulfate	mg/L	T	-	-	1690. J	-	1480. J	-
Total Alkalinity	mg/L	T	-	-	<3.1 :	-	<4.3 :	-
Total Dissolved Solids	mg/L	T	-	-	2440. :	-	2430. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	<0.24 J	-
Total Organic Carbon	mg/L	T	-	-	1.3 :	-	1.1 J	-
Total Suspended Solids	mg/L	T	-	-	46. :	-	45. :	-
Laboratory Parameters								
pH	SU	T	-	-	4.81 :	-	5. J	-
Specific Conductance	umhos/cm	T	-	-	-	-	2180. J	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	1400. :	-	1410. :	-
Hardness	mg/L	D	-	-	-	1400. :	-	1340. :
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-32A 11/3/2002 MMW-32A-D01N-GRW GW4	MMW-32A 11/4/2002 MMW-32A-T01N-GRW GW4	MMW-32A 1/16/2003 MMW-32A-T01N-GRW GW4	MMW-32A 1/16/2003 MMW-32A-D01N-GRW GW4	MMW-32A 4/8/2003 MMW-32A-T01N-GRW GW4	MMW-32A 4/8/2003 MMW-32A-D01N-GRW GW4
Aluminum	mg/L	T	-	-	79.2 :	-	56.6 :	-
Aluminum	mg/L	D	-	-	-	62. :	-	45.1 :
Antimony	mg/L	T	-	-	<0.028 :	-	<0.003 :	-
Antimony	mg/L	D	-	-	-	<0.028 :	-	<0.003 :
Arsenic	mg/L	T	-	-	<0.023 :	-	<0.04 :	-
Arsenic	mg/L	D	-	-	-	<0.023 :	-	<0.04 :
Barium	mg/L	T	-	-	<0.048 :	-	<0.123 :	-
Barium	mg/L	D	-	-	-	<0.048 :	-	<0.123 :
Beryllium	mg/L	T	-	-	<0.0161 :	-	<0.0256 :	-
Beryllium	mg/L	D	-	-	-	<0.0135 :	-	<0.0225 :
Boron	mg/L	T	-	-	<0.027 J	-	<0.084 :	-
Boron	mg/L	D	-	-	-	<0.027 J	-	<0.084 :
Cadmium	mg/L	T	-	-	<0.08 :	-	0.04 :	-
Cadmium	mg/L	D	-	-	-	<0.08 :	-	0.0399 :
Calcium	mg/L	T	-	-	283. :	-	300. :	-
Calcium	mg/L	D	-	-	-	282. :	-	288. :
Chromium	mg/L	T	-	-	<0.16 :	-	<0.01 :	-
Chromium	mg/L	D	-	-	-	<0.16 :	-	<0.01 :
Chromium, Hexavalent	mg/L	D	-	0.0028 J	-	-	-	-
Cobalt	mg/L	T	-	-	0.291 :	-	0.251 :	-
Cobalt	mg/L	D	-	-	-	0.287 :	-	0.252 :
Copper	mg/L	T	-	-	0.933 :	-	0.916 :	-
Copper	mg/L	D	-	-	-	0.922 :	-	0.876 :
Iron	mg/L	T	-	-	<2.66 :	-	<3.11 :	-
Iron	mg/L	D	-	-	-	<2.66 :	-	<3.11 :
Lead	mg/L	T	-	-	0.0011 :	-	<0.001 :	-
Lead	mg/L	D	-	-	-	<0.001 :	-	<0.001 :
Magnesium	mg/L	T	-	-	168. :	-	160. :	-
Magnesium	mg/L	D	-	-	-	168. :	-	151. :
Manganese	mg/L	T	-	-	37. :	-	34.7 :	-
Manganese	mg/L	D	-	-	-	37.1 :	-	32.7 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.011 :	-	<0.023 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-32A 11/3/2002 MMW-32A-D01N-GRW GW4		MMW-32A 11/4/2002 MMW-32A-T01N-GRW GW4		MMW-32A 1/16/2003 MMW-32A-T01N-GRW GW4		MMW-32A 1/16/2003 MMW-32A-D01N-GRW GW4		MMW-32A 4/8/2003 MMW-32A-T01N-GRW GW4		MMW-32A 4/8/2003 MMW-32A-D01N-GRW GW4	
Molybdenum	mg/L	D	-		-		-		<0.011	:	-		<0.023	:
Nickel	mg/L	T	-		-		0.692	:	-		0.614	:	-	
Nickel	mg/L	D	-		-		-		0.765	:	-		0.608	:
Potassium	mg/L	T	-		-		<31.4	:	-		<3.26	:	-	
Potassium	mg/L	D	-		-		-		<31.4	:	-		<3.26	:
Selenium	mg/L	T	-		-		<0.008	:	-		<0.005	J	-	
Selenium	mg/L	D	-		-		-		<0.008	:	-		<0.005	J
Silver	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		-		-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	-		-		61.8	:	-		42.5	:	-	
Sodium	mg/L	D	-		-		-		<36.6	:	-		<35.2	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		-		-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	-		-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		-		-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	-		-		6.52	:	-		6.07	:	-	
Zinc	mg/L	D	-		-		-		6.5	:	-		5.65	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	-		-		<0.00025	J	-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	-		-		<0.01	:	-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	-		-		0.0011	:	-		<0.001	:	-	
Lead	mg/L	D	-		-		-		<0.001	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-32A	7/21/2003	MMW-32A-T01N-GRW		MMW-32A	7/21/2003	MMW-32A-D01N-GRW		MMW-32A	10/21/2003	MMW-32A-T01N-GRW		MMW-32A	10/21/2003	MMW-32A-D01N-GRW		MMW-32A	1/9/2004	MMW-32A-T01N-GRW	
			GW4				GW4				GW4				GW4				GW4			
Field Measurements																						
DO	mg/L	T	4.84		:		-				7.8		:		-				4.91		:	
Eh	millivolts	T	471.8		:		-				384.1		:		-				468.3		:	
pH	SU	T	4.7	J			-				5.1	J			-				4.3	J		
Specific Conductance	uS/cm	T	2260.		:		-				2102.		:		-				2127.		:	
Temperature	Celsius	T	12.02		:		-				11.12		:		-				8.17		:	
Turbidity	NTU	T	37.6		:		-				1315.4		:		-				0.5		:	
General Chemistry																						
Ammonia	mg/L	T	<0.11	J			-				0.074	J			-				0.08	J		
Bicarbonate (as CaCO3)	mg/L	T	<1.5		:		-				11.7		:		-				<1.		:	
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-				<1.		:	
Chloride	mg/L	T	25.9		:		-				24.		:		-				21.9		:	
Fluoride	mg/L	T	32.3		:		-				22.1		:		-				27.8		:	
Hydroxide (as CaCO3)	mg/L	T	1.5		:		-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	3.8	J			-				3.	J			-				3.6		:	
Nitrite	mg/L	T	<0.005		:		-				<0.005	J			-				<0.005		:	
Phosphate, Ortho As P	mg/L	T	<0.015		:		-				<0.01	J			-				0.039		:	
Phosphorus	mg/L	T	0.2		:		-				2.8		:		-				0.069		:	
Sulfate	mg/L	T	1480.	J			-				1410.	J			-				1320.		:	
Total Alkalinity	mg/L	T	<1.5		:		-				11.7		:		-				<1.		:	
Total Dissolved Solids	mg/L	T	2330.		:		-				2240.		:		-				2050.		:	
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	<1.3	J			-				1.3	J			-				<1.3		:	
Total Suspended Solids	mg/L	T	99.5		:		-				2150.		:		-				<1.		:	
Laboratory Parameters																						
pH	SU	T	4.7	J			-				5.1	J			-				4.3	J		
Specific Conductance	umhos/cm	T	2190.	J			-				2110.	J			-				1990.	J		
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				<0.01		:		-				<0.01	J		
Physical Properties																						
Hardness	mg/L	T	1280.		:		-				1000.		:		-				1120.		:	
Hardness	mg/L	D	-				1300.		:		-				1130.		:		-				1080.	:
Metals																						

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-32A 7/21/2003 MMW-32A-T01N-GRW GW4		MMW-32A 7/21/2003 MMW-32A-D01N-GRW GW4		MMW-32A 10/21/2003 MMW-32A-T01N-GRW GW4		MMW-32A 10/21/2003 MMW-32A-D01N-GRW GW4		MMW-32A 1/9/2004 MMW-32A-T01N-GRW GW4		MMW-32A 1/9/2004 MMW-32A-D01N-GRW GW4	
Aluminum	mg/L	T	84.	:	-		124.	:	-		60.7	:	-	
Aluminum	mg/L	D	-		58.2	:	-		58.3	:	-		57.9	:
Antimony	mg/L	T	<0.038	:	-		<0.082	:	-		<0.029	:	-	
Antimony	mg/L	D	-		<0.038	:	-		<0.082	:	-		<0.029	:
Arsenic	mg/L	T	0.047	:	-		<0.035	:	-		<0.028	:	-	
Arsenic	mg/L	D	-		<0.024	:	-		<0.035	:	-		<0.028	:
Barium	mg/L	T	<0.073	:	-		<0.117	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.073	:	-		<0.117	:	-		<0.053	:
Beryllium	mg/L	T	<0.0197	:	-		0.0289	:	-		0.0146	:	-	
Beryllium	mg/L	D	-		<0.0136	J	-		<0.0134	J	-		0.014	:
Boron	mg/L	T	<0.046	:	-		<0.064	:	-		<0.117	:	-	
Boron	mg/L	D	-		<0.046	:	-		<0.064	:	-		<0.117	:
Cadmium	mg/L	T	<0.12	:	-		<0.13	:	-		0.0774	J	-	
Cadmium	mg/L	D	-		<0.12	:	-		<0.13	:	-		<0.07	:
Calcium	mg/L	T	258.	:	-		187.	:	-		202.	:	-	
Calcium	mg/L	D	-		262.	:	-		209.	:	-		197.	:
Chromium	mg/L	T	<0.19	:	-		<0.11	J	-		<0.11	:	-	
Chromium	mg/L	D	-		<0.19	:	-		<0.11	J	-		<0.11	:
Cobalt	mg/L	T	<0.37	:	-		<0.32	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		<0.37	:	-		<0.32	:	-		0.34	:
Copper	mg/L	T	0.853	:	-		0.983	:	-		1.04	:	-	
Copper	mg/L	D	-		0.773	:	-		0.996	:	-		0.925	:
Iron	mg/L	T	<6.67	:	-		<4.55	:	-		<3.73	:	-	
Iron	mg/L	D	-		<6.67	:	-		<4.55	:	-		<3.73	:
Lead	mg/L	T	<0.001	:	-		0.0105	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Magnesium	mg/L	T	155.	:	-		130.	:	-		149.	:	-	
Magnesium	mg/L	D	-		157.	:	-		147.	:	-		143.	:
Manganese	mg/L	T	33.8	:	-		29.8	:	-		34.	:	-	
Manganese	mg/L	D	-		34.3	:	-		33.6	:	-		33.2	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	<0.016	:	-		<0.012	:	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.012	:	-		<0.024	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-32A 7/21/2003 MMW-32A-T01N-GRW GW4		MMW-32A 7/21/2003 MMW-32A-D01N-GRW GW4		MMW-32A 10/21/2003 MMW-32A-T01N-GRW GW4		MMW-32A 10/21/2003 MMW-32A-D01N-GRW GW4		MMW-32A 1/9/2004 MMW-32A-T01N-GRW GW4		MMW-32A 1/9/2004 MMW-32A-D01N-GRW GW4	
Nickel	mg/L	T	0.693	:	-		0.777	:	-		0.785	:	-	
Nickel	mg/L	D	-		0.669	:	-		0.884	:	-		0.888	:
Potassium	mg/L	T	<37.1	:	-		<63.8	:	-		<24.3	:	-	
Potassium	mg/L	D	-		<37.1	:	-		<63.8	:	-		<24.3	:
Selenium	mg/L	T	0.0089	:	-		<0.03	:	-		0.0114	J	-	
Selenium	mg/L	D	-		0.0102	J	-		<0.03	:	-		0.0086	:
Silver	mg/L	T	<0.001	J	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	J	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<63.7	:	-		<99.1	:	-		<92.	:	-	
Sodium	mg/L	D	-		<91.8	:	-		<99.1	:	-		<92.	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		0.0023	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.002	:
Zinc	mg/L	T	5.48	:	-		7.56	:	-		6.03	:	-	
Zinc	mg/L	D	-		5.49	:	-		8.42	:	-		5.8	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		0.0105	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-32A	MMW-32A	MMW-32A	MMW-33A	MMW-33A	MMW-33A
Sample Date			4/21/2004	4/21/2004	4/22/2004	11/5/2002	11/5/2002	11/5/2002
Sample ID			MMW-32A-T01N-GR W	MMW-32A-D01N-GR W	MMW-32A-T01N-GR W	MMW-33A-T01N-GR WRE	MMW-33A-T01N-GR W	MMW-33A-D01N-GR WRE
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements								
DO	mg/L	T	3.26 :	-	-	-	19.8 :	-
Eh	millivolts	T	491.2 :	-	-	-	346.5 :	-
pH	SU	T	6.1 J	-	-	-	4.33 :	-
Specific Conductance	uS/cm	T	2239. :	-	-	-	2087. :	-
Temperature	Celsius	T	9.81 :	-	-	-	8.29 :	-
Turbidity	NTU	T	80.9 :	-	-	-	25. :	-
General Chemistry								
Ammonia	mg/L	T	<0.066 :	-	-	-	<0.2 :	-
Bicarbonate (as CaCO3)	mg/L	T	<12.1 :	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Chloride	mg/L	T	23.8 :	-	-	-	27.3 :	-
Fluoride	mg/L	T	21.2 :	-	-	24. J	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T	2.1 J	-	-	-	4.4 J	-
Nitrite	mg/L	T	<0.005 J	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	-	-	<0.01 J	-
Phosphorus	mg/L	T	0.042 :	-	-	-	0.043 :	-
Sulfate	mg/L	T	1390. :	-	-	1190. J	-	-
Total Alkalinity	mg/L	T	<12.1 :	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	1900. :	-	-	-	1930. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	1.4 J	-	-	-	2. :	-
Total Suspended Solids	mg/L	T	77.2 J	-	-	-	14.8 :	-
Laboratory Parameters								
pH	SU	T	6.1 J	-	-	-	4.33 :	-
Specific Conductance	umhos/cm	T	1870. J	-	-	-	-	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
Physical Properties								
Hardness	mg/L	T	1370. :	-	-	-	872. :	-
Hardness	mg/L	D	-	1290. :	-	-	-	1100. :
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-32A 4/21/2004 MMW-32A-T01N-GRW GW4		MMW-32A 4/21/2004 MMW-32A-D01N-GRW GW4		MMW-32A 4/22/2004 MMW-32A-T01N-GRW GW4		MMW-33A 11/5/2002 MMW-33A-T01N-GRWRE GW4		MMW-33A 11/5/2002 MMW-33A-T01N-GRW GW4		MMW-33A 11/5/2002 MMW-33A-D01N-GRWRE GW4	
Aluminum	mg/L	T	23.5	:	-		-		-		-		-	
Aluminum	mg/L	D	-		21.5	:	-		-		-		60.	:
Antimony	mg/L	T	<0.027	:	-		-		-		-		-	
Antimony	mg/L	D	-		<0.027	:	-		-		-		<0.028	:
Arsenic	mg/L	T	<0.026	:	-		-		-		-		-	
Arsenic	mg/L	D	-		<0.026	:	-		-		-		<0.023	:
Barium	mg/L	T	<0.012	:	-		-		-		-		-	
Barium	mg/L	D	-		<0.012	:	-		-		-		<0.048	:
Beryllium	mg/L	T	0.0071	:	-		-		-		-		-	
Beryllium	mg/L	D	-		0.0077	:	-		-		-		0.0121	:
Boron	mg/L	T	<0.018	:	-		-		-		-		-	
Boron	mg/L	D	-		<0.018	:	-		-		-		<0.027	:
Cadmium	mg/L	T	<0.1	:	-		-		-		-		-	
Cadmium	mg/L	D	-		<0.1	:	-		-		-		<0.08	:
Calcium	mg/L	T	372.	:	-		-		-		-		-	
Calcium	mg/L	D	-		304.	:	-		-		-		210.	:
Chromium	mg/L	T	<0.13	:	-		-		-		-		-	
Chromium	mg/L	D	-		0.312	:	-		-		-		<0.16	J
Cobalt	mg/L	T	<0.18	:	-		-		-		-		-	
Cobalt	mg/L	D	-		0.194	:	-		-		-		0.267	:
Copper	mg/L	T	<0.27	:	-		-		-		-		-	
Copper	mg/L	D	-		0.378	:	-		-		-		<0.841	:
Iron	mg/L	T	<2.93	J	-		-		-		-		-	
Iron	mg/L	D	-		<2.93	:	-		-		-		<2.66	:
Lead	mg/L	T	<0.004	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.004	:	-		-		-		<0.001	:
Magnesium	mg/L	T	107.	:	-		-		-		-		-	
Magnesium	mg/L	D	-		128.	:	-		-		-		139.	:
Manganese	mg/L	T	19.	:	-		-		-		-		-	
Manganese	mg/L	D	-		25.8	:	-		-		-		31.1	:
Mercury	mg/L	T	<0.0001	:	-		-		-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		-	
Molybdenum	mg/L	T	<0.01	:	-		-		-		-		-	
Molybdenum	mg/L	D	-		<0.01	:	-		-		-		<0.011	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-32A 4/21/2004 MMW-32A-T01N-GR W GW4		MMW-32A 4/21/2004 MMW-32A-D01N-GR W GW4		MMW-32A 4/22/2004 MMW-32A-T01N-GR W GW4		MMW-33A 11/5/2002 MMW-33A-T01N-GR WRE GW4		MMW-33A 11/5/2002 MMW-33A-T01N-GR W GW4		MMW-33A 11/5/2002 MMW-33A-D01N-GR WRE GW4	
Nickel	mg/L	T	<0.33	:	-		-		-		-		-	
Nickel	mg/L	D	-		0.685	:	-		-		-		0.52	:
Potassium	mg/L	T	<15.5	:	-		-		-		-		-	
Potassium	mg/L	D	-		<15.5	:	-		-		-		<31.4	J
Selenium	mg/L	T	<0.007	:	-		-		-		-		-	
Selenium	mg/L	D	-		<0.007	:	-		-		-		<0.008	:
Silver	mg/L	T	<0.001	:	-		-		-		-		-	
Silver	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Sodium	mg/L	T	<33.4	J	-		-		-		-		-	
Sodium	mg/L	D	-		<32.8	J	-		-		-		<36.6	:
Thallium	mg/L	T	<0.001	:	-		-		-		-		-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		-		-		-		-	
Vanadium	mg/L	D	-		<0.002	:	-		-		-		<0.002	:
Zinc	mg/L	T	2.24	J	-		-		-		-		-	
Zinc	mg/L	D	-		3.87	J	-		-		-		5.71	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-		<0.00025	J	-	
2,6-Pyridinediamine,	mg/L	T	-		-		-		-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-		<0.00025	J	-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-		<0.00025	J	-	
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-		<0.01	J	-	
Isotopes														
Delta D	per mil	T	-		-		-89.1	:	-		-		-	
Delta O-18	per mil	T	-		-		-12.2	:	-		-		-	
Lead	mg/L	T	<0.004	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.004	:	-		-		-		<0.001	:

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units		Site ID	MMW-33A	MMW-33A	MMW-33A	MMW-33A	MMW-33A	MMW-33A
			Sample Date	11/5/2002	1/16/2003	1/16/2003	2/8/2003	2/8/2003	3/4/2003
			Sample ID	MMW-33A-D01N-GR	MMW-33A-T01N-GR	MMW-33A-D01N-GR	MMW-33A-T01N-GR	MMW-33A-D01N-GR	MMW-33A-T01N-GR
			Exposure Area	W	W	W	W	W	W
		Fraction		GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	6.93 :	-	6.5 :	-	8.51 :
Eh	millivolts	T		-	330. :	-	291.5 :	-	481.5 :
pH	SU	T		-	4.33 :	-	4.28 :	-	4.28 :
Specific Conductance	uS/cm	T		-	2026. :	-	1897. :	-	1964. :
Temperature	Celsius	T		-	8.09 :	-	8.16 :	-	8.1 :
Turbidity	NTU	T		-	51.5 :	-	0. :	-	38.7 :
General Chemistry									
Ammonia	mg/L	T		-	<0.065 :	-	<0.16 :	-	<0.1 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. J	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. J	-	<1. :
Chloride	mg/L	T		-	18.8 :	-	22.3 :	-	18.6 :
Fluoride	mg/L	T		-	23.9 :	-	24.6 :	-	24.6 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. J	-	<1. :
Nitrate	mg/L	T		-	4. J	-	4. J	-	3.8 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	0.011 J	-	0.011 J
Phosphorus	mg/L	T		-	0.02 :	-	<0.024 :	-	<0.015 J
Sulfate	mg/L	T		-	1220. J	-	1230. J	-	1190. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1. J	-	<1. :
Total Dissolved Solids	mg/L	T		-	1860. :	-	1850. :	-	1970. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	<1.5 J
Total Suspended Solids	mg/L	T		-	3.3 :	-	2.5 :	-	1.5 J
Laboratory Parameters									
pH	SU	T		-	4.33 :	-	4.28 :	-	4.28 :
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	988. :	-	1110. :	-	961. :
Hardness	mg/L	D		-	-	986. :	-	1050. :	-
Metals									
Aluminum	mg/L	T		-	54.2 :	-	67.5 :	-	52.1 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction	
			MMW-33A	11/5/2002	MMW-33A-D01N-GRW	GW4		MMW-33A	1/16/2003	MMW-33A-T01N-GRW	GW4		MMW-33A	1/16/2003	MMW-33A-D01N-GRW	GW4		MMW-33A	2/8/2003	MMW-33A-T01N-GRW	GW4		MMW-33A	2/8/2003	MMW-33A-D01N-GRW	GW4	
Aluminum	mg/L	D	-					-					54.3	:	-			63.5	:	-			-				
Antimony	mg/L	T	-					<0.028	:	-			-		<0.028	:		-					<0.028	:	-		
Antimony	mg/L	D	-					-					<0.028	:	-			<0.028	:	-			-				
Arsenic	mg/L	T	-					<0.023	:	-			-		<0.023	J		-					<0.0396	:	-		
Arsenic	mg/L	D	-					-					<0.023	:	-			<0.023	J	-			-				
Barium	mg/L	T	-					<0.048	:	-			-		<0.048	:		-					<0.048	:	-		
Barium	mg/L	D	-					-					<0.048	:	-			<0.048	:	-			-				
Beryllium	mg/L	T	-					<0.0112	:	-			-		0.0139	:		-					0.0127	:	-		
Beryllium	mg/L	D	-					-					<0.011	:	-			0.0131	:	-			-				
Boron	mg/L	T	-					<0.027	J	-			-		<0.027	:		-					<0.0307	:	-		
Boron	mg/L	D	-					-					<0.027	J	-			<0.027	:	-			-				
Cadmium	mg/L	T	-					<0.08	:	-			-		<0.08	:		-					<0.08	:	-		
Cadmium	mg/L	D	-					-					<0.08	:	-			<0.08	:	-			-				
Calcium	mg/L	T	-					188.	:	-			-		212.	:		-					182.	J	-		
Calcium	mg/L	D	-					-					188.	:	-			201.	:	-			-				
Chromium	mg/L	T	-					<0.16	:	-			-		<0.16	:		-					<0.16	:	-		
Chromium	mg/L	D	-					-					<0.16	:	-			<0.16	:	-			-				
Cobalt	mg/L	T	-					<0.23	:	-			-		0.314	:		-					<0.23	:	-		
Cobalt	mg/L	D	-					-					<0.23	:	-			0.296	:	-			-				
Copper	mg/L	T	-					0.767	:	-			-		0.713	J		-					0.787	:	-		
Copper	mg/L	D	-					-					0.796	:	-			0.625	J	-			-				
Iron	mg/L	T	-					<2.66	:	-			-		<2.66	J		-					<2.66	:	-		
Iron	mg/L	D	-					-					<2.66	:	-			<2.66	J	-			-				
Lead	mg/L	T	-					<0.001	:	-			-		<0.001	:		-					<0.001	:	-		
Lead	mg/L	D	-					-					<0.001	:	-			<0.001	:	-			-				
Magnesium	mg/L	T	-					126.	:	-			-		142.	:		-					123.	:	-		
Magnesium	mg/L	D	-					-					126.	:	-			133.	:	-			-				
Manganese	mg/L	T	-					28.1	:	-			-		31.9	J		-					27.3	:	-		
Manganese	mg/L	D	-					-					28.	:	-			30.4	:	-			-				
Mercury	mg/L	T	-					<0.0001	:	-			-		<0.0001	:		-					<0.0001	:	-		
Mercury	mg/L	D	<0.0001	:	-			-					<0.0001	:	-			<0.0001	:	-			-				
Molybdenum	mg/L	T	-					<0.011	:	-			-		<0.011	J		-					<0.011	J	-		
Molybdenum	mg/L	D	-					-					<0.011	:	-			<0.011	J	-			-				
Nickel	mg/L	T	-					0.564	:	-			-		0.751	:		-					0.522	:	-		

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 11/5/2002 MMW-33A-D01N-GR W GW4		MMW-33A 1/16/2003 MMW-33A-T01N-GR W GW4		MMW-33A 1/16/2003 MMW-33A-D01N-GR W GW4		MMW-33A 2/8/2003 MMW-33A-T01N-GR W GW4		MMW-33A 2/8/2003 MMW-33A-D01N-GR W GW4		MMW-33A 3/4/2003 MMW-33A-T01N-GR W GW4	
Nickel	mg/L	D	-		-		0.558	:	-		0.742	:	-	
Potassium	mg/L	T	-		<31.4	:	-		2.15	:	-		<31.4	:
Potassium	mg/L	D	-		-		<31.4	:	-		<2.02	:	-	
Selenium	mg/L	T	-		<0.008	:	-		0.0086	:	-		0.0126	J
Selenium	mg/L	D	-		-		<0.008	:	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<36.6	:	-		39.	:	-		<36.6	:
Sodium	mg/L	D	-		-		<36.6	:	-		<36.6	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		0.0026	:
Vanadium	mg/L	D	-		-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		5.32	:	-		5.82	:	-		5.02	J
Zinc	mg/L	D	-		-		5.3	:	-		5.45	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	J
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	J
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	J
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		-		-		<0.01	J
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-33A	3/4/2003	MMW-33A-D01N-GRW GW4		MMW-33A	4/1/2003	MMW-33A-T01N-GRW GW4		MMW-33A	4/1/2003	MMW-33A-D01N-GRW GW4		MMW-33A	5/5/2003	MMW-33A-T01N-GRW GW4		MMW-33A	5/5/2003	MMW-33A-D01N-GRW GW4		MMW-33A	6/3/2003	MMW-33A-T01N-GRW GW4	
Field Measurements																										
DO	mg/L	T	-				5.45	:			-				5.99	:			-				6.6	:		
Eh	millivolts	T	-				250.9	:			-				414.3	:			-				555.5	:		
pH	SU	T	-				4.4	J			-				4.6	J			-				4.3	J		
Specific Conductance	uS/cm	T	-				1928.	:			-				1867.	:			-				1809.	:		
Temperature	Celsius	T	-				8.3	:			-				8.93	:			-				10.15	:		
Turbidity	NTU	T	-				71.4	:			-				0.	:			-				0.	:		
General Chemistry																										
Ammonia	mg/L	T	-				<0.088	:			-				<0.14	:			-				<0.17	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				24.9	:			-				19.5	:			-				<20.4	:		
Fluoride	mg/L	T	-				26.8	:			-				24.6	:			-				24.5	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				3.5	J			-				3.3	J			-				3.1	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	J			-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				<0.014	J			-				<0.01	J			-				0.18	J		
Phosphorus	mg/L	T	-				0.029	:			-				<0.027	:			-				-			
Sulfate	mg/L	T	-				1280.	J			-				1080.	:			-				1050.	J		
Total Alkalinity	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Total Dissolved Solids	mg/L	T	-				1890.	:			-				1890.	:			-				1990.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				-			
Total Organic Carbon	mg/L	T	-				<1.	J			-				1.5	:			-				1.4	J		
Total Suspended Solids	mg/L	T	-				<1.8	:			-				2.5	:			-				<2.1	:		
Laboratory Parameters																										
pH	SU	T	-				4.4	J			-				4.6	J			-				4.3	J		
Specific Conductance	umhos/cm	T	-				1650.	J			-				1790.	J			-				1760.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	J			-				<0.01	:		
Physical Properties																										
Hardness	mg/L	T	-				950.	:			-				930.	:			-				844.	:		
Hardness	mg/L	D	971.	:			-				949.	:			-				968.	:			-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 3/4/2003 MMW-33A-D01N-GRW GW4		MMW-33A 4/1/2003 MMW-33A-T01N-GRW GW4		MMW-33A 4/1/2003 MMW-33A-D01N-GRW GW4		MMW-33A 5/5/2003 MMW-33A-T01N-GRW GW4		MMW-33A 5/5/2003 MMW-33A-D01N-GRW GW4		MMW-33A 6/3/2003 MMW-33A-T01N-GRW GW4	
Aluminum	mg/L	T	-		51.3	:	-		50.2	:	-		45.3	:
Aluminum	mg/L	D	52.6	:	-		49.6	:	-		52.2	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.072	:	-		<0.072	:
Antimony	mg/L	D	<0.028	:	-		<0.072	:	-		<0.072	:	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.04	:	-		<0.04	:
Arsenic	mg/L	D	<0.023	:	-		<0.04	:	-		<0.04	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.123	:	-		<0.123	:
Barium	mg/L	D	<0.048	:	-		<0.123	:	-		<0.123	:	-	
Beryllium	mg/L	T	-		<0.0217	:	-		<0.0141	:	-		<0.0138	:
Beryllium	mg/L	D	0.0126	:	-		<0.024	:	-		<0.0143	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.084	:	-		<0.084	:
Boron	mg/L	D	<0.027	:	-		<0.084	:	-		<0.084	:	-	
Cadmium	mg/L	T	-		<0.07	:	-		0.0395	:	-		0.0337	:
Cadmium	mg/L	D	<0.08	:	-		<0.0935	:	-		0.0382	:	-	
Calcium	mg/L	T	-		182.	:	-		176.	:	-		163.	:
Calcium	mg/L	D	184.	J	-		182.	:	-		184.	:	-	
Chromium	mg/L	T	-		<0.19	J	-		<0.01	:	-		<0.01	:
Chromium	mg/L	D	<0.16	:	-		<0.19	J	-		<0.01	:	-	
Cobalt	mg/L	T	-		<0.36	:	-		0.224	:	-		0.198	:
Cobalt	mg/L	D	<0.23	:	-		<0.36	:	-		0.221	:	-	
Copper	mg/L	T	-		0.667	:	-		0.729	:	-		0.665	:
Copper	mg/L	D	0.802	:	-		0.573	:	-		0.73	:	-	
Iron	mg/L	T	-		<4.22	:	-		<0.311	:	-		<0.311	:
Iron	mg/L	D	<2.66	:	-		<4.22	:	-		<0.311	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		120.	:	-		119.	:	-		106.	:
Magnesium	mg/L	D	124.	:	-		120.	:	-		123.	:	-	
Manganese	mg/L	T	-		27.	:	-		26.6	:	-		24.2	:
Manganese	mg/L	D	27.6	:	-		27.1	:	-		27.7	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.023	:	-		<0.023	:
Molybdenum	mg/L	D	<0.011	J	-		<0.023	:	-		<0.023	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 3/4/2003 MMW-33A-D01N-GRW GW4		MMW-33A 4/1/2003 MMW-33A-T01N-GRW GW4		MMW-33A 4/1/2003 MMW-33A-D01N-GRW GW4		MMW-33A 5/5/2003 MMW-33A-T01N-GRW GW4		MMW-33A 5/5/2003 MMW-33A-D01N-GRW GW4		MMW-33A 6/3/2003 MMW-33A-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.73	:	-		0.543	:	-		0.495	:
Nickel	mg/L	D	0.6	:	-		<0.73	:	-		0.54	:	-	
Potassium	mg/L	T	-		<40.5	:	-		<40.5	:	-		<3.26	:
Potassium	mg/L	D	<31.4	:	-		<40.5	:	-		<40.5	:	-	
Selenium	mg/L	T	-		<0.0147	:	-		0.0088	:	-		<0.008	:
Selenium	mg/L	D	0.0112	:	-		<0.0154	:	-		0.0086	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<91.6	:	-		<91.6	:	-		17.4	:
Sodium	mg/L	D	<36.6	:	-		<91.6	:	-		<91.6	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0042	:	-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	0.0029	:	-		0.004	:	-		<0.001	:	-	
Zinc	mg/L	T	-		5.01	:	-		4.99	:	-		4.32	:
Zinc	mg/L	D	5.08	:	-		5.05	:	-		5.23	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units		Site ID	MMW-33A	MMW-33A	MMW-33A	MMW-33A	MMW-33A	MMW-33A
			Sample Date	6/3/2003	6/4/2003	7/22/2003	7/22/2003	8/11/2003	8/11/2003
			Sample ID	MMW-33A-D01N-GRW	MMW-33A-T01N-GRW	MMW-33A-T01N-GRW	MMW-33A-D01N-GRW	MMW-33A-T01N-GRW	MMW-33A-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	-	6.73 :	-	6.91 :	-
Eh	millivolts	T		-	-	682.1 :	-	334.7 :	-
pH	SU	T		-	-	4.5 J	-	4.4 J	-
Specific Conductance	uS/cm	T		-	-	1699. :	-	1753. :	-
Temperature	Celsius	T		-	-	10.26 :	-	11.21 :	-
Turbidity	NTU	T		-	-	0. :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		-	-	<0.047 J	-	0.11 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Chloride	mg/L	T		-	-	19.7 :	-	19.5 :	-
Fluoride	mg/L	T		-	-	23.7 :	-	20.8 :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		-	-	2.6 J	-	<2.9 J	-
Nitrite	mg/L	T		-	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	-	<0.013 :	-	0.015 J	-
Phosphorus	mg/L	T		-	-	0.02 :	-	0.022 :	-
Sulfate	mg/L	T		-	-	955. J	-	841. J	-
Total Alkalinity	mg/L	T		-	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	-	1720. :	-	1830. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	-	<1. J	-	<1.9 J	-
Total Suspended Solids	mg/L	T		-	-	<1.4 :	-	<1.9 :	-
Laboratory Parameters									
pH	SU	T		-	-	4.5 J	-	4.4 J	-
Specific Conductance	umhos/cm	T		-	-	1670. J	-	1520. J	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		-	-	797. :	-	807. :	-
Hardness	mg/L	D		851. :	-	-	806. :	-	809. :
Metals									

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 6/3/2003 MMW-33A-D01N-GRW GW4		MMW-33A 6/4/2003 MMW-33A-T01N-GRW GW4		MMW-33A 7/22/2003 MMW-33A-T01N-GRW GW4		MMW-33A 7/22/2003 MMW-33A-D01N-GRW GW4		MMW-33A 8/11/2003 MMW-33A-T01N-GRW GW4		MMW-33A 8/11/2003 MMW-33A-D01N-GRW GW4	
Aluminum	mg/L	T	-		-		37.8	:	-		44.	:	-	
Aluminum	mg/L	D	45.4	:	-		-		39.3	:	-		43.7	J
Antimony	mg/L	T	-		-		<0.047	:	-		<0.038	:	-	
Antimony	mg/L	D	<0.072	:	-		-		<0.047	:	-		0.071	:
Arsenic	mg/L	T	-		-		<0.048	:	-		<0.024	:	-	
Arsenic	mg/L	D	<0.04	:	-		-		<0.048	:	-		<0.024	:
Barium	mg/L	T	-		-		<0.059	:	-		<0.073	:	-	
Barium	mg/L	D	<0.123	:	-		-		<0.059	:	-		<0.073	:
Beryllium	mg/L	T	-		-		<0.0121	:	-		0.0099	J	-	
Beryllium	mg/L	D	0.0151	:	-		-		<0.0124	:	-		0.0107	J
Boron	mg/L	T	-		-		<0.048	:	-		<0.046	:	-	
Boron	mg/L	D	<0.084	:	-		-		<0.048	:	-		<0.046	:
Cadmium	mg/L	T	-		-		<0.12	:	-		<0.12	:	-	
Cadmium	mg/L	D	0.0354	:	-		-		<0.12	:	-		<0.12	:
Calcium	mg/L	T	-		-		152.	:	-		153.	:	-	
Calcium	mg/L	D	164.	:	-		-		154.	:	-		154.	:
Chromium	mg/L	T	-		-		<0.19	:	-		<0.19	:	-	
Chromium	mg/L	D	<0.01	:	-		-		<0.19	:	-		<0.19	:
Cobalt	mg/L	T	-		-		<0.37	:	-		<0.37	:	-	
Cobalt	mg/L	D	0.204	:	-		-		<0.37	:	-		<0.37	:
Copper	mg/L	T	-		-		0.472	:	-		<0.79	:	-	
Copper	mg/L	D	0.663	:	-		-		0.56	:	-		<0.772	:
Iron	mg/L	T	-		-		<6.67	:	-		<6.67	:	-	
Iron	mg/L	D	<0.311	:	-		-		<6.67	:	-		<6.67	:
Lead	mg/L	T	-		-		0.001	:	-		<0.001	:	-	
Lead	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Magnesium	mg/L	T	-		-		101.	:	-		103.	:	-	
Magnesium	mg/L	D	107.	:	-		-		102.	:	-		103.	:
Manganese	mg/L	T	-		-		21.5	:	-		21.7	:	-	
Manganese	mg/L	D	24.3	:	-		-		21.7	:	-		21.7	:
Mercury	mg/L	T	-		-		0.00012	:	-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	-		-		<0.017	:	-		<0.016	:	-	
Molybdenum	mg/L	D	<0.023	:	-		-		<0.017	:	-		<0.016	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 6/3/2003 MMW-33A-D01N-GRW GW4	MMW-33A 6/4/2003 MMW-33A-T01N-GRW GW4	MMW-33A 7/22/2003 MMW-33A-T01N-GRW GW4	MMW-33A 7/22/2003 MMW-33A-D01N-GRW GW4	MMW-33A 8/11/2003 MMW-33A-T01N-GRW GW4	MMW-33A 8/11/2003 MMW-33A-D01N-GRW GW4
Nickel	mg/L	T	-	-	<0.44 :	-	0.867 :	-
Nickel	mg/L	D	0.497 :	-	-	0.477 :	-	0.671 :
Potassium	mg/L	T	-	-	<37.1 :	-	<37.1 :	-
Potassium	mg/L	D	<3.26 :	-	-	<37.1 :	-	<37.1 :
Selenium	mg/L	T	-	-	<0.008 :	-	<0.008 :	-
Selenium	mg/L	D	<0.008 :	-	-	<0.008 J	-	<0.008 :
Silver	mg/L	T	-	-	<0.001 J	-	<0.001 :	-
Silver	mg/L	D	<0.001 :	-	-	<0.001 J	-	<0.001 :
Sodium	mg/L	T	-	-	<53.2 :	-	<53.2 J	-
Sodium	mg/L	D	18.5 :	-	-	<53.2 :	-	<53.2 J
Thallium	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T	-	-	<0.002 :	-	<0.002 :	-
Vanadium	mg/L	D	<0.002 :	-	-	<0.002 :	-	<0.002 :
Zinc	mg/L	T	-	-	4.19 :	-	4.49 :	-
Zinc	mg/L	D	4.38 :	-	-	4.24 :	-	4.46 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	-	-
Isotopes								
Lead	mg/L	T	-	-	0.001 :	-	<0.001 :	-
Lead	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-33A		MMW-33A		MMW-33A		MMW-33A		MMW-33A		MMW-33A			
			9/9/2003		9/9/2003		10/23/2003		10/23/2003		11/3/2003		11/3/2003			
			MMW-33A-T01N-GRW		MMW-33A-D01N-GRW		MMW-33A-T01N-GRW		MMW-33A-D01N-GRW		MMW-33A-T01N-GRW		MMW-33A-D01N-GRW			
			GW4		GW4		GW4		GW4		GW4		GW4			
Field Measurements																
DO	mg/L	T	6.11	:	-		5.79	:	-		5.53	:	-			
Eh	millivolts	T	270.	:	-		756.8	:	-		240.4	:	-			
pH	SU	T	4.6	J	-		4.4	J	-		4.3	J	-			
Specific Conductance	uS/cm	T	1680.	:	-		1812.	:	-		1598.	:	-			
Temperature	Celsius	T	8.51	:	-		9.51	:	-		8.47	:	-			
Turbidity	NTU	T	0.	:	-		0.	:	-		4.3	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.091	:	-		<0.12	J	-		<0.04	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	16.9	:	-		18.	:	-		21.4	:	-			
Fluoride	mg/L	T	21.4	:	-		24.	:	-		23.2	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	2.9	J	-		2.8	:	-		2.8	J	-			
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	<0.013	J	-		<0.014	:	-		0.016	J	-			
Phosphorus	mg/L	T	0.017	:	-		0.02	:	-		0.015	:	-			
Sulfate	mg/L	T	1100.	J	-		1460.	J	-		1060.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	1570.	:	-		1840.	:	-		1680.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		3.	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	<1.6	:	-		1.2	J	-		1.1	:	-			
Total Suspended Solids	mg/L	T	2.1	:	-		<1.4	:	-		<1.6	:	-			
Laboratory Parameters																
pH	SU	T	4.6	J	-		4.4	J	-		4.3	J	-			
Specific Conductance	umhos/cm	T	1540.	J	-		1480.	J	-		1710.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	843.	:	-		848.	:	-		762.	:	-			
Hardness	mg/L	D	-		830.	:	-		802.	:	-		779.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-33A 9/9/2003 MMW-33A-T01N-GRW GW4		MMW-33A 9/9/2003 MMW-33A-D01N-GRW GW4		MMW-33A 10/23/2003 MMW-33A-T01N-GRW GW4		MMW-33A 10/23/2003 MMW-33A-D01N-GRW GW4		MMW-33A 11/3/2003 MMW-33A-T01N-GRW GW4		MMW-33A 11/3/2003 MMW-33A-D01N-GRW GW4	
Aluminum	mg/L	T		46.8	:	-		42.6	:	-		40.5	:	-	
Aluminum	mg/L	D		-		46.2	:	-		46.5	:	-		42.9	:
Antimony	mg/L	T		<0.082	:	-		<0.052	:	-		<0.052	:	-	
Antimony	mg/L	D		-		<0.082	:	-		<0.082	:	-		<0.052	:
Arsenic	mg/L	T		<0.035	:	-		<0.041	:	-		<0.041	:	-	
Arsenic	mg/L	D		-		<0.035	:	-		<0.035	:	-		<0.041	:
Barium	mg/L	T		<0.117	:	-		<0.115	:	-		<0.115	:	-	
Barium	mg/L	D		-		<0.117	:	-		<0.117	:	-		<0.115	:
Beryllium	mg/L	T		<0.0136	:	-		0.0146	:	-		0.0083	:	-	
Beryllium	mg/L	D		-		<0.0135	:	-		<0.0174	:	-		0.009	:
Boron	mg/L	T		<0.064	:	-		<0.063	:	-		<0.063	:	-	
Boron	mg/L	D		-		<0.064	:	-		<0.064	:	-		<0.063	:
Cadmium	mg/L	T		<0.13	:	-		<0.05	:	-		<0.05	:	-	
Cadmium	mg/L	D		-		<0.13	:	-		0.106	:	-		<0.05	:
Calcium	mg/L	T		161.	:	-		162.	:	-		139.	:	-	
Calcium	mg/L	D		-		158.	:	-		153.	:	-		141.	:
Chromium	mg/L	T		<0.23	:	-		<0.11	J	-		<0.11	J	-	
Chromium	mg/L	D		-		<0.23	:	-		<0.183	J	-		<0.11	J
Cobalt	mg/L	T		<0.32	:	-		<0.29	:	-		<0.29	:	-	
Cobalt	mg/L	D		-		<0.32	:	-		0.38	:	-		<0.29	:
Copper	mg/L	T		0.554	:	-		0.545	:	-		0.54	:	-	
Copper	mg/L	D		-		0.63	:	-		0.48	J	-		0.601	:
Iron	mg/L	T		<4.55	:	-		<2.78	:	-		<2.78	:	-	
Iron	mg/L	D		-		<4.55	:	-		<4.75	:	-		<2.78	:
Lead	mg/L	T		<0.002	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D		-		<0.002	:	-		<0.002	:	-		<0.002	:
Magnesium	mg/L	T		107.	:	-		108.	:	-		101.	:	-	
Magnesium	mg/L	D		-		106.	:	-		102.	:	-		104.	:
Manganese	mg/L	T		22.4	:	-		23.5	:	-		21.8	J	-	
Manganese	mg/L	D		-		22.2	:	-		21.6	:	-		22.5	:
Mercury	mg/L	T		<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D		-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T		<0.012	:	-		<0.011	:	-		<0.011	:	-	
Molybdenum	mg/L	D		-		<0.012	:	-		<0.012	:	-		<0.011	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 9/9/2003 MMW-33A-T01N-GRW GW4		MMW-33A 9/9/2003 MMW-33A-D01N-GRW GW4		MMW-33A 10/23/2003 MMW-33A-T01N-GRW GW4		MMW-33A 10/23/2003 MMW-33A-D01N-GRW GW4		MMW-33A 11/3/2003 MMW-33A-T01N-GRW GW4		MMW-33A 11/3/2003 MMW-33A-D01N-GRW GW4	
Nickel	mg/L	T	<0.45	:	-		0.622	:	-		<0.24	J	-	
Nickel	mg/L	D	-		<0.45	:	-		0.667	:	-		0.513	J
Potassium	mg/L	T	<63.8	:	-		<31.8	:	-		<31.8	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<52.2	:	-		<31.8	:
Selenium	mg/L	T	0.0042	:	-		0.007	:	-		0.0036	:	-	
Selenium	mg/L	D	-		0.0049	:	-		0.0056	:	-		0.0087	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		<45.4	:	-		<45.4	:	-	
Sodium	mg/L	D	-		<99.1	:	-		<74.9	:	-		<45.4	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	4.44	:	-		4.68	:	-		3.83	J	-	
Zinc	mg/L	D	-		4.35	:	-		4.2	:	-		5.52	J
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-33A		MMW-33A		MMW-33A		MMW-33A		MMW-33A		MMW-33A			
			12/11/2003		12/11/2003		1/13/2004		1/13/2004		4/13/2004		4/13/2004			
			MMW-33A-T01N-GRW		MMW-33A-D01N-GRW		MMW-33A-T01N-GRW		MMW-33A-D01N-GRW		MMW-33A-T01N-GRW		MMW-33A-D01N-GRW			
			GW4		GW4		GW4		GW4		GW4		GW4			
Field Measurements																
DO	mg/L	T	5.89	:	-		6.31	:	-		6.73	:	-			
Eh	millivolts	T	349.2	:	-		438.2	:	-		417.2	:	-			
pH	SU	T	4.5	J	-		4.5	J	-		4.9	J	-			
Specific Conductance	uS/cm	T	1703.	:	-		1620.	:	-		1433.	:	-			
Temperature	Celsius	T	6.26	:	-		8.14	:	-		7.26	:	-			
Turbidity	NTU	T	1.	:	-		3.2	:	-		46.3	:	-			
General Chemistry																
Ammonia	mg/L	T	0.08	:	-		<0.085	J	-		<0.07	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	17.3	:	-		17.2	:	-		17.2	:	-			
Fluoride	mg/L	T	23.2	:	-		21.2	:	-		18.2	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	2.9	:	-		2.4	J	-		2.2	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	0.016	:	-		<0.017	J	-		0.018	J	-			
Phosphorus	mg/L	T	0.014	:	-		<0.025	:	-		0.023	:	-			
Sulfate	mg/L	T	973.	:	-		956.	:	-		1000.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	1640.	J	-		1440.	:	-		1450.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		<0.24	:	-		0.25	:	-			
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		2.2	J	-			
Total Suspended Solids	mg/L	T	3.	:	-		<2.	:	-		<1.9	J	-			
Laboratory Parameters																
pH	SU	T	4.5	J	-		4.5	J	-		4.9	J	-			
Specific Conductance	umhos/cm	T	1410.	J	-		1580.	J	-		1350.	J	-			
Inorganics																
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	829.	:	-		747.	:	-		759.	:	-			
Hardness	mg/L	D	-		786.	:	-		772.	:	-		736.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-33A 12/11/2003 MMW-33A-T01N-GRW GW4		MMW-33A 12/11/2003 MMW-33A-D01N-GRW GW4		MMW-33A 1/13/2004 MMW-33A-T01N-GRW GW4		MMW-33A 1/13/2004 MMW-33A-D01N-GRW GW4		MMW-33A 4/13/2004 MMW-33A-T01N-GRW GW4		MMW-33A 4/13/2004 MMW-33A-D01N-GRW GW4	
Aluminum	mg/L	T	44.5	:	-		39.4	:	-		40.3	:	-	
Aluminum	mg/L	D	-		42.2	:	-		40.9	:	-		37.9	:
Antimony	mg/L	T	<0.082	:	-		<0.097	:	-		<0.053	:	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.097	:	-		<0.053	:
Arsenic	mg/L	T	<0.035	:	-		<0.052	:	-		<0.037	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.052	:	-		<0.037	:
Barium	mg/L	T	<0.117	:	-		<0.188	:	-		<0.049	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.188	:	-		<0.049	:
Beryllium	mg/L	T	<0.0201	:	-		0.0103	:	-		<0.0135	:	-	
Beryllium	mg/L	D	-		<0.019	:	-		0.0128	:	-		<0.0138	:
Boron	mg/L	T	<0.064	:	-		<0.117	:	-		<0.036	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.117	:	-		<0.036	:
Cadmium	mg/L	T	<0.13	:	-		<0.07	J	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		<0.07	:	-		<0.1	:
Calcium	mg/L	T	158.	:	-		143.	:	-		144.	:	-	
Calcium	mg/L	D	-		150.	:	-		147.	:	-		140.	:
Chromium	mg/L	T	<0.23	:	-		<0.145	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.23	:	-		<0.11	:	-		<0.13	:
Cobalt	mg/L	T	<0.32	:	-		<0.31	:	-		0.202	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.31	:	-		0.2	:
Copper	mg/L	T	0.7	:	-		0.726	:	-		0.632	:	-	
Copper	mg/L	D	-		0.708	:	-		0.666	:	-		0.702	:
Iron	mg/L	T	<4.55	:	-		<3.73	:	-		<2.93	J	-	
Iron	mg/L	D	-		<4.55	:	-		<3.73	:	-		<2.93	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		0.0016	:	-		<0.001	:	-		<0.004	:
Magnesium	mg/L	T	106.	:	-		95.	:	-		96.7	:	-	
Magnesium	mg/L	D	-		99.9	:	-		98.1	:	-		93.9	:
Manganese	mg/L	T	22.7	:	-		20.4	:	-		20.4	:	-	
Manganese	mg/L	D	-		21.5	:	-		21.1	:	-		19.8	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.012	J	-		<0.03	:	-		<0.014	:	-	
Molybdenum	mg/L	D	-		<0.012	J	-		<0.03	:	-		<0.014	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-33A 12/11/2003 MMW-33A-T01N-GRW GW4		MMW-33A 12/11/2003 MMW-33A-D01N-GRW GW4		MMW-33A 1/13/2004 MMW-33A-T01N-GRW GW4		MMW-33A 1/13/2004 MMW-33A-D01N-GRW GW4		MMW-33A 4/13/2004 MMW-33A-T01N-GRW GW4		MMW-33A 4/13/2004 MMW-33A-D01N-GRW GW4	
Nickel	mg/L	T	<0.45	:	-		0.555	:	-		0.715	:	-	
Nickel	mg/L	D	-		<0.45	:	-		0.514	:	-		0.641	:
Potassium	mg/L	T	<63.8	:	-		<24.3	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<24.3	:	-		<15.5	:
Selenium	mg/L	T	0.0043	:	-		0.0096	J	-		<0.007	:	-	
Selenium	mg/L	D	-		0.0053	:	-		0.0066	:	-		<0.007	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<99.1	:	-		<49.	:	-		<32.8	J	-	
Sodium	mg/L	D	-		<99.1	:	-		<49.	:	-		<32.8	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.003	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.0028	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	4.46	:	-		4.68	:	-		4.17	:	-	
Zinc	mg/L	D	-		4.23	:	-		4.81	:	-		4.18	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-95.4	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.2	:	-	
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		0.0016	:	-		<0.001	:	-		<0.004	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-42A		MMW-42A		MMW-42A		MMW-42A		MMW-42A		MMW-42A	
Sample Date			11/11/2002		11/11/2002		11/11/2002		11/11/2002		1/10/2003		1/10/2003	
Sample ID			MMW-42A-T01N-GR WRE		MMW-42A-T01N-GR W		MMW-42A-D01N-GR WRE		MMW-42A-D01N-GR W		MMW-42A-T01N-GR W		MMW-42A-D01N-GR W	
Exposure Area			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	-		6.65	:	-		-		3.71	:	-	
Eh	millivolts	T	-		449.7	:	-		-		412.8	:	-	
pH	SU	T	-		3.22	:	-		-		3.28	:	-	
Specific Conductance	uS/cm	T	-		2800.	:	-		-		2779.	:	-	
Temperature	Celsius	T	-		9.25	:	-		-		9.16	:	-	
Turbidity	NTU	T	-		12.2	:	-		-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	-		0.15	:	-		-		<0.17	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		390.	:	-		-		266.	:	-	
Fluoride	mg/L	T	21.8	J	-		-		-		0.99	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.4	:	-		-		<0.72	J	-	
Nitrite	mg/L	T	-		<0.005	:	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		12.9	J	-	
Phosphorus	mg/L	T	-		0.041	:	-		-		0.033	J	-	
Sulfate	mg/L	T	1350.	J	-		-		-		1720.	J	-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		2690.	:	-		-		2560.	J	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		1.3	:	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		7.4	:	-		-		2.2	:	-	
Laboratory Parameters														
pH	SU	T	-		3.22	:	-		-		3.28	:	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		-		-		-		817.	:	-	
Hardness	mg/L	D	-		-		887.	:	-		-		815.	:
Metals														
Aluminum	mg/L	T	-		-		-		-		175.	:	-	

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T = Total Fraction D = Dissolved Fracton
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-42A 11/11/2002 MMW-42A-T01N-GR WRE GW5		MMW-42A 11/11/2002 MMW-42A-T01N-GR W GW5		MMW-42A 11/11/2002 MMW-42A-D01N-GR WRE GW5		MMW-42A 11/11/2002 MMW-42A-D01N-GR W GW5		MMW-42A 1/10/2003 MMW-42A-T01N-GR W GW5		MMW-42A 1/10/2003 MMW-42A-D01N-GR W GW5	
Aluminum	mg/L	D		-		-		187.	:	-		-		176.	:
Antimony	mg/L	T		-		-		-		-		<0.028	:	-	
Antimony	mg/L	D		-		-		<0.028	:	-		-		<0.028	:
Arsenic	mg/L	T		-		-		-		-		0.0243	:	-	
Arsenic	mg/L	D		-		-		<0.028	:	-		-		<0.023	:
Barium	mg/L	T		-		-		-		-		<0.048	:	-	
Barium	mg/L	D		-		-		<0.048	:	-		-		<0.048	:
Beryllium	mg/L	T		-		-		-		-		0.037	:	-	
Beryllium	mg/L	D		-		-		0.0365	:	-		-		0.0356	:
Boron	mg/L	T		-		-		-		-		<0.027	:	-	
Boron	mg/L	D		-		-		<0.027	:	-		-		<0.027	:
Cadmium	mg/L	T		-		-		-		-		<0.04	:	-	
Cadmium	mg/L	D		-		-		<0.08	:	-		-		0.0404	:
Calcium	mg/L	T		-		-		-		-		214.	:	-	
Calcium	mg/L	D		-		-		230.	:	-		-		214.	:
Chromium	mg/L	T		-		-		-		-		<0.37	:	-	
Chromium	mg/L	D		-		-		<0.16	J	-		-		<0.37	:
Cobalt	mg/L	T		-		-		-		-		0.306	:	-	
Cobalt	mg/L	D		-		-		0.332	:	-		-		0.361	:
Copper	mg/L	T		-		-		-		-		3.19	:	-	
Copper	mg/L	D		-		-		3.44	:	-		-		3.25	:
Iron	mg/L	T		-		-		-		-		<4.89	:	-	
Iron	mg/L	D		-		-		<2.66	:	-		-		<4.89	:
Lead	mg/L	T		-		-		-		-		<0.001	:	-	
Lead	mg/L	D		-		-		<0.001	:	-		-		<0.001	:
Magnesium	mg/L	T		-		-		-		-		68.5	:	-	
Magnesium	mg/L	D		-		-		75.8	:	-		-		68.4	:
Manganese	mg/L	T		-		-		-		-		24.7	:	-	
Manganese	mg/L	D		-		-		26.4	:	-		-		24.6	:
Mercury	mg/L	T		-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D		-		-		-		0.00024	:	-		<0.0001	:
Molybdenum	mg/L	T		-		-		-		-		<0.011	:	-	
Molybdenum	mg/L	D		-		-		<0.011	:	-		-		<0.011	:
Nickel	mg/L	T		-		-		-		-		0.536	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-42A 11/11/2002 MMW-42A-T01N-GRWRE GW5		MMW-42A 11/11/2002 MMW-42A-T01N-GRW GW5		MMW-42A 11/11/2002 MMW-42A-D01N-GRWRE GW5		MMW-42A 11/11/2002 MMW-42A-D01N-GRW GW5		MMW-42A 1/10/2003 MMW-42A-T01N-GRW GW5		MMW-42A 1/10/2003 MMW-42A-D01N-GRW GW5	
Nickel	mg/L		D	-		-		0.615	:	-		-		0.599	:
Potassium	mg/L		T	-		-		-		-		<20.2	:	-	
Potassium	mg/L		D	-		-		<31.4	J	-		-		<20.2	:
Selenium	mg/L		T	-		-		-		-		0.0083	:	-	
Selenium	mg/L		D	-		-		<0.008	:	-		-		0.0086	:
Silver	mg/L		T	-		-		-		-		0.0013	:	-	
Silver	mg/L		D	-		-		0.0012	:	-		-		<0.001	:
Sodium	mg/L		T	-		-		-		-		62.9	:	-	
Sodium	mg/L		D	-		-		53.2	:	-		-		56.	:
Thallium	mg/L		T	-		-		-		-		<0.001	:	-	
Thallium	mg/L		D	-		-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L		T	-		-		-		-		0.0023	:	-	
Vanadium	mg/L		D	-		-		<0.002	:	-		-		0.0024	:
Zinc	mg/L		T	-		-		-		-		6.27	:	-	
Zinc	mg/L		D	-		-		6.66	:	-		-		6.26	:
Isotopes															
Lead	mg/L		T	-		-		-		-		<0.001	:	-	
Lead	mg/L		D	-		-		<0.001	:	-		-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-42A	4/7/2003	MMW-42A-T01N-GRW		MMW-42A	4/7/2003	MMW-42A-D01N-GRW		MMW-42A	7/23/2003	MMW-42A-T01N-GRW		MMW-42A	7/23/2003	MMW-42A-D01N-GRW	
					GW5				GW5				GW5				GW5	
Field Measurements																		
DO	mg/L	T	4.78	:			-				0.72	:			-			
Eh	millivolts	T	477.1	:			-				456.6	:			-			
pH	SU	T	5.9	J			-				3.8	J			-			
Specific Conductance	uS/cm	T	2506.	:			-				2531.	:			-			
Temperature	Celsius	T	9.18	:			-				11.17	:			-			
Turbidity	NTU	T	0.	:			-				0.	:			-			
General Chemistry																		
Ammonia	mg/L	T	<0.087	:			-				<0.076	J			-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Chloride	mg/L	T	242.	:			-				230.	:			-			
Fluoride	mg/L	T	20.	:			-				21.5	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	<0.57	J			-				<0.4	:			-			
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.015	J			-				<0.01	J			-			
Phosphorus	mg/L	T	0.039	:			-				0.034	:			-			
Sulfate	mg/L	T	1390.	J			-				1400.	J			-			
Total Alkalinity	mg/L	T	<1.	:			-				<1.	:			-			
Total Dissolved Solids	mg/L	T	2320.	:			-				3580.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	2.4	J			-				<2.	J			-			
Total Suspended Solids	mg/L	T	<2.4	:			-				<1.3	:			-			
Laboratory Parameters																		
pH	SU	T	5.9	J			-				3.8	J			-			
Specific Conductance	umhos/cm	T	2380.	J			-				2570.	J			-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-			
Physical Properties																		
Hardness	mg/L	T	763.	:			-				907.	:			-			
Hardness	mg/L	D	-				751.	:			-				887.	:		
Metals																		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42A 4/7/2003 MMW-42A-T01N-GRW GW5		MMW-42A 4/7/2003 MMW-42A-D01N-GRW GW5		MMW-42A 7/23/2003 MMW-42A-T01N-GRW GW5		MMW-42A 7/23/2003 MMW-42A-D01N-GRW GW5		MMW-42A 10/16/2003 MMW-42A-T01N-GRW GW5		MMW-42A 10/16/2003 MMW-42A-D01N-GRW GW5	
Aluminum	mg/L	T	158.	:	-		190.	:	-		135.	:	-	
Aluminum	mg/L	D	-		155.	:	-		185.	:	-		133.	:
Antimony	mg/L	T	<0.003	:	-		<0.047	:	-		<0.082	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.047	:	-		<0.082	:
Arsenic	mg/L	T	<0.002	:	-		<0.048	:	-		<0.035	:	-	
Arsenic	mg/L	D	-		<0.002	:	-		<0.048	:	-		<0.035	:
Barium	mg/L	T	<0.125	:	-		<0.059	:	-		<0.117	:	-	
Barium	mg/L	D	-		<0.125	:	-		<0.059	:	-		<0.117	:
Beryllium	mg/L	T	0.0304	:	-		0.0364	:	-		0.033	:	-	
Beryllium	mg/L	D	-		0.0297	:	-		0.0331	:	-		<0.0295	:
Boron	mg/L	T	<0.084	:	-		<0.048	:	-		<0.064	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.048	:	-		<0.064	:
Cadmium	mg/L	T	0.0337	:	-		<0.12	:	-		<0.393	:	-	
Cadmium	mg/L	D	-		0.0338	:	-		<0.12	:	-		<0.377	:
Calcium	mg/L	T	200.	:	-		234.	:	-		186.	:	-	
Calcium	mg/L	D	-		197.	:	-		230.	:	-		184.	:
Chromium	mg/L	T	0.0321	:	-		<0.19	:	-		<0.13	J	-	
Chromium	mg/L	D	-		0.0332	:	-		<0.19	:	-		<0.13	J
Cobalt	mg/L	T	0.264	:	-		0.391	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		0.264	:	-		<0.37	:	-		<0.31	:
Copper	mg/L	T	2.98	:	-		2.81	:	-		2.55	:	-	
Copper	mg/L	D	-		2.94	:	-		2.58	:	-		2.5	:
Iron	mg/L	T	1.47	:	-		5.22	:	-		<4.55	:	-	
Iron	mg/L	D	-		1.25	:	-		4.86	:	-		<4.55	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.002	:
Magnesium	mg/L	T	64.4	:	-		78.	:	-		58.1	:	-	
Magnesium	mg/L	D	-		63.2	:	-		75.8	:	-		57.4	:
Manganese	mg/L	T	23.	:	-		24.8	:	-		21.	:	-	
Manganese	mg/L	D	-		22.7	:	-		24.2	:	-		20.6	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.022	:	-		<0.017	:	-		<0.012	J	-	
Molybdenum	mg/L	D	-		<0.022	:	-		<0.017	:	-		<0.012	J

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-42A 4/7/2003 MMW-42A-T01N-GRW GW5		MMW-42A 4/7/2003 MMW-42A-D01N-GRW GW5		MMW-42A 7/23/2003 MMW-42A-T01N-GRW GW5		MMW-42A 7/23/2003 MMW-42A-D01N-GRW GW5		MMW-42A 10/16/2003 MMW-42A-T01N-GRW GW5		MMW-42A 10/16/2003 MMW-42A-D01N-GRW GW5	
Nickel	mg/L		T	0.547	:	-		<0.44	:	-		<0.694	:	-	
Nickel	mg/L		D	-		0.545	:	-		<0.44	:	-		<0.742	:
Potassium	mg/L		T	<4.05	:	-		<37.1	:	-		<52.2	:	-	
Potassium	mg/L		D	-		<4.05	:	-		<37.1	:	-		<52.2	:
Selenium	mg/L		T	<0.005	:	-		<0.008	:	-		<0.0069	:	-	
Selenium	mg/L		D	-		<0.005	:	-		<0.008	J	-		<0.0067	:
Silver	mg/L		T	<0.001	:	-		<0.001	J	-		0.0021	:	-	
Silver	mg/L		D	-		<0.001	:	-		<0.001	J	-		0.002	:
Sodium	mg/L		T	59.	:	-		<53.2	:	-		64.9	:	-	
Sodium	mg/L		D	-		58.4	:	-		54.5	:	-		71.6	:
Thallium	mg/L		T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L		T	<0.001	J	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L		D	-		<0.001	J	-		<0.002	:	-		<0.001	:
Zinc	mg/L		T	5.64	:	-		6.27	:	-		5.76	:	-	
Zinc	mg/L		D	-		5.58	:	-		6.04	:	-		5.78	:
Isotopes															
Lead	mg/L		T	<0.001	:	-		<0.001	:	-		<0.002	:	-	
Lead	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-42A		MMW-42A		MMW-42A		MMW-42A		MMW-43A		MMW-43A	
Sample Date			1/14/2004		1/14/2004		4/18/2004		4/18/2004		11/4/2002		11/4/2002	
Sample ID			MMW-42A-T01N-GRW		MMW-42A-D01N-GRW		MMW-42A-T01N-GRW		MMW-42A-D01N-GRW		MMW-43A-T01N-GRW		MMW-43A-D01N-GRW	
Exposure Area			GW5		GW5		GW5		GW5		GW6		GW6	
Field Measurements														
DO	mg/L	T	4.05	:	-		5.98	:	-		3.22	:	-	
Eh	millivolts	T	571.2	:	-		499.8	:	-		19.9	:	-	
pH	SU	T	3.5	J	-		5.	J	-		6.81	:	-	
Specific Conductance	uS/cm	T	2596.	:	-		2558.	:	-		2107.	:	-	
Temperature	Celsius	T	8.85	:	-		9.95	:	-		7.3	:	-	
Turbidity	NTU	T	2.	:	-		1.2	:	-		8.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.078	J	-		<0.048	:	-		<0.16	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		238.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	321.	:	-		301.	J	-		13.5	:	-	
Fluoride	mg/L	T	17.7	:	-		16.6	:	-		2.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.49	J	-		0.38	:	-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.015	J	-		0.015	:	-		<0.01	:	-	
Phosphorus	mg/L	T	0.037	:	-		0.027	:	-		0.044	:	-	
Sulfate	mg/L	T	1280.	:	-		1340.	:	-		1230.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		238.	:	-	
Total Dissolved Solids	mg/L	T	2190.	:	-		2320.	:	-		1980.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		2.6	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	<1.9	:	-		<1.5	J	-		35.4	:	-	
Laboratory Parameters														
pH	SU	T	3.5	J	-		5.	J	-		6.81	:	-	
Specific Conductance	umhos/cm	T	2320.	J	-		2220.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	704.	:	-		769.	:	-		1410.	:	-	
Hardness	mg/L	D	-		694.	:	-		774.	:	-		1360.	:
Metals														

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-42A 1/14/2004 MMW-42A-T01N-GRW GW5		MMW-42A 1/14/2004 MMW-42A-D01N-GRW GW5		MMW-42A 4/18/2004 MMW-42A-T01N-GRW GW5		MMW-42A 4/18/2004 MMW-42A-D01N-GRW GW5		MMW-43A 11/4/2002 MMW-43A-T01N-GRW GW6		MMW-43A 11/4/2002 MMW-43A-D01N-GRW GW6	
Aluminum	mg/L	T	146.	:	-		154.	:	-		0.473	:	-	
Aluminum	mg/L	D	-		144.	:	-		156.	:	-		0.0815	:
Antimony	mg/L	T	<0.029	:	-		<0.027	:	-		<0.0004	:	-	
Antimony	mg/L	D	-		<0.029	:	-		<0.027	:	-		<0.0004	:
Arsenic	mg/L	T	<0.028	:	-		<0.026	:	-		0.0005	J	-	
Arsenic	mg/L	D	-		<0.028	:	-		<0.026	:	-		0.00042	J
Barium	mg/L	T	<0.053	:	-		<0.012	:	-		0.0399	:	-	
Barium	mg/L	D	-		<0.053	:	-		<0.012	:	-		0.0372	:
Beryllium	mg/L	T	0.0337	:	-		0.0335	:	-		0.00076	:	-	
Beryllium	mg/L	D	-		0.0338	:	-		0.0336	:	-		0.00051	:
Boron	mg/L	T	<0.023	:	-		<0.023	:	-		0.0075	:	-	
Boron	mg/L	D	-		<0.023	:	-		<0.018	:	-		0.0064	:
Cadmium	mg/L	T	<0.07	J	-		0.0443	:	-		0.00064	J	-	
Cadmium	mg/L	D	-		<0.07	:	-		0.0625	J	-		<0.0002	:
Calcium	mg/L	T	185.	:	-		200.	:	-		414.	:	-	
Calcium	mg/L	D	-		183.	:	-		201.	:	-		400.	:
Chromium	mg/L	T	<0.57	:	-		<0.08	:	-		<0.0046	:	-	
Chromium	mg/L	D	-		<0.57	:	-		0.0916	:	-		<0.0046	:
Chromium, Hexavalent	mg/L	D	-		-		-		-		<0.01	:	-	
Cobalt	mg/L	T	<0.37	:	-		0.336	:	-		0.0025	:	-	
Cobalt	mg/L	D	-		<0.37	:	-		0.377	:	-		<0.0022	:
Copper	mg/L	T	3.03	:	-		2.96	:	-		0.0035	:	-	
Copper	mg/L	D	-		3.01	:	-		3.09	:	-		<0.0016	:
Iron	mg/L	T	<4.23	:	-		<2.47	J	-		4.61	:	-	
Iron	mg/L	D	-		<4.23	:	-		<3.3	:	-		3.48	:
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		0.0016	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-		<0.0002	:
Magnesium	mg/L	T	58.5	:	-		65.6	:	-		90.8	:	-	
Magnesium	mg/L	D	-		57.6	:	-		66.	:	-		87.5	:
Manganese	mg/L	T	21.1	:	-		22.1	:	-		3.22	:	-	
Manganese	mg/L	D	-		20.9	:	-		22.3	:	-		3.09	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.024	:	-		<0.0179	:	-		0.00092	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MMW-42A	1/14/2004	MMW-42A-T01N-GRW	GW5	MMW-42A	1/14/2004	MMW-42A-D01N-GRW	GW5	MMW-42A	4/18/2004	MMW-42A-T01N-GRW	GW5	MMW-42A	4/18/2004	MMW-42A-D01N-GRW	GW5
Molybdenum	mg/L	D	-				<0.024	:			-				<0.01	:		
Nickel	mg/L	T	<1.68	:			-				0.518	:			-			
Nickel	mg/L	D	-				<1.68	:			-				0.567	:		
Potassium	mg/L	T	<110.	J			-				<10.9	J			-			
Potassium	mg/L	D	-				<110.	J			-				<10.9	J		
Selenium	mg/L	T	0.008	J			-				<0.007	:			-			
Selenium	mg/L	D	-				0.0078	:			-				<0.007	:		
Silver	mg/L	T	0.0018	:			-				<0.001	J			-			
Silver	mg/L	D	-				0.0019	:			-				<0.001	J		
Sodium	mg/L	T	<92.	:			-				<83.	:			-			
Sodium	mg/L	D	-				<92.	:			-				<90.5	:		
Thallium	mg/L	T	<0.001	:			-				<0.001	:			-			
Thallium	mg/L	D	-				<0.001	:			-				<0.001	:		
Vanadium	mg/L	T	<0.002	:			-				<0.002	:			-			
Vanadium	mg/L	D	-				<0.002	:			-				<0.002	:		
Zinc	mg/L	T	5.56	:			-				5.81	:			-			
Zinc	mg/L	D	-				5.49	:			-				5.87	:		
Volatile Organics																		
1,1,1-Trichloroethane	mg/L	T	-				-				-				-			
1,1,2,2-Tetrachloroethane	mg/L	T	-				-				-				-			
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-				-				-				-			
1,1,2-Trichloroethane	mg/L	T	-				-				-				-			
1,1-Dichloroethane	mg/L	T	-				-				-				-			
1,1-Dichloroethene	mg/L	T	-				-				-				-			
1,2,4-Trichlorobenzene	mg/L	T	-				-				-				-			
1,2-Dibromo-3-chloropropane	mg/L	T	-				-				-				-			
1,2-Dichlorobenzene	mg/L	T	-				-				-				-			
1,2-Dichloroethane	mg/L	T	-				-				-				-			
1,2-Dichloroethene (total)	mg/L	T	-				-				-				-			
1,2-Dichloropropane	mg/L	T	-				-				-				-			
1,3-Dichlorobenzene	mg/L	T	-				-				-				-			
1,4-Dichlorobenzene	mg/L	T	-				-				-				-			
2-Butanone	mg/L	T	-				-				-				-			
2-Hexanone	mg/L	T	-				-				-				-			

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MMW-43A	11/4/2002	MMW-43A-T01N-GRW	GW6	MMW-43A	11/4/2002	MMW-43A-D01N-GRW	GW6								
Molybdenum	mg/L	D	-				0.0013	:										
Nickel	mg/L	T	0.006	J			-											
Nickel	mg/L	D	-				0.0019	J										
Potassium	mg/L	T	4.35	:			-											
Potassium	mg/L	D	-				4.11	:										
Selenium	mg/L	T	0.00062	:			-											
Selenium	mg/L	D	-				<0.0004	:										
Silver	mg/L	T	<0.0002	:			-											
Silver	mg/L	D	-				<0.0002	:										
Sodium	mg/L	T	33.8	:			-											
Sodium	mg/L	D	-				32.6	:										
Thallium	mg/L	T	<0.0002	:			-											
Thallium	mg/L	D	-				<0.0002	:										
Vanadium	mg/L	T	0.00096	:			-											
Vanadium	mg/L	D	-				<0.0002	:										
Zinc	mg/L	T	0.134	:			-											
Zinc	mg/L	D	-				0.107	:										
Volatile Organics																		
1,1,1-Trichloroethane	mg/L	T	<0.01	:			-											
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:			-											
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:			-											
1,1,2-Trichloroethane	mg/L	T	<0.01	:			-											
1,1-Dichloroethane	mg/L	T	0.004	J			-											
1,1-Dichloroethene	mg/L	T	<0.01	:			-											
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:			-											
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	J			-											
1,2-Dichlorobenzene	mg/L	T	<0.01	:			-											
1,2-Dichloroethane	mg/L	T	<0.01	:			-											
1,2-Dichloroethene (total)	mg/L	T	<0.01	:			-											
1,2-Dichloropropane	mg/L	T	<0.01	:			-											
1,3-Dichlorobenzene	mg/L	T	<0.01	:			-											
1,4-Dichlorobenzene	mg/L	T	<0.01	:			-											
2-Butanone	mg/L	T	<0.01	J			-											
2-Hexanone	mg/L	T	<0.01	J			-											

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-42A 1/14/2004 MMW-42A-T01N-GRW GW5	MMW-42A 1/14/2004 MMW-42A-D01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-T01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-D01N-GRW GW5	MMW-43A 11/4/2002 MMW-43A-T01N-GRW GW6	MMW-43A 11/4/2002 MMW-43A-D01N-GRW GW6
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	<0.01 J	-
Acetone	mg/L	T	-	-	-	-	<0.01 J	-
Benzene	mg/L	T	-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Bromoform	mg/L	T	-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T	-	-	-	-	<0.01 J	-
Carbon disulfide	mg/L	T	-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T	-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Chloroform	mg/L	T	-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T	-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T	-	-	-	-	<0.01 :	-
Styrene	mg/L	T	-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Toluene	mg/L	T	-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T	-	-	-	-	<0.01 :	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	<0.026 :	-
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T	-	-	-	-	<0.026 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-42A 1/14/2004 MMW-42A-T01N-GRW GW5	MMW-42A 1/14/2004 MMW-42A-D01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-T01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-D01N-GRW GW5	MMW-43A 11/4/2002 MMW-43A-T01N-GRW GW6	MMW-43A 11/4/2002 MMW-43A-D01N-GRW GW6
2,4-Dinitrotoluene	mg/L	T	-	-	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T	-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T	-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T	-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T	-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T	-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T	-	-	-	-	<0.026 :	-
2-Nitrophenol	mg/L	T	-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T	-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T	-	-	-	-	<0.026 :	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	-	<0.026 :	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T	-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T	-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T	-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T	-	-	-	-	<0.026 :	-
4-Nitrophenol	mg/L	T	-	-	-	-	<0.026 :	-
Acenaphthene	mg/L	T	-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T	-	-	-	-	<0.01 :	-
Anthracene	mg/L	T	-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T	-	-	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T	-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T	-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Carbazole	mg/L	T	-	-	-	-	<0.01 :	-
Chrysene	mg/L	T	-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T	-	-	-	-	<0.01 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-42A 1/14/2004 MMW-42A-T01N-GRW GW5	MMW-42A 1/14/2004 MMW-42A-D01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-T01N-GRW GW5	MMW-42A 4/18/2004 MMW-42A-D01N-GRW GW5	MMW-43A 11/4/2002 MMW-43A-T01N-GRW GW6	MMW-43A 11/4/2002 MMW-43A-D01N-GRW GW6
Dibenzofuran	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 J	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.026 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta D	per mil	T	-	-	-88. :	-	-	-
Delta O-18	per mil	T	-	-	-12.1 :	-	-	-
Lead	mg/L	T	<0.001 :	-	<0.004 :	-	0.0016 :	-
Lead	mg/L	D	-	<0.001 :	-	<0.004 :	-	<0.0002 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-43A	1/16/2003	MMW-43A-T01N-GRW		MMW-43A	1/16/2003	MMW-43A-D01N-GRW		MMW-43A	4/4/2003	MMW-43A-T01N-GRW		MMW-43A	4/4/2003	MMW-43A-D01N-GRW		MMW-43A	7/20/2003	MMW-43A-T01N-GRW	
					GW6				GW6				GW6				GW6				GW6	
Field Measurements																						
DO	mg/L	T			1.06	:			-				0.05	:			-				0.7	:
Eh	millivolts	T			18.8	:			-				20.4	:			-				10.5	:
pH	SU	T			6.88	:			-				7.3	J			-				7.1	J
Specific Conductance	uS/cm	T			1915.	:			-				2155.	:			-				2200.	:
Temperature	Celsius	T			7.43	:			-				6.98	:			-				14.29	:
Turbidity	NTU	T			161.7	:			-				247.9	:			-				71.7	:
General Chemistry																						
Ammonia	mg/L	T			<0.065	:			-				<0.064	:			-				<0.14	J
Bicarbonate (as CaCO3)	mg/L	T			225.	:			-				239.	:			-				242.	:
Carbonate (as CaCO3)	mg/L	T			<1.	:			-				<1.	:			-				<1.	:
Chloride	mg/L	T			13.6	:			-				13.2	:			-				12.9	:
Fluoride	mg/L	T			1.6	:			-				1.7	:			-				1.8	:
Hydroxide (as CaCO3)	mg/L	T			<1.	:			-				<1.	:			-				<1.	:
Nitrate	mg/L	T			<0.4	J			-				<0.4	:			-				<0.2	J
Nitrite	mg/L	T			<0.005	J			-				<0.005	:			-				<0.005	:
Phosphate, Ortho As P	mg/L	T			<0.01	J			-				<0.01	:			-				<0.01	J
Phosphorus	mg/L	T			0.098	:			-				0.21	:			-				0.051	:
Sulfate	mg/L	T			2580.	J			-				1130.	J			-				1110.	J
Total Alkalinity	mg/L	T			225.	:			-				239.	:			-				242.	:
Total Dissolved Solids	mg/L	T			1910.	:			-				2000.	:			-				2150.	:
Total Kjeldahl Nitrogen	mg/L	T			<0.28	:			-				<0.24	:			-				<0.24	:
Total Organic Carbon	mg/L	T			<1.	:			-				<5.	J			-				<1.1	J
Total Suspended Solids	mg/L	T			104.	:			-				171.	:			-				49.4	:
Laboratory Parameters																						
pH	SU	T			6.88	:			-				7.3	J			-				7.1	J
Specific Conductance	umhos/cm	T			-				-				2090.	J			-				2110.	J
Inorganics																						
Cyanide	mg/L	T			<0.01	J			-				<0.01	J			-				<0.01	J
Physical Properties																						
Hardness	mg/L	T			1380.	:			-				1340.	:			-				1430.	:
Hardness	mg/L	D			-				1370.	:			-				1400.	:			-	
Metals																						

			MMW-43A	1/16/2003	MMW-43A-T01N-GRW		MMW-43A	1/16/2003	MMW-43A-D01N-GRW		MMW-43A	4/4/2003	MMW-43A-T01N-GRW		MMW-43A	4/4/2003	MMW-43A-D01N-GRW		MMW-43A	7/20/2003	MMW-43A-T01N-GRW	
					GW6				GW6				GW6				GW6				GW6	
Field Measurements																						
DO	mg/L	T			1.06	:			-				0.05	:			-				0.7	:
Eh	millivolts	T			18.8	:			-				20.4	:			-				10.5	:
pH	SU	T			6.88	:			-				7.3	J			-				7.1	J
Specific Conductance	uS/cm	T			1915.	:			-				2155.	:			-				2200.	:
Temperature	Celsius	T			7.43	:			-				6.98	:			-				14.29	:
Turbidity	NTU	T			161.7	:			-				247.9	:			-				71.7	:
General Chemistry																						
Ammonia	mg/L	T			<0.065	:			-				<0.064	:			-				<0.14	J
Bicarbonate (as CaCO3)	mg/L	T			225.	:			-				239.	:			-				242.	:
Carbonate (as CaCO3)	mg/L	T			<1.	:			-				<1.	:			-				<1.	:
Chloride	mg/L	T			13.6	:			-				13.2	:			-				12.9	:
Fluoride	mg/L	T			1.6	:			-				1.7	:			-				1.8	:
Hydroxide (as CaCO3)	mg/L	T			<1.	:			-				<1.	:			-				<1.	:
Nitrate	mg/L	T			<0.4	J			-				<0.4	:			-				<0.2	J
Nitrite	mg/L	T			<0.005	J			-				<0.005	:			-				<0.005	:
Phosphate, Ortho As P	mg/L	T			<0.01	J			-				<0.01	:			-				<0.01	J
Phosphorus	mg/L	T			0.098	:			-				0.21	:			-				0.051	:
Sulfate	mg/L	T			2580.	J			-				1130.	J			-				1110.	J
Total Alkalinity	mg/L	T			225.	:			-				239.	:			-				242.	:
Total Dissolved Solids	mg/L	T			1910.	:			-				2000.	:			-				2150.	:
Total Kjeldahl Nitrogen	mg/L	T			<0.28	:			-				<0.24	:			-				<0.24	:
Total Organic Carbon	mg/L	T			<1.	:			-				<5.	J			-				<1.1	J
Total Suspended Solids	mg/L	T			104.	:			-				171.	:			-				49.4	:
Laboratory Parameters																						
pH	SU	T			6.88	:			-				7.3	J			-				7.1	J
Specific Conductance	umhos/cm	T			-				-				2090.	J			-				2110.	J
Inorganics																						
Cyanide	mg/L	T			<0.01	J			-				<0.01	J			-				<0.01	J
Physical Properties																						
Hardness	mg/L	T			1380.	:			-				1340.	:			-				1430.	:
Hardness	mg/L	D			-				1370.	:			-				1400.	:			-	
Metals																						

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-43A 1/16/2003 MMW-43A-T01N-GRW GW6		MMW-43A 1/16/2003 MMW-43A-D01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-T01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-D01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-T01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-D01N-GRW GW6	
Aluminum	mg/L	T	1.49	:	-		1.58	:	-		0.902	:	-	
Aluminum	mg/L	D	-		<0.142	J	-		<0.0398	:	-		<0.631	:
Antimony	mg/L	T	<0.0006	J	-		<0.0006	J	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	J	-		<0.0006	J	-		<0.001	:
Arsenic	mg/L	T	0.00077	:	-		0.0006	:	-		0.00049	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0441	:	-		0.0423	:	-		0.0405	:	-	
Barium	mg/L	D	-		0.0363	:	-		0.0383	:	-		0.0379	:
Beryllium	mg/L	T	<0.00095	:	-		0.0011	:	-		<0.00067	:	-	
Beryllium	mg/L	D	-		<0.00046	:	-		0.0005	:	-		<0.0002	J
Boron	mg/L	T	<0.0027	J	-		0.0103	:	-		0.0066	:	-	
Boron	mg/L	D	-		<0.0027	J	-		0.0087	:	-		0.0064	:
Cadmium	mg/L	T	0.00072	:	-		0.0013	:	-		0.00054	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0003	:
Calcium	mg/L	T	407.	:	-		393.	:	-		420.	:	-	
Calcium	mg/L	D	-		403.	:	-		412.	:	-		409.	:
Chromium	mg/L	T	<0.0037	:	-		0.0046	:	-		0.0031	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.0009	:	-		<0.0019	:
Cobalt	mg/L	T	<0.0034	:	-		0.0041	:	-		0.0038	:	-	
Cobalt	mg/L	D	-		0.0029	:	-		<0.0029	:	-		0.0037	:
Copper	mg/L	T	<0.0043	J	-		0.0073	:	-		<0.0059	:	-	
Copper	mg/L	D	-		<0.0017	J	-		<0.0024	:	-		0.0022	:
Iron	mg/L	T	5.48	:	-		5.68	:	-		4.56	:	-	
Iron	mg/L	D	-		3.27	:	-		3.46	:	-		2.86	:
Lead	mg/L	T	0.0028	:	-		0.0041	:	-		0.0017	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	89.2	:	-		87.2	:	-		93.3	:	-	
Magnesium	mg/L	D	-		88.	:	-		90.9	:	-		90.5	:
Manganese	mg/L	T	3.2	:	-		3.18	:	-		3.29	:	-	
Manganese	mg/L	D	-		3.1	:	-		3.23	:	-		3.16	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.00023	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.00019	:
Molybdenum	mg/L	T	<0.0011	:	-		<0.0016	:	-		<0.0016	:	-	
Molybdenum	mg/L	D	-		<0.0011	:	-		<0.0016	:	-		<0.0016	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-43A 1/16/2003 MMW-43A-T01N-GRW GW6		MMW-43A 1/16/2003 MMW-43A-D01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-T01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-D01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-T01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-D01N-GRW GW6	
Nickel	mg/L	T	0.0055	:	-		0.0068	:	-		0.0027	J	-	
Nickel	mg/L	D	-		0.0034	:	-		0.0037	:	-		<0.002	J
Potassium	mg/L	T	<4.24	:	-		4.54	:	-		4.75	:	-	
Potassium	mg/L	D	-		<3.9	:	-		4.46	:	-		4.65	:
Selenium	mg/L	T	<0.0016	:	-		<0.001	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.001	:	-		<0.0016	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	32.1	:	-		34.6	:	-		26.9	J	-	
Sodium	mg/L	D	-		31.	:	-		35.2	:	-		27.7	J
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0026	:	-		0.0026	:	-		0.0013	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Zinc	mg/L	T	0.162	:	-		0.198	:	-		<0.214	:	-	
Zinc	mg/L	D	-		<0.0979	:	-		0.118	:	-		<0.132	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1-Dichloroethane	mg/L	T	0.004	J	-		0.004	J	-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Hexanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-43A 1/16/2003 MMW-43A-T01N-GR W GW6		MMW-43A 1/16/2003 MMW-43A-D01N-GR W GW6		MMW-43A 4/4/2003 MMW-43A-T01N-GR W GW6		MMW-43A 4/4/2003 MMW-43A-D01N-GR W GW6		MMW-43A 7/20/2003 MMW-43A-T01N-GR W GW6		MMW-43A 7/20/2003 MMW-43A-D01N-GR W GW6	
Acetone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Trichloroethene	mg/L	T	0.0009	J	-		<0.01	:	-		-		-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4,5-Trichlorophenol	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
2,4-Dinitrophenol	mg/L	T	<0.026	J	-		<0.026	J	-		-		-	
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-43A 1/16/2003 MMW-43A-T01N-GR W GW6		MMW-43A 1/16/2003 MMW-43A-D01N-GR W GW6		MMW-43A 4/4/2003 MMW-43A-T01N-GR W GW6		MMW-43A 4/4/2003 MMW-43A-D01N-GR W GW6		MMW-43A 7/20/2003 MMW-43A-T01N-GR W GW6		MMW-43A 7/20/2003 MMW-43A-D01N-GR W GW6	
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Chlorophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Methylnaphthalene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
2-Nitrophenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
3-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	J	-		-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chloroaniline	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Methylphenol	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
4-Nitroaniline	mg/L	T	<0.026	:	-		<0.026	:	-		-		-	
4-Nitrophenol	mg/L	T	<0.026	J	-		<0.026	J	-		-		-	
Acenaphthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Acenaphthylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Anthracene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzaldehyde	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Benzo(a)anthracene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(a)pyrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	0.0007	J	-		<0.01	:	-		-		-	
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbazole	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chrysene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibenzofuran	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction		MMW-43A 1/16/2003 MMW-43A-T01N-GRW GW6		MMW-43A 1/16/2003 MMW-43A-D01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-T01N-GRW GW6		MMW-43A 4/4/2003 MMW-43A-D01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-T01N-GRW GW6		MMW-43A 7/20/2003 MMW-43A-D01N-GRW GW6	
Dichlorodiisopropyl ether	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Diethylphthalate	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Dimethylphthalate	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Di-n-Butyl phthalate	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Di-n-Octyl phthalate	mg/L	T		<0.01	J	-		<0.01	:	-		-		-	
Fluoranthene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Fluorene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Hexachlorobenzene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Hexachlorobutadiene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Hexachlorocyclopentadiene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Hexachloroethane	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Isophorone	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Naphthalene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Nitrobenzene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
N-Nitrosodi-n-propylamine	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
N-Nitrosodiphenylamine	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Pentachlorophenol	mg/L	T		<0.026	:	-		<0.026	:	-		-		-	
Phenanthrene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Phenol	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Pyrene	mg/L	T		<0.01	:	-		<0.01	:	-		-		-	
Isotopes															
Lead	mg/L	T		0.0028	:	-		0.0041	:	-		0.0017	:	-	
Lead	mg/L	D		-		<0.0002	:	-		<0.0002	:	-		<0.0002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-43A		MMW-43A		MMW-43A		MMW-43A		MMW-43A		MMW-43A			
			10/22/2003		10/22/2003		1/12/2004		1/12/2004		4/16/2004		4/16/2004			
			MMW-43A-T01N-GRW		MMW-43A-D01N-GRW		MMW-43A-T01N-GRW		MMW-43A-D01N-GRW		MMW-43A-T01N-GRW		MMW-43A-D01N-GRW			
			GW6		GW6		GW6		GW6		GW6		GW6			
Field Measurements																
DO	mg/L	T	0.23	:	-		0.36	:	-		0.36	:	-			
Eh	millivolts	T	70.8	:	-		-32.	:	-		-20.7	:	-			
pH	SU	T	6.9	J	-		7.1	J	-		7.1	J	-			
Specific Conductance	uS/cm	T	2391.	:	-		2126.	:	-		2141.	:	-			
Temperature	Celsius	T	11.19	:	-		5.57	:	-		10.04	:	-			
Turbidity	NTU	T	61.2	:	-		51.3	:	-		58.3	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.1	J	-		<0.05	J	-		<0.054	:	-			
Bicarbonate (as CaCO3)	mg/L	T	235.	:	-		231.	:	-		235.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	13.5	:	-		14.8	:	-		14.9	:	-			
Fluoride	mg/L	T	1.9	:	-		1.7	:	-		1.8	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	<0.2	J	-		<0.2	J	-		<0.2	:	-			
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	:	-			
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-			
Phosphorus	mg/L	T	0.014	:	-		0.073	:	-		0.027	:	-			
Sulfate	mg/L	T	1210.	J	-		1160.	:	-		1260.	:	-			
Total Alkalinity	mg/L	T	235.	:	-		231.	:	-		235.	:	-			
Total Dissolved Solids	mg/L	T	1980.	:	-		2020.	:	-		2030.	J	-			
Total Kjeldahl Nitrogen	mg/L	T	2.9	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	:	-		<1.8	J	-			
Total Suspended Solids	mg/L	T	29.8	:	-		64.8	:	-		41.	J	-			
Laboratory Parameters																
pH	SU	T	6.9	J	-		7.1	J	-		7.1	J	-			
Specific Conductance	umhos/cm	T	1790.	J	-		2070.	J	-		2040.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	1430.	:	-		1350.	:	-		1500.	:	-			
Hardness	mg/L	D	-		1350.	:	-		1350.	:	-		1480.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-43A		MMW-43A		MMW-43A		MMW-43A		MMW-43A		MMW-43A			
			10/22/2003		10/22/2003		1/12/2004		1/12/2004		4/16/2004		4/16/2004			
			MMW-43A-T01N-GRW		MMW-43A-D01N-GRW		MMW-43A-T01N-GRW		MMW-43A-D01N-GRW		MMW-43A-T01N-GRW		MMW-43A-D01N-GRW			
			GW6		GW6		GW6		GW6		GW6		GW6			
Aluminum	mg/L	T	<0.378	:	-		<0.514	:	-		<0.243	:	-			
Aluminum	mg/L	D	-		<0.217	:	-		<0.514	:	-		<0.201	:		
Antimony	mg/L	T	<0.001	:	-		<0.0024	:	-		<0.0035	:	-			
Antimony	mg/L	D	-		<0.001	:	-		<0.0024	:	-		<0.0012	:		
Arsenic	mg/L	T	0.00056	:	-		<0.0004	:	-		0.00065	:	-			
Arsenic	mg/L	D	-		<0.0004	:	-		0.00052	:	-		<0.0004	:		
Barium	mg/L	T	0.0392	:	-		0.0385	:	-		0.0385	:	-			
Barium	mg/L	D	-		0.038	:	-		0.037	:	-		0.0358	:		
Beryllium	mg/L	T	0.0009	:	-		0.0009	:	-		0.00031	J	-			
Beryllium	mg/L	D	-		0.00072	:	-		0.00057	:	-		0.00033	J		
Boron	mg/L	T	<0.011	:	-		<0.0117	:	-		0.0065	:	-			
Boron	mg/L	D	-		<0.0115	:	-		<0.0117	:	-		0.0049	:		
Cadmium	mg/L	T	<0.0013	:	-		0.0015	J	-		<0.0003	:	-			
Cadmium	mg/L	D	-		<0.0013	:	-		0.0007	:	-		<0.0003	:		
Calcium	mg/L	T	421.	:	-		397.	:	-		436.	:	-			
Calcium	mg/L	D	-		397.	:	-		396.	:	-		432.	:		
Chromium	mg/L	T	0.0036	J	-		<0.0015	:	-		<0.0015	:	-			
Chromium	mg/L	D	-		<0.0023	J	-		<0.0015	:	-		<0.0006	:		
Cobalt	mg/L	T	0.0034	:	-		0.0032	J	-		0.0032	:	-			
Cobalt	mg/L	D	-		0.0034	:	-		0.0045	:	-		0.0057	:		
Copper	mg/L	T	0.0033	:	-		<0.003	:	-		0.0041	:	-			
Copper	mg/L	D	-		0.0031	:	-		<0.003	:	-		<0.0014	:		
Iron	mg/L	T	3.92	:	-		3.5	:	-		<3.86	J	-			
Iron	mg/L	D	-		3.06	:	-		2.99	:	-		<2.82	:		
Lead	mg/L	T	0.0014	:	-		0.002	:	-		0.0022	:	-			
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:		
Magnesium	mg/L	T	92.5	:	-		86.8	:	-		99.4	:	-			
Magnesium	mg/L	D	-		87.2	:	-		86.9	:	-		98.	:		
Manganese	mg/L	T	3.36	:	-		2.97	:	-		3.35	:	-			
Manganese	mg/L	D	-		3.14	:	-		2.95	:	-		3.31	:		
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-			
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:		
Molybdenum	mg/L	T	<0.0013	:	-		<0.0024	:	-		<0.0018	:	-			
Molybdenum	mg/L	D	-		<0.0012	:	-		<0.0024	:	-		<0.0017	:		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-43A 10/22/2003 MMW-43A-T01N-GRW GW6		MMW-43A 10/22/2003 MMW-43A-D01N-GRW GW6		MMW-43A 1/12/2004 MMW-43A-T01N-GRW GW6		MMW-43A 1/12/2004 MMW-43A-D01N-GRW GW6		MMW-43A 4/16/2004 MMW-43A-T01N-GRW GW6		MMW-43A 4/16/2004 MMW-43A-D01N-GRW GW6	
Nickel	mg/L	T	0.0059	:	-		<0.0024	J	-		0.0037	J	-	
Nickel	mg/L	D	-		0.0052	:	-		<0.0024	J	-		0.0026	J
Potassium	mg/L	T	3.92	:	-		4.22	:	-		4.4	:	-	
Potassium	mg/L	D	-		3.82	:	-		4.22	:	-		4.19	:
Selenium	mg/L	T	<0.0006	:	-		<0.0006	J	-		<0.0014	:	-	
Selenium	mg/L	D	-		<0.0006	:	-		0.00061	J	-		<0.0014	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	33.2	:	-		32.7	:	-		<37.5	J	-	
Sodium	mg/L	D	-		33.2	:	-		32.4	:	-		<34.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.00024	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00022	:
Vanadium	mg/L	T	0.00099	:	-		0.00082	:	-		0.0018	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		0.00049	:
Zinc	mg/L	T	<0.164	:	-		0.185	:	-		0.196	:	-	
Zinc	mg/L	D	-		<0.108	:	-		0.108	:	-		0.131	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-93.1	:	-	
Delta O-18	per mil	T	-		-		-		-		-12.7	:	-	
Lead	mg/L	T	0.0014	:	-		0.002	:	-		0.0022	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Site ID	Sample Date	Sample ID	Site ID	Sample Date	Sample ID	Site ID	Sample Date	Sample ID
			MMW-45A	2/6/2003	MMW-45A-T01N-GRWRE GW1	MMW-45A	2/6/2003	MMW-45A-T01N-GRW GW1	MMW-45A	2/6/2003	MMW-45A-D01N-GRW GW1	MMW-45A	3/3/2003	MMW-45A-T01N-GRWRE GW1
Field Measurements														
DO	mg/L	T	-			5.09	:		-			-		
Eh	millivolts	T	-			364.6	:		-			-		
pH	SU	T	-			3.58	:		-			-		
Specific Conductance	uS/cm	T	-			1730.	:		-			-		
Temperature	Celsius	T	-			7.29	:		-			-		
Turbidity	NTU	T	-			15.1	:		-			-		
General Chemistry														
Ammonia	mg/L	T	-			<0.087	:		-			-		
Bicarbonate (as CaCO3)	mg/L	T	-			<1.	:		-			-		
Carbonate (as CaCO3)	mg/L	T	-			<1.	:		-			-		
Chloride	mg/L	T	-			22.4	:		-			-		
Fluoride	mg/L	T	13.2	J		-			-			12.2	J	
Hydroxide (as CaCO3)	mg/L	T	-			<1.	:		-			-		
Nitrate	mg/L	T	-			0.49	:		-			-		
Nitrite	mg/L	T	-			<0.005	:		-			-		
Phosphate, Ortho As P	mg/L	T	-			0.019	:		-			-		
Phosphorus	mg/L	T	-			<0.012	:		-			-		
Sulfate	mg/L	T	-			1090.	J		-			-		
Total Alkalinity	mg/L	T	-			<1.	:		-			-		
Total Dissolved Solids	mg/L	T	-			1730.	:		-			-		
Total Kjeldahl Nitrogen	mg/L	T	-			<0.24	:		-			-		
Total Organic Carbon	mg/L	T	-			1.2	:		-			-		
Total Suspended Solids	mg/L	T	-			1.	:		-			-		
Laboratory Parameters														
pH	SU	T	-			3.58	:		-			-		
Inorganics														
Cyanide	mg/L	T	-			<0.01	J		-			-		
Physical Properties														
Hardness	mg/L	T	-			654.	:		-			-		
Hardness	mg/L	D	-			-			651.	:		-		
Metals														
Aluminum	mg/L	T	-			89.9	:		-			-		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Site ID	Sample Date	Sample ID
			MMW-45A	3/3/2003	MMW-45A-T01N-GRW GW1	MMW-45A	3/3/2003	MMW-45A-D01N-GRW GW1
Field Measurements								
DO	mg/L	T	3.81	:		-		
Eh	millivolts	T	387.1	:		-		
pH	SU	T	3.65	:		-		
Specific Conductance	uS/cm	T	1510.	:		-		
Temperature	Celsius	T	6.83	:		-		
Turbidity	NTU	T	0.	:		-		
General Chemistry								
Ammonia	mg/L	T	0.092	J		-		
Bicarbonate (as CaCO3)	mg/L	T	<1.	:		-		
Carbonate (as CaCO3)	mg/L	T	<1.	:		-		
Chloride	mg/L	T	18.6	:		-		
Fluoride	mg/L	T	-			-		
Hydroxide (as CaCO3)	mg/L	T	<1.	:		-		
Nitrate	mg/L	T	0.41	J		-		
Nitrite	mg/L	T	<0.005	J		-		
Phosphate, Ortho As P	mg/L	T	0.016	J		-		
Phosphorus	mg/L	T	<0.01	:		-		
Sulfate	mg/L	T	1020.	:		-		
Total Alkalinity	mg/L	T	<1.	:		-		
Total Dissolved Solids	mg/L	T	1590.	:		-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:		-		
Total Organic Carbon	mg/L	T	<1.2	J		-		
Total Suspended Solids	mg/L	T	1.4	J		-		
Laboratory Parameters								
pH	SU	T	3.65	:		-		
Inorganics								
Cyanide	mg/L	T	<0.01	J		-		
Physical Properties								
Hardness	mg/L	T	654.	:		-		
Hardness	mg/L	D	-			628.	:	
Metals								
Aluminum	mg/L	T	86.6	:		-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	MMW-45A 2/6/2003 MMW-45A-T01N-GR WRE GW1		MMW-45A 2/6/2003 MMW-45A-T01N-GR W GW1		MMW-45A 2/6/2003 MMW-45A-D01N-GR W GW1		MMW-45A 3/3/2003 MMW-45A-T01N-GR WRE GW1		MMW-45A 3/3/2003 MMW-45A-T01N-GR W GW1		MMW-45A 3/3/2003 MMW-45A-D01N-GR W GW1	
Aluminum	mg/L	D	-		-		88.8	:	-		-		81.8	:
Antimony	mg/L	T	-		<0.028	:	-		-		<0.028	:	-	
Antimony	mg/L	D	-		-		<0.028	:	-		-		<0.028	:
Arsenic	mg/L	T	-		<0.023	J	-		-		<0.023	J	-	
Arsenic	mg/L	D	-		-		<0.023	J	-		-		<0.023	J
Barium	mg/L	T	-		<0.048	:	-		-		<0.048	:	-	
Barium	mg/L	D	-		-		<0.048	:	-		-		<0.048	:
Beryllium	mg/L	T	-		0.0422	:	-		-		0.0391	:	-	
Beryllium	mg/L	D	-		-		0.041	:	-		-		0.0376	:
Boron	mg/L	T	-		<0.027	:	-		-		<0.027	:	-	
Boron	mg/L	D	-		-		<0.027	:	-		-		<0.027	:
Cadmium	mg/L	T	-		<0.08	:	-		-		<0.08	:	-	
Cadmium	mg/L	D	-		-		<0.08	:	-		-		<0.08	:
Calcium	mg/L	T	-		172.	:	-		-		173.	J	-	
Calcium	mg/L	D	-		-		170.	:	-		-		<166.	J
Chromium	mg/L	T	-		<0.16	:	-		-		<0.16	:	-	
Chromium	mg/L	D	-		-		<0.16	:	-		-		<0.16	:
Cobalt	mg/L	T	-		<0.23	:	-		-		<0.23	:	-	
Cobalt	mg/L	D	-		-		<0.23	:	-		-		<0.23	:
Copper	mg/L	T	-		0.948	:	-		-		0.946	:	-	
Copper	mg/L	D	-		-		0.969	:	-		-		0.85	:
Iron	mg/L	T	-		<2.66	J	-		-		<2.66	:	-	
Iron	mg/L	D	-		-		<2.66	J	-		-		<2.66	J
Lead	mg/L	T	-		<0.001	:	-		-		<0.001	:	-	
Lead	mg/L	D	-		-		<0.001	:	-		-		<0.001	:
Magnesium	mg/L	T	-		54.7	:	-		-		54.	:	-	
Magnesium	mg/L	D	-		-		54.8	:	-		-		52.	:
Manganese	mg/L	T	-		19.1	J	-		-		18.7	:	-	
Manganese	mg/L	D	-		-		19.	:	-		-		17.9	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	-		-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.011	J	-		-		<0.011	:	-	
Molybdenum	mg/L	D	-		-		<0.011	J	-		-		<0.0112	:
Nickel	mg/L	T	-		0.363	:	-		-		<0.34	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 2/6/2003 MMW-45A-T01N-GRWRE GW1	MMW-45A 2/6/2003 MMW-45A-T01N-GRW GW1	MMW-45A 2/6/2003 MMW-45A-D01N-GRW GW1	MMW-45A 3/3/2003 MMW-45A-T01N-GRWRE GW1	MMW-45A 3/3/2003 MMW-45A-T01N-GRW GW1	MMW-45A 3/3/2003 MMW-45A-D01N-GRW GW1
Nickel	mg/L	D	-	-	0.451 :	-	-	0.35 :
Potassium	mg/L	T	-	33.4 :	-	-	<31.4 :	-
Potassium	mg/L	D	-	-	<31.4 :	-	-	<31.4 :
Selenium	mg/L	T	-	<0.008 :	-	-	<0.008 J	-
Selenium	mg/L	D	-	-	<0.008 :	-	-	0.0147 :
Silver	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T	-	204. :	-	-	<36.6 :	-
Sodium	mg/L	D	-	-	<36.6 :	-	-	<36.6 :
Thallium	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	<0.002 :	-	-	0.0024 :	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	0.0022 :
Zinc	mg/L	T	-	4.53 :	-	-	4.48 J	-
Zinc	mg/L	D	-	-	4.47 :	-	-	4.26 :
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Lead	mg/L	D	-	-	<0.001 :	-	-	<0.001 :

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-45A	4/8/2003	MMW-45A-T01N-GRW	GW1	MMW-45A	4/8/2003	MMW-45A-D01N-GRW	GW1	MMW-45A	5/5/2003	MMW-45A-T01N-GRW	GW1	MMW-45A	5/5/2003	MMW-45A-D01N-GRW	GW1	MMW-45A	6/2/2003	MMW-45A-T01N-GRW	GW1
			MMW-45A	6/2/2003	MMW-45A-D01N-GRW	GW1																
Field Measurements																						
DO	mg/L	T	0.72	:			-				6.06	:			-				5.22	:		
			-																			
Eh	millivolts	T	451.1	:			-				340.8	:			-				496.3	:		
			-																			
pH	SU	T	4.1	J			-				5.4	J			-				4.1	J		
			-																			
Specific Conductance	uS/cm	T	1530.	:			-				1697.	:			-				1659.	:		
			-																			
Temperature	Celsius	T	6.05	:			-				7.83	:			-				11.35	:		
			-																			
Turbidity	NTU	T	80.6	:			-				1.5	:			-				0.	:		
			-																			
General Chemistry																						
Ammonia	mg/L	T	<0.071	:			-				<0.077	:			-				<0.14	J		
			-																			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:		
			-																			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:		
			-																			
Chloride	mg/L	T	38.8	:			-				29.4	:			-				125.	:		
			-																			
Fluoride	mg/L	T	10.4	J			-				11.7	:			-				13.2	:		
			-																			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:		
			-																			
Nitrate	mg/L	T	<0.62	J			-				0.67	J			-				0.75	J		
			-																			
Nitrite	mg/L	T	<0.005	J			-				<0.005	:			-				<0.005	J		
			-																			
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.01	J			-				0.21	J		
			-																			
Phosphorus	mg/L	T	0.023	:			-				<0.019	:			-				0.031	J		
			-																			
Sulfate	mg/L	T	888.	J			-				1030.	:			-				990.	J		
			-																			
Total Alkalinity	mg/L	T	<1.	:			-				<1.	:			-				<1.	:		
			-																			
Total Dissolved Solids	mg/L	T	1530.	:			-				1520.	:			-				1780.	:		
			-																			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J			-				<0.24	:			-				0.31	:		
			-																			
Total Organic Carbon	mg/L	T	<1.3	J			-				<1.	:			-				1.5	J		
			-																			
Total Suspended Solids	mg/L	T	<2.	:			-				<1.5	:			-				<1.2	:		
			-																			
Laboratory Parameters																						
pH	SU	T	4.1	J			-				5.4	J			-				4.1	J		
			-																			
Specific Conductance	umhos/cm	T	1400.	J			-				1570.	J			-				1610.	J		
			-																			
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-				<0.01	:		
			-																			
Physical Properties																						
Hardness	mg/L	T	603.	:			-				619.	:			-				675.	:		
			-																			
Hardness	mg/L	D	-				575.	:			-				630.	:			-			
			667.	:																		
Metals																						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 4/8/2003 MMW-45A-T01N-GRW GW1		MMW-45A 4/8/2003 MMW-45A-D01N-GRW GW1		MMW-45A 5/5/2003 MMW-45A-T01N-GRW GW1		MMW-45A 5/5/2003 MMW-45A-D01N-GRW GW1		MMW-45A 6/2/2003 MMW-45A-T01N-GRW GW1		MMW-45A 6/2/2003 MMW-45A-D01N-GRW GW1	
Aluminum	mg/L	T	72.	:	-		75.3	:	-		84.3	:	-	
Aluminum	mg/L	D	-		68.2	:	-		77.1	:	-		82.3	:
Antimony	mg/L	T	<0.003	:	-		<0.048	:	-		<0.072	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.048	:	-		<0.072	:
Arsenic	mg/L	T	<0.04	:	-		<0.047	:	-		<0.04	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.047	:	-		<0.04	:
Barium	mg/L	T	<0.123	:	-		<0.135	:	-		<0.123	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.135	:	-		<0.123	:
Beryllium	mg/L	T	0.0482	:	-		0.0352	:	-		0.0381	:	-	
Beryllium	mg/L	D	-		0.0453	:	-		0.0354	:	-		0.0413	:
Boron	mg/L	T	<0.084	:	-		<0.075	:	-		<0.084	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.075	:	-		<0.084	:
Cadmium	mg/L	T	0.0116	:	-		0.0148	:	-		<0.07	:	-	
Cadmium	mg/L	D	-		0.0138	:	-		0.0194	:	-		<0.07	:
Calcium	mg/L	T	161.	:	-		163.	:	-		176.	:	-	
Calcium	mg/L	D	-		153.	:	-		166.	:	-		174.	:
Chromium	mg/L	T	<0.01	:	-		<0.009	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.009	:	-		<0.19	:
Cobalt	mg/L	T	0.143	:	-		0.161	:	-		<0.36	:	-	
Cobalt	mg/L	D	-		0.146	:	-		0.167	:	-		<0.36	:
Copper	mg/L	T	0.796	:	-		0.762	:	-		0.975	:	-	
Copper	mg/L	D	-		0.736	:	-		0.781	:	-		0.995	:
Iron	mg/L	T	<3.11	:	-		<0.299	:	-		<4.22	:	-	
Iron	mg/L	D	-		<3.11	:	-		<0.299	:	-		<4.22	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Magnesium	mg/L	T	48.9	:	-		51.5	:	-		57.5	:	-	
Magnesium	mg/L	D	-		46.7	:	-		52.4	:	-		56.6	:
Manganese	mg/L	T	16.2	:	-		17.4	:	-		20.4	:	-	
Manganese	mg/L	D	-		15.5	:	-		17.8	:	-		20.	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.016	:	-		<0.023	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.016	:	-		<0.023	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-45A 4/8/2003 MMW-45A-T01N-GRW GW1		MMW-45A 4/8/2003 MMW-45A-D01N-GRW GW1		MMW-45A 5/5/2003 MMW-45A-T01N-GRW GW1		MMW-45A 5/5/2003 MMW-45A-D01N-GRW GW1		MMW-45A 6/2/2003 MMW-45A-T01N-GRW GW1		MMW-45A 6/2/2003 MMW-45A-D01N-GRW GW1	
Nickel	mg/L		T	0.299	:	-		0.34	:	-		<0.73	:	-	
Nickel	mg/L		D	-		0.298	:	-		0.343	:	-		<0.73	:
Potassium	mg/L		T	<3.26	:	-		<3.27	:	-		<40.5	:	-	
Potassium	mg/L		D	-		<3.26	:	-		<3.27	:	-		<40.5	:
Selenium	mg/L		T	<0.005	J	-		<0.008	:	-		0.0085	:	-	
Selenium	mg/L		D	-		<0.005	J	-		0.0086	:	-		<0.008	:
Silver	mg/L		T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L		T	<35.2	:	-		33.3	:	-		<91.6	:	-	
Sodium	mg/L		D	-		<35.2	:	-		32.4	:	-		<91.6	:
Thallium	mg/L		T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L		T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L		D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L		T	3.73	:	-		3.94	:	-		4.52	:	-	
Zinc	mg/L		D	-		3.57	:	-		4.02	:	-		4.47	:
Isotopes															
Lead	mg/L		T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Lead	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.001	J

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A			
			7/20/2003		7/20/2003		8/11/2003		8/11/2003		9/7/2003		9/7/2003			
			MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW			
			GW1		GW1		GW1		GW1		GW1		GW1			
Field Measurements																
DO	mg/L	T	0.48	:	-		0.65	:	-		1.15	:	-			
Eh	millivolts	T	456.2	:	-		368.8	:	-		422.7	:	-			
pH	SU	T	3.6	J	-		3.5	J	-		3.8	J	-			
Specific Conductance	uS/cm	T	2108.	:	-		2250.	:	-		1693.	:	-			
Temperature	Celsius	T	11.57	:	-		11.51	:	-		12.01	:	-			
Turbidity	NTU	T	0.	:	-		0.	:	-		2.3	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.17	J	-		0.049	:	-		<0.063	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	19.7	:	-		24.4	:	-		22.3	:	-			
Fluoride	mg/L	T	21.2	:	-		16.8	:	-		13.8	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	0.26	J	-		<0.2	J	-		0.22	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	:	-			
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	:	-		<0.017	J	-			
Phosphorus	mg/L	T	0.016	:	-		0.018	:	-		0.019	:	-			
Sulfate	mg/L	T	1310.	J	-		1230.	J	-		1130.	J	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	2400.	J	-		2590.	J	-		1990.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.28	:	-			
Total Organic Carbon	mg/L	T	<1.8	J	-		<2.7	J	-		<1.9	:	-			
Total Suspended Solids	mg/L	T	<1.6	:	-		<1.4	:	-		1.2	:	-			
Laboratory Parameters																
pH	SU	T	3.6	J	-		3.5	J	-		3.8	J	-			
Specific Conductance	umhos/cm	T	1920.	J	-		1910.	J	-		1640.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	764.	:	-		799.	:	-		725.	:	-			
Hardness	mg/L	D	-		789.	:	-		788.	:	-		730.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-45A	7/20/2003	MMW-45A-T01N-GRW GW1		MMW-45A	7/20/2003	MMW-45A-D01N-GRW GW1		MMW-45A	8/11/2003	MMW-45A-T01N-GRW GW1		MMW-45A	8/11/2003	MMW-45A-D01N-GRW GW1	
			MMW-45A	9/7/2003	MMW-45A-T01N-GRW GW1		MMW-45A	9/7/2003	MMW-45A-D01N-GRW GW1	
Aluminum	mg/L	T	101.	:	-		127.	:	-		101.	:	-	
Aluminum	mg/L	D	-		105.	:	-		123.	:	-		102.	:
Antimony	mg/L	T	<0.038	:	-		<0.038	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.038	:	-		<0.038	:	-		<0.001	:
Arsenic	mg/L	T	0.0247	:	-		0.029	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.024	:	-		0.0342	:	-		<0.0004	:
Barium	mg/L	T	<0.073	:	-		<0.073	:	-		<0.0115	:	-	
Barium	mg/L	D	-		<0.073	:	-		<0.073	:	-		<0.0115	:
Beryllium	mg/L	T	0.0478	:	-		0.0532	:	-		0.0361	:	-	
Beryllium	mg/L	D	-		0.0483	:	-		0.0526	:	-		0.036	:
Boron	mg/L	T	<0.046	:	-		<0.046	:	-		<0.0063	:	-	
Boron	mg/L	D	-		<0.046	:	-		<0.046	:	-		<0.0063	:
Cadmium	mg/L	T	0.0394	:	-		<0.06	:	-		0.0153	J	-	
Cadmium	mg/L	D	-		0.0345	:	-		<0.06	:	-		0.0152	J
Calcium	mg/L	T	204.	:	-		215.	:	-		190.	:	-	
Calcium	mg/L	D	-		210.	:	-		212.	:	-		191.	:
Chromium	mg/L	T	<0.06	J	-		<0.14	:	-		0.0115	:	-	
Chromium	mg/L	D	-		<0.06	J	-		<0.14	:	-		0.0116	:
Cobalt	mg/L	T	0.296	:	-		0.207	:	-		0.155	:	-	
Cobalt	mg/L	D	-		0.242	:	-		0.236	:	-		0.156	:
Copper	mg/L	T	1.34	:	-		1.27	:	-		0.898	:	-	
Copper	mg/L	D	-		1.38	:	-		1.25	:	-		0.885	:
Iron	mg/L	T	12.1	:	-		6.	:	-		3.76	:	-	
Iron	mg/L	D	-		4.96	:	-		5.75	:	-		3.73	:
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		<0.00073	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.00071	:
Magnesium	mg/L	T	62.2	:	-		63.7	:	-		60.9	:	-	
Magnesium	mg/L	D	-		64.	:	-		63.	:	-		61.3	:
Manganese	mg/L	T	21.7	:	-		22.8	:	-		20.6	:	-	
Manganese	mg/L	D	-		22.5	:	-		22.6	:	-		20.7	:
Mercury	mg/L	T	0.00016	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		0.00014	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.016	:	-		<0.016	:	-		<0.0011	J	-	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.016	:	-		<0.0011	J

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-45A 7/20/2003 MMW-45A-T01N-GRW GW1		MMW-45A 7/20/2003 MMW-45A-D01N-GRW GW1		MMW-45A 8/11/2003 MMW-45A-T01N-GRW GW1		MMW-45A 8/11/2003 MMW-45A-D01N-GRW GW1		MMW-45A 9/7/2003 MMW-45A-T01N-GRW GW1		MMW-45A 9/7/2003 MMW-45A-D01N-GRW GW1	
Nickel	mg/L		T	0.406	J	-		0.436	:	-		0.302	:	-	
Nickel	mg/L		D	-		19.2	J	-		0.485	:	-		0.302	:
Potassium	mg/L		T	<25.	:	-		40.9	:	-		<1.72	:	-	
Potassium	mg/L		D	-		<25.	:	-		41.6	:	-		<1.82	:
Selenium	mg/L		T	0.0131	:	-		0.0082	:	-		0.0096	:	-	
Selenium	mg/L		D	-		0.0113	J	-		0.0075	:	-		0.0086	:
Silver	mg/L		T	<0.0013	J	-		<0.001	:	-		<0.0002	:	-	
Silver	mg/L		D	-		<0.0023	J	-		<0.001	:	-		<0.0002	:
Sodium	mg/L		T	46.1	:	-		<47.3	:	-		28.4	:	-	
Sodium	mg/L		D	-		34.1	:	-		<47.3	:	-		27.6	:
Thallium	mg/L		T	<0.001	:	-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Vanadium	mg/L		T	<0.002	:	-		<0.001	:	-		<0.0002	:	-	
Vanadium	mg/L		D	-		<0.002	:	-		<0.001	:	-		<0.0002	:
Zinc	mg/L		T	3.85	J	-		5.58	:	-		4.66	:	-	
Zinc	mg/L		D	-		4.07	J	-		5.5	:	-		4.72	:
Isotopes															
Lead	mg/L		T	<0.001	:	-		<0.002	:	-		<0.00073	:	-	
Lead	mg/L		D	-		<0.001	:	-		<0.002	:	-		<0.00071	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A			
			9/18/2003		9/18/2003		10/16/2003		10/16/2003		11/2/2003		11/2/2003			
			MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW			
			GW1		GW1		GW1		GW1		GW1		GW1			
Field Measurements																
DO	mg/L	T	1.54	:	-		2.18	:	-		1.86	:	-			
Eh	millivolts	T	422.6	:	-		740.3	:	-		513.1	:	-			
pH	SU	T	3.8	J	-		3.9	J	-		3.9	J	-			
Specific Conductance	uS/cm	T	1138.	:	-		1496.	:	-		1526.	:	-			
Temperature	Celsius	T	12.57	:	-		13.04	:	-		11.9	:	-			
Turbidity	NTU	T	0.	:	-		1.4	:	-		0.3	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.089	:	-		<0.079	J	-		<0.18	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	19.4	:	-		26.	:	-		19.9	:	-			
Fluoride	mg/L	T	15.	:	-		11.9	:	-		4.1	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	0.3	:	-		0.32	J	-		0.45	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	:	-		0.012	:	-			
Phosphorus	mg/L	T	0.012	:	-		0.034	:	-		0.018	:	-			
Sulfate	mg/L	T	1130.	J	-		1040.	J	-		1020.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	2130.	:	-		1660.	:	-		1620.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	<2.7	:	-		1.4	J	-		<1.	:	-			
Total Suspended Solids	mg/L	T	30.4	:	-		<0.8	:	-		<0.9	:	-			
Laboratory Parameters																
pH	SU	T	3.8	J	-		3.9	J	-		3.9	J	-			
Specific Conductance	umhos/cm	T	1550.	J	-		1340.	J	-		1570.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	725.	:	-		562.	:	-		518.	:	-			
Hardness	mg/L	D	-		730.	:	-		640.	:	-		490.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45A 9/18/2003 MMW-45A-T01N-GRW GW1		MMW-45A 9/18/2003 MMW-45A-D01N-GRW GW1		MMW-45A 10/16/2003 MMW-45A-T01N-GRW GW1		MMW-45A 10/16/2003 MMW-45A-D01N-GRW GW1		MMW-45A 11/2/2003 MMW-45A-T01N-GRW GW1		MMW-45A 11/2/2003 MMW-45A-D01N-GRW GW1	
Aluminum	mg/L	T	100.	:	-		65.7	:	-		69.6	:	-	
Aluminum	mg/L	D	-		101.	:	-		68.2	:	-		65.8	:
Antimony	mg/L	T	<0.052	:	-		<0.052	:	-		<0.052	:	-	
Antimony	mg/L	D	-		<0.052	:	-		<0.052	:	-		<0.052	:
Arsenic	mg/L	T	<0.0759	:	-		<0.041	:	-		<0.041	:	-	
Arsenic	mg/L	D	-		<0.0817	:	-		<0.041	:	-		<0.041	:
Barium	mg/L	T	<0.115	:	-		<0.115	:	-		<0.115	:	-	
Barium	mg/L	D	-		<0.115	:	-		<0.115	:	-		<0.115	:
Beryllium	mg/L	T	0.0468	:	-		0.0386	:	-		0.0363	:	-	
Beryllium	mg/L	D	-		0.0458	:	-		0.0386	:	-		0.0339	:
Boron	mg/L	T	<0.063	:	-		<0.063	:	-		<0.063	:	-	
Boron	mg/L	D	-		<0.063	:	-		<0.063	:	-		<0.063	:
Cadmium	mg/L	T	<0.13	:	-		<0.13	:	-		<0.05	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		<0.13	:	-		<0.05	:
Calcium	mg/L	T	189.	:	-		147.	:	-		131.	:	-	
Calcium	mg/L	D	-		190.	:	-		179.	:	-		125.	:
Chromium	mg/L	T	<0.23	:	-		<0.23	J	-		<0.11	J	-	
Chromium	mg/L	D	-		<0.23	:	-		<0.23	J	-		<0.11	J
Cobalt	mg/L	T	<0.32	:	-		<0.32	:	-		<0.29	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.32	:	-		<0.29	:
Copper	mg/L	T	1.01	:	-		0.715	:	-		0.756	:	-	
Copper	mg/L	D	-		1.01	:	-		0.824	:	-		0.724	:
Iron	mg/L	T	<4.55	:	-		<4.55	:	-		<2.78	:	-	
Iron	mg/L	D	-		<4.55	:	-		<4.55	:	-		<2.78	:
Lead	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Magnesium	mg/L	T	61.7	:	-		43.5	:	-		46.5	:	-	
Magnesium	mg/L	D	-		61.7	:	-		45.3	:	-		43.4	:
Manganese	mg/L	T	20.9	:	-		16.1	:	-		16.8	J	-	
Manganese	mg/L	D	-		21.	:	-		16.6	:	-		16.1	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0303	:	-		<0.011	:	-		<0.011	:	-	
Molybdenum	mg/L	D	-		<0.0316	:	-		<0.011	:	-		<0.011	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 9/18/2003 MMW-45A-T01N-GRW GW1		MMW-45A 9/18/2003 MMW-45A-D01N-GRW GW1		MMW-45A 10/16/2003 MMW-45A-T01N-GRW GW1		MMW-45A 10/16/2003 MMW-45A-D01N-GRW GW1		MMW-45A 11/2/2003 MMW-45A-T01N-GRW GW1		MMW-45A 11/2/2003 MMW-45A-D01N-GRW GW1	
Nickel	mg/L	T	<0.45	:	-		<0.45	J	-		0.449	J	-	
Nickel	mg/L	D	-		0.629	:	-		<0.45	J	-		0.393	J
Potassium	mg/L	T	<63.8	:	-		<63.8	:	-		<31.8	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<63.8	:	-		<31.8	:
Selenium	mg/L	T	0.0131	:	-		0.0104	:	-		0.009	:	-	
Selenium	mg/L	D	-		0.0111	:	-		0.0129	:	-		0.0099	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		<99.1	:	-		<45.4	:	-	
Sodium	mg/L	D	-		<99.1	:	-		<99.1	:	-		<45.4	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	4.97	:	-		4.11	J	-		5.4	:	-	
Zinc	mg/L	D	-		5.07	:	-		6.08	J	-		5.31	:
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A		MMW-45A	
Sample Date			12/8/2003		12/8/2003		1/11/2004		1/11/2004		2/22/2004		2/22/2004	
Sample ID			MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW		MMW-45A-T01N-GRW		MMW-45A-D01N-GRW	
Exposure Area			GW1		GW1		GW1		GW1		GW1		GW1	
Field Measurements														
DO	mg/L	T	-		-		2.72	:	-		1.37	:	-	
Eh	millivolts	T	-		-		419.6	:	-		440.9	:	-	
pH	SU	T	3.9	J	-		3.9	J	-		3.68	:	-	
Specific Conductance	uS/cm	T	-		-		1447.	:	-		1510.	:	-	
Temperature	Celsius	T	-		-		8.35	:	-		7.06	:	-	
Turbidity	NTU	T	-		-		3.7	:	-		4.	:	-	
General Chemistry														
Ammonia	mg/L	T	0.08	:	-		<0.11	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Chloride	mg/L	T	24.7	:	-		15.7	:	-		-		-	
Fluoride	mg/L	T	12.9	:	-		10.1	:	-		28.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Nitrate	mg/L	T	0.43	:	-		<0.47	J	-		-		-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.013	:	-		-		-	
Phosphorus	mg/L	T	0.04	:	-		<0.01	:	-		-		-	
Sulfate	mg/L	T	1000.	:	-		830.	:	-		1010.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Total Dissolved Solids	mg/L	T	1560.	:	-		1560.	:	-		1440.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.5	:	-		-		-	
Total Suspended Solids	mg/L	T	1.9	:	-		<0.9	:	-		<0.9	:	-	
Laboratory Parameters														
pH	SU	T	3.9	J	-		3.9	J	-		3.68	:	-	
Specific Conductance	umhos/cm	T	1350.	J	-		1430.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	621.	:	-		541.	:	-		573.	:	-	
Hardness	mg/L	D	-		611.	:	-		565.	:	-		545.	:
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 12/8/2003 MMW-45A-T01N-GRW GW1		MMW-45A 12/8/2003 MMW-45A-D01N-GRW GW1		MMW-45A 1/11/2004 MMW-45A-T01N-GRW GW1		MMW-45A 1/11/2004 MMW-45A-D01N-GRW GW1		MMW-45A 2/22/2004 MMW-45A-T01N-GRW GW1		MMW-45A 2/22/2004 MMW-45A-D01N-GRW GW1	
Aluminum	mg/L	T	81.8	:	-		69.4	:	-		76.5	:	-	
Aluminum	mg/L	D	-		80.	:	-		72.3	:	-		72.9	:
Antimony	mg/L	T	<0.052	:	-		<0.029	:	-		<0.029	:	-	
Antimony	mg/L	D	-		<0.052	:	-		<0.029	:	-		<0.029	:
Arsenic	mg/L	T	<0.041	:	-		<0.028	:	-		<0.028	:	-	
Arsenic	mg/L	D	-		<0.041	:	-		<0.028	:	-		<0.028	:
Barium	mg/L	T	<0.115	:	-		<0.053	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.115	:	-		<0.053	:	-		<0.053	:
Beryllium	mg/L	T	0.0415	:	-		0.0333	:	-		0.0277	:	-	
Beryllium	mg/L	D	-		0.0403	:	-		0.0339	:	-		0.0254	:
Boron	mg/L	T	<0.064	J	-		<0.0274	:	-		<0.023	:	-	
Boron	mg/L	D	-		<0.064	J	-		<0.023	:	-		<0.023	:
Cadmium	mg/L	T	<0.05	:	-		<0.07	J	-		<0.07	:	-	
Cadmium	mg/L	D	-		<0.05	:	-		<0.07	:	-		<0.07	J
Calcium	mg/L	T	166.	:	-		144.	:	-		151.	:	-	
Calcium	mg/L	D	-		163.	:	-		150.	:	-		144.	:
Chromium	mg/L	T	<0.11	:	-		<0.11	:	-		<0.11	:	-	
Chromium	mg/L	D	-		<0.11	:	-		<0.11	:	-		<0.11	:
Cobalt	mg/L	T	<0.29	:	-		<0.31	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		<0.29	:	-		<0.31	:	-		<0.31	:
Copper	mg/L	T	0.735	:	-		0.587	:	-		0.574	:	-	
Copper	mg/L	D	-		0.775	:	-		0.726	:	-		0.597	:
Iron	mg/L	T	<2.78	:	-		<3.73	:	-		<3.73	:	-	
Iron	mg/L	D	-		<2.78	:	-		<3.73	:	-		<3.73	:
Lead	mg/L	T	<0.002	:	-		<0.001	J	-		<0.0019	:	-	
Lead	mg/L	D	-		<0.002	:	-		0.0031	J	-		<0.0013	:
Magnesium	mg/L	T	50.1	:	-		43.9	:	-		47.5	:	-	
Magnesium	mg/L	D	-		49.4	:	-		46.	:	-		45.2	:
Manganese	mg/L	T	18.7	:	-		15.4	:	-		17.2	:	-	
Manganese	mg/L	D	-		18.4	:	-		16.1	:	-		16.4	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	<0.011	J	-		<0.024	:	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.011	J	-		<0.024	:	-		<0.024	:

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45A 12/8/2003 MMW-45A-T01N-GRW GW1		MMW-45A 12/8/2003 MMW-45A-D01N-GRW GW1		MMW-45A 1/11/2004 MMW-45A-T01N-GRW GW1		MMW-45A 1/11/2004 MMW-45A-D01N-GRW GW1		MMW-45A 2/22/2004 MMW-45A-T01N-GRW GW1		MMW-45A 2/22/2004 MMW-45A-D01N-GRW GW1	
Nickel	mg/L	T	0.464	J	-		<0.27	:	-		0.356	:	-	
Nickel	mg/L	D	-		0.498	J	-		0.323	:	-		0.419	:
Potassium	mg/L	T	<31.8	:	-		<24.3	:	-		<24.3	:	-	
Potassium	mg/L	D	-		42.4	:	-		<24.3	:	-		<24.3	:
Selenium	mg/L	T	0.0076	:	-		0.0131	J	-		0.0079	J	-	
Selenium	mg/L	D	-		0.0085	:	-		0.0119	:	-		0.006	J
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<49.5	:	-		<49.	:	-		<49.	J	-	
Sodium	mg/L	D	-		<45.4	:	-		<49.	:	-		<49.	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0017	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0017	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.0018	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.0021	:
Zinc	mg/L	T	4.34	:	-		3.6	:	-		3.61	:	-	
Zinc	mg/L	D	-		4.25	:	-		3.81	:	-		3.38	:
Lanthanides														
Cerium	mg/L	T	-		-		-		-		0.605	:	-	
Cerium	mg/L	D	-		-		-		-		-		0.695	:
Dysprosium	mg/L	T	-		-		-		-		0.0519	:	-	
Dysprosium	mg/L	D	-		-		-		-		-		0.048	:
Erbium	mg/L	T	-		-		-		-		0.0182	:	-	
Erbium	mg/L	D	-		-		-		-		-		0.0166	:
Europium	mg/L	T	-		-		-		-		0.00978	:	-	
Europium	mg/L	D	-		-		-		-		-		0.00964	:
Gadolinium	mg/L	T	-		-		-		-		0.0847	:	-	
Gadolinium	mg/L	D	-		-		-		-		-		0.0878	:
Holmium	mg/L	T	-		-		-		-		0.00811	:	-	
Holmium	mg/L	D	-		-		-		-		-		0.00755	:
Lanthanum	mg/L	T	-		-		-		-		0.219	:	-	
Lanthanum	mg/L	D	-		-		-		-		-		0.255	:
Lutetium	mg/L	T	-		-		-		-		0.00146	:	-	
Lutetium	mg/L	D	-		-		-		-		-		0.00135	:
Neodymium	mg/L	T	-		-		-		-		0.38	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45A 12/8/2003 MMW-45A-T01N-GRW GW1	MMW-45A 12/8/2003 MMW-45A-D01N-GRW GW1	MMW-45A 1/11/2004 MMW-45A-T01N-GRW GW1	MMW-45A 1/11/2004 MMW-45A-D01N-GRW GW1	MMW-45A 2/22/2004 MMW-45A-T01N-GRW GW1	MMW-45A 2/22/2004 MMW-45A-D01N-GRW GW1
Neodymium	mg/L	D	-	-	-	-	-	0.405 :
Praseodymium	mg/L	T	-	-	-	-	0.0872 :	-
Praseodymium	mg/L	D	-	-	-	-	-	0.0957 :
Samarium	mg/L	T	-	-	-	-	0.0885 :	-
Samarium	mg/L	D	-	-	-	-	-	0.0883 :
Terbium	mg/L	T	-	-	-	-	0.0115 :	-
Terbium	mg/L	D	-	-	-	-	-	0.0111 :
Thulium	mg/L	T	-	-	-	-	0.00203 :	-
Thulium	mg/L	D	-	-	-	-	-	0.00187 :
Ytterbium	mg/L	T	-	-	-	-	0.0113 :	-
Ytterbium	mg/L	D	-	-	-	-	-	0.0108 :
Yttrium	mg/L	T	-	-	-	-	0.194 :	-
Yttrium	mg/L	D	-	-	-	-	-	0.213 :
Isotopes								
204Pb/206Pb	mg/L	T	-	-	-	-	0.00005 :	-
204Pb/206Pb	mg/L	D	-	-	-	-	-	0.00005 :
207Pb/206Pb	mg/L	T	-	-	-	-	0.00085 :	-
207Pb/206Pb	mg/L	D	-	-	-	-	-	0.00084 :
208Pb/206Pb	mg/L	T	-	-	-	-	0.00206 :	-
208Pb/206Pb	mg/L	D	-	-	-	-	-	0.002 :
Delta D	per mil	T	-	-	-	-	-90.7 :	-
Delta O-18	per mil	T	-	-	-	-	-12.8 :	-
Lead	mg/L	T	<0.002 :	-	<0.001 J	-	<0.0019 :	-
Lead	mg/L	D	-	<0.002 :	-	0.0031 J	-	<0.0013 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-45A	2/23/2004	MMW-45A-D01N-GRW GW1		MMW-45A	4/18/2004	MMW-45A-T01N-GRW GW1		MMW-45A	4/18/2004	MMW-45A-D01N-GRW GW1		MMW-47A	11/6/2002	MMW-47A-T01N-GRWRE GW5		MMW-47A	11/6/2002	MMW-47A-T01N-GRW GW5	
			MMW-47A	11/6/2002	MMW-47A-D01N-GRWRE GW5																	
Field Measurements																						
DO	mg/L	T	-				38.	:	-		-				8.13	:	-					
Eh	millivolts	T	-				153.3	:	-		-				450.8	:	-					
pH	SU	T	-				4.1	J	-		-				4.8	:	-					
Specific Conductance	uS/cm	T	-				996.	:	-		-				1297.	:	-					
Temperature	Celsius	T	-				7.58	:	-		-				8.81	:	-					
Turbidity	NTU	T	-				-		-		-				41.7	:	-					
General Chemistry																						
Ammonia	mg/L	T	-				<0.075	:	-		-				<0.12	:	-					
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:	-		-				<2.7	:	-					
Carbonate (as CaCO3)	mg/L	T	-				<1.	:	-		-				<1.	:	-					
Chloride	mg/L	T	-				30.7	J	-		-				12.8	:	-					
Fluoride	mg/L	T	-				11.3	:	-		17.2	J			-		-					
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:	-		-				<1.	:	-					
Nitrate	mg/L	T	-				0.38	:	-		-				2.7	J	-					
Nitrite	mg/L	T	-				<0.005	J	-		-				<0.005	J	-					
Phosphate, Ortho As P	mg/L	T	-				<0.01	J	-		-				<0.01	J	-					
Phosphorus	mg/L	T	-				0.016	:	-		-				<0.01	:	-					
Sulfate	mg/L	T	-				917.	:	-		-				736.	:	-					
Total Alkalinity	mg/L	T	-				<1.	:	-		-				<2.7	:	-					
Total Dissolved Solids	mg/L	T	-				1560.	:	-		-				1130.	:	-					
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:	-		-				<0.24	:	-					
Total Organic Carbon	mg/L	T	-				2.3	J	-		-				<1.	:	-					
Total Suspended Solids	mg/L	T	-				<1.2	J	-		-				<0.6	:	-					
Laboratory Parameters																						
pH	SU	T	-				4.1	J	-		-				4.8	:	-					
Specific Conductance	umhos/cm	T	-				1320.	J	-		-				-		-					
Inorganics																						
Cyanide	mg/L	T	-				<0.01	:	-		-				<0.01	:	-					
Physical Properties																						
Hardness	mg/L	T	-				607.	:	-		-				-		-					
Hardness	mg/L	D	-				-		601.	:	-				-		775.	:				
Metals																						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 2/23/2004 MMW-45A-D01N-GRW GW1	MMW-45A 4/18/2004 MMW-45A-T01N-GRW GW1	MMW-45A 4/18/2004 MMW-45A-D01N-GRW GW1	MMW-47A 11/6/2002 MMW-47A-T01N-GRWRE GW5	MMW-47A 11/6/2002 MMW-47A-T01N-GRW GW5	MMW-47A 11/6/2002 MMW-47A-D01N-GRWRE GW5
Aluminum	mg/L	T	-	77.7 :	-	-	-	-
Aluminum	mg/L	D	-	-	77.5 :	-	-	15.5 :
Antimony	mg/L	T	-	<0.027 :	-	-	-	-
Antimony	mg/L	D	-	-	<0.027 :	-	-	<0.028 :
Arsenic	mg/L	T	-	<0.026 :	-	-	-	-
Arsenic	mg/L	D	-	-	<0.026 :	-	-	<0.023 :
Barium	mg/L	T	-	<0.012 :	-	-	-	-
Barium	mg/L	D	-	-	<0.012 :	-	-	<0.048 :
Beryllium	mg/L	T	-	0.0354 :	-	-	-	-
Beryllium	mg/L	D	-	-	0.0337 :	-	-	0.0089 :
Boron	mg/L	T	-	<0.018 :	-	-	-	-
Boron	mg/L	D	-	-	<0.018 :	-	-	<0.027 :
Cadmium	mg/L	T	-	<0.0386 :	-	-	-	-
Cadmium	mg/L	D	-	-	<0.0442 :	-	-	<0.04 :
Calcium	mg/L	T	-	161. :	-	-	-	-
Calcium	mg/L	D	-	-	159. :	-	-	178. :
Chromium	mg/L	T	-	<0.08 :	-	-	-	-
Chromium	mg/L	D	-	-	<0.08 :	-	-	<0.37 :
Cobalt	mg/L	T	-	0.204 :	-	-	-	-
Cobalt	mg/L	D	-	-	0.234 :	-	-	<0.16 :
Copper	mg/L	T	-	0.749 :	-	-	-	-
Copper	mg/L	D	-	-	0.839 :	-	-	<0.17 :
Iron	mg/L	T	-	<1.92 J	-	-	-	-
Iron	mg/L	D	-	-	<1.92 :	-	-	<4.89 :
Lead	mg/L	T	-	<0.004 :	-	-	-	-
Lead	mg/L	D	-	-	<0.004 :	-	-	<0.001 :
Magnesium	mg/L	T	-	50. :	-	-	-	-
Magnesium	mg/L	D	-	-	49.4 :	-	-	80.4 :
Manganese	mg/L	T	-	17.5 :	-	-	-	-
Manganese	mg/L	D	-	-	17.3 :	-	-	8.14 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.01 :	-	-	-	-
Molybdenum	mg/L	D	-	-	<0.01 :	-	-	<0.011 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45A 2/23/2004 MMW-45A-D01N-GR W GW1	MMW-45A 4/18/2004 MMW-45A-T01N-GR W GW1	MMW-45A 4/18/2004 MMW-45A-D01N-GR W GW1	MMW-47A 11/6/2002 MMW-47A-T01N-GR WRE GW5	MMW-47A 11/6/2002 MMW-47A-T01N-GR W GW5	MMW-47A 11/6/2002 MMW-47A-D01N-GR WRE GW5
Nickel	mg/L	T	-	0.253 :	-	-	-	-
Nickel	mg/L	D	-	-	0.354 :	-	-	0.468 :
Potassium	mg/L	T	-	<10.9 J	-	-	-	-
Potassium	mg/L	D	-	-	<10.9 J	-	-	<24.3 :
Selenium	mg/L	T	-	<0.007 :	-	-	-	-
Selenium	mg/L	D	-	-	0.0076 :	-	-	<0.008 :
Silver	mg/L	T	-	<0.001 J	-	-	-	-
Silver	mg/L	D	-	-	<0.001 J	-	-	<0.001 :
Sodium	mg/L	T	-	<38.8 :	-	-	-	-
Sodium	mg/L	D	-	-	<36.7 :	-	-	<32.7 :
Thallium	mg/L	T	-	<0.001 :	-	-	-	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	<0.002 :	-	-	-	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	<0.002 :
Zinc	mg/L	T	-	4.1 :	-	-	-	-
Zinc	mg/L	D	-	-	4.08 :	-	-	<3.44 :
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T	-	-	-	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T	-	-	-	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T	-	-	-	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
2-Butanone	mg/L	T	-	-	-	-	<0.01 :	-
2-Hexanone	mg/L	T	-	-	-	-	<0.01 :	-
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	<0.01 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-45A 2/23/2004 MMW-45A-D01N-GRW GW1	MMW-45A 4/18/2004 MMW-45A-T01N-GRW GW1	MMW-45A 4/18/2004 MMW-45A-D01N-GRW GW1	MMW-47A 11/6/2002 MMW-47A-T01N-GRWRE GW5	MMW-47A 11/6/2002 MMW-47A-T01N-GRW GW5	MMW-47A 11/6/2002 MMW-47A-D01N-GRWRE GW5
Acetone	mg/L	T	-	-	-	-	<0.01 :	-
Benzene	mg/L	T	-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Bromoform	mg/L	T	-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T	-	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T	-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T	-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Chloroform	mg/L	T	-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T	-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T	-	-	-	-	<0.01 :	-
Styrene	mg/L	T	-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Toluene	mg/L	T	-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T	-	-	-	-	<0.01 :	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	-	<0.011 :	-
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	<0.027 :	-
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	<0.011 :	-
2,4-Dichlorophenol	mg/L	T	-	-	-	-	<0.011 :	-
2,4-Dimethylphenol	mg/L	T	-	-	-	-	<0.011 :	-
2,4-Dinitrophenol	mg/L	T	-	-	-	-	<0.027 :	-
2,4-Dinitrotoluene	mg/L	T	-	-	-	-	<0.011 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction						
		Site ID	MMW-45A	MMW-45A	MMW-45A	MMW-47A	MMW-47A	MMW-47A
		Sample Date	2/23/2004	4/18/2004	4/18/2004	11/6/2002	11/6/2002	11/6/2002
		Sample ID	MMW-45A-D01N-GRW	MMW-45A-T01N-GRW	MMW-45A-D01N-GRW	MMW-47A-T01N-GRWRE	MMW-47A-T01N-GRW	MMW-47A-D01N-GRWRE
		Exposure Area Fraction	GW1	GW1	GW1	GW5	GW5	GW5
2,6-Dinitrotoluene	mg/L	T	-	-	-	-	<0.011 :	-
2-Chloronaphthalene	mg/L	T	-	-	-	-	<0.011 :	-
2-Chlorophenol	mg/L	T	-	-	-	-	<0.011 :	-
2-Methylnaphthalene	mg/L	T	-	-	-	-	<0.011 :	-
2-Methylphenol	mg/L	T	-	-	-	-	<0.011 :	-
2-Nitroaniline	mg/L	T	-	-	-	-	<0.027 :	-
2-Nitrophenol	mg/L	T	-	-	-	-	<0.011 :	-
3,3-Dichlorobenzidine	mg/L	T	-	-	-	-	<0.011 :	-
3-Nitroaniline	mg/L	T	-	-	-	-	<0.027 :	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	-	<0.027 :	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	-	<0.011 :	-
4-Chloro-3-methylphenol	mg/L	T	-	-	-	-	<0.011 :	-
4-Chloroaniline	mg/L	T	-	-	-	-	<0.011 :	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	-	<0.011 :	-
4-Methylphenol	mg/L	T	-	-	-	-	<0.011 :	-
4-Nitroaniline	mg/L	T	-	-	-	-	<0.027 :	-
4-Nitrophenol	mg/L	T	-	-	-	-	<0.027 :	-
Acenaphthene	mg/L	T	-	-	-	-	<0.011 :	-
Acenaphthylene	mg/L	T	-	-	-	-	<0.011 :	-
Anthracene	mg/L	T	-	-	-	-	<0.011 :	-
Benzaldehyde	mg/L	T	-	-	-	-	<0.011 J	-
Benzo(a)anthracene	mg/L	T	-	-	-	-	<0.011 :	-
Benzo(a)pyrene	mg/L	T	-	-	-	-	<0.011 :	-
Benzo(b)fluoranthene	mg/L	T	-	-	-	-	<0.011 :	-
Benzo(g,h,i)perylene	mg/L	T	-	-	-	-	<0.011 :	-
Benzo(k)fluoranthene	mg/L	T	-	-	-	-	<0.011 :	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	-	<0.011 :	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	-	<0.011 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	-	<0.011 :	-
Butyl benzyl phthalate	mg/L	T	-	-	-	-	<0.011 :	-
Carbazole	mg/L	T	-	-	-	-	<0.011 :	-
Chrysene	mg/L	T	-	-	-	-	<0.011 :	-
Dibenz(a,h)anthracene	mg/L	T	-	-	-	-	<0.011 :	-
Dibenzofuran	mg/L	T	-	-	-	-	<0.011 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45A 2/23/2004 MMW-45A-D01N-GR W GW1	MMW-45A 4/18/2004 MMW-45A-T01N-GR W GW1	MMW-45A 4/18/2004 MMW-45A-D01N-GR W GW1	MMW-47A 11/6/2002 MMW-47A-T01N-GR WRE GW5	MMW-47A 11/6/2002 MMW-47A-T01N-GR W GW5	MMW-47A 11/6/2002 MMW-47A-D01N-GR WRE GW5
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.011 J	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.011 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.011 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.011 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.011 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.011 :	-
Fluorene	mg/L	T	-	-	-	-	<0.011 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.011 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.011 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.011 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.011 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.011 :	-
Isophorone	mg/L	T	-	-	-	-	<0.011 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.011 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.011 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.011 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.011 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.027 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.011 :	-
Phenol	mg/L	T	-	-	-	-	<0.011 :	-
Pyrene	mg/L	T	-	-	-	-	<0.011 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta 34S	per mil	D	-5. :	-	-	-	-	-
Lead	mg/L	T	-	<0.004 :	-	-	-	-
Lead	mg/L	D	-	-	<0.004 :	-	-	<0.001 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-T01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-D01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-T01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-D01N-GR W GW5	MMW-47A 2/6/2003 MMW-47A-T01N-GR WRE GW5
Field Measurements								
DO	mg/L	T	-	116.1 :	-	5.43 :	-	-
Eh	millivolts	T	-	396.3 :	-	446.7 :	-	-
pH	SU	T	-	4.78 :	-	4.95 :	-	-
Specific Conductance	uS/cm	T	-	2336. :	-	937. :	-	-
Temperature	Celsius	T	-	8.58 :	-	7.28 :	-	-
Turbidity	NTU	T	-	17.8 :	-	47.5 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	0.12 :	-	<0.07 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<2.8 J	-	<5.1 :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Chloride	mg/L	T	-	12.7 :	-	8.6 :	-	-
Fluoride	mg/L	T	-	15.9 :	-	11.3 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T	-	2.2 J	-	1.4 :	-	-
Nitrite	mg/L	T	-	<0.005 :	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.029 :	-	<0.01 J	-	-
Phosphorus	mg/L	T	-	<0.014 J	-	0.011 :	-	-
Sulfate	mg/L	T	-	804. J	-	494. J	-	-
Total Alkalinity	mg/L	T	-	<2.8 J	-	<5.1 :	-	-
Total Dissolved Solids	mg/L	T	-	1130. :	-	765. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 J	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	<1. :	-	<1. :	-	-
Total Suspended Solids	mg/L	T	-	<0.53 J	-	<0.5 :	-	-
Laboratory Parameters								
pH	SU	T	-	4.78 :	-	4.95 :	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	625. :	-	516. :	-	-
Hardness	mg/L	D	-	-	623. :	-	571. :	-
Metals								
Aluminum	mg/L	T	-	15.2 :	-	17.2 :	-	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GRW GW5	MMW-47A 12/2/2002 MMW-47A-T01N-GRW GW5	MMW-47A 12/2/2002 MMW-47A-D01N-GRW GW5	MMW-47A 1/8/2003 MMW-47A-T01N-GRW GW5	MMW-47A 1/8/2003 MMW-47A-D01N-GRW GW5	MMW-47A 2/6/2003 MMW-47A-T01N-GRWRE GW5
Aluminum	mg/L	D	-	-	14.9 :	-	<9.73 J	-
Antimony	mg/L	T	-	<0.0006 :	-	<0.028 :	-	-
Antimony	mg/L	D	-	-	<0.0006 :	-	<0.028 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.023 J	-	-
Arsenic	mg/L	D	-	-	<0.0004 :	-	<0.023 J	-
Barium	mg/L	T	-	0.0142 :	-	<0.048 :	-	-
Barium	mg/L	D	-	-	0.0141 :	-	<0.048 :	-
Beryllium	mg/L	T	-	0.0066 :	-	0.0054 :	-	-
Beryllium	mg/L	D	-	-	0.0066 :	-	0.0053 :	-
Boron	mg/L	T	-	<0.0074 :	-	<0.027 :	-	-
Boron	mg/L	D	-	-	<0.0085 :	-	<0.027 :	-
Cadmium	mg/L	T	-	0.018 :	-	<0.08 :	-	-
Cadmium	mg/L	D	-	-	0.0186 J	-	<0.08 :	-
Calcium	mg/L	T	-	144. :	-	115. :	-	-
Calcium	mg/L	D	-	-	144. :	-	108. :	-
Chromium	mg/L	T	-	<0.0037 :	-	<0.16 :	-	-
Chromium	mg/L	D	-	-	<0.0051 :	-	<0.16 :	-
Cobalt	mg/L	T	-	<0.0016 :	-	<0.23 :	-	-
Cobalt	mg/L	D	-	-	<0.0016 :	-	<0.23 :	-
Copper	mg/L	T	-	0.178 :	-	<0.17 :	-	-
Copper	mg/L	D	-	-	0.178 J	-	<0.17 :	-
Iron	mg/L	T	-	0.0496 :	-	<2.75 :	-	-
Iron	mg/L	D	-	-	0.0558 :	-	<2.66 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.001 :	-	-
Lead	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-
Magnesium	mg/L	T	-	64.4 :	-	55.2 :	-	-
Magnesium	mg/L	D	-	-	64.1 :	-	48.7 :	-
Manganese	mg/L	T	-	6.38 J	-	4.67 :	-	-
Manganese	mg/L	D	-	-	6.48 J	-	4.76 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0011 :	-	<0.011 J	-	-
Molybdenum	mg/L	D	-	-	<0.0011 :	-	<0.011 J	-
Nickel	mg/L	T	-	0.289 :	-	<0.34 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-T01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-D01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-T01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-D01N-GR W GW5	MMW-47A 2/6/2003 MMW-47A-T01N-GR WRE GW5
Nickel	mg/L	D	-	-	0.293 :	-	<0.34 :	-
Potassium	mg/L	T	-	2.57 :	-	<31.4 :	-	-
Potassium	mg/L	D	-	-	2.72 :	-	<31.4 :	-
Selenium	mg/L	T	-	0.0044 :	-	<0.008 :	-	-
Selenium	mg/L	D	-	-	0.0029 J	-	<0.008 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.001 :	-	-
Silver	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-
Sodium	mg/L	T	-	15.9 :	-	<36.6 :	-	-
Sodium	mg/L	D	-	-	15.4 :	-	<36.6 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.001 :	-	-
Thallium	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.0004 :	-	<0.002 :	-	-
Vanadium	mg/L	D	-	-	<0.0004 :	-	<0.002 :	-
Zinc	mg/L	T	-	2.54 J	-	<1.98 :	-	-
Zinc	mg/L	D	-	-	2.56 J	-	<1.87 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Butanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Hexanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Acetone	mg/L	T	-	<0.01 J	-	<0.01 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-T01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-D01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-T01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-D01N-GR W GW5	MMW-47A 2/6/2003 MMW-47A-T01N-GR WRE GW5
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
2,4,5-Trichlorophenol	mg/L	T	-	<0.027 :	-	<0.027 :	-	-
2,4,6-Trichlorophenol	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
2,4-Dichlorophenol	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
2,4-Dimethylphenol	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
2,4-Dinitrophenol	mg/L	T	-	<0.027 :	-	<0.027 :	-	-
2,4-Dinitrotoluene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
2,6-Dinitrotoluene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GR W GW5		MMW-47A 12/2/2002 MMW-47A-T01N-GR W GW5		MMW-47A 12/2/2002 MMW-47A-D01N-GR W GW5		MMW-47A 1/8/2003 MMW-47A-T01N-GR W GW5		MMW-47A 1/8/2003 MMW-47A-D01N-GR W GW5		MMW-47A 2/6/2003 MMW-47A-T01N-GR WRE GW5	
2-Chloronaphthalene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
2-Chlorophenol	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
2-Methylnaphthalene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
2-Methylphenol	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
2-Nitroaniline	mg/L	T	-		<0.027	:	-		<0.027	:	-		-	
2-Nitrophenol	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
3,3-Dichlorobenzidine	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
3-Nitroaniline	mg/L	T	-		<0.027	:	-		<0.027	:	-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.027	:	-		<0.027	:	-		-	
4-Bromophenyl phenyl ether	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
4-Chloro-3-methylphenol	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
4-Chloroaniline	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
4-Methylphenol	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
4-Nitroaniline	mg/L	T	-		<0.027	:	-		<0.027	:	-		-	
4-Nitrophenol	mg/L	T	-		<0.027	J	-		<0.027	:	-		-	
Acenaphthene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Acenaphthylene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Anthracene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Benzaldehyde	mg/L	T	-		<0.011	J	-		<0.011	:	-		-	
Benzo(a)anthracene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Benzo(a)pyrene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Benzo(b)fluoranthene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Benzo(g,h,i)perylene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Benzo(k)fluoranthene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Bis(2-chloroethyl)ether	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Butyl benzyl phthalate	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Carbazole	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Chrysene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Dibenz(a,h)anthracene	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Dibenzofuran	mg/L	T	-		<0.011	:	-		<0.011	:	-		-	
Dichlorodiisopropyl ether	mg/L	T	-		<0.011	J	-		<0.011	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 11/6/2002 MMW-47A-D01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-T01N-GR W GW5	MMW-47A 12/2/2002 MMW-47A-D01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-T01N-GR W GW5	MMW-47A 1/8/2003 MMW-47A-D01N-GR W GW5	MMW-47A 2/6/2003 MMW-47A-T01N-GR WRE GW5
Diethylphthalate	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Dimethylphthalate	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Di-n-Butyl phthalate	mg/L	T	-	0.0006 J	-	<0.011 :	-	-
Di-n-Octyl phthalate	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Fluoranthene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Fluorene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Hexachlorobenzene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Hexachlorobutadiene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Hexachloroethane	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Isophorone	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Naphthalene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Nitrobenzene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Pentachlorophenol	mg/L	T	-	<0.027 :	-	<0.027 :	-	-
Phenanthrene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Phenol	mg/L	T	-	<0.011 J	-	<0.011 :	-	-
Pyrene	mg/L	T	-	<0.011 :	-	<0.011 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	<0.0002 :	-	<0.001 :	-	-
Lead	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-47A		MMW-47A		MMW-47A		MMW-47A		MMW-47A		MMW-47A			
			2/6/2003		2/6/2003		3/3/2003		3/3/2003		4/7/2003		4/7/2003			
			MMW-47A-T01N-GRW		MMW-47A-D01N-GRW		MMW-47A-T01N-GRW		MMW-47A-D01N-GRW		MMW-47A-T01N-GRW		MMW-47A-D01N-GRW			
			GW5		GW5		GW5		GW5		GW5		GW5			
Field Measurements																
DO	mg/L	T	8.15	:	-		6.43	:	-		3.81	:	-			
Eh	millivolts	T	258.6	:	-		406.6	:	-		323.9	:	-			
pH	SU	T	4.89	:	-		4.89	:	-		4.6	J	-			
Specific Conductance	uS/cm	T	1005.	:	-		1224.	:	-		1312.	:	-			
Temperature	Celsius	T	5.76	:	-		6.24	:	-		6.04	:	-			
Turbidity	NTU	T	18.6	:	-		49.8	:	-		112.	:	-			
General Chemistry																
Ammonia	mg/L	T	<0.062	J	-		<0.076	J	-		<0.06	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<5.6	:	-		<4.7	J	-		<5.6	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	11.4	:	-		7.1	:	-		14.9	:	-			
Fluoride	mg/L	T	12.1	:	-		14.7	:	-		12.8	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	1.6	:	-		2.1	:	-		2.4	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		<0.24	J	-			
Phosphorus	mg/L	T	<0.01	:	-		<0.01	J	-		0.17	:	-			
Sulfate	mg/L	T	508.	J	-		567.	:	-		709.	J	-			
Total Alkalinity	mg/L	T	<5.6	:	-		<4.7	J	-		<5.6	:	-			
Total Dissolved Solids	mg/L	T	772.	:	-		1030.	:	-		1280.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		<1.	J	-			
Total Suspended Solids	mg/L	T	0.6	:	-		5.8	J	-		<0.6	:	-			
Laboratory Parameters																
pH	SU	T	4.89	:	-		4.89	:	-		4.6	J	-			
Specific Conductance	umhos/cm	T	-		-		-		-		1260.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-			
Physical Properties																
Hardness	mg/L	T	510.	:	-		702.	:	-		668.	:	-			
Hardness	mg/L	D	-		484.	:	-		702.	:	-		669.	:		
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 2/6/2003 MMW-47A-T01N-GRW GW5		MMW-47A 2/6/2003 MMW-47A-D01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-T01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-D01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-T01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-D01N-GRW GW5	
Aluminum	mg/L	T	<12.3	:	-		15.9	:	-		14.9	:	-	
Aluminum	mg/L	D	-		<9.78	:	-		15.2	:	-		15.7	:
Antimony	mg/L	T	<0.028	:	-		<0.028	:	-		<0.003	:	-	
Antimony	mg/L	D	-		<0.028	:	-		<0.028	:	-		<0.003	:
Arsenic	mg/L	T	<0.023	J	-		<0.023	J	-		<0.002	:	-	
Arsenic	mg/L	D	-		<0.023	J	-		<0.023	J	-		<0.002	:
Barium	mg/L	T	<0.048	:	-		<0.048	:	-		<0.125	:	-	
Barium	mg/L	D	-		<0.048	:	-		<0.048	:	-		<0.125	:
Beryllium	mg/L	T	0.0053	:	-		0.0078	:	-		<0.004	:	-	
Beryllium	mg/L	D	-		0.005	:	-		0.0075	:	-		<0.004	:
Boron	mg/L	T	<0.027	:	-		<0.027	:	-		<0.084	:	-	
Boron	mg/L	D	-		<0.027	:	-		<0.027	:	-		<0.084	:
Cadmium	mg/L	T	<0.08	:	-		<0.08	:	-		0.0235	:	-	
Cadmium	mg/L	D	-		<0.08	:	-		<0.08	:	-		0.0211	:
Calcium	mg/L	T	117.	:	-		160.	J	-		153.	:	-	
Calcium	mg/L	D	-		111.	:	-		161.	:	-		161.	:
Chromium	mg/L	T	<0.16	:	-		<0.16	:	-		<0.019	:	-	
Chromium	mg/L	D	-		<0.16	:	-		<0.16	:	-		<0.019	:
Cobalt	mg/L	T	<0.23	:	-		<0.23	:	-		<0.036	:	-	
Cobalt	mg/L	D	-		<0.23	:	-		<0.23	:	-		<0.036	:
Copper	mg/L	T	<0.17	:	-		0.251	:	-		0.162	:	-	
Copper	mg/L	D	-		<0.17	:	-		0.228	:	-		0.17	:
Iron	mg/L	T	<2.66	J	-		<2.66	:	-		<0.422	:	-	
Iron	mg/L	D	-		<2.66	J	-		<2.66	J	-		<0.422	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Magnesium	mg/L	T	52.8	:	-		73.3	:	-		69.2	:	-	
Magnesium	mg/L	D	-		50.1	:	-		72.7	:	-		72.3	:
Manganese	mg/L	T	4.83	J	-		8.16	:	-		7.64	:	-	
Manganese	mg/L	D	-		4.47	:	-		7.71	:	-		8.16	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.011	J	-		<0.011	:	-		<0.022	:	-	
Molybdenum	mg/L	D	-		<0.011	J	-		<0.0171	:	-		<0.022	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 2/6/2003 MMW-47A-T01N-GRW GW5		MMW-47A 2/6/2003 MMW-47A-D01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-T01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-D01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-T01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-D01N-GRW GW5	
Nickel	mg/L	T	<0.34	:	-		0.404	:	-		0.327	:	-	
Nickel	mg/L	D	-		<0.34	:	-		0.426	:	-		0.352	:
Potassium	mg/L	T	<31.4	:	-		<31.4	:	-		<4.05	:	-	
Potassium	mg/L	D	-		<31.4	:	-		35.7	:	-		<4.05	:
Selenium	mg/L	T	<0.008	:	-		<0.008	J	-		<0.005	:	-	
Selenium	mg/L	D	-		<0.008	:	-		<0.008	:	-		<0.005	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<36.6	:	-		<36.6	:	-		15.9	:	-	
Sodium	mg/L	D	-		<36.6	:	-		<191.	:	-		16.3	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		<0.001	J	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.001	J
Zinc	mg/L	T	2.15	:	-		3.17	J	-		2.89	:	-	
Zinc	mg/L	D	-		2.03	:	-		3.04	:	-		2.99	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
2-Butanone	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
2-Hexanone	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-47A 2/6/2003 MMW-47A-T01N-GR W GW5		MMW-47A 2/6/2003 MMW-47A-D01N-GR W GW5		MMW-47A 3/3/2003 MMW-47A-T01N-GR W GW5		MMW-47A 3/3/2003 MMW-47A-D01N-GR W GW5		MMW-47A 4/7/2003 MMW-47A-T01N-GR W GW5		MMW-47A 4/7/2003 MMW-47A-D01N-GR W GW5	
Acetone	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4,5-Trichlorophenol	mg/L	T	<0.025	:	-		<0.028	:	-		<0.026	:	-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	J	-	
2,4-Dinitrophenol	mg/L	T	<0.025	J	-		<0.028	:	-		<0.026	J	-	
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-47A 2/6/2003 MMW-47A-T01N-GRW GW5		MMW-47A 2/6/2003 MMW-47A-D01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-T01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-D01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-T01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-D01N-GRW GW5	
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2-Chlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2-Methylnaphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2-Methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2-Nitroaniline	mg/L	T	<0.025	:	-		<0.028	:	-		<0.026	:	-	
2-Nitrophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
3,3-Dichlorobenzidine	mg/L	T	<0.01	J	-		<0.011	:	-		<0.011	J	-	
3-Nitroaniline	mg/L	T	<0.025	:	-		<0.028	:	-		<0.026	J	-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.025	J	-		<0.028	:	-		<0.026	J	-	
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
4-Chloroaniline	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
4-Methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
4-Nitroaniline	mg/L	T	<0.025	:	-		<0.028	:	-		<0.026	:	-	
4-Nitrophenol	mg/L	T	<0.025	:	-		<0.028	:	-		<0.026	J	-	
Acenaphthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Acenaphthylene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Benzaldehyde	mg/L	T	<0.01	J	-		<0.011	:	-		<0.011	:	-	
Benzo(a)anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Benzo(a)pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Bis(2-ethylhexyl)phthalate	mg/L	T	0.007	J	-		0.003	J	-		<0.011	:	-	
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Carbazole	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Chrysene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	J	-	
Dibenzofuran	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 2/6/2003 MMW-47A-T01N-GRW GW5		MMW-47A 2/6/2003 MMW-47A-D01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-T01N-GRW GW5		MMW-47A 3/3/2003 MMW-47A-D01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-T01N-GRW GW5		MMW-47A 4/7/2003 MMW-47A-D01N-GRW GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.01	J	-		<0.011	:	-		<0.011	:	-	
Diethylphthalate	mg/L	T	0.0005	J	-		<0.011	:	-		<0.011	:	-	
Dimethylphthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Di-n-Octyl phthalate	mg/L	T	0.002	J	-		<0.011	J	-		<0.011	J	-	
Fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Fluorene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Hexachlorobenzene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Hexachlorobutadiene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Hexachlorocyclopentadiene	mg/L	T	<0.01	J	-		<0.011	J	-		<0.011	:	-	
Hexachloroethane	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Isophorone	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Naphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Nitrobenzene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Pentachlorophenol	mg/L	T	<0.025	J	-		<0.028	:	-		<0.026	:	-	
Phenanthrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Phenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	-		-		<0.00025	J	-		<0.00025	:	-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-47A	5/5/2003	MMW-47A-T01N-GRWRE GW5		MMW-47A	5/5/2003	MMW-47A-T01N-GRW GW5		MMW-47A	5/5/2003	MMW-47A-D01N-GRW GW5		MMW-47A	6/2/2003	MMW-47A-T01N-GRW GW5		MMW-47A	6/2/2003	MMW-47A-D01N-GRW GW5		MMW-47A	7/20/2003	MMW-47A-T01N-GRW GW5	
Field Measurements																										
DO	mg/L	T	-				4.47	:			-				3.84	:			-				3.7	:		
Eh	millivolts	T	-				402.	:			-				398.9	:			-				544.6	:		
pH	SU	T	-				4.5	J			-				5.2	J			-				4.	J		
Specific Conductance	uS/cm	T	-				1327.	:			-				1190.	:			-				1116.	:		
Temperature	Celsius	T	-				7.06	:			-				9.98	:			-				9.23	:		
Turbidity	NTU	T	-				0.	:			-				0.	:			-				14.7	:		
General Chemistry																										
Ammonia	mg/L	T	-				<0.1	:			-				<0.056	J			-				<0.069	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<4.7	:			-				<4.9	:			-				<5.6	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				<11.8	:			-				<23.2	:			-				10.8	:		
Fluoride	mg/L	T	-				8.6	:			-				3.	:			-				14.8	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				2.1	J			-				1.7	:			-				1.6	J		
Nitrite	mg/L	T	-				<0.005	:			-				<0.005	:			-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				<0.01	:			-				0.045	J			-				<0.01	J		
Phosphorus	mg/L	T	-				<0.014	:			-				0.012	J			-				0.013	:		
Sulfate	mg/L	T	-				795.	:			-				714.	J			-				505.	J		
Total Alkalinity	mg/L	T	-				<4.7	:			-				<4.9	:			-				<5.6	:		
Total Dissolved Solids	mg/L	T	-				1150.	:			-				1100.	:			-				1780.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				1.	J			-				<1.	J		
Total Suspended Solids	mg/L	T	-				<0.6	:			-				<0.5	:			-				<1.9	:		
Laboratory Parameters																										
pH	SU	T	-				4.5	J			-				5.2	J			-				4.	J		
Specific Conductance	umhos/cm	T	-				1260.	J			-				1160.	J			-				1030.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	:			-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	-				720.	:			-				615.	:			-				560.	:		
Hardness	mg/L	D	-				-				711.	:			-				585.	:			-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 5/5/2003 MMW-47A-T01N-GRWRE GW5		MMW-47A 5/5/2003 MMW-47A-T01N-GRW GW5		MMW-47A 5/5/2003 MMW-47A-D01N-GRW GW5		MMW-47A 6/2/2003 MMW-47A-T01N-GRW GW5		MMW-47A 6/2/2003 MMW-47A-D01N-GRW GW5		MMW-47A 7/20/2003 MMW-47A-T01N-GRW GW5	
Aluminum	mg/L	T	-		15.9	:	-		14.1	:	-		2.64	J
Aluminum	mg/L	D	-		-		15.9	:	-		12.9	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.072	:	-		<0.038	:
Antimony	mg/L	D	-		-		<0.072	:	-		<0.072	:	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.04	:	-		<0.024	:
Arsenic	mg/L	D	-		-		<0.04	:	-		<0.04	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.123	:	-		<0.073	:
Barium	mg/L	D	-		-		<0.123	:	-		<0.123	:	-	
Beryllium	mg/L	T	-		<0.0123	:	-		<0.0078	:	-		0.0039	:
Beryllium	mg/L	D	-		-		<0.0132	:	-		<0.0106	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.084	:	-		<0.046	:
Boron	mg/L	D	-		-		<0.084	:	-		<0.084	:	-	
Cadmium	mg/L	T	-		0.0249	:	-		<0.07	:	-		<0.03	:
Cadmium	mg/L	D	-		-		0.0255	:	-		<0.07	:	-	
Calcium	mg/L	T	-		163.	:	-		140.	:	-		130.	:
Calcium	mg/L	D	-		-		161.	:	-		134.	:	-	
Chromium	mg/L	T	-		<0.01	:	-		<0.19	:	-		<0.06	J
Chromium	mg/L	D	-		-		<0.01	:	-		<0.19	:	-	
Cobalt	mg/L	T	-		<0.038	:	-		<0.36	:	-		<0.18	:
Cobalt	mg/L	D	-		-		<0.038	:	-		<0.36	:	-	
Copper	mg/L	T	-		0.204	:	-		0.227	:	-		<0.271	:
Copper	mg/L	D	-		-		0.189	:	-		<0.2	:	-	
Iron	mg/L	T	-		<0.311	:	-		<4.22	:	-		<1.68	:
Iron	mg/L	D	-		-		<0.311	:	-		<4.22	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.001	J	-		<0.001	:
Lead	mg/L	D	-		-		<0.001	:	-		<0.001	J	-	
Magnesium	mg/L	T	-		75.9	:	-		64.2	:	-		57.5	:
Magnesium	mg/L	D	-		-		75.	:	-		60.6	:	-	
Manganese	mg/L	T	-		9.14	:	-		6.81	:	-		6.15	:
Manganese	mg/L	D	-		-		8.97	:	-		6.44	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.023	:	-		<0.016	:
Molybdenum	mg/L	D	-		-		<0.023	:	-		<0.023	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 5/5/2003 MMW-47A-T01N-GRWRE GW5		MMW-47A 5/5/2003 MMW-47A-T01N-GRW GW5		MMW-47A 5/5/2003 MMW-47A-D01N-GRW GW5		MMW-47A 6/2/2003 MMW-47A-T01N-GRW GW5		MMW-47A 6/2/2003 MMW-47A-D01N-GRW GW5		MMW-47A 7/20/2003 MMW-47A-T01N-GRW GW5	
Nickel	mg/L	T	-		0.397	:	-		<0.73	:	-		0.32	J
Nickel	mg/L	D	-		-		0.383	:	-		<0.73	:	-	
Potassium	mg/L	T	-		<40.5	:	-		<40.5	:	-		<25.	:
Potassium	mg/L	D	-		-		<40.5	:	-		<40.5	:	-	
Selenium	mg/L	T	-		0.0053	:	-		<0.008	:	-		<0.008	:
Selenium	mg/L	D	-		-		<0.005	:	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0012	J
Silver	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<91.6	:	-		<91.6	:	-		<22.4	:
Sodium	mg/L	D	-		-		<91.6	:	-		<91.6	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	-		-		<0.001	:	-		<0.002	:	-	
Zinc	mg/L	T	-		3.32	:	-		2.76	:	-		<1.	:
Zinc	mg/L	D	-		-		3.28	:	-		2.62	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Butanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Hexanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 5/5/2003 MMW-47A-T01N-GR WRE GW5	MMW-47A 5/5/2003 MMW-47A-T01N-GR W GW5	MMW-47A 5/5/2003 MMW-47A-D01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-T01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-D01N-GR W GW5	MMW-47A 7/20/2003 MMW-47A-T01N-GR W GW5
Acetone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
2,4,6-Trichlorophenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
2,4-Dinitrotoluene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-47A 5/5/2003 MMW-47A-T01N-GR WRE GW5	MMW-47A 5/5/2003 MMW-47A-T01N-GR W GW5	MMW-47A 5/5/2003 MMW-47A-D01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-T01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-D01N-GR W GW5	MMW-47A 7/20/2003 MMW-47A-T01N-GR W GW5
2,6-Dinitrotoluene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2-Chloronaphthalene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2-Methylphenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
2-Nitrophenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
3-Nitroaniline	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
4-Bromophenyl phenyl ether	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
4-Methylphenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
4-Nitrophenol	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
Acenaphthene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Acenaphthylene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Anthracene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Benzaldehyde	mg/L	T	<0.011 J	-	-	<0.01 J	-	-
Benzo(a)anthracene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Carbazole	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Chrysene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Dibenzofuran	mg/L	T	<0.011 J	-	-	<0.01 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-47A 5/5/2003 MMW-47A-T01N-GR WRE GW5	MMW-47A 5/5/2003 MMW-47A-T01N-GR W GW5	MMW-47A 5/5/2003 MMW-47A-D01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-T01N-GR W GW5	MMW-47A 6/2/2003 MMW-47A-D01N-GR W GW5	MMW-47A 7/20/2003 MMW-47A-T01N-GR W GW5
Dichlorodiisopropyl ether	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Di-n-Butyl phthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Di-n-Octyl phthalate	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Fluoranthene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Fluorene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Isophorone	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Naphthalene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	<0.028 J	-	-	<0.026 :	-	-
Phenanthrene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Phenol	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Pyrene	mg/L	T	<0.011 J	-	-	<0.01 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	<0.001 J	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.001 J	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction		Site ID	Sample Date	Sample ID	Exposure Area Fraction	
			MMW-47A	7/20/2003	MMW-47A-D01N-GRW	GW5		MMW-47A	8/12/2003	MMW-47A-T01N-GRW	GW5		MMW-47A	8/12/2003	MMW-47A-D01N-GRW	GW5		MMW-47A	9/10/2003	MMW-47A-T01N-GRW	GW5		MMW-47A	9/10/2003	MMW-47A-D01N-GRW	GW5	
Field Measurements																										
DO	mg/L	T	-					3.63	:				-					3.62	:				-					3.38	:
Eh	millivolts	T	-					284.1	:				-					375.2	:				-					506.2	:
pH	SU	T	-					5.	J				-					5.6	J				-					5.2	J
Specific Conductance	uS/cm	T	-					1072.	:				-					801.	:				-					1068.	:
Temperature	Celsius	T	-					8.72	:				-					9.45	:				-					9.87	:
Turbidity	NTU	T	-					27.5	:				-					12.6	:				-					2.3	:
General Chemistry																										
Ammonia	mg/L	T	-					0.076	:				-					<0.059	:				-					<0.11	J
Bicarbonate (as CaCO3)	mg/L	T	-					<5.7	:				-					<7.8	:				-					<5.2	:
Carbonate (as CaCO3)	mg/L	T	-					<1.	:				-					<1.	:				-					<1.	:
Chloride	mg/L	T	-					11.3	:				-					7.9	:				-					10.4	:
Fluoride	mg/L	T	-					13.6	:				-					9.2	:				-					12.5	:
Hydroxide (as CaCO3)	mg/L	T	-					<1.	:				-					<1.	:				-					<1.	:
Nitrate	mg/L	T	-					1.4	J				-					1.	J				-					1.4	:
Nitrite	mg/L	T	-					<0.005	J				-					<0.005	J				-					<0.005	:
Phosphate, Ortho As P	mg/L	T	-					<0.01	J				-					<0.01	J				-					<0.01	:
Phosphorus	mg/L	T	-					0.011	:				-					<0.01	:				-					0.013	:
Sulfate	mg/L	T	-					488.	J				-					390.	J				-					702.	J
Total Alkalinity	mg/L	T	-					<5.7	:				-					<7.8	:				-					<5.2	:
Total Dissolved Solids	mg/L	T	-					1100.	:				-					646.	:				-					926.	:
Total Kjeldahl Nitrogen	mg/L	T	-					<0.24	:				-					<0.24	:				-					<0.24	:
Total Organic Carbon	mg/L	T	-					<1.1	J				-					<1.	:				-					<1.	J
Total Suspended Solids	mg/L	T	-					<0.8	:				-					<0.5	:				-					<0.8	:
Laboratory Parameters																										
pH	SU	T	-					5.	J				-					5.6	J				-					5.2	J
Specific Conductance	umhos/cm	T	-					945.	J				-					770.	J				-					941.	J
Inorganics																										
Cyanide	mg/L	T	-					<0.01	:				-					<0.01	:				-					<0.01	J
Physical Properties																										
Hardness	mg/L	T	-					540.	:				-					390.	:				-					585.	:
Hardness	mg/L	D	561.	:				-					521.	:				-					397.	:				-	
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction						
		Site ID	MMW-47A	MMW-47A	MMW-47A	MMW-47A	MMW-47A	MMW-47A
		Sample Date	7/20/2003	8/12/2003	8/12/2003	9/10/2003	9/10/2003	10/16/2003
		Sample ID	MMW-47A-D01N-GRW	MMW-47A-T01N-GRW	MMW-47A-D01N-GRW	MMW-47A-T01N-GRW	MMW-47A-D01N-GRW	MMW-47A-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T	-	<13.2 :	-	7.4 :	-	9.83 :
Aluminum	mg/L	D	<1.83 J	-	<13.6 :	-	7.68 :	-
Antimony	mg/L	T	-	<0.038 :	-	<0.082 :	-	<0.082 :
Antimony	mg/L	D	<0.038 :	-	<0.038 :	-	<0.082 :	-
Arsenic	mg/L	T	-	<0.0254 :	-	<0.035 :	-	<0.035 :
Arsenic	mg/L	D	<0.024 :	-	<0.0387 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.073 :	-	<0.117 :	-	<0.117 :
Barium	mg/L	D	<0.073 :	-	<0.073 :	-	<0.117 :	-
Beryllium	mg/L	T	-	0.0058 :	-	<0.007 :	-	<0.003 J
Beryllium	mg/L	D	0.004 :	-	0.0048 :	-	<0.0051 :	-
Boron	mg/L	T	-	<0.046 :	-	<0.064 :	-	<0.064 :
Boron	mg/L	D	<0.046 :	-	<0.046 :	-	<0.064 :	-
Cadmium	mg/L	T	-	<0.06 :	-	<0.13 :	-	<0.07 :
Cadmium	mg/L	D	<0.03 :	-	<0.06 :	-	<0.13 :	-
Calcium	mg/L	T	-	127. :	-	89.1 :	-	136. :
Calcium	mg/L	D	130. :	-	122. :	-	90.8 :	-
Chromium	mg/L	T	-	<0.14 :	-	<0.23 :	-	<0.13 J
Chromium	mg/L	D	<0.06 J	-	<0.14 :	-	<0.23 :	-
Cobalt	mg/L	T	-	<0.2 :	-	<0.32 :	-	<0.31 :
Cobalt	mg/L	D	<0.18 :	-	<0.2 :	-	<0.32 :	-
Copper	mg/L	T	-	<0.24 :	-	<0.23 :	-	<0.2 :
Copper	mg/L	D	<0.239 :	-	<0.24 :	-	<0.23 :	-
Iron	mg/L	T	-	<3.33 :	-	<4.55 :	-	<4.55 :
Iron	mg/L	D	<1.68 :	-	<3.33 :	-	<4.55 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D	<0.001 :	-	<0.002 :	-	<0.002 :	-
Magnesium	mg/L	T	-	54.2 :	-	40.8 :	-	59.8 :
Magnesium	mg/L	D	57.4 :	-	52.8 :	-	41.4 :	-
Manganese	mg/L	T	-	6.17 :	-	2.43 :	-	6.47 :
Manganese	mg/L	D	6.09 :	-	5.93 :	-	2.52 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.016 :	-	<0.0152 :	-	<0.012 J
Molybdenum	mg/L	D	<0.016 :	-	<0.016 :	-	<0.0173 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 7/20/2003 MMW-47A-D01N-GRW GW5		MMW-47A 8/12/2003 MMW-47A-T01N-GRW GW5		MMW-47A 8/12/2003 MMW-47A-D01N-GRW GW5		MMW-47A 9/10/2003 MMW-47A-T01N-GRW GW5		MMW-47A 9/10/2003 MMW-47A-D01N-GRW GW5		MMW-47A 10/16/2003 MMW-47A-T01N-GRW GW5	
Nickel	mg/L	T	-		0.318	:	-		<0.45	:	-		0.413	:
Nickel	mg/L	D	0.23	J	-		0.408	:	-		<0.45	:	-	
Potassium	mg/L	T	-		<39.3	:	-		<63.8	:	-		<52.2	:
Potassium	mg/L	D	<25.	:	-		<39.3	:	-		<63.8	:	-	
Selenium	mg/L	T	-		<0.003	:	-		<0.003	:	-		<0.0039	:
Selenium	mg/L	D	<0.008	J	-		<0.003	:	-		<0.003	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.0016	J	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<47.3	:	-		<99.1	:	-		<50.2	:
Sodium	mg/L	D	<33.4	:	-		<47.3	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		<0.001	:	-		<0.001	:	-	
Zinc	mg/L	T	-		2.5	:	-		<1.46	:	-		2.32	:
Zinc	mg/L	D	0.958	J	-		2.48	:	-		<1.52	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.002	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-47A	10/16/2003	MMW-47A-D01N-GRW GW5		MMW-47A	11/2/2003	MMW-47A-T01N-GRW GW5		MMW-47A	11/2/2003	MMW-47A-D01N-GRW GW5		MMW-47A	12/8/2003	MMW-47A-T01N-GRW GW5		MMW-47A	12/8/2003	MMW-47A-D01N-GRW GW5		MMW-47A	1/8/2004	MMW-47A-T01N-GRW GW5	
Field Measurements																										
DO	mg/L	T	-				3.13	:			-				-				9.25	:		
Eh	millivolts	T	-				384.6	:			-				-				300.5	:		
pH	SU	T	-				4.9	J			-				4.6	J			5.1	J		
Specific Conductance	uS/cm	T	-				1095.	:			-				-				538.	:		
Temperature	Celsius	T	-				9.12	:			-				-				6.38	:		
Turbidity	NTU	T	-				17.4	:			-				-				3.1	:		
General Chemistry																						
Ammonia	mg/L	T	-				<0.1	:			-				0.071	:			<0.051	J		
Bicarbonate (as CaCO3)	mg/L	T	-				<4.7	:			-				4.8	:			<4.5	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			<1.	:		
Chloride	mg/L	T	-				12.7	:			-				8.8	:			4.4	:		
Fluoride	mg/L	T	-				11.2	:			-				12.3	:			6.9	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			<1.	:		
Nitrate	mg/L	T	-				1.5	J			-				1.2	:			<0.58	:		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	:			<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				<0.01	J			-				<0.01	:			<0.01	:		
Phosphorus	mg/L	T	-				0.017	:			-				0.014	:			<0.015	:		
Sulfate	mg/L	T	-				647.	:			-				520.	:			261.	:		
Total Alkalinity	mg/L	T	-				<4.7	:			-				4.8	:			<4.5	:		
Total Dissolved Solids	mg/L	T	-				950.	:			-				744.	:			426.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				<1.	:			<1.	:		
Total Suspended Solids	mg/L	T	-				<0.6	:			-				1.3	:			<0.5	:		
Laboratory Parameters																						
pH	SU	T	-				4.9	J			-				4.6	J			5.1	J		
Specific Conductance	umhos/cm	T	-				1120.	J			-				793.	J			518.	J		
Inorganics																						
Cyanide	mg/L	T	-				<0.01	:			-				<0.01	:			<0.01	J		
Physical Properties																						
Hardness	mg/L	T	-				477.	:			-				449.	:			229.	:		
Hardness	mg/L	D	551.	:			-				487.	:			-				454.	:		
Metals																						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 10/16/2003 MMW-47A-D01N-GRW GW5		MMW-47A 11/2/2003 MMW-47A-T01N-GRW GW5		MMW-47A 11/2/2003 MMW-47A-D01N-GRW GW5		MMW-47A 12/8/2003 MMW-47A-T01N-GRW GW5		MMW-47A 12/8/2003 MMW-47A-D01N-GRW GW5		MMW-47A 1/8/2004 MMW-47A-T01N-GRW GW5	
Aluminum	mg/L	T	-		10.	:	-		8.02	:	-		6.81	:
Aluminum	mg/L	D	7.51	:	-		9.65	:	-		9.96	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.052	:	-		<0.029	:
Antimony	mg/L	D	<0.082	:	-		<0.052	:	-		<0.052	:	-	
Arsenic	mg/L	T	-		<0.041	:	-		<0.041	:	-		<0.028	:
Arsenic	mg/L	D	<0.035	:	-		<0.041	:	-		<0.041	:	-	
Barium	mg/L	T	-		<0.115	:	-		<0.115	:	-		<0.053	:
Barium	mg/L	D	<0.117	:	-		<0.115	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		0.0054	:	-		0.008	:	-		0.0048	:
Beryllium	mg/L	D	<0.003	J	-		0.0051	:	-		0.0082	:	-	
Boron	mg/L	T	-		<0.063	:	-		<0.064	J	-		<0.117	:
Boron	mg/L	D	<0.064	:	-		<0.063	:	-		<0.064	J	-	
Cadmium	mg/L	T	-		<0.05	:	-		<0.05	:	-		<0.07	J
Cadmium	mg/L	D	<0.07	:	-		<0.05	:	-		<0.05	:	-	
Calcium	mg/L	T	-		100.	:	-		104.	:	-		50.9	:
Calcium	mg/L	D	128.	:	-		103.	:	-		104.	:	-	
Chromium	mg/L	T	-		<0.11	J	-		<0.11	:	-		<0.11	:
Chromium	mg/L	D	<0.13	J	-		<0.11	J	-		<0.11	:	-	
Cobalt	mg/L	T	-		<0.29	:	-		<0.29	:	-		<0.31	:
Cobalt	mg/L	D	<0.31	:	-		<0.29	:	-		<0.29	:	-	
Copper	mg/L	T	-		<0.22	:	-		<0.22	:	-		<0.24	:
Copper	mg/L	D	<0.2	:	-		<0.22	:	-		<0.22	:	-	
Iron	mg/L	T	-		<2.78	:	-		<2.78	:	-		<3.73	:
Iron	mg/L	D	<4.55	:	-		<2.78	:	-		<2.78	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.001	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		54.9	:	-		46.	:	-		<24.9	:
Magnesium	mg/L	D	56.	:	-		55.8	:	-		47.1	:	-	
Manganese	mg/L	T	-		6.34	J	-		5.54	:	-		2.59	:
Manganese	mg/L	D	5.91	:	-		6.27	:	-		5.58	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.011	J	-		<0.024	:
Molybdenum	mg/L	D	<0.012	J	-		<0.011	:	-		<0.011	J	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 10/16/2003 MMW-47A-D01N-GRW GW5	MMW-47A 11/2/2003 MMW-47A-T01N-GRW GW5	MMW-47A 11/2/2003 MMW-47A-D01N-GRW GW5	MMW-47A 12/8/2003 MMW-47A-T01N-GRW GW5	MMW-47A 12/8/2003 MMW-47A-D01N-GRW GW5	MMW-47A 1/8/2004 MMW-47A-T01N-GRW GW5
Nickel	mg/L	T	-	<0.24 J	-	0.307 J	-	0.292 :
Nickel	mg/L	D	0.381 :	-	0.271 J	-	0.376 J	-
Potassium	mg/L	T	-	<31.8 :	-	<31.8 :	-	<24.3 :
Potassium	mg/L	D	<52.2 :	-	<31.8 :	-	<31.8 :	-
Selenium	mg/L	T	-	0.0036 :	-	<0.003 :	-	<0.003 J
Selenium	mg/L	D	<0.0045 :	-	0.0034 :	-	<0.003 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<45.4 :	-	<45.4 :	-	<92. :
Sodium	mg/L	D	<50.2 :	-	<45.4 :	-	<52.4 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.002 :
Vanadium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T	-	3.68 :	-	2.09 :	-	1.18 :
Zinc	mg/L	D	2.22 :	-	3.63 :	-	2.13 :	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.001 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	<0.002 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	MMW-47A	MMW-47A	MMW-47A	MMW-49A	MMW-49A	MMW-49A
Sample Date			1/8/2004	4/18/2004	4/18/2004	2/2/2003	2/2/2003	2/2/2003
Sample ID			MMW-47A-D01N-GR W	MMW-47A-T01N-GR W	MMW-47A-D01N-GR W	MMW-49A-T01N-GR WRE	MMW-49A-T01N-GR W	MMW-49A-D01N-GR W
Exposure Area			GW5	GW5	GW5	GW4	GW4	GW4
Field Measurements								
DO	mg/L	T	-	7.71 :	-	-	2.19 :	-
Eh	millivolts	T	-	305.1 :	-	-	393. :	-
pH	SU	T	-	5.1 J	-	-	4.11 :	-
Specific Conductance	uS/cm	T	-	772. :	-	-	2019. :	-
Temperature	Celsius	T	-	6.41 :	-	-	8.67 :	-
Turbidity	NTU	T	-	14.6 :	-	-	2.1 :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.047 :	-	-	<0.078 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	<5.3 :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	8.2 J	-	-	26.3 :	-
Fluoride	mg/L	T	-	8.9 :	-	25.7 J	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	1. J	-	-	3.4 :	-
Nitrite	mg/L	T	-	<0.005 J	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	-	0.041 :	-
Phosphorus	mg/L	T	-	0.017 :	-	-	<0.04 :	-
Sulfate	mg/L	T	-	382. :	-	-	1190. J	-
Total Alkalinity	mg/L	T	-	<5.3 :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	664. :	-	-	1880. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	1.5 J	-	-	<1. :	-
Total Suspended Solids	mg/L	T	-	<0.8 J	-	-	0.6 :	-
Laboratory Parameters								
pH	SU	T	-	5.1 J	-	-	4.11 :	-
Specific Conductance	umhos/cm	T	-	665. J	-	-	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	406. :	-	-	973. :	-
Hardness	mg/L	D	231. :	-	396. :	-	-	971. :
Metals								

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 1/8/2004 MMW-47A-D01N-GRW GW5		MMW-47A 4/18/2004 MMW-47A-T01N-GRW GW5		MMW-47A 4/18/2004 MMW-47A-D01N-GRW GW5		MMW-49A 2/2/2003 MMW-49A-T01N-GRWRE GW4		MMW-49A 2/2/2003 MMW-49A-T01N-GRW GW4		MMW-49A 2/2/2003 MMW-49A-D01N-GRW GW4	
Aluminum	mg/L	T	-		<9.93	:	-		-		52.6	:	-	
Aluminum	mg/L	D	6.19	:	-		<9.36	:	-		-		52.2	:
Antimony	mg/L	T	-		<0.027	:	-		-		<0.0006	:	-	
Antimony	mg/L	D	<0.029	:	-		<0.027	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		<0.026	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.028	:	-		<0.026	:	-		-		<0.0004	:
Barium	mg/L	T	-		<0.012	:	-		-		0.0078	:	-	
Barium	mg/L	D	<0.053	:	-		<0.012	:	-		-		0.0077	:
Beryllium	mg/L	T	-		0.0043	:	-		-		0.0103	:	-	
Beryllium	mg/L	D	0.0046	:	-		0.0042	:	-		-		0.0103	:
Boron	mg/L	T	-		<0.018	:	-		-		<0.0065	:	-	
Boron	mg/L	D	<0.117	:	-		<0.018	:	-		-		<0.0059	:
Cadmium	mg/L	T	-		<0.03	:	-		-		0.0325	:	-	
Cadmium	mg/L	D	<0.07	:	-		<0.03	:	-		-		0.0325	:
Calcium	mg/L	T	-		92.2	:	-		-		183.	:	-	
Calcium	mg/L	D	53.5	:	-		90.5	:	-		-		182.	:
Chromium	mg/L	T	-		<0.08	:	-		-		0.0039	:	-	
Chromium	mg/L	D	<0.11	:	-		<0.08	:	-		-		<0.0037	:
Cobalt	mg/L	T	-		0.113	:	-		-		0.185	:	-	
Cobalt	mg/L	D	<0.31	:	-		<0.11	:	-		-		0.185	:
Copper	mg/L	T	-		<0.198	:	-		-		0.675	:	-	
Copper	mg/L	D	<0.24	:	-		<0.136	:	-		-		0.673	:
Iron	mg/L	T	-		<1.92	J	-		-		<0.266	:	-	
Iron	mg/L	D	<3.73	:	-		<1.92	:	-		-		<0.266	:
Lead	mg/L	T	-		<0.004	:	-		-		0.0003	:	-	
Lead	mg/L	D	<0.001	:	-		<0.004	:	-		-		0.0003	:
Magnesium	mg/L	T	-		42.6	:	-		-		125.	:	-	
Magnesium	mg/L	D	<24.9	:	-		41.4	:	-		-		125.	:
Manganese	mg/L	T	-		3.65	:	-		-		27.8	J	-	
Manganese	mg/L	D	2.7	:	-		3.64	:	-		-		27.7	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.0124	:	-		-		<0.0011	:	-	
Molybdenum	mg/L	D	<0.024	:	-		<0.01	:	-		-		<0.0011	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-47A 1/8/2004 MMW-47A-D01N-GRW GW5		MMW-47A 4/18/2004 MMW-47A-T01N-GRW GW5		MMW-47A 4/18/2004 MMW-47A-D01N-GRW GW5		MMW-49A 2/2/2003 MMW-49A-T01N-GRWRE GW4		MMW-49A 2/2/2003 MMW-49A-T01N-GRW GW4		MMW-49A 2/2/2003 MMW-49A-D01N-GRW GW4	
Nickel	mg/L	T	-		0.194	:	-		-		0.455	:	-	
Nickel	mg/L	D	<0.27	:	-		0.17	:	-		-		0.454	:
Potassium	mg/L	T	-		<10.9	J	-		-		2.83	:	-	
Potassium	mg/L	D	<24.3	:	-		<10.9	J	-		-		2.81	:
Selenium	mg/L	T	-		<0.007	:	-		-		0.0038	:	-	
Selenium	mg/L	D	0.0032	:	-		<0.007	:	-		-		0.0049	:
Silver	mg/L	T	-		<0.001	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		-		<0.0002	:
Sodium	mg/L	T	-		<44.5	:	-		-		25.1	:	-	
Sodium	mg/L	D	<92.	:	-		<28.	:	-		-		24.9	:
Thallium	mg/L	T	-		<0.001	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		<0.002	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		-		<0.0004	:
Zinc	mg/L	T	-		1.73	:	-		-		5.26	:	-	
Zinc	mg/L	D	1.12	:	-		1.72	:	-		-		5.24	:
Isotopes														
Delta D	per mil	T	-		-96.9	:	-		-		-		-	
Delta O-18	per mil	T	-		-13.4	:	-		-		-		-	
Lead	mg/L	T	-		<0.004	:	-		-		0.0003	:	-	
Lead	mg/L	D	<0.001	:	-		<0.004	:	-		-		0.0003	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-49A 2/8/2003 MMW-49A-T01N-GR WRE GW4	MMW-49A 2/8/2003 MMW-49A-T01N-GR W GW4	MMW-49A 2/8/2003 MMW-49A-D01N-GR W GW4	MMW-49A 3/5/2003 MMW-49A-T01N-GR WRE GW4	MMW-49A 3/5/2003 MMW-49A-T01N-GR W GW4	MMW-49A 3/5/2003 MMW-49A-D01N-GR W GW4
Field Measurements								
DO	mg/L	T	-	4.97 :	-	-	5.28 :	-
Eh	millivolts	T	-	336.3 :	-	-	450. :	-
pH	SU	T	-	4.1 :	-	-	4.16 :	-
Specific Conductance	uS/cm	T	-	1863. :	-	-	2084. :	-
Temperature	Celsius	T	-	8.04 :	-	-	7.9 :	-
Turbidity	NTU	T	-	0. :	-	-	0. :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.074 :	-	-	<0.11 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	22.6 :	-	-	11.5 :	-
Fluoride	mg/L	T	27.2 J	-	-	27.7 J	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	3.9 J	-	-	3.7 :	-
Nitrite	mg/L	T	-	<0.005 J	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	0.029 J	-	-	0.04 :	-
Phosphorus	mg/L	T	-	0.046 :	-	-	<0.044 J	-
Sulfate	mg/L	T	-	1130. J	-	-	1340. :	-
Total Alkalinity	mg/L	T	-	<1. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	1840. :	-	-	1960. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. :	-	-	<1.7 J	-
Total Suspended Solids	mg/L	T	-	1.2 :	-	-	1.2 J	-
Laboratory Parameters								
pH	SU	T	-	4.1 :	-	-	4.16 :	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	1080. :	-	-	1080. :	-
Hardness	mg/L	D	-	-	1040. :	-	-	1060. :
Metals								
Aluminum	mg/L	T	-	63.2 :	-	-	57.3 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 2/8/2003 MMW-49A-T01N-GR WRE GW4	MMW-49A 2/8/2003 MMW-49A-T01N-GR W GW4	MMW-49A 2/8/2003 MMW-49A-D01N-GR W GW4	MMW-49A 3/5/2003 MMW-49A-T01N-GR WRE GW4	MMW-49A 3/5/2003 MMW-49A-T01N-GR W GW4	MMW-49A 3/5/2003 MMW-49A-D01N-GR W GW4
Aluminum	mg/L	D	-	-	60.6 :	-	-	56.3 :
Antimony	mg/L	T	-	<0.028 :	-	-	<0.028 :	-
Antimony	mg/L	D	-	-	<0.028 :	-	-	<0.028 :
Arsenic	mg/L	T	-	<0.023 :	-	-	<0.023 :	-
Arsenic	mg/L	D	-	-	<0.023 :	-	-	<0.023 :
Barium	mg/L	T	-	<0.048 :	-	-	<0.048 :	-
Barium	mg/L	D	-	-	<0.048 :	-	-	<0.048 :
Beryllium	mg/L	T	-	0.0126 :	-	-	0.0117 :	-
Beryllium	mg/L	D	-	-	0.0126 :	-	-	0.0114 :
Boron	mg/L	T	-	<0.027 :	-	-	<0.027 :	-
Boron	mg/L	D	-	-	<0.027 :	-	-	<0.027 :
Cadmium	mg/L	T	-	<0.08 :	-	-	0.055 :	-
Cadmium	mg/L	D	-	-	<0.08 :	-	-	0.0433 :
Calcium	mg/L	T	-	205. :	-	-	202. J	-
Calcium	mg/L	D	-	-	196. :	-	-	197. J
Chromium	mg/L	T	-	<0.16 :	-	-	<0.37 :	-
Chromium	mg/L	D	-	-	<0.16 :	-	-	<0.37 :
Cobalt	mg/L	T	-	0.299 :	-	-	0.241 :	-
Cobalt	mg/L	D	-	-	0.238 :	-	-	0.26 :
Copper	mg/L	T	-	0.78 :	-	-	0.752 :	-
Copper	mg/L	D	-	-	0.625 :	-	-	0.661 :
Iron	mg/L	T	-	<2.66 J	-	-	<4.89 :	-
Iron	mg/L	D	-	-	<2.66 J	-	-	<4.89 J
Lead	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Lead	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Magnesium	mg/L	T	-	139. :	-	-	140. :	-
Magnesium	mg/L	D	-	-	134. :	-	-	138. :
Manganese	mg/L	T	-	30. J	-	-	30.5 :	-
Manganese	mg/L	D	-	-	29. :	-	-	29.9 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	-	<0.011 J	-	-	<0.011 :	-
Molybdenum	mg/L	D	-	-	<0.011 J	-	-	<0.011 :
Nickel	mg/L	T	-	0.781 :	-	-	0.59 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 2/8/2003 MMW-49A-T01N-GRWRE GW4		MMW-49A 2/8/2003 MMW-49A-T01N-GRW GW4		MMW-49A 2/8/2003 MMW-49A-D01N-GRW GW4		MMW-49A 3/5/2003 MMW-49A-T01N-GRWRE GW4		MMW-49A 3/5/2003 MMW-49A-T01N-GRW GW4		MMW-49A 3/5/2003 MMW-49A-D01N-GRW GW4	
Nickel	mg/L	D	-		-		0.754	:	-		-		0.605	:
Potassium	mg/L	T	-		4.41	:	-		-		<20.2	:	-	
Potassium	mg/L	D	-		-		5.51	:	-		-		<20.2	:
Selenium	mg/L	T	-		<0.008	:	-		-		0.0088	J	-	
Selenium	mg/L	D	-		-		<0.008	:	-		-		0.0159	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.001	:	-	
Silver	mg/L	D	-		-		<0.001	:	-		-		<0.001	:
Sodium	mg/L	T	-		42.8	:	-		-		<32.7	:	-	
Sodium	mg/L	D	-		-		37.2	:	-		-		<46.1	:
Thallium	mg/L	T	-		<0.001	:	-		-		<0.001	:	-	
Thallium	mg/L	D	-		-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.002	:	-		-		0.0031	:	-	
Vanadium	mg/L	D	-		-		<0.002	:	-		-		0.0029	:
Zinc	mg/L	T	-		5.76	:	-		-		6.06	J	-	
Zinc	mg/L	D	-		-		5.5	:	-		-		5.95	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	J	-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	J	-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	J	-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	J	-		-		-		-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		-		<0.001	:	-	
Lead	mg/L	D	-		-		<0.001	:	-		-		<0.001	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-49A 4/1/2003 MMW-49A-T01N-GR WRE GW4		MMW-49A 4/1/2003 MMW-49A-T01N-GR W GW4		MMW-49A 4/1/2003 MMW-49A-D01N-GR W GW4		MMW-49A 5/5/2003 MMW-49A-T01N-GR W GW4		MMW-49A 5/5/2003 MMW-49A-D01N-GR W GW4		MMW-49A 6/3/2003 MMW-49A-T01N-GR W GW4	
Field Measurements														
DO	mg/L	T	-		5.67	:	-		7.51	:	-		7.63	:
Eh	millivolts	T	-		507.3	:	-		502.	:	-		561.4	:
pH	SU	T	-		4.5	J	-		4.4	J	-		4.5	J
Specific Conductance	uS/cm	T	-		2023.	:	-		1920.	:	-		1727.	:
Temperature	Celsius	T	-		8.72	:	-		8.84	:	-		10.61	:
Turbidity	NTU	T	-		3.6	:	-		12.	:	-		1.9	:
General Chemistry														
Ammonia	mg/L	T	-		<0.2	:	-		<0.072	:	-		<0.04	J
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		29.4	:	-		<15.4	:	-		<27.4	:
Fluoride	mg/L	T	27.7	J	-		-		25.5	J	-		22.8	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		3.8	J	-		3.4	J	-		3.2	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.032	J	-		0.029	J	-		0.13	J
Phosphorus	mg/L	T	-		0.03	:	-		0.042	:	-		0.037	J
Sulfate	mg/L	T	-		1260.	J	-		953.	:	-		1030.	J
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		2010.	:	-		1900.	:	-		1850.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<2.2	:	-		<1.3	:	-		<0.6	:
Laboratory Parameters														
pH	SU	T	-		4.5	J	-		4.4	J	-		4.5	J
Specific Conductance	umhos/cm	T	-		1760.	J	-		1760.	J	-		1690.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		1030.	:	-		941.	:	-		790.	:
Hardness	mg/L	D	-		-		1000.	:	-		924.	:	-	
Metals														

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 4/1/2003 MMW-49A-T01N-GRWRE GW4	MMW-49A 4/1/2003 MMW-49A-T01N-GRW GW4	MMW-49A 4/1/2003 MMW-49A-D01N-GRW GW4	MMW-49A 5/5/2003 MMW-49A-T01N-GRW GW4	MMW-49A 5/5/2003 MMW-49A-D01N-GRW GW4	MMW-49A 6/3/2003 MMW-49A-T01N-GRW GW4
Aluminum	mg/L	T	-	54.8 :	-	49.8 :	-	41.5 :
Aluminum	mg/L	D	-	-	52. :	-	48.9 :	-
Antimony	mg/L	T	-	<0.072 :	-	<0.048 J	-	<0.044 :
Antimony	mg/L	D	-	-	<0.072 :	-	<0.048 J	-
Arsenic	mg/L	T	-	<0.04 :	-	<0.047 :	-	<0.043 :
Arsenic	mg/L	D	-	-	<0.04 :	-	<0.047 :	-
Barium	mg/L	T	-	<0.123 :	-	<0.135 :	-	<0.125 :
Barium	mg/L	D	-	-	<0.123 :	-	<0.135 :	-
Beryllium	mg/L	T	-	<0.0307 :	-	0.0117 :	-	0.01 :
Beryllium	mg/L	D	-	-	<0.0259 :	-	0.0114 :	-
Boron	mg/L	T	-	<0.084 :	-	<0.075 :	-	<0.048 :
Boron	mg/L	D	-	-	<0.084 :	-	<0.075 :	-
Cadmium	mg/L	T	-	<0.0851 :	-	0.0375 :	-	0.031 :
Cadmium	mg/L	D	-	-	<0.103 :	-	0.0359 :	-
Calcium	mg/L	T	-	195. :	-	176. :	-	148. :
Calcium	mg/L	D	-	-	188. :	-	173. :	-
Chromium	mg/L	T	-	<0.19 :	-	<0.009 :	-	<0.019 :
Chromium	mg/L	D	-	-	<0.19 :	-	<0.009 :	-
Cobalt	mg/L	T	-	<0.36 :	-	0.21 :	-	0.188 :
Cobalt	mg/L	D	-	-	<0.36 :	-	0.21 :	-
Copper	mg/L	T	-	0.752 :	-	0.712 :	-	0.625 :
Copper	mg/L	D	-	-	0.704 :	-	0.704 :	-
Iron	mg/L	T	-	<4.22 :	-	<0.299 :	-	<0.422 :
Iron	mg/L	D	-	-	<4.22 :	-	<0.299 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Magnesium	mg/L	T	-	133. :	-	122. :	-	102. :
Magnesium	mg/L	D	-	-	129. :	-	120. :	-
Manganese	mg/L	T	-	29.9 :	-	26.1 :	-	21.6 :
Manganese	mg/L	D	-	-	29.1 :	-	25.6 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.023 :	-	<0.016 :	-	<0.022 :
Molybdenum	mg/L	D	-	-	<0.023 :	-	<0.016 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 4/1/2003 MMW-49A-T01N-GRWRE GW4		MMW-49A 4/1/2003 MMW-49A-T01N-GRW GW4		MMW-49A 4/1/2003 MMW-49A-D01N-GRW GW4		MMW-49A 5/5/2003 MMW-49A-T01N-GRW GW4		MMW-49A 5/5/2003 MMW-49A-D01N-GRW GW4		MMW-49A 6/3/2003 MMW-49A-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.73	:	-		0.536	:	-		0.455	:
Nickel	mg/L	D	-		-		<0.73	:	-		0.529	:	-	
Potassium	mg/L	T	-		<40.5	:	-		<3.27	:	-		<4.05	:
Potassium	mg/L	D	-		-		<40.5	:	-		<3.27	:	-	
Selenium	mg/L	T	-		0.0097	:	-		<0.008	:	-		<0.008	:
Selenium	mg/L	D	-		-		<0.006	:	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<91.6	:	-		22.	:	-		24.	:
Sodium	mg/L	D	-		-		<91.6	:	-		23.2	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0037	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	-		-		0.0037	:	-		<0.002	:	-	
Zinc	mg/L	T	-		5.64	:	-		5.	:	-		4.13	:
Zinc	mg/L	D	-		-		5.36	:	-		4.91	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			MMW-49A	6/3/2003	MMW-49A-D01N-GRW GW4		MMW-49A	7/22/2003	MMW-49A-T01N-GRW GW4		MMW-49A	7/22/2003	MMW-49A-D01N-GRW GW4		MMW-49A	8/11/2003	MMW-49A-T01N-GRW GW4		MMW-49A	8/11/2003	MMW-49A-D01N-GRW GW4		MMW-49A	9/9/2003	MMW-49A-T01N-GRW GW4	
Field Measurements																										
DO	mg/L	T	-				6.3		:		-				6.4		:		-				8.13		:	
Eh	millivolts	T	-				819.5		:		-				305.6		:		-				283.2		:	
pH	SU	T	-				4.4	J			-				4.3	J			-				4.2	J		
Specific Conductance	uS/cm	T	-				1707.		:		-				1825.		:		-				1737.		:	
Temperature	Celsius	T	-				10.57		:		-				10.76		:		-				9.46		:	
Turbidity	NTU	T	-				0.		:		-				0.		:		-				0.		:	
General Chemistry																										
Ammonia	mg/L	T	-				<0.05	J			-				<0.04		:		-				<0.075		:	
Bicarbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				21.1		:		-				19.5		:		-				16.		:	
Fluoride	mg/L	T	-				11.8		:		-				22.5		:		-				24.1		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				2.7	J			-				3.2	J			-				2.7	J		
Nitrite	mg/L	T	-				<0.005		:		-				<0.005	J			-				<0.005		:	
Phosphate, Ortho As P	mg/L	T	-				<0.021	J			-				0.027	J			-				<0.028	J		
Phosphorus	mg/L	T	-				0.035		:		-				0.048		:		-				0.034		:	
Sulfate	mg/L	T	-				935.	J			-				987.	J			-				1040.	J		
Total Alkalinity	mg/L	T	-				<1.		:		-				<1.		:		-				<1.		:	
Total Dissolved Solids	mg/L	T	-				1660.		:		-				2000.		:		-				1750.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	-				<1.3	J			-				<1.9	J			-				<1.3		:	
Total Suspended Solids	mg/L	T	-				<0.9		:		-				<1.2		:		-				2.6		:	
Laboratory Parameters																										
pH	SU	T	-				4.4	J			-				4.3	J			-				4.2	J		
Specific Conductance	umhos/cm	T	-				1650.	J			-				1590.	J			-				1580.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01		:		-				<0.01		:	
Physical Properties																										
Hardness	mg/L	T	-				789.		:		-				842.		:		-				873.		:	
Hardness	mg/L	D	768.		:		-				794.		:		-				860.		:		-			
Metals																										

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 6/3/2003 MMW-49A-D01N-GRW GW4		MMW-49A 7/22/2003 MMW-49A-T01N-GRW GW4		MMW-49A 7/22/2003 MMW-49A-D01N-GRW GW4		MMW-49A 8/11/2003 MMW-49A-T01N-GRW GW4		MMW-49A 8/11/2003 MMW-49A-D01N-GRW GW4		MMW-49A 9/9/2003 MMW-49A-T01N-GRW GW4	
Aluminum	mg/L	T	-		37.1	:	-		44.9	:	-		48.2	:
Aluminum	mg/L	D	40.4	:	-		37.2	:	-		45.3	J	-	
Antimony	mg/L	T	-		<0.047	:	-		0.039	:	-		<0.082	:
Antimony	mg/L	D	<0.044	:	-		<0.047	:	-		<0.038	:	-	
Arsenic	mg/L	T	-		<0.048	:	-		<0.024	:	-		<0.035	:
Arsenic	mg/L	D	<0.043	:	-		<0.048	:	-		<0.024	:	-	
Barium	mg/L	T	-		<0.059	:	-		<0.073	:	-		<0.117	:
Barium	mg/L	D	<0.125	:	-		<0.059	:	-		<0.073	:	-	
Beryllium	mg/L	T	-		<0.0132	:	-		0.0083	J	-		<0.0126	:
Beryllium	mg/L	D	0.0095	:	-		<0.0138	:	-		0.0101	J	-	
Boron	mg/L	T	-		<0.048	:	-		<0.046	:	-		<0.064	:
Boron	mg/L	D	<0.048	:	-		<0.048	:	-		<0.046	:	-	
Cadmium	mg/L	T	-		<0.12	:	-		<0.12	:	-		<0.13	:
Cadmium	mg/L	D	0.0278	:	-		<0.12	:	-		<0.12	:	-	
Calcium	mg/L	T	-		152.	:	-		162.	:	-		160.	:
Calcium	mg/L	D	144.	:	-		152.	:	-		164.	:	-	
Chromium	mg/L	T	-		<0.19	:	-		<0.19	:	-		<0.23	:
Chromium	mg/L	D	<0.019	:	-		<0.19	:	-		<0.19	:	-	
Cobalt	mg/L	T	-		<0.37	:	-		<0.37	:	-		<0.32	:
Cobalt	mg/L	D	0.174	:	-		<0.37	:	-		<0.37	:	-	
Copper	mg/L	T	-		0.412	:	-		<0.703	:	-		0.488	:
Copper	mg/L	D	0.594	:	-		0.485	:	-		<0.75	:	-	
Iron	mg/L	T	-		<6.67	:	-		<6.67	:	-		<4.55	:
Iron	mg/L	D	<0.422	:	-		<6.67	:	-		<6.67	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		0.0037	:	-	
Magnesium	mg/L	T	-		99.6	:	-		106.	:	-		115.	:
Magnesium	mg/L	D	99.	:	-		100.	:	-		109.	:	-	
Manganese	mg/L	T	-		20.5	:	-		21.7	:	-		23.2	:
Manganese	mg/L	D	21.	:	-		20.6	:	-		22.3	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.017	:	-		<0.016	:	-		<0.012	:
Molybdenum	mg/L	D	<0.022	:	-		<0.017	:	-		<0.016	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 6/3/2003 MMW-49A-D01N-GRW GW4		MMW-49A 7/22/2003 MMW-49A-T01N-GRW GW4		MMW-49A 7/22/2003 MMW-49A-D01N-GRW GW4		MMW-49A 8/11/2003 MMW-49A-T01N-GRW GW4		MMW-49A 8/11/2003 MMW-49A-D01N-GRW GW4		MMW-49A 9/9/2003 MMW-49A-T01N-GRW GW4	
Nickel	mg/L	T	-		<0.44	:	-		0.489	:	-		0.481	:
Nickel	mg/L	D	0.428	:	-		<0.44	:	-		<0.44	:	-	
Potassium	mg/L	T	-		<37.1	:	-		<37.1	:	-		<63.8	:
Potassium	mg/L	D	<4.05	:	-		<37.1	:	-		<37.1	:	-	
Selenium	mg/L	T	-		<0.008	:	-		<0.008	:	-		0.0062	:
Selenium	mg/L	D	0.0086	:	-		<0.008	J	-		<0.008	:	-	
Silver	mg/L	T	-		<0.001	J	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Sodium	mg/L	T	-		<63.4	:	-		<53.2	J	-		<99.1	:
Sodium	mg/L	D	21.4	:	-		<119.	:	-		<53.2	J	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		4.18	:	-		4.66	:	-		4.58	:
Zinc	mg/L	D	4.02	:	-		4.21	:	-		4.65	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		0.0037	:	-	

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-49A	MMW-49A	MMW-49A	MMW-49A
			9/9/2003	10/22/2003	10/23/2003	10/23/2003
			MMW-49A-D01N-GRW	MMW-49A-T01N-GRW	MMW-49A-T01N-GRW	MMW-49A-D01N-GRW
			GW4	GW4	GW4	GW4
Field Measurements						
DO	mg/L	T	-	-	6.39 :	-
Eh	millivolts	T	-	-	396.1 :	-
pH	SU	T	-	-	4.3 J	-
Specific Conductance	uS/cm	T	-	-	1739. :	-
Temperature	Celsius	T	-	-	8.33 :	-
Turbidity	NTU	T	-	-	0.7 :	-
General Chemistry						
Ammonia	mg/L	T	-	-	<0.079 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-
Chloride	mg/L	T	-	-	17.2 :	-
Fluoride	mg/L	T	-	-	21.7 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-
Nitrate	mg/L	T	-	-	2.8 J	-
Nitrite	mg/L	T	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.025 J	-
Phosphorus	mg/L	T	-	-	0.036 :	-
Sulfate	mg/L	T	-	-	1080. J	-
Total Alkalinity	mg/L	T	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	-	1610. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	3. :	-	-
Total Organic Carbon	mg/L	T	-	-	2.1 J	-
Total Suspended Solids	mg/L	T	-	-	3.5 :	-
Laboratory Parameters						
pH	SU	T	-	-	4.3 J	-
Specific Conductance	umhos/cm	T	-	-	1330. J	-
Inorganics						
Cyanide	mg/L	T	-	-	<0.01 J	-
Physical Properties						
Hardness	mg/L	T	-	-	846. :	-
Hardness	mg/L	D	855. :	-	-	845. :
Metals						

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-49A	MMW-49A	MMW-49A	MMW-49A
			11/3/2003	11/3/2003		
			MMW-49A-T01N-GRW	MMW-49A-D01N-GRW		
			GW4	GW4		
Field Measurements						
DO	mg/L	T	5.53 :	-		
Eh	millivolts	T	425.4 :	-		
pH	SU	T	3.8 J	-		
Specific Conductance	uS/cm	T	1594. :	-		
Temperature	Celsius	T	8.25 :	-		
Turbidity	NTU	T	-	-		
General Chemistry						
Ammonia	mg/L	T	<0.11 :	-		
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-		
Carbonate (as CaCO3)	mg/L	T	<1. :	-		
Chloride	mg/L	T	18.5 :	-		
Fluoride	mg/L	T	22.7 :	-		
Hydroxide (as CaCO3)	mg/L	T	<1. :	-		
Nitrate	mg/L	T	3. J	-		
Nitrite	mg/L	T	<0.005 J	-		
Phosphate, Ortho As P	mg/L	T	0.032 J	-		
Phosphorus	mg/L	T	0.04 :	-		
Sulfate	mg/L	T	1020. :	-		
Total Alkalinity	mg/L	T	<1. :	-		
Total Dissolved Solids	mg/L	T	1800. :	-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-		
Total Organic Carbon	mg/L	T	<1. :	-		
Total Suspended Solids	mg/L	T	<1.6 :	-		
Laboratory Parameters						
pH	SU	T	3.8 J	-		
Specific Conductance	umhos/cm	T	1660. J	-		
Inorganics						
Cyanide	mg/L	T	<0.01 :	-		
Physical Properties						
Hardness	mg/L	T	761. :	-		
Hardness	mg/L	D	-	736. :		
Metals						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 9/9/2003 MMW-49A-D01N-GRW GW4		MMW-49A 10/22/2003 MMW-49A-T01N-GRW GW4		MMW-49A 10/23/2003 MMW-49A-T01N-GRW GW4		MMW-49A 10/23/2003 MMW-49A-D01N-GRW GW4		MMW-49A 11/3/2003 MMW-49A-T01N-GRW GW4		MMW-49A 11/3/2003 MMW-49A-D01N-GRW GW4	
Aluminum	mg/L	T	-		-		45.4	:	-		41.2	:	-	
Aluminum	mg/L	D	47.5	:	-		-		45.1	:	-		40.3	:
Antimony	mg/L	T	-		-		<0.052	:	-		<0.052	:	-	
Antimony	mg/L	D	<0.082	:	-		-		<0.052	:	-		<0.052	:
Arsenic	mg/L	T	-		-		<0.041	:	-		<0.041	:	-	
Arsenic	mg/L	D	<0.035	:	-		-		<0.041	:	-		<0.041	:
Barium	mg/L	T	-		-		<0.115	:	-		<0.115	:	-	
Barium	mg/L	D	<0.117	:	-		-		<0.115	:	-		<0.115	:
Beryllium	mg/L	T	-		-		0.01	:	-		0.009	:	-	
Beryllium	mg/L	D	<0.0125	:	-		-		0.0098	:	-		0.0092	:
Boron	mg/L	T	-		-		<0.063	:	-		<0.063	:	-	
Boron	mg/L	D	<0.064	:	-		-		<0.063	:	-		<0.063	:
Cadmium	mg/L	T	-		-		<0.13	:	-		<0.05	:	-	
Cadmium	mg/L	D	<0.13	:	-		-		<0.13	:	-		<0.05	:
Calcium	mg/L	T	-		-		160.	:	-		135.	:	-	
Calcium	mg/L	D	157.	:	-		-		160.	:	-		130.	:
Chromium	mg/L	T	-		-		<0.23	J	-		<0.11	J	-	
Chromium	mg/L	D	<0.23	:	-		-		<0.23	J	-		<0.11	J
Cobalt	mg/L	T	-		-		<0.32	:	-		<0.29	:	-	
Cobalt	mg/L	D	<0.32	:	-		-		<0.32	:	-		<0.29	:
Copper	mg/L	T	-		-		0.684	:	-		0.555	:	-	
Copper	mg/L	D	0.417	:	-		-		0.683	:	-		0.592	:
Iron	mg/L	T	-		-		<4.55	:	-		<2.78	:	-	
Iron	mg/L	D	6.04	:	-		-		<4.55	:	-		<2.78	:
Lead	mg/L	T	-		-		0.0048	:	-		<0.002	:	-	
Lead	mg/L	D	<0.002	:	-		-		<0.002	:	-		<0.002	:
Magnesium	mg/L	T	-		-		108.	:	-		103.	:	-	
Magnesium	mg/L	D	112.	:	-		-		108.	:	-		100.	:
Manganese	mg/L	T	-		-		22.8	:	-		21.9	J	-	
Manganese	mg/L	D	22.6	:	-		-		22.9	:	-		21.2	:
Mercury	mg/L	T	-		-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	-		-		<0.011	:	-		<0.011	:	-	
Molybdenum	mg/L	D	<0.012	:	-		-		<0.011	:	-		<0.011	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 9/9/2003 MMW-49A-D01N-GRW GW4		MMW-49A 10/22/2003 MMW-49A-T01N-GRW GW4		MMW-49A 10/23/2003 MMW-49A-T01N-GRW GW4		MMW-49A 10/23/2003 MMW-49A-D01N-GRW GW4		MMW-49A 11/3/2003 MMW-49A-T01N-GRW GW4		MMW-49A 11/3/2003 MMW-49A-D01N-GRW GW4	
Nickel	mg/L	T	-		-		0.544	:	-		0.279	J	-	
Nickel	mg/L	D	0.465	:	-		-		0.497	:	-		<0.24	J
Potassium	mg/L	T	-		-		<63.8	:	-		34.1	:	-	
Potassium	mg/L	D	<63.8	:	-		-		<63.8	:	-		36.	:
Selenium	mg/L	T	-		-		0.0049	:	-		0.0062	:	-	
Selenium	mg/L	D	0.0061	:	-		-		0.0068	:	-		0.005	:
Silver	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	-		-		<99.1	:	-		<45.4	:	-	
Sodium	mg/L	D	<99.1	:	-		-		<99.1	:	-		<45.4	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	-		-		4.74	:	-		3.85	:	-	
Zinc	mg/L	D	4.65	:	-		-		4.64	:	-		3.68	:
Isotopes														
Lead	mg/L	T	-		-		0.0048	:	-		<0.002	:	-	
Lead	mg/L	D	<0.002	:	-		-		<0.002	:	-		<0.002	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-49A		MMW-49A		MMW-49A		MMW-49A		MMW-49A		MMW-49A			
			12/11/2003		12/11/2003		1/13/2004		1/13/2004		4/13/2004		4/13/2004			
			MMW-49A-T01N-GRW		MMW-49A-D01N-GRW		MMW-49A-T01N-GRW		MMW-49A-D01N-GRW		MMW-49A-T01N-GRW		MMW-49A-D01N-GRW			
			GW4		GW4		GW4		GW4		GW4		GW4			
Field Measurements																
DO	mg/L	T	5.28	:	-		6.5	:	-		6.68	:	-			
Eh	millivolts	T	456.8	:	-		432.7	:	-		395.	:	-			
pH	SU	T	4.4	J	-		4.5	J	-		4.8	J	-			
Specific Conductance	uS/cm	T	1677.	:	-		1677.	:	-		1603.	:	-			
Temperature	Celsius	T	7.75	:	-		7.93	:	-		9.07	:	-			
Turbidity	NTU	T	0.2	:	-		1.2	:	-		1.3	:	-			
General Chemistry																
Ammonia	mg/L	T	0.073	:	-		<0.22	J	-		<0.073	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	17.6	:	-		18.1	:	-		16.7	:	-			
Fluoride	mg/L	T	22.7	:	-		18.9	:	-		21.6	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	2.8	:	-		2.5	J	-		2.4	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	:	-			
Phosphate, Ortho As P	mg/L	T	0.031	:	-		<0.05	J	-		0.026	:	-			
Phosphorus	mg/L	T	0.043	:	-		0.067	:	-		0.036	:	-			
Sulfate	mg/L	T	909.	:	-		1010.	:	-		1040.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	1550.	J	-		1480.	:	-		1560.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	1.4	:	-		<1.	J	-		1.7	J	-			
Total Suspended Solids	mg/L	T	1.3	:	-		<1.5	:	-		<1.2	J	-			
Laboratory Parameters																
pH	SU	T	4.4	J	-		4.5	J	-		4.8	J	-			
Specific Conductance	umhos/cm	T	1440.	J	-		1440.	J	-		1420.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	725.	:	-		759.	:	-		803.	:	-			
Hardness	mg/L	D	-		766.	:	-		787.	:	-		815.	:		
Metals																

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 12/11/2003 MMW-49A-T01N-GRW GW4		MMW-49A 12/11/2003 MMW-49A-D01N-GRW GW4		MMW-49A 1/13/2004 MMW-49A-T01N-GRW GW4		MMW-49A 1/13/2004 MMW-49A-D01N-GRW GW4		MMW-49A 4/13/2004 MMW-49A-T01N-GRW GW4		MMW-49A 4/13/2004 MMW-49A-D01N-GRW GW4	
Aluminum	mg/L	T	39.4	:	-		40.2	:	-		41.6	:	-	
Aluminum	mg/L	D	-		40.9	:	-		42.9	:	-		42.7	:
Antimony	mg/L	T	<0.082	:	-		<0.097	:	-		<0.053	:	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.097	:	-		<0.053	:
Arsenic	mg/L	T	<0.035	:	-		<0.052	:	-		<0.037	J	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.052	:	-		<0.037	J
Barium	mg/L	T	<0.117	:	-		<0.188	:	-		<0.049	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.188	:	-		<0.049	:
Beryllium	mg/L	T	<0.0129	J	-		0.0107	:	-		<0.0179	:	-	
Beryllium	mg/L	D	-		<0.0188	J	-		0.0125	:	-		<0.0153	:
Boron	mg/L	T	<0.064	:	-		<0.117	:	-		<0.036	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.117	:	-		<0.036	:
Cadmium	mg/L	T	<0.13	:	-		<0.07	J	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		<0.07	:	-		<0.1	:
Calcium	mg/L	T	136.	:	-		144.	:	-		150.	:	-	
Calcium	mg/L	D	-		144.	:	-		150.	:	-		152.	:
Chromium	mg/L	T	<0.23	:	-		<0.11	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.23	:	-		<0.234	:	-		<0.13	:
Cobalt	mg/L	T	<0.32	:	-		<0.31	:	-		<0.18	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.31	:	-		0.3	:
Copper	mg/L	T	0.596	:	-		0.685	:	-		0.7	:	-	
Copper	mg/L	D	-		0.551	:	-		0.782	:	-		0.811	:
Iron	mg/L	T	<4.55	:	-		<3.73	:	-		<2.93	J	-	
Iron	mg/L	D	-		<4.55	:	-		<3.73	:	-		<2.93	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.004	:
Magnesium	mg/L	T	93.2	:	-		97.2	:	-		104.	:	-	
Magnesium	mg/L	D	-		98.7	:	-		100.	:	-		106.	:
Manganese	mg/L	T	20.	:	-		20.5	:	-		21.9	:	-	
Manganese	mg/L	D	-		21.2	:	-		21.3	:	-		22.3	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.012	:	-		<0.03	:	-		<0.014	:	-	
Molybdenum	mg/L	D	-		<0.012	:	-		<0.03	:	-		<0.014	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-49A 12/11/2003 MMW-49A-T01N-GRW GW4		MMW-49A 12/11/2003 MMW-49A-D01N-GRW GW4		MMW-49A 1/13/2004 MMW-49A-T01N-GRW GW4		MMW-49A 1/13/2004 MMW-49A-D01N-GRW GW4		MMW-49A 4/13/2004 MMW-49A-T01N-GRW GW4		MMW-49A 4/13/2004 MMW-49A-D01N-GRW GW4	
Nickel	mg/L	T	<0.45	:	-		0.431	:	-		0.593	:	-	
Nickel	mg/L	D	-		0.453	J	-		0.487	:	-		0.702	:
Potassium	mg/L	T	<63.8	:	-		<24.3	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<24.3	:	-		<15.5	:
Selenium	mg/L	T	0.0055	:	-		0.0074	J	-		<0.007	:	-	
Selenium	mg/L	D	-		0.0045	:	-		<0.003	:	-		<0.007	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<99.1	:	-		54.	:	-		<32.8	J	-	
Sodium	mg/L	D	-		<99.1	:	-		<49.	:	-		<32.8	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.0033	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.0047	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	3.95	:	-		4.36	J	-		4.46	:	-	
Zinc	mg/L	D	-		4.18	:	-		5.7	J	-		4.5	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-95.2	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.1	:	-	
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.004	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-50A		MMW-50A		MMW-50A		MMW-50A		MMW-50A		MMW-50A			
			3/7/2004		3/7/2004		4/13/2004		4/13/2004		5/9/2004		5/9/2004			
			MMW-50A-T01N-GRW		MMW-50A-D01N-GRW		MMW-50A-T01N-GRW		MMW-50A-D01N-GRW		MMW-50A-T01N-GRW		MMW-50A-D01N-GRW			
			GW1		GW1		GW1		GW1		GW1		GW1			
Field Measurements																
DO	mg/L	T	10.43	:	-		4.25	:	-		4.3	:	-			
Eh	millivolts	T	344.2	:	-		498.8	:	-		545.4	:	-			
pH	SU	T	4.6	J	-		4.5	J	-		4.2	J	-			
Specific Conductance	uS/cm	T	1248.	:	-		1351.	:	-		1364.	:	-			
Temperature	Celsius	T	5.92	:	-		7.3	:	-		8.98	:	-			
Turbidity	NTU	T	1.7	:	-		7.5	:	-		0.7	:	-			
General Chemistry																
Ammonia	mg/L	T	0.074	:	-		<0.067	:	-		<0.086	:	-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Chloride	mg/L	T	52.7	:	-		95.5	:	-		85.2	:	-			
Fluoride	mg/L	T	9.2	:	-		9.8	:	-		9.1	:	-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Nitrate	mg/L	T	0.36	:	-		0.4	J	-		0.45	J	-			
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-			
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-			
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-			
Sulfate	mg/L	T	774.	:	-		734.	:	-		713.	:	-			
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-			
Total Dissolved Solids	mg/L	T	1110.	:	-		1200.	:	-		1120.	:	-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-			
Total Organic Carbon	mg/L	T	1.4	:	-		1.6	J	-		<1.	:	-			
Total Suspended Solids	mg/L	T	0.6	:	-		<0.6	J	-		1.	:	-			
Laboratory Parameters																
pH	SU	T	4.6	J	-		4.5	J	-		4.2	J	-			
Specific Conductance	umhos/cm	T	1020.	J	-		1220.	J	-		1300.	J	-			
Inorganics																
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-			
Physical Properties																
Hardness	mg/L	T	392.	:	-		456.	:	-		423.	:	-			
Hardness	mg/L	D	-		389.	:	-		426.	:	-		453.	:		
Metals																

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-50A 3/7/2004 MMW-50A-T01N-GRW GW1		MMW-50A 3/7/2004 MMW-50A-D01N-GRW GW1		MMW-50A 4/13/2004 MMW-50A-T01N-GRW GW1		MMW-50A 4/13/2004 MMW-50A-D01N-GRW GW1		MMW-50A 5/9/2004 MMW-50A-T01N-GRW GW1		MMW-50A 5/9/2004 MMW-50A-D01N-GRW GW1	
Aluminum	mg/L	T	56.6	:	-		63.6	:	-		56.4	:	-	
Aluminum	mg/L	D	-		55.7	:	-		59.3	:	-		59.9	:
Antimony	mg/L	T	<0.029	:	-		<0.053	:	-		<0.027	:	-	
Antimony	mg/L	D	-		<0.029	:	-		<0.053	:	-		<0.027	:
Arsenic	mg/L	T	<0.028	:	-		<0.037	J	-		0.0346	:	-	
Arsenic	mg/L	D	-		<0.028	:	-		<0.037	J	-		<0.026	:
Barium	mg/L	T	<0.053	:	-		<0.049	:	-		<0.012	:	-	
Barium	mg/L	D	-		<0.053	:	-		<0.049	:	-		<0.012	:
Beryllium	mg/L	T	0.0057	:	-		<0.0167	:	-		0.0125	:	-	
Beryllium	mg/L	D	-		0.0071	:	-		<0.0134	:	-		0.0121	:
Boron	mg/L	T	<0.023	:	-		<0.036	:	-		<0.018	:	-	
Boron	mg/L	D	-		<0.023	:	-		<0.036	:	-		<0.018	:
Cadmium	mg/L	T	<0.07	:	-		<0.1	:	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.07	:	-		<0.1	:	-		<0.1	:
Calcium	mg/L	T	104.	:	-		120.	:	-		112.	:	-	
Calcium	mg/L	D	-		103.	:	-		113.	:	-		122.	:
Chromium	mg/L	T	<0.15	J	-		<0.13	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.15	J	-		<0.13	:	-		<0.13	:
Cobalt	mg/L	T	<0.23	:	-		0.234	:	-		<0.18	:	-	
Cobalt	mg/L	D	-		<0.23	:	-		<0.18	:	-		<0.18	:
Copper	mg/L	T	0.766	:	-		1.1	:	-		0.705	:	-	
Copper	mg/L	D	-		0.748	:	-		0.83	:	-		0.809	:
Iron	mg/L	T	<3.57	:	-		<2.93	J	-		<2.93	:	-	
Iron	mg/L	D	-		<3.57	:	-		<2.93	:	-		<2.93	:
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-		<0.004	:
Magnesium	mg/L	T	32.1	:	-		37.6	:	-		34.7	:	-	
Magnesium	mg/L	D	-		32.1	:	-		35.1	:	-		36.2	:
Manganese	mg/L	T	7.12	:	-		8.08	:	-		7.48	:	-	
Manganese	mg/L	D	-		7.03	:	-		7.57	:	-		7.95	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.024	:	-		<0.014	:	-		0.013	:	-	
Molybdenum	mg/L	D	-		<0.024	:	-		<0.014	:	-		<0.01	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-50A 3/7/2004 MMW-50A-T01N-GRW GW1		MMW-50A 3/7/2004 MMW-50A-D01N-GRW GW1		MMW-50A 4/13/2004 MMW-50A-T01N-GRW GW1		MMW-50A 4/13/2004 MMW-50A-D01N-GRW GW1		MMW-50A 5/9/2004 MMW-50A-T01N-GRW GW1		MMW-50A 5/9/2004 MMW-50A-D01N-GRW GW1	
Nickel	mg/L	T	<0.24	J	-		0.5	:	-		<0.33	:	-	
Nickel	mg/L	D	-		<0.24	J	-		0.388	:	-		<0.33	:
Potassium	mg/L	T	<39.1	:	-		<15.5	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<39.1	:	-		<15.5	:	-		<15.5	:
Selenium	mg/L	T	0.0058	:	-		<0.007	:	-		<0.007	:	-	
Selenium	mg/L	D	-		0.0054	:	-		<0.007	:	-		<0.007	:
Silver	mg/L	T	<0.001	J	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	J	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	<51.5	J	-		<59.9	J	-		<46.8	:	-	
Sodium	mg/L	D	-		<51.5	J	-		<60.8	J	-		<40.	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.0029	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.0028	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	2.2	:	-		2.65	:	-		2.43	:	-	
Zinc	mg/L	D	-		2.21	:	-		2.47	:	-		2.76	:
Isotopes														
Delta D	per mil	T	-		-		-91.	:	-		-		-	
Delta O-18	per mil	T	-		-		-12.6	:	-		-		-	
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-		<0.004	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			P-1	P-1	P-1	P-1
			11/6/2002	11/6/2002	11/6/2002	11/6/2002
			P-1-T01N-GRWRE	P-1-T01N-GRW	P-1-D01N-GRWRE	P-1-D01N-GRW
			GW5	GW5	GW5	GW5
Field Measurements						
DO	mg/L	T	-	8.33 :	-	-
Eh	millivolts	T	-	260.9 :	-	-
pH	SU	T	-	4.45 :	-	-
Specific Conductance	uS/cm	T	-	1758. :	-	-
Temperature	Celsius	T	-	9.26 :	-	-
Turbidity	NTU	T	-	2. :	-	-
General Chemistry						
Ammonia	mg/L	T	-	<0.33 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-
Chloride	mg/L	T	-	20.4 :	-	-
Fluoride	mg/L	T	22.7 J	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-
Nitrate	mg/L	T	-	3.8 J	-	-
Nitrite	mg/L	T	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-	-
Phosphorus	mg/L	T	-	0.039 :	-	-
Sulfate	mg/L	T	1010. J	-	-	-
Total Alkalinity	mg/L	T	-	<1. :	-	-
Total Dissolved Solids	mg/L	T	-	1650. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	<1. :	-	-
Total Suspended Solids	mg/L	T	-	6.8 :	-	-
Laboratory Parameters						
pH	SU	T	-	4.45 :	-	-
Inorganics						
Cyanide	mg/L	T	-	<0.01 :	-	-
Physical Properties						
Hardness	mg/L	T	-	684. :	-	-
Hardness	mg/L	D	-	-	1020. :	-
Metals						
Aluminum	mg/L	T	-	-	-	-

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			P-1	P-1	P-1	P-1
			1/12/2003	1/12/2003	1/12/2003	1/12/2003
			P-1-T01N-GRW	P-1-D01N-GRW	P-1-T01N-GRW	P-1-D01N-GRW
			GW5	GW5	GW5	GW5
Field Measurements						
DO	mg/L	T	6.93 :	-		
Eh	millivolts	T	488.9 :	-		
pH	SU	T	4.49 :	-		
Specific Conductance	uS/cm	T	1839. :	-		
Temperature	Celsius	T	6.67 :	-		
Turbidity	NTU	T	4.1 :	-		
General Chemistry						
Ammonia	mg/L	T	<0.04 :	-		
Bicarbonate (as CaCO3)	mg/L	T	<1.5 :	-		
Carbonate (as CaCO3)	mg/L	T	<1. :	-		
Chloride	mg/L	T	21.2 J	-		
Fluoride	mg/L	T	21.2 :	-		
Hydroxide (as CaCO3)	mg/L	T	<1. :	-		
Nitrate	mg/L	T	3.3 :	-		
Nitrite	mg/L	T	<0.005 :	-		
Phosphate, Ortho As P	mg/L	T	<0.01 J	-		
Phosphorus	mg/L	T	<0.01 :	-		
Sulfate	mg/L	T	1060. J	-		
Total Alkalinity	mg/L	T	<1.5 :	-		
Total Dissolved Solids	mg/L	T	1750. :	-		
Total Kjeldahl Nitrogen	mg/L	T	<0.37 :	-		
Total Organic Carbon	mg/L	T	<1. :	-		
Total Suspended Solids	mg/L	T	<1.2 :	-		
Laboratory Parameters						
pH	SU	T	4.49 :	-		
Inorganics						
Cyanide	mg/L	T	<0.01 J	-		
Physical Properties						
Hardness	mg/L	T	930. :	-		
Hardness	mg/L	D	-	943. :		
Metals						
Aluminum	mg/L	T	32.6 :	-		

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 11/6/2002 P-1-T01N-GRWRE GW5	P-1 11/6/2002 P-1-T01N-GRW GW5	P-1 11/6/2002 P-1-D01N-GRWRE GW5	P-1 11/6/2002 P-1-D01N-GRW GW5	P-1 1/12/2003 P-1-T01N-GRW GW5	P-1 1/12/2003 P-1-D01N-GRW GW5
Aluminum	mg/L	D	-	-	34.8 :	-	-	33.9 :
Antimony	mg/L	T	-	-	-	-	0.0473 :	-
Antimony	mg/L	D	-	-	<0.028 :	-	-	<0.0335 :
Arsenic	mg/L	T	-	-	-	-	<0.023 :	-
Arsenic	mg/L	D	-	-	<0.023 :	-	-	<0.023 :
Barium	mg/L	T	-	-	-	-	<0.048 :	-
Barium	mg/L	D	-	-	<0.048 :	-	-	<0.048 :
Beryllium	mg/L	T	-	-	-	-	0.028 :	-
Beryllium	mg/L	D	-	-	0.0285 :	-	-	0.0277 :
Boron	mg/L	T	-	-	-	-	<0.0768 :	-
Boron	mg/L	D	-	-	<0.027 :	-	-	<0.0393 :
Cadmium	mg/L	T	-	-	-	-	0.0591 :	-
Cadmium	mg/L	D	-	-	<0.08 :	-	-	0.0548 :
Calcium	mg/L	T	-	-	-	-	199. :	-
Calcium	mg/L	D	-	-	218. :	-	-	202. :
Chromium	mg/L	T	-	-	-	-	<0.37 :	-
Chromium	mg/L	D	-	-	<0.16 J	-	-	<0.37 :
Cobalt	mg/L	T	-	-	-	-	<0.16 :	-
Cobalt	mg/L	D	-	-	<0.23 :	-	-	<0.16 :
Copper	mg/L	T	-	-	-	-	0.357 :	-
Copper	mg/L	D	-	-	<0.452 :	-	-	0.439 :
Iron	mg/L	T	-	-	-	-	<4.89 :	-
Iron	mg/L	D	-	-	<2.66 :	-	-	<4.89 :
Lead	mg/L	T	-	-	-	-	<0.001 :	-
Lead	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Magnesium	mg/L	T	-	-	-	-	105. :	-
Magnesium	mg/L	D	-	-	115. :	-	-	107. :
Manganese	mg/L	T	-	-	-	-	18. :	-
Manganese	mg/L	D	-	-	19.1 :	-	-	18.3 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	-	-	<0.011 :	-
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	<0.011 :
Nickel	mg/L	T	-	-	-	-	0.671 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 11/6/2002 P-1-T01N-GRWRE GW5	P-1 11/6/2002 P-1-T01N-GRW GW5	P-1 11/6/2002 P-1-D01N-GRWRE GW5	P-1 11/6/2002 P-1-D01N-GRW GW5	P-1 1/12/2003 P-1-T01N-GRW GW5	P-1 1/12/2003 P-1-D01N-GRW GW5
Nickel	mg/L	D	-	-	0.646 :	-	-	0.725 :
Potassium	mg/L	T	-	-	-	-	<20.2 :	-
Potassium	mg/L	D	-	-	<31.4 J	-	-	<20.2 :
Selenium	mg/L	T	-	-	-	-	0.0245 :	-
Selenium	mg/L	D	-	-	0.0097 :	-	-	0.0239 :
Silver	mg/L	T	-	-	-	-	<0.001 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T	-	-	-	-	<32.7 :	-
Sodium	mg/L	D	-	-	<36.6 :	-	-	42.2 :
Thallium	mg/L	T	-	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	-	-	-	<0.002 :	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	<0.002 :
Zinc	mg/L	T	-	-	-	-	6.39 :	-
Zinc	mg/L	D	-	-	7.07 :	-	-	6.44 :
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2-Butanone	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2-Hexanone	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Acetone	mg/L	T	-	<0.01 :	-	-	<0.01 :	-

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 11/6/2002 P-1-T01N-GRWRE GW5	P-1 11/6/2002 P-1-T01N-GRW GW5	P-1 11/6/2002 P-1-D01N-GRWRE GW5	P-1 11/6/2002 P-1-D01N-GRW GW5	P-1 1/12/2003 P-1-T01N-GRW GW5	P-1 1/12/2003 P-1-D01N-GRW GW5
Benzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Bromoform	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Bromomethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Carbon disulfide	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Chloroethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Chloroform	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Chloromethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Methylene chloride	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Styrene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Toluene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Total Xylene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Trichloroethene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T	-	<0.025 :	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T	-	<0.025 :	-	-	<0.025 :	-
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T	-	<0.01 :	-	-	<0.01 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-1	11/6/2002	P-1-T01N-GRWRE		P-1	11/6/2002	P-1-T01N-GRW		P-1	11/6/2002	P-1-D01N-GRWRE		P-1	11/6/2002	P-1-D01N-GRW		P-1	1/12/2003	P-1-T01N-GRW		P-1	1/12/2003	P-1-D01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
2-Chloronaphthalene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
2-Chlorophenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
2-Methylnaphthalene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
2-Methylphenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
2-Nitroaniline	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
2-Nitrophenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
3,3-Dichlorobenzidine	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
3-Nitroaniline	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
4,6-Dinitro-2-methylphenol	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
4-Bromophenyl phenyl ether	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
4-Chloro-3-methylphenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
4-Chloroaniline	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
4-Chlorophenyl phenyl ether	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
4-Methylphenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
4-Nitroaniline	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
4-Nitrophenol	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
Acenaphthene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Acenaphthylene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Anthracene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Benzaldehyde	mg/L	T	-				<0.01		J		-				-				<0.01		:		-			
Benzo(a)anthracene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Benzo(a)pyrene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Benzo(b)fluoranthene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Benzo(g,h,i)perylene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Benzo(k)fluoranthene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Bis(2-chloroethoxy)methane	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Bis(2-chloroethyl)ether	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Bis(2-ethylhexyl)phthalate	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Butyl benzyl phthalate	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Carbazole	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Chrysene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Dibenz(a,h)anthracene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Dibenzofuran	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Dichlorodiisopropyl ether	mg/L	T	-				<0.01		J		-				-				<0.01		:		-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-1	11/6/2002	P-1-T01N-GRWRE		P-1	11/6/2002	P-1-T01N-GRW		P-1	11/6/2002	P-1-D01N-GRWRE		P-1	11/6/2002	P-1-D01N-GRW		P-1	1/12/2003	P-1-T01N-GRW		P-1	1/12/2003	P-1-D01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Diethylphthalate	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Dimethylphthalate	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Di-n-Butyl phthalate	mg/L	T	-				<0.01		:		-				-				<0.01		J		-			
Di-n-Octyl phthalate	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Fluoranthene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Fluorene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Hexachlorobenzene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Hexachlorobutadiene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Hexachlorocyclopentadiene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Hexachloroethane	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Indeno(1,2,3-cd)pyrene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Isophorone	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Naphthalene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Nitrobenzene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
N-Nitrosodi-n-propylamine	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
N-Nitrosodiphenylamine	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Pentachlorophenol	mg/L	T	-				<0.025		:		-				-				<0.025		:		-			
Phenanthrene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Phenol	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Pyrene	mg/L	T	-				<0.01		:		-				-				<0.01		:		-			
Explosives																										
2,4,6-Trinitrotoluene	mg/L	T	-				<0.00025		J		-				-				<0.00025		:		-			
2,6-Pyridinediamine,	mg/L	T	-				<0.00025		J		-				-				<0.00025		J		-			
Cyclotetramethylenetetranitramine	mg/L	T	-				<0.00025		J		-				-				<0.00025		:		-			
Cyclotrimethylenetrinitramine	mg/L	T	-				<0.00025		J		-				-				<0.00025		:		-			
Pentaerythritol tetranitrate	mg/L	T	-				<0.01		J		-				-				<0.01		:		-			
Isotopes																										
Lead	mg/L	T	-				-				-				-				<0.001		:		-			
Lead	mg/L	D	-				-				<0.001		:		-				-				<0.001		:	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-1	4/7/2003	P-1-T01N-GRW		P-1	4/7/2003	P-1-D01N-GRW	P-1	7/23/2003	P-1-T01N-GRW	P-1	7/23/2003	P-1-D01N-GRW	P-1	10/16/2003	P-1-T01N-GRW	P-1	10/16/2003	P-1-D01N-GRW
			GW5				GW5			GW5			GW5			GW5			GW5		
Field Measurements																					
DO	mg/L	T	6.07	:			-			6.05	:		-			5.42	:		-		
Eh	millivolts	T	354.2	:			-			646.5	:		-			418.3	:		-		
pH	SU	T	4.1	J			-			4.8	J		-			4.7	J		-		
Specific Conductance	uS/cm	T	1797.	:			-			1297.	:		-			1347.	:		-		
Temperature	Celsius	T	7.64	:			-			9.06	:		-			7.8	:		-		
Turbidity	NTU	T	7.2	:			-			0.4	:		-			1.9	:		-		
General Chemistry																					
Ammonia	mg/L	T	<0.11	:			-			<0.091	J		-			<0.072	J		-		
Bicarbonate (as CaCO3)	mg/L	T	<1.2	:			-			<1.8	:		-			<1.	:		-		
Carbonate (as CaCO3)	mg/L	T	<1.	:			-			<1.	:		-			<1.	:		-		
Chloride	mg/L	T	26.2	:			-			15.4	:		-			14.	:		-		
Fluoride	mg/L	T	26.3	:			-			17.9	:		-			18.9	:		-		
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-			<1.	:		-			<1.	:		-		
Nitrate	mg/L	T	3.3	J			-			1.9	:		-			2.2	J		-		
Nitrite	mg/L	T	<0.005	J			-			<0.005	:		-			<0.005	J		-		
Phosphate, Ortho As P	mg/L	T	<0.05	J			-			<0.01	:		-			<0.01	J		-		
Phosphorus	mg/L	T	0.13	:			-			0.014	:		-			0.013	:		-		
Sulfate	mg/L	T	1010.	J			-			672.	J		-			717.	J		-		
Total Alkalinity	mg/L	T	<1.2	:			-			<1.8	:		-			<1.	:		-		
Total Dissolved Solids	mg/L	T	1710.	:			-			1620.	:		-			1250.	:		-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-			<0.24	:		-			<0.24	:		-		
Total Organic Carbon	mg/L	T	<1.3	J			-			<1.8	J		-			<1.	J		-		
Total Suspended Solids	mg/L	T	<2.2	:			-			<0.9	:		-			4.5	:		-		
Laboratory Parameters																					
pH	SU	T	4.1	J			-			4.8	J		-			4.7	J		-		
Specific Conductance	umhos/cm	T	1620.	J			-			1280.	J		-			1210.	J		-		
Inorganics																					
Cyanide	mg/L	T	<0.01	J			-			<0.01	J		-			<0.01	J		-		
Physical Properties																					
Hardness	mg/L	T	860.	:			-			603.	:		-			715.	:		-		
Hardness	mg/L	D	-				870.	:		-			677.	:		-			658.	:	
Metals																					

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 4/7/2003 P-1-T01N-GRW GW5		P-1 4/7/2003 P-1-D01N-GRW GW5		P-1 7/23/2003 P-1-T01N-GRW GW5		P-1 7/23/2003 P-1-D01N-GRW GW5		P-1 10/16/2003 P-1-T01N-GRW GW5		P-1 10/16/2003 P-1-D01N-GRW GW5	
Aluminum	mg/L	T	33.	:	-		23.6	:	-		28.1	:	-	
Aluminum	mg/L	D	-		33.4	:	-		28.	:	-		25.8	:
Antimony	mg/L	T	<0.003	:	-		<0.047	:	-		<0.052	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.047	:	-		<0.052	:
Arsenic	mg/L	T	<0.002	:	-		<0.048	:	-		<0.041	:	-	
Arsenic	mg/L	D	-		<0.002	:	-		<0.048	:	-		<0.041	:
Barium	mg/L	T	<0.125	:	-		<0.059	:	-		<0.115	:	-	
Barium	mg/L	D	-		<0.125	:	-		<0.059	:	-		<0.115	:
Beryllium	mg/L	T	0.0185	:	-		0.0218	:	-		0.0189	:	-	
Beryllium	mg/L	D	-		0.0188	:	-		0.021	:	-		0.0191	:
Boron	mg/L	T	<0.084	:	-		<0.048	:	-		<0.063	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.048	:	-		<0.063	:
Cadmium	mg/L	T	0.041	:	-		<0.12	:	-		<0.13	:	-	
Cadmium	mg/L	D	-		0.043	:	-		<0.12	:	-		<0.13	:
Calcium	mg/L	T	181.	:	-		128.	:	-		157.	:	-	
Calcium	mg/L	D	-		183.	:	-		142.	:	-		135.	:
Chromium	mg/L	T	<0.009	J	-		<0.19	:	-		<0.23	J	-	
Chromium	mg/L	D	-		<0.019	:	-		<0.19	:	-		<0.23	J
Cobalt	mg/L	T	0.0377	:	-		<0.37	:	-		<0.32	:	-	
Cobalt	mg/L	D	-		0.0377	:	-		<0.37	:	-		<0.32	:
Copper	mg/L	T	0.369	:	-		<0.33	:	-		0.391	:	-	
Copper	mg/L	D	-		0.366	:	-		<0.33	:	-		0.267	:
Iron	mg/L	T	<0.299	:	-		<0.333	:	-		<4.55	:	-	
Iron	mg/L	D	-		<0.422	:	-		<0.333	:	-		<4.55	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.002	:
Magnesium	mg/L	T	99.	:	-		69.	:	-		79.6	:	-	
Magnesium	mg/L	D	-		100.	:	-		78.2	:	-		73.6	:
Manganese	mg/L	T	18.1	:	-		11.2	:	-		14.9	:	-	
Manganese	mg/L	D	-		18.3	:	-		12.4	:	-		13.8	:
Mercury	mg/L	T	<0.0001	:	-		0.00012	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.022	:	-		<0.017	:	-		<0.011	:	-	
Molybdenum	mg/L	D	-		<0.022	:	-		<0.017	:	-		<0.011	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 4/7/2003 P-1-T01N-GRW GW5		P-1 4/7/2003 P-1-D01N-GRW GW5		P-1 7/23/2003 P-1-T01N-GRW GW5		P-1 7/23/2003 P-1-D01N-GRW GW5		P-1 10/16/2003 P-1-T01N-GRW GW5		P-1 10/16/2003 P-1-D01N-GRW GW5	
Nickel	mg/L	T	0.671	:	-		<0.44	:	-		<0.45	J	-	
Nickel	mg/L	D	-		0.634	:	-		<0.44	:	-		<0.45	J
Potassium	mg/L	T	<4.05	:	-		<37.1	:	-		<63.8	:	-	
Potassium	mg/L	D	-		<4.05	:	-		<37.1	:	-		<63.8	:
Selenium	mg/L	T	0.0052	:	-		<0.008	:	-		0.0129	:	-	
Selenium	mg/L	D	-		0.0062	:	-		<0.008	J	-		0.0096	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	20.2	:	-		<53.2	:	-		<99.1	:	-	
Sodium	mg/L	D	-		20.4	:	-		<53.2	:	-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	J	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	J	-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	5.72	:	-		4.	:	-		5.9	:	-	
Zinc	mg/L	D	-		5.77	:	-		4.42	:	-		4.78	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		-		-		-		-	
2-Hexanone	mg/L	T	<0.01	J	-		-		-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		-		-		-		-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			P-1	P-1	P-1	P-1	P-1	P-1		
			4/7/2003	4/7/2003	7/23/2003	7/23/2003	10/16/2003	10/16/2003		
			P-1-T01N-GRW	P-1-D01N-GRW	P-1-T01N-GRW	P-1-D01N-GRW	P-1-T01N-GRW	P-1-D01N-GRW		
			GW5	GW5	GW5	GW5	GW5	GW5		
Acetone	mg/L	T	<0.01	: -	-	-	-	-	-	
Benzene	mg/L	T	<0.01	: -	-	-	-	-	-	
Bromodichloromethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Bromoform	mg/L	T	<0.01	: -	-	-	-	-	-	
Bromomethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Carbon disulfide	mg/L	T	<0.01	: -	-	-	-	-	-	
Carbon tetrachloride	mg/L	T	<0.01	: -	-	-	-	-	-	
Chlorobenzene	mg/L	T	<0.01	: -	-	-	-	-	-	
Chloroethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Chloroform	mg/L	T	<0.01	: -	-	-	-	-	-	
Chloromethane	mg/L	T	<0.01	: -	-	-	-	-	-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	: -	-	-	-	-	-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	: -	-	-	-	-	-	
Dibromochloromethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Dichlorodifluoromethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Ethylbenzene	mg/L	T	<0.01	: -	-	-	-	-	-	
Methylene chloride	mg/L	T	<0.01	: -	-	-	-	-	-	
Styrene	mg/L	T	<0.01	: -	-	-	-	-	-	
Tetrachloroethene	mg/L	T	<0.01	: -	-	-	-	-	-	
Toluene	mg/L	T	<0.01	: -	-	-	-	-	-	
Total Xylene	mg/L	T	<0.01	: -	-	-	-	-	-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	: -	-	-	-	-	-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	: -	-	-	-	-	-	
Trichloroethene	mg/L	T	<0.01	: -	-	-	-	-	-	
Trichlorofluoromethane	mg/L	T	<0.01	: -	-	-	-	-	-	
Vinyl chloride	mg/L	T	<0.01	: -	-	-	-	-	-	
Semi-Volatile Organics										
1,1`-Biphenyl	mg/L	T	<0.01	: -	-	-	-	-	-	
2,4,5-Trichlorophenol	mg/L	T	<0.026	: -	-	-	-	-	-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	: -	-	-	-	-	-	
2,4-Dichlorophenol	mg/L	T	<0.01	: -	-	-	-	-	-	
2,4-Dimethylphenol	mg/L	T	<0.01	J -	-	-	-	-	-	
2,4-Dinitrophenol	mg/L	T	<0.026	J -	-	-	-	-	-	
2,4-Dinitrotoluene	mg/L	T	<0.01	: -	-	-	-	-	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			P-1	4/7/2003	P-1-T01N-GRW	P-1	4/7/2003	P-1-D01N-GRW	P-1	7/23/2003	P-1-T01N-GRW	P-1	7/23/2003	P-1-D01N-GRW	P-1	10/16/2003	P-1-T01N-GRW	P-1	10/16/2003	P-1-D01N-GRW
			GW5			GW5			GW5			GW5			GW5			GW5		
2,6-Dinitrotoluene	mg/L	T	<0.01	:		-			-			-			-			-		
2-Chloronaphthalene	mg/L	T	<0.01	:		-			-			-			-			-		
2-Chlorophenol	mg/L	T	<0.01	:		-			-			-			-			-		
2-Methylnaphthalene	mg/L	T	<0.01	:		-			-			-			-			-		
2-Methylphenol	mg/L	T	<0.01	:		-			-			-			-			-		
2-Nitroaniline	mg/L	T	<0.026	:		-			-			-			-			-		
2-Nitrophenol	mg/L	T	<0.01	:		-			-			-			-			-		
3,3-Dichlorobenzidine	mg/L	T	<0.01	J		-			-			-			-			-		
3-Nitroaniline	mg/L	T	<0.026	J		-			-			-			-			-		
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026	J		-			-			-			-			-		
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:		-			-			-			-			-		
4-Chloro-3-methylphenol	mg/L	T	<0.01	:		-			-			-			-			-		
4-Chloroaniline	mg/L	T	<0.01	:		-			-			-			-			-		
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:		-			-			-			-			-		
4-Methylphenol	mg/L	T	<0.01	:		-			-			-			-			-		
4-Nitroaniline	mg/L	T	<0.026	:		-			-			-			-			-		
4-Nitrophenol	mg/L	T	<0.026	J		-			-			-			-			-		
Acenaphthene	mg/L	T	<0.01	:		-			-			-			-			-		
Acenaphthylene	mg/L	T	<0.01	:		-			-			-			-			-		
Anthracene	mg/L	T	<0.01	:		-			-			-			-			-		
Benzaldehyde	mg/L	T	<0.01	:		-			-			-			-			-		
Benzo(a)anthracene	mg/L	T	<0.01	:		-			-			-			-			-		
Benzo(a)pyrene	mg/L	T	<0.01	:		-			-			-			-			-		
Benzo(b)fluoranthene	mg/L	T	<0.01	:		-			-			-			-			-		
Benzo(g,h,i)perylene	mg/L	T	<0.01	:		-			-			-			-			-		
Benzo(k)fluoranthene	mg/L	T	<0.01	:		-			-			-			-			-		
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:		-			-			-			-			-		
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:		-			-			-			-			-		
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	:		-			-			-			-			-		
Butyl benzyl phthalate	mg/L	T	<0.01	:		-			-			-			-			-		
Carbazole	mg/L	T	<0.01	:		-			-			-			-			-		
Chrysene	mg/L	T	<0.01	:		-			-			-			-			-		
Dibenz(a,h)anthracene	mg/L	T	<0.01	J		-			-			-			-			-		
Dibenzofuran	mg/L	T	<0.01	:		-			-			-			-			-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P-1 4/7/2003 P-1-T01N-GRW GW5	P-1 4/7/2003 P-1-D01N-GRW GW5	P-1 7/23/2003 P-1-T01N-GRW GW5	P-1 7/23/2003 P-1-D01N-GRW GW5	P-1 10/16/2003 P-1-T01N-GRW GW5	P-1 10/16/2003 P-1-D01N-GRW GW5
Dichlorodiisopropyl ether	mg/L	T	<0.01 :	-	-	-	-	-
Diethylphthalate	mg/L	T	<0.01 :	-	-	-	-	-
Dimethylphthalate	mg/L	T	<0.01 :	-	-	-	-	-
Di-n-Butyl phthalate	mg/L	T	<0.01 :	-	-	-	-	-
Di-n-Octyl phthalate	mg/L	T	<0.01 J	-	-	-	-	-
Fluoranthene	mg/L	T	<0.01 :	-	-	-	-	-
Fluorene	mg/L	T	<0.01 :	-	-	-	-	-
Hexachlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
Hexachlorobutadiene	mg/L	T	<0.01 :	-	-	-	-	-
Hexachlorocyclopentadiene	mg/L	T	<0.01 :	-	-	-	-	-
Hexachloroethane	mg/L	T	<0.01 :	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01 :	-	-	-	-	-
Isophorone	mg/L	T	<0.01 :	-	-	-	-	-
Naphthalene	mg/L	T	<0.01 :	-	-	-	-	-
Nitrobenzene	mg/L	T	<0.01 :	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T	<0.01 :	-	-	-	-	-
N-Nitrosodiphenylamine	mg/L	T	<0.01 :	-	-	-	-	-
Pentachlorophenol	mg/L	T	<0.026 :	-	-	-	-	-
Phenanthrene	mg/L	T	<0.01 :	-	-	-	-	-
Phenol	mg/L	T	<0.01 :	-	-	-	-	-
Pyrene	mg/L	T	<0.01 :	-	-	-	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :	-	-	-	-	-
2,6-Pyridinediamine,	mg/L	T	<0.00025 :	-	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :	-	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :	-	-	-	-	-
Pentaerythritol tetranitrate	mg/L	T	<0.01 :	-	-	-	-	-
Isotopes								
Lead	mg/L	T	<0.001 :	-	<0.001 :	-	<0.002 :	-
Lead	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.002 :

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-1	1/12/2004	P-1-T01N-GRW		P-1	1/12/2004	P-1-D01N-GRW		P-1	4/20/2004	P-1-T01N-GRW		P-1	4/20/2004	P-1-D01N-GRW		P-2	11/5/2002	P-2-T01N-GRWRE		P-2	11/5/2002	P-2-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Field Measurements																										
DO	mg/L	T	-				-				5.55		:		-				-				11.15		:	
Eh	millivolts	T	603.4		:		-				367.4		:		-				-				269.3		:	
pH	SU	T	4.7	J			-				4.6	J			-				-				4.34		:	
Specific Conductance	uS/cm	T	1258.		:		-				1349.		:		-				-				1589.		:	
Temperature	Celsius	T	7.24		:		-				8.14		:		-				-				9.3		:	
Turbidity	NTU	T	7.7		:		-				-				-				-				22.5		:	
General Chemistry																										
Ammonia	mg/L	T	<0.067	J			-				<0.042		:		-				-				<0.24	J		
Bicarbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-				-				17.2		:	
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-				-				<1.		:	
Chloride	mg/L	T	13.8		:		-				14.4		:		-				-				17.5		:	
Fluoride	mg/L	T	16.6		:		-				16.6		:		-				18.	J			-			
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-				-				<1.		:	
Nitrate	mg/L	T	2.3	J			-				1.9	J			-				-				3.5	J		
Nitrite	mg/L	T	<0.005		:		-				<0.005		:		-				-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.01		:		-				-				<0.01	J		
Phosphorus	mg/L	T	<0.027		:		-				0.011		:		-				-				0.029		:	
Sulfate	mg/L	T	839.		:		-				814.		:		-				819.	J			-			
Total Alkalinity	mg/L	T	<1.		:		-				<1.		:		-				-				17.2		:	
Total Dissolved Solids	mg/L	T	1200.		:		-				1140.		:		-				-				1440.		:	
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-				<0.24	J			-				-				<0.24		:	
Total Organic Carbon	mg/L	T	<1.1		:		-				<1.	J			-				-				1.		:	
Total Suspended Solids	mg/L	T	7.6		:		-				<1.9	J			-				-				17.8		:	
Laboratory Parameters																										
pH	SU	T	4.7	J			-				4.6	J			-				-				4.34		:	
Specific Conductance	umhos/cm	T	1320.	J			-				1120.	J			-				-				-			
Inorganics																										
Cyanide	mg/L	T	<0.01	J			-				<0.01		:		-				-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	646.		:		-				615.		:		-				-				-			
Hardness	mg/L	D	-				657.		:		-				591.		:		-				-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 1/12/2004 P-1-T01N-GRW GW5	P-1 1/12/2004 P-1-D01N-GRW GW5	P-1 4/20/2004 P-1-T01N-GRW GW5	P-1 4/20/2004 P-1-D01N-GRW GW5	P-2 11/5/2002 P-2-T01N-GRWRE GW5	P-2 11/5/2002 P-2-T01N-GRW GW5
Aluminum	mg/L	T	23.4 :	-	30.1 :	-	-	-
Aluminum	mg/L	D	-	24.7 :	-	29.4 :	-	-
Antimony	mg/L	T	<0.029 :	-	<0.053 :	-	-	-
Antimony	mg/L	D	-	<0.029 :	-	<0.053 :	-	-
Arsenic	mg/L	T	<0.028 J	-	<0.037 :	-	-	-
Arsenic	mg/L	D	-	<0.028 J	-	<0.037 :	-	-
Barium	mg/L	T	<0.053 :	-	<0.049 :	-	-	-
Barium	mg/L	D	-	<0.053 :	-	<0.049 :	-	-
Beryllium	mg/L	T	0.021 :	-	0.0196 :	-	-	-
Beryllium	mg/L	D	-	0.0218 :	-	0.0176 :	-	-
Boron	mg/L	T	<0.023 :	-	<0.036 :	-	-	-
Boron	mg/L	D	-	<0.023 :	-	<0.036 :	-	-
Cadmium	mg/L	T	<0.07 J	-	<0.0689 :	-	-	-
Cadmium	mg/L	D	-	<0.07 :	-	<0.0606 :	-	-
Calcium	mg/L	T	137. :	-	127. :	-	-	-
Calcium	mg/L	D	-	139. :	-	122. :	-	-
Chromium	mg/L	T	<0.57 :	-	<0.08 :	-	-	-
Chromium	mg/L	D	-	<0.57 :	-	<0.08 :	-	-
Cobalt	mg/L	T	<0.37 :	-	<0.11 :	-	-	-
Cobalt	mg/L	D	-	<0.37 :	-	<0.11 :	-	-
Copper	mg/L	T	0.39 :	-	<0.58 :	-	-	-
Copper	mg/L	D	-	0.409 :	-	<0.598 :	-	-
Iron	mg/L	T	<4.23 :	-	<1.92 J	-	-	-
Iron	mg/L	D	-	<4.74 :	-	<2.6 :	-	-
Lead	mg/L	T	<0.001 :	-	<0.004 :	-	-	-
Lead	mg/L	D	-	<0.001 :	-	<0.004 :	-	-
Magnesium	mg/L	T	73.8 :	-	72.4 :	-	-	-
Magnesium	mg/L	D	-	75.1 :	-	69.6 :	-	-
Manganese	mg/L	T	13.3 :	-	14.2 :	-	-	-
Manganese	mg/L	D	-	13. :	-	13.6 :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	-
Molybdenum	mg/L	T	<0.024 :	-	<0.014 :	-	-	-
Molybdenum	mg/L	D	-	<0.024 :	-	<0.014 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 1/12/2004 P-1-T01N-GRW GW5	P-1 1/12/2004 P-1-D01N-GRW GW5	P-1 4/20/2004 P-1-T01N-GRW GW5	P-1 4/20/2004 P-1-D01N-GRW GW5	P-2 11/5/2002 P-2-T01N-GRWRE GW5	P-2 11/5/2002 P-2-T01N-GRW GW5
Nickel	mg/L	T	<1.68 :	-	0.367 :	-	-	-
Nickel	mg/L	D	-	<1.68 :	-	0.346 :	-	-
Potassium	mg/L	T	<110. :	-	<10.9 J	-	-	-
Potassium	mg/L	D	-	<110. :	-	<10.9 J	-	-
Selenium	mg/L	T	0.0127 J	-	<0.007 :	-	-	-
Selenium	mg/L	D	-	0.008 :	-	0.0079 :	-	-
Silver	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Silver	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Sodium	mg/L	T	<92. :	-	<17.3 :	-	-	-
Sodium	mg/L	D	-	<92. :	-	<27.4 :	-	-
Thallium	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Vanadium	mg/L	T	<0.002 :	-	<0.002 :	-	-	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.002 :	-	-
Zinc	mg/L	T	4.68 :	-	4.29 :	-	-	-
Zinc	mg/L	D	-	4.82 :	-	4.09 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1-Dichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,1-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloroethane	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	-	-	-	-	<0.01 :
1,2-Dichloropropane	mg/L	T	-	-	-	-	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
2-Butanone	mg/L	T	-	-	-	-	-	<0.01 :
2-Hexanone	mg/L	T	-	-	-	-	-	<0.01 :
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	-	<0.01 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction						
		Site ID	P-1	P-1	P-1	P-1	P-2	P-2
		Sample Date	1/12/2004	1/12/2004	4/20/2004	4/20/2004	11/5/2002	11/5/2002
		Sample ID	P-1-T01N-GRW	P-1-D01N-GRW	P-1-T01N-GRW	P-1-D01N-GRW	P-2-T01N-GRWRE	P-2-T01N-GRW
		Exposure Area Fraction	GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T	-	-	-	-	-	<0.01 :
Benzene	mg/L	T	-	-	-	-	-	<0.01 :
Bromodichloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Bromoform	mg/L	T	-	-	-	-	-	<0.01 :
Bromomethane	mg/L	T	-	-	-	-	-	<0.01 :
Carbon disulfide	mg/L	T	-	-	-	-	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	-	-	-	-	<0.01 :
Chlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Chloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Chloroform	mg/L	T	-	-	-	-	-	<0.01 :
Chloromethane	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Dibromochloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	-	-	-	-	<0.01 :
Ethylbenzene	mg/L	T	-	-	-	-	-	<0.01 :
Methylene chloride	mg/L	T	-	-	-	-	-	<0.01 :
Styrene	mg/L	T	-	-	-	-	-	<0.01 :
Tetrachloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Toluene	mg/L	T	-	-	-	-	-	<0.01 :
Total Xylene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Trichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	-	-	-	-	<0.01 :
Vinyl chloride	mg/L	T	-	-	-	-	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	-	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dinitrophenol	mg/L	T	-	-	-	-	-	<0.025 :
2,4-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction						
		Site ID	P-1	P-1	P-1	P-1	P-2	P-2
		Sample Date	1/12/2004	1/12/2004	4/20/2004	4/20/2004	11/5/2002	11/5/2002
		Sample ID	P-1-T01N-GRW	P-1-D01N-GRW	P-1-T01N-GRW	P-1-D01N-GRW	P-2-T01N-GRWRE	P-2-T01N-GRW
		Exposure Area Fraction	GW5	GW5	GW5	GW5	GW5	GW5
2,6-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01 :
2-Chloronaphthalene	mg/L	T	-	-	-	-	-	<0.01 :
2-Chlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2-Methylnaphthalene	mg/L	T	-	-	-	-	-	<0.01 :
2-Methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
2-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
2-Nitrophenol	mg/L	T	-	-	-	-	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T	-	-	-	-	-	<0.01 :
3-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	-	-	<0.025 :
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
4-Chloroaniline	mg/L	T	-	-	-	-	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01 :
4-Methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
4-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
4-Nitrophenol	mg/L	T	-	-	-	-	-	<0.025 :
Acenaphthene	mg/L	T	-	-	-	-	-	<0.01 :
Acenaphthylene	mg/L	T	-	-	-	-	-	<0.01 :
Anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Benzaldehyde	mg/L	T	-	-	-	-	-	<0.01 J
Benzo(a)anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(a)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Butyl benzyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Carbazole	mg/L	T	-	-	-	-	-	<0.01 :
Chrysene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenzofuran	mg/L	T	-	-	-	-	-	<0.01 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-1 1/12/2004 P-1-T01N-GRW GW5	P-1 1/12/2004 P-1-D01N-GRW GW5	P-1 4/20/2004 P-1-T01N-GRW GW5	P-1 4/20/2004 P-1-D01N-GRW GW5	P-2 11/5/2002 P-2-T01N-GRWRE GW5	P-2 11/5/2002 P-2-T01N-GRW GW5
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	-	<0.01 :
Diethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Dimethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Fluorene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobutadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Isophorone	mg/L	T	-	-	-	-	-	<0.01 :
Naphthalene	mg/L	T	-	-	-	-	-	<0.01 :
Nitrobenzene	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	-	<0.01 :
Pentachlorophenol	mg/L	T	-	-	-	-	-	<0.025 :
Phenanthrene	mg/L	T	-	-	-	-	-	<0.01 :
Phenol	mg/L	T	-	-	-	-	-	<0.01 :
Pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	-	<0.01 :
Isotopes								
Delta D	per mil	T	-	-	-96.3 :	-	-	-
Delta O-18	per mil	T	-	-	-13.2 :	-	-	-
Lead	mg/L	T	<0.001 :	-	<0.004 :	-	-	-
Lead	mg/L	D	-	<0.001 :	-	<0.004 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-2	11/5/2002	P-2-D01N-GRWRE		P-2	11/5/2002	P-2-D01N-GRW		P-2	1/13/2003	P-2-T01N-GRW		P-2	1/13/2003	P-2-D01N-GRW		P-2	4/7/2003	P-2-T01N-GRW		P-2	4/7/2003	P-2-D01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Field Measurements																										
DO	mg/L	T	-				-				7.58		:		-				6.96		:		-			
Eh	millivolts	T	-				-				493.4		:		-				324.		:		-			
pH	SU	T	-				-				4.65		:		-				3.8		J		-			
Specific Conductance	uS/cm	T	-				-				1270.		:		-				1490.		:		-			
Temperature	Celsius	T	-				-				9.01		:		-				6.44		:		-			
Turbidity	NTU	T	-				-				-				-				4.2		:		-			
General Chemistry																										
Ammonia	mg/L	T	-				-				<0.19		J		-				<0.074		:		-			
Bicarbonate (as CaCO3)	mg/L	T	-				-				<2.2		:		-				<2.4		:		-			
Carbonate (as CaCO3)	mg/L	T	-				-				<1.		:		-				<1.		:		-			
Chloride	mg/L	T	-				-				17.1		J		-				22.1		:		-			
Fluoride	mg/L	T	-				-				15.5		:		-				18.3		:		-			
Hydroxide (as CaCO3)	mg/L	T	-				-				<1.		:		-				<1.		:		-			
Nitrate	mg/L	T	-				-				2.2		:		-				2.7		J		-			
Nitrite	mg/L	T	-				-				<0.005		:		-				<0.005		J		-			
Phosphate, Ortho As P	mg/L	T	-				-				<0.012		J		-				<0.01		J		-			
Phosphorus	mg/L	T	-				-				0.012		:		-				<0.01		:		-			
Sulfate	mg/L	T	-				-				701.		J		-				878.		J		-			
Total Alkalinity	mg/L	T	-				-				<2.2		:		-				<2.4		:		-			
Total Dissolved Solids	mg/L	T	-				-				1110.		J		-				1450.		:		-			
Total Kjeldahl Nitrogen	mg/L	T	-				-				<0.26		:		-				<0.24		:		-			
Total Organic Carbon	mg/L	T	-				-				<1.		:		-				<1.4		J		-			
Total Suspended Solids	mg/L	T	-				-				<0.6		:		-				<0.6		:		-			
Laboratory Parameters																										
pH	SU	T	-				-				4.65		:		-				3.8		J		-			
Specific Conductance	umhos/cm	T	-				-				-				-				1380.		J		-			
Inorganics																										
Cyanide	mg/L	T	-				-				<0.01		J		-				-				-			
Physical Properties																										
Hardness	mg/L	T	-				-				713.		:		-				752.		:		-			
Hardness	mg/L	D	747.		:		-				-				722.		:		-				718.		:	
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-2 11/5/2002 P-2-D01N-GRWRE GW5	P-2 11/5/2002 P-2-D01N-GRW GW5	P-2 1/13/2003 P-2-T01N-GRW GW5	P-2 1/13/2003 P-2-D01N-GRW GW5	P-2 4/7/2003 P-2-T01N-GRW GW5	P-2 4/7/2003 P-2-D01N-GRW GW5
Aluminum	mg/L	T	-	-	27.1 :	-	30.5 :	-
Aluminum	mg/L	D	25.6 :	-	-	27.2 :	-	29.3 :
Antimony	mg/L	T	-	-	<0.028 :	-	<0.003 :	-
Antimony	mg/L	D	<0.028 :	-	-	<0.028 :	-	<0.003 :
Arsenic	mg/L	T	-	-	<0.023 :	-	<0.002 :	-
Arsenic	mg/L	D	<0.0245 J	-	-	<0.0383 :	-	<0.002 :
Barium	mg/L	T	-	-	<0.048 :	-	<0.125 :	-
Barium	mg/L	D	<0.048 :	-	-	<0.048 :	-	<0.125 :
Beryllium	mg/L	T	-	-	0.0133 :	-	0.0076 :	-
Beryllium	mg/L	D	0.0134 :	-	-	0.0129 :	-	0.0067 :
Boron	mg/L	T	-	-	<0.036 :	-	<0.084 :	-
Boron	mg/L	D	<0.027 :	-	-	<0.027 :	-	<0.084 :
Cadmium	mg/L	T	-	-	0.0458 :	-	0.0304 :	-
Cadmium	mg/L	D	<0.08 :	-	-	0.0449 :	-	0.0289 :
Calcium	mg/L	T	-	-	156. :	-	159. :	-
Calcium	mg/L	D	159. :	-	-	158. :	-	152. :
Chromium	mg/L	T	-	-	<0.37 :	-	<0.019 :	-
Chromium	mg/L	D	<0.16 J	-	-	<0.37 :	-	<0.019 :
Cobalt	mg/L	T	-	-	<0.16 :	-	0.0838 :	-
Cobalt	mg/L	D	<0.23 :	-	-	<0.16 :	-	0.0795 :
Copper	mg/L	T	-	-	0.398 :	-	0.387 :	-
Copper	mg/L	D	<0.343 :	-	-	0.434 :	-	0.369 :
Iron	mg/L	T	-	-	<4.89 :	-	<0.422 :	-
Iron	mg/L	D	<2.66 :	-	-	<4.89 :	-	<0.422 :
Lead	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Lead	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Magnesium	mg/L	T	-	-	78.6 :	-	86.2 :	-
Magnesium	mg/L	D	85.1 :	-	-	79.6 :	-	82.2 :
Manganese	mg/L	T	-	-	13.1 :	-	16.4 :	-
Manganese	mg/L	D	15. :	-	-	13.4 :	-	15.6 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.011 J	-	<0.022 :	-
Molybdenum	mg/L	D	<0.011 :	-	-	<0.011 J	-	<0.022 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-2 11/5/2002 P-2-D01N-GRWRE GW5	P-2 11/5/2002 P-2-D01N-GRW GW5	P-2 1/13/2003 P-2-T01N-GRW GW5	P-2 1/13/2003 P-2-D01N-GRW GW5	P-2 4/7/2003 P-2-T01N-GRW GW5	P-2 4/7/2003 P-2-D01N-GRW GW5
Nickel	mg/L	T	-	-	0.43 :	-	0.424 :	-
Nickel	mg/L	D	<0.34 :	-	-	0.451 :	-	0.4 :
Potassium	mg/L	T	-	-	<20.2 J	-	<4.05 :	-
Potassium	mg/L	D	<31.4 J	-	-	<20.2 J	-	<4.05 :
Selenium	mg/L	T	-	-	<0.008 :	-	<0.005 :	-
Selenium	mg/L	D	<0.008 :	-	-	0.0081 :	-	<0.005 :
Silver	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	-	-	<32.7 :	-	17.4 :	-
Sodium	mg/L	D	<36.6 :	-	-	<32.7 :	-	17.5 :
Thallium	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T	-	-	<0.002 :	-	<0.001 J	-
Vanadium	mg/L	D	<0.002 :	-	-	<0.002 :	-	<0.001 J
Zinc	mg/L	T	-	-	4.01 :	-	3.93 :	-
Zinc	mg/L	D	3.87 :	-	-	4.08 :	-	3.78 :
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
2-Butanone	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
2-Hexanone	mg/L	T	-	-	<0.01 :	-	<0.01 J	-
4-Methyl-2-pentanone	mg/L	T	-	-	<0.01 :	-	<0.01 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-2	11/5/2002	P-2-D01N-GRWRE		P-2	11/5/2002	P-2-D01N-GRW		P-2	1/13/2003	P-2-T01N-GRW		P-2	1/13/2003	P-2-D01N-GRW	
			GW5				GW5				GW5				GW5			
Acetone	mg/L	T	-				-				<0.01		J		-			
Benzene	mg/L	T	-				-				<0.01		:		-			
Bromodichloromethane	mg/L	T	-				-				<0.01		:		-			
Bromoform	mg/L	T	-				-				<0.01		:		-			
Bromomethane	mg/L	T	-				-				<0.01		:		-			
Carbon disulfide	mg/L	T	-				-				<0.01		:		-			
Carbon tetrachloride	mg/L	T	-				-				<0.01		:		-			
Chlorobenzene	mg/L	T	-				-				<0.01		:		-			
Chloroethane	mg/L	T	-				-				<0.01		:		-			
Chloroform	mg/L	T	-				-				<0.01		:		-			
Chloromethane	mg/L	T	-				-				<0.01		:		-			
cis-1,2-Dichloroethene	mg/L	T	-				-				<0.01		:		-			
cis-1,3-Dichloropropene	mg/L	T	-				-				<0.01		:		-			
Dibromochloromethane	mg/L	T	-				-				<0.01		:		-			
Dichlorodifluoromethane	mg/L	T	-				-				<0.01		:		-			
Ethylbenzene	mg/L	T	-				-				<0.01		:		-			
Methylene chloride	mg/L	T	-				-				<0.01		:		-			
Styrene	mg/L	T	-				-				<0.01		:		-			
Tetrachloroethene	mg/L	T	-				-				<0.01		:		-			
Toluene	mg/L	T	-				-				<0.01		:		-			
Total Xylene	mg/L	T	-				-				<0.01		:		-			
trans-1,2-Dichloroethene	mg/L	T	-				-				<0.01		:		-			
trans-1,3-Dichloropropene	mg/L	T	-				-				<0.01		:		-			
Trichloroethene	mg/L	T	-				-				<0.01		:		-			
Trichlorofluoromethane	mg/L	T	-				-				<0.01		:		-			
Vinyl chloride	mg/L	T	-				-				<0.01		:		-			
Semi-Volatile Organics																		
1,1`-Biphenyl	mg/L	T	-				-				<0.01		:		-			
2,4,5-Trichlorophenol	mg/L	T	-				-				<0.025		:		-			
2,4,6-Trichlorophenol	mg/L	T	-				-				<0.01		:		-			
2,4-Dichlorophenol	mg/L	T	-				-				<0.01		:		-			
2,4-Dimethylphenol	mg/L	T	-				-				<0.01		:		-			
2,4-Dinitrophenol	mg/L	T	-				-				<0.025		J		-			
2,4-Dinitrotoluene	mg/L	T	-				-				<0.01		:		-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	P-2	P-2	P-2		P-2	P-2		P-2
Site ID			P-2	P-2	P-2		P-2	P-2		P-2
Sample Date			11/5/2002	11/5/2002	1/13/2003		1/13/2003	4/7/2003		4/7/2003
Sample ID			P-2-D01N-GRWRE	P-2-D01N-GRW	P-2-T01N-GRW		P-2-D01N-GRW	P-2-T01N-GRW		P-2-D01N-GRW
Exposure Area			GW5	GW5	GW5		GW5	GW5		GW5
2,6-Dinitrotoluene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
2-Chloronaphthalene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
2-Chlorophenol	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
2-Methylnaphthalene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
2-Methylphenol	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
2-Nitroaniline	mg/L	T	-	-	<0.025	:	-	<0.026	:	-
2-Nitrophenol	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.01	:	-	<0.01	J	-
3-Nitroaniline	mg/L	T	-	-	<0.025	:	-	<0.026	J	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.025	:	-	<0.026	J	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
4-Chloroaniline	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
4-Methylphenol	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
4-Nitroaniline	mg/L	T	-	-	<0.025	:	-	<0.026	:	-
4-Nitrophenol	mg/L	T	-	-	<0.025	J	-	<0.026	J	-
Acenaphthene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Acenaphthylene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Anthracene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzaldehyde	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzo(a)anthracene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzo(a)pyrene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzo(b)fluoranthene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Benzo(k)fluoranthene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	0.0007	J	-	<0.01	:	-
Butyl benzyl phthalate	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Carbazole	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Chrysene	mg/L	T	-	-	<0.01	:	-	<0.01	:	-
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.01	:	-	<0.01	J	-
Dibenzofuran	mg/L	T	-	-	<0.01	:	-	<0.01	:	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-2 11/5/2002 P-2-D01N-GRWRE GW5	P-2 11/5/2002 P-2-D01N-GRW GW5	P-2 1/13/2003 P-2-T01N-GRW GW5	P-2 1/13/2003 P-2-D01N-GRW GW5	P-2 4/7/2003 P-2-T01N-GRW GW5	P-2 4/7/2003 P-2-D01N-GRW GW5
Dichlorodiisopropyl ether	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Diethylphthalate	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	<0.01 J	-	<0.01 J	-
Fluoranthene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Fluorene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Isophorone	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	<0.025 :	-	<0.026 :	-
Phenanthrene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Phenol	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Pyrene	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Lead	mg/L	D	<0.001 :	-	-	<0.001 :	-	<0.001 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			P-2	7/23/2003	P-2-T01N-GRW	GW5	P-2	7/23/2003	P-2-D01N-GRW	GW5	P-2	10/16/2003	P-2-T01N-GRW	GW5	P-2	10/16/2003	P-2-D01N-GRW	GW5	P-2	1/13/2004	P-2-T01N-GRW	GW5	P-2	1/13/2004	P-2-D01N-GRW	GW5
Field Measurements																						
DO	mg/L	T	5.88	:			-				5.78	:			-				8.43	:			-			
Eh	millivolts	T	389.4	:			-				671.9	:			-				370.6	:			-			
pH	SU	T	4.7	J			-				4.8	J			-				4.8	J			-			
Specific Conductance	uS/cm	T	985.	:			-				1134.	:			-				1254.	:			-			
Temperature	Celsius	T	9.34	:			-				9.86	:			-				9.14	:			-			
Turbidity	NTU	T	0.	:			-				0.	:			-				32.1	:			-			
General Chemistry																						
Ammonia	mg/L	T	<0.061	J			-				<0.099	J			-				<0.087	J			-			
Bicarbonate (as CaCO3)	mg/L	T	<2.	:			-				<2.1	:			-				<2.3	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Chloride	mg/L	T	7.6	:			-				11.2	:			-				13.2	:			-			
Fluoride	mg/L	T	12.	:			-				14.4	:			-				16.3	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	1.5	:			-				2.	J			-				2.	J			-			
Nitrite	mg/L	T	<0.005	:			-				<0.005	J			-				<0.005	:			-			
Phosphate, Ortho As P	mg/L	T	<0.01	:			-				<0.01	J			-				<0.01	:			-			
Phosphorus	mg/L	T	0.012	:			-				0.013	:			-				0.033	:			-			
Sulfate	mg/L	T	519.	J			-				610.	J			-				742.	:			-			
Total Alkalinity	mg/L	T	<2.	:			-				<2.1	:			-				<2.3	:			-			
Total Dissolved Solids	mg/L	T	1150.	:			-				1160.	:			-				1140.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	<1.3	J			-				<1.	J			-				<1.	:			-			
Total Suspended Solids	mg/L	T	<0.7	:			-				<0.6	:			-				17.8	:			-			
Laboratory Parameters																						
pH	SU	T	4.7	J			-				4.8	J			-				4.8	J			-			
Specific Conductance	umhos/cm	T	968.	J			-				1030.	J			-				1310.	J			-			
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-				<0.01	J			-			
Physical Properties																						
Hardness	mg/L	T	437.	:			-				579.	:			-				641.	:			-			
Hardness	mg/L	D	-				467.	:			-				535.	:			-				652.	:		
Metals																						

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-2 7/23/2003 P-2-T01N-GRW GW5		P-2 7/23/2003 P-2-D01N-GRW GW5		P-2 10/16/2003 P-2-T01N-GRW GW5		P-2 10/16/2003 P-2-D01N-GRW GW5		P-2 1/13/2004 P-2-T01N-GRW GW5		P-2 1/13/2004 P-2-D01N-GRW GW5	
Aluminum	mg/L	T	21.5	:	-		18.6	:	-		30.4	:	-	
Aluminum	mg/L	D	-		22.7	:	-		11.7	:	-		29.8	:
Antimony	mg/L	T	<0.047	:	-		<0.052	:	-		<0.097	:	-	
Antimony	mg/L	D	-		<0.047	:	-		<0.052	:	-		<0.097	:
Arsenic	mg/L	T	<0.048	:	-		<0.041	:	-		<0.052	:	-	
Arsenic	mg/L	D	-		<0.048	:	-		<0.041	:	-		<0.052	:
Barium	mg/L	T	<0.059	:	-		<0.115	:	-		<0.188	:	-	
Barium	mg/L	D	-		<0.059	:	-		<0.115	:	-		<0.188	:
Beryllium	mg/L	T	0.0099	:	-		<0.0141	:	-		0.0119	:	-	
Beryllium	mg/L	D	-		0.0099	:	-		<0.0106	:	-		0.0122	:
Boron	mg/L	T	<0.048	:	-		<0.063	:	-		<0.117	:	-	
Boron	mg/L	D	-		<0.048	:	-		<0.063	:	-		<0.117	:
Cadmium	mg/L	T	<0.12	:	-		<0.0645	:	-		<0.07	J	-	
Cadmium	mg/L	D	-		<0.12	:	-		-		-		<0.07	:
Calcium	mg/L	T	91.7	:	-		119.	:	-		130.	:	-	
Calcium	mg/L	D	-		99.1	:	-		111.	:	-		133.	:
Chromium	mg/L	T	<0.19	:	-		0.182	J	-		<0.11	:	-	
Chromium	mg/L	D	-		<0.19	:	-		<0.11	J	-		<0.11	:
Cobalt	mg/L	T	<0.37	:	-		<0.29	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		<0.37	:	-		<0.29	:	-		<0.31	:
Copper	mg/L	T	<0.33	J	-		0.328	J	-		0.397	:	-	
Copper	mg/L	D	-		<0.33	J	-		<0.22	J	-		0.399	:
Iron	mg/L	T	<0.333	:	-		4.32	:	-		<3.73	:	-	
Iron	mg/L	D	-		<0.333	:	-		<2.78	:	-		<3.73	:
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		0.0012	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Magnesium	mg/L	T	50.4	:	-		68.7	:	-		76.6	:	-	
Magnesium	mg/L	D	-		53.4	:	-		62.8	:	-		77.8	:
Manganese	mg/L	T	7.85	:	-		12.3	:	-		15.4	:	-	
Manganese	mg/L	D	-		8.32	:	-		11.6	:	-		15.6	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	<0.017	:	-		<0.0175	:	-		<0.03	:	-	
Molybdenum	mg/L	D	-		<0.017	:	-		<0.011	:	-		<0.03	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-2 7/23/2003 P-2-T01N-GRW GW5		P-2 7/23/2003 P-2-D01N-GRW GW5		P-2 10/16/2003 P-2-T01N-GRW GW5		P-2 10/16/2003 P-2-D01N-GRW GW5		P-2 1/13/2004 P-2-T01N-GRW GW5		P-2 1/13/2004 P-2-D01N-GRW GW5	
Nickel	mg/L	T	<0.44	J	-		<0.576	:	-		0.339	:	-	
Nickel	mg/L	D	-		<0.44	J	-		<0.313	:	-		0.297	:
Potassium	mg/L	T	<37.1	:	-		284.	:	-		<24.3	:	-	
Potassium	mg/L	D	-		<37.1	:	-		381.	:	-		<24.3	:
Selenium	mg/L	T	<0.008	:	-		<0.0052	:	-		0.0078	J	-	
Selenium	mg/L	D	-		<0.008	J	-		<0.0055	:	-		0.007	:
Silver	mg/L	T	<0.001	J	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	J	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<53.2	:	-		<50.2	:	-		<49.	:	-	
Sodium	mg/L	D	-		<53.2	:	-		<50.2	:	-		<49.	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.002	:
Zinc	mg/L	T	2.28	:	-		3.01	:	-		3.54	:	-	
Zinc	mg/L	D	-		2.46	:	-		2.73	:	-		3.64	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		0.0012	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			P-2	5/12/2004	P-2-T01N-GRW	GW5
			P-2	5/12/2004	P-2-D01N-GRW	GW5
			P-3	11/4/2002	P-3-T01N-GRWRE	GW4
			P-3	11/4/2002	P-3-T01N-GRW	GW4
			P-3	11/4/2002	P-3-D01N-GRWRE	GW4
			P-3	11/4/2002	P-3-D01N-GRW	GW4
Field Measurements						
DO	mg/L	T	7.76 :	-	-	5.96 :	-	-
Eh	millivolts	T	588.7 :	-	-	479.8 :	-	-
pH	SU	T	4.9 J	-	-	4.71 :	-	-
Specific Conductance	uS/cm	T	1250. :	-	-	1507. :	-	-
Temperature	Celsius	T	8.69 :	-	-	6.65 :	-	-
Turbidity	NTU	T	1.8 :	-	-	17.5 :	-	-
General Chemistry						
Ammonia	mg/L	T	<0.095 :	-	-	<0.089 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	<1.9 :	-	-	<1.3 :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	-
Chloride	mg/L	T	11.9 :	-	-	16.9 :	-	-
Fluoride	mg/L	T	13.6 :	-	17.8 J	-	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	-
Nitrate	mg/L	T	1.6 J	-	-	2.9 :	-	-
Nitrite	mg/L	T	<0.005 :	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-	<0.01 J	-	-
Phosphorus	mg/L	T	0.018 :	-	-	<0.01 :	-	-
Sulfate	mg/L	T	731. :	-	791. J	-	-	-
Total Alkalinity	mg/L	T	<1.9 :	-	-	<1.3 :	-	-
Total Dissolved Solids	mg/L	T	1040. :	-	-	1380. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	1.6 :	-	-	<1. :	-	-
Total Suspended Solids	mg/L	T	4.9 :	-	-	<0.5 :	-	-
Laboratory Parameters						
pH	SU	T	4.9 J	-	-	4.71 :	-	-
Specific Conductance	umhos/cm	T	1100. J	-	-	-	-	-
Inorganics						
Cyanide	mg/L	T	<0.01 :	-	-	<0.01 J	-	-
Physical Properties						
Hardness	mg/L	T	585. :	-	-	-	-	-
Hardness	mg/L	D	-	578. :	-	-	706. :	-
Metals						

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-2	5/12/2004	P-2-T01N-GRW		P-2	5/12/2004	P-2-D01N-GRW		P-3	11/4/2002	P-3-T01N-GRWRE		P-3	11/4/2002	P-3-T01N-GRW		P-3	11/4/2002	P-3-D01N-GRWRE		P-3	11/4/2002	P-3-D01N-GRW	
			GW5				GW5				GW4				GW4				GW4				GW4			
Aluminum	mg/L	T	27.4	:			-				-				-				-				-			
Aluminum	mg/L	D	-				26.9	:			-				-				20.6	:			-			
Antimony	mg/L	T	<0.0008	:			-				-				-				-				-			
Antimony	mg/L	D	-				<0.0008	:			-				-				<0.028	:			-			
Arsenic	mg/L	T	<0.0004	:			-				-				-				-				-			
Arsenic	mg/L	D	-				<0.0004	:			-				-				<0.023	:			-			
Barium	mg/L	T	0.0128	:			-				-				-				-				-			
Barium	mg/L	D	-				0.0098	:			-				-				<0.048	:			-			
Beryllium	mg/L	T	0.0093	:			-				-				-				-				-			
Beryllium	mg/L	D	-				0.0093	:			-				-				0.0197	:			-			
Boron	mg/L	T	0.007	:			-				-				-				-				-			
Boron	mg/L	D	-				0.0059	:			-				-				<0.027	:			-			
Cadmium	mg/L	T	0.0175	:			-				-				-				-				-			
Cadmium	mg/L	D	-				0.0164	:			-				-				<0.08	:			-			
Calcium	mg/L	T	118.	:			-				-				-				-				-			
Calcium	mg/L	D	-				117.	:			-				-				154.	:			-			
Chromium	mg/L	T	<0.0006	J			-				-				-				-				-			
Chromium	mg/L	D	-				<0.0006	J			-				-				<0.16	J			-			
Chromium, Hexavalent	mg/L	D	-				-				-				<0.01	:			-				-			
Cobalt	mg/L	T	0.0722	:			-				-				-				-				-			
Cobalt	mg/L	D	-				0.0684	:			-				-				<0.23	:			-			
Copper	mg/L	T	0.392	:			-				-				-				-				-			
Copper	mg/L	D	-				0.36	:			-				-				<0.212	:			-			
Iron	mg/L	T	<0.293	:			-				-				-				-				-			
Iron	mg/L	D	-				<0.293	:			-				-				<2.66	:			-			
Lead	mg/L	T	<0.0008	:			-				-				-				-				-			
Lead	mg/L	D	-				<0.0008	:			-				-				<0.001	:			-			
Magnesium	mg/L	T	70.1	:			-				-				-				-				-			
Magnesium	mg/L	D	-				69.4	:			-				-				78.1	:			-			
Manganese	mg/L	T	14.2	:			-				-				-				-				-			
Manganese	mg/L	D	-				14.	:			-				-				10.4	:			-			
Mercury	mg/L	T	<0.0001	:			-				-				<0.0001	:			-				-			
Mercury	mg/L	D	-				<0.0001	:			-				-				-				<0.0001	:		
Molybdenum	mg/L	T	<0.0014	J			-				-				-				-				-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-2	5/12/2004	P-2-T01N-GRW		P-2	5/12/2004	P-2-D01N-GRW		P-3	11/4/2002	P-3-T01N-GRWRE		P-3	11/4/2002	P-3-T01N-GRW		P-3	11/4/2002	P-3-D01N-GRWRE		P-3	11/4/2002	P-3-D01N-GRW	
			GW5				GW5				GW4				GW4				GW4				GW4			
Molybdenum	mg/L	D	-				<0.0014		J		-				-				<0.011		:		-			
Nickel	mg/L	T	0.269		:		-				-				-				-				-			
Nickel	mg/L	D	-				0.258		:		-				-				0.403		:		-			
Potassium	mg/L	T	2.48		:		-				-				-				-				-			
Potassium	mg/L	D	-				2.42		:		-				-				<31.4		J		-			
Selenium	mg/L	T	0.0034		:		-				-				-				-				-			
Selenium	mg/L	D	-				0.0032		:		-				-				<0.008		:		-			
Silver	mg/L	T	<0.0002		:		-				-				-				-				-			
Silver	mg/L	D	-				<0.0002		:		-				-				<0.001		:		-			
Sodium	mg/L	T	16.8		:		-				-				-				-				-			
Sodium	mg/L	D	-				18.2		:		-				-				41.9		:		-			
Thallium	mg/L	T	<0.0002		:		-				-				-				-				-			
Thallium	mg/L	D	-				<0.0002		:		-				-				<0.001		:		-			
Vanadium	mg/L	T	<0.0004		:		-				-				-				-				-			
Vanadium	mg/L	D	-				<0.0004		:		-				-				<0.002		:		-			
Zinc	mg/L	T	3.1		:		-				-				-				-				-			
Zinc	mg/L	D	-				3.06		:		-				-				4.07		:		-			
Explosives																										
2,4,6-Trinitrotoluene	mg/L	T	-				-				-				<0.00025		:		-				-			
2,6-Pyridinediamine,	mg/L	T	-				-				-				<0.00025		J		-				-			
Cyclotetramethylenetetranitramine	mg/L	T	-				-				-				<0.00025		:		-				-			
Cyclotrimethylenetrinitramine	mg/L	T	-				-				-				<0.00025		:		-				-			
Pentaerythritol tetranitrate	mg/L	T	-				-				-				<0.01		:		-				-			
Isotopes																										
Lead	mg/L	T	<0.0008		:		-				-				-				-				-			
Lead	mg/L	D	-				<0.0008		:		-				-				<0.001		:		-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-3	1/13/2003	P-3-T01N-GRW		P-3	1/13/2003	P-3-D01N-GRW		P-3	4/7/2003	P-3-T01N-GRW		P-3	4/7/2003	P-3-D01N-GRW	
			GW4				GW4				GW4				GW4			
Field Measurements																		
DO	mg/L	T	6.95		:		-		:		5.74		:		-		:	
Eh	millivolts	T	468.3		:		-		:		374.6		:		-		:	
pH	SU	T	4.71		:		-		:		4.6	J	:		-		:	
Specific Conductance	uS/cm	T	1460.		:		-		:		1481.		:		-		:	
Temperature	Celsius	T	7.56		:		-		:		7.47		:		-		:	
Turbidity	NTU	T	0.		:		-		:		4.		:		-		:	
General Chemistry																		
Ammonia	mg/L	T	<0.11		:		-		:		<0.084		:		-		:	
Bicarbonate (as CaCO3)	mg/L	T	<4.2		:		-		:		<2.5		:		-		:	
Carbonate (as CaCO3)	mg/L	T	<1.		:		-		:		<1.		:		-		:	
Chloride	mg/L	T	16.		:		-		:		19.2		:		-		:	
Fluoride	mg/L	T	11.8		:		-		:		19.6		:		-		:	
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-		:		<1.		:		-		:	
Nitrate	mg/L	T	2.9		:		-		:		2.6	J	:		-		:	
Nitrite	mg/L	T	<0.005		:		-		:		<0.005		:		-		:	
Phosphate, Ortho As P	mg/L	T	<0.01	J	:		-		:		<1.4		:		-		:	
Phosphorus	mg/L	T	<0.01		:		-		:		0.045		:		-		:	
Sulfate	mg/L	T	876.	J	:		-		:		815.	J	:		-		:	
Total Alkalinity	mg/L	T	<4.2		:		-		:		<2.5		:		-		:	
Total Dissolved Solids	mg/L	T	1360.		:		-		:		1340.		:		-		:	
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-		:		<0.24		:		-		:	
Total Organic Carbon	mg/L	T	<1.		:		-		:		1.9	J	:		-		:	
Total Suspended Solids	mg/L	T	<0.8		:		-		:		<0.7		:		-		:	
Laboratory Parameters																		
pH	SU	T	4.71		:		-		:		4.6	J	:		-		:	
Specific Conductance	umhos/cm	T	-				-				1350.	J	:		-		:	
Inorganics																		
Cyanide	mg/L	T	<0.01	J	:		-		:		<0.01	J	:		-		:	
Physical Properties																		
Hardness	mg/L	T	824.		:		-		:		709.		:		-		:	
Hardness	mg/L	D	-				802.		:		-				707.		:	
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-3	7/11/2003	P-3-T01N-GRW		P-3	7/11/2003	P-3-D01N-GRW							
			GW4				GW4									
Field Measurements																
DO	mg/L	T	5.48		:		-									
Eh	millivolts	T	644.8		:		-									
pH	SU	T	5.2	J	:		-									
Specific Conductance	uS/cm	T	884.		:		-									
Temperature	Celsius	T	15.69		:		-									
Turbidity	NTU	T	1.		:		-									
General Chemistry																
Ammonia	mg/L	T	<0.067	J	:		-									
Bicarbonate (as CaCO3)	mg/L	T	<4.6		:		-									
Carbonate (as CaCO3)	mg/L	T	<1.		:		-									
Chloride	mg/L	T	6.5		:		-									
Fluoride	mg/L	T	10.2		:		-									
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-									
Nitrate	mg/L	T	1.1	J	:		-									
Nitrite	mg/L	T	<0.005		:		-									
Phosphate, Ortho As P	mg/L	T	<0.01		:		-									
Phosphorus	mg/L	T	0.03		:		-									
Sulfate	mg/L	T	441.	J	:		-									
Total Alkalinity	mg/L	T	<4.6		:		-									
Total Dissolved Solids	mg/L	T	734.		:		-									
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-									
Total Organic Carbon	mg/L	T	7.2	J	:		-									
Total Suspended Solids	mg/L	T	5.3		:		-									
Laboratory Parameters																
pH	SU	T	5.2	J	:		-									
Specific Conductance	umhos/cm	T	765.	J	:		-									
Inorganics																
Cyanide	mg/L	T	<0.01	J	:		-									
Physical Properties																
Hardness	mg/L	T	348.		:		-									
Hardness	mg/L	D	-				367.		:							
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-3 1/13/2003 P-3-T01N-GRW GW4		P-3 1/13/2003 P-3-D01N-GRW GW4		P-3 4/7/2003 P-3-T01N-GRW GW4		P-3 4/7/2003 P-3-D01N-GRW GW4		P-3 7/11/2003 P-3-T01N-GRW GW4		P-3 7/11/2003 P-3-D01N-GRW GW4	
Aluminum	mg/L	T	24.6	:	-		22.1	:	-		11.7	:	-	
Aluminum	mg/L	D	-		24.	:	-		22.6	:	-		11.3	:
Antimony	mg/L	T	<0.028	:	-		<0.003	:	-		<0.047	:	-	
Antimony	mg/L	D	-		<0.028	:	-		<0.003	:	-		<0.047	:
Arsenic	mg/L	T	0.0942	:	-		<0.002	:	-		<0.048	:	-	
Arsenic	mg/L	D	-		<0.023	:	-		<0.002	:	-		<0.048	:
Barium	mg/L	T	<0.048	:	-		<0.125	:	-		<0.059	:	-	
Barium	mg/L	D	-		<0.048	:	-		<0.125	:	-		<0.059	:
Beryllium	mg/L	T	0.0224	:	-		0.0133	:	-		0.0127	:	-	
Beryllium	mg/L	D	-		0.0207	:	-		0.0129	:	-		0.0116	:
Boron	mg/L	T	<0.0413	:	-		<0.084	:	-		<0.048	J	-	
Boron	mg/L	D	-		<0.027	:	-		<0.084	:	-		<0.048	J
Cadmium	mg/L	T	<0.08	:	-		0.0345	:	-		0.0168	:	-	
Cadmium	mg/L	D	-		<0.08	:	-		0.0344	:	-		0.0165	:
Calcium	mg/L	T	179.	:	-		154.	:	-		77.1	:	-	
Calcium	mg/L	D	-		174.	:	-		153.	:	-		81.6	:
Chromium	mg/L	T	<0.16	:	-		<0.019	:	-		<0.014	:	-	
Chromium	mg/L	D	-		<0.16	:	-		<0.019	:	-		<0.014	:
Cobalt	mg/L	T	<0.23	:	-		<0.036	:	-		<0.02	:	-	
Cobalt	mg/L	D	-		<0.23	:	-		<0.036	:	-		<0.02	:
Copper	mg/L	T	0.348	:	-		0.223	:	-		0.13	:	-	
Copper	mg/L	D	-		0.327	:	-		0.245	:	-		0.126	:
Iron	mg/L	T	<2.66	:	-		<0.422	:	-		0.742	:	-	
Iron	mg/L	D	-		<2.66	:	-		<0.422	:	-		<0.333	:
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		0.0017	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Magnesium	mg/L	T	91.3	:	-		78.6	:	-		37.7	:	-	
Magnesium	mg/L	D	-		88.9	:	-		78.7	:	-		39.6	:
Manganese	mg/L	T	11.2	:	-		10.8	:	-		4.41	:	-	
Manganese	mg/L	D	-		10.9	:	-		11.2	:	-		4.64	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		0.00016	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0505	:	-		<0.022	:	-		<0.017	:	-	
Molybdenum	mg/L	D	-		<0.011	:	-		<0.022	:	-		<0.017	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-3 1/13/2003 P-3-T01N-GRW GW4		P-3 1/13/2003 P-3-D01N-GRW GW4		P-3 4/7/2003 P-3-T01N-GRW GW4		P-3 4/7/2003 P-3-D01N-GRW GW4		P-3 7/11/2003 P-3-T01N-GRW GW4		P-3 7/11/2003 P-3-D01N-GRW GW4	
Nickel	mg/L	T	0.597	:	-		0.495	:	-		0.258	:	-	
Nickel	mg/L	D	-		0.676	:	-		0.499	:	-		0.256	:
Potassium	mg/L	T	<31.4	:	-		<4.05	:	-		<3.93	:	-	
Potassium	mg/L	D	-		<31.4	:	-		<4.05	:	-		<3.93	:
Selenium	mg/L	T	0.0108	:	-		<0.005	:	-		0.0099	:	-	
Selenium	mg/L	D	-		0.0096	:	-		0.0103	:	-		0.0088	J
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<36.6	:	-		16.	:	-		9.3	:	-	
Sodium	mg/L	D	-		<36.6	:	-		15.5	:	-		11.7	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	J	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	J	-		<0.002	:
Zinc	mg/L	T	5.03	:	-		4.35	:	-		4.49	:	-	
Zinc	mg/L	D	-		4.93	:	-		4.33	:	-		4.52	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	:	-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		0.0017	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID		P-3		P-3		P-3		P-3		P-3	
			Sample Date		10/16/2003		10/16/2003		1/12/2004		1/12/2004		4/20/2004		4/20/2004	
			Sample ID		P-3-T01N-GRW		P-3-D01N-GRW		P-3-T01N-GRW		P-3-D01N-GRW		P-3-T01N-GRW		P-3-D01N-GRW	
					GW4		GW4		GW4		GW4		GW4		GW4	
Field Measurements																
DO	mg/L	T			5.33	:	-		5.44	:	-		5.35	:	-	
Eh	millivolts	T			691.5	:	-		449.8	:	-		361.5	:	-	
pH	SU	T			4.9	J	-		4.9	J	-		4.8	J	-	
Specific Conductance	uS/cm	T			900.	:	-		1152.	:	-		1261.	:	-	
Temperature	Celsius	T			9.13	:	-		7.36	:	-		8.51	:	-	
Turbidity	NTU	T			0.	:	-		0.	:	-		-		-	
General Chemistry																
Ammonia	mg/L	T			<0.11	J	-		<0.071	J	-		<0.1	:	-	
Bicarbonate (as CaCO3)	mg/L	T			<4.5	:	-		<1.2	:	-		<2.4	:	-	
Carbonate (as CaCO3)	mg/L	T			<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T			8.7	J	-		10.7	:	-		14.5	:	-	
Fluoride	mg/L	T			12.6	:	-		14.6	:	-		15.5	:	-	
Hydroxide (as CaCO3)	mg/L	T			<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T			1.4	J	-		2.	J	-		1.8	J	-	
Nitrite	mg/L	T			<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T			<0.01	J	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T			<0.01	:	-		<0.01	:	-		<0.01	:	-	
Sulfate	mg/L	T			708.	J	-		736.	:	-		783.	:	-	
Total Alkalinity	mg/L	T			<4.5	:	-		<1.2	:	-		<2.4	:	-	
Total Dissolved Solids	mg/L	T			743.	J	-		1070.	:	-		1120.	:	-	
Total Kjeldahl Nitrogen	mg/L	T			<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T			1.1	J	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T			<0.6	:	-		<0.6	:	-		<1.2	J	-	
Laboratory Parameters																
pH	SU	T			4.9	J	-		4.9	J	-		4.8	J	-	
Specific Conductance	umhos/cm	T			813.	J	-		1170.	J	-		1080.	J	-	
Inorganics																
Cyanide	mg/L	T			<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties																
Hardness	mg/L	T			425.	:	-		600.	:	-		586.	:	-	
Hardness	mg/L	D			-		452.	:	-		580.	:	-		597.	:
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-3 10/16/2003 P-3-T01N-GRW GW4		P-3 10/16/2003 P-3-D01N-GRW GW4		P-3 1/12/2004 P-3-T01N-GRW GW4		P-3 1/12/2004 P-3-D01N-GRW GW4		P-3 4/20/2004 P-3-T01N-GRW GW4		P-3 4/20/2004 P-3-D01N-GRW GW4	
Aluminum	mg/L	T	10.7	:	-		23.9	:	-		25.1	:	-	
Aluminum	mg/L	D	-		11.5	:	-		21.7	:	-		25.3	:
Antimony	mg/L	T	<0.082	:	-		<0.029	:	-		<0.053	:	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.029	:	-		<0.053	:
Arsenic	mg/L	T	<0.035	:	-		<0.028	J	-		<0.0632	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.028	J	-		<0.0388	:
Barium	mg/L	T	<0.117	:	-		<0.053	:	-		<0.049	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.053	:	-		<0.049	:
Beryllium	mg/L	T	<0.0147	J	-		0.0152	:	-		<0.0177	J	-	
Beryllium	mg/L	D	-		<0.0143	J	-		0.0155	:	-		<0.0176	J
Boron	mg/L	T	<0.064	:	-		<0.023	:	-		<0.036	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.023	:	-		<0.036	:
Cadmium	mg/L	T	<0.07	:	-		<0.07	J	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.0716	:	-		<0.07	:	-		<0.15	:
Calcium	mg/L	T	94.7	:	-		126.	:	-		119.	:	-	
Calcium	mg/L	D	-		100.	:	-		122.	:	-		122.	:
Chromium	mg/L	T	<0.13	J	-		<0.57	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.13	J	-		<0.57	:	-		<0.13	:
Cobalt	mg/L	T	<0.31	:	-		<0.37	:	-		<0.18	:	-	
Cobalt	mg/L	D	-		<0.31	:	-		<0.37	:	-		<0.18	:
Copper	mg/L	T	<0.2	:	-		0.438	:	-		0.448	:	-	
Copper	mg/L	D	-		<0.2	:	-		0.439	:	-		0.401	:
Iron	mg/L	T	<4.55	:	-		<4.23	:	-		<2.93	J	-	
Iron	mg/L	D	-		<4.55	:	-		<4.23	:	-		<2.93	:
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:
Magnesium	mg/L	T	45.9	:	-		69.3	:	-		69.9	:	-	
Magnesium	mg/L	D	-		49.1	:	-		66.8	:	-		71.2	:
Manganese	mg/L	T	6.46	:	-		12.5	:	-		12.6	:	-	
Manganese	mg/L	D	-		6.72	:	-		12.4	:	-		12.9	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.012	J	-		<0.024	:	-		<0.0258	:	-	
Molybdenum	mg/L	D	-		<0.012	J	-		<0.024	:	-		<0.014	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-3 10/16/2003 P-3-T01N-GRW GW4		P-3 10/16/2003 P-3-D01N-GRW GW4		P-3 1/12/2004 P-3-T01N-GRW GW4		P-3 1/12/2004 P-3-D01N-GRW GW4		P-3 4/20/2004 P-3-T01N-GRW GW4		P-3 4/20/2004 P-3-D01N-GRW GW4	
Nickel	mg/L	T	0.419	:	-		<1.68	:	-		0.435	:	-	
Nickel	mg/L	D	-		0.542	:	-		<1.68	:	-		0.573	:
Potassium	mg/L	T	<52.2	:	-		<110.	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<52.2	:	-		<110.	:	-		<15.5	:
Selenium	mg/L	T	<0.0066	:	-		0.0073	J	-		<0.036	:	-	
Selenium	mg/L	D	-		<0.0066	:	-		0.0088	:	-		<0.036	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<50.2	:	-		<92.	:	-		<38.9	:	-	
Sodium	mg/L	D	-		<50.2	:	-		<92.	:	-		<32.8	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	2.55	:	-		3.99	:	-		3.51	:	-	
Zinc	mg/L	D	-		2.58	:	-		3.78	:	-		3.54	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-96.8	:	-	
Delta O-18	per mil	T	-		-		-		-		-13.4	:	-	
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-4A	6/2/2003	P-4A-T01N-GRW		P-4A	6/2/2003	P-4A-D01N-GRW		P-4B	11/8/2002	P-4B-T01N-GRWRE		P-4B	11/8/2002	P-4B-T01N-GRW	
			GW4				GW4				GW4				GW4			
Field Measurements																		
DO	mg/L	T	7.94		:		-				-				4.78		:	
Eh	millivolts	T	240.4		:		-				-				181.3		:	
pH	SU	T	5.3	J			-				-				4.51		:	
Specific Conductance	uS/cm	T	1099.		:		-				-				1951.		:	
Temperature	Celsius	T	9.41		:		-				-				7.92		:	
Turbidity	NTU	T	0.3		:		-				-				3.4		:	
General Chemistry																		
Ammonia	mg/L	T	<0.052	J			-				-				<0.14		:	
Bicarbonate (as CaCO3)	mg/L	T	<4.5		:		-				-				<1.		:	
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				-				<1.		:	
Chloride	mg/L	T	<15.		:		-				-				24.7		:	
Fluoride	mg/L	T	2.		:		-				23.4	J			-			
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-				-				<1.		:	
Nitrate	mg/L	T	0.62	J			-				-				3.6	J		
Nitrite	mg/L	T	<0.005	J			-				-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	0.047	J			-				-				<0.01	J		
Phosphorus	mg/L	T	-				-				-				<0.01		:	
Sulfate	mg/L	T	739.	J			-				1170.	J			-			
Total Alkalinity	mg/L	T	<4.3		:		-				-				<1.		:	
Total Dissolved Solids	mg/L	T	460.		:		-				-				1810.		:	
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-				-				<0.24		:	
Total Organic Carbon	mg/L	T	1.1	J			-				-				<1.		:	
Total Suspended Solids	mg/L	T	<1.2		:		-				-				<1.2		:	
Laboratory Parameters																		
pH	SU	T	5.3	J			-				-				4.51		:	
Specific Conductance	umhos/cm	T	572.	J			-				-				-			
Inorganics																		
Cyanide	mg/L	T	<0.01		:		-				-				<0.01	J		
Physical Properties																		
Hardness	mg/L	T	285.		:		-				-				-			
Hardness	mg/L	D	-				260.		:		-				-			
Metals																		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-4A 6/2/2003 P-4A-T01N-GRW GW4	P-4A 6/2/2003 P-4A-D01N-GRW GW4	P-4B 11/8/2002 P-4B-T01N-GRWRE GW4	P-4B 11/8/2002 P-4B-T01N-GRW GW4	P-4B 11/8/2002 P-4B-D01N-GRWRE GW4	P-4B 11/8/2002 P-4B-D01N-GRW GW4
Aluminum	mg/L	T	5.05 :	-	-	-	-	-
Aluminum	mg/L	D	-	<4.26 :	-	-	48.6 :	-
Antimony	mg/L	T	<0.072 :	-	-	-	-	-
Antimony	mg/L	D	-	<0.072 :	-	-	<0.028 :	-
Arsenic	mg/L	T	<0.04 :	-	-	-	-	-
Arsenic	mg/L	D	-	<0.04 :	-	-	<0.023 :	-
Barium	mg/L	T	<0.123 :	-	-	-	-	-
Barium	mg/L	D	-	<0.123 :	-	-	<0.048 :	-
Beryllium	mg/L	T	0.004 :	-	-	-	-	-
Beryllium	mg/L	D	-	0.0056 :	-	-	0.0184 :	-
Boron	mg/L	T	<0.084 :	-	-	-	-	-
Boron	mg/L	D	-	<0.084 :	-	-	<0.027 :	-
Cadmium	mg/L	T	<0.07 :	-	-	-	-	-
Cadmium	mg/L	D	-	<0.07 :	-	-	<0.08 :	-
Calcium	mg/L	T	75.5 :	-	-	-	-	-
Calcium	mg/L	D	-	69.3 :	-	-	220. :	-
Chromium	mg/L	T	<0.19 :	-	-	-	-	-
Chromium	mg/L	D	-	<0.19 :	-	-	<0.16 J	-
Cobalt	mg/L	T	<0.36 :	-	-	-	-	-
Cobalt	mg/L	D	-	<0.36 :	-	-	<0.23 :	-
Copper	mg/L	T	<0.2 :	-	-	-	-	-
Copper	mg/L	D	-	<0.2 :	-	-	<0.742 :	-
Iron	mg/L	T	<4.22 :	-	-	-	-	-
Iron	mg/L	D	-	<4.22 :	-	-	<2.66 :	-
Lead	mg/L	T	<0.001 J	-	-	-	-	-
Lead	mg/L	D	-	<0.001 J	-	-	<0.001 :	-
Magnesium	mg/L	T	<35.2 :	-	-	-	-	-
Magnesium	mg/L	D	-	<35.2 :	-	-	127. :	-
Manganese	mg/L	T	0.317 :	-	-	-	-	-
Manganese	mg/L	D	-	0.365 :	-	-	26.7 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.023 :	-	-	-	-	-
Molybdenum	mg/L	D	-	<0.023 :	-	-	<0.011 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-4A 6/2/2003 P-4A-T01N-GRW GW4	P-4A 6/2/2003 P-4A-D01N-GRW GW4	P-4B 11/8/2002 P-4B-T01N-GRWRE GW4	P-4B 11/8/2002 P-4B-T01N-GRW GW4	P-4B 11/8/2002 P-4B-D01N-GRWRE GW4	P-4B 11/8/2002 P-4B-D01N-GRW GW4
Nickel	mg/L	T	<0.73 :	-	-	-	-	-
Nickel	mg/L	D	-	<0.73 :	-	-	0.64 :	-
Potassium	mg/L	T	<40.5 :	-	-	-	-	-
Potassium	mg/L	D	-	<40.5 :	-	-	<31.4 J	-
Selenium	mg/L	T	<0.008 :	-	-	-	-	-
Selenium	mg/L	D	-	<0.008 :	-	-	<0.008 :	-
Silver	mg/L	T	<0.001 :	-	-	-	-	-
Silver	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Sodium	mg/L	T	<91.6 :	-	-	-	-	-
Sodium	mg/L	D	-	<91.6 :	-	-	42.9 :	-
Thallium	mg/L	T	<0.001 :	-	-	-	-	-
Thallium	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T	<0.002 :	-	-	-	-	-
Vanadium	mg/L	D	-	<0.002 :	-	-	<0.002 :	-
Zinc	mg/L	T	1.11 :	-	-	-	-	-
Zinc	mg/L	D	-	1.12 :	-	-	6. :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	<0.00025 J	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	<0.01 :	-	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	<0.001 J	-	-	-	-	-
Lead	mg/L	D	-	<0.001 J	-	-	<0.001 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-4B	1/14/2003	P-4B-T01N-GRW		P-4B	1/14/2003	P-4B-D01N-GRW		P-4B	4/8/2003	P-4B-T01N-GRW		P-4B	4/8/2003	P-4B-D01N-GRW	
			GW4				GW4				GW4				GW4			
Field Measurements																		
DO	mg/L	T	5.14	:			-				4.46	:			-			
Eh	millivolts	T	511.3	:			-				300.	:			-			
pH	SU	T	4.54	:			-				4.6	J			-			
Specific Conductance	uS/cm	T	1844.	:			-				1893.	:			-			
Temperature	Celsius	T	8.06	:			-				7.22	:			-			
Turbidity	NTU	T	0.6	:			-				4.	:			-			
General Chemistry																		
Ammonia	mg/L	T	<0.072	:			-				<0.053	:			-			
Bicarbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Chloride	mg/L	T	17.6	:			-				18.6	:			-			
Fluoride	mg/L	T	24.9	:			-				26.8	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	3.6	:			-				3.4	J			-			
Nitrite	mg/L	T	<0.005	:			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.019	J			-			
Phosphorus	mg/L	T	0.01	:			-				<0.01	:			-			
Sulfate	mg/L	T	1160.	J			-				1010.	J			-			
Total Alkalinity	mg/L	T	<1.	:			-				<1.	:			-			
Total Dissolved Solids	mg/L	T	1800.	:			-				1820.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	J			-			
Total Organic Carbon	mg/L	T	<1.	:			-				<1.6	J			-			
Total Suspended Solids	mg/L	T	5.8	:			-				<1.7	:			-			
Laboratory Parameters																		
pH	SU	T	4.54	:			-				4.6	J			-			
Specific Conductance	umhos/cm	T	-				-				1730.	J			-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-			
Physical Properties																		
Hardness	mg/L	T	1030.	:			-				964.	:			-			
Hardness	mg/L	D	-				891.	:			-				913.	:		
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-4B	7/11/2003	P-4B-T01N-GRW		P-4B	7/11/2003	P-4B-D01N-GRW							
			GW4				GW4									
Field Measurements																
DO	mg/L	T	6.6	:			-									
Eh	millivolts	T	413.8	:			-									
pH	SU	T	4.6	J			-									
Specific Conductance	uS/cm	T	1458.	:			-									
Temperature	Celsius	T	9.5	:			-									
Turbidity	NTU	T	36.5	:			-									
General Chemistry																
Ammonia	mg/L	T	<0.18	J			-									
Bicarbonate (as CaCO3)	mg/L	T	<1.1	:			-									
Carbonate (as CaCO3)	mg/L	T	<1.	:			-									
Chloride	mg/L	T	16.3	:			-									
Fluoride	mg/L	T	17.8	:			-									
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-									
Nitrate	mg/L	T	2.5	J			-									
Nitrite	mg/L	T	<0.005	:			-									
Phosphate, Ortho As P	mg/L	T	<0.01	:			-									
Phosphorus	mg/L	T	0.021	:			-									
Sulfate	mg/L	T	952.	J			-									
Total Alkalinity	mg/L	T	<1.1	:			-									
Total Dissolved Solids	mg/L	T	1530.	:			-									
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-									
Total Organic Carbon	mg/L	T	<3.4	J			-									
Total Suspended Solids	mg/L	T	<1.7	:			-									
Laboratory Parameters																
pH	SU	T	4.6	J			-									
Specific Conductance	umhos/cm	T	1540.	J			-									
Inorganics																
Cyanide	mg/L	T	<0.01	J			-									
Physical Properties																
Hardness	mg/L	T	769.	:			-									
Hardness	mg/L	D	-				774.	:								
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-4B 1/14/2003 P-4B-T01N-GRW GW4	P-4B 1/14/2003 P-4B-D01N-GRW GW4	P-4B 4/8/2003 P-4B-T01N-GRW GW4	P-4B 4/8/2003 P-4B-D01N-GRW GW4	P-4B 7/11/2003 P-4B-T01N-GRW GW4	P-4B 7/11/2003 P-4B-D01N-GRW GW4
Aluminum	mg/L	T	47. :	-	39.6 :	-	36.3 :	-
Aluminum	mg/L	D	-	39.7 :	-	37.2 :	-	35.9 :
Antimony	mg/L	T	<0.028 :	-	<0.003 :	-	<0.047 :	-
Antimony	mg/L	D	-	<0.028 :	-	<0.003 :	-	<0.047 :
Arsenic	mg/L	T	<0.023 J	-	<0.04 :	-	<0.048 :	-
Arsenic	mg/L	D	-	<0.023 J	-	<0.04 :	-	<0.048 :
Barium	mg/L	T	<0.048 :	-	<0.123 :	-	<0.059 :	-
Barium	mg/L	D	-	<0.048 :	-	<0.123 :	-	<0.059 :
Beryllium	mg/L	T	0.0228 :	-	<0.0344 :	-	0.0182 :	-
Beryllium	mg/L	D	-	0.022 :	-	<0.0377 :	-	0.0188 :
Boron	mg/L	T	<0.027 :	-	<0.084 :	-	<0.048 J	-
Boron	mg/L	D	-	<0.027 :	-	<0.084 :	-	<0.048 J
Cadmium	mg/L	T	<0.08 :	-	0.0422 :	-	0.0346 :	-
Cadmium	mg/L	D	-	<0.08 :	-	0.0401 :	-	0.0357 :
Calcium	mg/L	T	210. :	-	199. :	-	158. :	-
Calcium	mg/L	D	-	182. :	-	189. :	-	160. :
Chromium	mg/L	T	<0.16 :	-	<0.01 :	-	0.0207 :	-
Chromium	mg/L	D	-	<0.16 :	-	<0.01 :	-	0.0205 :
Cobalt	mg/L	T	<0.23 :	-	0.114 :	-	0.0909 :	-
Cobalt	mg/L	D	-	<0.23 :	-	0.109 :	-	0.0948 :
Copper	mg/L	T	0.692 :	-	0.634 :	-	0.521 :	-
Copper	mg/L	D	-	0.536 :	-	0.605 :	-	0.517 :
Iron	mg/L	T	<2.66 :	-	<3.11 :	-	0.43 :	-
Iron	mg/L	D	-	<2.66 :	-	<3.11 :	-	0.44 :
Lead	mg/L	T	<0.001 :	-	<0.001 :	-	<0.001 :	-
Lead	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.001 :
Magnesium	mg/L	T	124. :	-	114. :	-	90.7 :	-
Magnesium	mg/L	D	-	106. :	-	107. :	-	91.2 :
Manganese	mg/L	T	25. :	-	23.4 :	-	18.8 :	-
Manganese	mg/L	D	-	21.8 :	-	22.1 :	-	19. :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	<0.011 J	-	<0.023 :	-	<0.017 :	-
Molybdenum	mg/L	D	-	<0.011 J	-	<0.023 :	-	<0.017 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-4B 1/14/2003 P-4B-T01N-GRW GW4		P-4B 1/14/2003 P-4B-D01N-GRW GW4		P-4B 4/8/2003 P-4B-T01N-GRW GW4		P-4B 4/8/2003 P-4B-D01N-GRW GW4		P-4B 7/11/2003 P-4B-T01N-GRW GW4		P-4B 7/11/2003 P-4B-D01N-GRW GW4	
Nickel	mg/L	T	0.754	:	-		0.613	:	-		0.53	:	-	
Nickel	mg/L	D	-		0.606	:	-		0.6	:	-		0.528	:
Potassium	mg/L	T	<31.4	:	-		<3.26	:	-		<3.93	:	-	
Potassium	mg/L	D	-		<31.4	:	-		<3.26	:	-		<3.93	:
Selenium	mg/L	T	<0.008	:	-		<0.005	J	-		0.0154	:	-	
Selenium	mg/L	D	-		0.0103	:	-		0.0075	J	-		0.0127	J
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	39.3	:	-		<35.2	:	-		19.9	:	-	
Sodium	mg/L	D	-		<36.6	:	-		<35.2	:	-		19.6	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.002	:
Zinc	mg/L	T	6.15	:	-		5.69	:	-		8.14	:	-	
Zinc	mg/L	D	-		5.35	:	-		5.43	:	-		8.03	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-4B	10/16/2003	P-4B-T01N-GRW	P-4B	10/16/2003	P-4B-D01N-GRW	P-4B	1/13/2004	P-4B-T01N-GRW	P-4B	1/13/2004	P-4B-D01N-GRW	P-4B	4/20/2004	P-4B-T01N-GRW	P-4B	4/20/2004	P-4B-D01N-GRW
			GW4			GW4			GW4			GW4			GW4			GW4		
Field Measurements																				
DO	mg/L	T	5.65	:		-			6.45	:		-			5.52	:		-		
Eh	millivolts	T	610.9	:		-			459.1	:		-			296.8	:		-		
pH	SU	T	4.8	J		-			4.8	J		-			5.1	J		-		
Specific Conductance	uS/cm	T	1437.	:		-			1381.	:		-			1365.	:		-		
Temperature	Celsius	T	8.3	:		-			7.	:		-			8.76	:		-		
Turbidity	NTU	T	0.6	:		-			0.	:		-			-			-		
General Chemistry																				
Ammonia	mg/L	T	<0.14	J		-			<0.078	J		-			<0.042	:		-		
Bicarbonate (as CaCO3)	mg/L	T	<1.	:		-			<1.1	:		-			<1.5	:		-		
Carbonate (as CaCO3)	mg/L	T	<1.	:		-			<1.	:		-			<1.	:		-		
Chloride	mg/L	T	14.3	:		-			14.8	:		-			<16.2	:		-		
Fluoride	mg/L	T	20.8	:		-			18.9	:		-			17.5	:		-		
Hydroxide (as CaCO3)	mg/L	T	<1.	:		-			<1.	:		-			<1.	:		-		
Nitrate	mg/L	T	2.4	:		-			2.1	J		-			1.8	:		-		
Nitrite	mg/L	T	<0.005	:		-			<0.005	:		-			<0.005	:		-		
Phosphate, Ortho As P	mg/L	T	<0.01	:		-			<0.01	:		-			<0.01	:		-		
Phosphorus	mg/L	T	<0.01	:		-			<0.026	:		-			0.012	:		-		
Sulfate	mg/L	T	832.	J		-			847.	:		-			823.	:		-		
Total Alkalinity	mg/L	T	<1.	:		-			<1.1	:		-			<1.5	:		-		
Total Dissolved Solids	mg/L	T	1300.	:		-			1250.	:		-			1200.	:		-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:		-			<0.24	:		-			<0.24	:		-		
Total Organic Carbon	mg/L	T	<1.	J		-			<1.	:		-			<1.	J		-		
Total Suspended Solids	mg/L	T	<1.	:		-			<1.1	:		-			<0.8	J		-		
Laboratory Parameters																				
pH	SU	T	4.8	J		-			4.8	J		-			5.1	J		-		
Specific Conductance	umhos/cm	T	1280.	J		-			1400.	J		-			1120.	J		-		
Inorganics																				
Cyanide	mg/L	T	<0.01	J		-			<0.01	J		-			<0.01	:		-		
Physical Properties																				
Hardness	mg/L	T	653.	:		-			676.	:		-			631.	:		-		
Hardness	mg/L	D	-			738.	:		-			692.	:		-			597.	:	
Metals																				

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-4B	10/16/2003	P-4B-T01N-GRW		P-4B	10/16/2003	P-4B-D01N-GRW		P-4B	1/13/2004	P-4B-T01N-GRW		P-4B	1/13/2004	P-4B-D01N-GRW		P-4B	4/20/2004	P-4B-T01N-GRW		P-4B	4/20/2004	P-4B-D01N-GRW	
			GW4				GW4				GW4				GW4				GW4				GW4			
Aluminum	mg/L	T	25.2	:			-				31.4	:			-				33.6	:			-			
Aluminum	mg/L	D	-				29.2	:			-				32.3	:			-				32.3	:		
Antimony	mg/L	T	<0.082	:			-				<0.097	:			-				<0.053	:			-			
Antimony	mg/L	D	-				<0.082	:			-				<0.097	:			-				<0.053	:		
Arsenic	mg/L	T	<0.035	:			-				<0.052	:			-				<0.037	:			-			
Arsenic	mg/L	D	-				<0.035	:			-				<0.052	:			-				<0.037	:		
Barium	mg/L	T	<0.117	:			-				<0.188	:			-				<0.049	:			-			
Barium	mg/L	D	-				<0.117	:			-				<0.188	:			-				<0.049	:		
Beryllium	mg/L	T	0.0267	J			-				0.0142	:			-				0.0141	:			-			
Beryllium	mg/L	D	-				0.0199	J			-				0.0157	:			-				0.0141	:		
Boron	mg/L	T	<0.064	:			-				<0.117	:			-				<0.036	:			-			
Boron	mg/L	D	-				<0.064	:			-				<0.117	:			-				<0.036	:		
Cadmium	mg/L	T	<0.07	:			-				<0.07	J			-				<0.0458	:			-			
Cadmium	mg/L	D	-				<0.0807	:			-				<0.07	:			-				<0.0682	:		
Calcium	mg/L	T	135.	:			-				137.	:			-				129.	:			-			
Calcium	mg/L	D	-				152.	:			-				140.	:			-				122.	:		
Chromium	mg/L	T	<0.13	J			-				<0.11	:			-				<0.08	:			-			
Chromium	mg/L	D	-				<0.13	J			-				<0.11	:			-				<0.08	:		
Cobalt	mg/L	T	<0.31	:			-				<0.31	:			-				<0.11	:			-			
Cobalt	mg/L	D	-				<0.31	:			-				<0.31	:			-				<0.11	:		
Copper	mg/L	T	0.352	:			-				0.566	:			-				<0.573	:			-			
Copper	mg/L	D	-				0.492	:			-				0.506	:			-				<0.649	:		
Iron	mg/L	T	<4.55	:			-				<3.73	:			-				<1.92	J			-			
Iron	mg/L	D	-				<4.55	:			-				<3.73	:			-				<2.96	:		
Lead	mg/L	T	<0.002	:			-				<0.001	:			-				<0.004	:			-			
Lead	mg/L	D	-				<0.002	:			-				<0.001	:			-				<0.004	:		
Magnesium	mg/L	T	76.4	:			-				80.9	:			-				74.7	:			-			
Magnesium	mg/L	D	-				86.7	:			-				83.	:			-				71.2	:		
Manganese	mg/L	T	15.5	:			-				16.4	:			-				15.4	:			-			
Manganese	mg/L	D	-				17.4	:			-				16.6	:			-				14.5	:		
Mercury	mg/L	T	<0.0001	:			-				<0.0001	J			-				<0.0001	:			-			
Mercury	mg/L	D	-				<0.0001	:			-				<0.0001	J			-				<0.0001	:		
Molybdenum	mg/L	T	<0.012	J			-				<0.03	:			-				<0.014	:			-			
Molybdenum	mg/L	D	-				<0.012	J			-				<0.03	:			-				<0.014	:		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-4B 10/16/2003 P-4B-T01N-GRW GW4		P-4B 10/16/2003 P-4B-D01N-GRW GW4		P-4B 1/13/2004 P-4B-T01N-GRW GW4		P-4B 1/13/2004 P-4B-D01N-GRW GW4		P-4B 4/20/2004 P-4B-T01N-GRW GW4		P-4B 4/20/2004 P-4B-D01N-GRW GW4	
Nickel	mg/L	T	0.446	:	-		0.608	:	-		0.415	:	-	
Nickel	mg/L	D	-		0.654	:	-		0.504	:	-		0.431	:
Potassium	mg/L	T	<52.2	:	-		<24.3	:	-		<10.9	J	-	
Potassium	mg/L	D	-		<52.2	:	-		<24.3	:	-		<10.9	J
Selenium	mg/L	T	<0.0088	:	-		0.0085	J	-		<0.007	:	-	
Selenium	mg/L	D	-		<0.0071	:	-		0.0092	:	-		<0.007	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<50.2	:	-		<49.	:	-		<17.3	J	-	
Sodium	mg/L	D	-		<50.2	:	-		<49.	:	-		<24.2	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	4.2	:	-		4.	:	-		3.78	:	-	
Zinc	mg/L	D	-		4.43	:	-		4.09	:	-		3.54	:
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-5A	6/2/2003	P-5A-T01N-GRW		P-5A	6/2/2003	P-5A-D01N-GRW		P-5A	7/11/2003	P-5A-T01N-GRW		P-5A	7/11/2003	P-5A-D01N-GRW	
			GW4				GW4				GW4				GW4			
Field Measurements																		
DO	mg/L	T	8.43		:		-				7.84		:		-			
Eh	millivolts	T	244.9		:		-				402.1		:		-			
pH	SU	T	5.1	J	:		-				4.8	J	:		-			
Specific Conductance	uS/cm	T	2239.		:		-				1273.		:		-			
Temperature	Celsius	T	7.38		:		-				8.55		:		-			
Turbidity	NTU	T	10.		:		-				4.5		:		-			
General Chemistry																		
Ammonia	mg/L	T	<0.068	J	:		-				<0.066	J	:		-			
Bicarbonate (as CaCO3)	mg/L	T	<4.5		:		-				<5.		:		-			
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Chloride	mg/L	T	<21.8		:		-				11.5		:		-			
Fluoride	mg/L	T	1.3		:		-				15.9		:		-			
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Nitrate	mg/L	T	2.	J	:		-				1.7	J	:		-			
Nitrite	mg/L	T	<0.005	J	:		-				<0.005		:		-			
Phosphate, Ortho As P	mg/L	T	0.059	J	:		-				<0.01		:		-			
Phosphorus	mg/L	T	-				-				0.023		:		-			
Sulfate	mg/L	T	675.	J	:		-				682.	J	:		-			
Total Alkalinity	mg/L	T	<4.5		:		-				<5.		:		-			
Total Dissolved Solids	mg/L	T	1150.		:		-				1230.		:		-			
Total Kjeldahl Nitrogen	mg/L	T	0.64		:		-				<0.24		:		-			
Total Organic Carbon	mg/L	T	1.1	J	:		-				<1.1	J	:		-			
Total Suspended Solids	mg/L	T	<1.8		:		-				<0.9		:		-			
Laboratory Parameters																		
pH	SU	T	5.1	J	:		-				4.8	J	:		-			
Specific Conductance	umhos/cm	T	1190.	J	:		-				1180.	J	:		-			
Inorganics																		
Cyanide	mg/L	T	<0.01		:		-				<0.01	J	:		-			
Physical Properties																		
Hardness	mg/L	T	621.		:		-				584.		:		-			
Hardness	mg/L	D	-				635.		:		-				583.		:	
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-5B	11/5/2002	P-5B-T01N-GRWRE		P-5B	11/5/2002	P-5B-T01N-GRW	
			GW4				GW4			
Field Measurements										
DO	mg/L	T	-				6.36		:	
Eh	millivolts	T	-				284.1		:	
pH	SU	T	-				4.3		:	
Specific Conductance	uS/cm	T	-				1936.		:	
Temperature	Celsius	T	-				7.61		:	
Turbidity	NTU	T	-				5.1		:	
General Chemistry										
Ammonia	mg/L	T	-				<0.2		:	
Bicarbonate (as CaCO3)	mg/L	T	-				<1.		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:	
Chloride	mg/L	T	-				26.		:	
Fluoride	mg/L	T	21.4	J			-			
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:	
Nitrate	mg/L	T	-				4.3	J		
Nitrite	mg/L	T	-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	-				<0.01	J		
Phosphorus	mg/L	T	-				0.023		:	
Sulfate	mg/L	T	1130.	J			-			
Total Alkalinity	mg/L	T	-				<1.		:	
Total Dissolved Solids	mg/L	T	-				1920.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:	
Total Organic Carbon	mg/L	T	-				<1.		:	
Total Suspended Solids	mg/L	T	-				2.3		:	
Laboratory Parameters										
pH	SU	T	-				4.3		:	
Specific Conductance	umhos/cm	T	-				-			
Inorganics										
Cyanide	mg/L	T	-				<0.01		:	
Physical Properties										
Hardness	mg/L	T	-				848.		:	
Hardness	mg/L	D	-				-			
Metals										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5A 6/2/2003 P-5A-T01N-GRW GW4	P-5A 6/2/2003 P-5A-D01N-GRW GW4	P-5A 7/11/2003 P-5A-T01N-GRW GW4	P-5A 7/11/2003 P-5A-D01N-GRW GW4	P-5B 11/5/2002 P-5B-T01N-GRWRE GW4	P-5B 11/5/2002 P-5B-T01N-GRW GW4
Aluminum	mg/L	T	18. :	-	<30.2 :	-	-	-
Aluminum	mg/L	D	-	18.8 :	-	<27.2 :	-	-
Antimony	mg/L	T	<0.072 :	-	<0.047 :	-	-	-
Antimony	mg/L	D	-	<0.072 :	-	<0.047 :	-	-
Arsenic	mg/L	T	<0.04 :	-	<0.048 :	-	-	-
Arsenic	mg/L	D	-	<0.04 :	-	<0.048 :	-	-
Barium	mg/L	T	<0.123 :	-	<0.059 :	-	-	-
Barium	mg/L	D	-	<0.123 :	-	<0.059 :	-	-
Beryllium	mg/L	T	0.0097 :	-	0.0103 :	-	-	-
Beryllium	mg/L	D	-	0.0118 :	-	0.0104 J	-	-
Boron	mg/L	T	<0.084 :	-	<0.048 J	-	-	-
Boron	mg/L	D	-	<0.084 :	-	<0.048 J	-	-
Cadmium	mg/L	T	<0.07 :	-	0.0232 :	-	-	-
Cadmium	mg/L	D	-	<0.07 :	-	0.0231 :	-	-
Calcium	mg/L	T	137. :	-	120. :	-	-	-
Calcium	mg/L	D	-	140. :	-	122. :	-	-
Chromium	mg/L	T	<0.19 :	-	<0.014 :	-	-	-
Chromium	mg/L	D	-	<0.19 :	-	<0.014 :	-	-
Cobalt	mg/L	T	<0.36 :	-	0.0595 :	-	-	-
Cobalt	mg/L	D	-	<0.36 :	-	0.065 :	-	-
Copper	mg/L	T	0.295 :	-	0.333 :	-	-	-
Copper	mg/L	D	-	0.4 :	-	0.358 :	-	-
Iron	mg/L	T	<4.22 :	-	<0.333 :	-	-	-
Iron	mg/L	D	-	<4.22 :	-	<0.333 :	-	-
Lead	mg/L	T	<0.001 J	-	<0.001 :	-	-	-
Lead	mg/L	D	-	<0.001 J	-	<0.001 :	-	-
Magnesium	mg/L	T	67.5 :	-	69.2 :	-	-	-
Magnesium	mg/L	D	-	69.3 :	-	67.7 :	-	-
Manganese	mg/L	T	7.12 :	-	11.7 :	-	-	-
Manganese	mg/L	D	-	7.32 :	-	12.5 J	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	-
Molybdenum	mg/L	T	<0.023 :	-	<0.017 :	-	-	-
Molybdenum	mg/L	D	-	<0.023 :	-	<0.017 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5A 6/2/2003 P-5A-T01N-GRW GW4	P-5A 6/2/2003 P-5A-D01N-GRW GW4	P-5A 7/11/2003 P-5A-T01N-GRW GW4	P-5A 7/11/2003 P-5A-D01N-GRW GW4	P-5B 11/5/2002 P-5B-T01N-GRWRE GW4	P-5B 11/5/2002 P-5B-T01N-GRW GW4
Nickel	mg/L	T	<0.73 :	-	0.32 :	-	-	-
Nickel	mg/L	D	-	<0.73 :	-	0.324 :	-	-
Potassium	mg/L	T	<40.5 :	-	<3.93 :	-	-	-
Potassium	mg/L	D	-	<40.5 :	-	<3.93 :	-	-
Selenium	mg/L	T	<0.008 :	-	0.0108 :	-	-	-
Selenium	mg/L	D	-	<0.008 :	-	0.0101 J	-	-
Silver	mg/L	T	<0.001 :	-	<0.001 J	-	-	-
Silver	mg/L	D	-	<0.001 :	-	<0.001 J	-	-
Sodium	mg/L	T	<91.6 :	-	13.8 :	-	-	-
Sodium	mg/L	D	-	<91.6 :	-	14.6 :	-	-
Thallium	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Vanadium	mg/L	T	<0.002 :	-	<0.002 :	-	-	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.002 :	-	-
Zinc	mg/L	T	3.13 :	-	<2.92 :	-	-	-
Zinc	mg/L	D	-	3.19 :	-	<2.93 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :	-	-	-	-	<0.00025 J
2,6-Pyridinediamine,	mg/L	T	<0.00025 J	-	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :	-	-	-	-	<0.00025 J
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :	-	-	-	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T	<0.01 :	-	-	-	-	<0.01 J
Isotopes								
Lead	mg/L	T	<0.001 J	-	<0.001 :	-	-	-
Lead	mg/L	D	-	<0.001 J	-	<0.001 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-5B	11/5/2002	P-5B-D01N-GRWRE		P-5B	11/5/2002	P-5B-D01N-GRW	P-5B	1/14/2003	P-5B-T01N-GRW	P-5B	1/14/2003	P-5B-D01N-GRW	P-5B	4/8/2003	P-5B-T01N-GRW	P-5B	4/8/2003	P-5B-D01N-GRW
			GW4				GW4			GW4			GW4			GW4			GW4		
Field Measurements																					
DO	mg/L	T	-				-			5.38		:	-			5.		:	-		
Eh	millivolts	T	-				-			474.8		:	-			251.		:	-		
pH	SU	T	-				-			4.44		:	-			4.5	J		-		
Specific Conductance	uS/cm	T	-				-			1880.		:	-			1882.		:	-		
Temperature	Celsius	T	-				-			7.17		:	-			7.6		:	-		
Turbidity	NTU	T	-				-			0.7		:	-			3.7		:	-		
General Chemistry																					
Ammonia	mg/L	T	-				-			<0.065		:	-			<0.07		:	-		
Bicarbonate (as CaCO3)	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Carbonate (as CaCO3)	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Chloride	mg/L	T	-				-			<25.7		:	-			23.7		:	-		
Fluoride	mg/L	T	-				-			18.9		:	-			25.8		:	-		
Hydroxide (as CaCO3)	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Nitrate	mg/L	T	-				-			3.6		:	-			3.3	J		-		
Nitrite	mg/L	T	-				-			<0.005		:	-			<0.005	J		-		
Phosphate, Ortho As P	mg/L	T	-				-			<0.16	J		-			<0.012	J		-		
Phosphorus	mg/L	T	-				-			0.02	J		-			0.015		:	-		
Sulfate	mg/L	T	-				-			1250.	J		-			1010.	J		-		
Total Alkalinity	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Total Dissolved Solids	mg/L	T	-				-			1810.		:	-			1840.		:	-		
Total Kjeldahl Nitrogen	mg/L	T	-				-			<0.24		:	-			<0.24	J		-		
Total Organic Carbon	mg/L	T	-				-			<1.		:	-			<1.	J		-		
Total Suspended Solids	mg/L	T	-				-			1.3		:	-			<1.1		:	-		
Laboratory Parameters																					
pH	SU	T	-				-			4.44		:	-			4.5	J		-		
Specific Conductance	umhos/cm	T	-				-			-			-			1690.	J		-		
Inorganics																					
Cyanide	mg/L	T	-				-			<0.01	J		-			<0.01	J		-		
Physical Properties																					
Hardness	mg/L	T	-				-			931.		:	-			885.		:	-		
Hardness	mg/L	D	1060.		:		-			-			977.		:	-			929.		:
Metals																					

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			P-5B	11/5/2002	P-5B-D01N-GRWRE		P-5B	11/5/2002	P-5B-D01N-GRW		P-5B	1/14/2003	P-5B-T01N-GRW		P-5B	1/14/2003	P-5B-D01N-GRW		P-5B	4/8/2003	P-5B-T01N-GRW		P-5B	4/8/2003	P-5B-D01N-GRW	
Aluminum	mg/L	T	-				-				46.4				-				40.8				-			
Aluminum	mg/L	D	52.3				-				-				49.				-				43.2			
Antimony	mg/L	T	-				-				<0.028				-				<0.003				-			
Antimony	mg/L	D	<0.028				-				-				<0.028				-				<0.003			
Arsenic	mg/L	T	-				-				<0.023	J			-				<0.04				-			
Arsenic	mg/L	D	<0.023				-				-				<0.023	J			-				<0.04			
Barium	mg/L	T	-				-				<0.048				-				<0.123				-			
Barium	mg/L	D	<0.048				-				-				<0.048				-				<0.123			
Beryllium	mg/L	T	-				-				0.0128				-				<0.0227				-			
Beryllium	mg/L	D	0.0114				-				-				0.0128				-				<0.0249			
Boron	mg/L	T	-				-				<0.027				-				<0.084				-			
Boron	mg/L	D	<0.027				-				-				<0.027				-				<0.084			
Cadmium	mg/L	T	-				-				<0.08				-				0.0302				-			
Cadmium	mg/L	D	<0.08				-				-				<0.08				-				0.0365			
Calcium	mg/L	T	-				-				186.				-				178.				-			
Calcium	mg/L	D	213.				-				-				196.				-				187.			
Chromium	mg/L	T	-				-				<0.16				-				<0.01				-			
Chromium	mg/L	D	<0.16	J			-				-				<0.16				-				<0.01			
Cobalt	mg/L	T	-				-				<0.23				-				0.175				-			
Cobalt	mg/L	D	<0.23				-				-				<0.23				-				0.184			
Copper	mg/L	T	-				-				0.567				-				0.63				-			
Copper	mg/L	D	<0.724				-				-				0.63				-				0.668			
Iron	mg/L	T	-				-				<2.66				-				<3.11				-			
Iron	mg/L	D	<2.66				-				-				<2.66				-				<3.11			
Lead	mg/L	T	-				-				<0.001				-				<0.001				-			
Lead	mg/L	D	<0.001				-				-				<0.001				-				<0.001			
Magnesium	mg/L	T	-				-				113.				-				107.				-			
Magnesium	mg/L	D	128.				-				-				119.				-				112.			
Manganese	mg/L	T	-				-				24.6				-				23.				-			
Manganese	mg/L	D	27.8				-				-				25.8				-				24.1			
Mercury	mg/L	T	-				-				<0.0001				-				<0.0001				-			
Mercury	mg/L	D	-				<0.0001				-				<0.0001				-				<0.0001			
Molybdenum	mg/L	T	-				-				<0.011	J			-				<0.023				-			
Molybdenum	mg/L	D	<0.011				-				-				<0.011	J			-				<0.023			

J = Qualified as estimated during data validation
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5B 11/5/2002 P-5B-D01N-GRWRE GW4		P-5B 11/5/2002 P-5B-D01N-GRW GW4		P-5B 1/14/2003 P-5B-T01N-GRW GW4		P-5B 1/14/2003 P-5B-D01N-GRW GW4		P-5B 4/8/2003 P-5B-T01N-GRW GW4		P-5B 4/8/2003 P-5B-D01N-GRW GW4	
Nickel	mg/L	T	-		-		0.511	:	-		0.479	:	-	
Nickel	mg/L	D	0.458	:	-		-		0.522	:	-		0.495	:
Potassium	mg/L	T	-		-		<31.4	:	-		<3.26	:	-	
Potassium	mg/L	D	<31.4	J	-		-		<31.4	:	-		<3.26	:
Selenium	mg/L	T	-		-		<0.008	:	-		<0.005	J	-	
Selenium	mg/L	D	<0.008	:	-		-		0.0086	:	-		<0.005	J
Silver	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	-		-		40.7	:	-		<35.2	:	-	
Sodium	mg/L	D	<36.6	:	-		-		38.	:	-		<35.2	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	-		-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	<0.002	:	-		-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	-		-		4.74	:	-		4.48	:	-	
Zinc	mg/L	D	5.22	:	-		-		5.01	:	-		4.67	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	-		-		<0.00025	J	-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		<0.00025	:	-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	-		-		<0.01	:	-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	-		-		<0.001	:	-		<0.001	:	-	
Lead	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.001	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			P-5B		7/11/2003 P-5B-T01N-GRW		P-5B	7/11/2003 P-5B-D01N-GRW	P-5B	10/16/2003 P-5B-T01N-GRW	P-5B	10/16/2003 P-5B-D01N-GRW	P-5B	1/12/2004 P-5B-T01N-GRW	P-5B	1/12/2004 P-5B-D01N-GRW
			GW4				GW4		GW4		GW4		GW4		GW4	
Field Measurements																
DO	mg/L	T	6.73	:		-			5.59	:		-	5.83	:		-
Eh	millivolts	T	692.9	:		-			732.6	:		-	421.1	:		-
pH	SU	T	4.9	J		-			4.8	J		-	4.7	J		-
Specific Conductance	uS/cm	T	1513.	:		-			1427.	:		-	1352.	:		-
Temperature	Celsius	T	9.11	:		-			8.33	:		-	7.73	:		-
Turbidity	NTU	T	0.	:		-			0.	:		-	0.	:		-
General Chemistry																
Ammonia	mg/L	T	<0.072	J		-			<0.17	J		-	<0.087	J		-
Bicarbonate (as CaCO3)	mg/L	T	<1.	:		-			<1.	:		-	<1.	:		-
Carbonate (as CaCO3)	mg/L	T	<1.	:		-			<1.	:		-	<1.	:		-
Chloride	mg/L	T	15.9	:		-			14.3	:		-	13.4	:		-
Fluoride	mg/L	T	18.5	:		-			16.7	:		-	16.3	:		-
Hydroxide (as CaCO3)	mg/L	T	<1.	:		-			<1.	:		-	<1.	:		-
Nitrate	mg/L	T	2.2	J		-			2.3	:		-	2.3	J		-
Nitrite	mg/L	T	<0.005	:		-			<0.005	:		-	<0.005	J		-
Phosphate, Ortho As P	mg/L	T	<0.042	J		-			<0.01	:		-	<0.022	J		-
Phosphorus	mg/L	T	0.017	J		-			0.016	:		-	<0.015	:		-
Sulfate	mg/L	T	860.	J		-			890.	J		-	895.	:		-
Total Alkalinity	mg/L	T	<1.	:		-			<1.	:		-	<1.	:		-
Total Dissolved Solids	mg/L	T	1350.	:		-			1360.	:		-	1350.	:		-
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:		-			<0.24	:		-	<0.24	:		-
Total Organic Carbon	mg/L	T	<1.4	J		-			<1.	J		-	<1.7	:		-
Total Suspended Solids	mg/L	T	<1.2	:		-			<0.8	:		-	<0.9	:		-
Laboratory Parameters																
pH	SU	T	4.9	J		-			4.8	J		-	4.7	J		-
Specific Conductance	umhos/cm	T	1350.	J		-			1270.	J		-	1400.	J		-
Inorganics																
Cyanide	mg/L	T	<0.01	J		-			<0.01	J		-	<0.01	J		-
Physical Properties																
Hardness	mg/L	T	667.	:		-			696.	:		-	703.	:		-
Hardness	mg/L	D	-			659.	:		-			701.	:	-		718.
Metals																

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5B 7/11/2003 P-5B-T01N-GRW GW4		P-5B 7/11/2003 P-5B-D01N-GRW GW4		P-5B 10/16/2003 P-5B-T01N-GRW GW4		P-5B 10/16/2003 P-5B-D01N-GRW GW4		P-5B 1/12/2004 P-5B-T01N-GRW GW4		P-5B 1/12/2004 P-5B-D01N-GRW GW4	
Aluminum	mg/L	T	33.1	:	-		29.5	:	-		34.6	:	-	
Aluminum	mg/L	D	-		32.	:	-		29.	:	-		34.8	:
Antimony	mg/L	T	<0.047	:	-		<0.082	:	-		<0.029	:	-	
Antimony	mg/L	D	-		<0.047	:	-		<0.082	:	-		<0.029	:
Arsenic	mg/L	T	<0.048	:	-		<0.035	:	-		<0.028	J	-	
Arsenic	mg/L	D	-		<0.048	:	-		<0.035	:	-		<0.028	J
Barium	mg/L	T	<0.059	:	-		<0.117	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.059	:	-		<0.117	:	-		<0.053	:
Beryllium	mg/L	T	0.0106	:	-		<0.0062	J	-		0.0099	:	-	
Beryllium	mg/L	D	-		0.0104	:	-		<0.003	J	-		0.0102	:
Boron	mg/L	T	<0.048	J	-		<0.064	:	-		<0.023	:	-	
Boron	mg/L	D	-		<0.048	J	-		<0.064	:	-		<0.023	:
Cadmium	mg/L	T	0.0275	:	-		<0.368	:	-		<0.07	J	-	
Cadmium	mg/L	D	-		0.025	:	-		<0.386	:	-		<0.07	:
Calcium	mg/L	T	135.	:	-		142.	:	-		142.	:	-	
Calcium	mg/L	D	-		134.	:	-		144.	:	-		145.	:
Chromium	mg/L	T	<0.014	:	-		<0.13	J	-		<0.57	:	-	
Chromium	mg/L	D	-		<0.014	:	-		<0.13	J	-		<0.57	:
Cobalt	mg/L	T	0.134	:	-		<0.31	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		0.132	:	-		<0.31	:	-		<0.37	:
Copper	mg/L	T	0.456	:	-		0.366	:	-		0.528	:	-	
Copper	mg/L	D	-		0.458	:	-		0.356	:	-		0.635	:
Iron	mg/L	T	0.336	:	-		<4.55	:	-		<4.23	:	-	
Iron	mg/L	D	-		<0.333	:	-		<4.55	:	-		<4.84	:
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Magnesium	mg/L	T	80.3	:	-		82.6	:	-		84.3	:	-	
Magnesium	mg/L	D	-		79.2	:	-		82.7	:	-		86.5	:
Manganese	mg/L	T	17.1	:	-		17.2	:	-		17.9	:	-	
Manganese	mg/L	D	-		16.9	:	-		17.6	:	-		18.2	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.017	:	-		<0.012	J	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.017	:	-		<0.012	J	-		<0.024	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5B 7/11/2003 P-5B-T01N-GRW GW4	P-5B 7/11/2003 P-5B-D01N-GRW GW4	P-5B 10/16/2003 P-5B-T01N-GRW GW4	P-5B 10/16/2003 P-5B-D01N-GRW GW4	P-5B 1/12/2004 P-5B-T01N-GRW GW4	P-5B 1/12/2004 P-5B-D01N-GRW GW4
Nickel	mg/L	T	0.376 :	-	<0.55 :	-	<1.68 :	-
Nickel	mg/L	D	-	0.374 :	-	<0.633 :	-	<1.68 :
Potassium	mg/L	T	<3.93 :	-	<52.2 :	-	<110. :	-
Potassium	mg/L	D	-	<3.93 :	-	<52.2 :	-	<110. :
Selenium	mg/L	T	0.0087 :	-	<0.0076 :	-	0.0032 J	-
Selenium	mg/L	D	-	0.0104 J	-	<0.0067 :	-	0.0095 :
Silver	mg/L	T	<0.001 J	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	-	<0.001 J	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	19. :	-	<50.2 :	-	<92. :	-
Sodium	mg/L	D	-	16.2 :	-	<50.2 :	-	<92. :
Thallium	mg/L	T	<0.001 :	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T	<0.002 :	-	<0.001 :	-	<0.002 :	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.001 :	-	<0.002 :
Zinc	mg/L	T	5.7 :	-	3.54 :	-	3.72 :	-
Zinc	mg/L	D	-	5.64 :	-	3.2 :	-	3.85 :
Isotopes								
Lead	mg/L	T	<0.001 :	-	<0.002 :	-	<0.001 :	-
Lead	mg/L	D	-	<0.001 :	-	<0.002 :	-	<0.001 :

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			P-5B	P-5B	RSTW	RSTW
			4/20/2004	4/20/2004	1/14/2004	1/14/2004
			P-5B-T01N-GRW	P-5B-D01N-GRW	RSTW-T01N-GRW	RANGERSTATION-T 01N-GRW
			GW4	GW4	GW1	GW1
Field Measurements						
DO	mg/L	T	5.76 :	-	5.12 :	-
Eh	millivolts	T	305.1 :	-	195.4 :	-
pH	SU	T	5. J	-	6.29 :	6.5 J
Specific Conductance	uS/cm	T	1300. :	-	410. :	-
Temperature	Celsius	T	8. :	-	8.42 :	-
Turbidity	NTU	T	-	-	26.4 :	-
General Chemistry						
Ammonia	mg/L	T	<0.049 :	-	-	<0.047 J
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	-	45. :
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	<1. :
Chloride	mg/L	T	<13.6 :	-	-	4.3 :
Fluoride	mg/L	T	15.4 :	-	-	1.1 :
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	<1. :
Nitrate	mg/L	T	1.7 :	-	-	<0.43 :
Nitrite	mg/L	T	<0.005 :	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-	<0.01 :
Phosphorus	mg/L	T	0.01 :	-	-	0.085 :
Sulfate	mg/L	T	789. :	-	-	172. :
Total Alkalinity	mg/L	T	<1. :	-	-	45. :
Total Dissolved Solids	mg/L	T	1110. :	-	-	248. :
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T	<1. J	-	-	<0.63 J
Total Suspended Solids	mg/L	T	<1. J	-	-	14.6 :
Laboratory Parameters						
pH	SU	T	5. J	-	6.29 :	6.5 J
Specific Conductance	umhos/cm	T	1070. J	-	-	356. J
Inorganics						
Cyanide	mg/L	T	<0.01 :	-	-	<0.01 J
Physical Properties						
Hardness	mg/L	T	545. :	-	-	205. :
Hardness	mg/L	D	-	554. :	-	-
Metals						

Parameter	Units	Exposure Area Fraction	RSTW	SC-7A
			1/14/2004	6/4/2003
			RANGERSTATION-D 01N-GRW	SC-7A-T01N-GRW
			GW1	OMR
Field Measurements				
DO	mg/L	T	-	0.42 :
Eh	millivolts	T	-	433.2 :
pH	SU	T	-	4.4 J
Specific Conductance	uS/cm	T	-	1573. :
Temperature	Celsius	T	-	8.54 :
Turbidity	NTU	T	-	0. :
General Chemistry				
Ammonia	mg/L	T	-	<0.11 J
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :
Chloride	mg/L	T	-	<3. :
Fluoride	mg/L	T	-	4.5 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :
Nitrate	mg/L	T	-	<0.4 J
Nitrite	mg/L	T	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	0.23 J
Phosphorus	mg/L	T	-	0.046 J
Sulfate	mg/L	T	-	877. J
Total Alkalinity	mg/L	T	-	<1. :
Total Dissolved Solids	mg/L	T	-	1850. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :
Total Organic Carbon	mg/L	T	-	1. J
Total Suspended Solids	mg/L	T	-	<0.6 :
Laboratory Parameters				
pH	SU	T	-	4.4 J
Specific Conductance	umhos/cm	T	-	1510. J
Inorganics				
Cyanide	mg/L	T	-	<0.01 :
Physical Properties				
Hardness	mg/L	T	-	667. :
Hardness	mg/L	D	209. :	-
Metals				

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	P-5B 4/20/2004 P-5B-T01N-GRW GW4		P-5B 4/20/2004 P-5B-D01N-GRW GW4		RSTW 1/14/2004 RSTW-T01N-GRW GW1		RSTW 1/14/2004 RANGERSTATION-T 01N-GRW GW1		RSTW 1/14/2004 RANGERSTATION-D 01N-GRW GW1		SC-7A 6/4/2003 SC-7A-T01N-GRW OMR	
Aluminum	mg/L	T	29.2	:	-		-		<0.621	:	-		36.7	:
Aluminum	mg/L	D	-		30.1	:	-		-		<0.621	:	-	
Antimony	mg/L	T	<0.053	:	-		-		<0.0017	:	-		<0.072	:
Antimony	mg/L	D	-		<0.053	:	-		-		<0.0018	:	-	
Arsenic	mg/L	T	<0.037	:	-		-		0.00027	:	-		<0.04	:
Arsenic	mg/L	D	-		<0.037	:	-		-		<0.0002	:	-	
Barium	mg/L	T	<0.049	:	-		-		0.047	:	-		<0.123	:
Barium	mg/L	D	-		<0.049	:	-		-		0.0444	:	-	
Beryllium	mg/L	T	0.0082	:	-		-		<0.001	:	-		<0.0122	:
Beryllium	mg/L	D	-		0.0096	:	-		-		<0.001	:	-	
Boron	mg/L	T	<0.036	:	-		-		<0.0117	:	-		<0.084	:
Boron	mg/L	D	-		<0.036	:	-		-		<0.0117	:	-	
Cadmium	mg/L	T	<0.0492	:	-		-		<0.0007	J	-		0.0076	:
Cadmium	mg/L	D	-		<0.0484	:	-		-		<0.0007	:	-	
Calcium	mg/L	T	109.	:	-		-		61.2	:	-		177.	:
Calcium	mg/L	D	-		112.	:	-		-		62.6	:	-	
Chromium	mg/L	T	<0.08	:	-		-		<0.0057	:	-		<0.01	:
Chromium	mg/L	D	-		<0.08	:	-		-		<0.0057	:	-	
Cobalt	mg/L	T	0.202	:	-		-		<0.0037	:	-		0.108	:
Cobalt	mg/L	D	-		<0.11	:	-		-		<0.0037	:	-	
Copper	mg/L	T	<0.763	:	-		-		0.0151	:	-		0.0563	:
Copper	mg/L	D	-		<0.471	:	-		-		0.0064	:	-	
Iron	mg/L	T	<1.92	J	-		-		3.59	:	-		31.3	:
Iron	mg/L	D	-		<1.92	:	-		-		<0.641	:	-	
Lead	mg/L	T	<0.004	:	-		-		0.0128	:	-		<0.001	:
Lead	mg/L	D	-		<0.004	:	-		-		0.001	:	-	
Magnesium	mg/L	T	65.9	:	-		-		12.6	:	-		54.8	:
Magnesium	mg/L	D	-		66.5	:	-		-		12.8	:	-	
Manganese	mg/L	T	13.6	:	-		-		0.0729	:	-		6.12	:
Manganese	mg/L	D	-		14.	:	-		-		0.0601	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	<0.014	:	-		-		0.0136	:	-		<0.023	:
Molybdenum	mg/L	D	-		<0.014	:	-		-		0.0119	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

		Site ID	P-5B	P-5B	RSTW	RSTW	RSTW	SC-7A
		Sample Date	4/20/2004	4/20/2004	1/14/2004	1/14/2004	1/14/2004	6/4/2003
		Sample ID	P-5B-T01N-GRW	P-5B-D01N-GRW	RSTW-T01N-GRW	RANGERSTATION-T01N-GRW	RANGERSTATION-D01N-GRW	SC-7A-T01N-GRW
Parameter	**Units**	**Exposure Area Fraction**	GW4	GW4	GW1	GW1	GW1	OMR
Nickel	mg/L	T	0.61 :	-	-	<0.0168 :	-	0.25 :
Nickel	mg/L	D	-	0.244 :	-	-	<0.0168 :	-
Potassium	mg/L	T	<10.9 J	-	-	2.15 :	-	<3.26 :
Potassium	mg/L	D	-	<10.9 J	-	-	2.06 :	-
Selenium	mg/L	T	<0.007 :	-	-	<0.0004 J	-	<0.008 :
Selenium	mg/L	D	-	<0.007 :	-	-	<0.0004 :	-
Silver	mg/L	T	<0.001 :	-	-	<0.0002 :	-	<0.001 :
Silver	mg/L	D	-	<0.001 :	-	-	<0.0002 :	-
Sodium	mg/L	T	<48.5 J	-	-	10.4 :	-	13.2 :
Sodium	mg/L	D	-	<17.3 J	-	-	<9.2 :	-
Thallium	mg/L	T	<0.001 :	-	-	<0.0002 :	-	<0.001 :
Thallium	mg/L	D	-	<0.001 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	<0.002 :	-	-	0.00058 :	-	<0.002 :
Vanadium	mg/L	D	-	<0.002 :	-	-	<0.0002 :	-
Zinc	mg/L	T	2.91 :	-	-	<0.091 :	-	2. :
Zinc	mg/L	D	-	3.04 :	-	-	<0.091 :	-
Isotopes								
Delta D	per mil	T	-96. :	-	-	-	-	-
Delta O-18	per mil	T	-13.2 :	-	-	-	-	-
Lead	mg/L	T	<0.004 :	-	-	0.0128 :	-	<0.001 :
Lead	mg/L	D	-	<0.004 :	-	-	0.001 :	-

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\Appendix A-6a.rpt

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID												
			SC-7A	6/4/2003	SC-7A-D01N-GRW		SC-7A	10/22/2003	SC-7A-T01N-GRW		SC-7A	10/22/2003	SC-7A-D01N-GRW		SC-7A	1/15/2004	SC-7A-T01N-GRW		SC-7A	1/15/2004	SC-7A-D01N-GRW		SC-7A	4/20/2004	SC-7A-T01N-GRW	
			OMR				OMR				OMR				OMR				OMR				OMR			
Field Measurements																										
DO	mg/L	T	-				2.7			:	-				0.52			:	-				1.06			:
Eh	millivolts	T	-				300.6			:	-				310.5			:	-				295.2			:
pH	SU	T	-				4.			J	-				4.6			J	-				4.2			J
Specific Conductance	uS/cm	T	-				1619.			:	-				1395.			:	-				1516.			:
Temperature	Celsius	T	-				7.95			:	-				7.09			:	-				7.26			:
Turbidity	NTU	T	-				5.9			:	-				13.5			:	-				0.3			:
General Chemistry																										
Ammonia	mg/L	T	-				<0.05			J	-				<0.051			J	-				<0.12			:
Bicarbonate (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Carbonate (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Chloride	mg/L	T	-				3.3			:	-				3.1			:	-				<7.1			:
Fluoride	mg/L	T	-				3.8			:	-				3.8			:	-				4.1			:
Hydroxide (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Nitrate	mg/L	T	-				<0.2			:	-				<0.2			J	-				<0.2			J
Nitrite	mg/L	T	-				<0.005			:	-				<0.005			J	-				<0.005			J
Phosphate, Ortho As P	mg/L	T	-				<0.032			:	-				<0.032			J	-				0.034			J
Phosphorus	mg/L	T	-				0.042			:	-				0.046			:	-				0.039			:
Sulfate	mg/L	T	-				919.			J	-				833.			:	-				990.			:
Total Alkalinity	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Total Dissolved Solids	mg/L	T	-				1890.			:	-				1470.			:	-				1410.			:
Total Kjeldahl Nitrogen	mg/L	T	-				<2.3			:	-				<0.24			:	-				<0.24			:
Total Organic Carbon	mg/L	T	-				1.7			J	-				<1.3			:	-				<1.			J
Total Suspended Solids	mg/L	T	-				<0.9			:	-				<2.2			:	-				<1.2			J
Laboratory Parameters																										
pH	SU	T	-				4.			J	-				4.6			J	-				4.2			J
Specific Conductance	umhos/cm	T	-				1560.			J	-				1260.			J	-				1350.			J
Inorganics																										
Cyanide	mg/L	T	-				<0.01			J	-				<0.01			J	-				<0.01			:
Physical Properties																										
Hardness	mg/L	T	-				699.			:	-				680.			:	-				719.			:
Hardness	mg/L	D	678.			:	-				607.			:	-				663.			:	-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	SC-7A 6/4/2003 SC-7A-D01N-GRW OMR		SC-7A 10/22/2003 SC-7A-T01N-GRW OMR		SC-7A 10/22/2003 SC-7A-D01N-GRW OMR		SC-7A 1/15/2004 SC-7A-T01N-GRW OMR		SC-7A 1/15/2004 SC-7A-D01N-GRW OMR		SC-7A 4/20/2004 SC-7A-T01N-GRW OMR	
Aluminum	mg/L	T	-		37.3	:	-		38.9	:	-		39.	:
Aluminum	mg/L	D	37.4	:	-		33.3	:	-		36.4	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.029	:	-		<0.053	:
Antimony	mg/L	D	<0.072	:	-		<0.082	:	-		<0.029	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.028	:	-		<0.0453	:
Arsenic	mg/L	D	<0.04	:	-		<0.035	:	-		<0.028	:	-	
Barium	mg/L	T	-		<0.117	:	-		<0.053	:	-		<0.049	:
Barium	mg/L	D	<0.123	:	-		<0.117	:	-		<0.053	:	-	
Beryllium	mg/L	T	-		0.008	:	-		<0.0082	:	-		<0.0119	J
Beryllium	mg/L	D	<0.0128	:	-		0.006	:	-		<0.0081	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.0382	:	-		<0.036	:
Boron	mg/L	D	<0.084	:	-		<0.064	:	-		<0.0233	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		<0.107	:
Cadmium	mg/L	D	0.01	:	-		<0.13	:	-		<0.07	:	-	
Calcium	mg/L	T	-		183.	:	-		179.	:	-		187.	:
Calcium	mg/L	D	179.	:	-		159.	:	-		175.	:	-	
Chromium	mg/L	T	-		<0.23	J	-		<0.57	:	-		<0.13	:
Chromium	mg/L	D	<0.01	:	-		<0.23	J	-		<0.57	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.37	:	-		<0.22	:
Cobalt	mg/L	D	0.108	:	-		<0.32	:	-		<0.37	:	-	
Copper	mg/L	T	-		<0.23	:	-		<0.35	:	-		<0.27	:
Copper	mg/L	D	0.0573	:	-		<0.23	:	-		<0.35	:	-	
Iron	mg/L	T	-		33.	:	-		34.9	:	-		32.4	J
Iron	mg/L	D	31.9	:	-		29.2	:	-		32.4	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		58.7	:	-		56.7	:	-		61.4	:
Magnesium	mg/L	D	55.8	:	-		51.3	:	-		54.9	:	-	
Manganese	mg/L	T	-		6.07	:	-		5.82	:	-		6.17	:
Manganese	mg/L	D	6.22	:	-		5.36	:	-		5.7	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.024	:	-		<0.014	:
Molybdenum	mg/L	D	<0.023	:	-		<0.012	:	-		<0.024	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	SC-7A 6/4/2003 SC-7A-D01N-GRW OMR		SC-7A 10/22/2003 SC-7A-T01N-GRW OMR		SC-7A 10/22/2003 SC-7A-D01N-GRW OMR		SC-7A 1/15/2004 SC-7A-T01N-GRW OMR		SC-7A 1/15/2004 SC-7A-D01N-GRW OMR		SC-7A 4/20/2004 SC-7A-T01N-GRW OMR	
Nickel	mg/L	T	-		<0.45	:	-		<1.68	:	-		<0.407	:
Nickel	mg/L	D	0.254	:	-		<0.45	:	-		<1.68	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<110.	:	-		<15.5	:
Potassium	mg/L	D	<3.26	:	-		<63.8	:	-		<110.	:	-	
Selenium	mg/L	T	-		<0.003	:	-		0.0043	J	-		<0.036	:
Selenium	mg/L	D	<0.008	:	-		<0.003	:	-		0.003	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<92.	:	-		<32.8	:
Sodium	mg/L	D	13.7	:	-		<99.1	:	-		<92.	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Zinc	mg/L	T	-		2.16	:	-		2.02	:	-		1.99	:
Zinc	mg/L	D	2.03	:	-		1.94	:	-		2.19	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			SC-7A	4/20/2004	SC-7A-D01N-GRW	OMR	SC-8A	6/4/2003	SC-8A-T01N-GRW	OMR	SC-8A	6/4/2003	SC-8A-D01N-GRW	OMR	SC-8A	10/22/2003	SC-8A-T01N-GRW	OMR
Field Measurements																		
DO	mg/L	T	-				5.92	:			-				7.	:		
Eh	millivolts	T	-				412.2	:			-				150.2	:		
pH	SU	T	-				6.3	J			-				6.5	J		
Specific Conductance	uS/cm	T	-				400.	:			-				385.	:		
Temperature	Celsius	T	-				8.03	:			-				8.33	:		
Turbidity	NTU	T	-				0.	:			-				0.8	:		
General Chemistry																		
Ammonia	mg/L	T	-				<0.042	J			-				<0.04	J		
Bicarbonate (as CaCO3)	mg/L	T	-				58.2	:			-				57.3	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				<11.4	:			-				3.1	:		
Fluoride	mg/L	T	-				0.27	:			-				0.28	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				<0.4	J			-				0.22	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				0.04	J			-				<0.01	:		
Phosphorus	mg/L	T	-				-				-				<0.01	:		
Sulfate	mg/L	T	-				119.	J			-				115.	J		
Total Alkalinity	mg/L	T	-				58.2	:			-				57.3	:		
Total Dissolved Solids	mg/L	T	-				250.	:			-				178.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				-				-				2.8	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				<1.	J		
Total Suspended Solids	mg/L	T	-				<0.6	:			-				<0.5	:		
Laboratory Parameters																		
pH	SU	T	-				6.3	J			-				6.5	J		
Specific Conductance	umhos/cm	T	-				386.	J			-				299.	J		
Inorganics																		
Cyanide	mg/L	T	-				<0.01	:			-				<0.01	J		
Physical Properties																		
Hardness	mg/L	T	-				177.	:			-				157.	:		
Hardness	mg/L	D	734.	:			-				178.	:			-			
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			SC-8A	10/22/2003	SC-8A-D01N-GRW	OMR	SC-8A	1/15/2004	SC-8A-T01N-GRW	OMR
Field Measurements										
DO	mg/L	T	-				7.88	:		
Eh	millivolts	T	-				52.1	:		
pH	SU	T	-				6.5	J		
Specific Conductance	uS/cm	T	-				332.	:		
Temperature	Celsius	T	-				6.17	:		
Turbidity	NTU	T	-				7.6	:		
General Chemistry										
Ammonia	mg/L	T	-				<0.04	:		
Bicarbonate (as CaCO3)	mg/L	T	-				54.6	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:		
Chloride	mg/L	T	-				3.3	:		
Fluoride	mg/L	T	-				0.49	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:		
Nitrate	mg/L	T	-				<0.2	J		
Nitrite	mg/L	T	-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				<0.01	J		
Phosphorus	mg/L	T	-				<0.01	:		
Sulfate	mg/L	T	-				102.	:		
Total Alkalinity	mg/L	T	-				54.6	:		
Total Dissolved Solids	mg/L	T	-				250.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:		
Total Organic Carbon	mg/L	T	-				<1.6	:		
Total Suspended Solids	mg/L	T	-				<0.6	:		
Laboratory Parameters										
pH	SU	T	-				6.5	J		
Specific Conductance	umhos/cm	T	-				284.	J		
Inorganics										
Cyanide	mg/L	T	-				<0.01	J		
Physical Properties										
Hardness	mg/L	T	-				168.	:		
Hardness	mg/L	D	166.	:			-			
Metals										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			SC-7A	4/20/2004	SC-7A-D01N-GRW	OMR	SC-8A	6/4/2003	SC-8A-T01N-GRW	OMR	SC-8A	6/4/2003	SC-8A-D01N-GRW	OMR	SC-8A	10/22/2003	SC-8A-T01N-GRW	OMR	SC-8A	10/22/2003	SC-8A-D01N-GRW	OMR	SC-8A	1/15/2004	SC-8A-T01N-GRW	OMR
Aluminum	mg/L	T	-				<0.426	:			-				<0.217	:			-				<0.621	:		
Aluminum	mg/L	D	39.7	:			-				<0.426	:			-				<0.217	:			-			
Antimony	mg/L	T	-				<0.001	:			-				<0.001	:			-				<0.0031	:		
Antimony	mg/L	D	<0.053	:			-				<0.001	:			-				<0.001	:			-			
Arsenic	mg/L	T	-				<0.0004	:			-				<0.0004	:			-				<0.0002	:		
Arsenic	mg/L	D	<0.0616	:			-				<0.0004	:			-				<0.0004	:			-			
Barium	mg/L	T	-				0.0233	:			-				0.0221	:			-				0.0206	:		
Barium	mg/L	D	<0.049	:			-				0.0235	:			-				0.0219	:			-			
Beryllium	mg/L	T	-				<0.0003	J			-				<0.0002	:			-				<0.001	:		
Beryllium	mg/L	D	<0.0095	J			-				<0.0003	J			-				<0.0002	:			-			
Boron	mg/L	T	-				<0.0084	:			-				<0.0103	:			-				<0.0117	:		
Boron	mg/L	D	<0.036	:			-				<0.0084	:			-				<0.0087	:			-			
Cadmium	mg/L	T	-				<0.0005	:			-				<0.0013	:			-				<0.0007	J		
Cadmium	mg/L	D	<0.107	:			-				<0.0005	:			-				<0.0013	:			-			
Calcium	mg/L	T	-				48.9	:			-				46.9	:			-				50.6	:		
Calcium	mg/L	D	191.	:			-				50.6	:			-				49.8	:			-			
Chromium	mg/L	T	-				<0.001	:			-				<0.0023	J			-				<0.0057	:		
Chromium	mg/L	D	<0.13	:			-				<0.001	:			-				<0.0023	J			-			
Cobalt	mg/L	T	-				<0.0038	:			-				<0.0032	:			-				<0.0037	:		
Cobalt	mg/L	D	<0.22	:			-				<0.0038	:			-				<0.0032	:			-			
Copper	mg/L	T	-				0.0017	:			-				<0.0023	:			-				<0.0035	:		
Copper	mg/L	D	<0.27	:			-				0.0017	:			-				<0.0023	:			-			
Iron	mg/L	T	-				<0.422	:			-				<0.455	:			-				<0.423	:		
Iron	mg/L	D	33.7	:			-				<0.422	:			-				<0.455	:			-			
Lead	mg/L	T	-				<0.0002	:			-				<0.0004	:			-				0.00021	:		
Lead	mg/L	D	<0.004	:			-				<0.0002	:			-				<0.0004	:			-			
Magnesium	mg/L	T	-				10.1	:			-				9.7	:			-				10.1	:		
Magnesium	mg/L	D	62.4	:			-				10.5	:			-				10.2	:			-			
Manganese	mg/L	T	-				<0.013	:			-				<0.016	:			-				<0.019	:		
Manganese	mg/L	D	6.55	:			-				<0.013	:			-				<0.016	:			-			
Mercury	mg/L	T	-				<0.0001	J			-				<0.0001	:			-				<0.0001	:		
Mercury	mg/L	D	<0.0001	:			-				<0.0001	J			-				<0.0001	:			-			
Molybdenum	mg/L	T	-				<0.0023	:			-				<0.0016	:			-				<0.003	:		
Molybdenum	mg/L	D	<0.014	:			-				<0.0023	:			-				<0.0014	:			-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	SC-7A 4/20/2004 SC-7A-D01N-GRW OMR		SC-8A 6/4/2003 SC-8A-T01N-GRW OMR		SC-8A 6/4/2003 SC-8A-D01N-GRW OMR		SC-8A 10/22/2003 SC-8A-T01N-GRW OMR		SC-8A 10/22/2003 SC-8A-D01N-GRW OMR		SC-8A 1/15/2004 SC-8A-T01N-GRW OMR	
Nickel	mg/L	T	-		<0.004	:	-		0.0058	:	-		<0.0168	:
Nickel	mg/L	D	<0.451	:	-		<0.0038	:	-		0.0056	:	-	
Potassium	mg/L	T	-		1.36	:	-		1.15	:	-		<1.1	:
Potassium	mg/L	D	<15.5	:	-		1.41	:	-		1.12	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0006	:	-		<0.0004	J
Selenium	mg/L	D	<0.036	:	-		<0.0016	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		<9.16	:	-		<9.91	:	-		<9.2	:
Sodium	mg/L	D	<32.8	:	-		<9.16	:	-		<9.91	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.00028	:
Thallium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.00035	:
Vanadium	mg/L	D	<0.002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		0.0435	:	-		<0.0395	:	-		<0.091	:
Zinc	mg/L	D	2.21	:	-		0.0448	:	-		<0.0401	:	-	
Isotopes														
Lead	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		0.00021	:
Lead	mg/L	D	<0.004	:	-		<0.0002	:	-		<0.0004	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-8A	SC-8A	SC-8A	SC-8A	SC-8A	Spring 13 P-1
			Sample Date	1/15/2004	2/25/2004	2/25/2004	4/22/2004	4/22/2004	5/9/2004
			Sample ID	SC-8A-D01N-GRW	SC-8A-T01N-GRW	SC-8A-D01N-GRW	SC-8A-T01N-GRW	SC-8A-D01N-GRW	SPRING13-P1-T01N-GRW
				OMR	OMR	OMR	OMR	OMR	GW1
Field Measurements									
DO	mg/L	T		-	6.48 :	-	7.65 :	-	3.05 :
Eh	millivolts	T		-	169.9 :	-	245.6 :	-	229.7 :
pH	SU	T		-	6.32 :	-	7. J	-	4.4 J
Specific Conductance	uS/cm	T		-	345. :	-	348. :	-	1552. :
Temperature	Celsius	T		-	5.81 :	-	6.58 :	-	10.76 :
Turbidity	NTU	T		-	2.5 :	-	0.2 :	-	137.6 :
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.047 :	-	<0.074 :
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	62.8 :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Chloride	mg/L	T		-	-	-	3.1 :	-	75.6 :
Fluoride	mg/L	T		-	0.31 :	-	0.28 :	-	10. :
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	-	-	0.32 J	-	0.36 J
Nitrite	mg/L	T		-	-	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	-	-	<0.01 J	-	0.012 :
Phosphorus	mg/L	T		-	-	-	0.023 :	-	0.07 :
Sulfate	mg/L	T		-	109. :	-	119. :	-	904. :
Total Alkalinity	mg/L	T		-	-	-	62.8 :	-	<1. :
Total Dissolved Solids	mg/L	T		-	242. :	-	232. :	-	1360. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	0.26 :
Total Organic Carbon	mg/L	T		-	-	-	<1. J	-	1.4 :
Total Suspended Solids	mg/L	T		-	<0.5 :	-	<0.5 J	-	45.8 :
Laboratory Parameters									
pH	SU	T		-	6.32 :	-	7. J	-	4.4 J
Specific Conductance	umhos/cm	T		-	-	-	310. J	-	1440. J
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	158. :	-	175. :	-	524. :
Hardness	mg/L	D		165. :	-	161. :	-	168. :	-
Metals									

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-8A	SC-8A	SC-8A	SC-8A	SC-8A	Spring 13 P-1
			Sample Date	1/15/2004	2/25/2004	2/25/2004	4/22/2004	4/22/2004	5/9/2004
			Sample ID	SC-8A-D01N-GRW	SC-8A-T01N-GRW	SC-8A-D01N-GRW	SC-8A-T01N-GRW	SC-8A-D01N-GRW	SPRING13-P1-T01N-GRW
				OMR	OMR	OMR	OMR	OMR	GW1
Aluminum	mg/L	T		-	<0.514 :	-	<0.176 :	-	78.5 :
Aluminum	mg/L	D		<0.621 :	-	<0.514 :	-	<0.176 :	-
Antimony	mg/L	T		-	<0.00098 :	-	<0.0012 :	-	<0.027 :
Antimony	mg/L	D		<0.003 :	-	<0.001 :	-	<0.0012 :	-
Arsenic	mg/L	T		-	<0.00038 :	-	<0.0004 :	-	<0.026 :
Arsenic	mg/L	D		<0.0002 :	-	<0.0002 :	-	<0.0004 :	-
Barium	mg/L	T		-	0.0206 J	-	0.0202 :	-	0.0183 :
Barium	mg/L	D		0.021 :	-	0.0202 J	-	0.02 :	-
Beryllium	mg/L	T		-	<0.0003 :	-	<0.0003 :	-	0.0137 :
Beryllium	mg/L	D		<0.001 :	-	<0.0003 :	-	<0.0003 :	-
Boron	mg/L	T		-	0.0032 :	-	0.0044 :	-	<0.018 :
Boron	mg/L	D		<0.0117 :	-	0.0031 :	-	<0.0036 :	-
Cadmium	mg/L	T		-	<0.0007 :	-	<0.0003 :	-	<0.1 :
Cadmium	mg/L	D		<0.0007 :	-	<0.0007 J	-	<0.0003 :	-
Calcium	mg/L	T		-	47.2 :	-	52.5 :	-	142. :
Calcium	mg/L	D		49.8 :	-	48.2 :	-	50.4 :	-
Chromium	mg/L	T		-	<0.0015 :	-	<0.00072 :	-	<0.13 :
Chromium	mg/L	D		<0.0057 :	-	<0.0015 :	-	<0.0006 :	-
Cobalt	mg/L	T		-	<0.0023 :	-	<0.0016 :	-	<0.18 :
Cobalt	mg/L	D		<0.0037 :	-	<0.0023 :	-	<0.0016 :	-
Copper	mg/L	T		-	<0.003 :	-	<0.0015 :	-	0.744 :
Copper	mg/L	D		<0.0035 :	-	<0.003 :	-	<0.0014 :	-
Iron	mg/L	T		-	<0.373 :	-	<0.192 J	-	<2.93 :
Iron	mg/L	D		<0.423 :	-	<0.373 :	-	<0.192 :	-
Lead	mg/L	T		-	<0.0002 :	-	<0.0008 :	-	0.0058 :
Lead	mg/L	D		<0.00061 :	-	<0.0002 :	-	<0.0008 :	-
Magnesium	mg/L	T		-	9.66 :	-	10.8 :	-	41.3 :
Magnesium	mg/L	D		9.97 :	-	9.84 :	-	10.3 :	-
Manganese	mg/L	T		-	<0.015 :	-	<0.019 :	-	10.6 :
Manganese	mg/L	D		<0.019 :	-	<0.015 :	-	<0.019 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.0024 :	-	<0.0014 :	-	<0.01 :
Molybdenum	mg/L	D		<0.003 :	-	<0.0024 :	-	<0.0014 :	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	SC-8A		SC-8A		SC-8A		SC-8A		SC-8A		Spring 13 P-1	
		Sample Date	1/15/2004		2/25/2004		2/25/2004		4/22/2004		4/22/2004		5/9/2004	
		Sample ID	SC-8A-D01N-GRW		SC-8A-T01N-GRW		SC-8A-D01N-GRW		SC-8A-T01N-GRW		SC-8A-D01N-GRW		SPRING13-P1-T01N-GRW	
		Exposure Area	OMR		OMR		OMR		OMR		OMR		GW1	
Nickel	mg/L	T	-		<0.0024	:	-		0.0016	J	-		<0.33	:
Nickel	mg/L	D	<0.0168	:	-		<0.0024	:	-		0.0021	J	-	
Potassium	mg/L	T	-		1.09	:	-		1.1	:	-		<15.5	:
Potassium	mg/L	D	<1.1	:	-		1.09	:	-		1.01	:	-	
Selenium	mg/L	T	-		<0.0015	J	-		<0.0014	:	-		<0.007	:
Selenium	mg/L	D	0.00047	:	-		<0.0004	J	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.001	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		<4.9	:	-		7.03	J	-		<56.	:
Sodium	mg/L	D	<9.2	:	-		6.62	:	-		<1.73	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.001	:
Thallium	mg/L	D	<0.00027	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.002	:
Vanadium	mg/L	D	<0.00035	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0405	:	-		0.037	:	-		2.92	:
Zinc	mg/L	D	<0.091	:	-		0.0416	:	-		0.116	:	-	
Isotopes														
Delta D	per mil	T	-		-98.6	:	-		-		-		-	
Delta O-18	per mil	T	-		-13.6	:	-		-		-		-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		0.0058	:
Lead	mg/L	D	<0.00061	:	-		<0.0002	:	-		<0.0008	:	-	

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T = Total Fraction D = Dissolved Fracton
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Spring 13 P-1		SPRING 13 P-2		SPRING 13 P-3		SPRING 13 P-4		US-1		US-1	
			Sample Date	5/9/2004		5/9/2004		5/9/2004		5/9/2004		11/7/2002		11/7/2002	
			Sample ID	SPRING13-P1-D01N-GRW		SPRING13-P2-T01N-GRW		SPRING13-P3-T01N-GRW		SPRING13-P4-T01N-GRW		US-1-T01N-GRWRE		US-1-T01N-GRW	
				GW1		GW1		GW1		GW1		GW5		GW5	
Field Measurements															
DO	mg/L	T		-		3.37	:	3.89	:	3.03	:	-		8.48	:
Eh	millivolts	T		-		321.8	:	395.5	:	426.5	:	-		238.1	:
pH	SU	T		-		2.9	:	2.6	:	2.99	:	-		6.71	:
Specific Conductance	uS/cm	T		-		1536.	:	1558.	:	1405.	:	-		305.	:
Temperature	Celsius	T		-		9.85	:	8.51	:	8.76	:	-		7.98	:
Turbidity	NTU	T		-		147.8	:	126.7	:	23.	:	-		2.	:
General Chemistry															
Ammonia	mg/L	T		-		-		-		-		-		<0.07	:
Bicarbonate (as CaCO3)	mg/L	T		-		-		-		-		-		68.2	:
Carbonate (as CaCO3)	mg/L	T		-		-		-		-		-		<1.	:
Chloride	mg/L	T		-		-		-		-		-		1.5	:
Fluoride	mg/L	T		-		-		-		-		-		0.45	:
Hydroxide (as CaCO3)	mg/L	T		-		-		-		-		-		<1.	:
Nitrate	mg/L	T		-		-		-		-		-		<0.4	J
Nitrite	mg/L	T		-		-		-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T		-		-		-		-		-		<0.01	J
Phosphorus	mg/L	T		-		-		-		-		-		<0.01	:
Sulfate	mg/L	T		-		-		-		-		73.6	J	-	
Total Alkalinity	mg/L	T		-		-		-		-		-		68.2	:
Total Dissolved Solids	mg/L	T		-		-		-		-		-		42.	J
Total Kjeldahl Nitrogen	mg/L	T		-		-		-		-		-		<0.24	:
Total Organic Carbon	mg/L	T		-		-		-		-		-		<1.	:
Total Suspended Solids	mg/L	T		-		-		-		-		-		<0.67	:
Laboratory Parameters															
pH	SU	T		-		2.9	:	2.6	:	2.99	:	-		6.71	:
Inorganics															
Cyanide	mg/L	T		-		-		-		-		-		<0.01	J
Physical Properties															
Hardness	mg/L	T		-		-		-		-		-		138.	:
Hardness	mg/L	D		517.	:	-		-		-		-		-	
Metals															
Aluminum	mg/L	T		-		-		-		-		-		<0.003	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 13 P-1	SPRING 13 P-2	SPRING 13 P-3	SPRING 13 P-4	US-1	US-1
		Sample Date	5/9/2004	5/9/2004	5/9/2004	5/9/2004	11/7/2002	11/7/2002
		Sample ID	SPRING13-P1-D01N-GRW	SPRING13-P2-T01N-GRW	SPRING13-P3-T01N-GRW	SPRING13-P4-T01N-GRW	US-1-T01N-GRWRE	US-1-T01N-GRW
		Exposure Area	GW1	GW1	GW1	GW1	GW5	GW5
Aluminum	mg/L	D	75.8 :	-	-	-	-	-
Antimony	mg/L	T	-	-	-	-	-	<0.0002 :
Antimony	mg/L	D	<0.027 :	-	-	-	-	-
Arsenic	mg/L	T	-	-	-	-	-	0.00022 :
Arsenic	mg/L	D	0.0314 :	-	-	-	-	-
Barium	mg/L	T	-	-	-	-	-	0.0782 :
Barium	mg/L	D	<0.012 :	-	-	-	-	-
Beryllium	mg/L	T	-	-	-	-	-	<0.0002 :
Beryllium	mg/L	D	0.0134 :	-	-	-	-	-
Boron	mg/L	T	-	-	-	-	-	<0.0048 :
Boron	mg/L	D	<0.018 :	-	-	-	-	-
Cadmium	mg/L	T	-	-	-	-	-	<0.0001 :
Cadmium	mg/L	D	<0.1 :	-	-	-	-	-
Calcium	mg/L	T	-	-	-	-	-	44.3 :
Calcium	mg/L	D	140. :	-	-	-	-	-
Chromium	mg/L	T	-	-	-	-	-	<0.0046 :
Chromium	mg/L	D	<0.13 :	-	-	-	-	-
Chromium, Hexavalent	mg/L	D	-	-	-	-	-	<0.01 :
Cobalt	mg/L	T	-	-	-	-	-	<0.0022 :
Cobalt	mg/L	D	<0.18 :	-	-	-	-	-
Copper	mg/L	T	-	-	-	-	-	0.00042 :
Copper	mg/L	D	0.779 :	-	-	-	-	-
Iron	mg/L	T	-	-	-	-	-	<0.0226 :
Iron	mg/L	D	<2.93 :	-	-	-	-	-
Lead	mg/L	T	-	-	-	-	-	<0.0001 :
Lead	mg/L	D	<0.004 :	-	-	-	-	-
Magnesium	mg/L	T	-	-	-	-	-	6.54 :
Magnesium	mg/L	D	40.8 :	-	-	-	-	-
Manganese	mg/L	T	-	-	-	-	-	<0.0025 :
Manganese	mg/L	D	10.5 :	-	-	-	-	-
Mercury	mg/L	T	-	-	-	-	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	-	-	-
Molybdenum	mg/L	T	-	-	-	-	-	0.0036 :
Molybdenum	mg/L	D	<0.01 :	-	-	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	Spring 13 P-1 5/9/2004 SPRING13-P1-D01N-GRW GW1	SPRING 13 P-2 5/9/2004 SPRING13-P2-T01N-GRW GW1	SPRING 13 P-3 5/9/2004 SPRING13-P3-T01N-GRW GW1	SPRING 13 P-4 5/9/2004 SPRING13-P4-T01N-GRW GW1	US-1 11/7/2002 US-1-T01N-GRWRE GW5	US-1 11/7/2002 US-1-T01N-GRW GW5
Nickel	mg/L	T	-	-	-	-	-	0.0006 :
Nickel	mg/L	D	<0.33 :	-	-	-	-	-
Potassium	mg/L	T	-	-	-	-	-	1.12 :
Potassium	mg/L	D	<15.5 :	-	-	-	-	-
Selenium	mg/L	T	-	-	-	-	-	<0.00086 :
Selenium	mg/L	D	<0.007 :	-	-	-	-	-
Silver	mg/L	T	-	-	-	-	-	<0.0001 :
Silver	mg/L	D	<0.001 :	-	-	-	-	-
Sodium	mg/L	T	-	-	-	-	-	3.76 :
Sodium	mg/L	D	<33.3 :	-	-	-	-	-
Thallium	mg/L	T	-	-	-	-	-	<0.0001 :
Thallium	mg/L	D	<0.001 :	-	-	-	-	-
Vanadium	mg/L	T	-	-	-	-	-	<0.0001 :
Vanadium	mg/L	D	<0.002 :	-	-	-	-	-
Zinc	mg/L	T	-	-	-	-	-	0.0071 :
Zinc	mg/L	D	2.86 :	-	-	-	-	-
Isotopes								
Lead	mg/L	T	-	-	-	-	-	<0.0001 :
Lead	mg/L	D	<0.004 :	-	-	-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-1	11/7/2002	US-1-D01N-GRWRE		US-1	11/7/2002	US-1-D01N-GRW	US-1	1/12/2003	US-1-T01N-GRW	US-1	1/12/2003	US-1-D01N-GRW	US-1	4/2/2003	US-1-T01N-GRW	US-1	4/2/2003	US-1-D01N-GRW
			GW5				GW5			GW5			GW5			GW5			GW5		
Field Measurements																					
DO	mg/L	T	-				-			8.28		:	-			8.35		:	-		
Eh	millivolts	T	-				-			276.6		:	-			156.9		:	-		
pH	SU	T	-				-			6.5		:	-			6.5	J		-		
Specific Conductance	uS/cm	T	-				-			302.		:	-			266.		:	-		
Temperature	Celsius	T	-				-			5.58		:	-			6.17		:	-		
Turbidity	NTU	T	-				-			40.		:	-			6.8		:	-		
General Chemistry																					
Ammonia	mg/L	T	-				-			<0.045		:	-			<0.059		:	-		
Bicarbonate (as CaCO3)	mg/L	T	-				-			67.9		:	-			71.8		:	-		
Carbonate (as CaCO3)	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Chloride	mg/L	T	-				-			<1.7		:	-			<1.3	J		-		
Fluoride	mg/L	T	-				-			0.46		:	-			0.53		:	-		
Hydroxide (as CaCO3)	mg/L	T	-				-			<1.		:	-			<1.		:	-		
Nitrate	mg/L	T	-				-			<0.54		:	-			<0.54	J		-		
Nitrite	mg/L	T	-				-			<0.005		:	-			<0.005		:	-		
Phosphate, Ortho As P	mg/L	T	-				-			<0.068	J		-			<0.022	J		-		
Phosphorus	mg/L	T	-				-			<0.01	J		-			<0.01		:	-		
Sulfate	mg/L	T	-				-			72.4	J		-			58.5	J		-		
Total Alkalinity	mg/L	T	-				-			67.9		:	-			71.8		:	-		
Total Dissolved Solids	mg/L	T	-				-			<213.		:	-			<208.		:	-		
Total Kjeldahl Nitrogen	mg/L	T	-				-			<0.29		:	-			<0.24		:	-		
Total Organic Carbon	mg/L	T	-				-			<1.		:	-			<1.	J		-		
Total Suspended Solids	mg/L	T	-				-			<0.5		:	-			<0.8		:	-		
Laboratory Parameters																					
pH	SU	T	-				-			6.5		:	-			6.5	J		-		
Specific Conductance	umhos/cm	T	-				-			-			-			259.	J		-		
Inorganics																					
Cyanide	mg/L	T	-				-			<0.01	J		-			<0.01	J		-		
Physical Properties																					
Hardness	mg/L	T	-				-			140.		:	-			129.		:	-		
Hardness	mg/L	D	129.		:		-			-			139.		:	-			131.		:
Metals																					

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-1	11/7/2002	US-1-D01N-GRWRE		US-1	11/7/2002	US-1-D01N-GRW		US-1	1/12/2003	US-1-T01N-GRW		US-1	1/12/2003	US-1-D01N-GRW		US-1	4/2/2003	US-1-T01N-GRW		US-1	4/2/2003	US-1-D01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Aluminum	mg/L	T	-				-				<0.142			:	-				<0.0503			:	-			
Aluminum	mg/L	D	<0.142			:	-				-				<0.142			:	-				<0.0503			:
Antimony	mg/L	T	-				-				<0.0006			:	-				<0.0006			:	-			
Antimony	mg/L	D	<0.0006			:	-				-				<0.0006			:	-				<0.0006			:
Arsenic	mg/L	T	-				-				<0.0004			:	-				<0.0002			:	-			
Arsenic	mg/L	D	<0.0004			:	-				-				<0.0004			:	-				<0.0002			:
Barium	mg/L	T	-				-				0.0785			:	-				0.07			:	-			
Barium	mg/L	D	0.0696			:	-				-				0.0786			:	-				0.0714			:
Beryllium	mg/L	T	-				-				<0.0002			:	-				<0.0003		J		-			
Beryllium	mg/L	D	<0.0002			:	-				-				<0.0002			:	-				<0.0003		J	
Boron	mg/L	T	-				-				<0.0039			:	-				<0.0084			:	-			
Boron	mg/L	D	<0.0041			:	-				-				<0.0039			:	-				<0.0084			:
Cadmium	mg/L	T	-				-				<0.0004			:	-				<0.0005			:	-			
Cadmium	mg/L	D	<0.0004			:	-				-				<0.0004			:	-				<0.0005			:
Calcium	mg/L	T	-				-				44.9			:	-				41.2			:	-			
Calcium	mg/L	D	41.4			:	-				-				44.6			:	-				42.			:
Chromium	mg/L	T	-				-				<0.0037			:	-				<0.001			:	-			
Chromium	mg/L	D	<0.0037			:	-				-				<0.0037			:	-				<0.001			:
Cobalt	mg/L	T	-				-				<0.0016			:	-				<0.0038			:	-			
Cobalt	mg/L	D	<0.0016			:	-				-				<0.0016			:	-				<0.0038			:
Copper	mg/L	T	-				-				<0.0017			:	-				0.0016			:	-			
Copper	mg/L	D	<0.0017			:	-				-				<0.0017			:	-				<0.0015			:
Iron	mg/L	T	-				-				<0.489			:	-				<0.0311			:	-			
Iron	mg/L	D	<0.489			:	-				-				<0.489			:	-				<0.0311			:
Lead	mg/L	T	-				-				<0.0002			:	-				<0.0002			:	-			
Lead	mg/L	D	<0.0002			:	-				-				<0.0002			:	-				<0.0002			:
Magnesium	mg/L	T	-				-				6.86			:	-				6.3			:	-			
Magnesium	mg/L	D	6.26			:	-				-				6.78			:	-				6.4			:
Manganese	mg/L	T	-				-				<0.005			:	-				<0.001			:	-			
Manganese	mg/L	D	<0.005			:	-				-				<0.005			:	-				<0.001			:
Mercury	mg/L	T	-				-				<0.0001			:	-				<0.0001			:	-			
Mercury	mg/L	D	-				<0.0001			:	-				<0.0001			:	-				<0.0001			:
Molybdenum	mg/L	T	-				-				0.0033			:	-				<0.0023			:	-			
Molybdenum	mg/L	D	0.004			:	-				-				0.0024			:	-				<0.0023			:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	US-1 11/7/2002 US-1-D01N-GRWRE GW5		US-1 11/7/2002 US-1-D01N-GRW GW5		US-1 1/12/2003 US-1-T01N-GRW GW5		US-1 1/12/2003 US-1-D01N-GRW GW5		US-1 4/2/2003 US-1-T01N-GRW GW5		US-1 4/2/2003 US-1-D01N-GRW GW5	
Nickel	mg/L	T	-		-		<0.0015	:	-		<0.003	:	-	
Nickel	mg/L	D	<0.0015	:	-		-		<0.0015	:	-		<0.003	:
Potassium	mg/L	T	-		-		1.09	:	-		1.01	:	-	
Potassium	mg/L	D	0.867	:	-		-		1.08	:	-		1.05	:
Selenium	mg/L	T	-		-		<0.0016	:	-		<0.001	J	-	
Selenium	mg/L	D	<0.0016	:	-		-		<0.0016	:	-		<0.001	J
Silver	mg/L	T	-		-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	-		-		5.66	:	-		3.08	:	-	
Sodium	mg/L	D	<3.27	:	-		-		<3.27	:	-		3.14	:
Thallium	mg/L	T	-		-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	-		-		<0.0004	:	-		<0.0002	:	-	
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		<0.0002	:
Zinc	mg/L	T	-		-		<0.039	:	-		<0.0057	:	-	
Zinc	mg/L	D	<0.039	:	-		-		<0.039	:	-		<0.0061	:
Isotopes														
Lead	mg/L	T	-		-		<0.0002	:	-		<0.0002	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-1	7/7/2003	US-1-T01N-GRW		US-1	7/7/2003	US-1-D01N-GRW	US-1	10/13/2003	US-1-T01N-GRW	US-1	10/13/2003	US-1-D01N-GRW	US-1	1/8/2004	US-1-T01N-GRW	US-1	1/8/2004	US-1-D01N-GRW
			GW5				GW5			GW5			GW5			GW5			GW5		
Field Measurements																					
DO	mg/L	T	8.01		:		-			8.42		:	-			3.61		:	-		
Eh	millivolts	T	331.1		:		-			455.		:	-			378.6		:	-		
pH	SU	T	7.	J			-			7.2	J		-			7.	J		-		
Specific Conductance	uS/cm	T	277.		:		-			221.		:	-			350.		:	-		
Temperature	Celsius	T	9.48		:		-			8.02		:	-			5.59		:	-		
Turbidity	NTU	T	6.9		:		-			17.3		:	-			1.5		:	-		
General Chemistry																					
Ammonia	mg/L	T	<0.082	J			-			<0.04	J		-			<0.04	J		-		
Bicarbonate (as CaCO3)	mg/L	T	74.2		:		-			69.7		:	-			64.		:	-		
Carbonate (as CaCO3)	mg/L	T	<1.		:		-			<1.		:	-			<1.		:	-		
Chloride	mg/L	T	1.6		:		-			<0.99		:	-			1.6		:	-		
Fluoride	mg/L	T	0.5		:		-			0.5		:	-			0.46		:	-		
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-			<1.		:	-			<1.		:	-		
Nitrate	mg/L	T	0.29		:		-			<0.2		:	-			<0.31	J		-		
Nitrite	mg/L	T	<0.005		:		-			<0.005		:	-			<0.005		:	-		
Phosphate, Ortho As P	mg/L	T	<0.01		:		-			<0.01		:	-			<0.01	J		-		
Phosphorus	mg/L	T	<0.01		:		-			<0.01		:	-			<0.01		:	-		
Sulfate	mg/L	T	67.8	J			-			39.4	J		-			91.6		:	-		
Total Alkalinity	mg/L	T	74.2		:		-			69.7		:	-			64.		:	-		
Total Dissolved Solids	mg/L	T	166.		:		-			162.		:	-			218.		:	-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-			<0.24		:	-			<0.24		:	-		
Total Organic Carbon	mg/L	T	<1.	J			-			<1.	J		-			<1.	J		-		
Total Suspended Solids	mg/L	T	<0.5		:		-			<0.5		:	-			<0.5		:	-		
Laboratory Parameters																					
pH	SU	T	7.	J			-			7.2	J		-			7.	J		-		
Specific Conductance	umhos/cm	T	253.	J			-			199.	J		-			312.	J		-		
Inorganics																					
Cyanide	mg/L	T	<0.01	J			-			<0.01	J		-			<0.01	J		-		
Physical Properties																					
Hardness	mg/L	T	138.		:		-			106.		:	-			171.		:	-		
Hardness	mg/L	D	-				136.		:	-			110.		:	-			168.		:
Metals																					

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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-1	7/7/2003	US-1-T01N-GRW	GW5	US-1	7/7/2003	US-1-D01N-GRW	GW5	US-1	10/13/2003	US-1-T01N-GRW	GW5	US-1	10/13/2003	US-1-D01N-GRW	GW5	US-1	1/8/2004	US-1-T01N-GRW	GW5	US-1	1/8/2004	US-1-D01N-GRW	GW5
Aluminum	mg/L	T	<0.631	:		-			<0.631	:	<0.307	:		-			<0.326	:	<0.621	:		-		
Aluminum	mg/L	D	-			<0.631	:		-		-			<0.326	:		-		-			<0.621	:	
Antimony	mg/L	T	<0.001	:		-			<0.001	:	<0.001	:		-			<0.0024	:	<0.0024	:		-		
Antimony	mg/L	D	-			<0.001	:		-		-			<0.001	:		-		-			<0.0024	:	
Arsenic	mg/L	T	<0.0004	:		-			<0.0004	:	<0.0004	:		-			<0.0004	:	<0.0004	:		-		
Arsenic	mg/L	D	-			<0.0004	:		-		-			<0.0004	:		-		-			<0.0004	:	
Barium	mg/L	T	0.0724	:		-			0.0587	:	-			0.0844	:		-		0.0844	:		-		
Barium	mg/L	D	-			0.0744	:		-		0.0563	:		-			0.0886	:	-			0.0886	:	
Beryllium	mg/L	T	0.00048	J		-			<0.0003	J	-			<0.001	J		-		<0.001	J		-		
Beryllium	mg/L	D	-			<0.0002	J		-		<0.0003	J		-			<0.001	J	-			<0.001	J	
Boron	mg/L	T	<0.0098	:		-			<0.0064	:	-			<0.0117	:		-		<0.0117	:		-		
Boron	mg/L	D	-			<0.0122	:		-		<0.0064	:		-			<0.0117	:	-			<0.0117	:	
Cadmium	mg/L	T	<0.0003	:		-			<0.0007	:	-			<0.0007	J		-		<0.0007	J		-		
Cadmium	mg/L	D	-			<0.0003	:		-		<0.0007	:		-			<0.0007	:	-			<0.0007	:	
Calcium	mg/L	T	44.5	:		-			34.3	:	-			55.	:		-		55.	:		-		
Calcium	mg/L	D	-			44.2	:		-		35.7	:		-			54.	:	-			54.	:	
Chromium	mg/L	T	<0.0006	J		-			<0.0013	J	-			<0.0057	:		-		<0.0057	:		-		
Chromium	mg/L	D	-			0.0703	J		-		<0.0013	J		-			<0.0057	:	-			<0.0057	:	
Cobalt	mg/L	T	<0.0018	:		-			<0.0031	:	-			<0.0037	:		-		<0.0037	:		-		
Cobalt	mg/L	D	-			<0.0018	:		-		<0.0031	:		-			<0.0037	:	-			<0.0037	:	
Copper	mg/L	T	<0.002	:		-			<0.03	J	-			<0.0035	:		-		<0.0035	:		-		
Copper	mg/L	D	-			<0.0034	:		-		<0.002	:		-			<0.0035	:	-			<0.0035	:	
Iron	mg/L	T	<0.667	:		-			<0.3	:	-			<0.423	:		-		<0.423	:		-		
Iron	mg/L	D	-			<0.667	:		-		<0.3	:		-			<0.423	:	-			<0.423	:	
Lead	mg/L	T	<0.0002	:		-			<0.0004	:	-			<0.0002	:		-		<0.0002	:		-		
Lead	mg/L	D	-			<0.0002	:		-		<0.0004	:		-			<0.0002	:	-			<0.0002	:	
Magnesium	mg/L	T	6.43	:		-			4.88	:	-			8.07	:		-		8.07	:		-		
Magnesium	mg/L	D	-			6.33	:		-		5.13	:		-			7.96	:	-			7.96	:	
Manganese	mg/L	T	<0.019	:		-			<0.01	:	-			<0.019	:		-		<0.019	:		-		
Manganese	mg/L	D	-			<0.019	:		-		<0.01	:		-			<0.019	:	-			<0.019	:	
Mercury	mg/L	T	<0.0001	:		-			<0.0001	:	-			<0.0001	:		-		<0.0001	:		-		
Mercury	mg/L	D	-			<0.0001	:		-		<0.0001	:		-			<0.0001	:	-			<0.0001	:	
Molybdenum	mg/L	T	0.0041	:		-			<0.0039	:	-			<0.003	:		-		<0.003	:		-		
Molybdenum	mg/L	D	-			0.0054	J		-		<0.0042	:		-			0.0037	:	-			0.0037	:	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	US-1 7/7/2003 US-1-T01N-GRW GW5		US-1 7/7/2003 US-1-D01N-GRW GW5		US-1 10/13/2003 US-1-T01N-GRW GW5		US-1 10/13/2003 US-1-D01N-GRW GW5		US-1 1/8/2004 US-1-T01N-GRW GW5		US-1 1/8/2004 US-1-D01N-GRW GW5	
Nickel	mg/L	T	<0.002	:	-		<0.0028	:	-		<0.0168	:	-	
Nickel	mg/L	D	-		0.0333	:	-		<0.0028	:	-		<0.0168	:
Potassium	mg/L	T	1.05	:	-		<1.35	:	-		1.05	:	-	
Potassium	mg/L	D	-		1.05	:	-		<1.25	:	-		1.01	:
Selenium	mg/L	T	<0.0016	:	-		<0.0006	:	-		<0.0006	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.0006	:	-		<0.0006	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<5.32	:	-		<5.02	:	-		<9.2	:	-	
Sodium	mg/L	D	-		<5.32	:	-		<5.02	:	-		<9.2	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	J	-		<0.0002	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Zinc	mg/L	T	<0.0334	:	-		<0.02	:	-		<0.091	:	-	
Zinc	mg/L	D	-		<0.0324	J	-		<0.02	:	-		<0.091	:
Isotopes														
Lead	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Fraction	US-1	US-1	US-1	US-1	US-2	US-2
Site ID			US-1	US-1	US-1	US-1	US-2	US-2
Sample Date			4/13/2004	4/13/2004	5/12/2004	5/12/2004	11/7/2002	11/7/2002
Sample ID			US-1-T01N-GRW	US-1-D01N-GRW	US-1-T01N-GRW	US-1-D01N-GRW	US-2-T01N-GRWRE	US-2-T01N-GRW
Exposure Area			GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements								
DO	mg/L	T	8.37 :	-	7.86 :	-	-	9.13 :
Eh	millivolts	T	227.2 :	-	383.3 :	-	-	296.2 :
pH	SU	T	7.7 J	-	7.2 J	-	-	6.25 :
Specific Conductance	uS/cm	T	202. :	-	283. :	-	-	703. :
Temperature	Celsius	T	6.66 :	-	6.75 :	-	-	8.13 :
Turbidity	NTU	T	8.3 :	-	9.8 :	-	-	0. :
General Chemistry								
Ammonia	mg/L	T	<0.062 J	-	<0.074 :	-	-	<0.043 :
Bicarbonate (as CaCO3)	mg/L	T	70.4 :	-	70. :	-	-	42.4 :
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	<1. :
Chloride	mg/L	T	1. :	-	1.5 :	-	-	5.1 :
Fluoride	mg/L	T	0.57 :	-	0.5 :	-	-	1. :
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	0.3 J	-	0.38 J	-	-	0.74 :
Nitrite	mg/L	T	<0.005 J	-	<0.005 :	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	<0.01 :	-	-	0.014 J
Phosphorus	mg/L	T	<0.01 :	-	<0.01 :	-	-	<0.01 :
Sulfate	mg/L	T	33.7 :	-	69.5 :	-	295. J	-
Total Alkalinity	mg/L	T	70.4 :	-	70. :	-	-	42.4 :
Total Dissolved Solids	mg/L	T	182. :	-	160. :	-	-	488. :
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T	<1.3 J	-	1.4 :	-	-	<1. :
Total Suspended Solids	mg/L	T	<0.6 J	-	<0.5 :	-	-	<0.56 :
Laboratory Parameters								
pH	SU	T	7.7 J	-	7.2 J	-	-	6.25 :
Specific Conductance	umhos/cm	T	179. J	-	243. J	-	-	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	<0.01 J	-	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	101. :	-	133. :	-	-	-
Hardness	mg/L	D	-	99.4 :	-	134. :	-	-
Metals								

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-1	4/13/2004	US-1-T01N-GRW		US-1	4/13/2004	US-1-D01N-GRW		US-1	5/12/2004	US-1-T01N-GRW		US-1	5/12/2004	US-1-D01N-GRW		US-2	11/7/2002	US-2-T01N-GRWRE		US-2	11/7/2002	US-2-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Aluminum	mg/L	T	<0.176	:			-				<0.201	:			-				-				-			
Aluminum	mg/L	D	-				<0.176	:			-				<0.201	:			-				-			
Antimony	mg/L	T	<0.0008	:			-				<0.0008	:			-				-				-			
Antimony	mg/L	D	-				<0.0008	:			-				<0.0008	:			-				-			
Arsenic	mg/L	T	<0.0004	:			-				<0.0004	:			-				-				-			
Arsenic	mg/L	D	-				<0.0004	:			-				<0.0004	:			-				-			
Barium	mg/L	T	0.0512	:			-				0.0692	:			-				-				-			
Barium	mg/L	D	-				0.0486	:			-				0.0685	:			-				-			
Beryllium	mg/L	T	<0.0003	J			-				<0.0003	:			-				-				-			
Beryllium	mg/L	D	-				<0.0003	J			-				<0.0006	:			-				-			
Boron	mg/L	T	0.0052	:			-				0.0039	:			-				-				-			
Boron	mg/L	D	-				<0.0036	:			-				0.0039	:			-				-			
Cadmium	mg/L	T	<0.0003	:			-				<0.0003	:			-				-				-			
Cadmium	mg/L	D	-				<0.0003	:			-				<0.0003	:			-				-			
Calcium	mg/L	T	32.6	:			-				42.8	:			-				-				-			
Calcium	mg/L	D	-				31.9	:			-				43.	:			-				-			
Chromium	mg/L	T	<0.0014	:			-				<0.0006	J			-				-				-			
Chromium	mg/L	D	-				<0.0006	:			-				<0.0006	J			-				-			
Chromium, Hexavalent	mg/L	D	-				-				-				-				-				<0.01	:		
Cobalt	mg/L	T	<0.0016	:			-				<0.0016	:			-				-				-			
Cobalt	mg/L	D	-				<0.0016	:			-				<0.0016	:			-				-			
Copper	mg/L	T	<0.0014	:			-				<0.0014	:			-				-				-			
Copper	mg/L	D	-				<0.0014	:			-				<0.0014	:			-				-			
Iron	mg/L	T	<0.192	J			-				<0.293	:			-				-				-			
Iron	mg/L	D	-				<0.192	:			-				<0.293	:			-				-			
Lead	mg/L	T	<0.0008	:			-				<0.0008	:			-				-				-			
Lead	mg/L	D	-				<0.0008	:			-				<0.0008	:			-				-			
Magnesium	mg/L	T	4.84	:			-				6.41	:			-				-				-			
Magnesium	mg/L	D	-				4.81	:			-				6.49	:			-				-			
Manganese	mg/L	T	<0.019	:			-				<0.014	:			-				-				-			
Manganese	mg/L	D	-				<0.019	:			-				<0.014	:			-				-			
Mercury	mg/L	T	<0.0001	:			-				<0.0001	:			-				-				<0.0001	:		
Mercury	mg/L	D	-				<0.0001	:			-				<0.0001	:			-				-			
Molybdenum	mg/L	T	0.0046	:			-				<0.0027	J			-				-				-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

		Site ID	US-1	US-1	US-1	US-1	US-2	US-2
		Sample Date	4/13/2004	4/13/2004	5/12/2004	5/12/2004	11/7/2002	11/7/2002
		Sample ID	US-1-T01N-GRW	US-1-D01N-GRW	US-1-T01N-GRW	US-1-D01N-GRW	US-2-T01N-GRWRE	US-2-T01N-GRW
Parameter	**Units**	**Exposure Area Fraction**	GW5	GW5	GW5	GW5	GW5	GW5
Molybdenum	mg/L	D	-	0.0046 :	-	<0.0014 J	-	-
Nickel	mg/L	T	<0.0015 J	-	0.0051 J	-	-	-
Nickel	mg/L	D	-	<0.0015 J	-	<0.0015 J	-	-
Potassium	mg/L	T	1.09 :	-	0.977 :	-	-	-
Potassium	mg/L	D	-	1.07 :	-	0.986 :	-	-
Selenium	mg/L	T	<0.0014 :	-	<0.0014 :	-	-	-
Selenium	mg/L	D	-	<0.0014 :	-	<0.0014 :	-	-
Silver	mg/L	T	<0.0002 :	-	<0.0002 :	-	-	-
Silver	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Sodium	mg/L	T	<3.3 :	-	4.45 :	-	-	-
Sodium	mg/L	D	-	2.48 :	-	6.71 :	-	-
Thallium	mg/L	T	<0.0002 :	-	<0.0002 :	-	-	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Vanadium	mg/L	T	<0.0004 :	-	<0.0004 :	-	-	-
Vanadium	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-
Zinc	mg/L	T	<0.015 J	-	<0.024 :	-	-	-
Zinc	mg/L	D	-	<0.015 J	-	0.0258 :	-	-
Isotopes								
Lead	mg/L	T	<0.0008 :	-	<0.0008 :	-	-	-
Lead	mg/L	D	-	<0.0008 :	-	<0.0008 :	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units		Site ID	US-2		US-2		US-2		US-2		US-2	
			Sample Date	11/7/2002		11/7/2002		1/12/2003		1/12/2003		4/2/2003	
			Sample ID	US-2-D01N-GRWRE		US-2-D01N-GRW		US-2-T01N-GRW		US-2-D01N-GRW		US-3-D01N-GRW	
		Exposure Area Fraction		GW5		GW5		GW5		GW5		GW5	
Field Measurements													
DO	mg/L	T		-		-		7.09	:	-		-	
Eh	millivolts	T		-		-		296.6	:	-		-	
pH	SU	T		-		-		6.11	:	-		-	
Specific Conductance	uS/cm	T		-		-		715.	:	-		-	
Temperature	Celsius	T		-		-		5.07	:	-		-	
Turbidity	NTU	T		-		-		36.9	:	-		-	
General Chemistry													
Ammonia	mg/L	T		-		-		<0.077	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T		-		-		35.2	:	-		-	
Carbonate (as CaCO3)	mg/L	T		-		-		<1.	:	-		-	
Chloride	mg/L	T		-		-		5.9	:	-		-	
Fluoride	mg/L	T		-		-		1.1	:	-		-	
Hydroxide (as CaCO3)	mg/L	T		-		-		<1.	:	-		-	
Nitrate	mg/L	T		-		-		<1.2	J	-		-	
Nitrite	mg/L	T		-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T		-		-		<0.01	J	-		-	
Phosphorus	mg/L	T		-		-		<0.01	:	-		-	
Sulfate	mg/L	T		-		-		296.	J	-		-	
Total Alkalinity	mg/L	T		-		-		35.2	:	-		-	
Total Dissolved Solids	mg/L	T		-		-		<528.	J	-		-	
Total Kjeldahl Nitrogen	mg/L	T		-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T		-		-		<1.	:	-		-	
Total Suspended Solids	mg/L	T		-		-		<1.	:	-		-	
Laboratory Parameters													
pH	SU	T		-		-		6.11	:	-		-	
Specific Conductance	umhos/cm	T		-		-		-		-		-	
Inorganics													
Cyanide	mg/L	T		-		-		<0.01	J	-		-	
Physical Properties													
Hardness	mg/L	T		-		-		399.	:	-		-	
Hardness	mg/L	D		343.	:	-		-		403.	:	114.	:
Metals													

Parameter	Units	Exposure Area Fraction	Site ID	US-2		US-2	
			Sample Date	4/2/2003		4/2/2003	
			Sample ID	US-2-T01N-GRW		US-2-T01N-GRW	
				GW5		GW5	
Field Measurements							
DO	mg/L	T		7.56	:		
Eh	millivolts	T		172.8	:		
pH	SU	T		6.8	J		
Specific Conductance	uS/cm	T		505.	:		
Temperature	Celsius	T		5.24	:		
Turbidity	NTU	T		4.1	:		
General Chemistry							
Ammonia	mg/L	T		<0.07	:		
Bicarbonate (as CaCO3)	mg/L	T		50.4	:		
Carbonate (as CaCO3)	mg/L	T		<1.	:		
Chloride	mg/L	T		3.5	:		
Fluoride	mg/L	T		1.	:		
Hydroxide (as CaCO3)	mg/L	T		<1.	:		
Nitrate	mg/L	T		<0.85	J		
Nitrite	mg/L	T		<0.005	:		
Phosphate, Ortho As P	mg/L	T		<0.01	:		
Phosphorus	mg/L	T		<0.01	:		
Sulfate	mg/L	T		192.	J		
Total Alkalinity	mg/L	T		50.4	:		
Total Dissolved Solids	mg/L	T		376.	:		
Total Kjeldahl Nitrogen	mg/L	T		<0.24	:		
Total Organic Carbon	mg/L	T		<1.	J		
Total Suspended Solids	mg/L	T		<0.5	:		
Laboratory Parameters							
pH	SU	T		6.8	J		
Specific Conductance	umhos/cm	T		482.	J		
Inorganics							
Cyanide	mg/L	T		<0.01	J		
Physical Properties							
Hardness	mg/L	T		246.	:		
Hardness	mg/L	D		-			
Metals							

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-2	11/7/2002	US-2-D01N-GRWRE		US-2	11/7/2002	US-2-D01N-GRW		US-2	1/12/2003	US-2-T01N-GRW		US-2	1/12/2003	US-2-D01N-GRW		US-2	4/2/2003	US-3-D01N-GRW		US-2	4/2/2003	US-2-T01N-GRW	
Aluminum	mg/L	T	GW5	-			GW5	-			GW5	<0.158		:	GW5	-			GW5	-			GW5	<0.0516		:
Aluminum	mg/L	D	GW5	<0.142		:	GW5	-			GW5	-			GW5	0.145		:	GW5	-			GW5	-		
Antimony	mg/L	T	GW5	-			GW5	-			GW5	<0.0006		J	GW5	-			GW5	-			GW5	<0.0006		:
Antimony	mg/L	D	GW5	<0.0006		:	GW5	-			GW5	-			GW5	<0.0006		J	GW5	<0.0006		:	GW5	-		
Arsenic	mg/L	T	GW5	-			GW5	-			GW5	<0.0004		:	GW5	-			GW5	-			GW5	<0.0002		:
Arsenic	mg/L	D	GW5	<0.0004		:	GW5	-			GW5	-			GW5	<0.0004		:	GW5	<0.0002		:	GW5	-		
Barium	mg/L	T	GW5	-			GW5	-			GW5	0.0712		:	GW5	-			GW5	-			GW5	0.0447		:
Barium	mg/L	D	GW5	0.067		:	GW5	-			GW5	-			GW5	0.072		:	GW5	-			GW5	-		
Beryllium	mg/L	T	GW5	-			GW5	-			GW5	0.00034		:	GW5	-			GW5	-			GW5	<0.0003		J
Beryllium	mg/L	D	GW5	0.00023		:	GW5	-			GW5	-			GW5	<0.00033		:	GW5	-			GW5	-		
Boron	mg/L	T	GW5	-			GW5	-			GW5	<0.0072		:	GW5	-			GW5	-			GW5	<0.0084		:
Boron	mg/L	D	GW5	<0.0073		:	GW5	-			GW5	-			GW5	<0.0074		:	GW5	-			GW5	-		
Cadmium	mg/L	T	GW5	-			GW5	-			GW5	0.00044		:	GW5	-			GW5	-			GW5	<0.0005		:
Cadmium	mg/L	D	GW5	<0.0004		:	GW5	-			GW5	-			GW5	0.00042		:	GW5	-			GW5	-		
Calcium	mg/L	T	GW5	-			GW5	-			GW5	112.		:	GW5	-			GW5	-			GW5	69.4		:
Calcium	mg/L	D	GW5	96.		:	GW5	-			GW5	-			GW5	113.		:	GW5	-			GW5	-		
Chromium	mg/L	T	GW5	-			GW5	-			GW5	<0.0037		:	GW5	-			GW5	-			GW5	<0.001		:
Chromium	mg/L	D	GW5	<0.0037		:	GW5	-			GW5	-			GW5	<0.0037		:	GW5	-			GW5	-		
Cobalt	mg/L	T	GW5	-			GW5	-			GW5	<0.0016		:	GW5	-			GW5	-			GW5	<0.0038		:
Cobalt	mg/L	D	GW5	<0.0016		:	GW5	-			GW5	-			GW5	<0.0016		:	GW5	-			GW5	-		
Copper	mg/L	T	GW5	-			GW5	-			GW5	<0.0027		:	GW5	-			GW5	-			GW5	0.0021		:
Copper	mg/L	D	GW5	<0.0017		:	GW5	-			GW5	-			GW5	<0.0026		:	GW5	-			GW5	-		
Iron	mg/L	T	GW5	-			GW5	-			GW5	<0.489		:	GW5	-			GW5	-			GW5	<0.0311		:
Iron	mg/L	D	GW5	<0.489		:	GW5	-			GW5	-			GW5	<0.489		:	GW5	-			GW5	-		
Lead	mg/L	T	GW5	-			GW5	-			GW5	<0.0002		:	GW5	-			GW5	-			GW5	<0.0002		:
Lead	mg/L	D	GW5	<0.0002		:	GW5	-			GW5	-			GW5	<0.0002		:	GW5	<0.0002		:	GW5	-		
Magnesium	mg/L	T	GW5	-			GW5	-			GW5	29.1		:	GW5	-			GW5	-			GW5	17.6		:
Magnesium	mg/L	D	GW5	25.		:	GW5	-			GW5	-			GW5	29.4		:	GW5	-			GW5	-		
Manganese	mg/L	T	GW5	-			GW5	-			GW5	<0.005		:	GW5	-			GW5	-			GW5	<0.001		:
Manganese	mg/L	D	GW5	<0.005		:	GW5	-			GW5	-			GW5	<0.005		:	GW5	-			GW5	-		
Mercury	mg/L	T	GW5	-			GW5	-			GW5	<0.0001		:	GW5	-			GW5	-			GW5	<0.0001		:
Mercury	mg/L	D	GW5	-			GW5	<0.0001		:	GW5	-			GW5	<0.0001		:	GW5	<0.0001		:	GW5	-		
Molybdenum	mg/L	T	GW5	-			GW5	-			GW5	<0.0043		J	GW5	-			GW5	-			GW5	<0.0037		:
Molybdenum	mg/L	D	GW5	0.0036		:	GW5	-			GW5	-			GW5	<0.0048		:	GW5	-			GW5	-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	US-2 11/7/2002 US-2-D01N-GRWRE GW5		US-2 11/7/2002 US-2-D01N-GRW GW5		US-2 1/12/2003 US-2-T01N-GRW GW5		US-2 1/12/2003 US-2-D01N-GRW GW5		US-2 4/2/2003 US-3-D01N-GRW GW5		US-2 4/2/2003 US-2-T01N-GRW GW5	
Nickel	mg/L	T	-		-		0.022	:	-		-		0.0114	:
Nickel	mg/L	D	0.0137	:	-		-		0.0226	:	-		-	
Potassium	mg/L	T	-		-		1.51	:	-		-		1.43	:
Potassium	mg/L	D	1.44	:	-		-		1.58	:	-		-	
Selenium	mg/L	T	-		-		<0.0016	:	-		-		0.0013	J
Selenium	mg/L	D	<0.0016	:	-		-		<0.0016	:	<0.001	J	-	
Silver	mg/L	T	-		-		<0.0002	:	-		-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	<0.0002	:	-	
Sodium	mg/L	T	-		-		11.3	:	-		-		5.61	:
Sodium	mg/L	D	6.66	:	-		-		9.4	:	-		-	
Thallium	mg/L	T	-		-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	<0.0002	:	-	
Vanadium	mg/L	T	-		-		<0.0004	:	-		-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0004	:	<0.0002	:	-	
Zinc	mg/L	T	-		-		0.14	:	-		-		0.0817	:
Zinc	mg/L	D	0.0763	:	-		-		<0.138	:	-		-	
Isotopes														
Lead	mg/L	T	-		-		<0.0002	:	-		-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		-		<0.0002	:	<0.0002	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-2	4/2/2003	US-2-D01N-GRW		US-2	7/9/2003	US-2-T01N-GRW		US-2	7/9/2003	US-2-D01N-GRW		US-2	10/14/2003	US-2-T01N-GRW	
			US-2	10/14/2003	US-2-D01N-GRW		US-2	1/6/2004	US-2-T01N-GRW									
Field Measurements																		
DO	mg/L	T	-				4.02		:		-				3.94		:	
Eh	millivolts	T	-				564.4		:		-				629.3		:	
pH	SU	T	-				6.7	J	:		-				6.7	J	:	
Specific Conductance	uS/cm	T	-				424.		:		-				362.		:	
Temperature	Celsius	T	-				11.11		:		-				8.46		:	
Turbidity	NTU	T	-				30.2		:		-				0.		:	
General Chemistry																		
Ammonia	mg/L	T	-				<0.1	J	:		-				<0.04	J	:	
Bicarbonate (as CaCO3)	mg/L	T	-				59.4		:		-				52.4		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				3.3		:		-				2.5		:	
Fluoride	mg/L	T	-				1.		:		-				1.1		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				<0.4	J	:		-				0.36		:	
Nitrite	mg/L	T	-				<0.005		:		-				<0.005		:	
Phosphate, Ortho As P	mg/L	T	-				<0.01		:		-				<0.01		:	
Phosphorus	mg/L	T	-				<0.01		:		-				<0.01		:	
Sulfate	mg/L	T	-				158.	J	:		-				119.	J	:	
Total Alkalinity	mg/L	T	-				59.4		:		-				52.4		:	
Total Dissolved Solids	mg/L	T	-				300.		:		-				322.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	-				3.7	J	:		-				<1.	J	:	
Total Suspended Solids	mg/L	T	-				<0.8		:		-				<0.5		:	
Laboratory Parameters																		
pH	SU	T	-				6.7	J	:		-				6.7	J	:	
Specific Conductance	umhos/cm	T	-				416.	J	:		-				346.	J	:	
Inorganics																		
Cyanide	mg/L	T	-				<0.01	J	:		-				<0.01	J	:	
Physical Properties																		
Hardness	mg/L	T	-				215.		:		-				181.		:	
Hardness	mg/L	D	246.		:		-				210.		:		-			
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-2	4/2/2003	US-2-D01N-GRW		US-2	7/9/2003	US-2-T01N-GRW		US-2	7/9/2003	US-2-D01N-GRW		US-2	10/14/2003	US-2-T01N-GRW	
			US-2	10/14/2003	US-2-D01N-GRW		US-2	1/6/2004	US-2-T01N-GRW									
Field Measurements																		
DO	mg/L	T	-				4.02		:		-				3.94		:	
Eh	millivolts	T	-				564.4		:		-				629.3		:	
pH	SU	T	-				6.7	J	:		-				6.7	J	:	
Specific Conductance	uS/cm	T	-				424.		:		-				362.		:	
Temperature	Celsius	T	-				11.11		:		-				8.46		:	
Turbidity	NTU	T	-				30.2		:		-				0.		:	
General Chemistry																		
Ammonia	mg/L	T	-				<0.1	J	:		-				<0.04	J	:	
Bicarbonate (as CaCO3)	mg/L	T	-				59.4		:		-				52.4		:	
Carbonate (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:	
Chloride	mg/L	T	-				3.3		:		-				2.5		:	
Fluoride	mg/L	T	-				1.		:		-				1.1		:	
Hydroxide (as CaCO3)	mg/L	T	-				<1.		:		-				<1.		:	
Nitrate	mg/L	T	-				<0.4	J	:		-				0.36		:	
Nitrite	mg/L	T	-				<0.005		:		-				<0.005		:	
Phosphate, Ortho As P	mg/L	T	-				<0.01		:		-				<0.01		:	
Phosphorus	mg/L	T	-				<0.01		:		-				<0.01		:	
Sulfate	mg/L	T	-				158.	J	:		-				119.	J	:	
Total Alkalinity	mg/L	T	-				59.4		:		-				52.4		:	
Total Dissolved Solids	mg/L	T	-				300.		:		-				322.		:	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24		:		-				<0.24		:	
Total Organic Carbon	mg/L	T	-				3.7	J	:		-				<1.	J	:	
Total Suspended Solids	mg/L	T	-				<0.8		:		-				<0.5		:	
Laboratory Parameters																		
pH	SU	T	-				6.7	J	:		-				6.7	J	:	
Specific Conductance	umhos/cm	T	-				416.	J	:		-				346.	J	:	
Inorganics																		
Cyanide	mg/L	T	-				<0.01	J	:		-				<0.01	J	:	
Physical Properties																		
Hardness	mg/L	T	-				215.		:		-				181.		:	
Hardness	mg/L	D	246.		:		-				210.		:		-			
Metals																		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-2	4/2/2003	US-2-D01N-GRW	US-2	7/9/2003	US-2-T01N-GRW	US-2	7/9/2003	US-2-D01N-GRW	US-2	10/14/2003	US-2-T01N-GRW	US-2	10/14/2003	US-2-D01N-GRW	US-2	1/6/2004	US-2-T01N-GRW
			GW5			GW5			GW5			GW5			GW5			GW5		
Aluminum	mg/L	T	-			<0.236	:		-			<0.307	:		-			<0.621	:	
Aluminum	mg/L	D	<0.0503	:		-			<0.631	:		-			<0.307	:		-		
Antimony	mg/L	T	-			<0.001	:		-			0.001	:		-			<0.0024	:	
Antimony	mg/L	D	<0.0006	:		-			<0.001	:		-			<0.001	:		-		
Arsenic	mg/L	T	-			<0.0004	:		-			<0.0004	:		-			<0.0004	:	
Arsenic	mg/L	D	<0.0002	:		-			<0.0004	:		-			<0.0004	:		-		
Barium	mg/L	T	-			0.038	:		-			0.0315	:		-			0.0276	:	
Barium	mg/L	D	0.0461	:		-			0.0382	:		-			0.0319	:		-		
Beryllium	mg/L	T	-			<0.0002	:		-			<0.0003	:		-			0.00061	:	
Beryllium	mg/L	D	<0.0003	J		-			<0.00084	:		-			<0.0003	:		-		
Boron	mg/L	T	-			<0.0048	:		-			<0.0064	:		-			<0.0049	:	
Boron	mg/L	D	<0.0084	:		-			0.005	:		-			<0.0064	:		-		
Cadmium	mg/L	T	-			<0.00064	:		-			<0.0013	:		-			<0.0007	:	
Cadmium	mg/L	D	<0.0005	:		-			<0.00055	:		-			<0.0013	:		-		
Calcium	mg/L	T	-			62.7	:		-			52.1	:		-			42.8	:	
Calcium	mg/L	D	69.5	:		-			60.7	:		-			55.8	:		-		
Chromium	mg/L	T	-			<0.0014	:		-			<0.0023	:		-			<0.0015	:	
Chromium	mg/L	D	<0.001	:		-			<0.0006	J		-			<0.0023	:		-		
Cobalt	mg/L	T	-			<0.002	:		-			<0.0031	:		-			<0.0023	:	
Cobalt	mg/L	D	<0.0038	:		-			<0.0018	:		-			<0.0031	:		-		
Copper	mg/L	T	-			<0.0052	:		-			0.0022	:		-			<0.003	:	
Copper	mg/L	D	0.0022	:		-			0.0016	:		-			0.0084	:		-		
Iron	mg/L	T	-			0.672	:		-			<0.3	:		-			<0.442	:	
Iron	mg/L	D	<0.0311	:		-			<0.667	:		-			<0.3	:		-		
Lead	mg/L	T	-			<0.0008	:		-			<0.0004	:		-			<0.0002	:	
Lead	mg/L	D	<0.0002	:		-			<0.00072	:		-			<0.0004	:		-		
Magnesium	mg/L	T	-			14.3	:		-			12.3	:		-			11.5	:	
Magnesium	mg/L	D	17.6	:		-			14.2	:		-			13.2	:		-		
Manganese	mg/L	T	-			0.101	:		-			<0.01	:		-			<0.019	:	
Manganese	mg/L	D	<0.001	:		-			<0.019	:		-			<0.01	:		-		
Mercury	mg/L	T	-			<0.0001	:		-			<0.00015	:		-			<0.0001	J	
Mercury	mg/L	D	<0.0001	:		-			<0.0001	:		-			<0.0001	:		-		
Molybdenum	mg/L	T	-			0.013	:		-			0.0051	:		-			0.0051	:	
Molybdenum	mg/L	D	0.0029	:		-			0.0138	:		-			0.0051	:		-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

		Site ID	US-2	US-2	US-2	US-2	US-2	US-2
		Sample Date	4/2/2003	7/9/2003	7/9/2003	10/14/2003	10/14/2003	1/6/2004
		Sample ID	US-2-D01N-GRW	US-2-T01N-GRW	US-2-D01N-GRW	US-2-T01N-GRW	US-2-D01N-GRW	US-2-T01N-GRW
Parameter	**Units**	**Exposure Area** **Fraction**	GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T	-	0.0076 :	-	0.0065 :	-	0.0079 J
Nickel	mg/L	D	0.0098 :	-	0.0055 J	-	0.007 :	-
Potassium	mg/L	T	-	1.47 :	-	1.4 :	-	0.871 :
Potassium	mg/L	D	1.35 :	-	1.41 :	-	1.4 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.0006 :	-	0.00075 :
Selenium	mg/L	D	0.0012 J	-	<0.0016 J	-	<0.0006 :	-
Silver	mg/L	T	-	<0.0002 J	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 J	-	<0.0002 :	-
Sodium	mg/L	T	-	5.78 :	-	6.18 :	-	<9.2 :
Sodium	mg/L	D	5.58 :	-	<5.32 :	-	5.15 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0004 :	-	<0.0002 :	-	<0.0004 :
Vanadium	mg/L	D	<0.0002 :	-	<0.0004 :	-	<0.0002 :	-
Zinc	mg/L	T	-	<0.01 J	-	0.0791 :	-	0.13 :
Zinc	mg/L	D	0.0864 :	-	0.0542 J	-	0.168 :	-
Isotopes								
Lead	mg/L	T	-	<0.0008 :	-	<0.0004 :	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	<0.00072 :	-	<0.0004 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-2	1/6/2004	US-2-D01N-GRW		US-2	4/12/2004	US-2-T01N-GRW		US-2	4/12/2004	US-2-D01N-GRW		US-2	5/11/2004	US-2-T01N-GRW		US-2	5/11/2004	US-2-D01N-GRW		US-3	11/7/2002	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Field Measurements																										
DO	mg/L	T	-				7.09			:	-				5.9			:	-				8.85			:
Eh	millivolts	T	-				236.3			:	-				377.1			:	-				269.6			:
pH	SU	T	-				6.5			J	-				6.5			J	-				6.98			:
Specific Conductance	uS/cm	T	-				414.			:	-				344.			:	-				288.			:
Temperature	Celsius	T	-				5.87			:	-				7.69			:	-				6.76			:
Turbidity	NTU	T	-				1.			:	-				6.1			:	-				0.			:
General Chemistry																										
Ammonia	mg/L	T	-				<0.04			:	-				0.11			J	-				<0.081			:
Bicarbonate (as CaCO3)	mg/L	T	-				38.7			:	-				32.1			:	-				69.9			:
Carbonate (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Chloride	mg/L	T	-				2.8			:	-				3.1			:	-				1.4			:
Fluoride	mg/L	T	-				2.2			:	-				2.6			:	-				0.43			:
Hydroxide (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Nitrate	mg/L	T	-				0.46			J	-				0.46			:	-				<0.4			:
Nitrite	mg/L	T	-				<0.005			:	-				<0.005			:	-				<0.005			:
Phosphate, Ortho As P	mg/L	T	-				<0.01			:	-				<0.01			:	-				<0.01			J
Phosphorus	mg/L	T	-				<0.01			:	-				<0.01			:	-				<0.01			:
Sulfate	mg/L	T	-				146.			:	-				117.			:	-				60.9			:
Total Alkalinity	mg/L	T	-				38.7			:	-				32.1			:	-				69.9			:
Total Dissolved Solids	mg/L	T	-				248.			:	-				228.			:	-				163.			:
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24			:	-				<0.24			:	-				<0.24			:
Total Organic Carbon	mg/L	T	-				<2.1			J	-				<1.9			:	-				<1.			:
Total Suspended Solids	mg/L	T	-				<0.5			J	-				<0.5			:	-				<0.56			:
Laboratory Parameters																										
pH	SU	T	-				6.5			J	-				6.5			J	-				6.98			:
Specific Conductance	umhos/cm	T	-				349.			J	-				284.			J	-				-			
Inorganics																										
Cyanide	mg/L	T	-				<0.01			:	-				<0.01			:	-				<0.01			:
Physical Properties																										
Hardness	mg/L	T	-				200.			:	-				156.			:	-				124.			:
Hardness	mg/L	D	155.			:	-				196.			:	-				155.			:	-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-2	1/6/2004	US-2-D01N-GRW	US-2	4/12/2004	US-2-T01N-GRW	US-2	4/12/2004	US-2-D01N-GRW	US-2	5/11/2004	US-2-T01N-GRW	US-2	5/11/2004	US-2-D01N-GRW	US-3	11/7/2002	US-3-T01N-GRW
			GW5			GW5			GW5			GW5			GW5			GW5		
Aluminum	mg/L	T	-			<0.296		:	-			<0.449		:	-			<0.0038		:
Aluminum	mg/L	D	<0.621		:	-			<0.273		:	-			<0.376		:	-		
Antimony	mg/L	T	-			<0.0008		:	-			<0.0008		:	-			<0.0002		:
Antimony	mg/L	D	<0.0024		:	-			<0.0008		:	-			<0.0008		:	-		
Arsenic	mg/L	T	-			<0.0004		:	-			<0.0004		:	-			<0.0004		:
Arsenic	mg/L	D	<0.0004		:	-			<0.0004		:	-			<0.0004		:	-		
Barium	mg/L	T	-			0.0376		:	-			0.0302		:	-			0.0752		:
Barium	mg/L	D	0.0269		:	-			0.0366		:	-			0.0301		:	-		
Beryllium	mg/L	T	-			<0.0003	J		-			<0.0013	J		-			<0.0002		:
Beryllium	mg/L	D	0.00053		:	-			<0.00031	J		-			<0.0016	J		-		
Boron	mg/L	T	-			0.0048		:	-			0.0075		:	-			<0.0048		:
Boron	mg/L	D	<0.0037		:	-			0.0045		:	-			0.0087		:	-		
Cadmium	mg/L	T	-			<0.0003		:	-			0.00039		:	-			<0.0001		:
Cadmium	mg/L	D	<0.0007		:	-			<0.0003		:	-			<0.0003		:	-		
Calcium	mg/L	T	-			55.2		:	-			42.8		:	-			41.5		:
Calcium	mg/L	D	42.8		:	-			54.2		:	-			42.5		:	-		
Chromium	mg/L	T	-			<0.0006		:	-			<0.0014		:	-			<0.0046		:
Chromium	mg/L	D	<0.0015		:	-			<0.00082		:	-			<0.0006		:	-		
Chromium, Hexavalent	mg/L	D	-			-			-			-			-			<0.01		:
Cobalt	mg/L	T	-			<0.0016		:	-			<0.0016		:	-			<0.0022		:
Cobalt	mg/L	D	<0.0023		:	-			<0.0016		:	-			<0.0016		:	-		
Copper	mg/L	T	-			<0.0014		:	-			0.0022		:	-			<0.0003		:
Copper	mg/L	D	<0.003		:	-			<0.0016		:	-			<0.0014		:	-		
Iron	mg/L	T	-			<0.192	J		-			<0.192		:	-			<0.0226		:
Iron	mg/L	D	<0.49		:	-			<0.192		:	-			<0.192		:	-		
Lead	mg/L	T	-			<0.0008		:	-			<0.0008		:	-			<0.0001		:
Lead	mg/L	D	<0.0002		:	-			<0.0008		:	-			<0.0008		:	-		
Magnesium	mg/L	T	-			15.1		:	-			12.		:	-			5.07		:
Magnesium	mg/L	D	11.7		:	-			14.8		:	-			11.9		:	-		
Manganese	mg/L	T	-			<0.019		:	-			<0.019		:	-			<0.0025		:
Manganese	mg/L	D	<0.019		:	-			<0.019		:	-			<0.019		:	-		
Mercury	mg/L	T	-			<0.0001		:	-			<0.0001		:	-			<0.0001		:
Mercury	mg/L	D	<0.0001	J	:	-			<0.0001		:	-			<0.0001		:	-		
Molybdenum	mg/L	T	-			<0.0036		:	-			0.0066		:	-			0.005		:

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-2	1/6/2004	US-2-D01N-GRW		US-2	4/12/2004	US-2-T01N-GRW		US-2	4/12/2004	US-2-D01N-GRW		US-2	5/11/2004	US-2-T01N-GRW		US-2	5/11/2004	US-2-D01N-GRW		US-3	11/7/2002	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Molybdenum	mg/L	D	0.0035	:			-				0.0038	:			-				0.0061	:			-			
Nickel	mg/L	T	-				0.0205	:			-				0.0211	:			-				<0.0002	J		
Nickel	mg/L	D	0.0076	J			-				0.0192	:			-				0.02	:			-			
Potassium	mg/L	T	-				1.32	:			-				1.15	:			-				1.07	:		
Potassium	mg/L	D	0.865	:			-				1.33	:			-				1.21	:			-			
Selenium	mg/L	T	-				<0.0014	:			-				<0.0014	:			-				<0.0004	:		
Selenium	mg/L	D	0.00075	:			-				<0.0014	:			-				<0.0014	:			-			
Silver	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0001	:		
Silver	mg/L	D	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Sodium	mg/L	T	-				6.22	:			-				<6.34	:			-				3.44	:		
Sodium	mg/L	D	12.6	:			-				5.51	:			-				<3.95	:			-			
Thallium	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0001	:		
Thallium	mg/L	D	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Vanadium	mg/L	T	-				<0.0004	:			-				<0.0004	:			-				<0.0001	:		
Vanadium	mg/L	D	<0.0004	:			-				<0.0004	:			-				<0.0004	:			-			
Zinc	mg/L	T	-				0.142	:			-				0.135	:			-				<0.0069	:		
Zinc	mg/L	D	0.138	:			-				0.137	:			-				0.137	:			-			
Isotopes																										
Delta D	per mil	T	-				-96.9	:			-				-				-				-			
Delta O-18	per mil	T	-				-13.5	:			-				-				-				-			
Lead	mg/L	T	-				<0.0008	:			-				<0.0008	:			-				<0.0001	:		
Lead	mg/L	D	<0.0002	:			-				<0.0008	:			-				<0.0008	:			-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-3	11/7/2002	US-3-D01N-GRW		US-3	1/12/2003	US-3-T01N-GRW		US-3	1/12/2003	US-3-D01N-GRW		US-3	4/2/2003	US-3-T01N-GRW		US-3	4/2/2003	US-3-D01N-GRW		US-3	7/10/2003	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Field Measurements																										
DO	mg/L	T	-				8.92	:			-				8.17	:			-				7.54	:		
Eh	millivolts	T	-				266.5	:			-				155.	:			-				341.9	:		
pH	SU	T	-				6.86	:			-				6.9	J			-				7.2	J		
Specific Conductance	uS/cm	T	-				255.	:			-				234.	:			-				230.	:		
Temperature	Celsius	T	-				6.37	:			-				5.95	:			-				7.08	:		
Turbidity	NTU	T	-				36.8	:			-				7.4	:			-				46.1	:		
General Chemistry																										
Ammonia	mg/L	T	-				<0.064	:			-				<0.071	:			-				<0.26	J		
Bicarbonate (as CaCO3)	mg/L	T	-				70.8	:			-				73.6	:			-				77.2	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Chloride	mg/L	T	-				<1.4	:			-				<1.	:			-				1.5	:		
Fluoride	mg/L	T	-				0.41	:			-				0.45	:			-				0.43	:		
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				<1.	:			-				<1.	:		
Nitrate	mg/L	T	-				<0.52	J			-				<0.47	J			-				0.43	J		
Nitrite	mg/L	T	-				<0.005	J			-				<0.005	:			-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				<0.01	J			-				<0.01	:			-				<0.01	:		
Phosphorus	mg/L	T	-				0.011	J			-				0.015	:			-				<0.01	:		
Sulfate	mg/L	T	-				47.5	J			-				45.5	J			-				51.	J		
Total Alkalinity	mg/L	T	-				70.8	:			-				73.6	:			-				77.2	:		
Total Dissolved Solids	mg/L	T	-				<170.	:			-				<166.	:			-				206.	:		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				<0.24	:			-				0.37	:		
Total Organic Carbon	mg/L	T	-				<1.	:			-				<1.	J			-				<1.	J		
Total Suspended Solids	mg/L	T	-				<2.1	:			-				<0.5	:			-				<0.9	:		
Laboratory Parameters																										
pH	SU	T	-				6.86	:			-				6.9	J			-				7.2	J		
Specific Conductance	umhos/cm	T	-				-				-				222.	J			-				229.	J		
Inorganics																										
Cyanide	mg/L	T	-				<0.01	J			-				<0.01	J			-				<0.01	J		
Physical Properties																										
Hardness	mg/L	T	-				122.	:			-				112.	:			-				114.	:		
Hardness	mg/L	D	125.	:			-				119.	:			-				-				-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-3	11/7/2002	US-3-D01N-GRW		US-3	1/12/2003	US-3-T01N-GRW		US-3	1/12/2003	US-3-D01N-GRW		US-3	4/2/2003	US-3-T01N-GRW		US-3	4/2/2003	US-3-D01N-GRW		US-3	7/10/2003	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Aluminum	mg/L	T	-				<0.142	J			-				<0.0503	:			-				<0.631	:		
Aluminum	mg/L	D	<0.0054	:			-				<0.142	J			-				<0.0503	:			-			
Antimony	mg/L	T	-				<0.00093	:			-				<0.0006	:			-				<0.001	:		
Antimony	mg/L	D	<0.0002	:			-				<0.0006	:			-				-				-			
Arsenic	mg/L	T	-				<0.0004	:			-				<0.0002	:			-				<0.0004	:		
Arsenic	mg/L	D	<0.0004	:			-				<0.0004	:			-				-				-			
Barium	mg/L	T	-				0.0741	:			-				0.0703	:			-				0.0729	:		
Barium	mg/L	D	0.0762	:			-				0.0734	:			-				0.0715	:			-			
Beryllium	mg/L	T	-				<0.0002	:			-				<0.0003	J			-				<0.00035	:		
Beryllium	mg/L	D	<0.0002	:			-				<0.0002	:			-				<0.0003	J			-			
Boron	mg/L	T	-				<0.0087	:			-				<0.0084	:			-				0.0054	:		
Boron	mg/L	D	<0.0048	:			-				<0.0091	:			-				<0.0084	:			-			
Cadmium	mg/L	T	-				<0.0004	:			-				<0.0005	:			-				0.00047	:		
Cadmium	mg/L	D	<0.0001	:			-				<0.0004	:			-				<0.0005	:			-			
Calcium	mg/L	T	-				41.4	:			-				37.9	:			-				38.5	:		
Calcium	mg/L	D	41.8	:			-				40.2	:			-				38.6	:			-			
Chromium	mg/L	T	-				<0.0037	:			-				<0.001	:			-				<0.0006	J		
Chromium	mg/L	D	<0.0046	:			-				<0.0037	:			-				<0.001	:			-			
Cobalt	mg/L	T	-				<0.0016	:			-				<0.0038	:			-				<0.0018	:		
Cobalt	mg/L	D	<0.0022	:			-				<0.0016	:			-				<0.0038	:			-			
Copper	mg/L	T	-				<0.0017	:			-				<0.0015	:			-				<0.0014	J		
Copper	mg/L	D	<0.0003	:			-				<0.0017	:			-				0.0017	:			-			
Iron	mg/L	T	-				<0.489	:			-				<0.0311	:			-				<0.667	:		
Iron	mg/L	D	<0.0589	:			-				<0.489	:			-				<0.0311	:			-			
Lead	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.00072	:		
Lead	mg/L	D	<0.0001	:			-				<0.0002	:			-				-				-			
Magnesium	mg/L	T	-				4.57	:			-				4.19	:			-				4.34	:		
Magnesium	mg/L	D	5.09	:			-				4.4	:			-				4.26	:			-			
Manganese	mg/L	T	-				<0.005	:			-				<0.001	:			-				<0.019	:		
Manganese	mg/L	D	<0.0025	:			-				<0.005	:			-				<0.001	:			-			
Mercury	mg/L	T	-				<0.0001	:			-				<0.0001	:			-				<0.0001	:		
Mercury	mg/L	D	<0.0001	:			-				<0.0001	:			-				-				-			
Molybdenum	mg/L	T	-				0.0053	:			-				<0.0025	:			-				0.0034	:		
Molybdenum	mg/L	D	0.0051	:			-				0.0031	:			-				<0.0023	:			-			

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			US-3	11/7/2002	US-3-D01N-GRW		US-3	1/12/2003	US-3-T01N-GRW		US-3	1/12/2003	US-3-D01N-GRW		US-3	4/2/2003	US-3-T01N-GRW		US-3	4/2/2003	US-3-D01N-GRW		US-3	7/10/2003	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Nickel	mg/L	T	-				<0.0015	:			-				<0.003	:			-				<0.002	J		
Nickel	mg/L	D	0.00024	J			-				<0.0015	:			-				<0.003	:			-			
Potassium	mg/L	T	-				1.16	:			-				1.09	:			-				1.05	:		
Potassium	mg/L	D	1.07	:			-				1.08	:			-				1.14	:			-			
Selenium	mg/L	T	-				<0.0016	:			-				<0.001	J			-				<0.0016	:		
Selenium	mg/L	D	<0.0004	:			-				<0.0016	:			-				-				-			
Silver	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	J		
Silver	mg/L	D	<0.0001	:			-				<0.0002	:			-				-				-			
Sodium	mg/L	T	-				<3.27	:			-				3.14	:			-				<5.32	:		
Sodium	mg/L	D	3.4	:			-				<3.27	:			-				2.83	:			-			
Thallium	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Thallium	mg/L	D	<0.0001	:			-				<0.0002	:			-				-				-			
Vanadium	mg/L	T	-				<0.0004	:			-				<0.0002	:			-				<0.0004	:		
Vanadium	mg/L	D	<0.0001	:			-				<0.0004	:			-				-				-			
Zinc	mg/L	T	-				<0.039	:			-				<0.0036	:			-				<0.016	:		
Zinc	mg/L	D	<0.0069	:			-				<0.039	:			-				0.0209	:			-			
Isotopes																										
Lead	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.00072	:		
Lead	mg/L	D	<0.0001	:			-				<0.0002	:			-				-				-			

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fracton

Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-3	7/10/2003	US-3-D01N-GRW		US-3	10/13/2003	US-3-T01N-GRW		US-3	10/13/2003	US-3-D01N-GRW		US-3	1/7/2004	US-3-T01N-GRW		US-3	1/7/2004	US-3-D01N-GRW		US-3	4/12/2004	US-3-T01N-GRW	
			GW5				GW5				GW5				GW5				GW5				GW5			
Field Measurements																										
DO	mg/L	T	-				10.66			:	-				7.44			:	-				8.35			:
Eh	millivolts	T	-				326.2			:	-				184.			:	-				244.9			:
pH	SU	T	-				7.3		J		-				6.5		J		-				7.2		J	
Specific Conductance	uS/cm	T	-				231.			:	-				316.			:	-				214.			:
Temperature	Celsius	T	-				6.6			:	-				5.36			:	-				6.94			:
Turbidity	NTU	T	-				14.9			:	-				3.9			:	-				15.1			:
General Chemistry																										
Ammonia	mg/L	T	-				<0.04		J		-				<0.04			:	-				<0.04			:
Bicarbonate (as CaCO3)	mg/L	T	-				76.1			:	-				66.1		J		-				74.3			:
Carbonate (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Chloride	mg/L	T	-				<0.97			:	-				1.7			:	-				<0.85			:
Fluoride	mg/L	T	-				0.43			:	-				0.41			:	-				0.46			:
Hydroxide (as CaCO3)	mg/L	T	-				<1.			:	-				<1.			:	-				<1.			:
Nitrate	mg/L	T	-				0.22			:	-				<0.32			:	-				0.27		J	
Nitrite	mg/L	T	-				<0.005			:	-				0.0073			:	-				<0.005			:
Phosphate, Ortho As P	mg/L	T	-				<0.01			:	-				<0.01			:	-				<0.01			:
Phosphorus	mg/L	T	-				<0.01			:	-				<0.01			:	-				<0.01			:
Sulfate	mg/L	T	-				38.4		J		-				77.2			:	-				31.7			:
Total Alkalinity	mg/L	T	-				76.1			:	-				66.1		J		-				74.3			:
Total Dissolved Solids	mg/L	T	-				196.			:	-				188.			:	-				102.			:
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24			:	-				<0.24			:	-				<0.24			:
Total Organic Carbon	mg/L	T	-				<1.		J		-				<1.			:	-				<1.8		J	
Total Suspended Solids	mg/L	T	-				<0.5			:	-				<0.5			:	-				6.6		J	
Laboratory Parameters																										
pH	SU	T	-				7.3		J		-				6.5		J		-				7.2		J	
Specific Conductance	umhos/cm	T	-				211.		J		-				288.		J		-				176.		J	
Inorganics																										
Cyanide	mg/L	T	-				<0.01		J		-				<0.01		J		-				<0.01			:
Physical Properties																										
Hardness	mg/L	T	-				115.			:	-				146.			:	-				105.			:
Hardness	mg/L	D	121.			:	-				112.			:	-				149.			:	-			
Metals																										

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-3		7/10/2003 US-3-D01N-GRW		US-3	10/13/2003 US-3-T01N-GRW	US-3	10/13/2003 US-3-D01N-GRW	US-3	1/7/2004 US-3-T01N-GRW	US-3	1/7/2004 US-3-D01N-GRW	US-3	4/12/2004 US-3-T01N-GRW
			GW5				GW5		GW5		GW5		GW5		GW5	
Aluminum	mg/L	T	-				<0.307	:	-		<0.514	:	-		<0.176	:
Aluminum	mg/L	D	<0.631	:			-		<0.307	:	-		<0.514	:	-	
Antimony	mg/L	T	-				<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:			-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-				<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:			-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-				0.0697	:	-		0.0862	:	-		0.0618	:
Barium	mg/L	D	0.0781	:			-		0.0638	:	-		0.0892	:	-	
Beryllium	mg/L	T	-				<0.0003	J	-		<0.0003	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0002	:			-		<0.0003	J	-		<0.0003	:	-	
Boron	mg/L	T	-				<0.0064	:	-		<0.006	:	-		0.0044	:
Boron	mg/L	D	0.0047	:			-		<0.0064	:	-		<0.004	:	-	
Cadmium	mg/L	T	-				<0.0007	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0003	:			-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-				38.7	:	-		47.6	:	-		35.5	:
Calcium	mg/L	D	40.8	:			-		37.7	:	-		49.4	:	-	
Chromium	mg/L	T	-				0.0139	J	-		<0.0015	J	-		<0.002	:
Chromium	mg/L	D	<0.0006	J			-		0.0013	J	-		<0.0015	J	-	
Cobalt	mg/L	T	-				<0.0031	:	-		<0.0023	:	-		<0.0016	:
Cobalt	mg/L	D	<0.0018	:			-		<0.0031	:	-		<0.0023	:	-	
Copper	mg/L	T	-				<0.0027	:	-		<0.003	:	-		<0.0014	:
Copper	mg/L	D	<0.0014	J			-		<0.002	:	-		<0.003	:	-	
Iron	mg/L	T	-				<0.3	:	-		<0.901	:	-		<0.192	J
Iron	mg/L	D	<0.667	:			-		<0.3	:	-		<0.373	:	-	
Lead	mg/L	T	-				<0.0004	:	-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	<0.00073	:			-		<0.0004	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-				4.36	:	-		6.5	:	-		3.99	:
Magnesium	mg/L	D	4.57	:			-		4.26	:	-		6.3	:	-	
Manganese	mg/L	T	-				<0.01	:	-		<0.0378	:	-		<0.019	:
Manganese	mg/L	D	<0.019	:			-		<0.01	:	-		<0.015	:	-	
Mercury	mg/L	T	-				<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:			-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-				<0.0039	:	-		0.0046	:	-		0.0044	:
Molybdenum	mg/L	D	0.0037	:			-		<0.0035	:	-		0.0042	:	-	

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			US-3	7/10/2003	US-3-D01N-GRW		US-3	10/13/2003	US-3-T01N-GRW	US-3	10/13/2003	US-3-D01N-GRW	US-3	1/7/2004	US-3-T01N-GRW	US-3	1/7/2004	US-3-D01N-GRW	US-3	4/12/2004	US-3-T01N-GRW
			GW5				GW5			GW5			GW5			GW5			GW5		
Nickel	mg/L	T	-				0.006	:		-	:		<0.0024	:		-	:		<0.0015	J	
Nickel	mg/L	D	<0.002	J			-			<0.0028	:		-			<0.0024	:		-		
Potassium	mg/L	T	-				<1.43	:		-	:		1.11	:		-	:		1.06	:	
Potassium	mg/L	D	1.15	:			-			<1.14	:		-			1.12	:		-		
Selenium	mg/L	T	-				<0.0006	:		-	:		0.00086	J		-	:		<0.0014	:	
Selenium	mg/L	D	<0.0016	J			-			<0.0006	:		-			<0.0006	:		-		
Silver	mg/L	T	-				<0.0002	:		-	:		<0.0002	:		-	:		<0.0002	:	
Silver	mg/L	D	<0.0002	J			-			<0.0002	:		-			<0.0002	:		-		
Sodium	mg/L	T	-				<5.02	:		-	:		5.84	:		-	:		<2.76	:	
Sodium	mg/L	D	<5.32	:			-			<5.02	:		-			6.85	:		-		
Thallium	mg/L	T	-				<0.0002	:		-	:		<0.0002	:		-	:		<0.0002	:	
Thallium	mg/L	D	<0.0002	:			-			<0.0002	:		-			<0.0002	:		-		
Vanadium	mg/L	T	-				<0.0002	:		-	:		<0.0004	:		-	:		<0.0004	:	
Vanadium	mg/L	D	<0.0004	:			-			<0.0002	:		-			<0.0004	:		-		
Zinc	mg/L	T	-				<0.02	:		-	:		0.0381	:		-	:		<0.015	J	
Zinc	mg/L	D	<0.016	:			-			<0.02	:		-			<0.026	:		-		
Isotopes																					
Lead	mg/L	T	-				<0.0004	:		-	:		<0.0002	:		-	:		<0.0008	:	
Lead	mg/L	D	<0.00073	:			-			<0.0004	:		-			<0.0002	:		-		

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID								
			US-3	4/12/2004	US-3-D01N-GRW		US-3	5/11/2004	US-3-T01N-GRW	US-3	5/11/2004	US-3-D01N-GRW	----	----	----
			GW5				GW5			GW5					
Field Measurements															
DO	mg/L	T	-				8.1	:		-			-	-	-
Eh	millivolts	T	-				467.4	:		-			-	-	-
pH	SU	T	-				7.2	J		-			-	-	-
Specific Conductance	uS/cm	T	-				216.	:		-			-	-	-
Temperature	Celsius	T	-				6.49	:		-			-	-	-
Turbidity	NTU	T	-				4.4	:		-			-	-	-
General Chemistry															
Ammonia	mg/L	T	-				0.12	:		-			-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-				74.2	:		-			-	-	-
Carbonate (as CaCO3)	mg/L	T	-				<1.	:		-			-	-	-
Chloride	mg/L	T	-				0.92	:		-			-	-	-
Fluoride	mg/L	T	-				0.44	:		-			-	-	-
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:		-			-	-	-
Nitrate	mg/L	T	-				0.35	:		-			-	-	-
Nitrite	mg/L	T	-				<0.005	:		-			-	-	-
Phosphate, Ortho As P	mg/L	T	-				<0.01	:		-			-	-	-
Phosphorus	mg/L	T	-				<0.01	:		-			-	-	-
Sulfate	mg/L	T	-				32.1	:		-			-	-	-
Total Alkalinity	mg/L	T	-				74.2	:		-			-	-	-
Total Dissolved Solids	mg/L	T	-				114.	:		-			-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:		-			-	-	-
Total Organic Carbon	mg/L	T	-				<1.	:		-			-	-	-
Total Suspended Solids	mg/L	T	-				<0.5	:		-			-	-	-
Laboratory Parameters															
pH	SU	T	-				7.2	J		-			-	-	-
Specific Conductance	umhos/cm	T	-				194.	J		-			-	-	-
Inorganics															
Cyanide	mg/L	T	-				<0.01	:		-			-	-	-
Physical Properties															
Hardness	mg/L	T	-				103.	:		-			-	-	-
Hardness	mg/L	D	104.	:			-			101.	:		-	-	-
Metals															

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID								
			US-3	4/12/2004	US-3-D01N-GRW		US-3	5/11/2004	US-3-T01N-GRW	US-3	5/11/2004	US-3-D01N-GRW	----	----	----
			GW5				GW5			GW5					
Aluminum	mg/L	T	-				<0.176	:		-			-	-	-
Aluminum	mg/L	D	<0.176	:			-			<0.176	:		-	-	-
Antimony	mg/L	T	-				<0.0008	:		-			-	-	-
Antimony	mg/L	D	<0.0008	:			-			<0.0008	:		-	-	-
Arsenic	mg/L	T	-				<0.0004	:		-			-	-	-
Arsenic	mg/L	D	<0.0004	:			-			<0.0004	:		-	-	-
Barium	mg/L	T	-				0.059	:		-			-	-	-
Barium	mg/L	D	0.0595	:			-			0.0618	:		-	-	-
Beryllium	mg/L	T	-				<0.00049	J		-			-	-	-
Beryllium	mg/L	D	<0.0003	J			-			<0.0003	J		-	-	-
Boron	mg/L	T	-				0.0044	:		-			-	-	-
Boron	mg/L	D	<0.0036	:			-			<0.0036	:		-	-	-
Cadmium	mg/L	T	-				<0.0003	:		-			-	-	-
Cadmium	mg/L	D	<0.0003	:			-			<0.0003	:		-	-	-
Calcium	mg/L	T	-				34.6	:		-			-	-	-
Calcium	mg/L	D	35.1	:			-			34.2	:		-	-	-
Chromium	mg/L	T	-				<0.0006	:		-			-	-	-
Chromium	mg/L	D	<0.00094	:			-			<0.00084	:		-	-	-
Cobalt	mg/L	T	-				<0.0016	:		-			-	-	-
Cobalt	mg/L	D	<0.0016	:			-			<0.0016	:		-	-	-
Copper	mg/L	T	-				<0.0014	:		-			-	-	-
Copper	mg/L	D	<0.0014	:			-			<0.0014	:		-	-	-
Iron	mg/L	T	-				<0.192	:		-			-	-	-
Iron	mg/L	D	<0.192	:			-			<0.192	:		-	-	-
Lead	mg/L	T	-				<0.0008	:		-			-	-	-
Lead	mg/L	D	<0.0008	:			-			<0.0008	:		-	-	-
Magnesium	mg/L	T	-				3.92	:		-			-	-	-
Magnesium	mg/L	D	3.92	:			-			3.76	:		-	-	-
Manganese	mg/L	T	-				<0.019	:		-			-	-	-
Manganese	mg/L	D	<0.019	:			-			<0.019	:		-	-	-
Mercury	mg/L	T	-				<0.0001	:		-			-	-	-
Mercury	mg/L	D	<0.0001	:			-			<0.0001	:		-	-	-
Molybdenum	mg/L	T	-				0.0035	:		-			-	-	-
Molybdenum	mg/L	D	0.0032	:			-			0.0044	:		-	-	-

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Appendix A-6a
Groundwater - Alluvial Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		Site ID	US-3		US-3		US-3		----	----	----		
		Sample Date	4/12/2004		5/11/2004		5/11/2004						
		Sample ID	US-3-D01N-GRW		US-3-T01N-GRW		US-3-D01N-GRW						
		Exposure Area	GW5		GW5		GW5						
Nickel	mg/L	T	-		<0.0015	:	-		-	-	-		
Nickel	mg/L	D	<0.0015	:	-		<0.0015	:	-	-	-		
Potassium	mg/L	T	-		1.18	:	-		-	-	-		
Potassium	mg/L	D	1.03	:	-		1.14	:	-	-	-		
Selenium	mg/L	T	-		<0.0014	:	-		-	-	-		
Selenium	mg/L	D	<0.0014	:	-		<0.0014	:	-	-	-		
Silver	mg/L	T	-		<0.0002	:	-		-	-	-		
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-	-	-		
Sodium	mg/L	T	-		<4.28	:	-		-	-	-		
Sodium	mg/L	D	3.29	:	-		<3.39	:	-	-	-		
Thallium	mg/L	T	-		<0.0002	:	-		-	-	-		
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-	-	-		
Vanadium	mg/L	T	-		<0.0004	:	-		-	-	-		
Vanadium	mg/L	D	<0.0004	:	-		<0.0004	:	-	-	-		
Zinc	mg/L	T	-		<0.015	:	-		-	-	-		
Zinc	mg/L	D	<0.015	J	-		<0.015	:	-	-	-		
Isotopes													
Lead	mg/L	T	-		<0.0008	:	-		-	-	-		
Lead	mg/L	D	<0.0008	:	-		<0.0008	:	-	-	-		

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fracton

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			EW-2 11/7/2002 EW-2-T01N-GRW		EW-2 11/7/2002 EW-2-D01N-GRW		EW-2 1/8/2003 EW-2-T01N-GRW		EW-2 1/8/2003 EW-2-D01N-GRW		EW-2 4/1/2003 EW-2-T01N-GRW		EW-2 4/1/2003 EW-2-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	7.79	:	-		7.56	:	-		8.45	:	-	
Eh	millivolts	T	85.2	:	-		265.6	:	-		279.2	:	-	
pH	SU	T	6.96	:	-		7.52	:	-		7.9	J	-	
Specific Conductance	uS/cm	T	449.	:	-		883.	:	-		498.	:	-	
Temperature	Celsius	T	12.03	:	-		12.73	:	-		14.52	:	-	
Turbidity	NTU	T	2.7	:	-		30.1	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.073	:	-		<0.095	:	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	108.	:	-		106.	:	-		105.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	6.1	:	-		6.1	:	-		<0.79	:	-	
Fluoride	mg/L	T	0.43	:	-		0.39	:	-		0.44	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.62	J	-		0.83	J	-		<0.79	:	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.017	J	-		<0.017	J	-	
Phosphorus	mg/L	T	0.013	:	-		0.014	:	-		0.016	:	-	
Sulfate	mg/L	T	107.	:	-		110.	J	-		116.	J	-	
Total Alkalinity	mg/L	T	108.	:	-		106.	:	-		105.	:	-	
Total Dissolved Solids	mg/L	T	316.	:	-		<317.	:	-		380.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.33	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	<0.56	:	-		<0.7	:	-		<0.5	:	-	
Laboratory Parameters														
pH	SU	T	6.96	:	-		7.52	:	-		7.9	J	-	
Specific Conductance	umhos/cm	T	-		-		-		-		442.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	194.	:	-		199.	:	-		228.	:	-	
Hardness	mg/L	D	-		200.	:	-		196.	:	-		195.	:
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 11/7/2002 EW-2-T01N-GRW GW13		EW-2 11/7/2002 EW-2-D01N-GRW GW13		EW-2 1/8/2003 EW-2-T01N-GRW GW13		EW-2 1/8/2003 EW-2-D01N-GRW GW13		EW-2 4/1/2003 EW-2-T01N-GRW GW13		EW-2 4/1/2003 EW-2-D01N-GRW GW13	
Aluminum	mg/L	T	<0.0209	:	-		<0.142	J	-		<0.426	:	-	
Aluminum	mg/L	D	-		<0.0122	:	-		<0.142	J	-		<0.426	:
Antimony	mg/L	T	<0.0002	:	-		<0.0006	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0002	:	-		<0.0006	:	-		<0.0006	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.00051	:
Barium	mg/L	T	0.0942	:	-		0.102	:	-		0.112	:	-	
Barium	mg/L	D	-		0.0943	:	-		0.101	:	-		0.104	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00048	:
Boron	mg/L	T	0.0089	:	-		<0.0112	:	-		<0.0084	:	-	
Boron	mg/L	D	-		0.0094	:	-		<0.0095	:	-		<0.0084	:
Cadmium	mg/L	T	<0.0001	:	-		<0.0004	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0001	:	-		<0.0004	:	-		<0.0005	:
Calcium	mg/L	T	61.2	:	-		62.6	:	-		71.5	:	-	
Calcium	mg/L	D	-		63.	:	-		61.5	:	-		61.	:
Chromium	mg/L	T	<0.0046	:	-		0.0047	:	-		<0.0038	:	-	
Chromium	mg/L	D	-		<0.0046	:	-		<0.0037	:	-		<0.002	:
Chromium, Hexavalent	mg/L	D	<0.01	:	-		-		-		-		-	
Cobalt	mg/L	T	<0.0022	:	-		<0.0016	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Copper	mg/L	T	0.0043	:	-		<0.0027	:	-		0.0026	:	-	
Copper	mg/L	D	-		<0.0003	:	-		<0.0017	:	-		<0.0015	:
Iron	mg/L	T	<0.0275	:	-		<0.489	:	-		<0.422	:	-	
Iron	mg/L	D	-		<0.0326	:	-		0.761	:	-		<0.422	:
Lead	mg/L	T	0.00085	:	-		0.0012	J	-		0.0008	:	-	
Lead	mg/L	D	-		0.00016	:	-		0.0032	J	-		0.00046	:
Magnesium	mg/L	T	10.1	:	-		10.4	:	-		12.1	:	-	
Magnesium	mg/L	D	-		10.4	:	-		10.2	:	-		10.3	:
Manganese	mg/L	T	<0.0025	:	-		<0.005	:	-		<0.013	:	-	
Manganese	mg/L	D	-		<0.0025	:	-		0.0055	:	-		<0.013	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0031	:	-		0.0029	:	-		0.0065	:	-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 11/7/2002 EW-2-T01N-GRW GW13		EW-2 11/7/2002 EW-2-D01N-GRW GW13		EW-2 1/8/2003 EW-2-T01N-GRW GW13		EW-2 1/8/2003 EW-2-D01N-GRW GW13		EW-2 4/1/2003 EW-2-T01N-GRW GW13		EW-2 4/1/2003 EW-2-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0031	:	-		0.0031	:	-		0.0032	:
Nickel	mg/L	T	0.00056	J	-		<0.0015	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0002	J	-		<0.0015	:	-		<0.003	:
Potassium	mg/L	T	4.12	:	-		4.31	:	-		4.09	:	-	
Potassium	mg/L	D	-		4.22	:	-		4.22	:	-		3.68	:
Selenium	mg/L	T	0.00068	:	-		<0.0016	:	-		0.0014	J	-	
Selenium	mg/L	D	-		0.00099	:	-		<0.0016	:	-		0.0022	J
Silver	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	12.6	:	-		12.6	:	-		14.2	:	-	
Sodium	mg/L	D	-		13.2	:	-		13.9	:	-		13.7	:
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.003	:	-		0.0028	:	-		0.0031	:	-	
Vanadium	mg/L	D	-		0.0029	:	-		0.0027	:	-		0.0032	:
Zinc	mg/L	T	0.0091	:	-		<0.039	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.0069	:	-		<0.039	:	-		<0.039	:

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: EW-2 / Sample Date: 7/10/2003 / Sample ID: EW-2-T01N-GRW		Site ID: EW-2 / Sample Date: 7/10/2003 / Sample ID: EW-2-D01N-GRW		Site ID: EW-2 / Sample Date: 10/16/2003 / Sample ID: EW-2-T01N-GRW		Site ID: EW-2 / Sample Date: 10/16/2003 / Sample ID: EW-2-D01N-GRW		Site ID: EW-2 / Sample Date: 1/8/2004 / Sample ID: EW-2-T01N-GRW		Site ID: EW-2 / Sample Date: 1/8/2004 / Sample ID: EW-2-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	7.77	:	-		8.3	:	-		2.66	:	-	
Eh	millivolts	T	325.1	:	-		335.1	:	-		189.	:	-	
pH	SU	T	8.	J	-		7.8	J	-		8.	J	-	
Specific Conductance	uS/cm	T	493.	:	-		508.	:	-		508.	:	-	
Temperature	Celsius	T	15.37	:	-		15.96	:	-		12.62	:	-	
Turbidity	NTU	T	0.	:	-		0.	:	-		1.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.22	J	-		<0.04	J	-		<0.056	J	-	
Bicarbonate (as CaCO3)	mg/L	T	107.	:	-		113.	:	-		105.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	6.2	:	-		6.4	:	-		6.7	:	-	
Fluoride	mg/L	T	0.5	:	-		0.45	:	-		0.42	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.76	J	-		0.61	J	-		0.62	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.012	J	-		<0.011	J	-		0.013	J	-	
Phosphorus	mg/L	T	<0.01	:	-		0.013	:	-		<0.011	:	-	
Sulfate	mg/L	T	125.	J	-		122.	J	-		146.	:	-	
Total Alkalinity	mg/L	T	107.	:	-		113.	:	-		105.	:	-	
Total Dissolved Solids	mg/L	T	360.	:	-		398.	:	-		360.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		1.1	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	<0.6	:	-		<0.9	:	-		<2.1	:	-	
Laboratory Parameters														
pH	SU	T	8.	J	-		7.8	J	-		8.	J	-	
Specific Conductance	umhos/cm	T	466.	J	-		432.	J	-		484.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	257.	:	-		222.	:	-		229.	:	-	
Hardness	mg/L	D	-		260.	:	-		229.	:	-		228.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 7/10/2003 EW-2-T01N-GRW GW13		EW-2 7/10/2003 EW-2-D01N-GRW GW13		EW-2 10/16/2003 EW-2-T01N-GRW GW13		EW-2 10/16/2003 EW-2-D01N-GRW GW13		EW-2 1/8/2004 EW-2-T01N-GRW GW13		EW-2 1/8/2004 EW-2-D01N-GRW GW13	
Aluminum	mg/L	T	<0.183	J	-		<0.221	:	-		<0.514	:	-	
Aluminum	mg/L	D	-		<0.183	J	-		<0.221	:	-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		0.00056	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0968	:	-		0.0926	:	-		0.0935	:	-	
Barium	mg/L	D	-		0.0957	:	-		0.0885	:	-		0.0924	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	:	-		<0.0003	:
Boron	mg/L	T	0.0083	:	-		0.0097	:	-		0.0153	:	-	
Boron	mg/L	D	-		0.0075	:	-		0.0087	:	-		<0.0117	:
Cadmium	mg/L	T	<0.0006	:	-		<0.0007	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0006	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	80.7	:	-		70.2	:	-		71.7	:	-	
Calcium	mg/L	D	-		81.7	:	-		72.2	:	-		71.3	:
Chromium	mg/L	T	0.002	:	-		0.0018	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		0.0019	:	-		0.0019	J	-		<0.0057	:
Cobalt	mg/L	T	<0.002	:	-		<0.0031	:	-		<0.0023	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.0031	:	-		<0.0023	:
Copper	mg/L	T	<0.0024	:	-		0.002	:	-		<0.003	:	-	
Copper	mg/L	D	-		<0.0024	:	-		<0.002	:	-		<0.003	:
Iron	mg/L	T	<0.168	J	-		<0.278	:	-		<0.373	:	-	
Iron	mg/L	D	-		<0.168	J	-		<0.278	:	-		<0.373	:
Lead	mg/L	T	<0.0023	:	-		0.00064	:	-		0.00063	:	-	
Lead	mg/L	D	-		<0.0013	:	-		<0.0004	:	-		<0.00037	:
Magnesium	mg/L	T	13.5	:	-		11.4	:	-		12.1	:	-	
Magnesium	mg/L	D	-		13.6	:	-		11.8	:	-		12.	:
Manganese	mg/L	T	<0.007	:	-		<0.012	:	-		<0.015	:	-	
Manganese	mg/L	D	-		<0.007	:	-		<0.012	:	-		<0.015	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0033	:	-		0.0018	:	-		0.0045	:	-	
Molybdenum	mg/L	D	-		0.0036	:	-		0.0019	:	-		0.0039	:

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 7/10/2003 EW-2-T01N-GRW GW13		EW-2 7/10/2003 EW-2-D01N-GRW GW13		EW-2 10/16/2003 EW-2-T01N-GRW GW13		EW-2 10/16/2003 EW-2-D01N-GRW GW13		EW-2 1/8/2004 EW-2-T01N-GRW GW13		EW-2 1/8/2004 EW-2-D01N-GRW GW13	
Nickel	mg/L	T	<0.0021	:	-		<0.0028	:	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.0021	:	-		<0.0028	:	-		<0.0024	:
Potassium	mg/L	T	4.06	:	-		4.23	:	-		4.4	:	-	
Potassium	mg/L	D	-		4.03	:	-		3.87	:	-		4.37	:
Selenium	mg/L	T	<0.0016	:	-		0.00083	:	-		<0.0019	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		0.0011	:	-		<0.00088	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	14.7	:	-		14.2	:	-		12.7	:	-	
Sodium	mg/L	D	-		15.5	:	-		14.2	:	-		12.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0029	:	-		0.0028	:	-		0.0027	:	-	
Vanadium	mg/L	D	-		0.003	:	-		0.0028	:	-		0.0026	:
Zinc	mg/L	T	<0.057	:	-		<0.023	:	-		<0.026	:	-	
Zinc	mg/L	D	-		<0.057	:	-		<0.023	:	-		<0.026	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 4/14/2004 EW-2-T01N-GRW GW13		EW-2 4/14/2004 EW-2-D01N-GRW GW13		MW-10 10/29/2002 MW-10-T01N-GRW GW13		MW-10 10/29/2002 MW-10-D01N-GRW GW13		MW-10 12/6/2002 MW-10-T01N-GRW GW13		MW-10 1/9/2003 MW-10-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	7.2	:	-		7.42	:	-		7.7	:	7.41	:
Eh	millivolts	T	180.	:	-		198.4	:	-		185.6	:	252.	:
pH	SU	T	8.1	J	-		7.11	:	-		7.45	:	7.63	:
Specific Conductance	uS/cm	T	514.	:	-		231.	:	-		228.	:	228.	:
Temperature	Celsius	T	15.98	:	-		12.9	:	-		3.35	:	9.43	:
Turbidity	NTU	T	2.	:	-		0.3	:	-		49.8	:	31.9	:
General Chemistry														
Ammonia	mg/L	T	<0.097	:	-		<0.18	J	-		-		<0.063	:
Bicarbonate (as CaCO3)	mg/L	T	106.	:	-		72.9	:	-		-		70.1	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	6.8	:	-		1.9	:	-		-		<2.	:
Fluoride	mg/L	T	0.54	:	-		0.4	:	-		-		0.34	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	0.64	J	-		<0.4	J	-		-		0.64	J
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	0.011	:	-		0.02	J	-		-		<0.025	J
Phosphorus	mg/L	T	0.017	:	-		0.029	:	-		-		0.036	:
Sulfate	mg/L	T	165.	:	-		37.5	:	-		-		37.3	J
Total Alkalinity	mg/L	T	106.	:	-		72.9	:	-		-		70.1	:
Total Dissolved Solids	mg/L	T	402.	:	-		190.	:	-		-		<163.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	:	-		-		<1.	:
Total Suspended Solids	mg/L	T	<4.5	J	-		9.6	:	-		-		5.6	:
Laboratory Parameters														
pH	SU	T	8.1	J	-		7.11	:	-		7.45	:	7.63	:
Specific Conductance	umhos/cm	T	461.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	276.	:	-		87.8	:	-		-		79.	:
Hardness	mg/L	D	-		276.	:	-		86.	:	-		-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-2 4/14/2004 EW-2-T01N-GRW GW13	EW-2 4/14/2004 EW-2-D01N-GRW GW13	MW-10 10/29/2002 MW-10-T01N-GRW GW13	MW-10 10/29/2002 MW-10-D01N-GRW GW13	MW-10 12/6/2002 MW-10-T01N-GRW GW13	MW-10 1/9/2003 MW-10-T01N-GRW GW13
Aluminum	mg/L	T	<0.176 :	-	0.182 :	-	-	<0.142 :
Aluminum	mg/L	D	-	<0.176 :	-	0.005 J	-	-
Antimony	mg/L	T	<0.0008 J	-	<0.0002 :	-	-	<0.0006 :
Antimony	mg/L	D	-	<0.0008 J	-	<0.0002 :	-	-
Arsenic	mg/L	T	<0.0004 :	-	0.00029 J	-	-	<0.0004 :
Arsenic	mg/L	D	-	<0.0004 :	-	0.0003 J	-	-
Barium	mg/L	T	0.0957 :	-	0.0454 :	-	-	0.0408 :
Barium	mg/L	D	-	0.0951 :	-	0.0429 :	-	-
Beryllium	mg/L	T	<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Beryllium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Boron	mg/L	T	0.0079 :	-	0.016 :	-	-	<0.0138 :
Boron	mg/L	D	-	0.0076 :	-	0.0154 :	-	-
Cadmium	mg/L	T	<0.0003 :	-	<0.0001 :	-	-	<0.0004 :
Cadmium	mg/L	D	-	<0.0003 :	-	<0.0001 :	-	-
Calcium	mg/L	T	86.8 :	-	27.8 :	-	-	25.1 :
Calcium	mg/L	D	-	86.7 :	-	27.3 :	-	-
Chromium	mg/L	T	<0.0023 :	-	<0.0046 :	-	-	<0.0037 :
Chromium	mg/L	D	-	<0.0024 :	-	<0.0046 :	-	-
Chromium, Hexavalent	mg/L	D	-	-	<0.01 :	-	-	-
Cobalt	mg/L	T	<0.0011 :	-	<0.0022 :	-	-	<0.0016 :
Cobalt	mg/L	D	-	<0.0039 :	-	<0.0022 :	-	-
Copper	mg/L	T	0.0895 :	-	<0.0035 :	-	-	<0.0017 :
Copper	mg/L	D	-	<0.0007 :	-	<0.0036 :	-	-
Iron	mg/L	T	<0.353 J	-	0.118 J	-	-	<0.489 :
Iron	mg/L	D	-	<0.42 :	-	<0.0226 J	-	-
Lead	mg/L	T	0.329 :	-	0.0011 :	-	-	<0.0002 :
Lead	mg/L	D	-	<0.0008 :	-	0.0004 :	-	-
Magnesium	mg/L	T	14.3 :	-	4.46 :	-	-	3.99 :
Magnesium	mg/L	D	-	14.4 :	-	4.35 :	-	-
Manganese	mg/L	T	<0.019 :	-	<0.0076 :	-	-	<0.005 :
Manganese	mg/L	D	-	<0.019 :	-	<0.0025 :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	-
Molybdenum	mg/L	T	<0.0032 :	-	0.0033 :	-	-	<0.0035 :

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			EW-2 4/14/2004 EW-2-T01N-GRW		EW-2 4/14/2004 EW-2-D01N-GRW		MW-10 10/29/2002 MW-10-T01N-GRW		MW-10 10/29/2002 MW-10-D01N-GRW		MW-10 12/6/2002 MW-10-T01N-GRW		MW-10 1/9/2003 MW-10-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Molybdenum	mg/L	D	-		0.0026	:	-		0.0035	:	-		-	
Nickel	mg/L	T	<0.0014	:	-		<0.0002	J	-		-		<0.0015	:
Nickel	mg/L	D	-		<0.0014	:	-		<0.0002	J	-		-	
Potassium	mg/L	T	4.36	:	-		1.14	:	-		-		1.07	:
Potassium	mg/L	D	-		4.4	:	-		1.26	:	-		-	
Selenium	mg/L	T	<0.0014	:	-		0.00033	:	-		-		<0.0016	:
Selenium	mg/L	D	-		<0.0014	:	-		0.00055	:	-		-	
Silver	mg/L	T	<0.0002	:	-		<0.0001	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		-	
Sodium	mg/L	T	16.2	:	-		15.3	:	-		-		12.5	:
Sodium	mg/L	D	-		16.	:	-		15.	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0001	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		-	
Vanadium	mg/L	T	0.0036	:	-		0.0013	:	-		-		0.0011	:
Vanadium	mg/L	D	-		0.0034	:	-		0.001	:	-		-	
Zinc	mg/L	T	0.332	:	-		0.0465	:	-		-		<0.039	:
Zinc	mg/L	D	-		<0.015	:	-		0.0274	:	-		-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID					
			MW-10 1/9/2003 MW-10-D01N-GRW	MW-10 2/7/2003 MW-10-T01N-GRW	MW-10 3/6/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-D01N-GRW	MW-10 5/9/2003 MW-10-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements								
DO	mg/L	T	-	5.96 :	3.77 :	5.96 :	-	6.6 :
Eh	millivolts	T	-	203.8 :	223. :	333.5 :	-	298.6 :
pH	SU	T	-	7.65 :	7.69 :	7.6 J	-	7.49 :
Specific Conductance	uS/cm	T	-	26. :	240. :	223. :	-	229. :
Temperature	Celsius	T	-	9.83 :	9.98 :	13.7 :	-	14.6 :
Turbidity	NTU	T	-	0. :	0. :	0. :	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	-	-	<0.04 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	73. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Chloride	mg/L	T	-	-	-	<1.9 :	-	-
Fluoride	mg/L	T	-	-	-	0.36 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Nitrate	mg/L	T	-	-	-	<0.62 J	-	-
Nitrite	mg/L	T	-	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	-	-	-	<0.71 J	-	-
Phosphorus	mg/L	T	-	-	-	0.028 J	-	-
Sulfate	mg/L	T	-	-	-	62.3 J	-	-
Total Alkalinity	mg/L	T	-	-	-	73. :	-	-
Total Dissolved Solids	mg/L	T	-	-	-	<168. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	-	-	<1. J	-	-
Total Suspended Solids	mg/L	T	-	-	-	<1.4 :	-	-
Laboratory Parameters								
pH	SU	T	-	7.65 :	7.69 :	7.6 J	-	7.49 :
Specific Conductance	umhos/cm	T	-	-	-	216. J	-	-
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	-	-	84.6 :	-	-
Hardness	mg/L	D	78.6 :	-	-	-	83.2 :	-
Metals								

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-10 1/9/2003 MW-10-D01N-GRW	MW-10 2/7/2003 MW-10-T01N-GRW	MW-10 3/6/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-D01N-GRW	MW-10 5/9/2003 MW-10-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T	-	-	-	<0.426 :	-	-
Aluminum	mg/L	D	<0.142 :	-	-	-	<0.426 :	-
Antimony	mg/L	T	-	-	-	<0.0006 :	-	-
Antimony	mg/L	D	<0.0006 :	-	-	-	<0.0006 :	-
Arsenic	mg/L	T	-	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	-	0.0409 :	-	-
Barium	mg/L	D	0.0404 :	-	-	-	0.0407 :	-
Beryllium	mg/L	T	-	-	-	<0.0003 J	-	-
Beryllium	mg/L	D	<0.0002 :	-	-	-	<0.0003 J	-
Boron	mg/L	T	-	-	-	0.0174 :	-	-
Boron	mg/L	D	<0.0136 :	-	-	-	0.0172 :	-
Cadmium	mg/L	T	-	-	-	<0.0004 :	-	-
Cadmium	mg/L	D	<0.0004 :	-	-	-	<0.0004 :	-
Calcium	mg/L	T	-	-	-	26.7 :	-	-
Calcium	mg/L	D	24.9 :	-	-	-	26.4 :	-
Chromium	mg/L	T	-	-	-	<0.0017 :	-	-
Chromium	mg/L	D	<0.0037 :	-	-	-	<0.0017 :	-
Cobalt	mg/L	T	-	-	-	<0.0029 :	-	-
Cobalt	mg/L	D	<0.0016 :	-	-	-	<0.0029 :	-
Copper	mg/L	T	-	-	-	<0.0055 :	-	-
Copper	mg/L	D	<0.0017 :	-	-	-	<0.0062 :	-
Iron	mg/L	T	-	-	-	<0.422 :	-	-
Iron	mg/L	D	<0.489 :	-	-	-	<0.422 :	-
Lead	mg/L	T	-	-	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	-	4.34 :	-	-
Magnesium	mg/L	D	3.98 :	-	-	-	4.22 :	-
Manganese	mg/L	T	-	-	-	<0.013 :	-	-
Manganese	mg/L	D	<0.005 :	-	-	-	<0.013 :	-
Mercury	mg/L	T	-	-	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	<0.0001 :	-
Molybdenum	mg/L	T	-	-	-	<0.0027 :	-	-
Molybdenum	mg/L	D	<0.0038 :	-	-	-	0.0028 :	-

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-10 1/9/2003 MW-10-D01N-GRW	MW-10 2/7/2003 MW-10-T01N-GRW	MW-10 3/6/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-T01N-GRW	MW-10 4/2/2003 MW-10-D01N-GRW	MW-10 5/9/2003 MW-10-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Nickel	mg/L	T	-	-	-	<0.0026 :	-	-
Nickel	mg/L	D	<0.0015 :	-	-	-	<0.0026 :	-
Potassium	mg/L	T	-	-	-	<2.45 :	-	-
Potassium	mg/L	D	1.08 :	-	-	-	<2.44 :	-
Selenium	mg/L	T	-	-	-	<0.001 :	-	-
Selenium	mg/L	D	<0.0016 :	-	-	-	<0.001 :	-
Silver	mg/L	T	-	-	-	<0.0002 :	-	-
Silver	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	-	13. :	-	-
Sodium	mg/L	D	11.8 :	-	-	-	16. :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	0.0011 :	-	-
Vanadium	mg/L	D	0.001 :	-	-	-	0.0011 :	-
Zinc	mg/L	T	-	-	-	<0.039 :	-	-
Zinc	mg/L	D	<0.039 :	-	-	-	<0.039 :	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-10 6/4/2003 MW-10-T01N-GRW		MW-10 7/10/2003 MW-10-T01N-GRW		MW-10 7/10/2003 MW-10-D01N-GRW		MW-10 8/9/2003 MW-10-T01N-GRW		MW-10 9/10/2003 MW-10-T01N-GRW		MW-10 10/15/2003 MW-10-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	5.95	:	6.74	:	-		5.72	:	8.05	:	8.12	:
Eh	millivolts	T	364.3	:	154.2	:	-		256.9	:	130.5	:	12.4	:
pH	SU	T	7.41	:	7.7	J	-		7.34	:	7.48	:	7.8	J
Specific Conductance	uS/cm	T	230.	:	211.	:	-		230.	:	226.	:	226.	:
Temperature	Celsius	T	23.85	:	17.57	:	-		16.45	:	13.01	:	15.55	:
Turbidity	NTU	T	0.	:	0.	:	-		10.4	:	49.8	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.11	J	-		-		-		<0.04	J
Bicarbonate (as CaCO3)	mg/L	T	-		74.	:	-		-		-		74.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		2.1	:	-		-		-		1.9	:
Fluoride	mg/L	T	-		0.38	:	-		-		-		0.36	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		0.57	J	-		-		-		0.47	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.019	J	-		-		-		<0.024	J
Phosphorus	mg/L	T	-		0.017	:	-		-		-		0.026	:
Sulfate	mg/L	T	-		36.6	J	-		-		-		34.8	J
Total Alkalinity	mg/L	T	-		74.	:	-		-		-		74.	:
Total Dissolved Solids	mg/L	T	-		178.	:	-		-		-		178.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		-		-		<1.	J
Total Suspended Solids	mg/L	T	-		<1.7	:	-		-		-		<0.8	:
Laboratory Parameters														
pH	SU	T	7.41	:	7.7	J	-		7.34	:	7.48	:	7.8	J
Specific Conductance	umhos/cm	T	-		203.	J	-		-		-		212.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		70.9	:	-		-		-		85.7	:
Hardness	mg/L	D	-		-		75.3	:	-		-		-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-10 6/4/2003 MW-10-T01N-GRW GW13		MW-10 7/10/2003 MW-10-T01N-GRW GW13		MW-10 7/10/2003 MW-10-D01N-GRW GW13		MW-10 8/9/2003 MW-10-T01N-GRW GW13	MW-10 9/10/2003 MW-10-T01N-GRW GW13	MW-10 10/15/2003 MW-10-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.631	:	-		-	-	<0.307	:
Aluminum	mg/L	D	-		-		<0.631	:	-	-	-	
Antimony	mg/L	T	-		<0.001	:	-		-	-	<0.001	:
Antimony	mg/L	D	-		-		<0.001	:	-	-	-	
Arsenic	mg/L	T	-		<0.0004	:	-		-	-	<0.0004	:
Arsenic	mg/L	D	-		-		<0.0004	:	-	-	-	
Barium	mg/L	T	-		0.0398	:	-		-	-	0.0392	:
Barium	mg/L	D	-		-		0.0391	:	-	-	-	
Beryllium	mg/L	T	-		<0.00039	:	-		-	-	<0.0003	:
Beryllium	mg/L	D	-		-		<0.00029	:	-	-	-	
Boron	mg/L	T	-		0.0156	:	-		-	-	0.0162	:
Boron	mg/L	D	-		-		0.0142	:	-	-	-	
Cadmium	mg/L	T	-		<0.0003	:	-		-	-	<0.0007	:
Cadmium	mg/L	D	-		-		<0.0003	:	-	-	-	
Calcium	mg/L	T	-		22.5	:	-		-	-	27.2	:
Calcium	mg/L	D	-		-		23.7	:	-	-	-	
Chromium	mg/L	T	-		<0.0006	J	-		-	-	0.0015	J
Chromium	mg/L	D	-		-		<0.0006	J	-	-	-	
Cobalt	mg/L	T	-		<0.0018	:	-		-	-	<0.0031	:
Cobalt	mg/L	D	-		-		<0.0018	:	-	-	-	
Copper	mg/L	T	-		<0.0014	J	-		-	-	<0.002	:
Copper	mg/L	D	-		-		<0.0014	J	-	-	-	
Iron	mg/L	T	-		<0.667	:	-		-	-	<0.3	:
Iron	mg/L	D	-		-		<0.667	:	-	-	-	
Lead	mg/L	T	-		<0.00078	:	-		-	-	<0.0004	:
Lead	mg/L	D	-		-		<0.00072	:	-	-	-	
Magnesium	mg/L	T	-		3.6	:	-		-	-	4.32	:
Magnesium	mg/L	D	-		-		3.89	:	-	-	-	
Manganese	mg/L	T	-		<0.019	:	-		-	-	<0.01	:
Manganese	mg/L	D	-		-		<0.019	:	-	-	-	
Mercury	mg/L	T	-		<0.0001	:	-		-	-	0.00051	:
Mercury	mg/L	D	-		-		<0.0001	:	-	-	-	
Molybdenum	mg/L	T	-		0.0025	:	-		-	-	0.004	:
Molybdenum	mg/L	D	-		-		0.0034	:	-	-	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-10 6/4/2003 MW-10-T01N-GRW GW13	MW-10 7/10/2003 MW-10-T01N-GRW GW13	MW-10 7/10/2003 MW-10-D01N-GRW GW13	MW-10 8/9/2003 MW-10-T01N-GRW GW13	MW-10 9/10/2003 MW-10-T01N-GRW GW13	MW-10 10/15/2003 MW-10-T01N-GRW GW13
Nickel	mg/L	T	-	<0.002 J	-	-	-	<0.0028 :
Nickel	mg/L	D	-	-	<0.002 J	-	-	-
Potassium	mg/L	T	-	0.978 :	-	-	-	0.725 :
Potassium	mg/L	D	-	-	0.964 :	-	-	-
Selenium	mg/L	T	-	<0.0016 :	-	-	-	0.00093 :
Selenium	mg/L	D	-	-	<0.0016 J	-	-	-
Silver	mg/L	T	-	<0.0002 J	-	-	-	<0.0002 :
Silver	mg/L	D	-	-	<0.0002 J	-	-	-
Sodium	mg/L	T	-	12. :	-	-	-	13.8 :
Sodium	mg/L	D	-	-	12.5 :	-	-	-
Thallium	mg/L	T	-	<0.0002 :	-	-	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.0002 :	-	-	-
Vanadium	mg/L	T	-	0.0011 :	-	-	-	0.00089 :
Vanadium	mg/L	D	-	-	0.0011 :	-	-	-
Zinc	mg/L	T	-	<0.0191 :	-	-	-	<0.02 :
Zinc	mg/L	D	-	-	<0.016 :	-	-	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-10 10/15/2003 MW-10-D01N-GRW		MW-10 11/1/2003 MW-10-T01N-GRW		MW-10 1/7/2004 MW-10-T01N-GRW		MW-10 1/7/2004 MW-10-D01N-GRW		MW-10 4/16/2004 MW-10-T01N-GRW		MW-10 4/16/2004 MW-10-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		5.54	:	6.04	:	-		6.76	:	-	
Eh	millivolts	T	-		206.8	:	111.2	:	-		185.9	:	-	
pH	SU	T	-		7.5	:	7.8	J	-		7.54	:	-	
Specific Conductance	uS/cm	T	-		210.	:	219.	:	-		226.	:	-	
Temperature	Celsius	T	-		12.56	:	11.38	:	-		12.95	:	-	
Turbidity	NTU	T	-		1.5	:	2.	:	-		2.	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		0.04	J	-		<0.004	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		70.5	:	-		73.7	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	-		-		2.	:	-		<2.1	:	-	
Fluoride	mg/L	T	-		-		0.36	:	-		0.38	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	-		-		<0.51	:	-		0.66	J	-	
Nitrite	mg/L	T	-		-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		-		0.04	:	-		0.021	:	-	
Phosphorus	mg/L	T	-		-		<0.021	:	-		0.027	:	-	
Sulfate	mg/L	T	-		-		35.3	:	-		38.1	:	-	
Total Alkalinity	mg/L	T	-		-		70.5	:	-		73.7	:	-	
Total Dissolved Solids	mg/L	T	-		-		142.	:	-		152.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		<1.	:	-		<1.9	J	-	
Total Suspended Solids	mg/L	T	-		-		<0.7	:	-		<0.7	J	-	
Laboratory Parameters														
pH	SU	T	-		7.5	:	7.8	J	-		7.54	:	-	
Specific Conductance	umhos/cm	T	-		-		213.	J	-		209.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		-		79.1	:	-		82.9	:	-	
Hardness	mg/L	D	84.4	:	-		-		77.	:	-		84.	:
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-10 Sample Date: 10/15/2003 Sample ID: MW-10-D01N-GRW GW13	MW-10 11/1/2003 MW-10-T01N-GRW GW13	MW-10 1/7/2004 MW-10-T01N-GRW GW13	MW-10 1/7/2004 MW-10-D01N-GRW GW13	MW-10 4/16/2004 MW-10-T01N-GRW GW13	MW-10 4/16/2004 MW-10-D01N-GRW GW13
Aluminum	mg/L	T	-	-	<0.514 J	-	<0.201 :	-
Aluminum	mg/L	D	<0.307 :	-	-	<0.514 :	-	<0.201 :
Antimony	mg/L	T	-	-	<0.0024 :	-	<0.00099 :	-
Antimony	mg/L	D	<0.001 :	-	-	<0.0024 :	-	<0.0012 :
Arsenic	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	<0.0004 :	-	-	0.00044 :	-	<0.0004 :
Barium	mg/L	T	-	-	0.0395 :	-	0.041 :	-
Barium	mg/L	D	0.0388 :	-	-	0.0384 :	-	0.0394 :
Beryllium	mg/L	T	-	-	<0.0003 :	-	<0.0003 J	-
Beryllium	mg/L	D	<0.0003 :	-	-	<0.0003 :	-	<0.0003 J
Boron	mg/L	T	-	-	<0.015 :	-	0.0156 :	-
Boron	mg/L	D	0.0147 :	-	-	<0.0138 :	-	0.0138 :
Cadmium	mg/L	T	-	-	<0.0007 J	-	<0.0003 :	-
Cadmium	mg/L	D	<0.0007 :	-	-	<0.0007 :	-	<0.0003 :
Calcium	mg/L	T	-	-	25. :	-	26.5 :	-
Calcium	mg/L	D	26.8 :	-	-	24.4 :	-	26.6 :
Chromium	mg/L	T	-	-	<0.0015 :	-	<0.0015 :	-
Chromium	mg/L	D	0.0014 J	-	-	<0.0015 :	-	0.0015 :
Cobalt	mg/L	T	-	-	<0.0023 :	-	<0.0016 :	-
Cobalt	mg/L	D	<0.0031 :	-	-	0.0028 :	-	<0.0018 :
Copper	mg/L	T	-	-	<0.003 :	-	<0.0014 :	-
Copper	mg/L	D	<0.002 :	-	-	<0.003 :	-	<0.0014 :
Iron	mg/L	T	-	-	<0.373 :	-	<0.293 :	-
Iron	mg/L	D	<0.3 :	-	-	<0.373 :	-	<0.293 :
Lead	mg/L	T	-	-	<0.0002 :	-	<0.0008 :	-
Lead	mg/L	D	<0.0004 :	-	-	<0.0002 :	-	<0.0008 :
Magnesium	mg/L	T	-	-	4.05 :	-	4.07 :	-
Magnesium	mg/L	D	4.26 :	-	-	3.94 :	-	4.29 :
Manganese	mg/L	T	-	-	<0.015 :	-	<0.014 :	-
Manganese	mg/L	D	<0.01 :	-	-	<0.015 :	-	<0.014 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	0.0032 :	-	<0.0038 :	-
Molybdenum	mg/L	D	0.0046 :	-	-	0.0032 :	-	<0.0039 :

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-10 10/15/2003 MW-10-D01N-GRW GW13		MW-10 11/1/2003 MW-10-T01N-GRW GW13		MW-10 1/7/2004 MW-10-T01N-GRW GW13		MW-10 1/7/2004 MW-10-D01N-GRW GW13		MW-10 4/16/2004 MW-10-T01N-GRW GW13		MW-10 4/16/2004 MW-10-D01N-GRW GW13	
Nickel	mg/L	T	-		-		<0.0024	:	-		<0.0015	J	-	
Nickel	mg/L	D	<0.0028	:	-		-		0.0025	:	-		<0.0015	J
Potassium	mg/L	T	-		-		1.05	:	-		1.13	:	-	
Potassium	mg/L	D	0.807	:	-		-		1.02	:	-		1.08	:
Selenium	mg/L	T	-		-		0.001	J	-		<0.0014	:	-	
Selenium	mg/L	D	0.00095	:	-		-		0.0015	:	-		<0.0014	:
Silver	mg/L	T	-		-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	-		-		12.8	:	-		<19.4	J	-	
Sodium	mg/L	D	17.1	:	-		-		14.9	:	-		<20.1	J
Thallium	mg/L	T	-		-		<0.0002	:	-		<0.00022	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.00022	:
Vanadium	mg/L	T	-		-		0.001	:	-		0.0014	:	-	
Vanadium	mg/L	D	0.00083	:	-		-		0.00089	:	-		0.0013	:
Zinc	mg/L	T	-		-		<0.04	:	-		<0.024	:	-	
Zinc	mg/L	D	<0.02	:	-		-		0.0286	:	-		<0.024	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-20 11/8/2002 MW20-T01N-GRW		MW-20 11/8/2002 MW20-D01N-GRW		MW-20 12/4/2002 MW-20-T01N-GRW		MW-20 12/5/2002 MW-20-T01N-GRW		MW-20 12/5/2002 MW-20-D01N-GRW		MW-20 1/15/2003 MW-20-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		TLR	
Field Measurements														
DO	mg/L	T	6.69	:	-		1.49	:	7.58	:	-		8.36	:
Eh	millivolts	T	130.2	:	-		313.8	:	272.	:	-		209.9	:
pH	SU	T	7.28	:	-		7.56	:	6.88	:	-		7.43	:
Specific Conductance	uS/cm	T	434.	:	-		440.	:	451.	:	-		439.	:
Temperature	Celsius	T	10.13	:	-		7.93	:	7.62	:	-		10.59	:
Turbidity	NTU	T	83.6	:	-		136.2	:	89.9	:	-		58.7	:
General Chemistry														
Ammonia	mg/L	T	<0.055	:	-		0.099	:	-		-		<0.069	:
Bicarbonate (as CaCO3)	mg/L	T	125.	:	-		124.	:	-		-		122.	J
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	J
Chloride	mg/L	T	13.5	:	-		11.6	:	-		-		11.8	:
Fluoride	mg/L	T	0.46	:	-		0.41	:	-		-		0.41	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		122.	J
Nitrate	mg/L	T	1.9	:	-		1.8	J	-		-		2.	:
Nitrite	mg/L	T	0.009	:	-		<0.005	J	-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		0.02	:	-		-		<0.022	:
Phosphorus	mg/L	T	0.11	:	-		0.046	J	-		-		0.2	:
Sulfate	mg/L	T	81.9	:	-		77.7	:	-		-		130.	J
Total Alkalinity	mg/L	T	125.	:	-		124.	:	-		-		122.	J
Total Dissolved Solids	mg/L	T	306.	:	-		306.	:	-		-		<294.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	J	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		1.	:	-		-		<1.	:
Total Suspended Solids	mg/L	T	72.	:	-		331.	J	-		-		86.3	:
Laboratory Parameters														
pH	SU	T	7.28	:	-		7.56	:	6.88	:	-		7.43	:
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	185.	:	-		184.	:	-		-		191.	:
Hardness	mg/L	D	-		184.	:	-		-		184.	:	-	
Metals														
Aluminum	mg/L	T	0.794	:	-		0.646	:	-		-		9.81	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 11/8/2002 MW20-T01N-GRW TLR	MW-20 11/8/2002 MW20-D01N-GRW TLR	MW-20 12/4/2002 MW-20-T01N-GRW TLR	MW-20 12/5/2002 MW-20-T01N-GRW TLR	MW-20 12/5/2002 MW-20-D01N-GRW TLR	MW-20 1/15/2003 MW-20-T01N-GRW TLR
Aluminum	mg/L	D	-	<0.0103 :	-	-	<0.0106 :	-
Antimony	mg/L	T	<0.0002 :	-	<0.0006 :	-	-	<0.0006 :
Antimony	mg/L	D	-	<0.0002 :	-	-	<0.0006 :	-
Arsenic	mg/L	T	0.00062 J	-	0.00086 :	-	-	<0.0004 :
Arsenic	mg/L	D	-	0.00055 J	-	-	<0.0004 :	-
Barium	mg/L	T	0.0684 :	-	0.0702 :	-	-	0.101 :
Barium	mg/L	D	-	0.0593 :	-	-	0.0592 :	-
Beryllium	mg/L	T	<0.0002 :	-	<0.0002 :	-	-	<0.00044 :
Beryllium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Boron	mg/L	T	0.0194 :	-	0.0196 :	-	-	<0.0188 :
Boron	mg/L	D	-	0.019 :	-	-	<0.0193 :	-
Cadmium	mg/L	T	<0.0001 :	-	<0.0002 :	-	-	<0.0004 :
Cadmium	mg/L	D	-	<0.0001 :	-	-	<0.0002 :	-
Calcium	mg/L	T	55.4 :	-	55.2 :	-	-	56. :
Calcium	mg/L	D	-	55.2 :	-	-	55.6 :	-
Chromium	mg/L	T	<0.0046 :	-	<0.0043 :	-	-	0.0088 :
Chromium	mg/L	D	-	<0.0046 :	-	-	<0.0037 :	-
Cobalt	mg/L	T	<0.0022 J	-	<0.0016 :	-	-	<0.0016 :
Cobalt	mg/L	D	-	<0.0022 :	-	-	<0.0016 :	-
Copper	mg/L	T	0.0022 :	-	<0.0048 :	-	-	<0.0054 :
Copper	mg/L	D	-	<0.0003 :	-	-	<0.0006 :	-
Iron	mg/L	T	0.834 :	-	0.943 :	-	-	5.46 :
Iron	mg/L	D	-	<0.0298 :	-	-	<0.0489 :	-
Lead	mg/L	T	0.0019 :	-	0.0037 :	-	-	0.0029 :
Lead	mg/L	D	-	<0.0001 :	-	-	<0.0002 :	-
Magnesium	mg/L	T	11.4 :	-	11.2 :	-	-	12.3 :
Magnesium	mg/L	D	-	11.1 :	-	-	11. :	-
Manganese	mg/L	T	0.221 :	-	0.116 J	-	-	0.116 :
Manganese	mg/L	D	-	0.196 :	-	-	0.0758 J	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T	0.0058 :	-	0.0048 :	-	-	0.0025 J
Molybdenum	mg/L	D	-	0.0076 :	-	-	0.0036 :	-
Nickel	mg/L	T	0.0021 J	-	0.0045 :	-	-	<0.0041 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 11/8/2002 MW20-T01N-GRW TLR		MW-20 11/8/2002 MW20-D01N-GRW TLR		MW-20 12/4/2002 MW-20-T01N-GRW TLR		MW-20 12/5/2002 MW-20-T01N-GRW TLR		MW-20 12/5/2002 MW-20-D01N-GRW TLR		MW-20 1/15/2003 MW-20-T01N-GRW TLR	
Nickel	mg/L	D	-		0.00022	J	-		-		<0.0006	:	-	
Potassium	mg/L	T	1.77	:	-		1.44	J	-		-		3.06	:
Potassium	mg/L	D	-		1.66	:	-		-		1.32	J	-	
Selenium	mg/L	T	0.0027	:	-		0.0025	J	-		-		0.0022	:
Selenium	mg/L	D	-		0.0029	:	-		-		0.0019	J	-	
Silver	mg/L	T	<0.0001	:	-		<0.0002	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0001	:	-		-		<0.0002	:	-	
Sodium	mg/L	T	22.6	:	-		23.7	:	-		-		20.9	:
Sodium	mg/L	D	-		22.6	:	-		-		22.5	:	-	
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0001	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	0.0024	:	-		0.0059	:	-		-		0.0033	:
Vanadium	mg/L	D	-		0.00063	:	-		-		0.00069	:	-	
Zinc	mg/L	T	0.0291	:	-		0.0526	J	-		-		0.0413	:
Zinc	mg/L	D	-		0.014	:	-		-		0.0315	J	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 1/15/2003 MW-20-D01N-GRW TLR		MW-20 2/4/2003 MW-20-T01N-GRW TLR		MW-20 2/4/2003 MW-20-D01N-GRW TLR		MW-20 3/3/2003 MW-20-T01N-GRW TLR		MW-20 3/3/2003 MW-20-D01N-GRW TLR		MW-20 4/3/2003 MW-20-T01N-GRW TLR	
Field Measurements														
DO	mg/L	T	-		10.16	:	-		9.64	:	-		6.7	:
Eh	millivolts	T	-		241.	:	-		320.9	:	-		75.7	:
pH	SU	T	-		7.4	:	-		7.4	:	-		7.4	:
Specific Conductance	uS/cm	T	-		456.	:	-		438.	:	-		452.	:
Temperature	Celsius	T	-		9.72	:	-		10.06	:	-		10.59	:
Turbidity	NTU	T	-		44.5	:	-		87.	:	-		220.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.067	:	-		<0.057	J	-		<0.064	:
Bicarbonate (as CaCO3)	mg/L	T	-		122.	:	-		125.	:	-		124.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		12.	:	-		12.4	:	-		11.9	:
Fluoride	mg/L	T	-		0.37	:	-		0.47	:	-		0.41	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		1.9	:	-		1.9	J	-		2.	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.018	:	-		0.025	J	-		<0.027	J
Phosphorus	mg/L	T	-		0.085	:	-		<0.084	J	-		0.051	J
Sulfate	mg/L	T	-		97.8	J	-		82.4	:	-		73.2	J
Total Alkalinity	mg/L	T	-		122.	:	-		125.	:	-		124.	:
Total Dissolved Solids	mg/L	T	-		272.	:	-		316.	:	-		290.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		45.8	:	-		33.	J	-		<12.2	:
Laboratory Parameters														
pH	SU	T	-		7.4	:	-		7.4	:	-		7.4	:
Specific Conductance	umhos/cm	T	-		-		-		-		-		432.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		185.	:	-		194.	:	-		198.	:
Hardness	mg/L	D	190.	:	-		186.	:	-		191.	:	-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 1/15/2003 MW-20-D01N-GRW TLR		MW-20 2/4/2003 MW-20-T01N-GRW TLR		MW-20 2/4/2003 MW-20-D01N-GRW TLR		MW-20 3/3/2003 MW-20-T01N-GRW TLR		MW-20 3/3/2003 MW-20-D01N-GRW TLR		MW-20 4/3/2003 MW-20-T01N-GRW TLR	
Aluminum	mg/L	T	-	:	0.768	:	-	:	<0.838	:	-	:	<0.503	:
Aluminum	mg/L	D	<0.142	:	-	:	<0.226	:	-	:	<0.142	:	-	:
Antimony	mg/L	T	-	:	<0.0006	:	-	:	<0.0006	:	-	:	<0.0006	:
Antimony	mg/L	D	<0.0006	:	-	:	<0.0006	:	-	:	<0.0006	:	-	:
Arsenic	mg/L	T	-	:	0.00066	:	-	:	0.0006	:	-	:	<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-	:	0.00055	:	-	:	<0.0004	:	-	:
Barium	mg/L	T	-	:	0.0708	:	-	:	0.0665	:	-	:	0.066	:
Barium	mg/L	D	0.0603	:	-	:	0.0621	:	-	:	0.0596	:	-	:
Beryllium	mg/L	T	-	:	<0.0002	:	-	:	<0.00032	:	-	:	<0.0003	J
Beryllium	mg/L	D	<0.0002	:	-	:	<0.0002	:	-	:	<0.00025	:	-	:
Boron	mg/L	T	-	:	<0.0154	:	-	:	0.0162	:	-	:	0.021	:
Boron	mg/L	D	<0.0171	:	-	:	<0.0152	:	-	:	0.0153	:	-	:
Cadmium	mg/L	T	-	:	<0.0004	:	-	:	<0.0004	:	-	:	<0.0005	:
Cadmium	mg/L	D	<0.0004	:	-	:	<0.0004	:	-	:	<0.0004	:	-	:
Calcium	mg/L	T	-	:	55.2	:	-	:	57.5	J	-	:	59.6	:
Calcium	mg/L	D	57.4	:	-	:	55.7	:	-	:	56.7	J	-	:
Chromium	mg/L	T	-	:	<0.0037	:	-	:	0.0042	:	-	:	0.0032	:
Chromium	mg/L	D	<0.0037	:	-	:	<0.0037	:	-	:	<0.0037	:	-	:
Cobalt	mg/L	T	-	:	<0.0016	:	-	:	<0.0016	:	-	:	<0.0038	:
Cobalt	mg/L	D	<0.0016	:	-	:	<0.0016	:	-	:	<0.0016	:	-	:
Copper	mg/L	T	-	:	<0.0017	:	-	:	<0.0017	J	-	:	<0.0037	:
Copper	mg/L	D	<0.0017	:	-	:	<0.0038	:	-	:	<0.0017	J	-	:
Iron	mg/L	T	-	:	0.673	:	-	:	<0.489	J	-	:	<0.311	:
Iron	mg/L	D	<0.489	:	-	:	<0.266	:	-	:	<0.489	J	-	:
Lead	mg/L	T	-	:	0.001	:	-	:	0.00091	:	-	:	0.00036	:
Lead	mg/L	D	<0.0002	:	-	:	<0.0002	:	-	:	<0.0002	:	-	:
Magnesium	mg/L	T	-	:	11.5	:	-	:	12.3	:	-	:	11.9	:
Magnesium	mg/L	D	11.2	:	-	:	11.4	:	-	:	12.	:	-	:
Manganese	mg/L	T	-	:	0.0468	J	-	:	<0.0399	J	-	:	0.0148	:
Manganese	mg/L	D	<0.0367	:	-	:	<0.028	:	-	:	0.0235	J	-	:
Mercury	mg/L	T	-	:	<0.0001	:	-	:	<0.0001	:	-	:	<0.0001	:
Mercury	mg/L	D	<0.0001	:	-	:	<0.0001	:	-	:	<0.0001	:	-	:
Molybdenum	mg/L	T	-	:	0.0048	:	-	:	0.0029	:	-	:	<0.0023	:
Molybdenum	mg/L	D	0.0017	J	-	:	0.0037	:	-	:	0.0026	:	-	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 1/15/2003 MW-20-D01N-GRW TLR		MW-20 2/4/2003 MW-20-T01N-GRW TLR		MW-20 2/4/2003 MW-20-D01N-GRW TLR		MW-20 3/3/2003 MW-20-T01N-GRW TLR		MW-20 3/3/2003 MW-20-D01N-GRW TLR		MW-20 4/3/2003 MW-20-T01N-GRW TLR	
Nickel	mg/L	T	-		<0.0015	:	-		<0.0022	:	-		<0.003	:
Nickel	mg/L	D	<0.0015	:	-		<0.0015	:	-		<0.0019	:	-	
Potassium	mg/L	T	-		1.66	:	-		<1.55	J	-		1.33	:
Potassium	mg/L	D	1.29	:	-		1.42	:	-		<1.64	J	-	
Selenium	mg/L	T	-		0.0036	:	-		0.0029	J	-		0.0028	:
Selenium	mg/L	D	0.0026	:	-		0.0033	:	-		0.0025	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		23.	:	-		26.6	:	-		22.4	:
Sodium	mg/L	D	25.7	:	-		22.7	:	-		23.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0016	:	-		0.0018	:	-		0.0012	:
Vanadium	mg/L	D	0.0008	:	-		0.00077	:	-		0.00076	:	-	
Zinc	mg/L	T	-		0.0389	:	-		<0.039	J	-		<0.014	:
Zinc	mg/L	D	<0.0613	:	-		<0.028	:	-		<0.039	J	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 4/3/2003 MW-20-D01N-GRW TLR		MW-20 5/4/2003 MW-20-T01N-GRW TLR		MW-20 5/4/2003 MW-20-D01N-GRW TLR		MW-20 6/2/2003 MW-20-T01N-GRW TLR		MW-20 6/2/2003 MW-20-D01N-GRW TLR		MW-20 7/8/2003 MW-20-T01N-GRW TLR	
Field Measurements														
DO	mg/L	T	-		7.31	:	-		6.91	:	-		7.13	:
Eh	millivolts	T	-		262.8	:	-		348.	:	-		235.7	:
pH	SU	T	-		7.	J	-		7.3	J	-		7.5	J
Specific Conductance	uS/cm	T	-		453.	:	-		451.	:	-		480.	:
Temperature	Celsius	T	-		11.39	:	-		16.72	:	-		12.09	:
Turbidity	NTU	T	-		42.7	:	-		88.3	:	-		14.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.073	:	-		<0.04	J	-		<0.082	J
Bicarbonate (as CaCO3)	mg/L	T	-		125.	:	-		123.	:	-		147.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		16.5	:	-		<20.4	:	-		12.9	:
Fluoride	mg/L	T	-		0.45	:	-		0.45	:	-		0.41	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		1.9	J	-		1.9	J	-		2.	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.023	J	-		0.083	J	-		<0.022	J
Phosphorus	mg/L	T	-		0.058	:	-		0.067	J	-		0.03	:
Sulfate	mg/L	T	-		84.9	:	-		80.6	J	-		89.	J
Total Alkalinity	mg/L	T	-		125.	:	-		123.	:	-		147.	:
Total Dissolved Solids	mg/L	T	-		284.	:	-		276.	:	-		386.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		1.3	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		29.2	:	-		61.7	:	-		6.1	:
Laboratory Parameters														
pH	SU	T	-		7.	J	-		7.3	J	-		7.5	J
Specific Conductance	umhos/cm	T	-		417.	J	-		441.	J	-		457.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		194.	:	-		185.	:	-		217.	:
Hardness	mg/L	D	197.	:	-		194.	:	-		184.	:	-	
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 4/3/2003 MW-20-D01N-GRW TLR		MW-20 5/4/2003 MW-20-T01N-GRW TLR		MW-20 5/4/2003 MW-20-D01N-GRW TLR		MW-20 6/2/2003 MW-20-T01N-GRW TLR		MW-20 6/2/2003 MW-20-D01N-GRW TLR		MW-20 7/8/2003 MW-20-T01N-GRW TLR	
Aluminum	mg/L	T	-		<1.16	:	-		0.499	:	-		<0.631	:
Aluminum	mg/L	D	<0.503	:	-		<0.503	:	-		<0.426	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		0.00042	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		0.00045	:	-	
Barium	mg/L	T	-		0.0726	:	-		0.0682	:	-		0.0712	:
Barium	mg/L	D	0.0654	:	-		0.0642	:	-		0.0637	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0003	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0228	:	-		0.0207	:	-		0.0186	:
Boron	mg/L	D	0.0171	:	-		0.0213	:	-		0.0215	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0005	:	-		<0.0003	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0004	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		58.1	:	-		55.1	:	-		64.7	:
Calcium	mg/L	D	59.4	:	-		58.3	:	-		54.8	:	-	
Chromium	mg/L	T	-		0.0038	:	-		<0.0032	:	-		<0.0006	J
Chromium	mg/L	D	<0.0018	:	-		0.0021	:	-		0.0023	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0038	:	-		<0.0018	:
Cobalt	mg/L	D	<0.0038	:	-		<0.0029	:	-		<0.0038	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0015	:	-		<0.0014	:
Copper	mg/L	D	<0.0037	:	-		<0.0024	:	-		<0.0015	:	-	
Iron	mg/L	T	-		0.751	:	-		<0.422	:	-		<0.667	:
Iron	mg/L	D	<0.311	:	-		<0.311	:	-		<0.422	:	-	
Lead	mg/L	T	-		0.0014	:	-		0.0011	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		11.9	:	-		11.5	:	-		13.4	:
Magnesium	mg/L	D	11.7	:	-		11.8	:	-		11.4	:	-	
Manganese	mg/L	T	-		0.0232	:	-		0.0177	:	-		<0.019	:
Manganese	mg/L	D	<0.01	:	-		<0.01	:	-		<0.013	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0016	:	-		<0.0023	:	-		0.0017	:
Molybdenum	mg/L	D	0.0041	:	-		0.0017	:	-		0.0023	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-20 4/3/2003 MW-20-D01N-GRW		MW-20 5/4/2003 MW-20-T01N-GRW		MW-20 5/4/2003 MW-20-D01N-GRW		MW-20 6/2/2003 MW-20-T01N-GRW		MW-20 6/2/2003 MW-20-D01N-GRW		MW-20 7/8/2003 MW-20-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		TLR	
Nickel	mg/L	T	-		<0.0026	:	-		<0.003	:	-		<0.002	J
Nickel	mg/L	D	<0.003	:	-		<0.0026	:	-		<0.003	:	-	
Potassium	mg/L	T	-		1.55	:	-		1.57	:	-		1.6	:
Potassium	mg/L	D	1.34	:	-		1.34	:	-		1.47	:	-	
Selenium	mg/L	T	-		0.0022	:	-		0.0022	:	-		0.0026	:
Selenium	mg/L	D	0.0028	:	-		0.0019	:	-		0.0029	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		22.	:	-		20.9	:	-		22.2	:
Sodium	mg/L	D	22.2	:	-		22.3	:	-		19.2	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0024	:	-		0.0023	:	-		0.00083	:
Vanadium	mg/L	D	0.00089	:	-		0.00061	:	-		0.00083	:	-	
Zinc	mg/L	T	-		<0.0231	:	-		<0.039	:	-		<0.016	:
Zinc	mg/L	D	<0.014	:	-		<0.014	:	-		<0.039	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 7/8/2003 MW-20-D01N-GRW TLR	MW-20 8/10/2003 MW-20-T01N-GRW TLR	MW-20 8/10/2003 MW-20-D01N-GRW TLR	MW-20 9/7/2003 MW-20-T01N-GRW TLR	MW-20 9/7/2003 MW-20-D01N-GRW TLR	MW-20 10/16/2003 MW-20-T01N-GRW TLR
Field Measurements								
DO	mg/L	T	-	6.65 :	-	8.81 :	-	9.96 :
Eh	millivolts	T	-	510.9 :	-	183.2 :	-	310.4 :
pH	SU	T	-	7.5 J	-	7.5 J	-	7.3 J
Specific Conductance	uS/cm	T	-	468. :	-	436. :	-	463. :
Temperature	Celsius	T	-	14.48 :	-	11.54 :	-	11.14 :
Turbidity	NTU	T	-	6.7 :	-	66.8 :	-	8. :
General Chemistry								
Ammonia	mg/L	T	-	0.05 :	-	<0.04 :	-	<0.04 J
Bicarbonate (as CaCO3)	mg/L	T	-	146. :	-	145. :	-	142. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	12. :	-	12.4 :	-	12.2 :
Fluoride	mg/L	T	-	0.4 :	-	0.41 :	-	0.42 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	2. :	-	1.9 J	-	2.1 J
Nitrite	mg/L	T	-	<0.005 :	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	0.019 J	-	<0.023 J	-	<0.024 J
Phosphorus	mg/L	T	-	0.034 :	-	0.069 :	-	0.024 :
Sulfate	mg/L	T	-	76.3 J	-	88.4 J	-	98.6 J
Total Alkalinity	mg/L	T	-	146. :	-	145. :	-	142. :
Total Dissolved Solids	mg/L	T	-	368. :	-	382. :	-	340. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.61 J	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T	-	10.6 :	-	25.9 :	-	3.3 :
Laboratory Parameters								
pH	SU	T	-	7.5 J	-	7.5 J	-	7.3 J
Specific Conductance	umhos/cm	T	-	453. :	-	432. J	-	412. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	216. :	-	219. :	-	211. :
Hardness	mg/L	D	208. :	-	215. :	-	225. :	-
Metals								

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 7/8/2003 MW-20-D01N-GRW TLR		MW-20 8/10/2003 MW-20-T01N-GRW TLR		MW-20 8/10/2003 MW-20-D01N-GRW TLR		MW-20 9/7/2003 MW-20-T01N-GRW TLR		MW-20 9/7/2003 MW-20-D01N-GRW TLR		MW-20 10/16/2003 MW-20-T01N-GRW TLR	
Aluminum	mg/L	T	-		<0.631	:	-		0.482	:	-		<0.221	:
Aluminum	mg/L	D	<0.631	:	-		<0.631	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0011	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		0.00059	:	-		0.00045	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0716	:	-		0.0774	:	-		0.0693	:
Barium	mg/L	D	0.0672	:	-		0.0682	:	-		0.0707	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Boron	mg/L	T	-		<0.0188	:	-		0.0197	:	-		0.019	:
Boron	mg/L	D	0.0158	:	-		<0.0187	:	-		0.0182	:	-	
Cadmium	mg/L	T	-		<0.0006	:	-		<0.0005	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0006	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		64.4	:	-		65.	:	-		63.7	:
Calcium	mg/L	D	62.2	:	-		64.3	:	-		67.	:	-	
Chromium	mg/L	T	-		<0.003	:	-		<0.0032	:	-		0.0026	J
Chromium	mg/L	D	<0.0006	J	-		0.0022	:	-		<0.0022	:	-	
Cobalt	mg/L	T	-		<0.002	:	-		<0.0029	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0018	:	-		<0.002	:	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0026	J	-		<0.002	:
Copper	mg/L	D	<0.0014	:	-		<0.0024	:	-		0.0177	J	-	
Iron	mg/L	T	-		<0.834	:	-		0.5	:	-		<0.278	:
Iron	mg/L	D	<0.667	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		0.00041	:	-		<0.0017	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00062	:	-	
Magnesium	mg/L	T	-		13.5	:	-		13.7	:	-		12.6	:
Magnesium	mg/L	D	12.8	:	-		13.3	:	-		14.	:	-	
Manganese	mg/L	T	-		<0.0358	:	-		0.029	:	-		<0.012	:
Manganese	mg/L	D	<0.019	:	-		<0.019	:	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0028	:	-		0.0013	J	-		0.0014	:
Molybdenum	mg/L	D	<0.0016	:	-		0.0031	:	-		0.0011	J	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 7/8/2003 MW-20-D01N-GRW TLR		MW-20 8/10/2003 MW-20-T01N-GRW TLR		MW-20 8/10/2003 MW-20-D01N-GRW TLR		MW-20 9/7/2003 MW-20-T01N-GRW TLR		MW-20 9/7/2003 MW-20-D01N-GRW TLR		MW-20 10/16/2003 MW-20-T01N-GRW TLR	
Nickel	mg/L	T	-		<0.0021	J	-		<0.0024	:	-		<0.0028	:
Nickel	mg/L	D	<0.002	J	-		<0.0021	J	-		<0.0024	:	-	
Potassium	mg/L	T	-		1.43	:	-		<1.86	:	-		1.53	:
Potassium	mg/L	D	1.41	:	-		1.41	:	-		<1.72	:	-	
Selenium	mg/L	T	-		0.0028	:	-		0.0035	:	-		0.0029	:
Selenium	mg/L	D	0.0027	J	-		0.002	:	-		0.0029	:	-	
Silver	mg/L	T	-		<0.0009	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0009	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		29.2	J	-		19.5	:	-		22.8	:
Sodium	mg/L	D	20.2	:	-		20.9	J	-		20.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0012	:	-		0.0016	:	-		0.00093	:
Vanadium	mg/L	D	0.00069	:	-		0.00071	:	-		0.00088	:	-	
Zinc	mg/L	T	-		<0.0553	:	-		<0.0287	:	-		<0.023	:
Zinc	mg/L	D	<0.016	:	-		<0.0429	:	-		<0.0242	:	-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 10/16/2003 MW-20-D01N-GRW TLR		MW-20 11/2/2003 MW-20-T01N-GRW TLR		MW-20 11/2/2003 MW-20-D01N-GRW TLR		MW-20 12/7/2003 MW-20-T01N-GRW TLR		MW-20 12/7/2003 MW-20-D01N-GRW TLR		MW-20 1/8/2004 MW-20-T01N-GRW TLR	
Field Measurements														
DO	mg/L	T	-		7.81	:	-		-		-		10.24	:
Eh	millivolts	T	-		174.5	:	-		-		-		158.8	:
pH	SU	T	-		7.6	J	-		7.6	J	-		7.36	:
Specific Conductance	uS/cm	T	-		416.	:	-		-		-		436.	:
Temperature	Celsius	T	-		10.99	:	-		-		-		10.58	:
Turbidity	NTU	T	-		22.9	:	-		-		-		8.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.047	:	-		0.046	:	-		<0.053	J
Bicarbonate (as CaCO3)	mg/L	T	-		123.	:	-		124.	:	-		128.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		87.7	:	-		11.9	:	-		11.6	:
Fluoride	mg/L	T	-		<0.38	:	-		0.41	:	-		0.41	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		9.1	J	-		2.	:	-		2.	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.028	J	-		0.025	J	-		<0.029	J
Phosphorus	mg/L	T	-		0.038	:	-		0.058	:	-		0.037	:
Sulfate	mg/L	T	-		326.	:	-		159.	:	-		85.3	:
Total Alkalinity	mg/L	T	-		123.	:	-		124.	J	-		128.	:
Total Dissolved Solids	mg/L	T	-		774.	:	-		334.	:	-		326.	:
Total Kjeldahl Nitrogen	mg/L	T	-		2.4	:	-		<0.24	J	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.3	:	-		<1.	:	-		<1.1	:
Total Suspended Solids	mg/L	T	-		5.7	:	-		11.4	:	-		5.6	:
Laboratory Parameters														
pH	SU	T	-		7.6	J	-		7.6	J	-		7.36	:
Specific Conductance	umhos/cm	T	-		1140.	J	-		354.	J	-		435.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		468.	:	-		183.	:	-		190.	:
Hardness	mg/L	D	209.	:	-		488.	:	-		192.	:	-	
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 10/16/2003 MW-20-D01N-GRW TLR		MW-20 11/2/2003 MW-20-T01N-GRW TLR		MW-20 11/2/2003 MW-20-D01N-GRW TLR		MW-20 12/7/2003 MW-20-T01N-GRW TLR		MW-20 12/7/2003 MW-20-D01N-GRW TLR		MW-20 1/8/2004 MW-20-T01N-GRW TLR	
Aluminum	mg/L	T	-		<0.217	:	-		<0.307	J	-		<0.514	:
Aluminum	mg/L	D	<0.221	:	-		<0.217	:	-		<0.307	:	-	
Antimony	mg/L	T	-		<0.0018	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Arsenic	mg/L	T	-		0.0013	:	-		<0.0004	:	-		0.0007	:
Arsenic	mg/L	D	<0.0004	:	-		0.0011	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0467	:	-		0.071	:	-		0.0686	:
Barium	mg/L	D	0.0679	:	-		0.0471	:	-		0.067	:	-	
Beryllium	mg/L	T	-		<0.0003	J	-		<0.00077	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0003	J	-		<0.00064	:	-	
Boron	mg/L	T	-		0.0156	:	-		0.0188	:	-		0.0198	:
Boron	mg/L	D	0.0182	:	-		0.0143	:	-		0.019	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		145.	:	-		54.8	:	-		56.7	:
Calcium	mg/L	D	63.2	:	-		150.	:	-		57.6	:	-	
Chromium	mg/L	T	-		<0.0039	:	-		0.0017	J	-		<0.0057	:
Chromium	mg/L	D	0.0021	J	-		<0.0016	:	-		<0.0013	J	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0031	:	-		<0.0023	:
Cobalt	mg/L	D	0.0039	:	-		<0.0031	:	-		<0.0031	:	-	
Copper	mg/L	T	-		0.0026	:	-		0.0026	:	-		<0.003	:
Copper	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Iron	mg/L	T	-		<0.455	:	-		0.325	:	-		<0.373	:
Iron	mg/L	D	<0.278	:	-		<0.455	:	-		<0.3	:	-	
Lead	mg/L	T	-		<0.0004	:	-		0.00045	:	-		<0.0002	:
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		26.	:	-		11.1	:	-		11.7	:
Magnesium	mg/L	D	12.5	:	-		27.2	:	-		11.6	:	-	
Manganese	mg/L	T	-		<0.016	J	-		0.0162	:	-		<0.0151	:
Manganese	mg/L	D	<0.012	:	-		<0.016	:	-		<0.01	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0025	:	-		<0.0012	J	-		0.0027	:
Molybdenum	mg/L	D	<0.0012	:	-		0.0023	:	-		<0.0012	J	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-20 10/16/2003 MW-20-D01N-GRW TLR	MW-20 11/2/2003 MW-20-T01N-GRW TLR	MW-20 11/2/2003 MW-20-D01N-GRW TLR	MW-20 12/7/2003 MW-20-T01N-GRW TLR	MW-20 12/7/2003 MW-20-D01N-GRW TLR	MW-20 1/8/2004 MW-20-T01N-GRW TLR
Nickel	mg/L	T	-	<0.0028 :	-	<0.0028 :	-	<0.0024 :
Nickel	mg/L	D	<0.0028 :	-	<0.0028 :	-	<0.0028 :	-
Potassium	mg/L	T	-	<2.88 :	-	<0.522 J	-	1.41 :
Potassium	mg/L	D	1.45 :	-	<3.17 :	-	<0.522 J	-
Selenium	mg/L	T	-	0.0121 :	-	0.0033 :	-	<0.0039 J
Selenium	mg/L	D	0.0029 :	-	0.0128 :	-	0.0034 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	59. :	-	19.4 :	-	20.6 :
Sodium	mg/L	D	22.1 :	-	58. :	-	22.6 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00096 :	-	0.0015 :	-	0.00091 :
Vanadium	mg/L	D	0.00082 :	-	0.0008 :	-	0.00078 :	-
Zinc	mg/L	T	-	<0.019 :	-	<0.02 :	-	<0.026 :
Zinc	mg/L	D	<0.023 :	-	<0.0278 :	-	0.024 :	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-20 1/8/2004 MW-20-D01N-GRW		MW-20 4/14/2004 MW-20-T01N-GRW		MW-20 4/14/2004 MW-20-D01N-GRW		MW-24 11/8/2002 MW-24-T01N-GRW		MW-24 11/8/2002 MW-24-D01N-GRW		MW-24 12/7/2002 MW-24-T01N-GRW RE	
			TLR		TLR		TLR		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		8.51	:	-		7.58	:	-		-	
Eh	millivolts	T	-		185.2	:	-		-366.2	:	-		-	
pH	SU	T	-		7.42	:	-		7.77	:	-		-	
Specific Conductance	uS/cm	T	-		446.	:	-		385.	:	-		-	
Temperature	Celsius	T	-		12.2	:	-		10.91	:	-		-	
Turbidity	NTU	T	-		1.7	:	-		1337.2	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		<0.085	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		126.	:	-		85.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		11.9	:	-		11.8	:	-		-	
Fluoride	mg/L	T	-		0.54	:	-		0.42	:	-		<2.	J
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		2.1	J	-		1.4	J	-		-	
Nitrite	mg/L	T	-		<0.005	:	-		0.05	J	-		-	
Phosphate, Ortho As P	mg/L	T	-		0.026	:	-		<0.01	J	-		-	
Phosphorus	mg/L	T	-		0.034	:	-		0.86	:	-		-	
Sulfate	mg/L	T	-		88.1	:	-		98.6	:	-		85.2	J
Total Alkalinity	mg/L	T	-		126.	:	-		85.	:	-		-	
Total Dissolved Solids	mg/L	T	-		286.	:	-		260.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.6	J	-		<1.	:	-		-	
Total Suspended Solids	mg/L	T	-		5.7	J	-		1280.	:	-		-	
Laboratory Parameters														
pH	SU	T	-		7.42	:	-		7.77	:	-		-	
Specific Conductance	umhos/cm	T	-		379.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	-		193.	:	-		212.	:	-		-	
Hardness	mg/L	D	186.	:	-		190.	:	-		135.	:	-	
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 1/8/2004 MW-20-D01N-GRW TLR	MW-20 4/14/2004 MW-20-T01N-GRW TLR	MW-20 4/14/2004 MW-20-D01N-GRW TLR	MW-24 11/8/2002 MW-24-T01N-GRW GW13	MW-24 11/8/2002 MW-24-D01N-GRW GW13	MW-24 12/7/2002 MW-24-T01N-GRW RE GW13
Aluminum	mg/L	T	-	0.53 :	-	57.6 :	-	-
Aluminum	mg/L	D	<0.514 :	-	<0.201 :	-	0.0183 :	-
Antimony	mg/L	T	-	<0.0008 :	-	<0.00053 :	-	-
Antimony	mg/L	D	<0.0024 :	-	<0.0008 :	-	<0.0002 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	0.0086 J	-	-
Arsenic	mg/L	D	0.00044 :	-	<0.0004 :	-	0.00059 J	-
Barium	mg/L	T	-	0.0674 :	-	0.423 :	-	-
Barium	mg/L	D	0.0633 :	-	0.064 :	-	0.0532 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	0.0031 :	-	-
Beryllium	mg/L	D	<0.0003 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.018 :	-	0.011 :	-	-
Boron	mg/L	D	0.0207 :	-	0.0168 :	-	0.0147 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	0.00045 J	-	-
Cadmium	mg/L	D	<0.0007 :	-	<0.0003 :	-	<0.0001 :	-
Calcium	mg/L	T	-	57.4 :	-	50.9 :	-	-
Calcium	mg/L	D	55.6 :	-	56.9 :	-	41. :	-
Chromium	mg/L	T	-	0.0034 :	-	0.112 :	-	-
Chromium	mg/L	D	<0.0057 :	-	0.0024 :	-	<0.0046 :	-
Cobalt	mg/L	T	-	<0.0011 :	-	0.0259 :	-	-
Cobalt	mg/L	D	<0.0023 :	-	<0.0011 :	-	<0.0022 :	-
Copper	mg/L	T	-	<0.00082 :	-	0.0831 :	-	-
Copper	mg/L	D	<0.003 :	-	<0.0007 :	-	<0.00066 :	-
Iron	mg/L	T	-	0.4 J	-	62.8 :	-	-
Iron	mg/L	D	<0.373 :	-	<0.293 :	-	<0.0226 :	-
Lead	mg/L	T	-	<0.0008 :	-	0.0686 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.0008 :	-	<0.0001 :	-
Magnesium	mg/L	T	-	12. :	-	20.6 :	-	-
Magnesium	mg/L	D	11.4 :	-	11.7 :	-	7.81 :	-
Manganese	mg/L	T	-	0.0223 :	-	1.89 :	-	-
Manganese	mg/L	D	<0.015 :	-	<0.014 :	-	0.352 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0052 :	-	0.0575 :	-	-
Molybdenum	mg/L	D	0.0025 :	-	<0.0034 :	-	0.038 :	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-20 1/8/2004 MW-20-D01N-GRW TLR	MW-20 4/14/2004 MW-20-T01N-GRW TLR	MW-20 4/14/2004 MW-20-D01N-GRW TLR	MW-24 11/8/2002 MW-24-T01N-GRW GW13	MW-24 11/8/2002 MW-24-D01N-GRW GW13	MW-24 12/7/2002 MW-24-T01N-GRW RE GW13
Nickel	mg/L	T	-	<0.0014 :	-	0.0822 J	-	-
Nickel	mg/L	D	<0.0024 :	-	<0.0014 :	-	0.00055 J	-
Potassium	mg/L	T	-	1.44 :	-	10.2 :	-	-
Potassium	mg/L	D	1.38 :	-	1.25 :	-	1.53 :	-
Selenium	mg/L	T	-	0.003 :	-	0.005 :	-	-
Selenium	mg/L	D	<0.0035 :	-	0.0029 :	-	<0.0035 J	-
Silver	mg/L	T	-	<0.0002 J	-	0.00041 :	-	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 J	-	<0.0001 :	-
Sodium	mg/L	T	-	<3.28 J	-	27.6 :	-	-
Sodium	mg/L	D	18.2 :	-	16.8 J	-	28.3 :	-
Thallium	mg/L	T	-	<0.0002 :	-	0.00049 :	-	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0001 :	-
Vanadium	mg/L	T	-	0.0013 :	-	0.0831 :	-	-
Vanadium	mg/L	D	0.00073 :	-	0.001 :	-	0.00076 :	-
Zinc	mg/L	T	-	<0.024 :	-	0.867 :	-	-
Zinc	mg/L	D	<0.026 :	-	<0.024 :	-	0.0619 :	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 12/7/2002 MW-24-T01N-GRW GW13		MW-24 12/7/2002 MW-24-D01N-GRW RE GW13		MW-24 12/7/2002 MW-24-D01N-GRW GW13		MW-24 1/15/2003 MW-24-T01N-GRW GW13		MW-24 1/15/2003 MW-24-D01N-GRW GW13		MW-24 2/4/2003 MW-24-T01N-GRW REP GW13	
Field Measurements														
DO	mg/L	T	7.16	:	-		-		0.81	:	-		1.84	:
Eh	millivolts	T	219.1	:	-		-		166.4	:	-		226.1	:
pH	SU	T	7.67	:	-		-		7.36	:	-		7.27	:
Specific Conductance	uS/cm	T	378.	:	-		-		382.	:	-		396.	:
Temperature	Celsius	T	7.63	:	-		-		9.79	:	-		10.19	:
Turbidity	NTU	T	49.4	:	-		-		4.1	:	-		167.1	:
General Chemistry														
Ammonia	mg/L	T	<0.024	:	-		-		<0.069	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	166.	J	-		-		92.9	J	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	J	-		-	
Chloride	mg/L	T	11.7	:	-		-		12.6	:	-		-	
Fluoride	mg/L	T	-		-		-		<2.	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		92.9	J	-		-	
Nitrate	mg/L	T	<0.4	J	-		-		<0.67	J	-		-	
Nitrite	mg/L	T	0.023	J	-		-		0.024	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	0.18	J	-		-		0.04	:	-		-	
Sulfate	mg/L	T	-		-		-		111.	J	-		-	
Total Alkalinity	mg/L	T	166.	:	-		-		92.9	J	-		-	
Total Dissolved Solids	mg/L	T	238.	:	-		-		<238.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	0.78	J	-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	50.7	J	-		-		66.3	:	-		-	
Laboratory Parameters														
pH	SU	T	7.67	:	-		-		7.36	:	-		7.27	:
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	139.	:	-		-		142.	:	-		-	
Hardness	mg/L	D	-		135.	:	-		-		142.	:	-	
Metals														
Aluminum	mg/L	T	2.31	:	-		-		0.971	:	-		-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-24 12/7/2002 MW-24-T01N-GRW GW13	MW-24 12/7/2002 MW-24-D01N-GRW RE GW13	MW-24 12/7/2002 MW-24-D01N-GRW GW13	MW-24 1/15/2003 MW-24-T01N-GRW GW13	MW-24 1/15/2003 MW-24-D01N-GRW GW13	MW-24 2/4/2003 MW-24-T01N-GRW REP GW13
Aluminum	mg/L	D	-	<0.142 :	-	-	<0.142 :	-
Antimony	mg/L	T	<0.0006 :	-	-	<0.0006 :	-	-
Antimony	mg/L	D	-	<0.0006 :	-	-	<0.0006 :	-
Arsenic	mg/L	T	0.00086 :	-	-	0.00064 :	-	-
Arsenic	mg/L	D	-	0.00055 :	-	-	0.00061 :	-
Barium	mg/L	T	0.0732 :	-	-	0.0578 :	-	-
Barium	mg/L	D	-	0.0525 :	-	-	0.0514 :	-
Beryllium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Beryllium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Boron	mg/L	T	<0.0143 :	-	-	<0.0163 :	-	-
Boron	mg/L	D	-	<0.0161 :	-	-	<0.0161 :	-
Cadmium	mg/L	T	<0.0002 :	-	-	<0.0004 :	-	-
Cadmium	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-
Calcium	mg/L	T	41.8 :	-	-	43.5 :	-	-
Calcium	mg/L	D	-	40.7 :	-	-	43.6 :	-
Chromium	mg/L	T	0.0056 J	-	-	<0.0037 :	-	-
Chromium	mg/L	D	-	<0.0037 :	-	-	<0.0037 :	-
Cobalt	mg/L	T	<0.0016 :	-	-	<0.0016 :	-	-
Cobalt	mg/L	D	-	<0.0016 :	-	-	<0.0016 :	-
Copper	mg/L	T	<0.0046 :	-	-	<0.0032 :	-	-
Copper	mg/L	D	-	<0.0017 :	-	-	<0.0017 :	-
Iron	mg/L	T	2.2 :	-	-	0.883 :	-	-
Iron	mg/L	D	-	<0.489 :	-	-	<0.489 :	-
Lead	mg/L	T	0.0026 :	-	-	0.00064 :	-	-
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Magnesium	mg/L	T	8.45 :	-	-	8.23 :	-	-
Magnesium	mg/L	D	-	7.99 :	-	-	8.08 :	-
Manganese	mg/L	T	0.303 J	-	-	0.555 :	-	-
Manganese	mg/L	D	-	0.262 :	-	-	0.545 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	0.0139 :	-	-	0.018 :	-	-
Molybdenum	mg/L	D	-	0.0128 :	-	-	0.0192 :	-
Nickel	mg/L	T	0.0033 :	-	-	<0.0015 :	-	-

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-24 12/7/2002 MW-24-T01N-GRW GW13		MW-24 12/7/2002 MW-24-D01N-GRW RE GW13		MW-24 12/7/2002 MW-24-D01N-GRW GW13		MW-24 1/15/2003 MW-24-T01N-GRW GW13		MW-24 1/15/2003 MW-24-D01N-GRW GW13		MW-24 2/4/2003 MW-24-T01N-GRW REP GW13	
Nickel	mg/L	D	-		<0.0015	:	-		-		<0.0015	:	-	
Potassium	mg/L	T	2.18	:	-		-		1.53	:	-		-	
Potassium	mg/L	D	-		1.21	:	-		-		1.41	:	-	
Selenium	mg/L	T	0.0034	:	-		-		<0.0016	:	-		-	
Selenium	mg/L	D	-		0.0031	:	-		-		0.0017	:	-	
Silver	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		-	
Silver	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Sodium	mg/L	T	25.2	:	-		-		26.7	:	-		-	
Sodium	mg/L	D	-		22.4	:	-		-		26.	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		-	
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	0.0039	:	-		-		0.0014	:	-		-	
Vanadium	mg/L	D	-		0.00064	:	-		-		<0.0004	:	-	
Zinc	mg/L	T	<0.0276	J	-		-		<0.039	:	-		-	
Zinc	mg/L	D	-		<0.039	:	-		-		<0.039	:	-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-24 / Sample Date: 2/4/2003 / Sample ID: MW-24-T01N-GRW		Site ID: MW-24 / Sample Date: 2/4/2003 / Sample ID: MW-24-D01N-GRW		Site ID: MW-24 / Sample Date: 3/2/2003 / Sample ID: MW-24-T01N-GRW		Site ID: MW-24 / Sample Date: 3/2/2003 / Sample ID: MW-24-D01N-GRW		Site ID: MW-24 / Sample Date: 4/3/2003 / Sample ID: MW-24-T01N-GRW		Site ID: MW-24 / Sample Date: 4/3/2003 / Sample ID: MW-24-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		-		4.64	:	-		3.29	:	-	
Eh	millivolts	T	-		-		299.5	:	-		142.6	:	-	
pH	SU	T	-		-		7.29	:	-		7.7	J	-	
Specific Conductance	uS/cm	T	-		-		351.	:	-		382.	:	-	
Temperature	Celsius	T	-		-		9.55	:	-		11.14	:	-	
Turbidity	NTU	T	-		-		44.2	:	-		123.2	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.087	:	-		<0.054	J	-		<0.13	:	-	
Bicarbonate (as CaCO3)	mg/L	T	84.1	:	-		83.9	:	-		85.3	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	13.	:	-		13.7	:	-		13.3	:	-	
Fluoride	mg/L	T	0.43	:	-		<2.	:	-		<2.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.	J	-		<1.2	:	-		1.8	J	-	
Nitrite	mg/L	T	0.027	:	-		0.0052	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		0.011	:	-		<0.16	J	-	
Phosphorus	mg/L	T	0.25	:	-		<0.019	J	-		0.29	:	-	
Sulfate	mg/L	T	152.	J	-		70.7	:	-		74.2	J	-	
Total Alkalinity	mg/L	T	84.1	:	-		83.9	:	-		85.3	:	-	
Total Dissolved Solids	mg/L	T	238.	:	-		240.	:	-		278.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	0.37	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		<1.3	J	-	
Total Suspended Solids	mg/L	T	228.	:	-		5.3	J	-		65.6	:	-	
Laboratory Parameters														
pH	SU	T	-		-		7.29	:	-		7.7	J	-	
Specific Conductance	umhos/cm	T	-		-		-		-		366.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	155.	:	-		133.	:	-		145.	:	-	
Hardness	mg/L	D	-		141.	:	-		135.	:	-		139.	:
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 2/4/2003 MW-24-T01N-GRW GW13		MW-24 2/4/2003 MW-24-D01N-GRW GW13		MW-24 3/2/2003 MW-24-T01N-GRW GW13		MW-24 3/2/2003 MW-24-D01N-GRW GW13		MW-24 4/3/2003 MW-24-T01N-GRW GW13		MW-24 4/3/2003 MW-24-D01N-GRW GW13	
Aluminum	mg/L	T	17.4	:	-		<0.211	:	-		2.04	:	-	
Aluminum	mg/L	D	-		<0.142	:	-		<0.142	:	-		<0.503	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.0011	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Arsenic	mg/L	T	0.00095	:	-		0.0006	:	-		0.00056	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.184	:	-		0.054	:	-		0.0856	:	-	
Barium	mg/L	D	-		0.0579	:	-		0.0538	:	-		0.0552	:
Beryllium	mg/L	T	0.0011	:	-		<0.0002	:	-		<0.0003	J	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0003	J
Boron	mg/L	T	<0.0134	:	-		0.0115	:	-		0.0214	:	-	
Boron	mg/L	D	-		<0.0254	:	-		0.0123	:	-		0.0177	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0005	:
Calcium	mg/L	T	42.7	:	-		39.2	J	-		42.6	:	-	
Calcium	mg/L	D	-		42.7	:	-		39.8	J	-		41.9	:
Chromium	mg/L	T	0.0398	:	-		<0.0037	:	-		0.0108	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.0037	:	-		<0.0012	:
Cobalt	mg/L	T	0.008	:	-		<0.0016	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0016	:	-		<0.0038	:
Copper	mg/L	T	0.0225	:	-		<0.0017	J	-		<0.0087	:	-	
Copper	mg/L	D	-		<0.0017	:	-		<0.0017	J	-		<0.0028	:
Iron	mg/L	T	18.3	:	-		<0.489	J	-		4.32	:	-	
Iron	mg/L	D	-		<0.489	:	-		<0.489	J	-		<0.311	:
Lead	mg/L	T	0.0074	:	-		<0.0002	:	-		0.0042	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	11.8	:	-		8.41	:	-		9.48	:	-	
Magnesium	mg/L	D	-		8.44	:	-		8.53	:	-		8.26	:
Manganese	mg/L	T	0.812	J	-		0.312	J	-		0.422	:	-	
Manganese	mg/L	D	-		0.409	:	-		0.32	J	-		0.282	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0142	:	-		0.0073	:	-		<0.0038	:	-	
Molybdenum	mg/L	D	-		<0.0113	:	-		0.0085	:	-		0.0074	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-24 2/4/2003 MW-24-T01N-GRW GW13		MW-24 2/4/2003 MW-24-D01N-GRW GW13		MW-24 3/2/2003 MW-24-T01N-GRW GW13		MW-24 3/2/2003 MW-24-D01N-GRW GW13		MW-24 4/3/2003 MW-24-T01N-GRW GW13		MW-24 4/3/2003 MW-24-D01N-GRW GW13	
Nickel	mg/L	T	0.0258	:	-		<0.0024	:	-		0.0073	:	-	
Nickel	mg/L	D	-		<0.0015	:	-		<0.002	:	-		<0.003	:
Potassium	mg/L	T	5.24	:	-		<1.23	J	-		1.47	:	-	
Potassium	mg/L	D	-		1.35	:	-		<1.34	J	-		1.22	:
Selenium	mg/L	T	0.0019	:	-		0.0031	J	-		0.0023	:	-	
Selenium	mg/L	D	-		0.0016	:	-		0.0022	J	-		0.0021	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	25.3	:	-		30.8	:	-		26.3	:	-	
Sodium	mg/L	D	-		23.9	:	-		29.2	:	-		25.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0092	:	-		0.00081	:	-		0.0053	:	-	
Vanadium	mg/L	D	-		0.0006	:	-		<0.0004	:	-		0.00042	J
Zinc	mg/L	T	<0.134	:	-		<0.039	J	-		<0.0429	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.039	:	-		<0.014	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID: MW-24		Site ID: MW-24		Site ID: MW-24		Site ID: MW-24		Site ID: MW-24	
		Sample Date	5/4/2003		5/4/2003		6/1/2003		6/1/2003		7/10/2003		7/10/2003	
		Sample ID	MW-24-T01N-GRW		MW-24-D01N-GRW		MW-24-T01N-GRW		MW-24-D01N-GRW		MW-24-T01N-GRW		MW-24-D01N-GRW	
		Exposure Area	GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	3.57	:	-		4.27	:	-		8.	:	-	
Eh	millivolts	T	346.7	:	-		346.2	:	-		445.7	:	-	
pH	SU	T	7.	J	-		7.3	J	-		7.07	:	-	
Specific Conductance	uS/cm	T	375.	:	-		378.	:	-		380.	:	-	
Temperature	Celsius	T	11.88	:	-		11.32	:	-		13.61	:	-	
Turbidity	NTU	T	27.5	:	-		25.4	:	-		71.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.088	:	-		<0.04	J	-		<0.29	J	-	
Bicarbonate (as CaCO3)	mg/L	T	87.6	:	-		85.	:	-		81.1	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	17.5	:	-		<21.7	:	-		13.1	:	-	
Fluoride	mg/L	T	<2.	:	-		0.44	:	-		0.59	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.1	:	-		1.3	:	-		1.5	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		0.051	J	-		<0.012	J	-	
Phosphorus	mg/L	T	0.055	:	-		0.3	J	-		0.068	:	-	
Sulfate	mg/L	T	88.8	:	-		77.	J	-		83.3	J	-	
Total Alkalinity	mg/L	T	87.6	:	-		85.	:	-		81.1	:	-	
Total Dissolved Solids	mg/L	T	282.	:	-		328.	:	-		242.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	11.5	:	-		159.	:	-		57.7	:	-	
Laboratory Parameters														
pH	SU	T	7.	J	-		7.3	J	-		7.07	:	-	
Specific Conductance	umhos/cm	T	350.	J	-		370.	J	-		339.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	139.	:	-		129.	:	-		131.	:	-	
Hardness	mg/L	D	-		133.	:	-		126.	:	-		162.	:
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-24	MW-24	MW-24	MW-24	MW-24	MW-24
		Sample Date:	5/4/2003	5/4/2003	6/1/2003	6/1/2003	7/10/2003	7/10/2003
		Sample ID:	MW-24-T01N-GRW	MW-24-D01N-GRW	MW-24-T01N-GRW	MW-24-D01N-GRW	MW-24-T01N-GRW	MW-24-D01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T	<1.32 :	-	1.95 :	-	<0.896 :	-
Aluminum	mg/L	D	-	<0.503 :	-	<0.426 :	-	<0.183 J
Antimony	mg/L	T	<0.0006 :	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D	-	<0.0006 :	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T	0.001 :	-	<0.0004 :	-	0.00046 :	-
Arsenic	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	0.00044 :
Barium	mg/L	T	0.0736 :	-	0.0705 :	-	0.0554 :	-
Barium	mg/L	D	-	0.0552 :	-	0.0535 :	-	0.0507 :
Beryllium	mg/L	T	<0.0003 :	-	<0.0003 :	-	<0.00045 :	-
Beryllium	mg/L	D	-	<0.0003 :	-	<0.0003 :	-	<0.0002 :
Boron	mg/L	T	0.0165 :	-	0.0184 :	-	0.0153 :	-
Boron	mg/L	D	-	0.0159 :	-	0.0182 :	-	0.0137 :
Cadmium	mg/L	T	<0.0004 :	-	<0.00076 :	-	<0.0003 :	-
Cadmium	mg/L	D	-	<0.0004 :	-	<0.0005 :	-	<0.0006 :
Calcium	mg/L	T	41.4 :	-	38.4 :	-	39.2 :	-
Calcium	mg/L	D	-	40.2 :	-	37.6 :	-	48.8 :
Chromium	mg/L	T	0.006 :	-	<0.0056 :	-	0.0036 J	-
Chromium	mg/L	D	-	0.0011 :	-	<0.001 :	-	<0.0014 :
Cobalt	mg/L	T	<0.0029 :	-	<0.0038 :	-	<0.0018 :	-
Cobalt	mg/L	D	-	<0.0029 :	-	<0.0038 :	-	<0.002 :
Copper	mg/L	T	<0.0049 :	-	0.0041 :	-	<0.0016 :	-
Copper	mg/L	D	-	<0.0024 :	-	<0.0015 :	-	<0.0024 :
Iron	mg/L	T	2.03 :	-	1.68 :	-	0.83 :	-
Iron	mg/L	D	-	<0.311 :	-	<0.422 :	-	<0.168 J
Lead	mg/L	T	0.005 :	-	<0.0018 :	-	<0.0018 :	-
Lead	mg/L	D	-	<0.0002 :	-	<0.00032 :	-	<0.0007 :
Magnesium	mg/L	T	8.73 :	-	8.15 :	-	8.14 :	-
Magnesium	mg/L	D	-	8.04 :	-	7.72 :	-	9.83 :
Manganese	mg/L	T	0.396 :	-	0.295 :	-	0.178 :	-
Manganese	mg/L	D	-	0.322 :	-	0.251 :	-	0.187 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	0.0057 :	-	<0.0088 :	-	0.0021 :	-
Molybdenum	mg/L	D	-	0.0082 :	-	<0.005 :	-	0.0049 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-24 5/4/2003 MW-24-T01N-GRW		MW-24 5/4/2003 MW-24-D01N-GRW		MW-24 6/1/2003 MW-24-T01N-GRW		MW-24 6/1/2003 MW-24-D01N-GRW		MW-24 7/10/2003 MW-24-T01N-GRW		MW-24 7/10/2003 MW-24-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	0.0038	:	-		0.005	:	-		0.0022	:	-	
Nickel	mg/L	D	-		<0.0026	:	-		<0.003	:	-		<0.0021	:
Potassium	mg/L	T	1.37	:	-		2.13	:	-		<1.79	:	-	
Potassium	mg/L	D	-		1.35	:	-		1.58	:	-		1.26	:
Selenium	mg/L	T	0.0022	:	-		0.002	:	-		0.0029	:	-	
Selenium	mg/L	D	-		0.0024	:	-		0.0023	:	-		0.0031	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	27.2	:	-		24.4	:	-		23.3	:	-	
Sodium	mg/L	D	-		25.6	:	-		23.8	:	-		27.8	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0079	:	-		0.0043	:	-		0.0022	:	-	
Vanadium	mg/L	D	-		0.00048	:	-		<0.0039	:	-		0.00067	:
Zinc	mg/L	T	<0.0385	:	-		0.0393	:	-		<0.057	:	-	
Zinc	mg/L	D	-		<0.014	:	-		<0.039	:	-		<0.057	:

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-24 8/10/2003 MW-24-T01N-GRW		MW-24 8/10/2003 MW-24-D01N-GRW		MW-24 9/8/2003 MW-24-T01N-GRW		MW-24 9/8/2003 MW-24-D01N-GRW		MW-24 10/15/2003 MW-24-T01N-GRW		MW-24 10/15/2003 MW-24-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.03	:	-		5.67	:	-		7.34	:	-	
Eh	millivolts	T	444.8	:	-		177.5	:	-		312.8	:	-	
pH	SU	T	7.16	:	-		7.2	:	-		7.6	J	-	
Specific Conductance	uS/cm	T	353.	:	-		344.	:	-		364.	:	-	
Temperature	Celsius	T	15.35	:	-		14.04	:	-		10.93	:	-	
Turbidity	NTU	T	54.3	:	-		69.8	:	-		7.5	:	-	
General Chemistry														
Ammonia	mg/L	T	0.043	:	-		<0.044	:	-		<0.04	J	-	
Bicarbonate (as CaCO3)	mg/L	T	80.1	:	-		79.4	:	-		81.2	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.5	:	-		13.	:	-		13.2	:	-	
Fluoride	mg/L	T	0.42	:	-		0.41	:	-		0.41	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.3	:	-		1.3	J	-		1.3	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.014	:	-		<0.013	J	-	
Phosphorus	mg/L	T	0.25	:	-		0.034	:	-		0.02	:	-	
Sulfate	mg/L	T	71.	J	-		78.6	J	-		76.3	J	-	
Total Alkalinity	mg/L	T	80.1	:	-		79.4	:	-		81.2	:	-	
Total Dissolved Solids	mg/L	T	294.	:	-		382.	:	-		254.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.25	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	115.	:	-		20.6	:	-		4.2	:	-	
Laboratory Parameters														
pH	SU	T	7.16	:	-		7.2	:	-		7.6	J	-	
Specific Conductance	umhos/cm	T	333.	:	-		322.	J	-		336.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	148.	:	-		132.	:	-		133.	:	-	
Hardness	mg/L	D	-		126.	:	-		130.	:	-		129.	:
Metals														

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 8/10/2003 MW-24-T01N-GRW GW13		MW-24 8/10/2003 MW-24-D01N-GRW GW13		MW-24 9/8/2003 MW-24-T01N-GRW GW13		MW-24 9/8/2003 MW-24-D01N-GRW GW13		MW-24 10/15/2003 MW-24-T01N-GRW GW13		MW-24 10/15/2003 MW-24-D01N-GRW GW13	
Aluminum	mg/L	T	1.7	:	-		<0.564	:	-		<0.307	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.217	:	-		<0.307	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.00091	:	-		0.00044	:	-		0.00075	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.00057	:
Barium	mg/L	T	0.0771	:	-		0.061	:	-		0.049	:	-	
Barium	mg/L	D	-		0.0491	:	-		0.0554	:	-		0.0473	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.00038	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0003	:
Boron	mg/L	T	<0.0168	:	-		0.0151	:	-		0.0123	:	-	
Boron	mg/L	D	-		<0.0145	:	-		0.014	:	-		0.0116	:
Cadmium	mg/L	T	<0.0006	:	-		<0.0005	:	-		<0.0007	:	-	
Cadmium	mg/L	D	-		<0.0006	:	-		<0.0005	:	-		<0.0007	:
Calcium	mg/L	T	43.1	:	-		38.8	:	-		39.7	:	-	
Calcium	mg/L	D	-		37.8	:	-		38.3	:	-		38.7	:
Chromium	mg/L	T	<0.0088	:	-		<0.002	:	-		0.002	J	-	
Chromium	mg/L	D	-		0.0017	:	-		<0.0011	:	-		0.0014	J
Cobalt	mg/L	T	0.0025	:	-		<0.0029	:	-		<0.0031	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.0029	:	-		<0.0031	:
Copper	mg/L	T	<0.0078	:	-		<0.0022	:	-		<0.002	:	-	
Copper	mg/L	D	-		0.005	:	-		<0.0022	:	-		<0.002	:
Iron	mg/L	T	3.77	:	-		<0.64	:	-		<0.3	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.455	:	-		<0.3	:
Lead	mg/L	T	0.0056	:	-		<0.0011	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.00057	:	-		<0.0004	:
Magnesium	mg/L	T	9.72	:	-		8.64	:	-		8.12	:	-	
Magnesium	mg/L	D	-		7.77	:	-		8.25	:	-		7.85	:
Manganese	mg/L	T	0.269	:	-		0.151	:	-		0.075	:	-	
Manganese	mg/L	D	-		0.174	:	-		0.117	:	-		0.066	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0048	:	-		0.0036	:	-		0.0044	:	-	
Molybdenum	mg/L	D	-		0.0057	:	-		0.0039	:	-		0.0051	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 8/10/2003 MW-24-T01N-GRW GW13		MW-24 8/10/2003 MW-24-D01N-GRW GW13		MW-24 9/8/2003 MW-24-T01N-GRW GW13		MW-24 9/8/2003 MW-24-D01N-GRW GW13		MW-24 10/15/2003 MW-24-T01N-GRW GW13		MW-24 10/15/2003 MW-24-D01N-GRW GW13	
Nickel	mg/L	T	<0.008	J	-		<0.0024	:	-		<0.0028	:	-	
Nickel	mg/L	D	-		0.0045	J	-		<0.0024	:	-		<0.0028	:
Potassium	mg/L	T	1.46	:	-		0.801	J	-		0.858	:	-	
Potassium	mg/L	D	-		1.15	:	-		0.677	J	-		0.9	:
Selenium	mg/L	T	0.0025	:	-		0.0031	:	-		0.0039	:	-	
Selenium	mg/L	D	-		0.0028	:	-		0.0024	:	-		0.0037	:
Silver	mg/L	T	<0.0009	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0009	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	26.4	:	-		<21.5	:	-		24.6	:	-	
Sodium	mg/L	D	-		22.5	:	-		<21.5	:	-		25.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0091	:	-		0.0013	:	-		0.00093	:	-	
Vanadium	mg/L	D	-		0.0007	:	-		0.00055	:	-		0.00055	:
Zinc	mg/L	T	<0.0871	:	-		<0.019	:	-		0.0212	:	-	
Zinc	mg/L	D	-		<0.0539	:	-		<0.019	:	-		<0.02	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-24 11/2/2003 MW-24-T01N-GRW		MW-24 11/2/2003 MW-24-D01N-GRW		MW-24 12/7/2003 MW-24-T01N-GRW		MW-24 12/7/2003 MW-24-D01N-GRW		MW-24 1/7/2004 MW-24-T01N-GRW		MW-24 1/7/2004 MW-24-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	5.75	:	-		6.41	:	-		5.26	:	-	
Eh	millivolts	T	223.3	:	-		190.	:	-		384.	:	-	
pH	SU	T	7.19	:	-		7.5	J	-		7.6	J	-	
Specific Conductance	uS/cm	T	334.	:	-		364.	:	-		364.	:	-	
Temperature	Celsius	T	11.56	:	-		10.78	:	-		9.82	:	-	
Turbidity	NTU	T	8.2	:	-		-		-		4.7	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.063	:	-		0.046	:	-		<0.08	J	-	
Bicarbonate (as CaCO3)	mg/L	T	72.5	:	-		76.	:	-		79.2	J	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	13.2	:	-		13.2	:	-		13.	:	-	
Fluoride	mg/L	T	<0.43	:	-		0.41	:	-		0.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.4	J	-		1.3	:	-		1.3	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.016	J	-		0.017	J	-		<0.016	J	-	
Phosphorus	mg/L	T	0.036	:	-		0.04	:	-		<0.015	:	-	
Sulfate	mg/L	T	79.4	:	-		75.5	:	-		79.	:	-	
Total Alkalinity	mg/L	T	72.5	:	-		76.	J	-		79.2	J	-	
Total Dissolved Solids	mg/L	T	304.	:	-		266.	:	-		224.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	2.3	:	-		<0.24	J	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.5	:	-	
Total Suspended Solids	mg/L	T	12.6	:	-		16.	:	-		<1.9	:	-	
Laboratory Parameters														
pH	SU	T	7.19	:	-		7.5	J	-		7.6	J	-	
Specific Conductance	umhos/cm	T	360.	J	-		286.	J	-		343.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	130.	:	-		127.	:	-		117.	:	-	
Hardness	mg/L	D	-		126.	:	-		117.	:	-		117.	:
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 11/2/2003 MW-24-T01N-GRW GW13		MW-24 11/2/2003 MW-24-D01N-GRW GW13		MW-24 12/7/2003 MW-24-T01N-GRW GW13		MW-24 12/7/2003 MW-24-D01N-GRW GW13		MW-24 1/7/2004 MW-24-T01N-GRW GW13		MW-24 1/7/2004 MW-24-D01N-GRW GW13	
Aluminum	mg/L	T	0.451	:	-		<0.307	J	-		<0.514	:	-	
Aluminum	mg/L	D	-		<0.217	:	-		<0.307	J	-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	0.00056	:	-		0.0006	:	-		0.00065	:	-	
Arsenic	mg/L	D	-		0.00048	:	-		0.00046	:	-		0.00074	:
Barium	mg/L	T	0.0556	:	-		0.0598	:	-		0.0496	:	-	
Barium	mg/L	D	-		0.0566	:	-		0.0504	:	-		0.0497	:
Beryllium	mg/L	T	<0.00054	J	-		<0.00045	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.00031	J	-		<0.0006	:	-		<0.0003	:
Boron	mg/L	T	0.0146	:	-		<0.013	:	-		<0.0122	:	-	
Boron	mg/L	D	-		0.0135	:	-		<0.0126	:	-		<0.0133	:
Cadmium	mg/L	T	<0.0007	:	-		<0.0007	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	38.6	:	-		37.8	:	-		34.8	:	-	
Calcium	mg/L	D	-		37.7	:	-		35.2	:	-		34.8	:
Chromium	mg/L	T	<0.0029	:	-		0.0015	J	-		<0.0015	J	-	
Chromium	mg/L	D	-		<0.0023	:	-		<0.0013	J	-		<0.0015	J
Cobalt	mg/L	T	<0.0031	:	-		<0.0031	:	-		<0.0023	:	-	
Cobalt	mg/L	D	-		<0.0031	:	-		<0.0031	:	-		<0.0023	:
Copper	mg/L	T	<0.002	J	-		0.0032	:	-		<0.003	:	-	
Copper	mg/L	D	-		<0.002	J	-		<0.002	:	-		<0.003	:
Iron	mg/L	T	0.459	:	-		0.745	:	-		<0.373	:	-	
Iron	mg/L	D	-		<0.455	:	-		<0.3	:	-		<0.373	:
Lead	mg/L	T	<0.00077	:	-		0.00058	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0002	:
Magnesium	mg/L	T	8.11	:	-		7.8	:	-		7.26	:	-	
Magnesium	mg/L	D	-		7.82	:	-		7.13	:	-		7.27	:
Manganese	mg/L	T	0.0763	J	-		0.0753	:	-		<0.0272	:	-	
Manganese	mg/L	D	-		0.0698	:	-		0.0531	:	-		<0.015	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.0036	J	-		0.003	J	-		0.0042	:	-	
Molybdenum	mg/L	D	-		0.0022	J	-		0.0024	J	-		0.0036	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 11/2/2003 MW-24-T01N-GRW GW13		MW-24 11/2/2003 MW-24-D01N-GRW GW13		MW-24 12/7/2003 MW-24-T01N-GRW GW13		MW-24 12/7/2003 MW-24-D01N-GRW GW13		MW-24 1/7/2004 MW-24-T01N-GRW GW13		MW-24 1/7/2004 MW-24-D01N-GRW GW13	
Nickel	mg/L	T	<0.0028	:	-		<0.0028	:	-		<0.0024	J	-	
Nickel	mg/L	D	-		<0.0028	:	-		<0.0028	:	-		<0.0024	J
Potassium	mg/L	T	<0.522	J	-		<0.522	J	-		1.21	:	-	
Potassium	mg/L	D	-		<0.629	J	-		<0.522	J	-		1.25	:
Selenium	mg/L	T	0.0037	:	-		0.0039	:	-		0.0041	J	-	
Selenium	mg/L	D	-		0.004	:	-		0.0035	:	-		0.0049	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	25.9	:	-		23.2	:	-		24.6	:	-	
Sodium	mg/L	D	-		28.2	:	-		21.2	:	-		21.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0016	:	-		0.0017	:	-		0.00066	:	-	
Vanadium	mg/L	D	-		0.00086	:	-		0.00073	:	-		0.00058	:
Zinc	mg/L	T	<0.019	:	-		<0.02	:	-		<0.026	:	-	
Zinc	mg/L	D	-		<0.019	:	-		<0.02	:	-		<0.026	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-24 4/15/2004 MW-24-T01N-GRW		MW-24 4/15/2004 MW-24-D01N-GRW		MW-7C 10/28/2002 MW-7C-T01N-GRW		MW-7C 10/28/2002 MW-7C-D01N-GRW		MW-7C 10/30/2002 MW-7C-T01N-GRW		MW-7C 1/17/2003 MW-7C-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.78	:	-		5.19	:	-		-		2.23	:
Eh	millivolts	T	222.8	:	-		315.8	:	-		-		302.1	:
pH	SU	T	7.5	J	-		7.21	:	-		-		7.11	:
Specific Conductance	uS/cm	T	340.	:	-		1696.	:	-		-		3192.	:
Temperature	Celsius	T	11.32	:	-		12.18	:	-		-		9.19	:
Turbidity	NTU	T	1.7	:	-		6.9	:	-		-		8.6	:
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.18	J	-		-		<0.078	:
Bicarbonate (as CaCO3)	mg/L	T	81.1	:	-		92.3	J	-		-		113.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		92.3	J	-		-		<1.	:
Chloride	mg/L	T	13.2	:	-		13.6	:	-		-		13.2	:
Fluoride	mg/L	T	0.52	:	-		0.25	:	-		-		0.2	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		92.3	J	-		-		<1.	:
Nitrate	mg/L	T	1.3	J	-		<0.4	J	-		-		<0.44	J
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	0.011	J	-		0.05	J	-		-		<0.035	J
Phosphorus	mg/L	T	0.02	:	-		0.056	:	-		-		0.066	:
Sulfate	mg/L	T	75.9	:	-		854.	:	-		-		961.	J
Total Alkalinity	mg/L	T	81.1	:	-		92.3	J	-		-		113.	:
Total Dissolved Solids	mg/L	T	238.	:	-		1540.	:	-		-		1480.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.3	:	-		1.6	:	-		-		1.9	:
Total Suspended Solids	mg/L	T	<2.9	:	-		62.3	:	-		-		10.2	:
Laboratory Parameters														
pH	SU	T	7.5	J	-		7.21	:	-		-		7.11	:
Specific Conductance	umhos/cm	T	321.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	127.	:	-		1010.	:	-		-		950.	:
Hardness	mg/L	D	-		129.	:	-		1000.	:	-		-	
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-24 4/15/2004 MW-24-T01N-GRW		MW-24 4/15/2004 MW-24-D01N-GRW		MW-7C 10/28/2002 MW-7C-T01N-GRW		MW-7C 10/28/2002 MW-7C-D01N-GRW		MW-7C 10/30/2002 MW-7C-T01N-GRW		MW-7C 1/17/2003 MW-7C-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.176	:	-		0.128	:	-		-		<0.226	:
Aluminum	mg/L	D	-		<0.176	:	-		<0.003	J	-		-	
Antimony	mg/L	T	<0.0008	:	-		<0.0002	:	-		-		<0.0006	:
Antimony	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		-	
Arsenic	mg/L	T	0.00044	:	-		0.0004	J	-		-		<0.0004	:
Arsenic	mg/L	D	-		<0.0004	:	-		0.00036	J	-		-	
Barium	mg/L	T	0.05	:	-		0.0258	:	-		-		0.0208	:
Barium	mg/L	D	-		0.0505	:	-		0.0226	:	-		-	
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Boron	mg/L	T	0.0132	:	-		0.0209	:	-		-		0.0186	:
Boron	mg/L	D	-		0.0132	:	-		0.0208	:	-		-	
Cadmium	mg/L	T	<0.0003	:	-		<0.0001	:	-		-		<0.0004	:
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0001	:	-		-	
Calcium	mg/L	T	37.9	:	-		310.	:	-		-		292.	:
Calcium	mg/L	D	-		38.7	:	-		309.	:	-		-	
Chromium	mg/L	T	<0.0028	:	-		<0.0046	:	-		-		<0.0037	:
Chromium	mg/L	D	-		0.0022	:	-		<0.0046	:	-		-	
Chromium, Hexavalent	mg/L	D	-		-		-		-		<0.01	:	-	
Cobalt	mg/L	T	<0.0011	:	-		<0.0022	:	-		-		<0.0016	:
Cobalt	mg/L	D	-		<0.0022	:	-		<0.0022	:	-		-	
Copper	mg/L	T	<0.00087	:	-		<0.003	:	-		-		<0.0017	:
Copper	mg/L	D	-		<0.0007	:	-		<0.0011	J	-		-	
Iron	mg/L	T	<0.192	J	-		0.0853	J	-		-		<0.266	:
Iron	mg/L	D	-		<0.192	:	-		<0.0226	J	-		-	
Lead	mg/L	T	<0.0008	:	-		0.00024	:	-		-		<0.0002	:
Lead	mg/L	D	-		<0.0008	:	-		<0.0001	:	-		-	
Magnesium	mg/L	T	7.84	:	-		57.1	:	-		-		53.7	:
Magnesium	mg/L	D	-		7.93	:	-		56.6	:	-		-	
Manganese	mg/L	T	<0.019	:	-		<0.0025	:	-		-		<0.028	:
Manganese	mg/L	D	-		<0.019	:	-		<0.0025	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0063	:	-		0.0178	:	-		-		0.017	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-24 4/15/2004 MW-24-T01N-GRW GW13		MW-24 4/15/2004 MW-24-D01N-GRW GW13		MW-7C 10/28/2002 MW-7C-T01N-GRW GW13		MW-7C 10/28/2002 MW-7C-D01N-GRW GW13		MW-7C 10/30/2002 MW-7C-T01N-GRW GW13		MW-7C 1/17/2003 MW-7C-T01N-GRW GW13	
Molybdenum	mg/L	D	-		<0.0056	:	-		0.019	:	-		-	
Nickel	mg/L	T	<0.0014	:	-		<0.0002	J	-		-		<0.0015	:
Nickel	mg/L	D	-		<0.0014	:	-		<0.0002	J	-		-	
Potassium	mg/L	T	1.11	:	-		3.36	:	-		-		3.02	:
Potassium	mg/L	D	-		1.16	:	-		3.28	:	-		-	
Selenium	mg/L	T	0.0035	:	-		0.0013	:	-		-		<0.0016	:
Selenium	mg/L	D	-		0.0032	:	-		0.0013	:	-		-	
Silver	mg/L	T	<0.00089	:	-		<0.0001	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.00089	:	-		<0.0001	:	-		-	
Sodium	mg/L	T	25.9	:	-		63.1	:	-		-		57.3	:
Sodium	mg/L	D	-		25.2	:	-		62.4	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0001	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		-	
Vanadium	mg/L	T	0.00086	:	-		0.00086	:	-		-		0.0008	:
Vanadium	mg/L	D	-		0.00085	:	-		0.0007	:	-		-	
Zinc	mg/L	T	0.0262	:	-		<0.0069	:	-		-		<0.028	:
Zinc	mg/L	D	-		<0.015	:	-		<0.0069	:	-		-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-7C 1/17/2003 MW-7C-D01N-GRW		MW-7C 4/1/2003 MW-7C-T01N-GRW		MW-7C 4/1/2003 MW-7C-D01N-GRW		MW-7C 7/9/2003 MW-7C-T01N-GRW		MW-7C 7/9/2003 MW-7C-D01N-GRW		MW-7C 10/15/2003 MW-7C-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		4.32	:	-		5.29	:	-		3.04	:
Eh	millivolts	T	-		206.	:	-		206.8	:	-		350.7	:
pH	SU	T	-		7.6	J	-		7.64	:	-		6.75	:
Specific Conductance	uS/cm	T	-		1749.	:	-		1765.	:	-		1616.	:
Temperature	Celsius	T	-		12.93	:	-		16.33	:	-		8.68	:
Turbidity	NTU	T	-		41.8	:	-		6.3	:	-		1.1	:
General Chemistry														
Ammonia	mg/L	T	-		<0.16	:	-		<0.099	J	-		<0.045	J
Bicarbonate (as CaCO3)	mg/L	T	-		114.	:	-		116.	:	-		120.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<0.4	:	-		13.6	:	-		13.8	:
Fluoride	mg/L	T	-		0.16	:	-		0.14	:	-		0.16	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	:	-		<0.4	J	-		0.31	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.033	J	-		1.8	J	-		<0.033	J
Phosphorus	mg/L	T	-		0.039	:	-		0.036	J	-		0.042	:
Sulfate	mg/L	T	-		895.	J	-		753.	J	-		785.	J
Total Alkalinity	mg/L	T	-		114.	:	-		116.	:	-		120.	:
Total Dissolved Solids	mg/L	T	-		1500.	:	-		1450.	:	-		1540.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		6.9	J	-		<1.6	J	-		1.	J
Total Suspended Solids	mg/L	T	-		<3.6	:	-		25.4	:	-		6.4	:
Laboratory Parameters														
pH	SU	T	-		7.6	J	-		7.64	:	-		6.75	:
Specific Conductance	umhos/cm	T	-		1630.	J	-		1540.	J	-		1600.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		982.	:	-		920.	:	-		971.	:
Hardness	mg/L	D	963.	:	-		1020.	:	-		906.	:	-	
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 1/17/2003 MW-7C-D01N-GRW GW13		MW-7C 4/1/2003 MW-7C-T01N-GRW GW13		MW-7C 4/1/2003 MW-7C-D01N-GRW GW13		MW-7C 7/9/2003 MW-7C-T01N-GRW GW13		MW-7C 7/9/2003 MW-7C-D01N-GRW GW13		MW-7C 10/15/2003 MW-7C-T01N-GRW GW13	
Aluminum	mg/L	T	-		0.538	:	-		<0.631	:	-		<0.307	:
Aluminum	mg/L	D	<0.226	:	-		<0.426	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.0012	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.00048	:	-		<0.0004	:	-		0.00047	:
Arsenic	mg/L	D	<0.0004	:	-		0.00066	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0639	:	-		0.0236	:	-		0.0216	:
Barium	mg/L	D	0.0197	:	-		0.0354	:	-		0.0196	:	-	
Beryllium	mg/L	T	-		<0.0016	:	-		<0.0002	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0002	:	-		<0.001	:	-		<0.0002	:	-	
Boron	mg/L	T	-		<0.0327	:	-		0.0216	:	-		0.0206	:
Boron	mg/L	D	0.0172	:	-		<0.0272	:	-		0.0191	:	-	
Cadmium	mg/L	T	-		0.0016	:	-		<0.0003	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0004	:	-		0.001	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		301.	:	-		282.	:	-		299.	:
Calcium	mg/L	D	296.	:	-		312.	:	-		278.	:	-	
Chromium	mg/L	T	-		<0.0077	:	-		<0.0006	J	-		0.0021	J
Chromium	mg/L	D	<0.0037	:	-		<0.0049	:	-		<0.0006	J	-	
Cobalt	mg/L	T	-		0.01	:	-		<0.0018	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0016	:	-		0.0046	:	-		<0.0018	:	-	
Copper	mg/L	T	-		0.0073	:	-		<0.0014	:	-		<0.002	:
Copper	mg/L	D	<0.0017	:	-		0.0038	:	-		<0.0014	:	-	
Iron	mg/L	T	-		<0.422	:	-		<0.667	:	-		<0.3	:
Iron	mg/L	D	<0.266	:	-		<0.422	:	-		<0.667	:	-	
Lead	mg/L	T	-		0.0004	:	-		<0.00037	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		55.8	:	-		52.	:	-		54.6	:
Magnesium	mg/L	D	54.4	:	-		57.5	:	-		51.2	:	-	
Manganese	mg/L	T	-		<0.013	:	-		<0.019	:	-		<0.01	:
Manganese	mg/L	D	<0.028	:	-		<0.013	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0281	:	-		0.0152	:	-		0.015	:
Molybdenum	mg/L	D	0.0162	:	-		0.0263	:	-		0.0136	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 1/17/2003 MW-7C-D01N-GRW GW13		MW-7C 4/1/2003 MW-7C-T01N-GRW GW13		MW-7C 4/1/2003 MW-7C-D01N-GRW GW13		MW-7C 7/9/2003 MW-7C-T01N-GRW GW13		MW-7C 7/9/2003 MW-7C-D01N-GRW GW13		MW-7C 10/15/2003 MW-7C-T01N-GRW GW13	
Nickel	mg/L	T	-		0.008	:	-		0.0072	J	-		<0.0028	:
Nickel	mg/L	D	<0.0015	:	-		0.0036	:	-		<0.002	J	-	
Potassium	mg/L	T	-		3.29	:	-		3.43	:	-		2.78	:
Potassium	mg/L	D	2.94	:	-		3.22	:	-		3.17	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0016	:	-		0.0017	:
Selenium	mg/L	D	<0.0016	:	-		<0.0024	:	-		<0.0016	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		60.4	:	-		54.8	:	-		53.7	:
Sodium	mg/L	D	58.8	:	-		73.2	:	-		53.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.001	:	-		0.0011	:	-		0.0009	:
Vanadium	mg/L	D	0.00075	:	-		0.00079	:	-		0.0007	:	-	
Zinc	mg/L	T	-		<0.039	:	-		<0.016	:	-		<0.02	:
Zinc	mg/L	D	<0.028	:	-		<0.039	:	-		<0.016	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-7C Sample Date: 10/15/2003 Sample ID: MW-7C-D01N-GRW GW13		Site ID: MW-7C Sample Date: 1/7/2004 Sample ID: MW-7C-T01N-GRW GW13		Site ID: MW-7C Sample Date: 1/7/2004 Sample ID: MW-7C-D01N-GRW GW13		Site ID: MW-7C Sample Date: 4/15/2004 Sample ID: MW-7C-T01N-GRW GW13		Site ID: MW-7C Sample Date: 4/15/2004 Sample ID: MW-7C-D01N-GRW GW13		Site ID: MW-CH Sample Date: 11/8/2002 Sample ID: MW-CH-T01N-GRW GW11	
Field Measurements														
DO	mg/L	T	-		3.88	:	-		5.02	:	-		8.68	:
Eh	millivolts	T	-		176.3	:	-		214.	:	-		134.2	:
pH	SU	T	-		7.4	J	-		7.3	J	-		7.67	:
Specific Conductance	uS/cm	T	-		1693.	:	-		1554.	:	-		498.	:
Temperature	Celsius	T	-		7.02	:	-		12.12	:	-		13.48	:
Turbidity	NTU	T	-		16.4	:	-		3.5	:	-		6.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.097	J	-		<0.04	:	-		<0.19	:
Bicarbonate (as CaCO3)	mg/L	T	-		115.	J	-		115.	:	-		225.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		13.7	:	-		13.9	:	-		1.2	:
Fluoride	mg/L	T	-		0.16	:	-		0.18	:	-		0.6	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.35	J	-		0.57	J	-		<0.4	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.035	J	-		0.03	:	-		0.011	:
Phosphorus	mg/L	T	-		0.038	:	-		0.035	:	-		<0.01	:
Sulfate	mg/L	T	-		830.	:	-		811.	:	-		41.	:
Total Alkalinity	mg/L	T	-		115.	J	-		115.	:	-		225.	:
Total Dissolved Solids	mg/L	T	-		1440.	:	-		1410.	:	-		299.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		0.25	:
Total Organic Carbon	mg/L	T	-		<1.6	:	-		<1.3	J	-		<1.	:
Total Suspended Solids	mg/L	T	-		13.4	:	-		<1.7	J	-		<0.59	:
Laboratory Parameters														
pH	SU	T	-		7.4	J	-		7.3	J	-		7.67	:
Specific Conductance	umhos/cm	T	-		1640.	J	-		1440.	J	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		903.	:	-		910.	:	-		111.	:
Hardness	mg/L	D	948.	:	-		912.	:	-		864.	:	-	
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 10/15/2003 MW-7C-D01N-GRW GW13		MW-7C 1/7/2004 MW-7C-T01N-GRW GW13		MW-7C 1/7/2004 MW-7C-D01N-GRW GW13		MW-7C 4/15/2004 MW-7C-T01N-GRW GW13		MW-7C 4/15/2004 MW-7C-D01N-GRW GW13		MW-CH 11/8/2002 MW-CH-T01N-GRW GW11	
Aluminum	mg/L	T	-		<0.514	:	-		<0.201	J	-		<0.0061	:
Aluminum	mg/L	D	<0.307	:	-		<0.514	:	-		<0.201	J	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.001	:	-		<0.0004	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.0013	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		0.00048	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0213	:	-		0.0195	:	-		0.0581	:
Barium	mg/L	D	0.0189	:	-		0.0206	:	-		0.0194	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	J	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0003	:	-		<0.0003	J	-	
Boron	mg/L	T	-		0.0205	:	-		0.0223	:	-		0.194	:
Boron	mg/L	D	0.0187	:	-		0.021	:	-		0.0196	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	:	-		<0.0002	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		277.	:	-		278.	:	-		33.6	:
Calcium	mg/L	D	292.	:	-		280.	:	-		265.	:	-	
Chromium	mg/L	T	-		<0.0015	J	-		<0.0015	:	-		<0.0046	:
Chromium	mg/L	D	0.0017	J	-		<0.0015	J	-		0.0012	:	-	
Cobalt	mg/L	T	-		<0.0023	:	-		<0.0016	:	-		<0.0022	:
Cobalt	mg/L	D	0.0049	:	-		0.0033	:	-		0.0046	:	-	
Copper	mg/L	T	-		<0.003	:	-		<0.0014	:	-		0.0129	:
Copper	mg/L	D	<0.002	:	-		<0.003	:	-		<0.0014	:	-	
Iron	mg/L	T	-		<0.373	:	-		<0.293	J	-		0.209	:
Iron	mg/L	D	<0.3	:	-		<0.373	:	-		<0.293	J	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		0.0036	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		51.3	:	-		52.2	:	-		6.67	:
Magnesium	mg/L	D	53.3	:	-		51.8	:	-		49.4	:	-	
Manganese	mg/L	T	-		<0.015	:	-		<0.014	J	-		<0.0025	:
Manganese	mg/L	D	<0.0106	:	-		<0.015	:	-		<0.014	J	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0136	:	-		0.0131	:	-		0.0057	:
Molybdenum	mg/L	D	0.0149	:	-		0.0154	:	-		0.013	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 10/15/2003 MW-7C-D01N-GRW GW13		MW-7C 1/7/2004 MW-7C-T01N-GRW GW13		MW-7C 1/7/2004 MW-7C-D01N-GRW GW13		MW-7C 4/15/2004 MW-7C-T01N-GRW GW13		MW-7C 4/15/2004 MW-7C-D01N-GRW GW13		MW-CH 11/8/2002 MW-CH-T01N-GRW GW11	
Nickel	mg/L	T	-		<0.0024	J	-		<0.0015	J	-		<0.00076	J
Nickel	mg/L	D	<0.0028	:	-		<0.0024	J	-		<0.0015	J	-	
Potassium	mg/L	T	-		3.15	:	-		3.19	:	-		<1.17	:
Potassium	mg/L	D	2.92	:	-		3.24	:	-		3.18	:	-	
Selenium	mg/L	T	-		0.0016	J	-		<0.0014	:	-		<0.0004	:
Selenium	mg/L	D	0.0009	:	-		0.0018	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		54.6	:	-		<48.5	J	-		74.6	:
Sodium	mg/L	D	53.4	:	-		54.7	:	-		<51.5	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.00022	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00022	:	-	
Vanadium	mg/L	T	-		0.00083	:	-		0.0011	:	-		0.0011	:
Vanadium	mg/L	D	0.00072	:	-		0.00069	:	-		0.0011	:	-	
Zinc	mg/L	T	-		0.056	:	-		<0.024	:	-		0.646	:
Zinc	mg/L	D	<0.02	:	-		0.0565	:	-		<0.024	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		-		-		-		-		<0.01	:
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-		-		-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T	-		-		-		-		-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	-		-		-		-		-		<0.01	:
1,1-Dichloroethane	mg/L	T	-		-		-		-		-		<0.01	:
1,1-Dichloroethene	mg/L	T	-		-		-		-		-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	-		-		-		-		-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-		-		-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	-		-		-		-		-		<0.01	:
1,2-Dichloroethane	mg/L	T	-		-		-		-		-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	-		-		-		-		-		<0.01	:
1,2-Dichloropropane	mg/L	T	-		-		-		-		-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	-		-		-		-		-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	-		-		-		-		-		<0.01	:
2-Butanone	mg/L	T	-		-		-		-		-		<0.01	:
2-Hexanone	mg/L	T	-		-		-		-		-		<0.01	:
4-Methyl-2-pentanone	mg/L	T	-		-		-		-		-		<0.01	:

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 10/15/2003 MW-7C-D01N-GRW GW13	MW-7C 1/7/2004 MW-7C-T01N-GRW GW13	MW-7C 1/7/2004 MW-7C-D01N-GRW GW13	MW-7C 4/15/2004 MW-7C-T01N-GRW GW13	MW-7C 4/15/2004 MW-7C-D01N-GRW GW13	MW-CH 11/8/2002 MW-CH-T01N-GRW GW11
Acetone	mg/L	T	-	-	-	-	-	<0.01 J
Benzene	mg/L	T	-	-	-	-	-	<0.01 :
Bromodichloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Bromoform	mg/L	T	-	-	-	-	-	<0.01 :
Bromomethane	mg/L	T	-	-	-	-	-	<0.01 :
Carbon disulfide	mg/L	T	-	-	-	-	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	-	-	-	-	<0.01 :
Chlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Chloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Chloroform	mg/L	T	-	-	-	-	-	<0.01 :
Chloromethane	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Dibromochloromethane	mg/L	T	-	-	-	-	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	-	-	-	-	<0.01 :
Ethylbenzene	mg/L	T	-	-	-	-	-	<0.01 :
Methylene chloride	mg/L	T	-	-	-	-	-	<0.01 :
Styrene	mg/L	T	-	-	-	-	-	<0.01 :
Tetrachloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Toluene	mg/L	T	-	-	-	-	-	<0.01 :
Total Xylene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	-	<0.01 :
Trichloroethene	mg/L	T	-	-	-	-	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	-	-	-	-	<0.01 :
Vinyl chloride	mg/L	T	-	-	-	-	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	-	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	-	-	-	-	<0.01 :
2,4-Dinitrophenol	mg/L	T	-	-	-	-	-	<0.025 :
2,4-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7C 10/15/2003 MW-7C-D01N-GRW GW13	MW-7C 1/7/2004 MW-7C-T01N-GRW GW13	MW-7C 1/7/2004 MW-7C-D01N-GRW GW13	MW-7C 4/15/2004 MW-7C-T01N-GRW GW13	MW-7C 4/15/2004 MW-7C-D01N-GRW GW13	MW-CH 11/8/2002 MW-CH-T01N-GRW GW11
2,6-Dinitrotoluene	mg/L	T	-	-	-	-	-	<0.01 :
2-Chloronaphthalene	mg/L	T	-	-	-	-	-	<0.01 :
2-Chlorophenol	mg/L	T	-	-	-	-	-	<0.01 :
2-Methylnaphthalene	mg/L	T	-	-	-	-	-	<0.01 :
2-Methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
2-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
2-Nitrophenol	mg/L	T	-	-	-	-	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T	-	-	-	-	-	<0.01 :
3-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	-	-	<0.025 :
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
4-Chloroaniline	mg/L	T	-	-	-	-	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	-	-	<0.01 :
4-Methylphenol	mg/L	T	-	-	-	-	-	<0.01 :
4-Nitroaniline	mg/L	T	-	-	-	-	-	<0.025 :
4-Nitrophenol	mg/L	T	-	-	-	-	-	<0.025 :
Acenaphthene	mg/L	T	-	-	-	-	-	<0.01 :
Acenaphthylene	mg/L	T	-	-	-	-	-	<0.01 :
Anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Benzaldehyde	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(a)anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(a)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T	-	-	-	-	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	-	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Butyl benzyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Carbazole	mg/L	T	-	-	-	-	-	<0.01 :
Chrysene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T	-	-	-	-	-	<0.01 :
Dibenzofuran	mg/L	T	-	-	-	-	-	<0.01 :

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-7C Sample Date: 10/15/2003 Sample ID: MW-7C-D01N-GRW GW13	Site ID: MW-7C Sample Date: 1/7/2004 Sample ID: MW-7C-T01N-GRW GW13	Site ID: MW-7C Sample Date: 1/7/2004 Sample ID: MW-7C-D01N-GRW GW13	Site ID: MW-7C Sample Date: 4/15/2004 Sample ID: MW-7C-T01N-GRW GW13	Site ID: MW-7C Sample Date: 4/15/2004 Sample ID: MW-7C-D01N-GRW GW13	Site ID: MW-CH Sample Date: 11/8/2002 Sample ID: MW-CH-T01N-GRW GW11
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	-	<0.01 :
Diethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Dimethylphthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	-	<0.01 :
Fluoranthene	mg/L	T	-	-	-	-	-	<0.01 :
Fluorene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobenzene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorobutadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Isophorone	mg/L	T	-	-	-	-	-	<0.01 :
Naphthalene	mg/L	T	-	-	-	-	-	<0.01 :
Nitrobenzene	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	-	<0.01 :
Pentachlorophenol	mg/L	T	-	-	-	-	-	<0.025 :
Phenanthrene	mg/L	T	-	-	-	-	-	<0.01 :
Phenol	mg/L	T	-	-	-	-	-	<0.01 :
Pyrene	mg/L	T	-	-	-	-	-	<0.01 :

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-CH 11/8/2002 MW-CH-D01N-GRW	MW-CH 1/17/2003 MW-CH-T01N-GRW	MW-CH 1/17/2003 MW-CH-D01N-GRW	MW-CH 4/1/2003 MW-CH-T01N-GRW	MW-CH 4/1/2003 MW-CH-D01N-GRW	MW-CH 7/9/2003 MW-CH-T01N-GRW
			GW11	GW11	GW11	GW11	GW11	GW11
Field Measurements								
DO	mg/L	T	-	19.1 :	-	8.07 :	-	5.66 :
Eh	millivolts	T	-	284.1 :	-	300.8 :	-	402. :
pH	SU	T	-	7.03 :	-	7.6 J	-	7.7 J
Specific Conductance	uS/cm	T	-	454. :	-	494. :	-	526. :
Temperature	Celsius	T	-	8.23 :	-	9.83 :	-	20.95 :
Turbidity	NTU	T	-	0.9 :	-	2.1 :	-	2. :
General Chemistry								
Ammonia	mg/L	T	-	<0.12 :	-	<0.048 :	-	<0.062 J
Bicarbonate (as CaCO3)	mg/L	T	-	221. :	-	226. :	-	229. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	<1.1 :	-	<0.57 :	-	1.3 :
Fluoride	mg/L	T	-	0.57 :	-	0.56 :	-	0.53 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.52 J	-	<0.57 :	-	0.49 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.018 J	-	<0.016 J	-	<0.014 :
Phosphorus	mg/L	T	-	0.025 :	-	0.023 :	-	0.021 :
Sulfate	mg/L	T	-	41.7 J	-	41.4 J	-	61.8 J
Total Alkalinity	mg/L	T	-	221. :	-	226. :	-	229. :
Total Dissolved Solids	mg/L	T	-	<295. :	-	352. :	-	348. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	-	<1. J	-	<1. J
Total Suspended Solids	mg/L	T	-	<0.6 :	-	<0.9 :	-	<0.7 :
Laboratory Parameters								
pH	SU	T	-	7.03 :	-	7.6 J	-	7.7 J
Specific Conductance	umhos/cm	T	-	-	-	465. J	-	466. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	117. :	-	115. :	-	118. :
Hardness	mg/L	D	111. :	-	114. :	-	113. :	-
Metals								

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-CH Sample Date: 11/8/2002 Sample ID: MW-CH-D01N-GRW GW11	MW-CH 1/17/2003 MW-CH-T01N-GRW GW11	MW-CH 1/17/2003 MW-CH-D01N-GRW GW11	MW-CH 4/1/2003 MW-CH-T01N-GRW GW11	MW-CH 4/1/2003 MW-CH-D01N-GRW GW11	MW-CH 7/9/2003 MW-CH-T01N-GRW GW11
Aluminum	mg/L	T	-	<0.226 :	-	<0.426 :	-	<0.631 :
Aluminum	mg/L	D	0.0065 :	-	<0.226 :	-	<0.426 :	-
Antimony	mg/L	T	-	<0.0006 :	-	<0.0006 :	-	<0.0005 :
Antimony	mg/L	D	<0.0004 :	-	<0.0006 :	-	<0.0006 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0002 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	0.00051 :	-
Barium	mg/L	T	-	0.0576 :	-	0.0567 :	-	0.0575 :
Barium	mg/L	D	0.0578 :	-	0.056 :	-	0.0568 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.00059 :	-	<0.0002 :
Beryllium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0004 :	-
Boron	mg/L	T	-	0.191 :	-	0.206 :	-	0.202 :
Boron	mg/L	D	0.196 :	-	0.19 :	-	0.205 :	-
Cadmium	mg/L	T	-	<0.0004 :	-	<0.0005 :	-	<0.0006 :
Cadmium	mg/L	D	<0.0002 :	-	<0.0004 :	-	<0.0005 :	-
Calcium	mg/L	T	-	35.1 :	-	34.7 :	-	36.1 :
Calcium	mg/L	D	33.4 :	-	34.2 :	-	34.2 :	-
Chromium	mg/L	T	-	<0.0037 :	-	<0.0017 :	-	<0.0014 :
Chromium	mg/L	D	<0.0046 :	-	<0.0037 :	-	<0.0019 :	-
Cobalt	mg/L	T	-	<0.0016 :	-	<0.0038 :	-	<0.002 :
Cobalt	mg/L	D	<0.0022 :	-	<0.0016 :	-	<0.0038 :	-
Copper	mg/L	T	-	0.0123 :	-	0.0087 :	-	0.0119 :
Copper	mg/L	D	0.0107 :	-	0.0082 :	-	0.007 :	-
Iron	mg/L	T	-	<0.356 :	-	<0.422 :	-	<0.667 :
Iron	mg/L	D	<0.0226 :	-	<0.266 :	-	<0.422 :	-
Lead	mg/L	T	-	0.0043 :	-	0.0034 :	-	<0.0019 :
Lead	mg/L	D	0.0004 :	-	0.00024 :	-	0.00031 :	-
Magnesium	mg/L	T	-	7.15 :	-	6.78 :	-	6.77 :
Magnesium	mg/L	D	6.64 :	-	6.92 :	-	6.61 :	-
Manganese	mg/L	T	-	<0.028 :	-	<0.013 :	-	<0.019 :
Manganese	mg/L	D	<0.0025 :	-	<0.028 :	-	<0.013 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.004 :	-	<0.0046 :	-	0.0035 :
Molybdenum	mg/L	D	<0.0048 :	-	<0.0048 :	-	0.0042 :	-

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-CH Sample Date: 11/8/2002 Sample ID: MW-CH-D01N-GRW GW11	MW-CH 1/17/2003 MW-CH-T01N-GRW GW11	MW-CH 1/17/2003 MW-CH-D01N-GRW GW11	MW-CH 4/1/2003 MW-CH-T01N-GRW GW11	MW-CH 4/1/2003 MW-CH-D01N-GRW GW11	MW-CH 7/9/2003 MW-CH-T01N-GRW GW11
Nickel	mg/L	T	-	<0.0015 :	-	<0.003 :	-	<0.0021 :
Nickel	mg/L	D	0.00076 J	-	<0.0015 :	-	<0.003 :	-
Potassium	mg/L	T	-	0.977 :	-	0.838 :	-	0.928 :
Potassium	mg/L	D	<1.1 :	-	0.958 :	-	0.67 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.001 :	-	<0.0008 :
Selenium	mg/L	D	<0.0004 :	-	<0.0016 :	-	0.0018 J	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0001 J
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	75. :	-	71.6 :	-	72.8 :
Sodium	mg/L	D	75. :	-	76. :	-	70.1 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0001 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.001 :	-	0.0011 :	-	0.0006 J
Vanadium	mg/L	D	0.0011 :	-	0.00081 :	-	0.00093 :	-
Zinc	mg/L	T	-	1.1 :	-	1.09 J	-	0.743 :
Zinc	mg/L	D	0.616 :	-	1. :	-	0.78 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Butanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Hexanone	mg/L	T	-	<0.01 :	-	<0.01 J	-	-
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-CH 11/8/2002 MW-CH-D01N-GRW GW11		MW-CH 1/17/2003 MW-CH-T01N-GRW GW11		MW-CH 1/17/2003 MW-CH-D01N-GRW GW11		MW-CH 4/1/2003 MW-CH-T01N-GRW GW11		MW-CH 4/1/2003 MW-CH-D01N-GRW GW11		MW-CH 7/9/2003 MW-CH-T01N-GRW GW11	
Acetone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bromodichloromethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bromoform	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bromomethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Carbon disulfide	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Carbon tetrachloride	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Chlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Chloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Chloroform	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Chloromethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
cis-1,2-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
cis-1,3-Dichloropropene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dibromochloromethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dichlorodifluoromethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Ethylbenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Methylene chloride	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Styrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Tetrachloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Toluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Total Xylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
trans-1,2-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
trans-1,3-Dichloropropene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Trichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Trichlorofluoromethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Vinyl chloride	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2,4,5-Trichlorophenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		-	
2,4,6-Trichlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2,4-Dichlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2,4-Dimethylphenol	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
2,4-Dinitrophenol	mg/L	T	-		<0.026	:	-		<0.026	J	-		-	
2,4-Dinitrotoluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-CH 11/8/2002 MW-CH-D01N-GRW GW11		MW-CH 1/17/2003 MW-CH-T01N-GRW GW11		MW-CH 1/17/2003 MW-CH-D01N-GRW GW11		MW-CH 4/1/2003 MW-CH-T01N-GRW GW11		MW-CH 4/1/2003 MW-CH-D01N-GRW GW11		MW-CH 7/9/2003 MW-CH-T01N-GRW GW11	
2,6-Dinitrotoluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Chloronaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Chlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Methylnaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		-	
2-Nitrophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
3,3-Dichlorobenzidine	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
3-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	J	-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		-	
4-Bromophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Chloro-3-methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Chloroaniline	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		-	
4-Nitrophenol	mg/L	T	-		<0.026	:	-		<0.026	J	-		-	
Acenaphthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Acenaphthylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzaldehyde	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzo(a)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzo(a)pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzo(b)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzo(g,h,i)perylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Benzo(k)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bis(2-chloroethyl)ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	-		<0.01	:	-		0.001	J	-		-	
Butyl benzyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Carbazole	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Chrysene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dibenz(a,h)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dibenzofuran	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-CH 11/8/2002 MW-CH-D01N-GRW GW11	MW-CH 1/17/2003 MW-CH-T01N-GRW GW11	MW-CH 1/17/2003 MW-CH-D01N-GRW GW11	MW-CH 4/1/2003 MW-CH-T01N-GRW GW11	MW-CH 4/1/2003 MW-CH-D01N-GRW GW11	MW-CH 7/9/2003 MW-CH-T01N-GRW GW11
Dichlorodiisopropyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Di-n-Butyl phthalate	mg/L	T	-	<0.01 :	-	0.0005 J	-	-
Di-n-Octyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Fluorene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isophorone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Naphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	-	<0.026 :	-	<0.026 J	-	-
Phenanthrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Phenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-CH 7/9/2003 MW-CH-D01N-GRW		MW-CH 10/15/2003 MW-CH-T01N-GRW		MW-CH 10/15/2003 MW-CH-D01N-GRW		MW-CH 1/7/2004 MW-CH-T01N-GRW		MW-CH 1/7/2004 MW-CH-D01N-GRW		MW-CH 4/15/2004 MW-CH-T01N-GRW	
			GW11		GW11		GW11		GW11		GW11		GW11	
Field Measurements														
DO	mg/L	T	-		9.	:	-		5.44	:	-		8.5	:
Eh	millivolts	T	-		11.7	:	-		219.3	:	-		217.7	:
pH	SU	T	-		7.56	:	-		7.8	J	-		6.6	:
Specific Conductance	uS/cm	T	-		508.	:	-		514.	:	-		491.	:
Temperature	Celsius	T	-		15.93	:	-		8.14	:	-		12.11	:
Turbidity	NTU	T	-		0.9	:	-		14.4	:	-		30.2	:
General Chemistry														
Ammonia	mg/L	T	-		<0.047	J	-		<0.083	J	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		233.	:	-		230.	J	-		229.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<1.	:	-		1.2	:	-		<1.4	:
Fluoride	mg/L	T	-		0.56	:	-		0.56	:	-		0.6	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.44	J	-		<0.46	J	-		0.64	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.015	J	-		<0.01	J	-		<0.01	:
Phosphorus	mg/L	T	-		0.047	:	-		<0.027	:	-		0.021	:
Sulfate	mg/L	T	-		40.3	J	-		45.6	:	-		45.1	:
Total Alkalinity	mg/L	T	-		233.	:	-		230.	J	-		229.	:
Total Dissolved Solids	mg/L	T	-		332.	:	-		312.	:	-		314.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	:	-		<2.1	J
Total Suspended Solids	mg/L	T	-		<0.6	:	-		3.8	:	-		8.4	J
Laboratory Parameters														
pH	SU	T	-		7.56	:	-		7.8	J	-		6.6	:
Specific Conductance	umhos/cm	T	-		472.	J	-		483.	J	-		449.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		123.	:	-		114.	:	-		118.	:
Hardness	mg/L	D	119.	:	-		121.	:	-		112.	:	-	
Metals														

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-CH Sample Date: 7/9/2003 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 10/15/2003 Sample ID: MW-CH-T01N-GRW GW11		Site ID: MW-CH Sample Date: 10/15/2003 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 1/7/2004 Sample ID: MW-CH-T01N-GRW GW11		Site ID: MW-CH Sample Date: 1/7/2004 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 4/15/2004 Sample ID: MW-CH-T01N-GRW GW11	
Aluminum	mg/L	T	-		<0.307	:	-		<0.514	:	-		<0.201	J
Aluminum	mg/L	D	<0.631	:	-		<0.307	:	-		<0.514	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.058	:	-		0.0575	:	-		0.0592	:
Barium	mg/L	D	0.0568	:	-		0.0556	:	-		0.0522	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.202	:	-		0.203	:	-		0.193	:
Boron	mg/L	D	0.202	:	-		0.196	:	-		0.191	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0006	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		37.4	:	-		34.5	:	-		36.1	:
Calcium	mg/L	D	36.3	:	-		37.	:	-		33.8	:	-	
Chromium	mg/L	T	-		<0.0013	J	-		<0.0015	J	-		<0.00082	:
Chromium	mg/L	D	<0.0014	:	-		<0.0013	J	-		<0.0015	J	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0023	:	-		<0.0016	:
Cobalt	mg/L	D	<0.002	:	-		0.0038	:	-		<0.0023	:	-	
Copper	mg/L	T	-		0.0094	:	-		0.0234	:	-		0.0336	:
Copper	mg/L	D	0.0093	:	-		0.0083	:	-		0.0072	:	-	
Iron	mg/L	T	-		<0.3	:	-		1.11	:	-		<0.293	J
Iron	mg/L	D	<0.667	:	-		<0.3	:	-		<0.373	:	-	
Lead	mg/L	T	-		0.0024	:	-		0.0154	:	-		0.0138	:
Lead	mg/L	D	<0.0014	:	-		0.00042	:	-		<0.0003	:	-	
Magnesium	mg/L	T	-		7.16	:	-		6.77	:	-		6.73	:
Magnesium	mg/L	D	6.81	:	-		7.01	:	-		6.6	:	-	
Manganese	mg/L	T	-		<0.01	:	-		<0.015	:	-		<0.014	J
Manganese	mg/L	D	<0.019	:	-		<0.0114	:	-		<0.015	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0056	:	-		<0.0024	:	-		<0.0038	:
Molybdenum	mg/L	D	0.003	:	-		0.0051	:	-		0.0032	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-CH Sample Date: 7/9/2003 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 10/15/2003 Sample ID: MW-CH-T01N-GRW GW11		Site ID: MW-CH Sample Date: 10/15/2003 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 1/7/2004 Sample ID: MW-CH-T01N-GRW GW11		Site ID: MW-CH Sample Date: 1/7/2004 Sample ID: MW-CH-D01N-GRW GW11		Site ID: MW-CH Sample Date: 4/15/2004 Sample ID: MW-CH-T01N-GRW GW11	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0024	J	-		<0.0015	J
Nickel	mg/L	D	<0.0021	:	-		<0.0028	:	-		<0.0024	J	-	
Potassium	mg/L	T	-		0.861	:	-		1.08	:	-		1.01	:
Potassium	mg/L	D	0.918	:	-		0.805	:	-		0.938	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0006	J	-		<0.0014	:
Selenium	mg/L	D	<0.0016	J	-		<0.0006	:	-		0.0008	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		71.5	:	-		71.6	:	-		<82.5	J
Sodium	mg/L	D	73.3	:	-		71.1	:	-		69.1	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.00022	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0009	:	-		0.001	:	-		0.0014	:
Vanadium	mg/L	D	0.0011	J	-		0.00092	:	-		0.00059	:	-	
Zinc	mg/L	T	-		0.829	:	-		1.38	:	-		1.19	:
Zinc	mg/L	D	0.732	:	-		0.806	:	-		1.2	:	-	

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Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-CH 4/15/2004 MW-CH-D01N-GRW GW11		TPZ-7L 5/8/2003 TPZ-7L-T01N-GRW GW13		TPZ-7L 5/8/2003 TPZ-7L-D01N-GRW GW13		----	----	----
Field Measurements											
DO	mg/L	T	-		0.27	:	-		-	-	-
Eh	millivolts	T	-		-524.8	:	-		-	-	-
pH	SU	T	-		8.44	:	-		-	-	-
Specific Conductance	uS/cm	T	-		297.	:	-		-	-	-
Temperature	Celsius	T	-		12.59	:	-		-	-	-
Turbidity	NTU	T	-		104.3	:	-		-	-	-
General Chemistry											
Ammonia	mg/L	T	-		<0.058	:	-		-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-		95.6	:	-		-	-	-
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-	-	-
Chloride	mg/L	T	-		<1.5	:	-		-	-	-
Fluoride	mg/L	T	-		0.76	:	-		-	-	-
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-	-	-
Nitrate	mg/L	T	-		<0.4	:	-		-	-	-
Nitrite	mg/L	T	-		0.026	J	-		-	-	-
Phosphate, Ortho As P	mg/L	T	-		0.022	J	-		-	-	-
Phosphorus	mg/L	T	-		0.63	:	-		-	-	-
Sulfate	mg/L	T	-		82.	:	-		-	-	-
Total Alkalinity	mg/L	T	-		95.6	:	-		-	-	-
Total Dissolved Solids	mg/L	T	-		204.	:	-		-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-	-	-
Total Organic Carbon	mg/L	T	-		1.7	:	-		-	-	-
Total Suspended Solids	mg/L	T	-		370.	:	-		-	-	-
Laboratory Parameters											
pH	SU	T	-		8.44	:	-		-	-	-
Specific Conductance	umhos/cm	T	-		284.	J	-		-	-	-
Inorganics											
Cyanide	mg/L	T	-		<0.01	J	-		-	-	-
Physical Properties											
Hardness	mg/L	T	-		94.1	:	-		-	-	-
Hardness	mg/L	D	124.	:	-		71.3	:	-	-	-
Metals											

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T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-CH 4/15/2004 MW-CH-D01N-GRW GW11		TPZ-7L 5/8/2003 TPZ-7L-T01N-GRW GW13		TPZ-7L 5/8/2003 TPZ-7L-D01N-GRW GW13		----	----	----
Aluminum	mg/L	T	-		8.9	:	-		-	-	-
Aluminum	mg/L	D	<0.201	J	-		<0.426	:	-	-	-
Antimony	mg/L	T	-		<0.0006	:	-		-	-	-
Antimony	mg/L	D	<0.001	:	-		<0.0006	:	-	-	-
Arsenic	mg/L	T	-		0.0023	:	-		-	-	-
Arsenic	mg/L	D	<0.0004	:	-		0.00063	:	-	-	-
Barium	mg/L	T	-		0.147	:	-		-	-	-
Barium	mg/L	D	0.058	:	-		0.0358	:	-	-	-
Beryllium	mg/L	T	-		<0.00037	:	-		-	-	-
Beryllium	mg/L	D	<0.0003	J	-		<0.0003	:	-	-	-
Boron	mg/L	T	-		0.0192	:	-		-	-	-
Boron	mg/L	D	0.197	:	-		0.0161	:	-	-	-
Cadmium	mg/L	T	-		<0.0005	:	-		-	-	-
Cadmium	mg/L	D	<0.0003	:	-		<0.0005	:	-	-	-
Calcium	mg/L	T	-		29.6	:	-		-	-	-
Calcium	mg/L	D	37.5	:	-		24.6	:	-	-	-
Chromium	mg/L	T	-		0.0285	:	-		-	-	-
Chromium	mg/L	D	<0.0006	:	-		<0.001	:	-	-	-
Cobalt	mg/L	T	-		0.0056	:	-		-	-	-
Cobalt	mg/L	D	<0.0016	:	-		<0.0038	:	-	-	-
Copper	mg/L	T	-		0.0144	:	-		-	-	-
Copper	mg/L	D	0.0061	:	-		<0.0015	:	-	-	-
Iron	mg/L	T	-		8.82	:	-		-	-	-
Iron	mg/L	D	<0.293	J	-		<0.422	J	-	-	-
Lead	mg/L	T	-		0.0117	:	-		-	-	-
Lead	mg/L	D	<0.0008	:	-		<0.0002	J	-	-	-
Magnesium	mg/L	T	-		4.91	:	-		-	-	-
Magnesium	mg/L	D	7.33	:	-		<3.52	:	-	-	-
Manganese	mg/L	T	-		0.514	:	-		-	-	-
Manganese	mg/L	D	<0.014	J	-		0.129	:	-	-	-
Mercury	mg/L	T	-		<0.0001	:	-		-	-	-
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-	-	-
Molybdenum	mg/L	T	-		0.0677	J	-		-	-	-
Molybdenum	mg/L	D	0.0043	:	-		0.092	J	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6b
Groundwater - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		MW-CH / 4/15/2004 / MW-CH-D01N-GRW / GW11		TPZ-7L / 5/8/2003 / TPZ-7L-T01N-GRW / GW13		TPZ-7L / 5/8/2003 / TPZ-7L-D01N-GRW / GW13		----	----	----			
Nickel	mg/L	T	-		0.0136	:	-		-		-		-
Nickel	mg/L	D	<0.0015	J	-		<0.003	:	-		-		-
Potassium	mg/L	T	-		3.46	:	-		-		-		-
Potassium	mg/L	D	1.03	:	-		1.65	:	-		-		-
Selenium	mg/L	T	-		<0.001	:	-		-		-		-
Selenium	mg/L	D	<0.0014	:	-		<0.001	:	-		-		-
Silver	mg/L	T	-		<0.0002	:	-		-		-		-
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		-		-
Sodium	mg/L	T	-		38.7	:	-		-		-		-
Sodium	mg/L	D	<66.2	J	-		36.4	:	-		-		-
Thallium	mg/L	T	-		<0.0002	:	-		-		-		-
Thallium	mg/L	D	<0.00022	:	-		<0.0002	:	-		-		-
Vanadium	mg/L	T	-		0.021	:	-		-		-		-
Vanadium	mg/L	D	0.00095	:	-		0.00076	:	-		-		-
Zinc	mg/L	T	-		<0.039	:	-		-		-		-
Zinc	mg/L	D	1.06	:	-		<0.039	:	-		-		-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			EW-1 11/7/2002 EW-1-T01N-GRW		EW-1 11/7/2002 EW-1-D01N-GRW		EW-1 1/8/2003 EW-1-T01N-GRW		EW-1 1/8/2003 EW-1-D01N-GRW		EW-1 4/1/2003 EW-1-T01N-GRW		EW-1 4/1/2003 EW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.67	:	-		7.	:	-		6.09	:	-	
Eh	millivolts	T	56.	:	-		293.	:	-		306.	:	-	
pH	SU	T	6.95	:	-		7.03	:	-		7.5	:	-	
Specific Conductance	uS/cm	T	719.	:	-		1374.	:	-		710.	:	-	
Temperature	Celsius	T	13.05	:	-		12.6	:	-		13.63	:	-	
Turbidity	NTU	T	2.6	:	-		29.9	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.046	:	-		<0.093	:	-		<0.05	:	-	
Bicarbonate (as CaCO3)	mg/L	T	158.	:	-		148.	:	-		156.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.7	:	-		11.3	:	-		11.3	:	-	
Fluoride	mg/L	T	0.37	:	-		0.38	:	-		0.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.58	J	-		<0.79	J	-		<0.76	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.012	J	-		<0.19	J	-	
Phosphorus	mg/L	T	0.012	:	-		<0.01	:	-		0.013	J	-	
Sulfate	mg/L	T	255.	:	-		207.	J	-		199.	J	-	
Total Alkalinity	mg/L	T	158.	:	-		148.	:	-		156.	:	-	
Total Dissolved Solids	mg/L	T	491.	:	-		<505.	:	-		482.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	2.3	:	-		<0.5	:	-		<4.1	:	-	
Laboratory Parameters														
pH	SU	T	6.95	:	-		7.03	:	-		7.5	:	-	
Specific Conductance	umhos/cm	T	-		-		-		-		641.	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	320.	:	-		324.	:	-		345.	:	-	
Hardness	mg/L	D	-		323.	:	-		327.	:	-		356.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-1 11/7/2002 EW-1-T01N-GRW GW13		EW-1 11/7/2002 EW-1-D01N-GRW GW13		EW-1 1/8/2003 EW-1-T01N-GRW GW13		EW-1 1/8/2003 EW-1-D01N-GRW GW13		EW-1 4/1/2003 EW-1-T01N-GRW GW13		EW-1 4/1/2003 EW-1-D01N-GRW GW13	
Aluminum	mg/L	T	<0.0036	:	-		<0.142	J	-		<0.503	:	-	
Aluminum	mg/L	D	-		<0.0073	:	-		<0.142	J	-		<0.503	:
Antimony	mg/L	T	<0.00022	:	-		<0.0006	:	-		<0.0006	J	-	
Antimony	mg/L	D	-		<0.0002	:	-		<0.0006	:	-		<0.0006	J
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0245	:	-		0.0265	:	-		0.0265	:	-	
Barium	mg/L	D	-		0.025	:	-		0.0267	:	-		0.0283	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		0.00032	J	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0003	J
Boron	mg/L	T	0.0182	:	-		<0.0155	:	-		0.0176	:	-	
Boron	mg/L	D	-		0.0169	:	-		<0.0174	:	-		0.0212	:
Cadmium	mg/L	T	<0.0001	:	-		<0.0004	:	-		<0.0005	J	-	
Cadmium	mg/L	D	-		<0.0001	:	-		<0.0004	:	-		<0.0005	J
Calcium	mg/L	T	96.4	:	-		97.8	:	-		103.	:	-	
Calcium	mg/L	D	-		97.3	:	-		98.8	:	-		107.	:
Chromium	mg/L	T	<0.0046	:	-		<0.0037	:	-		<0.001	:	-	
Chromium	mg/L	D	-		<0.0046	:	-		<0.0037	:	-		<0.001	:
Chromium, Hexavalent	mg/L	D	<0.01	:	-		-		-		-		-	
Cobalt	mg/L	T	<0.0022	:	-		<0.0016	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Copper	mg/L	T	0.00046	:	-		<0.0019	:	-		<0.0015	:	-	
Copper	mg/L	D	-		<0.00031	:	-		<0.0017	:	-		<0.0015	:
Iron	mg/L	T	<0.0314	:	-		<0.489	:	-		<0.311	:	-	
Iron	mg/L	D	-		<0.0226	:	-		<0.489	:	-		<0.379	:
Lead	mg/L	T	0.00012	:	-		0.0003	:	-		0.00044	:	-	
Lead	mg/L	D	-		0.00014	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	19.4	:	-		19.4	:	-		21.1	:	-	
Magnesium	mg/L	D	-		19.5	:	-		19.6	:	-		21.7	:
Manganese	mg/L	T	<0.0025	:	-		<0.005	:	-		<0.01	:	-	
Manganese	mg/L	D	-		<0.0025	:	-		<0.005	:	-		<0.01	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0135	J	-		0.0132	:	-		0.0125	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-1 11/7/2002 EW-1-T01N-GRW GW13		EW-1 11/7/2002 EW-1-D01N-GRW GW13		EW-1 1/8/2003 EW-1-T01N-GRW GW13		EW-1 1/8/2003 EW-1-D01N-GRW GW13		EW-1 4/1/2003 EW-1-T01N-GRW GW13		EW-1 4/1/2003 EW-1-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0134	:	-		0.011	J	-		0.0121	:
Nickel	mg/L	T	<0.0002	J	-		<0.0015	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0002	J	-		<0.0015	:	-		<0.003	:
Potassium	mg/L	T	2.87	:	-		2.93	:	-		2.69	:	-	
Potassium	mg/L	D	-		2.87	:	-		2.94	:	-		2.94	:
Selenium	mg/L	T	0.00042	:	-		<0.0016	:	-		<0.001	:	-	
Selenium	mg/L	D	-		0.00062	:	-		<0.0016	:	-		<0.001	:
Silver	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	25.4	:	-		25.9	:	-		25.6	:	-	
Sodium	mg/L	D	-		25.6	:	-		25.	:	-		26.4	:
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0028	:	-		0.0027	:	-		0.003	:	-	
Vanadium	mg/L	D	-		0.0027	:	-		0.0027	:	-		0.0031	:
Zinc	mg/L	T	<0.0069	:	-		<0.039	:	-		<0.0679	:	-	
Zinc	mg/L	D	-		<0.0069	:	-		<0.039	:	-		<0.0929	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			EW-1 7/9/2003 EW-1-T01N-GRW		EW-1 7/9/2003 EW-1-D01N-GRW		EW-1 10/15/2003 EW-1-T01N-GRW		EW-1 10/15/2003 EW-1-D01N-GRW		EW-1 1/8/2004 EW-1-T01N-GRW		EW-1 1/8/2004 EW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.54	:	-		7.46	:	-		6.01	:	-	
Eh	millivolts	T	308.8	:	-		0.1	:	-		206.7	:	-	
pH	SU	T	7.7	J	-		7.71	:	-		7.27	:	-	
Specific Conductance	uS/cm	T	856.	:	-		773.	:	-		685.	:	-	
Temperature	Celsius	T	14.89	:	-		12.84	:	-		10.8	:	-	
Turbidity	NTU	T	0.7	:	-		0.	:	-		1.2	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.077	J	-		<0.095	J	-		<0.066	J	-	
Bicarbonate (as CaCO3)	mg/L	T	155.	:	-		161.	:	-		157.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.	:	-		12.	:	-		11.7	:	-	
Fluoride	mg/L	T	0.38	:	-		0.36	:	-		0.39	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.76	J	-		0.68	:	-		0.65	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.039	J	-		<0.011	:	-		<0.029	J	-	
Phosphorus	mg/L	T	0.01	J	-		<0.01	:	-		<0.01	:	-	
Sulfate	mg/L	T	311.	J	-		<227.	J	-		199.	:	-	
Total Alkalinity	mg/L	T	155.	:	-		161.	:	-		157.	:	-	
Total Dissolved Solids	mg/L	T	570.	:	-		666.	:	-		542.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	J	-		<1.3	:	-	
Total Suspended Solids	mg/L	T	<0.6	:	-		<0.56	:	-		<0.5	:	-	
Laboratory Parameters														
pH	SU	T	7.7	J	-		7.71	:	-		7.27	:	-	
Specific Conductance	umhos/cm	T	780.	J	-		678.	J	-		654.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	409.	:	-		373.	:	-		314.	:	-	
Hardness	mg/L	D	-		398.	:	-		373.	:	-		317.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			EW-1 7/9/2003 EW-1-T01N-GRW		EW-1 7/9/2003 EW-1-D01N-GRW		EW-1 10/15/2003 EW-1-T01N-GRW		EW-1 10/15/2003 EW-1-D01N-GRW		EW-1 1/8/2004 EW-1-T01N-GRW		EW-1 1/8/2004 EW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.236	J	-		<0.221	:	-		<0.514	:	-	
Aluminum	mg/L	D	-		1.68	J	-		<0.221	:	-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0326	:	-		0.0273	:	-		0.0269	:	-	
Barium	mg/L	D	-		0.0301	:	-		0.027	:	-		0.0274	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0003	:
Boron	mg/L	T	0.0172	:	-		0.0166	:	-		0.0242	:	-	
Boron	mg/L	D	-		0.0157	:	-		0.0166	:	-		0.021	:
Cadmium	mg/L	T	<0.0006	:	-		<0.0005	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0006	:	-		<0.0005	:	-		<0.0007	:
Calcium	mg/L	T	122.	:	-		112.	:	-		93.8	:	-	
Calcium	mg/L	D	-		119.	:	-		112.	:	-		94.7	:
Chromium	mg/L	T	<0.0014	:	-		0.0011	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		<0.0014	:	-		<0.0011	J	-		<0.0057	:
Cobalt	mg/L	T	<0.002	:	-		<0.0029	J	-		<0.0023	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.0029	:	-		0.0032	:
Copper	mg/L	T	0.0148	:	-		<0.0022	:	-		<0.003	:	-	
Copper	mg/L	D	-		<0.0024	:	-		<0.0022	:	-		<0.003	:
Iron	mg/L	T	<0.333	J	-		<0.278	:	-		<0.373	:	-	
Iron	mg/L	D	-		1.84	J	-		<0.278	:	-		<0.373	:
Lead	mg/L	T	<0.0012	:	-		<0.0004	:	-		0.00035	:	-	
Lead	mg/L	D	-		<0.00032	:	-		<0.0004	:	-		<0.00025	:
Magnesium	mg/L	T	25.	:	-		22.6	:	-		19.4	:	-	
Magnesium	mg/L	D	-		24.4	:	-		22.6	:	-		19.5	:
Manganese	mg/L	T	<0.007	:	-		<0.012	:	-		<0.015	:	-	
Manganese	mg/L	D	-		<0.007	:	-		<0.012	:	-		<0.015	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0126	:	-		0.0126	:	-		0.0159	:	-	
Molybdenum	mg/L	D	-		0.012	:	-		0.0131	:	-		0.0148	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-1 7/9/2003 EW-1-T01N-GRW GW13		EW-1 7/9/2003 EW-1-D01N-GRW GW13		EW-1 10/15/2003 EW-1-T01N-GRW GW13		EW-1 10/15/2003 EW-1-D01N-GRW GW13		EW-1 1/8/2004 EW-1-T01N-GRW GW13		EW-1 1/8/2004 EW-1-D01N-GRW GW13	
Nickel	mg/L	T	<0.0021	:	-		<0.0024	:	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.0021	:	-		<0.0024	:	-		<0.0024	:
Potassium	mg/L	T	1.9	J	-		2.64	:	-		2.91	:	-	
Potassium	mg/L	D	-		1.02	J	-		2.62	:	-		2.87	:
Selenium	mg/L	T	<0.0016	:	-		<0.0006	:	-		<0.0013	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		0.00073	:	-		<0.0008	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<30.2	:	-		27.3	:	-		22.9	:	-	
Sodium	mg/L	D	-		<33.2	:	-		27.5	:	-		22.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0029	:	-		0.0028	:	-		0.0028	:	-	
Vanadium	mg/L	D	-		0.0031	:	-		0.0027	:	-		0.0026	:
Zinc	mg/L	T	<0.0481	:	-		<0.023	:	-		<0.026	:	-	
Zinc	mg/L	D	-		0.0663	:	-		<0.023	:	-		<0.026	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			EW-1 4/13/2004 EW-1-T01N-GRW		EW-1 4/13/2004 EW-1-D01N-GRW		MW-1 11/1/2002 MW-1-T01N-GRW		MW-1 11/1/2002 MW-1-D01N-GRW		MW-1 12/7/2002 MW-1-T01N-GRW		MW-1 12/7/2002 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	7.07	:	-		3.98	:	-		4.09	:	-	
Eh	millivolts	T	146.7	:	-		105.7	:	-		67.3	:	-	
pH	SU	T	7.6	J	-		7.21	:	-		7.2	:	-	
Specific Conductance	uS/cm	T	684.	:	-		1368.	:	-		1645.	:	-	
Temperature	Celsius	T	13.21	:	-		11.25	:	-		11.16	:	-	
Turbidity	NTU	T	0.	:	-		9.7	:	-		76.2	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.26	:	-		<0.05	:	-	
Bicarbonate (as CaCO3)	mg/L	T	154.	:	-		156.	:	-		152.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.5	:	-		13.3	:	-		12.	:	-	
Fluoride	mg/L	T	0.41	:	-		0.56	:	-		0.31	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.74	J	-		1.2	J	-		1.	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.013	J	-		0.016	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.01	:	-		0.054	:	-		0.053	J	-	
Sulfate	mg/L	T	201.	:	-		585.	:	-		663.	:	-	
Total Alkalinity	mg/L	T	154.	:	-		156.	:	-		152.	:	-	
Total Dissolved Solids	mg/L	T	474.	:	-		1040.	:	-		1200.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	J	-	
Total Organic Carbon	mg/L	T	<1.7	J	-		1.2	:	-		<1.	:	-	
Total Suspended Solids	mg/L	T	<0.6	J	-		2.2	:	-		8.2	J	-	
Laboratory Parameters														
pH	SU	T	7.6	J	-		7.21	:	-		7.2	:	-	
Specific Conductance	umhos/cm	T	611.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	337.	:	-		675.	:	-		771.	:	-	
Hardness	mg/L	D	-		333.	:	-		689.	:	-		765.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-1 4/13/2004 EW-1-T01N-GRW GW13		EW-1 4/13/2004 EW-1-D01N-GRW GW13		MW-1 11/1/2002 MW-1-T01N-GRW GW13		MW-1 11/1/2002 MW-1-D01N-GRW GW13		MW-1 12/7/2002 MW-1-T01N-GRW GW13		MW-1 12/7/2002 MW-1-D01N-GRW GW13	
Aluminum	mg/L	T	<0.176	:	-		<0.0056	:	-		<0.0106	:	-	
Aluminum	mg/L	D	-		<0.176	:	-		<0.0042	:	-		<0.0106	:
Antimony	mg/L	T	<0.0008	:	-		<0.0002	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		<0.0006	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Barium	mg/L	T	0.0336	:	-		0.0245	:	-		0.0301	:	-	
Barium	mg/L	D	-		0.031	:	-		0.0244	:	-		0.0277	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0161	:	-		0.032	:	-		0.0334	:	-	
Boron	mg/L	D	-		0.0165	:	-		0.033	:	-		0.0332	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0001	:	-		<0.0002	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0001	:	-		<0.0002	:
Calcium	mg/L	T	101.	:	-		204.	:	-		232.	:	-	
Calcium	mg/L	D	-		99.9	:	-		208.	:	-		231.	:
Chromium	mg/L	T	<0.001	:	-		<0.0046	:	-		<0.0016	J	-	
Chromium	mg/L	D	-		0.0014	:	-		<0.0046	:	-		<0.0016	J
Chromium, Hexavalent	mg/L	D	-		-		<0.01	:	-		-		-	
Cobalt	mg/L	T	<0.0011	:	-		<0.0022	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0018	:	-		<0.0022	:	-		<0.0016	:
Copper	mg/L	T	<0.0021	:	-		<0.0003	J	-		<0.00072	:	-	
Copper	mg/L	D	-		0.001	:	-		<0.0029	J	-		<0.0006	:
Iron	mg/L	T	<0.332	J	-		1.2	:	-		3.17	:	-	
Iron	mg/L	D	-		<0.192	:	-		0.135	:	-		<0.0773	:
Lead	mg/L	T	<0.0008	:	-		0.00033	:	-		0.00052	:	-	
Lead	mg/L	D	-		<0.0008	:	-		<0.0001	:	-		<0.0002	:
Magnesium	mg/L	T	20.6	:	-		40.	:	-		46.4	:	-	
Magnesium	mg/L	D	-		20.4	:	-		40.9	:	-		45.9	:
Manganese	mg/L	T	<0.019	:	-		0.0333	:	-		0.115	J	-	
Manganese	mg/L	D	-		<0.019	:	-		0.019	:	-		0.0168	J
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0143	:	-		0.0362	:	-		0.0381	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-1 4/13/2004 EW-1-T01N-GRW GW13		EW-1 4/13/2004 EW-1-D01N-GRW GW13		MW-1 11/1/2002 MW-1-T01N-GRW GW13		MW-1 11/1/2002 MW-1-D01N-GRW GW13		MW-1 12/7/2002 MW-1-T01N-GRW GW13		MW-1 12/7/2002 MW-1-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0147	:	-		0.0382	:	-		0.0376	:
Nickel	mg/L	T	<0.0014	:	-		<0.0002	J	-		0.0014	:	-	
Nickel	mg/L	D	-		<0.0014	:	-		<0.0002	J	-		0.0012	:
Potassium	mg/L	T	2.84	:	-		3.06	:	-		3.66	:	-	
Potassium	mg/L	D	-		2.81	:	-		3.15	:	-		3.6	:
Selenium	mg/L	T	<0.0014	:	-		0.0012	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		0.0013	:	-		<0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Sodium	mg/L	T	25.2	:	-		51.6	J	-		54.4	:	-	
Sodium	mg/L	D	-		24.8	:	-		52.4	J	-		53.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Vanadium	mg/L	T	0.0027	:	-		0.0014	:	-		0.0021	:	-	
Vanadium	mg/L	D	-		0.0027	:	-		0.00089	:	-		0.0012	:
Zinc	mg/L	T	<0.0483	:	-		<0.0069	:	-		<0.0039	J	-	
Zinc	mg/L	D	-		<0.019	:	-		<0.0069	:	-		<0.0039	J

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
			Sample Date	1/7/2003	1/7/2003	2/4/2003	2/4/2003	3/2/2003	3/2/2003
			Sample ID	MW-1-T01N-GRW	MW-1-D01N-GRW	MW-1-T01N-GRW	MW-1-D01N-GRW	MW-1-T01N-GRW	MW-1-D01N-GRW
			Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		4.35 :	-	2.99 :	-	4.68 :	-
Eh	millivolts	T		123.7 :	-	99.9 :	-	104.2 :	-
pH	SU	T		7.18 :	-	7.16 :	-	7.12 :	-
Specific Conductance	uS/cm	T		1589. :	-	193. :	-	1610. :	-
Temperature	Celsius	T		11.9 :	-	10.78 :	-	11.05 :	-
Turbidity	NTU	T		48.3 :	-	68. :	-	52.6 :	-
General Chemistry									
Ammonia	mg/L	T		<0.11 :	-	<0.084 :	-	<0.043 J	-
Bicarbonate (as CaCO3)	mg/L	T		214. :	-	150. :	-	151. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		13.6 :	-	14.6 :	-	15.9 :	-
Fluoride	mg/L	T		0.34 :	-	0.31 :	-	0.31 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.92 J	-	0.83 J	-	<0.83 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		28.2 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.061 J	-	0.062 :	-	<0.061 J	-
Sulfate	mg/L	T		744. J	-	814. J	-	847. :	-
Total Alkalinity	mg/L	T		214. :	-	150. :	-	151. :	-
Total Dissolved Solids	mg/L	T		1340. :	-	1410. :	-	1460. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.41 :	-	0.26 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		1.2 :	-	1.7 :	-	<1.6 J	-
Total Suspended Solids	mg/L	T		11.4 :	-	9.9 :	-	14.9 J	-
Laboratory Parameters									
pH	SU	T		7.18 :	-	7.16 :	-	7.12 :	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		912. :	-	894. :	-	1010. :	-
Hardness	mg/L	D		-	890. :	-	911. :	-	976. :
Metals									
Aluminum	mg/L	T		<0.142 :	-	<0.226 :	-	<0.142 :	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 1/7/2003 MW-1-T01N-GRW		MW-1 1/7/2003 MW-1-D01N-GRW		MW-1 2/4/2003 MW-1-T01N-GRW		MW-1 2/4/2003 MW-1-D01N-GRW		MW-1 3/2/2003 MW-1-T01N-GRW		MW-1 3/2/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	D	-		<0.142	:	-		<0.226	:	-		<0.142	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.0014	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0326	:	-		0.0308	:	-		0.034	:	-	
Barium	mg/L	D	-		0.0298	:	-		0.0297	:	-		0.0294	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	<0.0363	:	-		0.0314	:	-		0.0332	:	-	
Boron	mg/L	D	-		<0.0348	:	-		0.0313	:	-		0.0329	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Calcium	mg/L	T	275.	:	-		270.	:	-		301.	J	-	
Calcium	mg/L	D	-		269.	:	-		275.	:	-		292.	J
Chromium	mg/L	T	<0.0037	:	-		<0.0037	:	-		<0.0037	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.0037	:	-		<0.0037	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0016	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0016	:	-		<0.0016	:
Copper	mg/L	T	<0.0017	:	-		<0.0017	:	-		<0.0017	J	-	
Copper	mg/L	D	-		<0.0028	:	-		<0.002	:	-		<0.0017	J
Iron	mg/L	T	3.43	:	-		2.14	:	-		5.45	:	-	
Iron	mg/L	D	-		<0.489	:	-		<0.266	:	-		<0.489	J
Lead	mg/L	T	0.00045	:	-		0.00023	:	-		0.0011	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	54.4	:	-		53.6	:	-		61.8	:	-	
Magnesium	mg/L	D	-		53.2	:	-		54.7	:	-		59.9	:
Manganese	mg/L	T	0.121	:	-		0.0704	J	-		0.146	J	-	
Manganese	mg/L	D	-		<0.0182	:	-		0.0318	:	-		0.0191	J
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0352	:	-		0.0334	:	-		0.0364	:	-	
Molybdenum	mg/L	D	-		0.0346	:	-		0.0355	:	-		0.0334	:
Nickel	mg/L	T	<0.0015	:	-		<0.0015	:	-		<0.0015	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 1/7/2003 MW-1-T01N-GRW		MW-1 1/7/2003 MW-1-D01N-GRW		MW-1 2/4/2003 MW-1-T01N-GRW		MW-1 2/4/2003 MW-1-D01N-GRW		MW-1 3/2/2003 MW-1-T01N-GRW		MW-1 3/2/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	D	-		<0.0015	:	-		<0.0015	:	-		<0.0015	:
Potassium	mg/L	T	3.38	:	-		3.5	:	-		<3.86	:	-	
Potassium	mg/L	D	-		3.29	:	-		3.51	:	-		<3.73	:
Selenium	mg/L	T	<0.0016	:	-		<0.0016	:	-		<0.0016	J	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.0016	:	-		<0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	57.2	:	-		59.6	:	-		67.3	:	-	
Sodium	mg/L	D	-		55.6	:	-		57.8	:	-		63.2	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0022	:	-		0.0019	:	-		0.0029	:	-	
Vanadium	mg/L	D	-		0.001	:	-		0.00098	:	-		0.00078	:
Zinc	mg/L	T	<0.039	:	-		<0.0281	:	-		<0.039	J	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.028	:	-		<0.039	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 4/2/2003 MW-1-T01N-GRW		MW-1 4/2/2003 MW-1-D01N-GRW		MW-1 5/4/2003 MW-1-T01N-GRW		MW-1 5/4/2003 MW-1-D01N-GRW		MW-1 6/1/2003 MW-1-T01N-GRW		MW-1 6/1/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	2.78	:	-		3.09	:	-		3.88	:	-	
Eh	millivolts	T	138.8	:	-		38.	:	-		125.5	:	-	
pH	SU	T	7.4	J	-		7.1	J	-		6.97	:	-	
Specific Conductance	uS/cm	T	1715.	:	-		1773.	:	-		1228.	:	-	
Temperature	Celsius	T	11.43	:	-		11.4	:	-		13.92	:	-	
Turbidity	NTU	T	100.8	:	-		163.	:	-		14.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.045	:	-		<0.087	:	-		<0.04	J	-	
Bicarbonate (as CaCO3)	mg/L	T	152.	:	-		152.	:	-		143.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	<1.9	:	-		<15.7	:	-		<20.3	J	-	
Fluoride	mg/L	T	0.29	:	-		0.29	:	-		0.34	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.62	:	-		0.55	J	-		1.	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		0.06	J	-	
Phosphorus	mg/L	T	0.11	:	-		0.05	:	-		0.047	J	-	
Sulfate	mg/L	T	875.	J	-		1020.	:	-		664.	J	-	
Total Alkalinity	mg/L	T	152.	:	-		152.	:	-		143.	:	-	
Total Dissolved Solids	mg/L	T	1390.	:	-		1590.	:	-		1100.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.9	J	-		1.3	:	-		1.5	J	-	
Total Suspended Solids	mg/L	T	30.5	:	-		9.7	J	-		6.2	:	-	
Laboratory Parameters														
pH	SU	T	7.4	J	-		7.1	J	-		6.97	:	-	
Specific Conductance	umhos/cm	T	1660.	J	-		1700.	J	-		1280.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	1000.	:	-		992.	:	-		538.	:	-	
Hardness	mg/L	D	-		999.	:	-		963.	:	-		622.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 4/2/2003 MW-1-T01N-GRW		MW-1 4/2/2003 MW-1-D01N-GRW		MW-1 5/4/2003 MW-1-T01N-GRW		MW-1 5/4/2003 MW-1-D01N-GRW		MW-1 6/1/2003 MW-1-T01N-GRW		MW-1 6/1/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.426	:	-		<0.503	:	-		<0.426	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.503	:	-		<0.426	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.0011	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	J	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	J
Barium	mg/L	T	0.0357	:	-		0.0323	:	-		0.0209	:	-	
Barium	mg/L	D	-		0.0297	:	-		0.0293	:	-		0.0213	:
Beryllium	mg/L	T	<0.0003	J	-		<0.0003	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0003	J	-		<0.0003	:	-		<0.0003	:
Boron	mg/L	T	0.0386	:	-		0.0373	:	-		0.0347	:	-	
Boron	mg/L	D	-		0.0374	:	-		0.035	:	-		0.0378	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.00073	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	:	-		<0.0005	:
Calcium	mg/L	T	302.	:	-		300.	:	-		162.	:	-	
Calcium	mg/L	D	-		301.	:	-		292.	:	-		187.	:
Chromium	mg/L	T	<0.0011	:	-		<0.0009	:	-		<0.001	:	-	
Chromium	mg/L	D	-		<0.0009	:	-		<0.001	:	-		<0.001	:
Cobalt	mg/L	T	<0.0029	:	-		<0.0029	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0038	:	-		<0.0038	:
Copper	mg/L	T	<0.0064	:	-		<0.0024	:	-		0.0023	:	-	
Copper	mg/L	D	-		<0.0058	:	-		0.0018	:	-		0.0022	:
Iron	mg/L	T	9.64	:	-		3.3	:	-		2.02	:	-	
Iron	mg/L	D	-		<0.422	:	-		<0.311	:	-		<0.422	:
Lead	mg/L	T	0.0012	:	-		0.00055	:	-		<0.00066	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00033	:
Magnesium	mg/L	T	60.2	:	-		58.8	:	-		32.2	:	-	
Magnesium	mg/L	D	-		60.2	:	-		56.9	:	-		37.3	:
Manganese	mg/L	T	0.33	:	-		0.117	:	-		0.0638	:	-	
Manganese	mg/L	D	-		<0.0409	:	-		0.0376	:	-		0.0194	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0278	:	-		0.0327	:	-		0.0365	:	-	
Molybdenum	mg/L	D	-		0.0334	:	-		0.0314	:	-		0.037	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-1 4/2/2003 MW-1-T01N-GRW GW13		MW-1 4/2/2003 MW-1-D01N-GRW GW13		MW-1 5/4/2003 MW-1-T01N-GRW GW13		MW-1 5/4/2003 MW-1-D01N-GRW GW13		MW-1 6/1/2003 MW-1-T01N-GRW GW13		MW-1 6/1/2003 MW-1-D01N-GRW GW13	
Nickel	mg/L	T	<0.0026	:	-		<0.0026	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0026	:	-		<0.003	:	-		<0.003	:
Potassium	mg/L	T	<5.1	:	-		3.27	:	-		3.18	:	-	
Potassium	mg/L	D	-		<5.1	:	-		3.54	:	-		3.33	:
Selenium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00031	J
Sodium	mg/L	T	61.8	:	-		58.9	:	-		42.8	:	-	
Sodium	mg/L	D	-		57.1	:	-		59.4	:	-		46.9	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0043	:	-		0.0026	:	-		<0.0039	:	-	
Vanadium	mg/L	D	-		0.00063	:	-		0.00082	:	-		<0.0039	:
Zinc	mg/L	T	<0.039	:	-		<0.0142	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.014	:	-		<0.039	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 7/8/2003 MW-1-T01N-GRW		MW-1 7/8/2003 MW-1-D01N-GRW		MW-1 8/10/2003 MW-1-T01N-GRW		MW-1 8/10/2003 MW-1-D01N-GRW		MW-1 9/8/2003 MW-1-T01N-GRW		MW-1 9/8/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	5.73	:	-		4.83	:	-		4.4	:	-	
Eh	millivolts	T	116.	:	-		30.1	:	-		-3.	:	-	
pH	SU	T	7.23	:	-		7.01	:	-		7.4	J	-	
Specific Conductance	uS/cm	T	956.	:	-		1015.	:	-		1072.	:	-	
Temperature	Celsius	T	12.37	:	-		12.27	:	-		12.18	:	-	
Turbidity	NTU	T	29.7	:	-		22.1	:	-		26.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.096	J	-		0.049	:	-		<0.043	:	-	
Bicarbonate (as CaCO3)	mg/L	T	152.	:	-		152.	:	-		152.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	8.5	:	-		8.7	:	-		8.8	:	-	
Fluoride	mg/L	T	0.35	J	-		0.38	:	-		0.34	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.3	J	-		1.4	J	-		1.	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.015	J	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.059	:	-		0.051	:	-		0.053	:	-	
Sulfate	mg/L	T	382.	J	-		404.	J	-		415.	J	-	
Total Alkalinity	mg/L	T	152.	:	-		152.	:	-		152.	:	-	
Total Dissolved Solids	mg/L	T	784.	:	-		880.	:	-		846.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.29	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		1.9	J	-		<2.2	:	-	
Total Suspended Solids	mg/L	T	5.7	:	-		7.7	J	-		6.2	:	-	
Laboratory Parameters														
pH	SU	T	7.23	:	-		7.01	:	-		7.4	J	-	
Specific Conductance	umhos/cm	T	918.	J	-		1010.	:	-		927.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	498.	:	-		561.	:	-		521.	:	-	
Hardness	mg/L	D	-		484.	:	-		522.	:	-		520.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 7/8/2003 MW-1-T01N-GRW		MW-1 7/8/2003 MW-1-D01N-GRW		MW-1 8/10/2003 MW-1-T01N-GRW		MW-1 8/10/2003 MW-1-D01N-GRW		MW-1 9/8/2003 MW-1-T01N-GRW		MW-1 9/8/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.631	:	-		<0.631	:	-		<0.26	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.631	:	-		<0.475	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0185	:	-		0.0204	:	-		0.0216	:	-	
Barium	mg/L	D	-		0.0183	:	-		0.0199	:	-		0.0202	:
Beryllium	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0004	:
Boron	mg/L	T	<0.0348	:	-		0.0329	:	-		0.034	:	-	
Boron	mg/L	D	-		<0.0378	:	-		0.0343	J	-		0.0335	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0006	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0006	:	-		<0.0005	:
Calcium	mg/L	T	150.	:	-		167.	:	-		155.	:	-	
Calcium	mg/L	D	-		146.	:	-		155.	:	-		154.	:
Chromium	mg/L	T	<0.0006	J	-		<0.0014	:	-		<0.0011	:	-	
Chromium	mg/L	D	-		0.0022	J	-		<0.0014	:	-		<0.0011	:
Cobalt	mg/L	T	<0.0018	:	-		<0.002	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0018	:	-		<0.002	:	-		<0.0029	:
Copper	mg/L	T	<0.0015	:	-		<0.0024	:	-		<0.0022	:	-	
Copper	mg/L	D	-		<0.0022	:	-		<0.0024	:	-		<0.0022	:
Iron	mg/L	T	3.37	:	-		2.65	:	-		<2.66	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.667	:	-		<1.12	:
Lead	mg/L	T	<0.0002	:	-		0.00039	:	-		<0.00078	:	-	
Lead	mg/L	D	-		0.00036	:	-		<0.0002	:	-		<0.00058	:
Magnesium	mg/L	T	30.1	:	-		34.8	:	-		32.8	:	-	
Magnesium	mg/L	D	-		29.2	:	-		32.5	:	-		32.9	:
Manganese	mg/L	T	0.065	:	-		0.0687	:	-		<0.082	:	-	
Manganese	mg/L	D	-		0.0289	:	-		0.0246	J	-		<0.0658	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0349	:	-		0.0392	:	-		0.0381	:	-	
Molybdenum	mg/L	D	-		0.0377	:	-		0.0378	:	-		0.0371	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-1 7/8/2003 MW-1-T01N-GRW GW13		MW-1 7/8/2003 MW-1-D01N-GRW GW13		MW-1 8/10/2003 MW-1-T01N-GRW GW13		MW-1 8/10/2003 MW-1-D01N-GRW GW13		MW-1 9/8/2003 MW-1-T01N-GRW GW13		MW-1 9/8/2003 MW-1-D01N-GRW GW13	
Nickel	mg/L	T	<0.002	:	-		<0.0021	J	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.002	:	-		<0.0021	J	-		<0.0024	:
Potassium	mg/L	T	2.54	:	-		2.77	:	-		2.31	J	-	
Potassium	mg/L	D	-		2.55	:	-		2.75	:	-		2.23	J
Selenium	mg/L	T	<0.0016	:	-		<0.0016	:	-		0.0009	:	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.0016	:	-		<0.0006	:
Silver	mg/L	T	<0.0002	J	-		<0.0009	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0009	J	-		<0.0002	:
Sodium	mg/L	T	44.5	:	-		52.2	J	-		48.7	:	-	
Sodium	mg/L	D	-		42.8	:	-		<33.4	:	-		33.6	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0027	J	-		0.0021	:	-		0.0021	:	-	
Vanadium	mg/L	D	-		0.0014	:	-		0.0014	:	-		0.0012	:
Zinc	mg/L	T	<0.0378	:	-		<0.016	:	-		<0.019	:	-	
Zinc	mg/L	D	-		<0.0346	:	-		<0.016	:	-		<0.0306	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-1 10/13/2003 MW-1-T01N-GRW		MW-1 10/13/2003 MW-1-D01N-GRW		MW-1 11/2/2003 MW-1-T01N-GRW		MW-1 11/2/2003 MW-1-D01N-GRW		MW-1 12/7/2003 MW-1-T01N-GRW		MW-1 12/7/2003 MW-1-D01N-GRW	
Field Measurements														
DO	mg/L	T	6.62	:	-		1.55	:	-		-		-	
Eh	millivolts	T	28.2	:	-		-5.2	:	-		-		-	
pH	SU	T	7.	J	-		7.3	J	-		7.2	J	-	
Specific Conductance	uS/cm	T	959.	:	-		939.	:	-		-		-	
Temperature	Celsius	T	12.27	:	-		11.77	:	-		-		-	
Turbidity	NTU	T	18.9	:	-		326.9	:	-		-		-	
General Chemistry														
Ammonia	mg/L	T	<0.04	J	-		<0.071	:	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	155.	:	-		129.	:	-		148.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	7.7	:	-		8.4	:	-		10.6	:	-	
Fluoride	mg/L	T	0.34	:	-		<0.35	:	-		0.32	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.96	:	-		0.9	J	-		0.97	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		0.019	J	-		0.019	J	-	
Phosphorus	mg/L	T	0.055	:	-		0.45	:	-		0.073	:	-	
Sulfate	mg/L	T	354.	J	-		402.	:	-		533.	:	-	
Total Alkalinity	mg/L	T	155.	:	-		129.	:	-		148.	J	-	
Total Dissolved Solids	mg/L	T	696.	:	-		792.	:	-		974.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		2.7	:	-		<0.24	J	-	
Total Organic Carbon	mg/L	T	2.	J	-		1.4	:	-		<1.	:	-	
Total Suspended Solids	mg/L	T	8.4	:	-		101.	:	-		9.6	:	-	
Laboratory Parameters														
pH	SU	T	7.	J	-		7.3	J	-		7.2	J	-	
Specific Conductance	umhos/cm	T	897.	J	-		990.	J	-		986.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	462.	:	-		465.	:	-		609.	:	-	
Hardness	mg/L	D	-		439.	:	-		498.	:	-		589.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 10/13/2003 MW-1-T01N-GRW		MW-1 10/13/2003 MW-1-D01N-GRW		MW-1 11/2/2003 MW-1-T01N-GRW		MW-1 11/2/2003 MW-1-D01N-GRW		MW-1 12/7/2003 MW-1-T01N-GRW		MW-1 12/7/2003 MW-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.307	:	-		0.932	:	-		<0.307	J	-	
Aluminum	mg/L	D	-		<0.307	:	-		<0.217	:	-		<0.307	J
Antimony	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		0.0012	J	-		<0.0004	J	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	J	-		<0.0004	J
Barium	mg/L	T	0.0179	:	-		0.154	:	-		0.0303	:	-	
Barium	mg/L	D	-		0.0164	:	-		0.0172	:	-		0.0233	:
Beryllium	mg/L	T	<0.0003	J	-		<0.0003	J	-		<0.00064	:	-	
Beryllium	mg/L	D	-		<0.0003	J	-		<0.0003	J	-		<0.00062	:
Boron	mg/L	T	0.0342	:	-		0.0299	:	-		0.0313	:	-	
Boron	mg/L	D	-		0.0334	:	-		0.0297	:	-		0.0336	:
Cadmium	mg/L	T	<0.0007	:	-		<0.0007	:	-		<0.0007	:	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	139.	:	-		138.	:	-		184.	:	-	
Calcium	mg/L	D	-		132.	:	-		148.	:	-		178.	:
Chromium	mg/L	T	0.0015	J	-		<0.0021	:	-		<0.0013	J	-	
Chromium	mg/L	D	-		<0.0013	J	-		<0.0013	:	-		<0.0013	J
Cobalt	mg/L	T	<0.0031	:	-		<0.0031	:	-		<0.0031	:	-	
Cobalt	mg/L	D	-		<0.0031	:	-		<0.0031	:	-		<0.0031	:
Copper	mg/L	T	<0.002	:	-		0.0032	:	-		<0.002	:	-	
Copper	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Iron	mg/L	T	2.58	:	-		27.2	:	-		2.85	:	-	
Iron	mg/L	D	-		<0.3	:	-		<0.455	:	-		<0.3	:
Lead	mg/L	T	<0.0004	:	-		0.0026	J	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0004	J	-		<0.0004	J
Magnesium	mg/L	T	28.	:	-		29.1	:	-		36.6	:	-	
Magnesium	mg/L	D	-		26.6	:	-		31.2	:	-		35.3	:
Manganese	mg/L	T	0.0727	:	-		0.628	J	-		0.0733	:	-	
Manganese	mg/L	D	-		<0.0225	:	-		0.142	:	-		0.0135	:
Mercury	mg/L	T	<0.00013	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0413	:	-		0.0472	:	-		0.0353	:	-	
Molybdenum	mg/L	D	-		0.0403	:	-		0.0371	:	-		0.0349	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-1 10/13/2003 MW-1-T01N-GRW GW13		MW-1 10/13/2003 MW-1-D01N-GRW GW13		MW-1 11/2/2003 MW-1-T01N-GRW GW13		MW-1 11/2/2003 MW-1-D01N-GRW GW13		MW-1 12/7/2003 MW-1-T01N-GRW GW13		MW-1 12/7/2003 MW-1-D01N-GRW GW13	
Nickel	mg/L	T	<0.0028	:	-		<0.0028	:	-		<0.0028	:	-	
Nickel	mg/L	D	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:
Potassium	mg/L	T	<2.72	:	-		3.57	:	-		0.757	J	-	
Potassium	mg/L	D	-		2.9	:	-		<2.8	J	-		0.584	J
Selenium	mg/L	T	<0.0006	:	-		0.001	:	-		0.00082	J	-	
Selenium	mg/L	D	-		<0.0006	:	-		0.00098	:	-		0.0013	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	J
Sodium	mg/L	T	39.6	:	-		<43.8	J	-		45.6	:	-	
Sodium	mg/L	D	-		36.5	:	-		41.6	:	-		43.8	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	J	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	J
Vanadium	mg/L	T	0.002	:	-		0.0232	J	-		0.0028	J	-	
Vanadium	mg/L	D	-		0.0014	:	-		0.00055	J	-		0.0015	J
Zinc	mg/L	T	<0.02	J	-		<0.019	:	-		<0.02	:	-	
Zinc	mg/L	D	-		<0.02	:	-		<0.019	:	-		<0.02	J

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-1 1/6/2004 MW-1-T01N-GRW		MW-1 1/6/2004 MW-1-D01N-GRW		MW-1 4/13/2004 MW-1-T01N-GRW		MW-1 4/13/2004 MW-1-D01N-GRW		MW-11 10/30/2002 MW-11-T01N-GRW		MW-11 10/30/2002 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	4.3	:	-		4.12	:	-		6.57	:	-	
Eh	millivolts	T	-6.7	:	-		128.6	:	-		241.1	:	-	
pH	SU	T	7.22	:	-		6.72	:	-		8.07	:	-	
Specific Conductance	uS/cm	T	1405.	:	-		1698.	:	-		462.	:	-	
Temperature	Celsius	T	10.68	:	-		12.22	:	-		12.48	:	-	
Turbidity	NTU	T	30.2	:	-		14.1	:	-		23.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.066	J	-		<0.057	:	-		<0.054	:	-	
Bicarbonate (as CaCO3)	mg/L	T	147.	J	-		146.	:	-		90.4	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.	:	-		16.2	:	-		10.	:	-	
Fluoride	mg/L	T	0.3	:	-		0.32	:	-		1.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.73	J	-		0.53	J	-		0.43	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.011	:	-		<0.01	:	-		0.01	J	-	
Phosphorus	mg/L	T	0.047	:	-		0.053	:	-		0.018	:	-	
Sulfate	mg/L	T	753.	:	-		925.	:	-		117.	:	-	
Total Alkalinity	mg/L	T	147.	J	-		146.	:	-		90.4	:	-	
Total Dissolved Solids	mg/L	T	1110.	:	-		1460.	:	-		304.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.4	J	-		<1.9	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	13.8	:	-		<5.6	J	-		<0.5	:	-	
Laboratory Parameters														
pH	SU	T	7.22	:	-		6.72	:	-		8.07	:	-	
Specific Conductance	umhos/cm	T	1300.	J	-		1490.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	758.	:	-		949.	:	-		150.	:	-	
Hardness	mg/L	D	-		772.	:	-		950.	:	-		146.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-1 1/6/2004 MW-1-T01N-GRW		MW-1 1/6/2004 MW-1-D01N-GRW		MW-1 4/13/2004 MW-1-T01N-GRW		MW-1 4/13/2004 MW-1-D01N-GRW		MW-11 10/30/2002 MW-11-T01N-GRW		MW-11 10/30/2002 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.329	:	-		<0.176	:	-		<0.0123	:	-	
Aluminum	mg/L	D	-		<0.329	:	-		<0.176	:	-		<0.0047	:
Antimony	mg/L	T	<0.0024	J	-		<0.0008	:	-		<0.0002	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		<0.0008	:	-		<0.0002	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		0.0017	J	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.0018	J
Barium	mg/L	T	0.0266	:	-		0.0298	:	-		0.022	:	-	
Barium	mg/L	D	-		0.0243	:	-		0.0283	:	-		0.0214	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0003	J	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0003	J	-		<0.0002	:
Boron	mg/L	T	0.0316	:	-		0.0328	:	-		0.0454	:	-	
Boron	mg/L	D	-		0.0332	:	-		0.0319	:	-		0.0437	:
Cadmium	mg/L	T	<0.0007	J	-		<0.0003	:	-		<0.0001	:	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0003	:	-		<0.0001	:
Calcium	mg/L	T	229.	J	-		287.	:	-		40.6	:	-	
Calcium	mg/L	D	-		233.	:	-		287.	:	-		39.6	:
Chromium	mg/L	T	<0.0015	:	-		<0.00087	:	-		<0.0046	:	-	
Chromium	mg/L	D	-		<0.0015	:	-		<0.0006	:	-		<0.0046	:
Chromium, Hexavalent	mg/L	D	-		-		-		-		<0.01	:	-	
Cobalt	mg/L	T	<0.0023	:	-		<0.0016	:	-		<0.0022	:	-	
Cobalt	mg/L	D	-		<0.0023	:	-		<0.0016	:	-		<0.0022	:
Copper	mg/L	T	<0.003	:	-		<0.0014	:	-		<0.0003	:	-	
Copper	mg/L	D	-		<0.003	:	-		<0.0014	:	-		<0.0003	:
Iron	mg/L	T	2.9	:	-		2.59	J	-		<0.0542	:	-	
Iron	mg/L	D	-		<0.357	:	-		<0.192	:	-		<0.028	:
Lead	mg/L	T	<0.0002	:	-		<0.0008	:	-		<0.00017	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0008	:	-		<0.0001	:
Magnesium	mg/L	T	45.2	:	-		56.5	:	-		11.7	:	-	
Magnesium	mg/L	D	-		46.1	:	-		56.8	:	-		11.3	:
Manganese	mg/L	T	0.0855	:	-		0.0778	:	-		<0.0025	:	-	
Manganese	mg/L	D	-		0.0378	:	-		0.0202	:	-		<0.0025	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0315	:	-		0.0361	:	-		0.265	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-1 1/6/2004 MW-1-T01N-GRW GW13		MW-1 1/6/2004 MW-1-D01N-GRW GW13		MW-1 4/13/2004 MW-1-T01N-GRW GW13		MW-1 4/13/2004 MW-1-D01N-GRW GW13		MW-11 10/30/2002 MW-11-T01N-GRW GW13		MW-11 10/30/2002 MW-11-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0332	:	-		0.0315	:	-		0.259	:
Nickel	mg/L	T	<0.0024	J	-		<0.0015	J	-		<0.0002	J	-	
Nickel	mg/L	D	-		<0.0024	J	-		<0.0015	J	-		<0.0002	J
Potassium	mg/L	T	3.03	:	-		3.49	:	-		3.46	:	-	
Potassium	mg/L	D	-		2.96	:	-		3.46	:	-		3.38	:
Selenium	mg/L	T	0.0013	J	-		<0.0014	:	-		<0.00021	:	-	
Selenium	mg/L	D	-		0.0016	:	-		<0.0014	:	-		<0.00034	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Sodium	mg/L	T	55.	:	-		58.8	:	-		31.6	:	-	
Sodium	mg/L	D	-		51.1	:	-		58.2	:	-		30.9	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Vanadium	mg/L	T	0.0021	:	-		0.0021	:	-		0.0072	:	-	
Vanadium	mg/L	D	-		0.001	:	-		0.0012	:	-		0.0071	:
Zinc	mg/L	T	<0.04	:	-		<0.015	J	-		<0.0069	:	-	
Zinc	mg/L	D	-		<0.04	:	-		<0.015	J	-		<0.0069	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-11 1/17/2003 MW-11-T01N-GRW		MW-11 1/17/2003 MW-11-D01N-GRW		MW-11 4/2/2003 MW-11-T01N-GRW		MW-11 4/2/2003 MW-11-D01N-GRW		MW-11 7/9/2003 MW-11-T01N-GRW		MW-11 7/9/2003 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	8.98	:	-		5.99	:	-		5.96	:	-	
Eh	millivolts	T	306.2	:	-		187.1	:	-		151.4	:	-	
pH	SU	T	8.16	:	-		7.9	J	-		8.2	:	-	
Specific Conductance	uS/cm	T	433.	:	-		439.	:	-		427.	:	-	
Temperature	Celsius	T	11.72	:	-		12.8	:	-		17.71	:	-	
Turbidity	NTU	T	-		-		7.8	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.054	:	-		<0.04	:	-		<0.059	J	-	
Bicarbonate (as CaCO3)	mg/L	T	85.5	:	-		90.3	:	-		88.2	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	10.1	:	-		14.4	:	-		10.4	:	-	
Fluoride	mg/L	T	1.1	:	-		1.1	:	-		1.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.64	J	-		<0.65	:	-		0.62	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.036	J	-		<0.01	J	-		<0.01	:	-	
Phosphorus	mg/L	T	0.014	:	-		0.01	:	-		<0.01	:	-	
Sulfate	mg/L	T	107.	J	-		121.	J	-		126.	J	-	
Total Alkalinity	mg/L	T	85.5	:	-		90.3	:	-		88.2	:	-	
Total Dissolved Solids	mg/L	T	<285.	:	-		388.	:	-		350.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.26	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.5	J	-		<1.	J	-	
Total Suspended Solids	mg/L	T	<0.56	:	-		<0.6	:	-		<0.8	:	-	
Laboratory Parameters														
pH	SU	T	8.16	:	-		7.9	J	-		8.2	:	-	
Specific Conductance	umhos/cm	T	-		-		429.	J	-		442.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	151.	:	-		161.	:	-		163.	:	-	
Hardness	mg/L	D	-		146.	:	-		158.	:	-		162.	:
Metals														

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-11 1/17/2003 MW-11-T01N-GRW		MW-11 1/17/2003 MW-11-D01N-GRW		MW-11 4/2/2003 MW-11-T01N-GRW		MW-11 4/2/2003 MW-11-D01N-GRW		MW-11 7/9/2003 MW-11-T01N-GRW		MW-11 7/9/2003 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.226	:	-		<0.426	:	-		<0.631	:	-	
Aluminum	mg/L	D	-		<0.226	:	-		<0.426	:	-		<0.631	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.001	:
Arsenic	mg/L	T	0.0017	:	-		0.002	:	-		0.0022	:	-	
Arsenic	mg/L	D	-		0.0018	:	-		0.002	:	-		<0.0004	:
Barium	mg/L	T	0.0221	:	-		0.022	:	-		0.0228	:	-	
Barium	mg/L	D	-		0.0212	:	-		0.0218	:	-		0.0231	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	J	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	J	-		<0.0002	:
Boron	mg/L	T	0.0437	:	-		0.0472	:	-		0.0455	:	-	
Boron	mg/L	D	-		0.0429	:	-		0.0476	:	-		0.0456	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0006	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0006	:
Calcium	mg/L	T	40.7	:	-		43.4	:	-		44.3	:	-	
Calcium	mg/L	D	-		39.7	:	-		42.5	:	-		44.	:
Chromium	mg/L	T	<0.0037	:	-		<0.0022	:	-		0.0021	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.0022	:	-		0.0014	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0029	:	-		<0.002	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0029	:	-		<0.002	:
Copper	mg/L	T	<0.0045	:	-		<0.0258	:	-		<0.0024	:	-	
Copper	mg/L	D	-		<0.0017	:	-		<0.0049	:	-		<0.0024	:
Iron	mg/L	T	<0.266	:	-		<0.422	:	-		<0.667	:	-	
Iron	mg/L	D	-		<0.266	:	-		<0.422	:	-		<0.667	:
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.00098	J	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0041	J
Magnesium	mg/L	T	11.9	:	-		12.7	:	-		12.8	:	-	
Magnesium	mg/L	D	-		11.5	:	-		12.5	:	-		12.6	:
Manganese	mg/L	T	<0.028	:	-		<0.013	:	-		<0.019	:	-	
Manganese	mg/L	D	-		<0.028	:	-		<0.013	:	-		<0.019	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.264	:	-		0.27	:	-		0.342	:	-	
Molybdenum	mg/L	D	-		0.254	:	-		0.268	:	-		0.345	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-11 1/17/2003 MW-11-T01N-GRW GW13		MW-11 1/17/2003 MW-11-D01N-GRW GW13		MW-11 4/2/2003 MW-11-T01N-GRW GW13		MW-11 4/2/2003 MW-11-D01N-GRW GW13		MW-11 7/9/2003 MW-11-T01N-GRW GW13		MW-11 7/9/2003 MW-11-D01N-GRW GW13	
Nickel	mg/L	T	<0.0015	:	-		<0.0026	:	-		<0.0021	:	-	
Nickel	mg/L	D	-		<0.0015	:	-		<0.0026	:	-		<0.0021	:
Potassium	mg/L	T	3.46	:	-		<5.34	:	-		3.9	:	-	
Potassium	mg/L	D	-		3.44	:	-		<5.28	:	-		3.94	:
Selenium	mg/L	T	<0.0016	:	-		<0.001	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.001	:	-		<0.0016	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	32.	:	-		32.1	:	-		32.4	:	-	
Sodium	mg/L	D	-		31.5	:	-		34.2	:	-		32.3	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0072	:	-		0.0075	:	-		0.0071	:	-	
Vanadium	mg/L	D	-		0.007	:	-		0.0073	:	-		0.0011	:
Zinc	mg/L	T	<0.028	:	-		<0.039	:	-		<0.0337	:	-	
Zinc	mg/L	D	-		<0.028	:	-		<0.039	:	-		<0.025	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-11 10/14/2003 MW-11-T01N-GRW		MW-11 10/14/2003 MW-11-D01N-GRW		MW-11 1/7/2004 MW-11-T01N-GRW		MW-11 1/7/2004 MW-11-D01N-GRW		MW-11 4/16/2004 MW-11-T01N-GRW		MW-11 4/16/2004 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	8.81	:	-		4.04	:	-		7.	:	-	
Eh	millivolts	T	296.9	:	-		199.3	:	-		182.8	:	-	
pH	SU	T	7.75	:	-		8.2	J	-		8.2	J	-	
Specific Conductance	uS/cm	T	472.	:	-		502.	:	-		509.	:	-	
Temperature	Celsius	T	14.26	:	-		11.84	:	-		14.	:	-	
Turbidity	NTU	T	0.	:	-		0.2	:	-		1.6	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.057	J	-		<0.043	J	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	90.	:	-		87.7	:	-		90.9	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	10.5	:	-		10.7	:	-		11.1	:	-	
Fluoride	mg/L	T	1.	:	-		0.96	:	-		0.98	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.54	J	-		<0.57	:	-		0.73	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.012	:	-		<0.016	:	-		<0.01	:	-	
Phosphorus	mg/L	T	0.013	:	-		<0.01	:	-		0.016	:	-	
Sulfate	mg/L	T	119.	J	-		150.	:	-		165.	:	-	
Total Alkalinity	mg/L	T	90.	:	-		87.7	:	-		90.9	:	-	
Total Dissolved Solids	mg/L	T	360.	:	-		338.	:	-		376.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	:	-		<1.1	J	-	
Total Suspended Solids	mg/L	T	<0.6	:	-		<0.6	:	-		<0.8	J	-	
Laboratory Parameters														
pH	SU	T	7.75	:	-		8.2	J	-		8.2	J	-	
Specific Conductance	umhos/cm	T	443.	J	-		480.	J	-		479.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	172.	:	-		173.	:	-		199.	:	-	
Hardness	mg/L	D	-		162.	:	-		184.	:	-		200.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-11 10/14/2003 MW-11-T01N-GRW		MW-11 10/14/2003 MW-11-D01N-GRW		MW-11 1/7/2004 MW-11-T01N-GRW		MW-11 1/7/2004 MW-11-D01N-GRW		MW-11 4/16/2004 MW-11-T01N-GRW		MW-11 4/16/2004 MW-11-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.263	:	-		<0.514	:	-		<0.201	J	-	
Aluminum	mg/L	D	-		<0.217	:	-		<0.514	:	-		<0.201	J
Antimony	mg/L	T	<0.001	:	-		<0.0024	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0024	:	-		<0.0011	:
Arsenic	mg/L	T	0.002	:	-		0.0022	:	-		0.0019	:	-	
Arsenic	mg/L	D	-		0.002	:	-		0.0023	:	-		0.0018	:
Barium	mg/L	T	0.027	:	-		0.025	:	-		0.0277	:	-	
Barium	mg/L	D	-		0.027	:	-		0.0265	:	-		0.0268	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0003	:	-		<0.0003	J	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0003	:	-		<0.0003	J
Boron	mg/L	T	0.0524	:	-		0.0429	:	-		0.0443	:	-	
Boron	mg/L	D	-		0.0541	:	-		0.0458	:	-		0.0418	:
Cadmium	mg/L	T	<0.0007	:	-		<0.0007	J	-		<0.0003	:	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0007	:	-		<0.0003	:
Calcium	mg/L	T	45.9	:	-		47.	:	-		53.9	:	-	
Calcium	mg/L	D	-		44.6	:	-		49.9	:	-		54.1	:
Chromium	mg/L	T	<0.0023	J	-		<0.0015	:	-		<0.0023	:	-	
Chromium	mg/L	D	-		<0.0035	J	-		<0.0015	:	-		0.0016	:
Cobalt	mg/L	T	<0.0031	:	-		<0.0023	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0031	:	-		<0.0023	:	-		<0.0016	:
Copper	mg/L	T	<0.002	:	-		<0.003	:	-		<0.0014	:	-	
Copper	mg/L	D	-		<0.002	:	-		<0.003	:	-		<0.0014	:
Iron	mg/L	T	<0.455	:	-		<0.373	:	-		<0.293	J	-	
Iron	mg/L	D	-		<0.455	:	-		<0.373	:	-		<0.293	J
Lead	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Magnesium	mg/L	T	14.	:	-		13.6	:	-		15.6	:	-	
Magnesium	mg/L	D	-		12.3	:	-		14.4	:	-		15.8	:
Manganese	mg/L	T	<0.016	:	-		<0.015	:	-		<0.014	J	-	
Manganese	mg/L	D	-		<0.016	:	-		<0.015	:	-		<0.014	J
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.469	:	-		0.462	:	-		0.516	:	-	
Molybdenum	mg/L	D	-		0.465	:	-		0.493	:	-		0.496	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-11 10/14/2003 MW-11-T01N-GRW GW13		MW-11 10/14/2003 MW-11-D01N-GRW GW13		MW-11 1/7/2004 MW-11-T01N-GRW GW13		MW-11 1/7/2004 MW-11-D01N-GRW GW13		MW-11 4/16/2004 MW-11-T01N-GRW GW13		MW-11 4/16/2004 MW-11-D01N-GRW GW13	
Nickel	mg/L	T	<0.0028	:	-		<0.0024	:	-		<0.0015	J	-	
Nickel	mg/L	D	-		<0.0028	:	-		<0.0024	:	-		<0.0015	J
Potassium	mg/L	T	4.25	:	-		4.02	:	-		4.29	:	-	
Potassium	mg/L	D	-		4.35	:	-		4.32	:	-		4.16	:
Selenium	mg/L	T	0.00095	:	-		0.001	J	-		<0.0014	:	-	
Selenium	mg/L	D	-		0.00091	:	-		0.0015	:	-		<0.0014	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	41.2	J	-		32.2	:	-		<41.9	J	-	
Sodium	mg/L	D	-		29.4	J	-		34.4	:	-		<45.6	J
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.00022	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00022	:
Vanadium	mg/L	T	0.0062	:	-		0.0063	:	-		0.0066	:	-	
Vanadium	mg/L	D	-		0.0064	:	-		0.0062	:	-		0.0064	:
Zinc	mg/L	T	<0.019	:	-		<0.026	:	-		<0.024	:	-	
Zinc	mg/L	D	-		<0.019	:	-		<0.026	:	-		<0.024	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-12 10/30/2002 MW-12-T01N-GRW		MW-12 10/30/2002 MW-12-D01N-GRW		MW-12 1/17/2003 MW-12-T01N-GRW		MW-12 1/17/2003 MW-12-D01N-GRW		MW-12 4/3/2003 MW-12-T01N-GRW		MW-12 4/3/2003 MW-12-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.51	:	-		8.65	:	-		5.81	:	-	
Eh	millivolts	T	75.9	:	-		318.7	:	-		268.6	:	-	
pH	SU	T	7.76	:	-		7.96	:	-		7.74	:	-	
Specific Conductance	uS/cm	T	303.	:	-		288.	:	-		291.	:	-	
Temperature	Celsius	T	11.84	:	-		11.14	:	-		11.36	:	-	
Turbidity	NTU	T	8.3	:	-		-		-		112.8	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.041	:	-		<0.059	:	-	
Bicarbonate (as CaCO3)	mg/L	T	114.	:	-		108.	:	-		111.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	4.2	:	-		<4.7	:	-		4.5	:	-	
Fluoride	mg/L	T	0.47	:	-		0.39	:	-		0.41	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		<0.54	J	-		<0.57	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.02	J	-		<0.02	J	-		<0.11	J	-	
Phosphorus	mg/L	T	0.035	:	-		0.022	:	-		0.068	J	-	
Sulfate	mg/L	T	38.2	:	-		40.8	J	-		35.4	J	-	
Total Alkalinity	mg/L	T	114.	:	-		108.	:	-		111.	:	-	
Total Dissolved Solids	mg/L	T	217.	:	-		<189.	:	-		<206.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	17.2	:	-		2.7	:	-		26.6	:	-	
Laboratory Parameters														
pH	SU	T	7.76	:	-		7.96	:	-		7.74	:	-	
Specific Conductance	umhos/cm	T	-		-		-		-		284.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	120.	:	-		125.	:	-		123.	:	-	
Hardness	mg/L	D	-		122.	:	-		126.	:	-		127.	:
Metals														

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-12 10/30/2002 MW-12-T01N-GRW		MW-12 10/30/2002 MW-12-D01N-GRW		MW-12 1/17/2003 MW-12-T01N-GRW		MW-12 1/17/2003 MW-12-D01N-GRW		MW-12 4/3/2003 MW-12-T01N-GRW		MW-12 4/3/2003 MW-12-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	0.332	:	-		<0.226	:	-		<0.503	:	-	
Aluminum	mg/L	D	-		<0.0082	:	-		<0.226	:	-		<0.503	:
Antimony	mg/L	T	<0.0002	:	-		<0.0006	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0002	:	-		0.0011	:	-		<0.0006	:
Arsenic	mg/L	T	0.001	J	-		0.00079	:	-		0.00092	:	-	
Arsenic	mg/L	D	-		0.00089	J	-		0.00092	:	-		0.00096	:
Barium	mg/L	T	0.0668	:	-		0.0677	:	-		0.0672	:	-	
Barium	mg/L	D	-		0.0642	:	-		0.0654	:	-		0.0645	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0003	J	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0003	J
Boron	mg/L	T	0.0107	:	-		<0.0065	:	-		0.0086	:	-	
Boron	mg/L	D	-		0.0094	:	-		<0.0061	:	-		0.0089	:
Cadmium	mg/L	T	<0.0001	:	-		<0.0004	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0001	:	-		<0.0004	:	-		<0.0005	:
Calcium	mg/L	T	36.5	:	-		38.	:	-		37.8	:	-	
Calcium	mg/L	D	-		37.3	:	-		38.1	:	-		38.8	:
Chromium	mg/L	T	<0.0046	:	-		<0.0037	:	-		<0.0025	:	-	
Chromium	mg/L	D	-		<0.0046	:	-		<0.0037	:	-		<0.0019	:
Chromium, Hexavalent	mg/L	D	<0.01	:	-		-		-		-		-	
Cobalt	mg/L	T	<0.0022	:	-		<0.0016	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Copper	mg/L	T	0.0016	:	-		0.0111	:	-		<0.0045	:	-	
Copper	mg/L	D	-		<0.00044	:	-		<0.0017	:	-		<0.0044	:
Iron	mg/L	T	0.298	:	-		<0.266	:	-		<0.311	:	-	
Iron	mg/L	D	-		<0.0226	:	-		<0.266	:	-		<0.311	:
Lead	mg/L	T	0.00099	:	-		<0.0002	:	-		0.00035	:	-	
Lead	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	7.01	:	-		7.4	:	-		7.01	:	-	
Magnesium	mg/L	D	-		7.11	:	-		7.36	:	-		7.23	:
Manganese	mg/L	T	0.0256	:	-		<0.028	:	-		<0.01	:	-	
Manganese	mg/L	D	-		<0.0025	:	-		<0.028	:	-		<0.01	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0046	:	-		<0.006	:	-		<0.0043	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-12 10/30/2002 MW-12-T01N-GRW GW13		MW-12 10/30/2002 MW-12-D01N-GRW GW13		MW-12 1/17/2003 MW-12-T01N-GRW GW13		MW-12 1/17/2003 MW-12-D01N-GRW GW13		MW-12 4/3/2003 MW-12-T01N-GRW GW13		MW-12 4/3/2003 MW-12-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0052	:	-		<0.0049	:	-		0.0055	:
Nickel	mg/L	T	0.00062	J	-		<0.0015	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0002	J	-		<0.0015	:	-		<0.003	:
Potassium	mg/L	T	2.04	:	-		2.16	:	-		2.12	:	-	
Potassium	mg/L	D	-		2.03	:	-		2.15	:	-		2.13	:
Selenium	mg/L	T	0.00064	:	-		<0.0016	:	-		<0.001	:	-	
Selenium	mg/L	D	-		<0.00037	:	-		<0.0016	:	-		<0.001	:
Silver	mg/L	T	0.00071	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	14.4	:	-		15.	:	-		14.8	:	-	
Sodium	mg/L	D	-		14.7	:	-		13.8	:	-		15.2	:
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0047	:	-		0.0043	:	-		0.0047	:	-	
Vanadium	mg/L	D	-		0.0042	:	-		0.0042	:	-		0.0045	:
Zinc	mg/L	T	0.0116	:	-		<0.028	:	-		<0.014	:	-	
Zinc	mg/L	D	-		0.0079	:	-		<0.028	:	-		<0.014	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-12 7/9/2003 MW-12-T01N-GRW		MW-12 7/9/2003 MW-12-D01N-GRW		MW-12 10/14/2003 MW-12-T01N-GRW		MW-12 10/14/2003 MW-12-D01N-GRW		MW-12 1/7/2004 MW-12-T01N-GRW		MW-12 1/7/2004 MW-12-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	5.89	:	-		7.52	:	-		6.02	:	-	
Eh	millivolts	T	115.1	:	-		389.2	:	-		127.1	:	-	
pH	SU	T	8.12	:	-		8.	J	-		8.4	J	-	
Specific Conductance	uS/cm	T	279.	:	-		290.	:	-		299.	:	-	
Temperature	Celsius	T	13.67	:	-		12.87	:	-		10.52	:	-	
Turbidity	NTU	T	0.	:	-		4.8	:	-		9.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.079	J	-		<0.055	J	-		<0.056	J	-	
Bicarbonate (as CaCO3)	mg/L	T	112.	:	-		113.	:	-		110.	J	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	4.5	:	-		4.4	:	-		4.5	:	-	
Fluoride	mg/L	T	0.42	:	-		0.4	:	-		0.41	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.49	J	-		0.42	:	-		<0.4	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.016	J	-		<0.02	:	-		<0.019	:	-	
Phosphorus	mg/L	T	0.019	:	-		0.03	:	-		<0.018	:	-	
Sulfate	mg/L	T	36.2	J	-		38.6	J	-		35.7	:	-	
Total Alkalinity	mg/L	T	112.	:	-		113.	:	-		110.	J	-	
Total Dissolved Solids	mg/L	T	198.	:	-		304.	:	-		190.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	7.3	:	-		8.7	:	-		10.6	:	-	
Laboratory Parameters														
pH	SU	T	8.12	:	-		8.	J	-		8.4	J	-	
Specific Conductance	umhos/cm	T	267.	J	-		272.	J	-		278.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	121.	:	-		131.	:	-		116.	:	-	
Hardness	mg/L	D	-		115.	:	-		118.	:	-		126.	:
Metals														

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-12 7/9/2003 MW-12-T01N-GRW		MW-12 7/9/2003 MW-12-D01N-GRW		MW-12 10/14/2003 MW-12-T01N-GRW		MW-12 10/14/2003 MW-12-D01N-GRW		MW-12 1/7/2004 MW-12-T01N-GRW		MW-12 1/7/2004 MW-12-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.631	:	-		<0.67	:	-		<0.514	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.217	:	-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	0.00093	:	-		0.001	:	-		0.0013	:	-	
Arsenic	mg/L	D	-		0.00077	:	-		0.0011	:	-		0.0012	:
Barium	mg/L	T	0.0649	:	-		0.0717	:	-		0.0644	:	-	
Barium	mg/L	D	-		0.063	:	-		0.0686	:	-		0.0674	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	:	-		<0.0003	:
Boron	mg/L	T	0.0094	:	-		0.0131	:	-		0.008	:	-	
Boron	mg/L	D	-		0.0103	:	-		0.0116	:	-		0.0079	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0007	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	36.5	:	-		39.2	:	-		35.1	:	-	
Calcium	mg/L	D	-		34.9	:	-		36.8	:	-		38.2	:
Chromium	mg/L	T	<0.0006	J	-		<0.0028	J	-		<0.0015	J	-	
Chromium	mg/L	D	-		<0.0006	J	-		<0.0022	J	-		<0.0015	J
Cobalt	mg/L	T	<0.0018	:	-		<0.0031	:	-		<0.0023	:	-	
Cobalt	mg/L	D	-		<0.0018	:	-		<0.0031	:	-		<0.0023	:
Copper	mg/L	T	<0.0014	:	-		<0.002	:	-		<0.003	:	-	
Copper	mg/L	D	-		<0.0014	:	-		<0.0021	:	-		<0.003	:
Iron	mg/L	T	<0.667	:	-		<0.455	:	-		<0.373	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.455	:	-		<0.373	:
Lead	mg/L	T	<0.00025	:	-		<0.0004	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Magnesium	mg/L	T	7.14	:	-		8.02	:	-		6.79	:	-	
Magnesium	mg/L	D	-		6.8	:	-		6.37	:	-		7.38	:
Manganese	mg/L	T	<0.019	:	-		<0.0206	:	-		<0.015	:	-	
Manganese	mg/L	D	-		<0.019	:	-		<0.016	:	-		<0.015	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.0036	:	-		0.0043	:	-		0.0042	:	-	
Molybdenum	mg/L	D	-		0.0041	:	-		0.0041	:	-		0.005	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-12 7/9/2003 MW-12-T01N-GRW GW13		MW-12 7/9/2003 MW-12-D01N-GRW GW13		MW-12 10/14/2003 MW-12-T01N-GRW GW13		MW-12 10/14/2003 MW-12-D01N-GRW GW13		MW-12 1/7/2004 MW-12-T01N-GRW GW13		MW-12 1/7/2004 MW-12-D01N-GRW GW13	
Nickel	mg/L	T	<0.002	J	-		<0.0028	:	-		<0.0024	J	-	
Nickel	mg/L	D	-		<0.002	J	-		<0.0028	:	-		<0.0024	J
Potassium	mg/L	T	2.35	:	-		2.28	:	-		2.22	:	-	
Potassium	mg/L	D	-		2.36	:	-		2.27	:	-		2.34	:
Selenium	mg/L	T	<0.0016	:	-		0.00067	:	-		0.0014	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		0.00093	:	-		0.0012	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	12.5	:	-		30.	J	-		12.8	:	-	
Sodium	mg/L	D	-		11.6	:	-		13.3	J	-		16.5	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0046	:	-		0.0043	:	-		0.0039	:	-	
Vanadium	mg/L	D	-		0.0044	:	-		0.0039	:	-		0.0038	:
Zinc	mg/L	T	<0.016	:	-		<0.019	:	-		<0.026	:	-	
Zinc	mg/L	D	-		<0.016	:	-		<0.019	:	-		<0.026	:

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-12 4/14/2004 MW-12-T01N-GRW		MW-12 4/14/2004 MW-12-D01N-GRW		MW-13 10/30/2002 MW-13-T01N-GRW		MW-13 10/30/2002 MW-13-D01N-GRW		MW-13 12/6/2002 MW-13-T01N-GRW		MW-13 1/11/2003 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	6.44	:	-		6.21	:	-		6.97	:	6.53	:
Eh	millivolts	T	359.	:	-		246.8	:	-		242.	:	236.4	:
pH	SU	T	8.2	J	-		7.96	:	-		7.91	:	8.03	:
Specific Conductance	uS/cm	T	299.	:	-		737.	:	-		720.	:	721.	:
Temperature	Celsius	T	12.54	:	-		12.28	:	-		10.67	:	10.68	:
Turbidity	NTU	T	3.1	:	-		23.6	:	-		49.3	:	39.9	:
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.054	:	-		-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	109.	:	-		92.1	:	-		-		90.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	4.7	:	-		11.1	:	-		-		10.8	:
Fluoride	mg/L	T	0.53	:	-		0.88	:	-		-		0.67	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	0.44	J	-		0.52	J	-		-		<0.73	J
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	0.015	:	-		<0.01	J	-		-		<0.012	J
Phosphorus	mg/L	T	0.022	:	-		0.019	:	-		-		0.01	:
Sulfate	mg/L	T	35.7	:	-		235.	:	-		-		253.	J
Total Alkalinity	mg/L	T	109.	:	-		92.1	:	-		-		90.	:
Total Dissolved Solids	mg/L	T	172.	:	-		325.	:	-		-		481.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.5	J	-		<1.	:	-		-		<1.	:
Total Suspended Solids	mg/L	T	5.4	J	-		1.8	:	-		-		3.3	:
Laboratory Parameters														
pH	SU	T	8.2	J	-		7.96	:	-		7.91	:	8.03	:
Specific Conductance	umhos/cm	T	243.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	127.	:	-		270.	:	-		-		273.	:
Hardness	mg/L	D	-		124.	:	-		268.	:	-		-	
Metals														

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-12 4/14/2004 MW-12-T01N-GRW		MW-12 4/14/2004 MW-12-D01N-GRW		MW-13 10/30/2002 MW-13-T01N-GRW		MW-13 10/30/2002 MW-13-D01N-GRW		MW-13 12/6/2002 MW-13-T01N-GRW		MW-13 1/11/2003 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.201	:	-		<0.0174	:	-		-		<0.142	:
Aluminum	mg/L	D	-		<0.201	:	-		<0.0051	:	-		-	
Antimony	mg/L	T	<0.0008	:	-		<0.0002	:	-		-		<0.0006	:
Antimony	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		-	
Arsenic	mg/L	T	0.00088	:	-		0.0013	J	-		-		0.0014	:
Arsenic	mg/L	D	-		0.00082	:	-		0.0013	J	-		-	
Barium	mg/L	T	0.0676	:	-		0.038	:	-		-		0.0386	:
Barium	mg/L	D	-		0.0634	:	-		0.0379	:	-		-	
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Boron	mg/L	T	0.0074	:	-		0.0467	:	-		-		<0.0504	:
Boron	mg/L	D	-		0.0065	:	-		0.0471	:	-		-	
Cadmium	mg/L	T	<0.0003	:	-		<0.0001	:	-		-		<0.0004	:
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0001	:	-		-	
Calcium	mg/L	T	38.6	:	-		76.2	:	-		-		77.	:
Calcium	mg/L	D	-		37.4	:	-		75.6	:	-		-	
Chromium	mg/L	T	<0.0017	:	-		<0.0046	:	-		-		<0.0037	:
Chromium	mg/L	D	-		<0.0008	:	-		<0.0046	:	-		-	
Chromium, Hexavalent	mg/L	D	-		-		0.0023	J	-		-		-	
Cobalt	mg/L	T	<0.0011	:	-		<0.0022	:	-		-		<0.0016	:
Cobalt	mg/L	D	-		<0.0011	:	-		<0.0022	:	-		-	
Copper	mg/L	T	<0.0007	:	-		0.00074	:	-		-		<0.0017	:
Copper	mg/L	D	-		<0.0007	:	-		<0.00034	:	-		-	
Iron	mg/L	T	<0.293	J	-		<0.0425	:	-		-		<0.489	:
Iron	mg/L	D	-		<0.293	:	-		<0.0351	:	-		-	
Lead	mg/L	T	<0.0008	:	-		<0.00014	:	-		-		<0.0002	:
Lead	mg/L	D	-		<0.0008	:	-		<0.0001	:	-		-	
Magnesium	mg/L	T	7.56	:	-		19.3	:	-		-		19.5	:
Magnesium	mg/L	D	-		7.32	:	-		19.3	:	-		-	
Manganese	mg/L	T	<0.014	:	-		<0.0025	:	-		-		<0.005	:
Manganese	mg/L	D	-		<0.014	:	-		<0.0025	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	0.0058	:	-		0.328	:	-		-		0.342	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-12 4/14/2004 MW-12-T01N-GRW GW13		MW-12 4/14/2004 MW-12-D01N-GRW GW13		MW-13 10/30/2002 MW-13-T01N-GRW GW13		MW-13 10/30/2002 MW-13-D01N-GRW GW13		MW-13 12/6/2002 MW-13-T01N-GRW GW13		MW-13 1/11/2003 MW-13-T01N-GRW GW13	
Molybdenum	mg/L	D	-		<0.0052	:	-		0.335	:	-		-	
Nickel	mg/L	T	<0.0014	:	-		<0.0002	J	-		-		<0.0015	:
Nickel	mg/L	D	-		<0.0014	:	-		<0.0002	J	-		-	
Potassium	mg/L	T	2.41	:	-		5.5	:	-		-		5.76	:
Potassium	mg/L	D	-		2.09	:	-		5.43	:	-		-	
Selenium	mg/L	T	<0.0014	:	-		<0.00046	:	-		-		<0.0016	:
Selenium	mg/L	D	-		<0.0014	:	-		<0.00046	:	-		-	
Silver	mg/L	T	<0.0002	J	-		<0.0001	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	J	-		<0.0001	:	-		-	
Sodium	mg/L	T	13.5	J	-		40.9	:	-		-		41.3	:
Sodium	mg/L	D	-		5.11	J	-		41.3	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0001	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		-	
Vanadium	mg/L	T	0.0046	:	-		0.0058	:	-		-		0.0059	:
Vanadium	mg/L	D	-		0.0042	:	-		0.0057	:	-		-	
Zinc	mg/L	T	<0.024	:	-		<0.0069	:	-		-		<0.039	:
Zinc	mg/L	D	-		<0.024	:	-		<0.0069	:	-		-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID					
			MW-13 1/11/2003 MW-13-D01N-GRW	MW-13 2/7/2003 MW-13-T01N-GRW	MW-13 3/6/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-D01N-GRW	MW-13 5/9/2003 MW-13-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements								
DO	mg/L	T	-	5.82 :	7.95 :	1.19 :	-	6.5 :
Eh	millivolts	T	-	222.3 :	252.2 :	174.7 :	-	325.8 :
pH	SU	T	-	7.83 :	7.99 :	8.2 J	-	7.67 :
Specific Conductance	uS/cm	T	-	82. :	687. :	975. :	-	707. :
Temperature	Celsius	T	-	11.01 :	11.17 :	8.06 :	-	13.05 :
Turbidity	NTU	T	-	0.2 :	0. :	6.4 :	-	12.5 :
General Chemistry								
Ammonia	mg/L	T	-	-	-	<0.16 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	89.8 :	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Chloride	mg/L	T	-	-	-	11.3 :	-	-
Fluoride	mg/L	T	-	-	-	0.71 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Nitrate	mg/L	T	-	-	-	<0.71 J	-	-
Nitrite	mg/L	T	-	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	-	-	-	<0.38 J	-	-
Phosphorus	mg/L	T	-	-	-	<0.01 J	-	-
Sulfate	mg/L	T	-	-	-	<221. J	-	-
Total Alkalinity	mg/L	T	-	-	-	90.2 :	-	-
Total Dissolved Solids	mg/L	T	-	-	-	536. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	-	-	<1. J	-	-
Total Suspended Solids	mg/L	T	-	-	-	<1. :	-	-
Laboratory Parameters								
pH	SU	T	-	7.83 :	7.99 :	8.2 J	-	7.67 :
Specific Conductance	umhos/cm	T	-	-	-	673. J	-	-
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	-	-	279. :	-	-
Hardness	mg/L	D	271. :	-	-	-	276. :	-
Metals								

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-13 1/11/2003 MW-13-D01N-GRW	MW-13 2/7/2003 MW-13-T01N-GRW	MW-13 3/6/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-D01N-GRW	MW-13 5/9/2003 MW-13-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T	-	-	-	<0.503 :	-	-
Aluminum	mg/L	D	<0.142 :	-	-	-	<0.503 :	-
Antimony	mg/L	T	-	-	-	<0.0006 :	-	-
Antimony	mg/L	D	<0.0006 :	-	-	-	<0.0006 :	-
Arsenic	mg/L	T	-	-	-	0.0014 :	-	-
Arsenic	mg/L	D	0.0015 :	-	-	-	0.0014 :	-
Barium	mg/L	T	-	-	-	0.039 :	-	-
Barium	mg/L	D	0.0373 :	-	-	-	0.0378 :	-
Beryllium	mg/L	T	-	-	-	<0.0003 J	-	-
Beryllium	mg/L	D	<0.0002 :	-	-	-	<0.0003 J	-
Boron	mg/L	T	-	-	-	0.046 :	-	-
Boron	mg/L	D	0.0492 :	-	-	-	0.0457 :	-
Cadmium	mg/L	T	-	-	-	<0.0005 :	-	-
Cadmium	mg/L	D	<0.0004 :	-	-	-	<0.0005 :	-
Calcium	mg/L	T	-	-	-	79.3 :	-	-
Calcium	mg/L	D	76.3 :	-	-	-	78.1 :	-
Chromium	mg/L	T	-	-	-	0.003 :	-	-
Chromium	mg/L	D	<0.0037 :	-	-	-	<0.0028 :	-
Cobalt	mg/L	T	-	-	-	<0.0038 :	-	-
Cobalt	mg/L	D	<0.0016 :	-	-	-	<0.0038 :	-
Copper	mg/L	T	-	-	-	<0.0047 :	-	-
Copper	mg/L	D	<0.0017 :	-	-	-	<0.005 :	-
Iron	mg/L	T	-	-	-	<0.311 :	-	-
Iron	mg/L	D	<0.489 :	-	-	-	<0.311 :	-
Lead	mg/L	T	-	-	-	<0.0002 :	-	-
Lead	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	-	19.8 :	-	-
Magnesium	mg/L	D	19.5 :	-	-	-	19.6 :	-
Manganese	mg/L	T	-	-	-	<0.01 :	-	-
Manganese	mg/L	D	<0.005 :	-	-	-	<0.01 :	-
Mercury	mg/L	T	-	-	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	<0.0001 :	-
Molybdenum	mg/L	T	-	-	-	0.338 :	-	-
Molybdenum	mg/L	D	0.334 :	-	-	-	0.33 :	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-13 1/11/2003 MW-13-D01N-GRW	MW-13 2/7/2003 MW-13-T01N-GRW	MW-13 3/6/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-T01N-GRW	MW-13 4/4/2003 MW-13-D01N-GRW	MW-13 5/9/2003 MW-13-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Nickel	mg/L	T	-	-	-	<0.003 :	-	-
Nickel	mg/L	D	<0.0015 :	-	-	-	<0.003 :	-
Potassium	mg/L	T	-	-	-	5.26 :	-	-
Potassium	mg/L	D	5.62 :	-	-	-	5.11 :	-
Selenium	mg/L	T	-	-	-	<0.001 :	-	-
Selenium	mg/L	D	<0.0016 :	-	-	-	<0.001 :	-
Silver	mg/L	T	-	-	-	<0.0002 J	-	-
Silver	mg/L	D	<0.0002 :	-	-	-	<0.0002 J	-
Sodium	mg/L	T	-	-	-	41.8 :	-	-
Sodium	mg/L	D	42.5 :	-	-	-	41.1 :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	0.0059 :	-	-
Vanadium	mg/L	D	0.0057 :	-	-	-	0.0059 :	-
Zinc	mg/L	T	-	-	-	<0.014 :	-	-
Zinc	mg/L	D	<0.039 :	-	-	-	<0.014 :	-

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-13 6/5/2003 MW-13-T01N-GRW		MW-13 7/9/2003 MW-13-T01N-GRW		MW-13 7/9/2003 MW-13-D01N-GRW		MW-13 8/9/2003 MW-13-T01N-GRW		MW-13 9/6/2003 MW-13-T01N-GRW		MW-13 10/14/2003 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	1.68	:	4.65	:	-		5.27	:	0.94	:	8.66	:
Eh	millivolts	T	113.3	:	102.7	:	-		396.6	:	172.8	:	310.1	:
pH	SU	T	7.98	:	8.	J	-		8.02	:	8.09	:	8.1	J
Specific Conductance	uS/cm	T	686.	:	631.	:	-		683.	:	669.	:	650.	:
Temperature	Celsius	T	16.51	:	14.67	:	-		18.35	:	13.16	:	12.96	:
Turbidity	NTU	T	2.7	:	0.	:	-		10.4	:	1.5	:	0.1	:
General Chemistry														
Ammonia	mg/L	T	-		<0.065	J	-		-		-		<0.066	J
Bicarbonate (as CaCO3)	mg/L	T	-		93.6	:	-		-		-		94.9	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		11.7	:	-		-		-		11.2	:
Fluoride	mg/L	T	-		0.75	:	-		-		-		0.74	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		0.64	J	-		-		-		0.56	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		<0.011	J
Phosphorus	mg/L	T	-		<0.01	:	-		-		-		0.019	:
Sulfate	mg/L	T	-		308.	J	-		-		-		217.	J
Total Alkalinity	mg/L	T	-		93.6	:	-		-		-		94.9	:
Total Dissolved Solids	mg/L	T	-		500.	:	-		-		-		530.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		-		-		1.2	J
Total Suspended Solids	mg/L	T	-		<1.	:	-		-		-		<0.9	:
Laboratory Parameters														
pH	SU	T	7.98	:	8.	J	-		8.02	:	8.09	:	8.1	J
Specific Conductance	umhos/cm	T	-		631.	J	-		-		-		616.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		270.	:	-		-		-		265.	:
Hardness	mg/L	D	-		-		270.	:	-		-		-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Site ID / Sample Date / Sample ID / Exposure Area			MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
			6/5/2003	7/9/2003	7/9/2003	8/9/2003	9/6/2003	10/14/2003
			MW-13-T01N-GRW	MW-13-T01N-GRW	MW-13-D01N-GRW	MW-13-T01N-GRW	MW-13-T01N-GRW	MW-13-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Paramete	**Units**	**Fraction**						
Aluminum	mg/L	T	-	<0.631 :	-	-	-	<0.319 :
Aluminum	mg/L	D	-	-	<0.631 :	-	-	-
Antimony	mg/L	T	-	<0.001 :	-	-	-	<0.001 :
Antimony	mg/L	D	-	-	<0.001 :	-	-	-
Arsenic	mg/L	T	-	0.0021 :	-	-	-	0.0015 :
Arsenic	mg/L	D	-	-	0.0016 :	-	-	-
Barium	mg/L	T	-	0.0364 :	-	-	-	0.0374 :
Barium	mg/L	D	-	-	0.036 :	-	-	-
Beryllium	mg/L	T	-	<0.0002 :	-	-	-	<0.0003 :
Beryllium	mg/L	D	-	-	<0.0002 :	-	-	-
Boron	mg/L	T	-	0.0496 :	-	-	-	0.056 :
Boron	mg/L	D	-	-	0.0492 :	-	-	-
Cadmium	mg/L	T	-	<0.0006 :	-	-	-	<0.0007 :
Cadmium	mg/L	D	-	-	<0.0006 :	-	-	-
Calcium	mg/L	T	-	75.9 :	-	-	-	73. :
Calcium	mg/L	D	-	-	75.8 :	-	-	-
Chromium	mg/L	T	-	0.0022 :	-	-	-	<0.0035 J
Chromium	mg/L	D	-	-	0.0022 :	-	-	-
Cobalt	mg/L	T	-	<0.002 :	-	-	-	<0.0031 :
Cobalt	mg/L	D	-	-	<0.002 :	-	-	-
Copper	mg/L	T	-	<0.0024 :	-	-	-	<0.002 :
Copper	mg/L	D	-	-	<0.0024 :	-	-	-
Iron	mg/L	T	-	<0.667 :	-	-	-	<0.455 :
Iron	mg/L	D	-	-	<0.667 :	-	-	-
Lead	mg/L	T	-	<0.00094 :	-	-	-	<0.0004 :
Lead	mg/L	D	-	-	<0.00087 :	-	-	-
Magnesium	mg/L	T	-	19.6 :	-	-	-	20.2 :
Magnesium	mg/L	D	-	-	19.6 :	-	-	-
Manganese	mg/L	T	-	<0.019 :	-	-	-	<0.0195 :
Manganese	mg/L	D	-	-	<0.019 :	-	-	-
Mercury	mg/L	T	-	<0.0001 J	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 J	-	-	-
Molybdenum	mg/L	T	-	0.337 :	-	-	-	0.351 :
Molybdenum	mg/L	D	-	-	0.335 :	-	-	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID													
			MW-13 6/5/2003 MW-13-T01N-GRW		MW-13 7/9/2003 MW-13-T01N-GRW		MW-13 7/9/2003 MW-13-D01N-GRW		MW-13 8/9/2003 MW-13-T01N-GRW		MW-13 9/6/2003 MW-13-T01N-GRW		MW-13 10/14/2003 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0021	:	-		-		-		<0.0028	:
Nickel	mg/L	D	-		-		<0.0021	:	-		-		-	
Potassium	mg/L	T	-		5.64	:	-		-		-		5.49	:
Potassium	mg/L	D	-		-		5.56	:	-		-		-	
Selenium	mg/L	T	-		0.0025	:	-		-		-		<0.0006	:
Selenium	mg/L	D	-		-		<0.0016	J	-		-		-	
Silver	mg/L	T	-		<0.0002	J	-		-		-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	J	-		-		-	
Sodium	mg/L	T	-		41.5	:	-		-		-		48.2	J
Sodium	mg/L	D	-		-		40.8	:	-		-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		-		-	
Vanadium	mg/L	T	-		0.0064	:	-		-		-		0.0057	:
Vanadium	mg/L	D	-		-		0.0065	:	-		-		-	
Zinc	mg/L	T	-		<0.0226	:	-		-		-		<0.019	:
Zinc	mg/L	D	-		-		<0.0182	:	-		-		-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			MW-13 10/14/2003 MW-13-D01N-GRW		MW-13 11/1/2003 MW-13-T01N-GRW		MW-13 12/7/2003 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-D01N-GRW	MW-13 4/15/2004 MW-13-T01N-GRW
			GW13		GW13		GW13		GW13		GW13	GW13
Field Measurements												
DO	mg/L	T	-		6.	:	3.23	:	8.68	:	-	3.81 :
Eh	millivolts	T	-		36.9	:	172.4	:	332.8	:	-	187.4 :
pH	SU	T	-		7.78	:	7.99	:	8.1	J	-	8.05 :
Specific Conductance	uS/cm	T	-		626.	:	667.	:	670.	:	-	680. :
Temperature	Celsius	T	-		-		11.5	:	10.17	:	-	13.11 :
Turbidity	NTU	T	-		0.	:	1.2	:	1.3	:	-	0.5 :
General Chemistry												
Ammonia	mg/L	T	-		-		-		<0.052	J	-	<0.11 :
Bicarbonate (as CaCO3)	mg/L	T	-		-		-		93.2	:	-	97. :
Carbonate (as CaCO3)	mg/L	T	-		-		-		<1.	:	-	<1. :
Chloride	mg/L	T	-		-		-		11.	:	-	11. :
Fluoride	mg/L	T	-		-		-		0.74	:	-	0.82 :
Hydroxide (as CaCO3)	mg/L	T	-		-		-		<1.	:	-	<1. :
Nitrate	mg/L	T	-		-		-		<0.56	J	-	0.72 J
Nitrite	mg/L	T	-		-		-		<0.005	J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-		-		-		<0.015	J	-	0.014 :
Phosphorus	mg/L	T	-		-		-		<0.023	:	-	<0.01 :
Sulfate	mg/L	T	-		-		-		220.	:	-	212. :
Total Alkalinity	mg/L	T	-		-		-		93.2	:	-	97. :
Total Dissolved Solids	mg/L	T	-		-		-		454.	:	-	472. :
Total Kjeldahl Nitrogen	mg/L	T	-		-		-		<0.24	:	-	<0.24 :
Total Organic Carbon	mg/L	T	-		-		-		<1.6	:	-	<2.1 J
Total Suspended Solids	mg/L	T	-		-		-		<0.7	:	-	14.3 J
Laboratory Parameters												
pH	SU	T	-		7.78	:	7.99	:	8.1	J	-	8.05 :
Specific Conductance	umhos/cm	T	-		-		-		623.	J	-	586. J
Inorganics												
Cyanide	mg/L	T	-		-		-		<0.01	J	-	<0.01 :
Physical Properties												
Hardness	mg/L	T	-		-		-		240.	:	-	279. :
Hardness	mg/L	D	252.	:	-		-		-		264. :	-
Metals												

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-13 10/14/2003 MW-13-D01N-GRW		MW-13 11/1/2003 MW-13-T01N-GRW		MW-13 12/7/2003 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-D01N-GRW		MW-13 4/15/2004 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		-		-		<0.621	:	-		<0.176	J
Aluminum	mg/L	D	<0.231	:	-		-		-		<0.621	:	-	
Antimony	mg/L	T	-		-		-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		-		-		<0.0024	:	-	
Arsenic	mg/L	T	-		-		-		0.0017	:	-		0.0015	:
Arsenic	mg/L	D	0.0015	:	-		-		-		0.0017	:	-	
Barium	mg/L	T	-		-		-		0.0284	:	-		0.0314	:
Barium	mg/L	D	0.0354	:	-		-		-		0.0317	:	-	
Beryllium	mg/L	T	-		-		-		<0.001	J	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	:	-		-		-		<0.001	J	-	
Boron	mg/L	T	-		-		-		0.0391	:	-		0.047	:
Boron	mg/L	D	0.0519	:	-		-		-		0.0447	:	-	
Cadmium	mg/L	T	-		-		-		<0.0007	J	-		<0.0003	J
Cadmium	mg/L	D	<0.0007	:	-		-		-		<0.0007	:	-	
Calcium	mg/L	T	-		-		-		67.3	:	-		77.3	:
Calcium	mg/L	D	69.4	:	-		-		-		74.1	:	-	
Chromium	mg/L	T	-		-		-		<0.0057	:	-		<0.0024	:
Chromium	mg/L	D	<0.0029	J	-		-		-		<0.0057	:	-	
Cobalt	mg/L	T	-		-		-		<0.0037	:	-		<0.0011	:
Cobalt	mg/L	D	0.0031	:	-		-		-		<0.0037	:	-	
Copper	mg/L	T	-		-		-		<0.0035	:	-		<0.0007	J
Copper	mg/L	D	<0.002	:	-		-		-		<0.0035	:	-	
Iron	mg/L	T	-		-		-		<0.423	:	-		<0.192	J
Iron	mg/L	D	<0.455	:	-		-		-		<0.423	:	-	
Lead	mg/L	T	-		-		-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	<0.0004	:	-		-		-		<0.0002	:	-	
Magnesium	mg/L	T	-		-		-		17.4	:	-		20.9	:
Magnesium	mg/L	D	19.1	:	-		-		-		19.1	:	-	
Manganese	mg/L	T	-		-		-		<0.019	:	-		<0.019	:
Manganese	mg/L	D	<0.016	:	-		-		-		<0.019	:	-	
Mercury	mg/L	T	-		-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		-		-		<0.0001	:	-	
Molybdenum	mg/L	T	-		-		-		0.274	:	-		0.367	:
Molybdenum	mg/L	D	0.332	:	-		-		-		0.314	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-13 10/14/2003 MW-13-D01N-GRW		MW-13 11/1/2003 MW-13-T01N-GRW		MW-13 12/7/2003 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-T01N-GRW		MW-13 1/8/2004 MW-13-D01N-GRW		MW-13 4/15/2004 MW-13-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		-		-		<0.0168	:	-		<0.0014	:
Nickel	mg/L	D	<0.0028	:	-		-		-		<0.0168	:	-	
Potassium	mg/L	T	-		-		-		4.47	:	-		<5.34	:
Potassium	mg/L	D	5.09	:	-		-		-		5.04	:	-	
Selenium	mg/L	T	-		-		-		<0.00087	J	-		<0.0014	:
Selenium	mg/L	D	0.00063	:	-		-		-		<0.002	:	-	
Silver	mg/L	T	-		-		-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		-		-		<0.0002	:	-	
Sodium	mg/L	T	-		-		-		40.3	:	-		41.2	J
Sodium	mg/L	D	37.	J	-		-		-		39.1	:	-	
Thallium	mg/L	T	-		-		-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		-		-		<0.0002	:	-	
Vanadium	mg/L	T	-		-		-		0.0056	:	-		0.0064	:
Vanadium	mg/L	D	0.0056	:	-		-		-		0.0057	:	-	
Zinc	mg/L	T	-		-		-		<0.091	:	-		<0.015	:
Zinc	mg/L	D	<0.019	:	-		-		-		<0.091	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-13 4/15/2004 MW-13-D01N-GRW		MW-22 7/9/2003 MW-22-T01N-GRW		MW-22 7/9/2003 MW-22-D01N-GRW		MW-22 8/10/2003 MW-22-T01N-GRW		MW-22 8/10/2003 MW-22-D01N-GRW		MW-22 9/8/2003 MW-22-T01N-GRW	
			GW13		TLR		TLR		TLR		TLR		TLR	
Field Measurements														
DO	mg/L	T	-		2.67	:	-		3.62	:	-		4.11	:
Eh	millivolts	T	-		254.5	:	-		356.8	:	-		358.8	:
pH	SU	T	-		8.	J	-		7.75	:	-		7.98	:
Specific Conductance	uS/cm	T	-		238.	:	-		225.	:	-		244.	:
Temperature	Celsius	T	-		17.15	:	-		16.9	:	-		14.82	:
Turbidity	NTU	T	-		69.6	:	-		4.5	:	-		4.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.11	J	-		0.042	:	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		88.4	:	-		85.7	:	-		85.5	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		10.2	:	-		9.7	:	-		10.2	:
Fluoride	mg/L	T	-		1.1	:	-		1.1	:	-		1.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.41	J	-		0.35	:	-		0.4	:
Nitrite	mg/L	T	-		0.021	J	-		<0.005	J	-		0.0059	:
Phosphate, Ortho As P	mg/L	T	-		<0.049	J	-		<0.01	J	-		<0.01	:
Phosphorus	mg/L	T	-		0.026	J	-		0.014	:	-		0.013	:
Sulfate	mg/L	T	-		22.7	J	-		25.1	J	-		21.6	J
Total Alkalinity	mg/L	T	-		88.4	:	-		85.7	:	-		85.5	:
Total Dissolved Solids	mg/L	T	-		194.	:	-		<204.	:	-		<202.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.25	:
Total Organic Carbon	mg/L	T	-		<1.2	J	-		<1.	J	-		<1.4	:
Total Suspended Solids	mg/L	T	-		11.4	:	-		<2.4	:	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		8.	J	-		7.75	:	-		7.98	:
Specific Conductance	umhos/cm	T	-		225.	J	-		218.	:	-		205.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		62.8	:	-		67.8	:	-		68.7	:
Hardness	mg/L	D	276.	:	-		62.6	:	-		67.2	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-13 4/15/2004 MW-13-D01N-GRW GW13	MW-22 7/9/2003 MW-22-T01N-GRW TLR	MW-22 7/9/2003 MW-22-D01N-GRW TLR	MW-22 8/10/2003 MW-22-T01N-GRW TLR	MW-22 8/10/2003 MW-22-D01N-GRW TLR	MW-22 9/8/2003 MW-22-T01N-GRW TLR
Aluminum	mg/L	T	-	0.668 :	-	<0.631 :	-	<0.296 :
Aluminum	mg/L	D	<0.176 J	-	<0.631 :	-	<0.631 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D	<0.0008 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	0.00087 :	-	0.0014 :	-	0.0017 :
Arsenic	mg/L	D	0.0014 :	-	0.00088 :	-	0.0015 :	-
Barium	mg/L	T	-	0.0291 :	-	0.0212 :	-	0.0186 :
Barium	mg/L	D	0.0298 :	-	0.0228 :	-	0.0195 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0004 :
Beryllium	mg/L	D	<0.0002 :	-	<0.00052 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0456 :	-	0.0477 :	-	0.0488 :
Boron	mg/L	D	0.0436 :	-	0.0429 :	-	0.048 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0006 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0003 J	-	<0.0003 :	-	<0.0006 :	-
Calcium	mg/L	T	-	16.7 :	-	18.2 :	-	17.8 :
Calcium	mg/L	D	76.3 :	-	16.6 :	-	18. :	-
Chromium	mg/L	T	-	0.0082 J	-	<0.003 :	-	<0.0014 :
Chromium	mg/L	D	<0.0024 :	-	<0.0006 J	-	0.0019 :	-
Cobalt	mg/L	T	-	0.002 :	-	<0.002 :	-	<0.0029 :
Cobalt	mg/L	D	<0.0011 :	-	<0.0018 :	-	0.0029 :	-
Copper	mg/L	T	-	<0.0052 :	-	<0.0039 :	-	<0.0028 :
Copper	mg/L	D	<0.0007 J	-	<0.0014 :	-	0.0097 :	-
Iron	mg/L	T	-	3.09 :	-	<0.667 :	-	<0.464 :
Iron	mg/L	D	<0.192 :	-	<0.667 :	-	<0.667 :	-
Lead	mg/L	T	-	0.0013 :	-	<0.0002 :	-	<0.00063 :
Lead	mg/L	D	<0.0008 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	5.14 :	-	5.43 :	-	5.92 :
Magnesium	mg/L	D	20.7 :	-	5.11 :	-	5.4 :	-
Manganese	mg/L	T	-	0.104 :	-	0.0645 :	-	<0.0558 :
Manganese	mg/L	D	<0.019 :	-	0.0788 :	-	0.0593 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0227 :	-	0.0165 :	-	0.0134 :
Molybdenum	mg/L	D	0.352 :	-	0.02 :	-	0.0164 :	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-13 4/15/2004 MW-13-D01N-GRW GW13	MW-22 7/9/2003 MW-22-T01N-GRW TLR	MW-22 7/9/2003 MW-22-D01N-GRW TLR	MW-22 8/10/2003 MW-22-T01N-GRW TLR	MW-22 8/10/2003 MW-22-D01N-GRW TLR	MW-22 9/8/2003 MW-22-T01N-GRW TLR
Nickel	mg/L	T	-	<0.002 J	-	<0.0123 J	-	<0.0024 :
Nickel	mg/L	D	<0.0014 :	-	<0.002 J	-	<0.0021 J	-
Potassium	mg/L	T	-	3.27 :	-	2.95 :	-	2.52 J
Potassium	mg/L	D	<5.24 :	-	2.93 :	-	3.08 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.0016 :	-	0.00066 :
Selenium	mg/L	D	<0.0014 :	-	<0.0016 J	-	<0.0016 :	-
Silver	mg/L	T	-	<0.0002 J	-	<0.0009 J	-	<0.0002 :
Silver	mg/L	D	<0.0002 J	-	<0.0002 J	-	<0.0009 J	-
Sodium	mg/L	T	-	22.9 :	-	25. :	-	20. :
Sodium	mg/L	D	38.8 J	-	23.8 :	-	29. :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.0026 :	-	0.0031 :	-	0.0045 :
Vanadium	mg/L	D	0.0065 :	-	0.002 :	-	0.0032 :	-
Zinc	mg/L	T	-	0.237 :	-	<0.0781 :	-	<0.0259 :
Zinc	mg/L	D	<0.015 :	-	<0.132 :	-	<0.0541 :	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-22 9/8/2003 MW-22-D01N-GRW		MW-22 10/14/2003 MW-22-T01N-GRW		MW-22 10/14/2003 MW-22-D01N-GRW		MW-22 11/2/2003 MW-22-T01N-GRW		MW-22 11/2/2003 MW-22-D01N-GRW		MW-22 12/7/2003 MW-22-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		TLR	
Field Measurements														
DO	mg/L	T	-		4.48	:	-		4.78	:	-		5.37	:
Eh	millivolts	T	-		292.2	:	-		370.	:	-		165.1	:
pH	SU	T	-		8.1	J	-		8.1	J	-		8.16	:
Specific Conductance	uS/cm	T	-		232.	:	-		236.	:	-		241.	:
Temperature	Celsius	T	-		11.76	:	-		13.28	:	-		11.59	:
Turbidity	NTU	T	-		0.3	:	-		0.	:	-		23.9	:
General Chemistry														
Ammonia	mg/L	T	-		<0.053	J	-		<0.04	:	-		0.077	:
Bicarbonate (as CaCO3)	mg/L	T	-		85.2	:	-		79.6	:	-		81.6	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		10.2	:	-		10.6	:	-		10.7	:
Fluoride	mg/L	T	-		1.1	:	-		1.1	:	-		1.	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.4	J	-		0.46	J	-		0.54	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.012	J	-		0.011	J	-		0.068	J
Phosphorus	mg/L	T	-		0.014	:	-		0.013	:	-		0.026	J
Sulfate	mg/L	T	-		<18.7	J	-		19.7	:	-		20.6	:
Total Alkalinity	mg/L	T	-		85.2	:	-		79.6	:	-		81.6	J
Total Dissolved Solids	mg/L	T	-		206.	:	-		208.	:	-		182.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		2.2	:	-		<0.24	J
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.9	:	-		<0.5	:	-		0.7	:
Laboratory Parameters														
pH	SU	T	-		8.1	J	-		8.1	J	-		8.16	:
Specific Conductance	umhos/cm	T	-		213.	J	-		237.	J	-		189.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		63.2	:	-		64.5	:	-		65.7	:
Hardness	mg/L	D	63.4	:	-		63.1	:	-		65.8	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-22 9/8/2003 MW-22-D01N-GRW		MW-22 10/14/2003 MW-22-T01N-GRW		MW-22 10/14/2003 MW-22-D01N-GRW		MW-22 11/2/2003 MW-22-T01N-GRW		MW-22 11/2/2003 MW-22-D01N-GRW		MW-22 12/7/2003 MW-22-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		TLR	
Aluminum	mg/L	T	-		<0.445	:	-		<0.217	:	-		<0.307	J
Aluminum	mg/L	D	<0.217	:	-		<0.217	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0019	:	-		0.0026	:	-		0.0021	:
Arsenic	mg/L	D	0.0016	:	-		0.0018	:	-		0.0022	:	-	
Barium	mg/L	T	-		0.0167	:	-		0.0144	:	-		0.0147	:
Barium	mg/L	D	0.0183	:	-		0.016	:	-		0.0148	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	J	-		<0.00095	:
Beryllium	mg/L	D	<0.0004	:	-		<0.0003	:	-		<0.0003	J	-	
Boron	mg/L	T	-		0.0479	:	-		0.0389	:	-		0.0391	:
Boron	mg/L	D	0.0485	:	-		0.0474	:	-		0.0421	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		16.5	:	-		17.1	:	-		17.4	:
Calcium	mg/L	D	16.4	:	-		16.6	:	-		17.5	:	-	
Chromium	mg/L	T	-		<0.0031	J	-		<0.002	:	-		<0.0013	J
Chromium	mg/L	D	<0.0011	:	-		<0.0032	J	-		<0.0024	:	-	
Cobalt	mg/L	T	-		<0.0031	:	-		0.0048	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0031	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.0023	:	-		<0.002	:	-		<0.002	:
Copper	mg/L	D	<0.0022	:	-		<0.0026	:	-		<0.002	:	-	
Iron	mg/L	T	-		0.58	:	-		<0.455	:	-		<0.3	:
Iron	mg/L	D	<0.455	:	-		<0.455	:	-		<0.455	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Lead	mg/L	D	<0.00095	:	-		<0.0004	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		5.33	:	-		5.28	:	-		5.36	:
Magnesium	mg/L	D	5.44	:	-		5.22	:	-		5.38	:	-	
Manganese	mg/L	T	-		0.046	:	-		0.0199	J	-		0.0132	:
Manganese	mg/L	D	<0.0503	:	-		<0.0191	:	-		0.0172	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0108	:	-		0.0112	:	-		0.0089	J
Molybdenum	mg/L	D	0.0134	:	-		0.0107	:	-		0.0113	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-22 9/8/2003 MW-22-D01N-GRW		MW-22 10/14/2003 MW-22-T01N-GRW		MW-22 10/14/2003 MW-22-D01N-GRW		MW-22 11/2/2003 MW-22-T01N-GRW		MW-22 11/2/2003 MW-22-D01N-GRW		MW-22 12/7/2003 MW-22-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		TLR	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:
Nickel	mg/L	D	<0.0024	:	-		<0.0028	:	-		<0.0028	:	-	
Potassium	mg/L	T	-		2.72	:	-		<3.24	:	-		0.633	J
Potassium	mg/L	D	2.61	J	-		2.66	:	-		<3.07	:	-	
Selenium	mg/L	T	-		0.00093	:	-		0.00082	:	-		0.00062	:
Selenium	mg/L	D	0.00069	:	-		0.00081	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		26.8	:	-		25.3	:	-		23.6	:
Sodium	mg/L	D	17.9	:	-		23.5	:	-		28.2	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.005	:	-		0.0075	:	-		0.0063	:
Vanadium	mg/L	D	0.0042	:	-		0.0048	:	-		0.0066	:	-	
Zinc	mg/L	T	-		<0.019	:	-		<0.019	:	-		<0.02	:
Zinc	mg/L	D	<0.019	:	-		<0.019	:	-		<0.019	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-22 12/7/2003 MW-22-D01N-GRW		MW-22 1/6/2004 MW-22-T01N-GRW		MW-22 1/6/2004 MW-22-D01N-GRW		MW-22 4/14/2004 MW-22-T01N-GRW		MW-22 4/14/2004 MW-22-D01N-GRW		MW-23 5/6/2003 MW-23-T01N-GRW	
			TLR		TLR		TLR		TLR		TLR		GW13	
Field Measurements														
DO	mg/L	T	-		3.04	:	-		5.82	:	-		6.49	:
Eh	millivolts	T	-		66.2	:	-		169.5	:	-		230.8	:
pH	SU	T	-		7.87	:	-		8.29	:	-		7.85	:
Specific Conductance	uS/cm	T	-		241.	:	-		237.	:	-		427.	:
Temperature	Celsius	T	-		10.41	:	-		12.83	:	-		12.41	:
Turbidity	NTU	T	-		1.	:	-		1.8	:	-		5.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.086	J	-		<0.054	:	-		<0.092	:
Bicarbonate (as CaCO3)	mg/L	T	-		83.3	:	-		84.8	:	-		92.5	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		10.1	:	-		10.5	:	-		<14.3	:
Fluoride	mg/L	T	-		1.	:	-		1.1	:	-		0.83	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.45	J	-		0.52	J	-		0.8	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		0.0085	J
Phosphate, Ortho As P	mg/L	T	-		<0.02	J	-		<0.01	J	-		<0.01	J
Phosphorus	mg/L	T	-		<0.01	:	-		0.011	:	-		<0.039	:
Sulfate	mg/L	T	-		18.7	:	-		20.	:	-		81.	:
Total Alkalinity	mg/L	T	-		83.3	:	-		84.8	:	-		92.5	:
Total Dissolved Solids	mg/L	T	-		174.	:	-		166.	:	-		294.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.27	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.5	:	-		1.3	:
Total Suspended Solids	mg/L	T	-		<0.8	:	-		<3.	:	-		18.7	:
Laboratory Parameters														
pH	SU	T	-		7.87	:	-		8.29	:	-		7.85	:
Specific Conductance	umhos/cm	T	-		221.	J	-		204.	J	-		399.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		65.4	:	-		69.5	:	-		130.	:
Hardness	mg/L	D	64.9	:	-		67.7	:	-		69.3	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-22 12/7/2003 MW-22-D01N-GRW TLR	MW-22 1/6/2004 MW-22-T01N-GRW TLR	MW-22 1/6/2004 MW-22-D01N-GRW TLR	MW-22 4/14/2004 MW-22-T01N-GRW TLR	MW-22 4/14/2004 MW-22-D01N-GRW TLR	MW-23 5/6/2003 MW-23-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.621 :	-	<0.176 J	-	<0.426 :
Aluminum	mg/L	D	<0.307 J	-	<0.621 :	-	<0.176 J	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.0008 :	-	<0.0006 :
Antimony	mg/L	D	<0.001 :	-	<0.0024 :	-	<0.0008 :	-
Arsenic	mg/L	T	-	0.0022 :	-	0.002 :	-	0.0012 :
Arsenic	mg/L	D	0.0022 :	-	0.0021 :	-	0.002 :	-
Barium	mg/L	T	-	0.0122 :	-	0.0113 :	-	0.128 :
Barium	mg/L	D	0.0145 :	-	0.0122 :	-	0.0113 :	-
Beryllium	mg/L	T	-	<0.0003 :	-	<0.0002 :	-	<0.0003 J
Beryllium	mg/L	D	<0.0003 :	-	<0.0003 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0428 :	-	0.0446 :	-	0.0463 :
Boron	mg/L	D	0.0452 :	-	0.0439 :	-	0.0456 :	-
Cadmium	mg/L	T	-	<0.0007 J	-	<0.0003 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0007 :	-	<0.0007 :	-	<0.0003 :	-
Calcium	mg/L	T	-	17.4 :	-	18.2 :	-	35.4 :
Calcium	mg/L	D	17.3 :	-	18. :	-	18.4 :	-
Chromium	mg/L	T	-	<0.0015 :	-	<0.0041 :	-	0.0013 :
Chromium	mg/L	D	<0.0013 J	-	<0.0015 :	-	<0.0029 :	-
Cobalt	mg/L	T	-	<0.0023 :	-	<0.0011 :	-	<0.0038 :
Cobalt	mg/L	D	0.0032 :	-	<0.0023 :	-	<0.0033 :	-
Copper	mg/L	T	-	<0.003 :	-	<0.0007 J	-	<0.0021 :
Copper	mg/L	D	<0.002 :	-	<0.003 :	-	<0.0007 J	-
Iron	mg/L	T	-	<0.423 :	-	<0.192 J	-	0.475 :
Iron	mg/L	D	<0.3 :	-	<0.423 :	-	<0.192 J	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0008 :	-	0.00057 :
Lead	mg/L	D	<0.0004 :	-	<0.0002 :	-	<0.0008 :	-
Magnesium	mg/L	T	-	5.34 :	-	5.82 :	-	10. :
Magnesium	mg/L	D	5.24 :	-	5.49 :	-	5.71 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.019 :	-	0.115 :
Manganese	mg/L	D	0.0148 :	-	<0.019 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0093 :	-	0.0088 :	-	0.0068 :
Molybdenum	mg/L	D	0.0085 J	-	0.0093 :	-	0.0094 :	-

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-22 12/7/2003 MW-22-D01N-GRW TLR		MW-22 1/6/2004 MW-22-T01N-GRW TLR		MW-22 1/6/2004 MW-22-D01N-GRW TLR		MW-22 4/14/2004 MW-22-T01N-GRW TLR		MW-22 4/14/2004 MW-22-D01N-GRW TLR		MW-23 5/6/2003 MW-23-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0024	J	-		0.0022	:	-		<0.003	:
Nickel	mg/L	D	<0.0028	:	-		<0.0024	J	-		0.0023	:	-	
Potassium	mg/L	T	-		2.72	:	-		2.44	J	-		5.01	:
Potassium	mg/L	D	1.61	J	-		2.74	:	-		2.53	J	-	
Selenium	mg/L	T	-		0.0011	J	-		<0.0014	:	-		0.0011	:
Selenium	mg/L	D	<0.0006	:	-		0.00084	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		28.4	:	-		<18.4	J	-		35.6	:
Sodium	mg/L	D	24.9	:	-		20.7	:	-		<20.1	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0054	:	-		0.0063	:	-		0.0045	:
Vanadium	mg/L	D	0.0064	:	-		0.0054	:	-		0.0065	:	-	
Zinc	mg/L	T	-		<0.091	:	-		<0.015	:	-		0.277	:
Zinc	mg/L	D	<0.02	:	-		<0.091	:	-		<0.015	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 5/6/2003 MW-23-D01N-GRW		MW-23 6/3/2003 MW-23-T01N-GRW		MW-23 6/3/2003 MW-23-D01N-GRW		MW-23 7/8/2003 MW-23-T01N-GRW		MW-23 7/8/2003 MW-23-D01N-GRW		MW-23 8/10/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		6.19	:	-		4.48	:	-		6.11	:
Eh	millivolts	T	-		294.4	:	-		183.4	:	-		339.5	:
pH	SU	T	-		7.6	J	-		7.9	J	-		7.52	:
Specific Conductance	uS/cm	T	-		384.	:	-		450.	:	-		456.	:
Temperature	Celsius	T	-		14.2	:	-		14.58	:	-		15.17	:
Turbidity	NTU	T	-		0.	:	-		1.7	:	-		0.6	:
General Chemistry														
Ammonia	mg/L	T	-		<0.063	J	-		<0.084	J	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		96.4	:	-		92.7	:	-		90.8	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<13.8	J	-		16.5	:	-		16.	:
Fluoride	mg/L	T	-		0.82	:	-		0.91	:	-		0.73	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.86	J	-		0.99	J	-		1.	J
Nitrite	mg/L	T	-		0.0052	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.13	J	-		<0.015	J	-		<0.01	J
Phosphorus	mg/L	T	-		0.016	J	-		0.016	:	-		0.017	:
Sulfate	mg/L	T	-		80.9	J	-		128.	J	-		109.	J
Total Alkalinity	mg/L	T	-		96.4	:	-		92.7	:	-		90.8	:
Total Dissolved Solids	mg/L	T	-		304.	:	-		314.	:	-		410.	:
Total Kjeldahl Nitrogen	mg/L	T	-		-		-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		<2.	:	-		<1.4	:	-		<1.4	:
Laboratory Parameters														
pH	SU	T	-		7.6	J	-		7.9	J	-		7.52	:
Specific Conductance	umhos/cm	T	-		403.	J	-		427.	J	-		464.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		104.	:	-		144.	:	-		151.	:
Hardness	mg/L	D	125.	:	-		111.	:	-		138.	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 5/6/2003 MW-23-D01N-GRW		MW-23 6/3/2003 MW-23-T01N-GRW		MW-23 6/3/2003 MW-23-D01N-GRW		MW-23 7/8/2003 MW-23-T01N-GRW		MW-23 7/8/2003 MW-23-D01N-GRW		MW-23 8/10/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.426	:	-		<0.236	:	-		<0.631	:
Aluminum	mg/L	D	<0.426	:	-		<0.426	:	-		<0.236	:	-	
Antimony	mg/L	T	-		0.0011	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0014	:	-		0.0014	:	-		0.0012	:
Arsenic	mg/L	D	0.0012	:	-		0.0013	:	-		0.0016	:	-	
Barium	mg/L	T	-		0.125	:	-		0.114	:	-		0.107	:
Barium	mg/L	D	0.119	:	-		0.125	:	-		0.108	:	-	
Beryllium	mg/L	T	-		<0.00032	J	-		<0.0002	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0003	J	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0482	:	-		0.0422	:	-		0.0409	:
Boron	mg/L	D	0.0443	:	-		0.0479	:	-		0.0409	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0006	:	-		<0.0003	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0005	:	-		<0.0006	:	-	
Calcium	mg/L	T	-		28.1	:	-		39.2	:	-		40.4	:
Calcium	mg/L	D	34.2	:	-		31.3	:	-		37.4	:	-	
Chromium	mg/L	T	-		<0.002	:	-		<0.0014	:	-		<0.00071	:
Chromium	mg/L	D	<0.001	:	-		0.0015	:	-		<0.0014	:	-	
Cobalt	mg/L	T	-		<0.0038	:	-		<0.002	:	-		<0.0018	:
Cobalt	mg/L	D	<0.0038	:	-		<0.0038	:	-		<0.002	:	-	
Copper	mg/L	T	-		<0.0015	:	-		<0.0024	:	-		<0.0017	:
Copper	mg/L	D	0.0017	:	-		<0.0015	:	-		0.0044	:	-	
Iron	mg/L	T	-		<0.422	:	-		<0.333	:	-		<0.667	:
Iron	mg/L	D	<0.422	:	-		<0.422	:	-		<0.333	:	-	
Lead	mg/L	T	-		<0.00024	:	-		<0.0002	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		7.93	:	-		11.2	:	-		12.1	:
Magnesium	mg/L	D	9.66	:	-		8.85	:	-		10.8	:	-	
Manganese	mg/L	T	-		0.0436	:	-		<0.0103	:	-		<0.019	J
Manganese	mg/L	D	0.107	:	-		0.0528	:	-		<0.007	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0059	:	-		0.0052	:	-		<0.0063	:
Molybdenum	mg/L	D	0.0076	:	-		0.0063	:	-		0.004	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 5/6/2003 MW-23-D01N-GRW		MW-23 6/3/2003 MW-23-T01N-GRW		MW-23 6/3/2003 MW-23-D01N-GRW		MW-23 7/8/2003 MW-23-T01N-GRW		MW-23 7/8/2003 MW-23-D01N-GRW		MW-23 8/10/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0049	:	-		<0.0021	:	-		<0.002	:
Nickel	mg/L	D	<0.003	:	-		<0.003	:	-		<0.0021	:	-	
Potassium	mg/L	T	-		4.94	:	-		3.58	:	-		5.3	:
Potassium	mg/L	D	4.8	:	-		5.1	:	-		3.52	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.0019	:	-		<0.0016	:
Selenium	mg/L	D	0.0016	:	-		<0.0016	:	-		0.0023	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0009	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		33.8	:	-		38.9	:	-		<41.5	:
Sodium	mg/L	D	34.2	:	-		38.9	:	-		40.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0054	:	-		0.0047	:	-		0.0045	:
Vanadium	mg/L	D	0.0043	:	-		0.0047	:	-		0.0048	:	-	
Zinc	mg/L	T	-		<0.039	:	-		<0.0185	:	-		<0.016	:
Zinc	mg/L	D	0.225	:	-		<0.039	:	-		<0.031	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 8/10/2003 MW-23-D01N-GRW		MW-23 9/8/2003 MW-23-T01N-GRW		MW-23 9/8/2003 MW-23-D01N-GRW		MW-23 10/14/2003 MW-23-T01N-GRW		MW-23 10/14/2003 MW-23-D01N-GRW		MW-23 11/2/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		6.73	:	-		9.35	:	-		5.6	:
Eh	millivolts	T	-		497.7	:	-		406.7	:	-		252.4	:
pH	SU	T	-		8.	J	-		7.7	J	-		8.	J
Specific Conductance	uS/cm	T	-		494.	:	-		483.	:	-		478.	:
Temperature	Celsius	T	-		13.8	:	-		13.31	:	-		12.6	:
Turbidity	NTU	T	-		3.5	:	-		0.	:	-		0.2	:
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		<0.05	J	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		92.8	:	-		90.8	:	-		84.9	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		16.	:	-		17.	:	-		16.4	:
Fluoride	mg/L	T	-		0.74	:	-		0.73	:	-		0.77	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.95	:	-		1.1	J	-		1.1	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.011	:	-		<0.01	J	-		<0.01	J
Phosphorus	mg/L	T	-		0.015	:	-		<0.01	:	-		0.012	:
Sulfate	mg/L	T	-		118.	J	-		120.	J	-		118.	:
Total Alkalinity	mg/L	T	-		92.8	:	-		90.8	:	-		84.9	:
Total Dissolved Solids	mg/L	T	-		440.	:	-		368.	:	-		384.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		2.6	:
Total Organic Carbon	mg/L	T	-		<1.4	:	-		<1.	J	-		<1.	:
Total Suspended Solids	mg/L	T	-		1.3	:	-		<0.7	:	-		<1.3	:
Laboratory Parameters														
pH	SU	T	-		8.	J	-		7.7	J	-		8.	J
Specific Conductance	umhos/cm	T	-		411.	J	-		444.	J	-		474.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		141.	:	-		145.	:	-		139.	:
Hardness	mg/L	D	153.	:	-		141.	:	-		149.	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 8/10/2003 MW-23-D01N-GRW		MW-23 9/8/2003 MW-23-T01N-GRW		MW-23 9/8/2003 MW-23-D01N-GRW		MW-23 10/14/2003 MW-23-T01N-GRW		MW-23 10/14/2003 MW-23-D01N-GRW		MW-23 11/2/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-	:	<0.327	:	-		<0.273	J	-		<0.217	:
Aluminum	mg/L	D	<0.631	:	-		<0.266	:	-		<0.853	J	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0013	:	-		0.0014	:	-		0.0016	:
Arsenic	mg/L	D	0.0013	:	-		0.0014	:	-		0.0015	:	-	
Barium	mg/L	T	-		0.124	:	-		0.104	:	-		0.101	:
Barium	mg/L	D	0.104	:	-		0.119	:	-		0.107	:	-	
Beryllium	mg/L	T	-		<0.0004	:	-		<0.0003	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.044	:	-		0.0418	:	-		0.0361	:
Boron	mg/L	D	0.0416	:	-		0.043	:	-		0.0425	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0007	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0005	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		37.5	:	-		38.8	:	-		37.7	:
Calcium	mg/L	D	41.2	:	-		37.5	:	-		39.4	:	-	
Chromium	mg/L	T	-		<0.0011	J	-		<0.0013	J	-		<0.0015	:
Chromium	mg/L	D	<0.0006	:	-		<0.006	J	-		<0.0022	J	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0031	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0018	:	-		<0.0029	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.002	:	-		<0.002	:
Copper	mg/L	D	0.0015	:	-		<0.0022	:	-		<0.0025	:	-	
Iron	mg/L	T	-		<0.833	:	-		<0.455	J	-		<0.455	:
Iron	mg/L	D	<0.667	:	-		<0.472	:	-		1.38	J	-	
Lead	mg/L	T	-		<0.00069	:	-		<0.0004	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0006	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		11.6	:	-		11.7	:	-		11.	:
Magnesium	mg/L	D	12.2	:	-		11.5	:	-		12.3	:	-	
Manganese	mg/L	T	-		0.0392	:	-		<0.016	J	-		<0.016	J
Manganese	mg/L	D	<0.019	J	-		<0.0308	:	-		0.0656	J	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.00011	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0049	:	-		0.0033	:	-		0.0054	:
Molybdenum	mg/L	D	0.0045	:	-		0.005	:	-		0.0052	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 8/10/2003 MW-23-D01N-GRW		MW-23 9/8/2003 MW-23-T01N-GRW		MW-23 9/8/2003 MW-23-D01N-GRW		MW-23 10/14/2003 MW-23-T01N-GRW		MW-23 10/14/2003 MW-23-D01N-GRW		MW-23 11/2/2003 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0028	:	-		<0.0028	:
Nickel	mg/L	D	<0.002	:	-		<0.0024	:	-		<0.0028	:	-	
Potassium	mg/L	T	-		4.91	:	-		4.95	:	-		<4.47	:
Potassium	mg/L	D	5.24	:	-		4.8	:	-		5.26	:	-	
Selenium	mg/L	T	-		0.0017	:	-		0.0022	:	-		0.002	:
Selenium	mg/L	D	0.0019	:	-		0.0019	:	-		0.0025	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0009	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		<39.	:	-		36.3	:	-		39.6	:
Sodium	mg/L	D	43.1	:	-		<24.6	:	-		47.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0045	:	-		0.0048	:	-		0.0048	:
Vanadium	mg/L	D	0.0045	:	-		0.0044	:	-		0.0047	:	-	
Zinc	mg/L	T	-		<0.0207	J	-		<0.019	:	-		<0.0268	:
Zinc	mg/L	D	<0.016	:	-		0.361	J	-		0.032	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MW-23 11/2/2003 MW-23-D01N-GRW	MW-23 12/7/2003 MW-23-T01N-GRW	MW-23 12/7/2003 MW-23-D01N-GRW	MW-23 1/6/2004 MW-23-T01N-GRW	MW-23 1/6/2004 MW-23-D01N-GRW	MW-23 4/14/2004 MW-23-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements								
DO	mg/L	T	-	-	-	3.56 :	-	7.75 :
Eh	millivolts	T	-	-	-	30.8 :	-	166.6 :
pH	SU	T	-	8. J	-	7.9 J	-	7.95 :
Specific Conductance	uS/cm	T	-	-	-	476. :	-	442. :
Temperature	Celsius	T	-	-	-	11.67 :	-	11.91 :
Turbidity	NTU	T	-	-	-	1.1 :	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	<0.04 :	-	<0.071 J	-	<0.066 :
Bicarbonate (as CaCO3)	mg/L	T	-	85.2 :	-	88.2 :	-	87.6 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	16.6 :	-	15.5 :	-	17.5 :
Fluoride	mg/L	T	-	0.72 :	-	0.73 :	-	0.83 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	1.1 J	-	1. :	-	1.1 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	0.05 J	-	<0.022 J	-	<0.01 J
Phosphorus	mg/L	T	-	0.012 J	-	<0.022 :	-	<0.01 :
Sulfate	mg/L	T	-	116. :	-	116. :	-	119. :
Total Alkalinity	mg/L	T	-	85.2 J	-	88.2 :	-	87.6 :
Total Dissolved Solids	mg/L	T	-	342. :	-	326. :	-	316. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 J	-	<0.25 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	-	<1.3 :	-	<2. :
Total Suspended Solids	mg/L	T	-	1.4 :	-	<1.2 :	-	<0.6 :
Laboratory Parameters								
pH	SU	T	-	8. J	-	7.9 J	-	7.95 :
Specific Conductance	umhos/cm	T	-	379. J	-	419. J	-	402. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	141. :	-	144. :	-	157. :
Hardness	mg/L	D	151. :	-	144. :	-	143. :	-
Metals								

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 11/2/2003 MW-23-D01N-GRW		MW-23 12/7/2003 MW-23-T01N-GRW		MW-23 12/7/2003 MW-23-D01N-GRW		MW-23 1/6/2004 MW-23-T01N-GRW		MW-23 1/6/2004 MW-23-D01N-GRW		MW-23 4/14/2004 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.307	J	-		<0.621	:	-		<0.176	J
Aluminum	mg/L	D	<0.217	:	-		<0.307	J	-		<0.621	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.0016	:	-		0.0015	:
Arsenic	mg/L	D	0.0017	:	-		0.0016	:	-		0.0021	:	-	
Barium	mg/L	T	-		0.116	:	-		0.101	:	-		0.105	:
Barium	mg/L	D	0.111	:	-		0.108	:	-		0.104	:	-	
Beryllium	mg/L	T	-		<0.0006	:	-		<0.0003	:	-		<0.00021	:
Beryllium	mg/L	D	<0.0003	J	-		<0.00045	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0403	:	-		0.0377	:	-		0.0412	:
Boron	mg/L	D	0.0403	:	-		0.044	:	-		0.0394	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	J	-		<0.0003	J
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		38.3	:	-		39.	:	-		42.2	:
Calcium	mg/L	D	40.8	:	-		39.2	:	-		38.5	:	-	
Chromium	mg/L	T	-		<0.0013	J	-		<0.0015	:	-		<0.0017	:
Chromium	mg/L	D	<0.0013	:	-		<0.0013	J	-		<0.0015	:	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0023	:	-		<0.0011	:
Cobalt	mg/L	D	<0.0031	:	-		<0.0031	:	-		<0.0023	:	-	
Copper	mg/L	T	-		0.0027	:	-		<0.003	:	-		<0.0007	J
Copper	mg/L	D	<0.002	:	-		<0.002	:	-		<0.003	:	-	
Iron	mg/L	T	-		<0.3	:	-		<0.423	:	-		<0.192	J
Iron	mg/L	D	<0.455	:	-		<0.3	:	-		<1.08	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		11.	:	-		11.4	:	-		12.6	:
Magnesium	mg/L	D	11.9	:	-		11.2	:	-		11.4	:	-	
Manganese	mg/L	T	-		<0.01	:	-		<0.019	:	-		<0.019	:
Manganese	mg/L	D	<0.016	:	-		<0.01	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0029	J	-		0.0035	:	-		0.0045	:
Molybdenum	mg/L	D	0.0062	:	-		0.0029	J	-		0.0043	:	-	

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Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-23 11/2/2003 MW-23-D01N-GRW		MW-23 12/7/2003 MW-23-T01N-GRW		MW-23 12/7/2003 MW-23-D01N-GRW		MW-23 1/6/2004 MW-23-T01N-GRW		MW-23 1/6/2004 MW-23-D01N-GRW		MW-23 4/14/2004 MW-23-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0024	J	-		<0.0014	:
Nickel	mg/L	D	<0.0028	:	-		<0.0028	:	-		<0.0024	J	-	
Potassium	mg/L	T	-		3.49	J	-		4.82	:	-		<5.28	:
Potassium	mg/L	D	<5.06	:	-		3.84	J	-		4.92	:	-	
Selenium	mg/L	T	-		0.0028	:	-		0.003	J	-		0.0023	:
Selenium	mg/L	D	0.0024	:	-		0.0025	:	-		0.0043	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		36.2	:	-		42.2	:	-		38.7	J
Sodium	mg/L	D	43.4	:	-		40.5	:	-		33.6	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0055	:	-		0.0053	:	-		0.0054	:
Vanadium	mg/L	D	0.0055	:	-		0.0057	:	-		0.0051	:	-	
Zinc	mg/L	T	-		<0.02	:	-		<0.091	:	-		<0.015	:
Zinc	mg/L	D	<0.0206	:	-		<0.02	:	-		<0.091	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			MW-23 4/14/2004 MW-23-D01N-GRW		MW-25 7/11/2003 MW-25-T01N-GRW		MW-25 7/11/2003 MW-25-D01N-GRW		MW-25 8/10/2003 MW-25-T01N-GRW		MW-25 8/10/2003 MW-25-D01N-GRW		MW-25 9/7/2003 MW-25-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		7.39	:	-		6.79	:	-		4.23	:
Eh	millivolts	T	-		132.	:	-		352.6	:	-		83.1	:
pH	SU	T	-		8.	J	-		8.	J	-		8.5	J
Specific Conductance	uS/cm	T	-		315.	:	-		319.	:	-		284.	:
Temperature	Celsius	T	-		15.08	:	-		15.02	:	-		13.55	:
Turbidity	NTU	T	-		35.4	:	-		1.4	:	-		2.2	:
General Chemistry														
Ammonia	mg/L	T	-		<0.18	J	-		0.043	:	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		88.	:	-		84.4	:	-		82.1	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		6.5	:	-		5.9	:	-		6.1	:
Fluoride	mg/L	T	-		2.1	:	-		1.3	:	-		1.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.48	J	-		0.32	J	-		0.28	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.023	:	-		0.015	J	-		<0.019	J
Phosphorus	mg/L	T	-		0.021	:	-		0.031	:	-		0.024	:
Sulfate	mg/L	T	-		68.8	J	-		65.5	J	-		46.2	J
Total Alkalinity	mg/L	T	-		88.	:	-		84.4	:	-		82.1	:
Total Dissolved Solids	mg/L	T	-		224.	:	-		<246.	:	-		<226.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.37	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	J	-		<1.	:
Total Suspended Solids	mg/L	T	-		5.3	:	-		5.8	:	-		1.4	:
Laboratory Parameters														
pH	SU	T	-		8.	J	-		8.	J	-		8.5	J
Specific Conductance	umhos/cm	T	-		309.	J	-		279.	:	-		249.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		117.	:	-		98.2	:	-		77.8	:
Hardness	mg/L	D	155.	:	-		115.	:	-		84.5	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: MW-23 Sample Date: 4/14/2004 Sample ID: MW-23-D01N-GRW	Site ID: MW-25 Sample Date: 7/11/2003 Sample ID: MW-25-T01N-GRW	Site ID: MW-25 Sample Date: 7/11/2003 Sample ID: MW-25-D01N-GRW	Site ID: MW-25 Sample Date: 8/10/2003 Sample ID: MW-25-T01N-GRW	Site ID: MW-25 Sample Date: 8/10/2003 Sample ID: MW-25-D01N-GRW	Site ID: MW-25 Sample Date: 9/7/2003 Sample ID: MW-25-T01N-GRW
			Exposure Area: GW13	Exposure Area: GW13	Exposure Area: GW13	Exposure Area: GW13	Exposure Area: GW13	Exposure Area: GW13
Aluminum	mg/L	T	-	<0.183 J	-	<0.631 :	-	<0.217 :
Aluminum	mg/L	D	<0.176 J	-	<0.183 J	-	<0.631 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.0012 :
Antimony	mg/L	D	<0.0008 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	0.00078 :	-	0.00053 :	-	0.00092 :
Arsenic	mg/L	D	0.0016 :	-	0.00064 :	-	0.00061 :	-
Barium	mg/L	T	-	0.0355 :	-	0.0334 :	-	0.027 :
Barium	mg/L	D	0.0981 :	-	0.0315 :	-	0.0299 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0004 :
Beryllium	mg/L	D	<0.00024 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0425 :	-	0.0452 :	-	0.0441 :
Boron	mg/L	D	0.0388 :	-	0.0424 :	-	0.0476 :	-
Cadmium	mg/L	T	-	<0.0006 :	-	<0.0006 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0003 J	-	<0.0006 :	-	<0.0006 :	-
Calcium	mg/L	T	-	35.4 :	-	29.6 :	-	23.2 :
Calcium	mg/L	D	41.4 :	-	34.8 :	-	25.7 :	-
Chromium	mg/L	T	-	0.0031 :	-	<0.0028 :	-	<0.0022 :
Chromium	mg/L	D	<0.0018 :	-	0.0017 :	-	0.0024 :	-
Cobalt	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.0029 :
Cobalt	mg/L	D	<0.002 :	-	<0.002 :	-	<0.002 :	-
Copper	mg/L	T	-	<0.0058 :	-	<0.0028 :	-	<0.0026 :
Copper	mg/L	D	<0.0007 J	-	<0.0024 :	-	0.0043 :	-
Iron	mg/L	T	-	<0.168 J	-	<0.667 :	-	<0.455 :
Iron	mg/L	D	<0.192 J	-	<0.168 J	-	<0.667 :	-
Lead	mg/L	T	-	<0.00087 :	-	0.00063 :	-	<0.00064 :
Lead	mg/L	D	<0.0008 :	-	<0.00071 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	6.97 :	-	5.9 :	-	4.84 :
Magnesium	mg/L	D	12.5 :	-	6.83 :	-	4.91 :	-
Manganese	mg/L	T	-	<0.0101 :	-	<0.029 :	-	<0.016 :
Manganese	mg/L	D	<0.019 :	-	<0.007 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0159 :	-	0.0155 :	-	0.0127 :
Molybdenum	mg/L	D	0.0047 :	-	0.016 :	-	0.016 :	-

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-23 4/14/2004 MW-23-D01N-GRW GW13		MW-25 7/11/2003 MW-25-T01N-GRW GW13		MW-25 7/11/2003 MW-25-D01N-GRW GW13		MW-25 8/10/2003 MW-25-T01N-GRW GW13		MW-25 8/10/2003 MW-25-D01N-GRW GW13		MW-25 9/7/2003 MW-25-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0347	:	-		<0.0021	J	-		<0.0024	:
Nickel	mg/L	D	0.0015	:	-		<0.0021	:	-		0.014	:	-	
Potassium	mg/L	T	-		3.26	:	-		3.36	:	-		<3.28	:
Potassium	mg/L	D	<5.06	J	-		3.21	:	-		3.32	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0016	:	-		0.00062	:
Selenium	mg/L	D	0.0024	:	-		<0.0016	J	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0009	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	J	-		<0.0009	J	-	
Sodium	mg/L	T	-		37.5	:	-		36.3	:	-		30.8	:
Sodium	mg/L	D	43.8	J	-		37.	:	-		38.1	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0069	:	-		0.0076	:	-		0.0083	:
Vanadium	mg/L	D	0.0057	:	-		0.007	:	-		0.0076	:	-	
Zinc	mg/L	T	-		<0.057	:	-		<0.0548	:	-		<0.019	:
Zinc	mg/L	D	<0.015	:	-		<0.057	:	-		<0.0514	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MW-25 9/7/2003 MW-25-D01N-GRW		MW-25 10/15/2003 MW-25-T01N-GRW		MW-25 10/15/2003 MW-25-D01N-GRW		MW-25 11/2/2003 MW-25-T01N-GRW		MW-25 11/2/2003 MW-25-D01N-GRW		MW-25 12/7/2003 MW-25-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		7.22	:	-		5.71	:	-		4.72	:
Eh	millivolts	T	-		-14.2	:	-		-1.9	:	-		86.9	:
pH	SU	T	-		8.	J	-		8.	:	-		8.1	J
Specific Conductance	uS/cm	T	-		283.	:	-		270.	:	-		265.	:
Temperature	Celsius	T	-		14.35	:	-		13.34	:	-		10.7	:
Turbidity	NTU	T	-		6.	:	-		7.3	:	-		7.6	:
General Chemistry														
Ammonia	mg/L	T	-		<0.15	J	-		<0.1	:	-		0.051	:
Bicarbonate (as CaCO3)	mg/L	T	-		85.2	:	-		77.8	:	-		80.9	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		5.9	:	-		6.2	:	-		6.2	:
Fluoride	mg/L	T	-		1.4	:	-		1.4	:	-		1.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.29	:	-		0.32	J	-		0.35	:
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.02	:	-		0.019	J	-		0.029	J
Phosphorus	mg/L	T	-		0.018	:	-		0.018	:	-		0.029	:
Sulfate	mg/L	T	-		42.9	J	-		48.2	:	-		46.1	:
Total Alkalinity	mg/L	T	-		85.2	:	-		77.8	:	-		80.9	J
Total Dissolved Solids	mg/L	T	-		276.	:	-		228.	:	-		216.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		1.8	:	-		<0.24	J
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<1.7	:	-		<1.5	:	-		3.1	:
Laboratory Parameters														
pH	SU	T	-		8.	J	-		8.	:	-		8.1	J
Specific Conductance	umhos/cm	T	-		266.	J	-		288.	J	-		224.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		77.2	:	-		74.8	:	-		72.2	:
Hardness	mg/L	D	77.9	:	-		73.5	:	-		70.5	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-25 9/7/2003 MW-25-D01N-GRW		MW-25 10/15/2003 MW-25-T01N-GRW		MW-25 10/15/2003 MW-25-D01N-GRW		MW-25 11/2/2003 MW-25-T01N-GRW		MW-25 11/2/2003 MW-25-D01N-GRW		MW-25 12/7/2003 MW-25-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.307	:	-		<0.217	:	-		<0.307	J
Aluminum	mg/L	D	<0.217	:	-		<0.307	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.00087	:	-		0.00099	:	-		0.00089	:
Arsenic	mg/L	D	0.0008	:	-		0.00073	:	-		0.00099	:	-	
Barium	mg/L	T	-		0.0257	:	-		0.0268	:	-		0.027	:
Barium	mg/L	D	0.0258	:	-		0.0264	:	-		0.0269	:	-	
Beryllium	mg/L	T	-		<0.00038	:	-		<0.0011	J	-		<0.00046	:
Beryllium	mg/L	D	<0.0004	:	-		<0.0003	:	-		<0.00066	J	-	
Boron	mg/L	T	-		0.0429	:	-		0.0468	:	-		<0.0412	:
Boron	mg/L	D	0.0426	:	-		0.0422	:	-		0.0459	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		23.4	:	-		22.5	:	-		21.8	:
Calcium	mg/L	D	23.2	:	-		22.2	:	-		21.2	:	-	
Chromium	mg/L	T	-		0.0017	J	-		<0.0023	:	-		<0.0013	J
Chromium	mg/L	D	<0.0022	:	-		0.0021	J	-		<0.0024	:	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0031	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0031	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.002	J	-		<0.002	:	-		<0.002	:
Copper	mg/L	D	<0.0022	:	-		0.0073	J	-		<0.002	:	-	
Iron	mg/L	T	-		<0.3	:	-		<0.455	:	-		<0.3	:
Iron	mg/L	D	<0.455	:	-		<0.3	:	-		<0.455	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Lead	mg/L	D	<0.00066	:	-		<0.0004	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		4.56	:	-		4.55	:	-		4.31	:
Magnesium	mg/L	D	4.85	:	-		4.36	:	-		4.26	:	-	
Manganese	mg/L	T	-		<0.01	:	-		<0.016	J	-		<0.01	:
Manganese	mg/L	D	<0.016	:	-		<0.01	:	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0125	:	-		0.0129	:	-		0.01	:
Molybdenum	mg/L	D	0.0113	:	-		0.0116	:	-		0.0136	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-25 9/7/2003 MW-25-D01N-GRW		MW-25 10/15/2003 MW-25-T01N-GRW		MW-25 10/15/2003 MW-25-D01N-GRW		MW-25 11/2/2003 MW-25-T01N-GRW		MW-25 11/2/2003 MW-25-D01N-GRW		MW-25 12/7/2003 MW-25-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:
Nickel	mg/L	D	<0.0024	:	-		<0.0028	:	-		<0.0028	:	-	
Potassium	mg/L	T	-		2.77	:	-		<2.89	:	-		1.3	J
Potassium	mg/L	D	<3.21	:	-		2.96	:	-		<2.72	:	-	
Selenium	mg/L	T	-		0.00068	:	-		0.0007	:	-		<0.0006	:
Selenium	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		30.4	:	-		31.6	:	-		27.7	:
Sodium	mg/L	D	31.4	:	-		28.4	:	-		31.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0077	:	-		0.0095	:	-		0.0085	:
Vanadium	mg/L	D	0.0087	:	-		0.0076	:	-		0.0093	:	-	
Zinc	mg/L	T	-		<0.02	:	-		<0.0202	:	-		0.0667	:
Zinc	mg/L	D	<0.019	:	-		<0.02	:	-		<0.019	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-25 12/7/2003 MW-25-D01N-GRW		MW-25 1/6/2004 MW-25-T01N-GRW		MW-25 1/6/2004 MW-25-D01N-GRW		MW-25 4/15/2004 MW-25-T01N-GRW		MW-25 4/15/2004 MW-25-D01N-GRW		MW-27 7/10/2003 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		5.33	:	-		5.68	:	-		4.75	:
Eh	millivolts	T	-		358.6	:	-		110.8	:	-		136.1	:
pH	SU	T	-		8.08	:	-		8.4	J	-		7.7	J
Specific Conductance	uS/cm	T	-		291.	:	-		268.	:	-		377.	:
Temperature	Celsius	T	-		11.31	:	-		13.76	:	-		15.9	:
Turbidity	NTU	T	-		0.	:	-		4.2	:	-		6.9	:
General Chemistry														
Ammonia	mg/L	T	-		<0.11	J	-		<0.04	:	-		<0.096	J
Bicarbonate (as CaCO3)	mg/L	T	-		81.1	J	-		84.4	:	-		162.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		6.3	:	-		5.8	:	-		13.3	:
Fluoride	mg/L	T	-		1.4	:	-		1.5	:	-		0.44	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.33	:	-		0.49	J	-		0.66	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.023	:	-		0.017	J	-		<0.013	:
Phosphorus	mg/L	T	-		<0.016	:	-		0.013	:	-		0.011	:
Sulfate	mg/L	T	-		46.5	:	-		39.9	:	-		35.9	J
Total Alkalinity	mg/L	T	-		81.1	J	-		84.4	:	-		162.	:
Total Dissolved Solids	mg/L	T	-		252.	:	-		152.	:	-		410.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.4	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		<2.1	:	-		<3.3	:	-		26.4	:
Laboratory Parameters														
pH	SU	T	-		8.08	:	-		8.4	J	-		7.7	J
Specific Conductance	umhos/cm	T	-		261.	J	-		239.	J	-		383.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		77.9	:	-		77.7	:	-		181.	:
Hardness	mg/L	D	72.5	:	-		76.4	:	-		75.3	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-25 12/7/2003 MW-25-D01N-GRW		MW-25 1/6/2004 MW-25-T01N-GRW		MW-25 1/6/2004 MW-25-D01N-GRW		MW-25 4/15/2004 MW-25-T01N-GRW		MW-25 4/15/2004 MW-25-D01N-GRW		MW-27 7/10/2003 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.329	:	-		<0.176	J	-		1.18	:
Aluminum	mg/L	D	<0.307	J	-		<0.329	:	-		<0.176	J	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0008	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.0008	:	-	
Arsenic	mg/L	T	-		0.001	:	-		0.00074	:	-		<0.0004	:
Arsenic	mg/L	D	0.00073	:	-		0.00088	:	-		0.00083	:	-	
Barium	mg/L	T	-		0.0265	:	-		0.0237	:	-		0.0959	:
Barium	mg/L	D	0.0257	:	-		0.0257	:	-		0.0227	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0002	:	-		<0.00042	:
Beryllium	mg/L	D	<0.0014	:	-		<0.0003	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0422	:	-		0.0419	:	-		0.0117	:
Boron	mg/L	D	<0.0405	:	-		0.0411	:	-		0.0404	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0003	J	-	
Calcium	mg/L	T	-		23.2	:	-		23.	:	-		54.9	:
Calcium	mg/L	D	21.9	:	-		22.8	:	-		22.3	:	-	
Chromium	mg/L	T	-		<0.0015	J	-		<0.003	:	-		<0.0006	J
Chromium	mg/L	D	<0.0013	J	-		<0.0015	J	-		<0.003	:	-	
Cobalt	mg/L	T	-		<0.0023	:	-		<0.0011	:	-		<0.0018	:
Cobalt	mg/L	D	<0.0031	:	-		<0.0023	:	-		<0.0034	:	-	
Copper	mg/L	T	-		<0.003	:	-		<0.0007	J	-		<0.0014	:
Copper	mg/L	D	<0.002	:	-		0.0035	:	-		0.0012	J	-	
Iron	mg/L	T	-		<0.357	:	-		<0.192	J	-		0.722	:
Iron	mg/L	D	<0.3	:	-		<0.357	:	-		<0.192	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		<0.0015	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		4.84	:	-		4.94	:	-		10.7	:
Magnesium	mg/L	D	4.32	:	-		4.71	:	-		4.74	:	-	
Manganese	mg/L	T	-		<0.016	:	-		<0.019	:	-		0.0964	:
Manganese	mg/L	D	<0.01	:	-		0.0135	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0124	:	-		0.0113	:	-		0.0064	:
Molybdenum	mg/L	D	0.0083	J	-		0.0105	:	-		0.0126	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-25 12/7/2003 MW-25-D01N-GRW GW13		MW-25 1/6/2004 MW-25-T01N-GRW GW13		MW-25 1/6/2004 MW-25-D01N-GRW GW13		MW-25 4/15/2004 MW-25-T01N-GRW GW13		MW-25 4/15/2004 MW-25-D01N-GRW GW13		MW-27 7/10/2003 MW-27-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0024	J	-		<0.0014	:	-		<0.002	J
Nickel	mg/L	D	<0.0028	:	-		<0.0024	J	-		0.0016	:	-	
Potassium	mg/L	T	-		2.99	:	-		<3.22	J	-		2.22	:
Potassium	mg/L	D	<0.522	J	-		2.97	:	-		<3.34	J	-	
Selenium	mg/L	T	-		<0.00099	J	-		<0.0014	:	-		<0.0016	:
Selenium	mg/L	D	<0.0006	:	-		<0.00095	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		30.7	:	-		17.9	J	-		13.3	:
Sodium	mg/L	D	29.	:	-		30.8	:	-		32.4	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0078	:	-		0.0087	:	-		0.0024	:
Vanadium	mg/L	D	0.0089	:	-		0.0076	:	-		0.0089	:	-	
Zinc	mg/L	T	-		<0.04	:	-		<0.015	:	-		0.406	:
Zinc	mg/L	D	0.0605	:	-		<0.04	:	-		<0.015	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 7/10/2003 MW-27-D01N-GRW		MW-27 8/10/2003 MW-27-T01N-GRW		MW-27 8/10/2003 MW-27-D01N-GRW		MW-27 9/8/2003 MW-27-T01N-GRW		MW-27 9/8/2003 MW-27-D01N-GRW		MW-27 10/15/2003 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		4.23	:	-		3.84	:	-		3.76	:
Eh	millivolts	T	-		351.2	:	-		561.9	:	-		429.7	:
pH	SU	T	-		7.5	J	-		7.3	J	-		7.42	:
Specific Conductance	uS/cm	T	-		404.	:	-		399.	:	-		389.	:
Temperature	Celsius	T	-		15.66	:	-		14.01	:	-		13.45	:
Turbidity	NTU	T	-		9.7	:	-		4.9	:	-		10.9	:
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		<0.04	:	-		<0.041	J
Bicarbonate (as CaCO3)	mg/L	T	-		159.	:	-		146.	:	-		162.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		12.4	:	-		16.7	:	-		12.3	:
Fluoride	mg/L	T	-		0.42	:	-		0.22	:	-		0.44	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.66	J	-		0.22	J	-		0.66	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		0.016	J	-		0.018	J	-		<0.016	:
Phosphorus	mg/L	T	-		0.031	:	-		0.027	:	-		0.025	:
Sulfate	mg/L	T	-		31.2	J	-		907.	J	-		26.4	J
Total Alkalinity	mg/L	T	-		159.	:	-		146.	:	-		162.	:
Total Dissolved Solids	mg/L	T	-		286.	:	-		1500.	:	-		294.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.27	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.4	J	-		<1.	:	-		<1.	J
Total Suspended Solids	mg/L	T	-		7.4	:	-		10.7	:	-		9.	:
Laboratory Parameters														
pH	SU	T	-		7.5	J	-		7.3	J	-		7.42	:
Specific Conductance	umhos/cm	T	-		376.	J	-		1510.	J	-		334.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		184.	:	-		953.	:	-		176.	:
Hardness	mg/L	D	173.	:	-		183.	:	-		950.	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 7/10/2003 MW-27-D01N-GRW		MW-27 8/10/2003 MW-27-T01N-GRW		MW-27 8/10/2003 MW-27-D01N-GRW		MW-27 9/8/2003 MW-27-T01N-GRW		MW-27 9/8/2003 MW-27-D01N-GRW		MW-27 10/15/2003 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.631	:	-		<0.486	:	-		<0.221	:
Aluminum	mg/L	D	<0.631	:	-		<0.631	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0826	:	-		0.0279	:	-		0.0815	:
Barium	mg/L	D	0.0832	:	-		0.078	:	-		0.0274	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0004	:
Beryllium	mg/L	D	<0.00031	:	-		<0.0002	:	-		<0.0004	:	-	
Boron	mg/L	T	-		0.0091	:	-		0.0233	:	-		0.0077	:
Boron	mg/L	D	0.0124	:	-		0.0098	:	-		0.0236	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0005	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0003	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		55.5	:	-		290.	:	-		53.8	:
Calcium	mg/L	D	52.8	:	-		55.4	:	-		289.	:	-	
Chromium	mg/L	T	-		<0.0006	:	-		<0.0011	:	-		<0.0011	J
Chromium	mg/L	D	<0.0006	J	-		<0.0006	:	-		<0.0011	:	-	
Cobalt	mg/L	T	-		<0.0018	:	-		<0.0029	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0018	:	-		<0.0018	:	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.0014	:	-		<0.0055	:	-		<0.0022	:
Copper	mg/L	D	<0.0014	:	-		<0.0014	:	-		<0.0022	:	-	
Iron	mg/L	T	-		<0.667	:	-		<0.668	:	-		<0.278	:
Iron	mg/L	D	<0.667	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		0.00023	:	-		<0.00092	:	-		<0.0004	:
Lead	mg/L	D	<0.00097	:	-		<0.0002	:	-		<0.00061	:	-	
Magnesium	mg/L	T	-		11.1	:	-		55.7	:	-		10.2	:
Magnesium	mg/L	D	10.1	:	-		10.9	:	-		55.4	:	-	
Manganese	mg/L	T	-		<0.0291	J	-		0.0411	:	-		<0.012	:
Manganese	mg/L	D	0.0787	:	-		<0.019	J	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0044	:	-		0.0786	:	-		0.0027	:
Molybdenum	mg/L	D	0.0052	:	-		0.0045	:	-		0.0835	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 7/10/2003 MW-27-D01N-GRW		MW-27 8/10/2003 MW-27-T01N-GRW		MW-27 8/10/2003 MW-27-D01N-GRW		MW-27 9/8/2003 MW-27-T01N-GRW		MW-27 9/8/2003 MW-27-D01N-GRW		MW-27 10/15/2003 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.002	:	-		<0.0024	:	-		<0.0024	:
Nickel	mg/L	D	<0.002	J	-		<0.002	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		1.81	:	-		2.3	J	-		1.74	:
Potassium	mg/L	D	1.96	:	-		1.65	:	-		2.32	J	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.00098	:	-		<0.0006	:
Selenium	mg/L	D	<0.0016	J	-		<0.0016	:	-		0.0011	:	-	
Silver	mg/L	T	-		<0.0009	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0009	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		<15.6	:	-		<56.8	:	-		14.	:
Sodium	mg/L	D	11.2	:	-		<21.7	:	-		<43.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0016	:	-		0.00069	:	-		0.0019	:
Vanadium	mg/L	D	0.0016	:	-		0.0015	:	-		0.0005	:	-	
Zinc	mg/L	T	-		<0.0874	:	-		<0.0241	:	-		<0.023	:
Zinc	mg/L	D	0.374	:	-		<0.0735	:	-		<0.019	:	-	

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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			MW-27 10/15/2003 MW-27-D01N-GRW		MW-27 11/2/2003 MW-27-T01N-GRW		MW-27 11/2/2003 MW-27-D01N-GRW		MW-27 12/10/2003 MW-27-T01N-GRW		MW-27 12/10/2003 MW-27-D01N-GRW		MW-27 1/6/2004 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		3.63	:	-		3.78	:	-		3.65	:
Eh	millivolts	T	-		308.2	:	-		267.2	:	-		335.2	:
pH	SU	T	-		7.33	:	-		7.58	:	-		7.7	J
Specific Conductance	uS/cm	T	-		366.	:	-		370.	:	-		406.	:
Temperature	Celsius	T	-		13.33	:	-		10.69	:	-		10.7	:
Turbidity	NTU	T	-		4.6	:	-		13.5	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.12	:	-		<0.04	:	-		<0.04	J
Bicarbonate (as CaCO3)	mg/L	T	-		149.	:	-		158.	:	-		158.	J
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		12.8	:	-		12.9	:	-		12.6	:
Fluoride	mg/L	T	-		<0.43	:	-		0.44	:	-		0.41	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.75	J	-		0.73	:	-		0.81	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.019	J	-		0.061	J	-		<0.027	J
Phosphorus	mg/L	T	-		0.02	:	-		0.02	J	-		<0.022	:
Sulfate	mg/L	T	-		31.4	:	-		28.4	:	-		40.	:
Total Alkalinity	mg/L	T	-		149.	:	-		158.	:	-		158.	J
Total Dissolved Solids	mg/L	T	-		300.	:	-		284.	:	-		256.	:
Total Kjeldahl Nitrogen	mg/L	T	-		3.2	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		2.1	:	-		8.6	:	-		11.5	:
Laboratory Parameters														
pH	SU	T	-		7.33	:	-		7.58	:	-		7.7	J
Specific Conductance	umhos/cm	T	-		391.	J	-		328.	J	-		361.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		185.	:	-		189.	:	-		186.	:
Hardness	mg/L	D	170.	:	-		180.	:	-		184.	:	-	
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 10/15/2003 MW-27-D01N-GRW		MW-27 11/2/2003 MW-27-T01N-GRW		MW-27 11/2/2003 MW-27-D01N-GRW		MW-27 12/10/2003 MW-27-T01N-GRW		MW-27 12/10/2003 MW-27-D01N-GRW		MW-27 1/6/2004 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.448	:	-		<0.221	:	-		<0.329	:
Aluminum	mg/L	D	<0.221	:	-		<0.307	:	-		<0.221	:	-	
Antimony	mg/L	T	-		<0.0016	:	-		<0.0024	:	-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.082	:	-		0.0875	:	-		0.0791	:
Barium	mg/L	D	0.0768	:	-		0.084	:	-		0.0846	:	-	
Beryllium	mg/L	T	-		<0.0011	J	-		<0.0004	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0004	:	-		<0.00087	J	-		<0.0004	:	-	
Boron	mg/L	T	-		0.0084	:	-		<0.012	:	-		<0.0104	:
Boron	mg/L	D	0.0075	:	-		0.009	:	-		<0.0113	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0005	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		56.2	:	-		57.5	:	-		56.6	:
Calcium	mg/L	D	51.8	:	-		55.7	:	-		55.9	:	-	
Chromium	mg/L	T	-		<0.0013	:	-		<0.0011	:	-		<0.0015	J
Chromium	mg/L	D	<0.0013	J	-		<0.0013	:	-		<0.0011	:	-	
Cobalt	mg/L	T	-		<0.0032	J	-		<0.0029	:	-		<0.0023	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0032	J	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.002	J	-		<0.0022	:	-		<0.003	:
Copper	mg/L	D	<0.0022	:	-		<0.002	J	-		<0.0022	:	-	
Iron	mg/L	T	-		<0.3	J	-		<0.278	:	-		<0.357	:
Iron	mg/L	D	<0.278	:	-		<0.3	J	-		<0.278	:	-	
Lead	mg/L	T	-		<0.0004	:	-		0.00021	J	-		<0.0002	:
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0002	J	-	
Magnesium	mg/L	T	-		10.7	:	-		11.	:	-		10.8	:
Magnesium	mg/L	D	9.8	:	-		10.1	:	-		10.7	:	-	
Manganese	mg/L	T	-		<0.01	:	-		<0.012	:	-		<0.011	:
Manganese	mg/L	D	<0.012	:	-		<0.01	:	-		<0.012	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0044	:	-		<0.0041	:	-		0.004	:
Molybdenum	mg/L	D	<0.0011	:	-		0.0034	:	-		<0.003	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 10/15/2003 MW-27-D01N-GRW		MW-27 11/2/2003 MW-27-T01N-GRW		MW-27 11/2/2003 MW-27-D01N-GRW		MW-27 12/10/2003 MW-27-T01N-GRW		MW-27 12/10/2003 MW-27-D01N-GRW		MW-27 1/6/2004 MW-27-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0024	:	-		<0.0024	J
Nickel	mg/L	D	<0.0024	:	-		<0.0028	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		1.62	:	-		<2.87	:	-		1.7	:
Potassium	mg/L	D	1.63	:	-		1.61	:	-		<2.66	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.0006	J
Selenium	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		12.6	:	-		<16.3	:	-		14.3	:
Sodium	mg/L	D	13.4	:	-		<5.02	:	-		<17.2	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0022	:	-		0.0018	:	-		0.002	:
Vanadium	mg/L	D	0.0017	:	-		0.0022	:	-		0.0016	:	-	
Zinc	mg/L	T	-		<0.0363	:	-		<0.023	:	-		<0.04	:
Zinc	mg/L	D	<0.023	:	-		<0.027	:	-		<0.023	:	-	

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID													
			MW-27 1/6/2004 MW-27-D01N-GRW		MW-27 4/18/2004 MW-27-T01N-GRW		MW-27 4/18/2004 MW-27-D01N-GRW		TPZ-1 5/5/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	-		4.54	:	-		5.99	:	-		-	
Eh	millivolts	T	-		203.7	:	-		139.8	:	-		-	
pH	SU	T	-		7.9	J	-		7.8	:	7.8	J	-	
Specific Conductance	uS/cm	T	-		390.	:	-		980.	:	-		-	
Temperature	Celsius	T	-		11.95	:	-		13.34	:	-		-	
Turbidity	NTU	T	-		1.8	:	-		16.	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		-		<0.092	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		158.	:	-		-		86.8	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		13.3	:	-		-		<11.2	:	-	
Fluoride	mg/L	T	-		0.48	:	-		-		0.34	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.95	J	-		-		0.79	J	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		0.02	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		0.024	:	-		-		<0.033	:	-	
Sulfate	mg/L	T	-		29.5	:	-		-		369.	:	-	
Total Alkalinity	mg/L	T	-		158.	:	-		-		86.8	:	-	
Total Dissolved Solids	mg/L	T	-		278.	:	-		-		650.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.1	:	-		-		1.	:	-	
Total Suspended Solids	mg/L	T	-		<2.4	:	-		-		16.7	:	-	
Laboratory Parameters														
pH	SU	T	-		7.9	J	-		7.8	:	7.8	J	-	
Specific Conductance	umhos/cm	T	-		353.	J	-		-		876.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		178.	:	-		-		370.	:	-	
Hardness	mg/L	D	187.	:	-		172.	:	-		-		359.	:
Metals														

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 1/6/2004 MW-27-D01N-GRW		MW-27 4/18/2004 MW-27-T01N-GRW		MW-27 4/18/2004 MW-27-D01N-GRW		TPZ-1 5/5/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	-		<0.201	:	-		-		<0.426	:	-	
Aluminum	mg/L	D	<0.329	:	-		<0.201	:	-		-		<0.426	:
Antimony	mg/L	T	-		<0.0008	:	-		-		<0.0006	:	-	
Antimony	mg/L	D	<0.0024	:	-		<0.0008	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Barium	mg/L	T	-		0.086	:	-		-		0.0784	:	-	
Barium	mg/L	D	0.0782	:	-		0.0845	:	-		-		0.0721	:
Beryllium	mg/L	T	-		<0.0003	J	-		-		<0.0003	J	-	
Beryllium	mg/L	D	<0.0003	:	-		<0.0003	J	-		-		<0.0003	J
Boron	mg/L	T	-		0.0112	:	-		-		0.0271	:	-	
Boron	mg/L	D	<0.0105	:	-		0.0119	:	-		-		0.0277	:
Cadmium	mg/L	T	-		<0.0003	:	-		-		<0.0005	:	-	
Cadmium	mg/L	D	<0.0007	:	-		<0.0003	:	-		-		<0.0005	:
Calcium	mg/L	T	-		54.	:	-		-		103.	:	-	
Calcium	mg/L	D	57.2	:	-		53.	:	-		-		100.	:
Chromium	mg/L	T	-		<0.0006	:	-		-		0.0029	:	-	
Chromium	mg/L	D	<0.0015	J	-		<0.0006	:	-		-		<0.001	:
Cobalt	mg/L	T	-		<0.0016	:	-		-		<0.0038	:	-	
Cobalt	mg/L	D	<0.0023	:	-		<0.0018	:	-		-		<0.0038	:
Copper	mg/L	T	-		<0.0014	:	-		-		<0.0027	:	-	
Copper	mg/L	D	<0.003	:	-		<0.0014	:	-		-		0.002	:
Iron	mg/L	T	-		<0.293	J	-		-		0.594	:	-	
Iron	mg/L	D	<0.357	:	-		<0.293	:	-		-		<0.422	:
Lead	mg/L	T	-		<0.0008	:	-		-		<0.0002	:	-	
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		-		<0.0002	:
Magnesium	mg/L	T	-		10.5	:	-		-		27.4	:	-	
Magnesium	mg/L	D	10.9	:	-		9.59	:	-		-		26.5	:
Manganese	mg/L	T	-		<0.014	:	-		-		0.08	:	-	
Manganese	mg/L	D	<0.011	:	-		<0.014	:	-		-		0.0708	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		0.0058	:	-		-		0.323	:	-	
Molybdenum	mg/L	D	0.0028	:	-		0.004	:	-		-		0.309	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MW-27 1/6/2004 MW-27-D01N-GRW		MW-27 4/18/2004 MW-27-T01N-GRW		MW-27 4/18/2004 MW-27-D01N-GRW		TPZ-1 5/5/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-T01N-GRW		TPZ-1 5/6/2003 TPZ-1-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T	-		<0.0015	J	-		-		<0.003	:	-	
Nickel	mg/L	D	<0.0024	J	-		<0.0015	J	-		-		<0.003	:
Potassium	mg/L	T	-		1.76	:	-		-		4.91	:	-	
Potassium	mg/L	D	1.65	:	-		1.76	:	-		-		4.8	:
Selenium	mg/L	T	-		<0.0014	:	-		-		0.0016	:	-	
Selenium	mg/L	D	<0.0006	:	-		<0.0014	:	-		-		<0.001	:
Silver	mg/L	T	-		<0.0002	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		-		<0.0002	:
Sodium	mg/L	T	-		<20.4	:	-		-		47.8	:	-	
Sodium	mg/L	D	11.9	:	-		<3.28	:	-		-		44.3	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0021	:	-		-		0.001	:	-	
Vanadium	mg/L	D	0.0019	:	-		0.0021	:	-		-		0.00079	:
Zinc	mg/L	T	-		<0.024	:	-		-		<0.039	:	-	
Zinc	mg/L	D	<0.04	:	-		<0.024	:	-		-		<0.039	:

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Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			TPZ-1 10/21/2003 TPZ-1-T01N-GRW		TPZ-1 10/21/2003 TPZ-1-D01N-GRW		TPZ-2 5/7/2003 TPZ-2-T01N-GRW		TPZ-2 5/7/2003 TPZ-2-D01N-GRW		TPZ-2 10/21/2003 TPZ-2-T01N-GRW		TPZ-2 10/21/2003 TPZ-2-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	7.85	:	-		3.9	:	-		4.19	:	-	
Eh	millivolts	T	458.3	:	-		140.	:	-		389.4	:	-	
pH	SU	T	7.7	J	-		8.	J	-		5.1	J	-	
Specific Conductance	uS/cm	T	1006.	:	-		642.	:	-		622.	:	-	
Temperature	Celsius	T	14.66	:	-		13.86	:	-		14.62	:	-	
Turbidity	NTU	T	0.	:	-		0.	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	J	-		<0.045	:	-		<0.049	J	-	
Bicarbonate (as CaCO3)	mg/L	T	78.8	:	-		88.5	:	-		89.9	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	11.	:	-		<9.7	:	-		10.2	:	-	
Fluoride	mg/L	T	0.26	:	-		0.38	:	-		0.72	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.	J	-		<0.4	J	-		0.37	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.01	:	-		<0.013	:	-		0.015	:	-	
Sulfate	mg/L	T	426.	J	-		203.	:	-		199.	J	-	
Total Alkalinity	mg/L	T	78.8	:	-		88.5	:	-		89.9	:	-	
Total Dissolved Solids	mg/L	T	794.	:	-		442.	:	-		544.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		1.2	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	<1.8	:	-		<1.9	:	-		<0.5	:	-	
Laboratory Parameters														
pH	SU	T	7.7	J	-		8.	J	-		5.1	J	-	
Specific Conductance	umhos/cm	T	829.	J	-		602.	:	-		508.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	458.	:	-		222.	:	-		214.	:	-	
Hardness	mg/L	D	-		467.	:	-		211.	:	-		220.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			TPZ-1 10/21/2003 TPZ-1-T01N-GRW		TPZ-1 10/21/2003 TPZ-1-D01N-GRW		TPZ-2 5/7/2003 TPZ-2-T01N-GRW		TPZ-2 5/7/2003 TPZ-2-D01N-GRW		TPZ-2 10/21/2003 TPZ-2-T01N-GRW		TPZ-2 10/21/2003 TPZ-2-D01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Aluminum	mg/L	T	<0.221	J	-		<0.426	:	-		<0.221	J	-	
Aluminum	mg/L	D	-		<0.221	J	-		<0.426	:	-		<0.221	J
Antimony	mg/L	T	<0.001	:	-		<0.0006	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0006	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		0.0012	:	-		0.0012	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.001	:	-		0.0012	:
Barium	mg/L	T	0.0329	:	-		0.0818	:	-		0.0717	:	-	
Barium	mg/L	D	-		0.0317	:	-		0.0774	:	-		0.073	:
Beryllium	mg/L	T	<0.0004	:	-		<0.0003	J	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.0004	:	-		<0.0003	J	-		<0.0004	:
Boron	mg/L	T	0.0079	:	-		0.0536	:	-		0.0491	:	-	
Boron	mg/L	D	-		0.0083	:	-		0.0519	:	-		0.0492	:
Cadmium	mg/L	T	<0.0005	:	-		<0.0005	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0005	:	-		<0.0005	:
Calcium	mg/L	T	127.	:	-		60.1	:	-		58.6	:	-	
Calcium	mg/L	D	-		129.	:	-		56.9	:	-		60.2	:
Chromium	mg/L	T	0.0016	J	-		<0.001	:	-		0.0019	J	-	
Chromium	mg/L	D	-		<0.0011	J	-		<0.001	:	-		0.0016	J
Cobalt	mg/L	T	<0.0029	:	-		<0.0038	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0038	:	-		<0.0029	:
Copper	mg/L	T	<0.0022	:	-		<0.0015	:	-		<0.0022	:	-	
Copper	mg/L	D	-		<0.0022	:	-		<0.0015	:	-		<0.0022	:
Iron	mg/L	T	<0.278	:	-		<0.422	:	-		<0.278	:	-	
Iron	mg/L	D	-		<0.278	:	-		<0.422	:	-		<0.278	:
Lead	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Magnesium	mg/L	T	34.1	:	-		17.6	:	-		16.5	:	-	
Magnesium	mg/L	D	-		35.	:	-		16.6	:	-		17.	:
Manganese	mg/L	T	<0.012	:	-		0.141	:	-		0.089	:	-	
Manganese	mg/L	D	-		<0.012	:	-		0.136	:	-		0.088	:
Mercury	mg/L	T	<0.00013	J	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.465	:	-		0.0591	:	-		0.053	:	-	
Molybdenum	mg/L	D	-		0.475	:	-		0.057	:	-		0.0518	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	TPZ-1 10/21/2003 TPZ-1-T01N-GRW GW13 T		TPZ-1 10/21/2003 TPZ-1-D01N-GRW GW13 D		TPZ-2 5/7/2003 TPZ-2-T01N-GRW GW13 T		TPZ-2 5/7/2003 TPZ-2-D01N-GRW GW13 D		TPZ-2 10/21/2003 TPZ-2-T01N-GRW GW13 T		TPZ-2 10/21/2003 TPZ-2-D01N-GRW GW13 D	
Nickel	mg/L	T	<0.0024	:	-		<0.003	:	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.003	:	-		<0.0024	:
Potassium	mg/L	T	3.97	:	-		5.11	:	-		4.41	:	-	
Potassium	mg/L	D	-		3.94	:	-		4.89	:	-		4.33	:
Selenium	mg/L	T	0.0015	:	-		<0.001	:	-		<0.0006	:	-	
Selenium	mg/L	D	-		0.0015	:	-		<0.001	:	-		<0.0006	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	54.2	:	-		48.1	:	-		44.	:	-	
Sodium	mg/L	D	-		53.2	:	-		44.4	:	-		47.9	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0017	:	-		0.0038	:	-		0.0042	:	-	
Vanadium	mg/L	D	-		0.0017	:	-		0.004	:	-		0.0043	:
Zinc	mg/L	T	0.0304	:	-		<0.039	:	-		<0.023	:	-	
Zinc	mg/L	D	-		0.024	:	-		<0.039	:	-		<0.023	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID	TPZ-5B	TPZ-5B	TPZ-5B	TPZ-5B	----	----
			Sample Date	5/8/2003	5/8/2003	10/21/2003	10/21/2003		
			Sample ID	TPZ-5B-T01N-GRW	TPZ-5B-D01N-GRW	TPZ-5B-T01N-GRW	TPZ-5B-D01N-GRW		
			Exposure Area	GW13	GW13	GW13	GW13		
Field Measurements									
DO	mg/L	T		3.86 :	-	0. :	-	-	-
Eh	millivolts	T		-114.8 :	-	-48.2 :	-	-	-
pH	SU	T		7.6 J	-	6.82 :	-	-	-
Specific Conductance	uS/cm	T		781. :	-	795. :	-	-	-
Temperature	Celsius	T		11.04 :	-	12.86 :	-	-	-
Turbidity	NTU	T		41.3 :	-	74.1 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.065 :	-	<0.078 J	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		164. :	-	159. :	-	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Chloride	mg/L	T		<8.1 :	-	7.3 :	-	-	-
Fluoride	mg/L	T		0.57 :	-	0.43 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Nitrate	mg/L	T		0.4 J	-	<0.2 J	-	-	-
Nitrite	mg/L	T		0.011 J	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	-	-
Phosphorus	mg/L	T		0.12 :	-	0.13 :	-	-	-
Sulfate	mg/L	T		226. :	-	251. J	-	-	-
Total Alkalinity	mg/L	T		164. :	-	159. :	-	-	-
Total Dissolved Solids	mg/L	T		506. :	-	588. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		<1. :	-	1.4 J	-	-	-
Total Suspended Solids	mg/L	T		32. :	-	42. :	-	-	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	6.82 :	-	-	-
Specific Conductance	umhos/cm	T		742. J	-	655. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	-	-
Physical Properties									
Hardness	mg/L	T		382. :	-	385. :	-	-	-
Hardness	mg/L	D		-	342. :	-	391. :	-	-
Metals									

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	TPZ-5B 5/8/2003 TPZ-5B-T01N-GRW GW13		TPZ-5B 5/8/2003 TPZ-5B-D01N-GRW GW13		TPZ-5B 10/21/2003 TPZ-5B-T01N-GRW GW13		TPZ-5B 10/21/2003 TPZ-5B-D01N-GRW GW13		----	----
Aluminum	mg/L	T	2.25	:	-		6.12	:	-		-	-
Aluminum	mg/L	D	-		<0.426	:	-		<0.221	J	-	-
Antimony	mg/L	T	<0.0006	:	-		<0.001	:	-		-	-
Antimony	mg/L	D	-		<0.0006	:	-		<0.001	:	-	-
Arsenic	mg/L	T	0.00041	:	-		0.0017	:	-		-	-
Arsenic	mg/L	D	-		<0.0004	:	-		0.0012	:	-	-
Barium	mg/L	T	0.149	:	-		0.276	:	-		-	-
Barium	mg/L	D	-		0.089	:	-		0.126	:	-	-
Beryllium	mg/L	T	<0.0003	:	-		<0.0004	:	-		-	-
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0004	:	-	-
Boron	mg/L	T	0.0243	:	-		0.0217	:	-		-	-
Boron	mg/L	D	-		0.022	:	-		0.0219	:	-	-
Cadmium	mg/L	T	<0.0005	:	-		<0.0005	:	-		-	-
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0005	:	-	-
Calcium	mg/L	T	118.	:	-		117.	:	-		-	-
Calcium	mg/L	D	-		106.	:	-		120.	:	-	-
Chromium	mg/L	T	0.0026	:	-		0.0046	J	-		-	-
Chromium	mg/L	D	-		<0.001	:	-		<0.0011	J	-	-
Cobalt	mg/L	T	0.0045	:	-		0.0085	:	-		-	-
Cobalt	mg/L	D	-		<0.0038	:	-		0.0038	:	-	-
Copper	mg/L	T	0.0058	:	-		0.0107	:	-		-	-
Copper	mg/L	D	-		<0.0015	:	-		<0.0022	:	-	-
Iron	mg/L	T	1.9	:	-		6.58	:	-		-	-
Iron	mg/L	D	-		<0.422	J	-		0.619	:	-	-
Lead	mg/L	T	<0.0002	J	-		0.0018	:	-		-	-
Lead	mg/L	D	-		<0.0002	J	-		<0.0004	:	-	-
Magnesium	mg/L	T	21.4	:	-		22.5	:	-		-	-
Magnesium	mg/L	D	-		18.9	:	-		22.3	:	-	-
Manganese	mg/L	T	2.33	:	-		2.65	:	-		-	-
Manganese	mg/L	D	-		1.72	:	-		1.82	:	-	-
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		-	-
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-	-
Molybdenum	mg/L	T	0.275	:	-		0.194	:	-		-	-
Molybdenum	mg/L	D	-		0.247	:	-		0.21	:	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6c
Groundwater - Basal Bedrock Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	TPZ-5B 5/8/2003 TPZ-5B-T01N-GRW GW13		TPZ-5B 5/8/2003 TPZ-5B-D01N-GRW GW13		TPZ-5B 10/21/2003 TPZ-5B-T01N-GRW GW13		TPZ-5B 10/21/2003 TPZ-5B-D01N-GRW GW13		----	----
Nickel	mg/L	T	0.0155	:	-		0.0215	:	-		-	-
Nickel	mg/L	D	-		0.0105	:	-		0.0161	:	-	-
Potassium	mg/L	T	3.2	:	-		3.17	:	-		-	-
Potassium	mg/L	D	-		2.75	:	-		2.49	:	-	-
Selenium	mg/L	T	<0.001	:	-		<0.0006	:	-		-	-
Selenium	mg/L	D	-		<0.001	:	-		0.00083	:	-	-
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		-	-
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-	-
Sodium	mg/L	T	35.2	:	-		33.7	:	-		-	-
Sodium	mg/L	D	-		31.7	:	-		34.2	:	-	-
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-	-
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-	-
Vanadium	mg/L	T	0.0056	:	-		0.0111	:	-		-	-
Vanadium	mg/L	D	-		0.0017	:	-		0.00049	:	-	-
Zinc	mg/L	T	<0.039	:	-		0.0477	:	-		-	-
Zinc	mg/L	D	-		<0.039	:	-		<0.023	:	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID / Sample Date / Sample ID / Exposure Area											
			C3 / 4/22/2004 / C3-T01N-GRW / GW5		C3 / 4/23/2004 / C3-T01N-GRW / GW5		CC-1B / 3/4/2003 / CC1B-T01N-GRW / MR		CC-1B / 3/4/2003 / CC1B-D01N-GRW / MR		CC-1B / 4/10/2003 / CC1B-T01N-GRW / MR		CC-1B / 4/10/2003 / CC1B-D01N-GRW / MR	
Field Measurements														
DO	mg/L	T	-		-		0.98	:	-		0.54	:	-	
EH	millivolts	T	179.3	:	-		256.1	:	-		132.8	:	-	
pH	SU	T	7.37	:	-		7.28	:	-		7.3	J	-	
Specific Conductance	uS/cm	T	2462.	:	-		654.	:	-		632.	:	-	
Temperature	Celsius	T	18.03	:	-		4.21	:	-		8.66	:	-	
Turbidity	NTU	T	123.4	:	-		2.2	:	-		23.1	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.064	J	-		<0.048	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		208.	:	-		202.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	-		-		7.7	:	-		6.3	:	-	
Fluoride	mg/L	T	-		-		1.1	:	-		1.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	-		-		<0.4	:	-		<0.4	J	-	
Nitrite	mg/L	T	-		-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	:	-		<0.071	J	-	
Phosphorus	mg/L	T	-		-		<0.01	J	-		<0.01	J	-	
Sulfate	mg/L	T	-		-		146.	:	-		115.	J	-	
Total Alkalinity	mg/L	T	-		-		208.	:	-		202.	:	-	
Total Dissolved Solids	mg/L	T	-		-		460.	:	-		496.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		<2.5	J	-		<1.9	J	-	
Total Suspended Solids	mg/L	T	-		-		2.1	J	-		<2.6	:	-	
Laboratory Parameters														
pH	SU	T	7.37	:	-		7.28	:	-		7.3	J	-	
Specific Conductance	umhos/cm	T	-		-		-		-		600.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		-		352.	:	-		294.	:	-	
Hardness	mg/L	D	-		-		-		357.	:	-		294.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	C3 4/22/2004 C3-T01N-GRW GW5	C3 4/23/2004 C3-T01N-GRW GW5	CC-1B 3/4/2003 CC1B-T01N-GRW MR	CC-1B 3/4/2003 CC1B-D01N-GRW MR	CC-1B 4/10/2003 CC1B-T01N-GRW MR	CC-1B 4/10/2003 CC1B-D01N-GRW MR
Aluminum	mg/L	T	-	-	<0.142 J	-	<0.426 :	-
Aluminum	mg/L	D	-	-	-	<0.142 J	-	0.478 :
Antimony	mg/L	T	-	-	<0.0006 :	-	<0.0006 :	-
Antimony	mg/L	D	-	-	-	<0.0006 :	-	<0.0006 :
Arsenic	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	-	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T	-	-	0.0383 :	-	0.0318 :	-
Barium	mg/L	D	-	-	-	0.0378 :	-	0.0309 :
Beryllium	mg/L	T	-	-	<0.0002 :	-	<0.0003 :	-
Beryllium	mg/L	D	-	-	-	<0.0002 :	-	<0.0003 :
Boron	mg/L	T	-	-	0.013 :	-	0.0148 :	-
Boron	mg/L	D	-	-	-	0.0138 :	-	0.0142 :
Cadmium	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Cadmium	mg/L	D	-	-	-	<0.0004 :	-	<0.0004 :
Calcium	mg/L	T	-	-	114. J	-	94.6 :	-
Calcium	mg/L	D	-	-	-	116. J	-	95.2 :
Chromium	mg/L	T	-	-	<0.0037 :	-	<0.0009 :	-
Chromium	mg/L	D	-	-	-	<0.0037 :	-	<0.0009 :
Cobalt	mg/L	T	-	-	<0.0016 :	-	<0.0029 :	-
Cobalt	mg/L	D	-	-	-	<0.0016 :	-	<0.0029 :
Copper	mg/L	T	-	-	<0.0017 J	-	<0.0024 J	-
Copper	mg/L	D	-	-	-	<0.0017 J	-	<0.0024 J
Iron	mg/L	T	-	-	<0.299 :	-	<0.422 :	-
Iron	mg/L	D	-	-	-	<0.299 J	-	<0.422 :
Lead	mg/L	T	-	-	<0.0002 :	-	<0.00094 :	-
Lead	mg/L	D	-	-	-	<0.0002 :	-	<0.00092 :
Magnesium	mg/L	T	-	-	16.2 :	-	14.1 :	-
Magnesium	mg/L	D	-	-	-	16.5 :	-	13.7 :
Manganese	mg/L	T	-	-	0.36 :	-	0.283 :	-
Manganese	mg/L	D	-	-	-	0.363 :	-	0.287 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.0071 :	-	0.0055 :	-
Molybdenum	mg/L	D	-	-	-	<0.0076 J	-	0.0044 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	C3 4/22/2004 C3-T01N-GRW GW5	C3 4/23/2004 C3-T01N-GRW GW5	CC-1B 3/4/2003 CC1B-T01N-GRW MR	CC-1B 3/4/2003 CC1B-D01N-GRW MR	CC-1B 4/10/2003 CC1B-T01N-GRW MR	CC-1B 4/10/2003 CC1B-D01N-GRW MR
Nickel	mg/L	T	-	-	0.0019 :	-	<0.0026 :	-
Nickel	mg/L	D	-	-	-	0.0025 :	-	<0.0026 :
Potassium	mg/L	T	-	-	2.81 :	-	<2.88 :	-
Potassium	mg/L	D	-	-	-	2.26 :	-	<2.88 :
Selenium	mg/L	T	-	-	<0.0016 J	-	<0.001 :	-
Selenium	mg/L	D	-	-	-	<0.0016 J	-	<0.001 :
Silver	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Silver	mg/L	D	-	-	-	<0.0002 :	-	<0.0002 :
Sodium	mg/L	T	-	-	27. :	-	20.6 :	-
Sodium	mg/L	D	-	-	-	27.2 :	-	19.5 :
Thallium	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D	-	-	-	<0.0002 :	-	<0.0002 :
Vanadium	mg/L	T	-	-	<0.0004 :	-	<0.0002 :	-
Vanadium	mg/L	D	-	-	-	<0.0004 :	-	<0.0002 :
Zinc	mg/L	T	-	-	<0.0366 J	-	<0.039 :	-
Zinc	mg/L	D	-	-	-	<0.032 :	-	<0.039 :
Isotopes								
Delta D	per mil	T	-	-89.8 :	-	-	-	-
Delta O-18	per mil	T	-	-12.2 :	-	-	-	-
Lead	mg/L	T	-	-	<0.0002 :	-	<0.00094 :	-
Lead	mg/L	D	-	-	-	<0.0002 :	-	<0.00092 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B 5/6/2003 CC-1B-T01N-GRW MR		CC-1B 5/6/2003 CC-1B-D01N-GRW MR		CC-1B 6/4/2003 CC1B-T01N-GRW MR		CC-1B 6/4/2003 CC-1B-T01N-GRW MR		CC-1B 6/4/2003 CC1B-D01N-GRW MR		CC-1B 7/21/2003 CC1B-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	0.41	:	-		-		0.43	:	-		-	
EH	millivolts	T	154.2	:	-		-		202.5	:	-		-	
pH	SU	T	7.2	J	-		7.4	J	4.7	:	-		7.4	J
Specific Conductance	uS/cm	T	629.	:	-		-		610.	:	-		-	
Temperature	Celsius	T	7.1	:	-		-		10.36	:	-		-	
Turbidity	NTU	T	8.2	:	-		-		0.4	:	-		-	
General Chemistry														
Ammonia	mg/L	T	<0.088	:	-		<0.17	J	-		-		<0.047	J
Bicarbonate (as CaCO3)	mg/L	T	197.	:	-		200.	:	-		-		205.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	<6.1	:	-		<15.1	:	-		-		6.9	:
Fluoride	mg/L	T	1.2	:	-		1.2	:	-		-		1.2	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	<0.4	J	-		<0.4	:	-		-		<0.2	J
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		0.053	J	-		-		<0.01	:
Phosphorus	mg/L	T	<0.01	:	-		-		-		-		<0.01	:
Sulfate	mg/L	T	100.	:	-		143.	J	-		-		122.	J
Total Alkalinity	mg/L	T	197.	:	-		200.	:	-		-		205.	:
Total Dissolved Solids	mg/L	T	352.	:	-		370.	:	-		-		408.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	2.4	:	-		1.8	J	-		-		<2.	J
Total Suspended Solids	mg/L	T	<1.2	:	-		<0.5	:	-		-		<0.5	:
Laboratory Parameters														
pH	SU	T	7.2	J	-		7.4	J	4.7	:	-		7.4	J
Specific Conductance	umhos/cm	T	558.	J	-		609.	J	-		-		618.	J
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	291.	:	-		281.	:	-		-		305.	:
Hardness	mg/L	D	-		294.	:	-		-		275.	:	-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1B 5/6/2003 CC-1B-T01N-GRW MR		CC-1B 5/6/2003 CC-1B-D01N-GRW MR		CC-1B 6/4/2003 CC1B-T01N-GRW MR		CC-1B 6/4/2003 CC-1B-T01N-GRW MR		CC-1B 6/4/2003 CC1B-D01N-GRW MR		CC-1B 7/21/2003 CC1B-T01N-GRW MR	
Aluminum	mg/L	T	<0.426	:	-		<0.503	:	-		-		<0.631	:
Aluminum	mg/L	D	-		<0.426	:	-		-		<0.503	:	-	
Antimony	mg/L	T	<0.0006	:	-		<0.072	:	-		-		<0.001	:
Antimony	mg/L	D	-		<0.0006	:	-		-		<0.072	:	-	
Arsenic	mg/L	T	<0.0004	:	-		<0.04	:	-		-		<0.0004	:
Arsenic	mg/L	D	-		<0.0004	:	-		-		<0.04	:	-	
Barium	mg/L	T	0.0301	:	-		<0.123	:	-		-		0.0277	:
Barium	mg/L	D	-		0.0293	:	-		-		<0.123	:	-	
Beryllium	mg/L	T	<0.0003	J	-		<0.0067	:	-		-		<0.00034	:
Beryllium	mg/L	D	-		<0.0003	J	-		-		<0.0075	:	-	
Boron	mg/L	T	0.0141	:	-		<0.084	:	-		-		0.0136	:
Boron	mg/L	D	-		0.0126	:	-		-		<0.084	:	-	
Cadmium	mg/L	T	<0.0005	:	-		<0.005	:	-		-		<0.0003	:
Cadmium	mg/L	D	-		<0.0005	:	-		-		<0.005	:	-	
Calcium	mg/L	T	94.7	:	-		92.1	:	-		-		98.9	:
Calcium	mg/L	D	-		95.7	:	-		-		90.1	:	-	
Chromium	mg/L	T	<0.001	:	-		<0.01	:	-		-		<0.0006	:
Chromium	mg/L	D	-		<0.001	:	-		-		<0.01	:	-	
Cobalt	mg/L	T	<0.0038	:	-		<0.038	:	-		-		<0.0018	:
Cobalt	mg/L	D	-		<0.0038	:	-		-		<0.038	:	-	
Copper	mg/L	T	<0.0023	:	-		<0.015	:	-		-		<0.0014	J
Copper	mg/L	D	-		0.0017	:	-		-		<0.015	:	-	
Iron	mg/L	T	<0.422	:	-		<0.518	:	-		-		<0.667	:
Iron	mg/L	D	-		<0.422	:	-		-		<0.453	:	-	
Lead	mg/L	T	<0.0002	:	-		<0.001	:	-		-		<0.0002	:
Lead	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Magnesium	mg/L	T	13.3	:	-		12.4	:	-		-		14.1	:
Magnesium	mg/L	D	-		13.4	:	-		-		12.1	:	-	
Manganese	mg/L	T	0.242	:	-		0.246	:	-		-		0.288	:
Manganese	mg/L	D	-		0.223	:	-		-		0.23	:	-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	0.0042	:	-		0.0253	:	-		-		0.0037	:
Molybdenum	mg/L	D	-		0.0047	:	-		-		<0.023	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			CC-1B 5/6/2003 CC-1B-T01N-GRW MR	CC-1B 5/6/2003 CC-1B-D01N-GRW MR	CC-1B 6/4/2003 CC1B-T01N-GRW MR	CC-1B 6/4/2003 CC-1B-T01N-GRW MR	CC-1B 6/4/2003 CC1B-D01N-GRW MR	CC-1B 7/21/2003 CC1B-T01N-GRW MR
Nickel	mg/L	T	<0.003 :	-	<0.03 :	-	-	<0.002 :
Nickel	mg/L	D	-	<0.003 :	-	-	<0.03 :	-
Potassium	mg/L	T	2.1 :	-	<3.26 :	-	-	2.22 :
Potassium	mg/L	D	-	2.09 :	-	-	<3.26 :	-
Selenium	mg/L	T	<0.001 :	-	<0.008 :	-	-	<0.0016 :
Selenium	mg/L	D	-	<0.001 :	-	-	<0.008 :	-
Silver	mg/L	T	<0.0002 :	-	<0.001 :	-	-	<0.0002 J
Silver	mg/L	D	-	<0.0002 :	-	-	<0.001 :	-
Sodium	mg/L	T	23.2 :	-	23.3 :	-	-	23.6 :
Sodium	mg/L	D	-	24. :	-	-	21.6 :	-
Thallium	mg/L	T	<0.0002 :	-	<0.001 :	-	-	<0.0002 :
Thallium	mg/L	D	-	<0.0002 :	-	-	<0.001 :	-
Vanadium	mg/L	T	<0.0002 :	-	<0.002 :	-	-	<0.0004 :
Vanadium	mg/L	D	-	0.0002 :	-	-	<0.002 :	-
Zinc	mg/L	T	<0.039 :	-	0.0198 :	-	-	<0.016 :
Zinc	mg/L	D	-	<0.039 :	-	-	0.0145 :	-
Isotopes								
Lead	mg/L	T	<0.0002 :	-	<0.001 :	-	-	<0.0002 :
Lead	mg/L	D	-	<0.0002 :	-	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B 7/21/2003 CC-1B-T01N-GRW MR		CC-1B 7/21/2003 CC1B-D01N-GRW MR		CC-1B 8/12/2003 CC1B-T01N-GRW MR		CC-1B 8/12/2003 CC-1B-T01N-GRW MR		CC-1B 8/12/2003 CC1B-D01N-GRW MR		CC-1B 9/11/2003 CC1B-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	0.31	:	-		-		0.44	:	-		-	
EH	millivolts	T	115.9	:	-		-		-59.7	:	-		-	
pH	SU	T	7.05	:	-		7.4	J	7.26	:	-		7.4	J
Specific Conductance	uS/cm	T	623.	:	-		-		603.	:	-		-	
Temperature	Celsius	T	12.49	:	-		-		13.84	:	-		-	
Turbidity	NTU	T	1.6	:	-		-		9.1	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.04	:	-		-		0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		-		213.	:	-		-		203.	:
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	-		-		7.7	:	-		-		6.5	:
Fluoride	mg/L	T	-		-		1.1	:	-		-		1.2	:
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	-		-		<0.2	J	-		-		<0.2	:
Nitrite	mg/L	T	-		-		<0.005	J	-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	J	-		-		<0.01	:
Phosphorus	mg/L	T	-		-		<0.01	:	-		-		<0.01	:
Sulfate	mg/L	T	-		-		126.	J	-		-		144.	J
Total Alkalinity	mg/L	T	-		-		213.	:	-		-		203.	:
Total Dissolved Solids	mg/L	T	-		-		476.	:	-		-		454.	:
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		<0.28	:
Total Organic Carbon	mg/L	T	-		-		2.3	J	-		-		<1.5	:
Total Suspended Solids	mg/L	T	-		-		3.4	:	-		-		25.6	:
Laboratory Parameters														
pH	SU	T	7.05	:	-		7.4	J	7.26	:	-		7.4	J
Specific Conductance	umhos/cm	T	-		-		610.	J	-		-		579.	J
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	:	-		-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		-		289.	:	-		-		300.	:
Hardness	mg/L	D	-		330.	:	-		-		308.	:	-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			CC-1B 7/21/2003 CC-1B-T01N-GRW MR	CC-1B 7/21/2003 CC1B-D01N-GRW MR	CC-1B 8/12/2003 CC1B-T01N-GRW MR	CC-1B 8/12/2003 CC-1B-T01N-GRW MR	CC-1B 8/12/2003 CC1B-D01N-GRW MR	CC-1B 9/11/2003 CC1B-T01N-GRW MR
Aluminum	mg/L	T	-	-	<0.183 :	-	-	<0.217 :
Aluminum	mg/L	D	-	<0.631 :	-	-	<0.183 :	-
Antimony	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Antimony	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Arsenic	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	0.0289 :	-	-	0.0289 :
Barium	mg/L	D	-	0.0274 :	-	-	0.0291 :	-
Beryllium	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Beryllium	mg/L	D	-	<0.0002 :	-	-	<0.0004 :	-
Boron	mg/L	T	-	-	0.0138 :	-	-	0.0132 :
Boron	mg/L	D	-	0.0145 :	-	-	0.014 :	-
Cadmium	mg/L	T	-	-	<0.0005 :	-	-	<0.0005 :
Cadmium	mg/L	D	-	<0.0003 :	-	-	<0.0005 :	-
Calcium	mg/L	T	-	-	94.1 :	-	-	97.2 :
Calcium	mg/L	D	-	101. :	-	-	100. :	-
Chromium	mg/L	T	-	-	<0.0011 :	-	-	<0.0011 :
Chromium	mg/L	D	-	<0.0006 :	-	-	<0.0017 :	-
Cobalt	mg/L	T	-	-	<0.0029 :	-	-	<0.0029 :
Cobalt	mg/L	D	-	<0.0018 :	-	-	<0.0029 :	-
Copper	mg/L	T	-	-	<0.0028 :	-	-	<0.0022 :
Copper	mg/L	D	-	<0.0014 J	-	-	<0.0026 :	-
Iron	mg/L	T	-	-	<0.261 :	-	-	<0.455 :
Iron	mg/L	D	-	<0.667 :	-	-	<0.226 :	-
Lead	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0004 :	-
Magnesium	mg/L	T	-	-	13.1 :	-	-	14. :
Magnesium	mg/L	D	-	14.3 :	-	-	14. :	-
Manganese	mg/L	T	-	-	0.298 :	-	-	0.315 :
Manganese	mg/L	D	-	0.294 :	-	-	0.335 :	-
Mercury	mg/L	T	-	-	<0.0001 J	-	-	<0.0001 J
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 J	-
Molybdenum	mg/L	T	-	-	<0.0054 :	-	-	0.004 J
Molybdenum	mg/L	D	-	0.0042 :	-	-	<0.006 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1B 7/21/2003 CC-1B-T01N-GRW MR	CC-1B 7/21/2003 CC1B-D01N-GRW MR	CC-1B 8/12/2003 CC1B-T01N-GRW MR	CC-1B 8/12/2003 CC-1B-T01N-GRW MR	CC-1B 8/12/2003 CC1B-D01N-GRW MR	CC-1B 9/11/2003 CC1B-T01N-GRW MR
Nickel	mg/L	T	-	-	<0.0024 :	-	-	<0.0024 :
Nickel	mg/L	D	-	<0.0039 :	-	-	<0.0024 :	-
Potassium	mg/L	T	-	-	1.86 :	-	-	<2.71 :
Potassium	mg/L	D	-	2.33 :	-	-	1.87 :	-
Selenium	mg/L	T	-	-	<0.0006 :	-	-	<0.0006 :
Selenium	mg/L	D	-	<0.0016 J	-	-	<0.0006 :	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D	-	<0.0002 J	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	20.5 :	-	-	29.8 :
Sodium	mg/L	D	-	25.5 :	-	-	21.3 :	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	<0.0002 J	-	-	<0.0002 :
Vanadium	mg/L	D	-	<0.0004 :	-	-	<0.0002 J	-
Zinc	mg/L	T	-	-	<0.057 :	-	-	0.0258 :
Zinc	mg/L	D	-	<0.016 :	-	-	<0.057 :	-
Isotopes								
Lead	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0004 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B 9/11/2003 CC-1B-T01N-GRW MR		CC-1B 9/11/2003 CC1B-D01N-GRW MR		CC-1B 10/23/2003 CC1B-T01N-GRW MR		CC-1B 10/23/2003 CC1B-D01N-GRW MR		CC-1B 11/4/2003 CC1B-T01N-GRW MR		CC-1B 11/4/2003 CC-1B-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	0.47	:	-		0.28	:	-		-		0.21	:
EH	millivolts	T	-17.7	:	-		299.	:	-		-		-1.	:
pH	SU	T	7.17	:	-		7.1	J	-		7.2	J	7.17	:
Specific Conductance	uS/cm	T	640.	:	-		611.	:	-		-		639.	:
Temperature	Celsius	T	11.39	:	-		12.89	:	-		-		8.75	:
Turbidity	NTU	T	141.3	:	-		1.7	:	-		-		2.7	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.043	J	-		<0.067	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		204.	:	-		197.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	-		-		6.3	:	-		7.	:	-	
Fluoride	mg/L	T	-		-		1.2	:	-		1.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	-		-		<0.2	J	-		<0.2	J	-	
Nitrite	mg/L	T	-		-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	:	-		<0.01	J	-	
Phosphorus	mg/L	T	-		-		<0.01	:	-		<0.01	:	-	
Sulfate	mg/L	T	-		-		146.	J	-		115.	:	-	
Total Alkalinity	mg/L	T	-		-		204.	:	-		197.	:	-	
Total Dissolved Solids	mg/L	T	-		-		392.	:	-		412.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<2.4	:	-		<0.26	:	-	
Total Organic Carbon	mg/L	T	-		-		3.2	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		-		<1.	:	-		<0.8	:	-	
Laboratory Parameters														
pH	SU	T	7.17	:	-		7.1	J	-		7.2	J	7.17	:
Specific Conductance	umhos/cm	T	-		-		540.	J	-		642.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		-		292.	:	-		296.	:	-	
Hardness	mg/L	D	-		287.	:	-		279.	:	-		-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			CC-1B 9/11/2003 CC-1B-T01N-GRW MR	CC-1B 9/11/2003 CC1B-D01N-GRW MR	CC-1B 10/23/2003 CC1B-T01N-GRW MR	CC-1B 10/23/2003 CC1B-D01N-GRW MR	CC-1B 11/4/2003 CC1B-T01N-GRW MR	CC-1B 11/4/2003 CC-1B-T01N-GRW MR
Aluminum	mg/L	T	-	-	<0.217 :	-	<0.217 :	-
Aluminum	mg/L	D	-	<0.217 :	-	<0.217 :	-	-
Antimony	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-
Barium	mg/L	T	-	-	0.027 :	-	0.025 :	-
Barium	mg/L	D	-	0.0279 :	-	0.027 :	-	-
Beryllium	mg/L	T	-	-	<0.0004 J	-	<0.0005 :	-
Beryllium	mg/L	D	-	<0.0004 :	-	<0.0004 J	-	-
Boron	mg/L	T	-	-	0.0123 :	-	0.0092 :	-
Boron	mg/L	D	-	0.0125 :	-	0.0124 :	-	-
Cadmium	mg/L	T	-	-	<0.0005 :	-	<0.0007 :	-
Cadmium	mg/L	D	-	<0.0005 :	-	<0.0005 :	-	-
Calcium	mg/L	T	-	-	94.8 :	-	95.9 :	-
Calcium	mg/L	D	-	93.1 :	-	90.8 :	-	-
Chromium	mg/L	T	-	-	<0.0011 J	-	<0.0013 :	-
Chromium	mg/L	D	-	<0.0011 :	-	<0.0011 J	-	-
Cobalt	mg/L	T	-	-	<0.0029 :	-	<0.0031 :	-
Cobalt	mg/L	D	-	<0.0029 :	-	<0.0029 :	-	-
Copper	mg/L	T	-	-	<0.0022 :	-	<0.002 :	-
Copper	mg/L	D	-	<0.0022 :	-	<0.0022 :	-	-
Iron	mg/L	T	-	-	<0.455 :	-	<0.455 :	-
Iron	mg/L	D	-	<0.455 :	-	<0.455 :	-	-
Lead	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Lead	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-
Magnesium	mg/L	T	-	-	13.3 :	-	13.6 :	-
Magnesium	mg/L	D	-	13.3 :	-	12.8 :	-	-
Manganese	mg/L	T	-	-	0.258 :	-	0.285 J	-
Manganese	mg/L	D	-	0.284 :	-	0.274 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 J	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	0.0051 :	-	<0.0045 :	-
Molybdenum	mg/L	D	-	0.0033 J	-	0.0048 :	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		CC-1B	CC-1B	CC-1B	CC-1B	CC-1B	CC-1B	
		9/11/2003	9/11/2003	10/23/2003	10/23/2003	11/4/2003	11/4/2003	
		CC-1B-T01N-GRW	CC1B-D01N-GRW	CC1B-T01N-GRW	CC1B-D01N-GRW	CC1B-T01N-GRW	CC-1B-T01N-GRW	
		MR	MR	MR	MR	MR	MR	
Nickel	mg/L	T	-	-	<0.0024 J	-	<0.0028 :	-
Nickel	mg/L	D	-	<0.0024 :	-	<0.0024 J	-	-
Potassium	mg/L	T	-	-	<2.6 :	-	<1.88 :	-
Potassium	mg/L	D	-	<2.73 :	-	<2.73 :	-	-
Selenium	mg/L	T	-	-	<0.0006 :	-	<0.0006 :	-
Selenium	mg/L	D	-	<0.0006 :	-	0.0006 :	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	24.6 :	-	22.5 :	-
Sodium	mg/L	D	-	24.2 :	-	21.1 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Zinc	mg/L	T	-	-	<0.019 :	-	<0.019 :	-
Zinc	mg/L	D	-	<0.019 :	-	<0.019 :	-	-
Isotopes								
Lead	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Lead	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B 11/4/2003 CC1B-D01N-GRW		CC-1B 12/11/2003 CC1B-T01N-GRW		CC-1B 12/11/2003 CC-1B-T01N-GRW		CC-1B 12/11/2003 CC1B-D01N-GRW		CC-1B 1/7/2004 CC1B-T01N-GRW		CC-1B 1/7/2004 CC-1B-T01N-GRW	
			MR		MR		MR		MR		MR		MR	
Field Measurements														
DO	mg/L	T	-		-		0.42	:	-		-		1.59	:
EH	millivolts	T	-		-		3.5	:	-		-		11.7	:
pH	SU	T	-		7.3	J	7.22	:	-		7.5	J	7.28	:
Specific Conductance	uS/cm	T	-		-		600.	:	-		-		631.	:
Temperature	Celsius	T	-		-		4.94	:	-		-		7.83	:
Turbidity	NTU	T	-		-		29.4	:	-		-		1.3	:
General Chemistry														
Ammonia	mg/L	T	-		0.056	:	-		-		<0.043	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		210.	:	-		-		207.	J	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		7.	:	-		-		6.9	:	-	
Fluoride	mg/L	T	-		1.1	:	-		-		1.3	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.2	:	-		-		<0.2	J	-	
Nitrite	mg/L	T	-		<0.005	:	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
Sulfate	mg/L	T	-		124.	:	-		-		142.	:	-	
Total Alkalinity	mg/L	T	-		210.	:	-		-		207.	J	-	
Total Dissolved Solids	mg/L	T	-		436.	:	-		-		412.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		2.8	:	-		-		<1.9	:	-	
Total Suspended Solids	mg/L	T	-		0.9	:	-		-		<0.8	:	-	
Laboratory Parameters														
pH	SU	T	-		7.3	J	7.22	:	-		7.5	J	7.28	:
Specific Conductance	umhos/cm	T	-		535.	J	-		-		610.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		319.	:	-		-		287.	:	-	
Hardness	mg/L	D	313.	:	-		-		315.	:	-		-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B	11/4/2003	CC1B-D01N-GRW	CC-1B	12/11/2003	CC1B-T01N-GRW	CC-1B	12/11/2003	CC1B-T01N-GRW	CC-1B	12/11/2003	CC1B-D01N-GRW
			CC-1B	1/7/2004	CC1B-T01N-GRW	CC-1B	1/7/2004	CC-1B-T01N-GRW						
Aluminum	mg/L	T	-			<0.217			-			-		
Aluminum	mg/L	D	<0.217			-			-			<0.217		
Antimony	mg/L	T	-			<0.0024			-			-		
Antimony	mg/L	D	<0.001			-			-			<0.0024		
Arsenic	mg/L	T	-			<0.0004			-			-		
Arsenic	mg/L	D	<0.0004			-			-			<0.0004		
Barium	mg/L	T	-			0.029			-			-		
Barium	mg/L	D	0.0286			-			-			0.03		
Beryllium	mg/L	T	-			<0.0004			-			-		
Beryllium	mg/L	D	<0.0003			-			-			<0.0004		
Boron	mg/L	T	-			0.015			-			-		
Boron	mg/L	D	0.0127			-			-			0.0145		
Cadmium	mg/L	T	-			<0.0005			-			-		
Cadmium	mg/L	D	<0.0007			-			-			<0.0005		
Calcium	mg/L	T	-			104.			-			-		
Calcium	mg/L	D	102.			-			-			102.		
Chromium	mg/L	T	-			<0.0011			-			-		
Chromium	mg/L	D	<0.0013			-			-			<0.0011		
Cobalt	mg/L	T	-			<0.0029			-			-		
Cobalt	mg/L	D	<0.0031			-			-			<0.0029		
Copper	mg/L	T	-			<0.0022			-			-		
Copper	mg/L	D	0.005			-			-			<0.0022		
Iron	mg/L	T	-			<0.455			-			-		
Iron	mg/L	D	<0.455			-			-			<0.455		
Lead	mg/L	T	-			<0.0002			-			-		
Lead	mg/L	D	<0.0004			-			-			<0.0002		
Magnesium	mg/L	T	-			14.6			-			-		
Magnesium	mg/L	D	14.4			-			-			14.5		
Manganese	mg/L	T	-			0.344			-			-		
Manganese	mg/L	D	0.304			-			-			0.323		
Mercury	mg/L	T	-			<0.0001			-			-		
Mercury	mg/L	D	<0.0001			-			-			<0.0001		
Molybdenum	mg/L	T	-			0.0048			-			-		
Molybdenum	mg/L	D	0.0047			-			-			0.0047		

			CC-1B	1/7/2004	CC1B-T01N-GRW
Aluminum	mg/L	T	<0.514		-
Aluminum	mg/L	D	-		-
Antimony	mg/L	T	<0.0024		-
Antimony	mg/L	D	-		-
Arsenic	mg/L	T	0.00041		-
Arsenic	mg/L	D	-		-
Barium	mg/L	T	0.0263		-
Barium	mg/L	D	-		-
Beryllium	mg/L	T	<0.0003		-
Beryllium	mg/L	D	-		-
Boron	mg/L	T	0.0144		-
Boron	mg/L	D	-		-
Cadmium	mg/L	T	<0.0007	J	-
Cadmium	mg/L	D	-		-
Calcium	mg/L	T	93.4		-
Calcium	mg/L	D	-		-
Chromium	mg/L	T	<0.0015	J	-
Chromium	mg/L	D	-		-
Cobalt	mg/L	T	<0.0023		-
Cobalt	mg/L	D	-		-
Copper	mg/L	T	<0.003		-
Copper	mg/L	D	-		-
Iron	mg/L	T	<0.373		-
Iron	mg/L	D	-		-
Lead	mg/L	T	<0.0002		-
Lead	mg/L	D	-		-
Magnesium	mg/L	T	13.1		-
Magnesium	mg/L	D	-		-
Manganese	mg/L	T	0.264		-
Manganese	mg/L	D	-		-
Mercury	mg/L	T	<0.0001	J	-
Mercury	mg/L	D	-		-
Molybdenum	mg/L	T	0.0046		-
Molybdenum	mg/L	D	-		-

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1B 11/4/2003 CC1B-D01N-GRW MR		CC-1B 12/11/2003 CC1B-T01N-GRW MR		CC-1B 12/11/2003 CC1B-T01N-GRW MR		CC-1B 12/11/2003 CC1B-D01N-GRW MR		CC-1B 1/7/2004 CC1B-T01N-GRW MR		CC-1B 1/7/2004 CC-1B-T01N-GRW MR	
Nickel	mg/L	T	-		<0.0024	:	-		-		<0.0024	:	-	
Nickel	mg/L	D	<0.0028	:	-		-		<0.0024	:	-		-	
Potassium	mg/L	T	-		2.29	:	-		-		2.11	:	-	
Potassium	mg/L	D	<2.	:	-		-		2.32	:	-		-	
Selenium	mg/L	T	-		0.00093	:	-		-		0.0014	J	-	
Selenium	mg/L	D	<0.0006	:	-		-		<0.0006	:	-		-	
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Sodium	mg/L	T	-		23.3	:	-		-		22.5	:	-	
Sodium	mg/L	D	23.7	:	-		-		23.1	:	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	<0.0002	:	-		-		<0.0004	:	-		-	
Zinc	mg/L	T	-		<0.019	:	-		-		<0.026	:	-	
Zinc	mg/L	D	<0.0341	:	-		-		<0.019	:	-		-	
Isotopes														
Lead	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Lead	mg/L	D	<0.0004	:	-		-		<0.0002	:	-		-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1B 1/7/2004 CC1B-D01N-GRW MR		CC-1B 4/21/2004 CC1B-T01N-GRW MR		CC-1B 4/21/2004 CC-1B-T01N-GRW MR		CC-1B 4/21/2004 CC1B-D01N-GRW MR		CC-2B 3/4/2003 CC2B-T01N-GRW MR		CC-2B 3/4/2003 CC2B-D01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		-		0.61	:	-		1.18	:	-	
EH	millivolts	T	-		-		182.1	:	-		232.1	:	-	
pH	SU	T	-		7.7	J	7.2	:	-		6.92	:	-	
Specific Conductance	uS/cm	T	-		-		613.	:	-		1799.	:	-	
Temperature	Celsius	T	-		-		6.51	:	-		4.27	:	-	
Turbidity	NTU	T	-		-		5.1	:	-		15.5	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.068	:	-		-		<0.045	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		196.	:	-		-		247.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		6.4	:	-		-		3.9	:	-	
Fluoride	mg/L	T	-		1.2	:	-		-		2.	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.23	J	-		-		<0.4	:	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Sulfate	mg/L	T	-		132.	:	-		-		872.	:	-	
Total Alkalinity	mg/L	T	-		196.	:	-		-		247.	:	-	
Total Dissolved Solids	mg/L	T	-		372.	:	-		-		1620.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<2.	J	-		-		<1.	J	-	
Total Suspended Solids	mg/L	T	-		<2.2	J	-		-		6.7	J	-	
Laboratory Parameters														
pH	SU	T	-		7.7	J	7.2	:	-		6.92	:	-	
Specific Conductance	umhos/cm	T	-		515.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		292.	:	-		-		1150.	:	-	
Hardness	mg/L	D	292.	:	-		-		282.	:	-		1190.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-1B	CC-1B	CC-1B	CC-1B	CC-2B	CC-2B
			Sample Date	1/7/2004	4/21/2004	4/21/2004	4/21/2004	3/4/2003	3/4/2003
			Sample ID	CC1B-D01N-GRW	CC1B-T01N-GRW	CC-1B-T01N-GRW	CC1B-D01N-GRW	CC2B-T01N-GRW	CC2B-D01N-GRW
			Exposure Area	MR	MR	MR	MR	MR	MR
Aluminum	mg/L	T		-	<0.204 :	-	-	0.221 J	-
Aluminum	mg/L	D		<0.514 :	-	-	<0.176 :	-	<0.142 J
Antimony	mg/L	T		-	<0.0015 :	-	-	<0.0006 :	-
Antimony	mg/L	D		<0.0024 :	-	-	<0.0015 :	-	<0.0006 :
Arsenic	mg/L	T		-	<0.0004 :	-	-	<0.0004 :	-
Arsenic	mg/L	D		0.00042 :	-	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T		-	0.025 :	-	-	<0.0197 :	-
Barium	mg/L	D		0.0273 :	-	-	0.0246 :	-	<0.0182 :
Beryllium	mg/L	T		-	<0.00022 :	-	-	<0.0002 :	-
Beryllium	mg/L	D		<0.0003 :	-	-	<0.0002 :	-	<0.0002 :
Boron	mg/L	T		-	<0.0137 :	-	-	0.0153 :	-
Boron	mg/L	D		0.015 :	-	-	<0.0134 :	-	0.0134 :
Cadmium	mg/L	T		-	<0.0003 J	-	-	<0.0004 :	-
Cadmium	mg/L	D		<0.0007 :	-	-	<0.0003 J	-	<0.0004 :
Calcium	mg/L	T		-	94.9 :	-	-	424. J	-
Calcium	mg/L	D		95.1 :	-	-	91.9 :	-	439. J
Chromium	mg/L	T		-	<0.0008 :	-	-	<0.0037 :	-
Chromium	mg/L	D		<0.0015 J	-	-	<0.0008 :	-	<0.0037 :
Cobalt	mg/L	T		-	<0.0011 :	-	-	<0.0016 :	-
Cobalt	mg/L	D		<0.0023 :	-	-	<0.0011 :	-	<0.0016 :
Copper	mg/L	T		-	<0.0013 J	-	-	<0.0017 J	-
Copper	mg/L	D		<0.003 :	-	-	<0.0011 J	-	<0.0017 J
Iron	mg/L	T		-	<0.192 J	-	-	<0.626 :	-
Iron	mg/L	D		<0.373 :	-	-	<0.192 :	-	<0.299 J
Lead	mg/L	T		-	<0.0008 :	-	-	0.00053 :	-
Lead	mg/L	D		<0.0002 :	-	-	<0.0008 :	-	<0.0002 :
Magnesium	mg/L	T		-	13.2 :	-	-	23. :	-
Magnesium	mg/L	D		13.4 :	-	-	12.8 :	-	23.7 :
Manganese	mg/L	T		-	0.0934 :	-	-	5.08 :	-
Manganese	mg/L	D		0.273 :	-	-	0.0216 :	-	5.29 :
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D		<0.0001 J	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		-	<0.0037 :	-	-	<0.0049 :	-
Molybdenum	mg/L	D		0.0037 :	-	-	<0.0031 :	-	<0.0057 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1B 1/7/2004 CC1B-D01N-GRW MR		CC-1B 4/21/2004 CC1B-T01N-GRW MR		CC-1B 4/21/2004 CC-1B-T01N-GRW MR		CC-1B 4/21/2004 CC1B-D01N-GRW MR		CC-2B 3/4/2003 CC2B-T01N-GRW MR		CC-2B 3/4/2003 CC2B-D01N-GRW MR	
Nickel	mg/L	T	-		<0.0014	:	-		-		0.0019	:	-	
Nickel	mg/L	D	<0.0024	:	-		-		<0.0014	:	-		0.0021	:
Potassium	mg/L	T	-		<1.48	:	-		-		6.6	:	-	
Potassium	mg/L	D	2.22	:	-		-		<1.4	:	-		7.54	:
Selenium	mg/L	T	-		<0.0014	:	-		-		<0.0016	J	-	
Selenium	mg/L	D	0.0012	:	-		-		<0.0014	:	-		<0.0016	J
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	-		<24.3	:	-		-		52.1	:	-	
Sodium	mg/L	D	22.7	:	-		-		<23.5	:	-		50.6	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	-		0.00046	:	-		-		0.00084	:	-	
Vanadium	mg/L	D	<0.0004	:	-		-		0.00041	:	-		0.0005	:
Zinc	mg/L	T	-		0.019	:	-		-		<0.107	J	-	
Zinc	mg/L	D	<0.026	:	-		-		<0.015	:	-		<0.0872	J
Isotopes														
Delta D	per mil	T	-		-		-92.3	:	-		-		-	
Delta O-18	per mil	T	-		-		-13.	:	-		-		-	
Lead	mg/L	T	-		<0.0008	:	-		-		0.00053	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0008	:	-		<0.0002	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2B 4/10/2003 CC2B-T01N-GRW MR		CC-2B 4/10/2003 CC2B-D01N-GRW MR		CC-2B 5/6/2003 CC-2B-T01N-GRW MR		CC-2B 5/6/2003 CC-2B-D01N-GRW MR		CC-2B 6/4/2003 CC2B-T01N-GRW MR		CC-2B 6/4/2003 CC-2B-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	0.73	:	-		0.64	:	-		-		1.62	:
EH	millivolts	T	140.4	:	-		141.3	:	-		-		40.7	:
pH	SU	T	7.3	J	-		7.1	J	-		7.1	J	5.41	:
Specific Conductance	uS/cm	T	1811.	:	-		1801.	:	-		-		1781.	:
Temperature	Celsius	T	7.51	:	-		6.61	:	-		-		8.71	:
Turbidity	NTU	T	19.1	:	-		8.8	:	-		-		2.5	:
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.14	:	-		<0.056	J	-	
Bicarbonate (as CaCO3)	mg/L	T	251.	:	-		256.	:	-		256.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	3.2	:	-		<2.	:	-		<12.1	:	-	
Fluoride	mg/L	T	1.9	:	-		2.	:	-		2.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		<0.4	J	-		<0.4	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.087	J	-		<0.01	J	-		0.1	J	-	
Phosphorus	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Sulfate	mg/L	T	782.	J	-		711.	:	-		857.	J	-	
Total Alkalinity	mg/L	T	251.	:	-		256.	:	-		256.	:	-	
Total Dissolved Solids	mg/L	T	1580.	:	-		1670.	:	-		1490.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		<1.	:	-		1.	J	-	
Total Suspended Solids	mg/L	T	<2.	:	-		3.3	:	-		<1.5	:	-	
Laboratory Parameters														
pH	SU	T	7.3	J	-		7.1	J	-		7.1	J	5.41	:
Specific Conductance	umhos/cm	T	1680.	J	-		570.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	1040.	:	-		1040.	:	-		1010.	:	-	
Hardness	mg/L	D	-		1030.	:	-		1040.	:	-		-	
Metals														

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2B 4/10/2003 CC2B-T01N-GRW MR		CC-2B 4/10/2003 CC2B-D01N-GRW MR		CC-2B 5/6/2003 CC-2B-T01N-GRW MR		CC-2B 5/6/2003 CC-2B-D01N-GRW MR		CC-2B 6/4/2003 CC2B-T01N-GRW MR		CC-2B 6/4/2003 CC-2B-T01N-GRW MR	
Aluminum	mg/L	T	<0.426	:	-		<0.426	:	-		<0.503	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.426	:	-		-	
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.072	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		-	
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.04	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		-	
Barium	mg/L	T	0.0141	:	-		0.0153	:	-		<0.123	:	-	
Barium	mg/L	D	-		0.0138	:	-		0.0151	:	-		-	
Beryllium	mg/L	T	<0.00087	:	-		<0.0003	J	-		<0.0057	:	-	
Beryllium	mg/L	D	-		<0.0011	:	-		<0.0003	J	-		-	
Boron	mg/L	T	0.0169	:	-		0.0144	:	-		<0.084	:	-	
Boron	mg/L	D	-		0.0156	:	-		0.0121	:	-		-	
Cadmium	mg/L	T	<0.0004	:	-		<0.0005	:	-		<0.005	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	:	-		-	
Calcium	mg/L	T	381.	:	-		382.	:	-		373.	:	-	
Calcium	mg/L	D	-		378.	:	-		383.	:	-		-	
Chromium	mg/L	T	<0.0009	:	-		<0.001	:	-		<0.01	:	-	
Chromium	mg/L	D	-		<0.0009	:	-		<0.001	:	-		-	
Cobalt	mg/L	T	<0.0029	:	-		<0.0038	:	-		<0.038	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0038	:	-		-	
Copper	mg/L	T	<0.0024	J	-		<0.0018	:	-		<0.015	:	-	
Copper	mg/L	D	-		<0.0024	J	-		0.0015	:	-		-	
Iron	mg/L	T	<0.422	:	-		0.678	:	-		<1.48	:	-	
Iron	mg/L	D	-		<0.422	:	-		0.503	:	-		-	
Lead	mg/L	T	<0.0011	:	-		<0.0002	:	-		<0.001	:	-	
Lead	mg/L	D	-		<0.00089	:	-		<0.0002	:	-		-	
Magnesium	mg/L	T	21.	:	-		20.6	:	-		19.5	:	-	
Magnesium	mg/L	D	-		21.	:	-		20.4	:	-		-	
Manganese	mg/L	T	5.18	:	-		5.17	:	-		5.54	:	-	
Manganese	mg/L	D	-		5.17	:	-		5.18	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0052	:	-		0.0029	:	-		<0.023	:	-	
Molybdenum	mg/L	D	-		0.0033	:	-		0.0031	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2B 4/10/2003 CC2B-T01N-GRW MR	CC-2B 4/10/2003 CC2B-D01N-GRW MR	CC-2B 5/6/2003 CC-2B-T01N-GRW MR	CC-2B 5/6/2003 CC-2B-D01N-GRW MR	CC-2B 6/4/2003 CC2B-T01N-GRW MR	CC-2B 6/4/2003 CC-2B-T01N-GRW MR
Nickel	mg/L	T	<0.0026 :	-	<0.003 :	-	<0.03 :	-
Nickel	mg/L	D	-	<0.0026 :	-	<0.003 :	-	-
Potassium	mg/L	T	<7.69 :	-	6.35 :	-	3.87 :	-
Potassium	mg/L	D	-	<8.56 :	-	6.33 :	-	-
Selenium	mg/L	T	<0.001 :	-	<0.001 :	-	<0.008 :	-
Selenium	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Silver	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.001 :	-
Silver	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Sodium	mg/L	T	37.4 :	-	37.8 :	-	41.2 :	-
Sodium	mg/L	D	-	37.4 :	-	37.8 :	-	-
Thallium	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.001 :	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Vanadium	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.002 :	-
Vanadium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Zinc	mg/L	T	<0.039 :	-	<0.039 :	-	0.0235 :	-
Zinc	mg/L	D	-	<0.039 :	-	<0.039 :	-	-
Isotopes								
Lead	mg/L	T	<0.0011 :	-	<0.0002 :	-	<0.001 :	-
Lead	mg/L	D	-	<0.00089 :	-	<0.0002 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2B 6/4/2003 CC2B-D01N-GRW MR	CC-2B 7/21/2003 CC2B-T01N-GRW MR	CC-2B 7/21/2003 CC-2B-T01N-GRW MR	CC-2B 7/21/2003 CC2B-D01N-GRW MR	CC-2B 8/12/2003 CC-2B-T01N-GRW MR	CC-2B 8/12/2003 CC-2B-D01N-GRW MR
Field Measurements								
DO	mg/L	T	-	-	1.11 :	-	0.54 :	-
EH	millivolts	T	-	-	-4.8 :	-	-160.9 :	-
pH	SU	T	-	7. J	6.94 :	-	7. J	-
Specific Conductance	uS/cm	T	-	-	1766. :	-	1654. :	-
Temperature	Celsius	T	-	-	11.8 :	-	10.08 :	-
Turbidity	NTU	T	-	-	2.5 :	-	18.2 :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.04 J	-	-	0.049 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	255. :	-	-	256. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	3.1 :	-	-	3.2 :	-
Fluoride	mg/L	T	-	2. :	-	-	2. :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	<0.2 J	-	-	<0.2 J	-
Nitrite	mg/L	T	-	<0.005 J	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	-	<0.01 J	-
Phosphorus	mg/L	T	-	<0.01 :	-	-	0.013 :	-
Sulfate	mg/L	T	-	756. J	-	-	757. J	-
Total Alkalinity	mg/L	T	-	255. :	-	-	256. :	-
Total Dissolved Solids	mg/L	T	-	1550. :	-	-	1520. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. J	-	-	1. J	-
Total Suspended Solids	mg/L	T	-	4.3 :	-	-	3.4 :	-
Laboratory Parameters								
pH	SU	T	-	7. J	6.94 :	-	7. J	-
Specific Conductance	umhos/cm	T	-	1700. J	-	-	1680. J	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	<0.01 :	-
Physical Properties								
Hardness	mg/L	T	-	1000. :	-	-	1070. :	-
Hardness	mg/L	D	984. :	-	-	1070. :	-	1070. :
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			CC-2B 6/4/2003 CC2B-D01N-GRW	CC-2B 7/21/2003 CC2B-T01N-GRW	CC-2B 7/21/2003 CC-2B-T01N-GRW	CC-2B 7/21/2003 CC2B-D01N-GRW	CC-2B 8/12/2003 CC-2B-T01N-GRW	CC-2B 8/12/2003 CC-2B-D01N-GRW
			MR	MR	MR	MR	MR	MR
Aluminum	mg/L	T	-	<0.631 :	-	-	<0.183 :	-
Aluminum	mg/L	D	<0.503 :	-	-	<0.631 :	-	<0.183 :
Antimony	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Antimony	mg/L	D	<0.072 :	-	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T	-	<0.0004 :	-	-	<0.0004 :	-
Arsenic	mg/L	D	<0.04 :	-	-	<0.0004 :	-	0.00042 :
Barium	mg/L	T	-	0.0173 :	-	-	0.0168 :	-
Barium	mg/L	D	<0.123 :	-	-	0.0168 :	-	0.0174 :
Beryllium	mg/L	T	-	<0.00039 :	-	-	<0.0004 :	-
Beryllium	mg/L	D	<0.0047 :	-	-	<0.0002 :	-	<0.0004 :
Boron	mg/L	T	-	0.0145 :	-	-	0.0131 :	-
Boron	mg/L	D	<0.084 :	-	-	0.0143 :	-	0.0134 :
Cadmium	mg/L	T	-	<0.0003 :	-	-	<0.0005 :	-
Cadmium	mg/L	D	<0.005 :	-	-	<0.0003 :	-	<0.0005 :
Calcium	mg/L	T	-	372. :	-	-	395. :	-
Calcium	mg/L	D	363. :	-	-	384. :	-	392. :
Chromium	mg/L	T	-	<0.0006 :	-	-	<0.0011 :	-
Chromium	mg/L	D	<0.01 :	-	-	<0.0006 :	-	<0.0011 :
Cobalt	mg/L	T	-	<0.0018 :	-	-	<0.0029 :	-
Cobalt	mg/L	D	<0.038 :	-	-	<0.0018 :	-	<0.0029 :
Copper	mg/L	T	-	<0.0014 J	-	-	<0.003 :	-
Copper	mg/L	D	<0.015 :	-	-	<0.0014 J	-	<0.0049 :
Iron	mg/L	T	-	2.91 :	-	-	3.24 :	-
Iron	mg/L	D	<1.12 :	-	-	2.78 :	-	3.03 :
Lead	mg/L	T	-	<0.0002 :	-	-	<0.0004 :	-
Lead	mg/L	D	<0.001 :	-	-	<0.0002 :	-	<0.0004 :
Magnesium	mg/L	T	-	20.2 :	-	-	21.3 :	-
Magnesium	mg/L	D	19. :	-	-	20.8 :	-	21.1 :
Manganese	mg/L	T	-	5.07 :	-	-	5.25 :	-
Manganese	mg/L	D	5.44 :	-	-	5.23 :	-	5.21 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 J	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 J
Molybdenum	mg/L	T	-	0.0024 :	-	-	<0.0029 :	-
Molybdenum	mg/L	D	<0.023 :	-	-	0.0022 :	-	<0.0036 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2B 6/4/2003 CC2B-D01N-GRW MR		CC-2B 7/21/2003 CC2B-T01N-GRW MR		CC-2B 7/21/2003 CC-2B-T01N-GRW MR		CC-2B 7/21/2003 CC2B-D01N-GRW MR		CC-2B 8/12/2003 CC-2B-T01N-GRW MR		CC-2B 8/12/2003 CC-2B-D01N-GRW MR	
Nickel	mg/L	T	-		<0.002	:	-		-		<0.0024	:	-	
Nickel	mg/L	D	<0.03	:	-		-		<0.002	:	-		<0.0024	:
Potassium	mg/L	T	-		6.4	:	-		-		5.9	:	-	
Potassium	mg/L	D	3.92	:	-		-		6.69	:	-		6.08	:
Selenium	mg/L	T	-		<0.0016	:	-		-		<0.0006	:	-	
Selenium	mg/L	D	<0.008	:	-		-		<0.0016	J	-		<0.0006	:
Silver	mg/L	T	-		<0.0002	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.001	:	-		-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	-		40.5	:	-		-		43.	:	-	
Sodium	mg/L	D	39.5	:	-		-		44.	:	-		39.	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	-		<0.0004	:	-		-		<0.0002	J	-	
Vanadium	mg/L	D	<0.002	:	-		-		<0.0004	:	-		<0.0002	J
Zinc	mg/L	T	-		<0.0173	:	-		-		<0.057	:	-	
Zinc	mg/L	D	0.0182	:	-		-		<0.016	:	-		<0.057	:
Isotopes														
Lead	mg/L	T	-		<0.0002	:	-		-		<0.0004	:	-	
Lead	mg/L	D	<0.001	:	-		-		<0.0002	:	-		<0.0004	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2B 9/11/2003 CC2B-T01N-GRW MR		CC-2B 9/11/2003 CC-2B-T01N-GRW MR		CC-2B 9/11/2003 CC2B-D01N-GRW MR		CC-2B 10/23/2003 CC2B-T01N-GRW MR		CC-2B 10/23/2003 CC-2B-T01N-GRW MR		CC-2B 10/23/2003 CC2B-D01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		0.3	:	-		-		0.36	:	-	
EH	millivolts	T	-		-106.4	:	-		-		-154.4	:	-	
pH	SU	T	7.1	J	6.76	:	-		6.9	J	6.76	:	-	
Specific Conductance	uS/cm	T	-		1780.	:	-		-		1683.	:	-	
Temperature	Celsius	T	-		8.38	:	-		-		10.84	:	-	
Turbidity	NTU	T	-		45.1	:	-		-		1.6	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.053	:	-		-		<0.074	J	-		-	
Bicarbonate (as CaCO3)	mg/L	T	257.	:	-		-		253.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	3.2	:	-		-		3.2	:	-		-	
Fluoride	mg/L	T	1.9	:	-		-		2.1	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.2	:	-		-		<0.2	J	-		-	
Nitrite	mg/L	T	<0.005	:	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	0.061	:	-		-		0.013	:	-		-	
Sulfate	mg/L	T	731.	J	-		-		830.	J	-		-	
Total Alkalinity	mg/L	T	257.	:	-		-		253.	:	-		-	
Total Dissolved Solids	mg/L	T	1540.	:	-		-		1450.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.26	:	-		-		3.1	:	-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		1.	J	-		-	
Total Suspended Solids	mg/L	T	6.7	:	-		-		<0.5	:	-		-	
Laboratory Parameters														
pH	SU	T	7.1	J	6.76	:	-		6.9	J	6.76	:	-	
Specific Conductance	umhos/cm	T	1610.	J	-		-		1510.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	1010.	:	-		-		936.	:	-		-	
Hardness	mg/L	D	-		-		1030.	:	-		-		992.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2B 9/11/2003 CC2B-T01N-GRW MR	CC-2B 9/11/2003 CC-2B-T01N-GRW MR	CC-2B 9/11/2003 CC2B-D01N-GRW MR	CC-2B 10/23/2003 CC2B-T01N-GRW MR	CC-2B 10/23/2003 CC-2B-T01N-GRW MR	CC-2B 10/23/2003 CC2B-D01N-GRW MR
Aluminum	mg/L	T	<0.217 :	-	-	<0.217 :	-	-
Aluminum	mg/L	D	-	-	<0.217 :	-	-	<0.217 :
Antimony	mg/L	T	<0.001 :	-	-	<0.001 :	-	-
Antimony	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Arsenic	mg/L	T	<0.0004 :	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :
Barium	mg/L	T	0.015 :	-	-	0.0128 :	-	-
Barium	mg/L	D	-	-	0.0156 :	-	-	0.0139 :
Beryllium	mg/L	T	<0.0004 :	-	-	<0.0004 J	-	-
Beryllium	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 J
Boron	mg/L	T	0.0133 :	-	-	0.0104 :	-	-
Boron	mg/L	D	-	-	0.0128 :	-	-	0.0111 :
Cadmium	mg/L	T	<0.0005 :	-	-	<0.0005 :	-	-
Cadmium	mg/L	D	-	-	<0.0005 :	-	-	<0.0005 :
Calcium	mg/L	T	371. :	-	-	344. :	-	-
Calcium	mg/L	D	-	-	379. :	-	-	365. :
Chromium	mg/L	T	<0.0012 :	-	-	<0.0011 J	-	-
Chromium	mg/L	D	-	-	<0.0011 :	-	-	<0.0011 J
Cobalt	mg/L	T	<0.0029 :	-	-	<0.0029 :	-	-
Cobalt	mg/L	D	-	-	<0.0029 :	-	-	<0.0029 :
Copper	mg/L	T	<0.0022 :	-	-	<0.0022 :	-	-
Copper	mg/L	D	-	-	<0.0022 :	-	-	<0.0022 :
Iron	mg/L	T	1.81 :	-	-	1.79 :	-	-
Iron	mg/L	D	-	-	2.02 :	-	-	1.84 :
Lead	mg/L	T	<0.0004 :	-	-	<0.0004 :	-	-
Lead	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :
Magnesium	mg/L	T	20.4 :	-	-	18.5 :	-	-
Magnesium	mg/L	D	-	-	20.9 :	-	-	19.6 :
Manganese	mg/L	T	4.71 :	-	-	4.27 :	-	-
Manganese	mg/L	D	-	-	4.8 :	-	-	4.52 :
Mercury	mg/L	T	<0.0001 J	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	-	<0.0001 J	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.0011 J	-	-	<0.0011 :	-	-
Molybdenum	mg/L	D	-	-	<0.0011 :	-	-	<0.0011 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2B 9/11/2003 CC2B-T01N-GRW MR	CC-2B 9/11/2003 CC-2B-T01N-GRW MR	CC-2B 9/11/2003 CC2B-D01N-GRW MR	CC-2B 10/23/2003 CC2B-T01N-GRW MR	CC-2B 10/23/2003 CC-2B-T01N-GRW MR	CC-2B 10/23/2003 CC2B-D01N-GRW MR
Nickel	mg/L	T	<0.0024 :	-	-	<0.0024 J	-	-
Nickel	mg/L	D	-	-	<0.0024 :	-	-	<0.0024 J
Potassium	mg/L	T	5.94 :	-	-	5.59 :	-	-
Potassium	mg/L	D	-	-	6.19 :	-	-	5.96 :
Selenium	mg/L	T	<0.0006 :	-	-	<0.0006 :	-	-
Selenium	mg/L	D	-	-	<0.0006 :	-	-	0.00074 :
Silver	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Silver	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 :
Sodium	mg/L	T	38.7 :	-	-	34.3 :	-	-
Sodium	mg/L	D	-	-	39.7 :	-	-	37.3 :
Thallium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Thallium	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 :
Zinc	mg/L	T	<0.019 :	-	-	<0.019 :	-	-
Zinc	mg/L	D	-	-	<0.019 :	-	-	<0.019 :
Isotopes								
Lead	mg/L	T	<0.0004 :	-	-	<0.0004 :	-	-
Lead	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2B 11/4/2003 CC2B-T01N-GRW MR		CC-2B 11/4/2003 CC-2B-T01N-GRW MR		CC-2B 11/4/2003 CC2B-D01N-GRW MR		CC-2B 12/11/2003 CC2B-T01N-GRW MR		CC-2B 12/11/2003 CC-2B-T01N-GRW MR		CC-2B 12/11/2003 CC2B-D01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		0.14	:	-		-		0.75	:	-	
EH	millivolts	T	-		31.1	:	-		-		-80.5	:	-	
pH	SU	T	7.	J	6.8	:	-		7.	J	6.81	:	-	
Specific Conductance	uS/cm	T	-		1727.	:	-		-		1599.	:	-	
Temperature	Celsius	T	-		5.88	:	-		-		7.55	:	-	
Turbidity	NTU	T	-		0.4	:	-		-		53.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.1	:	-		-		0.092	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	235.	:	-		-		249.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	3.7	:	-		-		4.5	:	-		-	
Fluoride	mg/L	T	1.9	:	-		-		2.	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.2	J	-		-		<0.2	:	-		-	
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	:	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	:	-		-	
Phosphorus	mg/L	T	<0.01	:	-		-		0.01	:	-		-	
Sulfate	mg/L	T	743.	:	-		-		805.	:	-		-	
Total Alkalinity	mg/L	T	235.	:	-		-		249.	:	-		-	
Total Dissolved Solids	mg/L	T	1460.	:	-		-		1500.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Total Suspended Solids	mg/L	T	2.5	:	-		-		3.4	:	-		-	
Laboratory Parameters														
pH	SU	T	7.	J	6.8	:	-		7.	J	6.81	:	-	
Specific Conductance	umhos/cm	T	1820.	J	-		-		1410.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	:	-		-	
Physical Properties														
Hardness	mg/L	T	1090.	:	-		-		1040.	:	-		-	
Hardness	mg/L	D	-		-		965.	:	-		-		1110.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			CC-2B 11/4/2003 CC2B-T01N-GRW MR	CC-2B 11/4/2003 CC-2B-T01N-GRW MR	CC-2B 11/4/2003 CC2B-D01N-GRW MR	CC-2B 12/11/2003 CC2B-T01N-GRW MR	CC-2B 12/11/2003 CC-2B-T01N-GRW MR	CC-2B 12/11/2003 CC2B-D01N-GRW MR
Aluminum	mg/L	T	<0.217 :	-	-	<0.217 :	-	-
Aluminum	mg/L	D	-	-	<0.217 :	-	-	<0.217 :
Antimony	mg/L	T	<0.001 :	-	-	<0.0024 :	-	-
Antimony	mg/L	D	-	-	<0.001 :	-	-	<0.0024 :
Arsenic	mg/L	T	<0.0004 :	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :
Barium	mg/L	T	0.016 :	-	-	0.0139 :	-	-
Barium	mg/L	D	-	-	0.0132 :	-	-	0.0153 :
Beryllium	mg/L	T	<0.00035 :	-	-	<0.0004 :	-	-
Beryllium	mg/L	D	-	-	<0.00043 :	-	-	<0.0004 :
Boron	mg/L	T	0.0106 :	-	-	0.0121 :	-	-
Boron	mg/L	D	-	-	0.0088 :	-	-	0.0132 :
Cadmium	mg/L	T	<0.0007 :	-	-	<0.0005 :	-	-
Cadmium	mg/L	D	-	-	<0.0007 :	-	-	<0.0005 :
Calcium	mg/L	T	400. :	-	-	382. :	-	-
Calcium	mg/L	D	-	-	355. :	-	-	407. :
Chromium	mg/L	T	<0.0013 :	-	-	<0.0014 :	-	-
Chromium	mg/L	D	-	-	<0.0013 :	-	-	<0.0023 :
Cobalt	mg/L	T	<0.0031 :	-	-	<0.0029 :	-	-
Cobalt	mg/L	D	-	-	<0.0031 :	-	-	<0.0029 :
Copper	mg/L	T	<0.002 :	-	-	<0.0022 :	-	-
Copper	mg/L	D	-	-	<0.002 :	-	-	<0.0022 :
Iron	mg/L	T	1.82 :	-	-	1.73 :	-	-
Iron	mg/L	D	-	-	1.69 :	-	-	1.95 :
Lead	mg/L	T	<0.0004 :	-	-	<0.0002 :	-	-
Lead	mg/L	D	-	-	<0.0004 :	-	-	<0.0002 :
Magnesium	mg/L	T	21.6 :	-	-	20.7 :	-	-
Magnesium	mg/L	D	-	-	19.2 :	-	-	22.1 :
Manganese	mg/L	T	4.68 J	-	-	4.46 :	-	-
Manganese	mg/L	D	-	-	4.16 :	-	-	4.75 :
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.0012 :	-	-	<0.0011 :	-	-
Molybdenum	mg/L	D	-	-	<0.0012 :	-	-	<0.0011 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		CC-2B / 11/4/2003 / CC2B-T01N-GRW / MR		CC-2B / 11/4/2003 / CC-2B-T01N-GRW / MR		CC-2B / 11/4/2003 / CC2B-D01N-GRW / MR		CC-2B / 12/11/2003 / CC2B-T01N-GRW / MR		CC-2B / 12/11/2003 / CC-2B-T01N-GRW / MR		CC-2B / 12/11/2003 / CC2B-D01N-GRW / MR	
Nickel	mg/L	T	<0.0028	:	-		-		<0.0024	:	-		-	
Nickel	mg/L	D	-		-		<0.0028	:	-		-		<0.0024	:
Potassium	mg/L	T	5.62	:	-		-		5.9	:	-		-	
Potassium	mg/L	D	-		-		5.41	:	-		-		6.47	:
Selenium	mg/L	T	<0.0006	:	-		-		<0.0006	:	-		-	
Selenium	mg/L	D	-		-		<0.0006	:	-		-		<0.0006	:
Silver	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		-	
Silver	mg/L	D	-		-		<0.0002	:	-		-		<0.0002	:
Sodium	mg/L	T	42.	:	-		-		41.	:	-		-	
Sodium	mg/L	D	-		-		36.8	:	-		-		43.6	:
Thallium	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		-	
Thallium	mg/L	D	-		-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	<0.0002	:	-		-		<0.0004	:	-		-	
Vanadium	mg/L	D	-		-		<0.0002	:	-		-		<0.0004	:
Zinc	mg/L	T	<0.019	:	-		-		<0.019	:	-		-	
Zinc	mg/L	D	-		-		<0.019	:	-		-		<0.019	:
Isotopes														
Lead	mg/L	T	<0.0004	:	-		-		<0.0002	:	-		-	
Lead	mg/L	D	-		-		<0.0004	:	-		-		<0.0002	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2B 1/7/2004 CC2B-T01N-GRW MR		CC-2B 1/7/2004 CC-2B-T01N-GRW MR		CC-2B 1/7/2004 CC2B-D01N-GRW MR		CC-2B 4/21/2004 CC2B-T01N-GRW MR		CC-2B 4/21/2004 CC-2B-T01N-GRW MR		CC-2B 4/21/2004 CC2B-D01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		0.3	:	-		-		1.12	:	-	
EH	millivolts	T	-		-32.6	:	-		-		77.7	:	-	
pH	SU	T	7.	J	6.92	:	-		7.4	J	6.81	:	-	
Specific Conductance	uS/cm	T	-		1719.	:	-		-		1736.	:	-	
Temperature	Celsius	T	-		4.87	:	-		-		6.78	:	-	
Turbidity	NTU	T	-		2.1	:	-		-		4.2	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.062	J	-		-		<0.082	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	249.	J	-		-		248.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	3.4	:	-		-		3.5	:	-		-	
Fluoride	mg/L	T	1.9	:	-		-		2.	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.2	J	-		-		<0.2	J	-		-	
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	<0.01	:	-		-		<0.01	:	-		-	
Sulfate	mg/L	T	778.	:	-		-		904.	:	-		-	
Total Alkalinity	mg/L	T	249.	J	-		-		248.	:	-		-	
Total Dissolved Solids	mg/L	T	1470.	:	-		-		1530.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		<1.	J	-		-	
Total Suspended Solids	mg/L	T	2.5	:	-		-		<1.4	J	-		-	
Laboratory Parameters														
pH	SU	T	7.	J	6.92	:	-		7.4	J	6.81	:	-	
Specific Conductance	umhos/cm	T	1570.	J	-		-		1500.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	964.	:	-		-		978.	:	-		-	
Hardness	mg/L	D	-		-		956.	:	-		-		1020.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / MR											
			CC-2B 1/7/2004 CC2B-T01N-GRW MR		CC-2B 1/7/2004 CC-2B-T01N-GRW MR		CC-2B 1/7/2004 CC2B-D01N-GRW MR		CC-2B 4/21/2004 CC2B-T01N-GRW MR		CC-2B 4/21/2004 CC-2B-T01N-GRW MR		CC-2B 4/21/2004 CC2B-D01N-GRW MR	
Aluminum	mg/L	T	<0.514	:	-		-		<0.176	:	-		-	
Aluminum	mg/L	D	-		-		<0.514	:	-		-		<0.176	:
Antimony	mg/L	T	<0.0024	:	-		-		<0.0014	:	-		-	
Antimony	mg/L	D	-		-		<0.0024	:	-		-		<0.0015	:
Arsenic	mg/L	T	<0.0004	:	-		-		<0.0004	:	-		-	
Arsenic	mg/L	D	-		-		<0.0004	:	-		-		<0.0004	:
Barium	mg/L	T	0.0135	:	-		-		0.0125	:	-		-	
Barium	mg/L	D	-		-		0.0131	:	-		-		0.0131	:
Beryllium	mg/L	T	<0.0003	:	-		-		<0.00034	:	-		-	
Beryllium	mg/L	D	-		-		<0.0003	:	-		-		<0.00034	:
Boron	mg/L	T	<0.0142	:	-		-		<0.0136	:	-		-	
Boron	mg/L	D	-		-		<0.014	:	-		-		<0.0138	:
Cadmium	mg/L	T	<0.0007	J	-		-		<0.0003	J	-		-	
Cadmium	mg/L	D	-		-		<0.0007	:	-		-		<0.0003	J
Calcium	mg/L	T	354.	:	-		-		360.	:	-		-	
Calcium	mg/L	D	-		-		352.	:	-		-		376.	:
Chromium	mg/L	T	<0.0015	J	-		-		<0.0012	:	-		-	
Chromium	mg/L	D	-		-		<0.0015	J	-		-		0.00099	:
Cobalt	mg/L	T	<0.0023	:	-		-		<0.0011	:	-		-	
Cobalt	mg/L	D	-		-		<0.0023	:	-		-		<0.0011	:
Copper	mg/L	T	<0.003	:	-		-		<0.0014	J	-		-	
Copper	mg/L	D	-		-		<0.003	:	-		-		<0.0007	J
Iron	mg/L	T	<1.57	:	-		-		<0.35	J	-		-	
Iron	mg/L	D	-		-		<1.62	:	-		-		<0.192	:
Lead	mg/L	T	<0.0002	:	-		-		<0.0008	:	-		-	
Lead	mg/L	D	-		-		<0.0002	:	-		-		<0.0008	:
Magnesium	mg/L	T	19.1	:	-		-		19.5	:	-		-	
Magnesium	mg/L	D	-		-		18.9	:	-		-		20.2	:
Manganese	mg/L	T	4.26	:	-		-		4.28	:	-		-	
Manganese	mg/L	D	-		-		4.22	:	-		-		4.46	:
Mercury	mg/L	T	<0.0001	J	-		-		<0.0001	:	-		-	
Mercury	mg/L	D	-		-		<0.0001	J	-		-		<0.0001	:
Molybdenum	mg/L	T	<0.0024	:	-		-		<0.001	:	-		-	
Molybdenum	mg/L	D	-		-		<0.0024	:	-		-		<0.001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		CC-2B 1/7/2004 CC2B-T01N-GRW MR		CC-2B 1/7/2004 CC-2B-T01N-GRW MR		CC-2B 1/7/2004 CC2B-D01N-GRW MR		CC-2B 4/21/2004 CC2B-T01N-GRW MR		CC-2B 4/21/2004 CC-2B-T01N-GRW MR		CC-2B 4/21/2004 CC2B-D01N-GRW MR	
Nickel	mg/L	T	<0.0024 :		-		-		<0.0014 :		-		-	
Nickel	mg/L	D	-		-		<0.0024 :		-		-		<0.0014 :	
Potassium	mg/L	T	5.89 :		-		-		5.3 :		-		-	
Potassium	mg/L	D	-		-		5.84 :		-		-		5.34 :	
Selenium	mg/L	T	<0.0006 J		-		-		<0.0014 :		-		-	
Selenium	mg/L	D	-		-		<0.0006 :		-		-		<0.0014 :	
Silver	mg/L	T	<0.0002 :		-		-		<0.0002 :		-		-	
Silver	mg/L	D	-		-		<0.0002 :		-		-		<0.0002 :	
Sodium	mg/L	T	35.7 :		-		-		40.4 :		-		-	
Sodium	mg/L	D	-		-		40.8 :		-		-		40.4 :	
Thallium	mg/L	T	<0.0002 :		-		-		<0.0002 :		-		-	
Thallium	mg/L	D	-		-		<0.0002 :		-		-		<0.0002 :	
Vanadium	mg/L	T	<0.0004 :		-		-		0.00049 :		-		-	
Vanadium	mg/L	D	-		-		<0.0004 :		-		-		0.00053 :	
Zinc	mg/L	T	<0.026 :		-		-		0.0182 :		-		-	
Zinc	mg/L	D	-		-		<0.026 :		-		-		0.0177 :	
Isotopes														
Lead	mg/L	T	<0.0002 :		-		-		<0.0008 :		-		-	
Lead	mg/L	D	-		-		<0.0002 :		-		-		<0.0008 :	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	F1	Mine 1	Mine 1	Mine 1	MINE 1	Mine 1
			Sample Date	4/22/2004	11/12/2002	11/12/2002	1/8/2003	1/8/2003	4/8/2003
			Sample ID	F1-T01N-GRW	Mine1-T01N-GRW	MINE1-D01N-GRW	Mine1-T01N-GRW	MINE1-D01N-GRW	Mine1-T01N-GRW
			Exposure Area	GW3	GW3	GW3	GW3	GW3	GW3
Field Measurements									
DO	mg/L	T		-	17.02 :	-	7.65 :	-	3.01 :
EH	millivolts	T		206.3 :	43.6 :	-	301.8 :	-	83.4 :
pH	SU	T		6.33 :	6.98 :	-	7.34 :	-	7.9 J
Specific Conductance	uS/cm	T		6491. :	2568. :	-	2834. :	-	3044. :
Temperature	Celsius	T		9.35 :	14.8 :	-	15.64 :	-	15.67 :
Turbidity	NTU	T		119.7 :	98. :	-	83.2 :	-	251. :
General Chemistry									
Ammonia	mg/L	T		-	<0.17 :	-	<0.13 :	-	0.095 :
Bicarbonate (as CaCO3)	mg/L	T		-	170. :	-	177. :	-	218. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	15.2 :	-	18.5 :	-	17.4 :
Fluoride	mg/L	T		-	10.9 :	-	7. :	-	10.2 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.55 :	-	<0.82 J	-	0.86 J
Nitrite	mg/L	T		-	0.006 :	-	0.011 J	-	0.0084 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.013 J	-	<0.01 J
Phosphorus	mg/L	T		-	0.013 :	-	0.014 :	-	0.01 :
Sulfate	mg/L	T		-	2030. :	-	1650. J	-	1640. J
Total Alkalinity	mg/L	T		-	170. :	-	177. :	-	218. :
Total Dissolved Solids	mg/L	T		-	3020. :	-	2710. :	-	3050. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.37 :	-	<0.24 J
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	2.3 J
Total Suspended Solids	mg/L	T		-	71.8 :	-	33.9 :	-	25.9 :
Laboratory Parameters									
pH	SU	T		6.33 :	6.98 :	-	7.34 :	-	7.9 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	2820. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1980. :	-	1870. :	-	2000. :
Hardness	mg/L	D		-	-	2000. :	-	1870. :	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	F1 4/22/2004 F1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-D01N-GRW GW3	Mine 1 1/8/2003 MINE1-T01N-GRW GW3	MINE 1 1/8/2003 MINE1-D01N-GRW GW3	Mine 1 4/8/2003 MINE1-T01N-GRW GW3
Aluminum	mg/L	T	-	7.81 :	-	3.18 :	-	1.88 :
Aluminum	mg/L	D	-	-	0.205 :	-	<0.142 J	-
Antimony	mg/L	T	-	<0.0004 :	-	<0.0006 :	-	<0.0013 :
Antimony	mg/L	D	-	-	<0.0004 :	-	<0.0006 :	-
Arsenic	mg/L	T	-	0.0014 J	-	<0.0004 :	-	0.00041 :
Arsenic	mg/L	D	-	-	0.00049 J	-	<0.0004 :	-
Barium	mg/L	T	-	<0.0092 :	-	0.0098 :	-	<0.0135 :
Barium	mg/L	D	-	-	<0.0092 :	-	0.0142 :	-
Beryllium	mg/L	T	-	0.034 :	-	0.0181 :	-	0.0216 :
Beryllium	mg/L	D	-	-	0.0104 :	-	0.0064 :	-
Boron	mg/L	T	-	0.0129 :	-	<0.0161 :	-	0.0162 :
Boron	mg/L	D	-	-	0.0137 :	-	<0.015 :	-
Cadmium	mg/L	T	-	0.0039 J	-	0.0033 :	-	0.0021 :
Cadmium	mg/L	D	-	-	0.0035 J	-	0.003 :	-
Calcium	mg/L	T	-	493. :	-	525. :	-	524. :
Calcium	mg/L	D	-	-	495. :	-	525. J	-
Chromium	mg/L	T	-	<0.0046 :	-	<0.0037 :	-	<0.0009 :
Chromium	mg/L	D	-	-	<0.0046 :	-	<0.0037 J	-
Cobalt	mg/L	T	-	0.168 :	-	0.0651 :	-	0.13 :
Cobalt	mg/L	D	-	-	0.169 :	-	0.0651 :	-
Copper	mg/L	T	-	0.0304 :	-	0.0101 :	-	<0.0024 J
Copper	mg/L	D	-	-	0.0207 :	-	<0.0023 :	-
Iron	mg/L	T	-	8.72 :	-	5.06 :	-	5.68 :
Iron	mg/L	D	-	-	1.2 :	-	<0.489 :	-
Lead	mg/L	T	-	0.0034 :	-	0.0028 :	-	0.0023 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	182. :	-	136. :	-	168. :
Magnesium	mg/L	D	-	-	185. :	-	136. :	-
Manganese	mg/L	T	-	40.6 :	-	19.4 :	-	34.1 :
Manganese	mg/L	D	-	-	39.6 :	-	19.3 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	5.3 :	-	5.03 :	-	6.47 :
Molybdenum	mg/L	D	-	-	5.3 :	-	5.12 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	F1 4/22/2004 F1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-D01N-GRW GW3	Mine 1 1/8/2003 MINE1-T01N-GRW GW3	MINE 1 1/8/2003 MINE1-D01N-GRW GW3	Mine 1 4/8/2003 MINE1-T01N-GRW GW3
Nickel	mg/L	T	-	0.263 J	-	0.147 :	-	0.186 :
Nickel	mg/L	D	-	-	0.26 J	-	0.144 :	-
Potassium	mg/L	T	-	12.9 :	-	9.25 :	-	10.6 :
Potassium	mg/L	D	-	-	12.6 :	-	9.51 :	-
Selenium	mg/L	T	-	0.0057 :	-	<0.0016 :	-	0.0012 :
Selenium	mg/L	D	-	-	0.0015 :	-	<0.0016 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	57.3 :	-	53.2 :	-	56.3 :
Sodium	mg/L	D	-	-	57.9 :	-	50. :	-
Thallium	mg/L	T	-	0.00022 :	-	<0.0002 :	-	0.00025 :
Thallium	mg/L	D	-	-	0.00022 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00033 :	-	0.0006 :	-	0.0002 :
Vanadium	mg/L	D	-	-	0.00023 :	-	<0.0004 :	-
Zinc	mg/L	T	-	3.22 :	-	1.63 :	-	2.11 :
Zinc	mg/L	D	-	-	2.39 :	-	1.26 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Butanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Hexanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: F1 Sample Date: 4/22/2004 Sample ID: F1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-T01N-GRW GW3	Mine 1 11/12/2002 MINE1-D01N-GRW GW3	Mine 1 1/8/2003 MINE1-T01N-GRW GW3	MINE 1 1/8/2003 MINE1-D01N-GRW GW3	Mine 1 4/8/2003 MINE1-T01N-GRW GW3
Acetone	mg/L	T	-	0.005 J	-	<0.01 J	-	<0.01 :
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	<0.011 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	<0.025 :	-	<0.027 :	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	<0.011 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	<0.011 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	<0.01 :	-	<0.011 :	-	<0.01 J
2,4-Dinitrophenol	mg/L	T	-	<0.025 :	-	<0.027 :	-	<0.025 J
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.011 :	-	<0.01 :

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area	F1 4/22/2004 F1-T01N-GRW GW3		Mine 1 11/12/2002 MINE1-T01N-GRW GW3		Mine 1 11/12/2002 MINE1-D01N-GRW GW3		Mine 1 1/8/2003 MINE1-T01N-GRW GW3		MINE 1 1/8/2003 MINE1-D01N-GRW GW3		Mine 1 4/8/2003 MINE1-T01N-GRW GW3	
2,6-Dinitrotoluene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
2-Chloronaphthalene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
2-Chlorophenol	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
2-Methylnaphthalene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
2-Methylphenol	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
2-Nitroaniline	mg/L	T		-		<0.025	:	-		<0.027	:	-		<0.025	:
2-Nitrophenol	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
3,3-Dichlorobenzidine	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	J
3-Nitroaniline	mg/L	T		-		<0.025	:	-		<0.027	:	-		<0.025	J
4,6-Dinitro-2-methylphenol	mg/L	T		-		<0.025	:	-		<0.027	:	-		<0.025	:
4-Bromophenyl phenyl ether	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
4-Chloro-3-methylphenol	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
4-Chloroaniline	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
4-Chlorophenyl phenyl ether	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
4-Methylphenol	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
4-Nitroaniline	mg/L	T		-		<0.025	:	-		<0.027	:	-		<0.025	:
4-Nitrophenol	mg/L	T		-		<0.025	:	-		<0.027	:	-		<0.025	J
Acenaphthene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Acenaphthylene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Anthracene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Benzaldehyde	mg/L	T		-		<0.01	:	-		<0.011	J	-		<0.01	:
Benzo(a)anthracene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Benzo(a)pyrene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Benzo(b)fluoranthene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Benzo(g,h,i)perylene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Benzo(k)fluoranthene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Bis(2-chloroethoxy)methane	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Bis(2-chloroethyl)ether	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Bis(2-ethylhexyl)phthalate	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Butyl benzyl phthalate	mg/L	T		-		<0.01	:	-		<0.011	:	-		0.0005	J
Carbazole	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Chrysene	mg/L	T		-		<0.01	:	-		<0.011	J	-		<0.01	:
Dibenz(a,h)anthracene	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:
Dibenzofuran	mg/L	T		-		<0.01	:	-		<0.011	:	-		<0.01	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	F1 4/22/2004 F1-T01N-GRW GW3		Mine 1 11/12/2002 MINE1-T01N-GRW GW3		Mine 1 11/12/2002 MINE1-D01N-GRW GW3		Mine 1 1/8/2003 MINE1-T01N-GRW GW3		MINE 1 1/8/2003 MINE1-D01N-GRW GW3		Mine 1 4/8/2003 MINE1-T01N-GRW GW3	
Dichlorodiisopropyl ether	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Diethylphthalate	mg/L	T	-		0.0005	J	-		<0.011	:	-		<0.01	:
Dimethylphthalate	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Di-n-Butyl phthalate	mg/L	T	-		0.0009	J	-		<0.011	:	-		<0.01	:
Di-n-Octyl phthalate	mg/L	T	-		<0.01	:	-		<0.011	J	-		<0.01	:
Fluoranthene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Fluorene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Hexachlorobenzene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Hexachlorocyclopentadiene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Hexachloroethane	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Indeno(1,2,3-cd)pyrene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Isophorone	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Naphthalene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Nitrobenzene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
N-Nitrosodi-n-propylamine	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
N-Nitrosodiphenylamine	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Pentachlorophenol	mg/L	T	-		<0.025	:	-		<0.027	:	-		<0.025	:
Phenanthrene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Phenol	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Pyrene	mg/L	T	-		<0.01	:	-		<0.011	:	-		<0.01	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		<0.00025	J	-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Isotopes														
Delta D	per mil	T	-81.8	:	-		-		-		-		-	
Delta O-18	per mil	T	-11.1	:	-		-		-		-		-	
Lead	mg/L	T	-		0.0034	:	-		0.0028	:	-		0.0023	:
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MINE 1 4/8/2003 MINE1-D01N-GRW		Mine 1 7/10/2003 MINE1-T01N-GRW		MINE 1 7/10/2003 MINE1-D01N-GRW		Mine 1 10/14/2003 MINE1-T01N-GRW		Mine 1 10/14/2003 MINE-1-T01N-GRW		Mine 1 10/14/2003 MINE-1-D01N-GRW	
			GW3		GW3		GW3		GW3		GW3		GW3	
Field Measurements														
DO	mg/L	T	-		5.85	:	-		9.71	:	-		-	
EH	millivolts	T	-		35.	:	-		117.	:	-		-	
pH	SU	T	-		7.3	J	-		6.35	:	7.2	J	-	
Specific Conductance	uS/cm	T	-		3090.	:	-		3141.	:	-		-	
Temperature	Celsius	T	-		16.25	:	-		16.18	:	-		-	
Turbidity	NTU	T	-		174.	:	-		26.3	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		0.36	J	-		-		0.15	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		155.	:	-		-		160.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		15.4	:	-		-		16.8	:	-	
Fluoride	mg/L	T	-		10.6	:	-		-		9.8	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.58	J	-		-		0.45	J	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		0.062	:	-		-		0.039	:	-	
Sulfate	mg/L	T	-		1910.	J	-		-		1850.	J	-	
Total Alkalinity	mg/L	T	-		155.	:	-		-		160.	:	-	
Total Dissolved Solids	mg/L	T	-		3750.	:	-		-		3150.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.6	J	-		-		1.8	J	-	
Total Suspended Solids	mg/L	T	-		48.6	:	-		-		33.4	:	-	
Laboratory Parameters														
pH	SU	T	-		7.3	J	-		6.35	:	7.2	J	-	
Specific Conductance	umhos/cm	T	-		2840.	J	-		-		2850.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		2120.	:	-		-		2190.	:	-	
Hardness	mg/L	D	2020.	:	-		2010.	:	-		-		2090.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MINE 1	Mine 1	MINE 1	Mine 1	Mine 1	Mine 1
			Sample Date	4/8/2003	7/10/2003	7/10/2003	10/14/2003	10/14/2003	10/14/2003
			Sample ID	MINE1-D01N-GRW	MINE1-T01N-GRW	MINE1-D01N-GRW	MINE1-T01N-GRW	MINE-1-T01N-GRW	MINE-1-D01N-GRW
				GW3	GW3	GW3	GW3	GW3	GW3
Aluminum	mg/L	T		-	6.32 :	-	-	7.08 :	-
Aluminum	mg/L	D		<0.277 :	-	<0.236 J	-	-	<0.221 :
Antimony	mg/L	T		-	<0.001 :	-	-	<0.0016 :	-
Antimony	mg/L	D		<0.00089 :	-	<0.001 :	-	-	<0.001 :
Arsenic	mg/L	T		-	0.00087 :	-	-	<0.0004 :	-
Arsenic	mg/L	D		<0.0004 :	-	<0.0004 :	-	-	<0.0004 :
Barium	mg/L	T		-	0.0128 :	-	-	<0.0115 :	-
Barium	mg/L	D		<0.0135 :	-	0.0099 :	-	-	<0.0115 :
Beryllium	mg/L	T		-	0.0235 J	-	-	0.0275 J	-
Beryllium	mg/L	D		0.0056 :	-	0.0106 :	-	-	0.0095 :
Boron	mg/L	T		-	0.0154 :	-	-	0.0148 :	-
Boron	mg/L	D		0.0128 :	-	0.015 :	-	-	0.0133 :
Cadmium	mg/L	T		-	0.0062 :	-	-	0.0101 :	-
Cadmium	mg/L	D		0.0017 J	-	0.006 :	-	-	0.0074 :
Calcium	mg/L	T		-	545. :	-	-	544. :	-
Calcium	mg/L	D		534. :	-	514. :	-	-	550. :
Chromium	mg/L	T		-	<0.0016 :	-	-	0.0047 J	-
Chromium	mg/L	D		<0.0009 :	-	<0.0014 :	-	-	0.0032 J
Cobalt	mg/L	T		-	0.171 :	-	-	0.17 J	-
Cobalt	mg/L	D		0.116 J	-	0.172 :	-	-	0.118 :
Copper	mg/L	T		-	0.0085 :	-	-	0.0089 :	-
Copper	mg/L	D		<0.0024 J	-	0.0028 :	-	-	0.0039 :
Iron	mg/L	T		-	7.74 :	-	-	5.42 :	-
Iron	mg/L	D		<0.299 :	-	1.62 :	-	-	0.545 J
Lead	mg/L	T		-	0.0033 :	-	-	0.0022 :	-
Lead	mg/L	D		<0.0002 :	-	<0.0002 :	-	-	<0.0004 :
Magnesium	mg/L	T		-	185. :	-	-	201. :	-
Magnesium	mg/L	D		167. :	-	176. :	-	-	174. :
Manganese	mg/L	T		-	42.6 :	-	-	43.5 :	-
Manganese	mg/L	D		32.6 :	-	40.7 :	-	-	31.2 :
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	4.73 :	-	-	4.92 J	-
Molybdenum	mg/L	D		6.35 :	-	4.77 :	-	-	5.34 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			MINE 1 4/8/2003 MINE1-D01N-GRW GW3		Mine 1 7/10/2003 MINE1-T01N-GRW GW3		MINE 1 7/10/2003 MINE1-D01N-GRW GW3		Mine 1 10/14/2003 MINE1-T01N-GRW GW3		Mine 1 10/14/2003 MINE-1-T01N-GRW GW3		Mine 1 10/14/2003 MINE-1-D01N-GRW GW3	
Nickel	mg/L	T	-		0.291	:	-		-		0.303	J	-	
Nickel	mg/L	D	0.164	:	-		0.288	:	-		-		0.219	:
Potassium	mg/L	T	-		10.3	:	-		-		12.1	:	-	
Potassium	mg/L	D	9.96	:	-		10.5	:	-		-		10.6	:
Selenium	mg/L	T	-		0.0017	:	-		-		0.002	:	-	
Selenium	mg/L	D	<0.001	:	-		<0.0016	J	-		-		0.0007	:
Silver	mg/L	T	-		<0.0002	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		-		<0.0002	:
Sodium	mg/L	T	-		73.4	:	-		-		57.5	:	-	
Sodium	mg/L	D	55.7	:	-		52.7	:	-		-		59.2	:
Thallium	mg/L	T	-		<0.0002	:	-		-		0.00022	:	-	
Thallium	mg/L	D	0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.00055	:	-		-		0.00033	:	-	
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		-		<0.0002	:
Zinc	mg/L	T	-		3.88	:	-		-		4.06	:	-	
Zinc	mg/L	D	1.37	J	-		3.23	:	-		-		2.51	:
Isotopes														
Lead	mg/L	T	-		0.0033	:	-		-		0.0022	:	-	
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0004	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Mine 1 1/12/2004 MINE1-T01N-GRW		Mine 1 1/12/2004 MINE-1-T01N-GRW		MINE 1 1/12/2004 MINE1-D01N-GRW		Mine 1 4/22/2004 MINE1-T01N-GRW		Mine 1 4/22/2004 MINE-1-T01N-GRW		MINE 1 4/22/2004 MINE1-D01N-GRW	
			GW3		GW3		GW3		GW3		GW3		GW3	
Field Measurements														
DO	mg/L	T	-		7.5	:	-		-		-		-	
EH	millivolts	T	-		42.	:	-		-		176.7	:	-	
pH	SU	T	7.5	J	6.98	:	-		7.7	J	7.77	:	-	
Specific Conductance	uS/cm	T	-		2926.	:	-		-		46.	:	-	
Temperature	Celsius	T	-		16.24	:	-		-		14.87	:	-	
Turbidity	NTU	T	-		46.1	:	-		-		122.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.22	J	-		-		<0.094	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	184.	:	-		-		168.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	19.	:	-		-		16.7	:	-		-	
Fluoride	mg/L	T	7.1	:	-		-		10.	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.46	J	-		-		0.54	J	-		-	
Nitrite	mg/L	T	0.006	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	0.038	:	-		-		0.038	:	-		-	
Sulfate	mg/L	T	1800.	:	-		-		2090.	:	-		-	
Total Alkalinity	mg/L	T	184.	:	-		-		168.	:	-		-	
Total Dissolved Solids	mg/L	T	2850.	:	-		-		3040.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.28	:	-		-	
Total Organic Carbon	mg/L	T	<1.3	:	-		-		<2.2	J	-		-	
Total Suspended Solids	mg/L	T	31.4	:	-		-		37.6	J	-		-	
Laboratory Parameters														
pH	SU	T	7.5	J	6.98	:	-		7.7	J	7.77	:	-	
Specific Conductance	umhos/cm	T	2720.	J	-		-		2760.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	:	-		-	
Physical Properties														
Hardness	mg/L	T	1960.	:	-		-		2120.	:	-		-	
Hardness	mg/L	D	-		-		1930.	:	-		-		2060.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Mine 1	Mine 1	MINE 1	Mine 1	Mine 1	MINE 1
			Sample Date	1/12/2004	1/12/2004	1/12/2004	4/22/2004	4/22/2004	4/22/2004
			Sample ID	MINE1-T01N-GRW	MINE-1-T01N-GRW	MINE1-D01N-GRW	MINE1-T01N-GRW	MINE-1-T01N-GRW	MINE1-D01N-GRW
			Exposure Area	GW3	GW3	GW3	GW3	GW3	GW3
Aluminum	mg/L	T		4.98 :	-	-	3.9 :	-	-
Aluminum	mg/L	D		-	-	<0.514 :	-	-	<0.176 :
Antimony	mg/L	T		<0.0024 :	-	-	<0.0014 :	-	-
Antimony	mg/L	D		-	-	<0.0024 :	-	-	<0.0014 :
Arsenic	mg/L	T		0.00059 :	-	-	<0.0004 :	-	-
Arsenic	mg/L	D		-	-	0.00046 :	-	-	<0.0004 :
Barium	mg/L	T		0.0092 :	-	-	0.0068 :	-	-
Barium	mg/L	D		-	-	0.0085 :	-	-	0.0074 :
Beryllium	mg/L	T		0.0208 :	-	-	0.0255 :	-	-
Beryllium	mg/L	D		-	-	0.0046 :	-	-	0.008 :
Boron	mg/L	T		0.0167 :	-	-	0.0123 :	-	-
Boron	mg/L	D		-	-	0.0183 :	-	-	0.0117 :
Cadmium	mg/L	T		0.0025 J	-	-	0.0094 :	-	-
Cadmium	mg/L	D		-	-	0.0021 :	-	-	0.0085 J
Calcium	mg/L	T		544. :	-	-	540. :	-	-
Calcium	mg/L	D		-	-	536. :	-	-	526. :
Chromium	mg/L	T		0.004 :	-	-	<0.0006 :	-	-
Chromium	mg/L	D		-	-	0.0035 :	-	-	<0.0006 :
Cobalt	mg/L	T		0.0869 J	-	-	0.128 :	-	-
Cobalt	mg/L	D		-	-	0.0842 :	-	-	0.132 :
Copper	mg/L	T		0.0065 :	-	-	0.01 :	-	-
Copper	mg/L	D		-	-	0.0031 :	-	-	<0.0014 :
Iron	mg/L	T		5.19 :	-	-	5.03 J	-	-
Iron	mg/L	D		-	-	<0.373 :	-	-	<0.192 :
Lead	mg/L	T		0.0027 :	-	-	0.0025 :	-	-
Lead	mg/L	D		-	-	<0.0002 :	-	-	<0.0008 :
Magnesium	mg/L	T		147. :	-	-	186. :	-	-
Magnesium	mg/L	D		-	-	143. :	-	-	181. :
Manganese	mg/L	T		23.1 :	-	-	36.2 :	-	-
Manganese	mg/L	D		-	-	21.6 :	-	-	35.8 :
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		5.23 :	-	-	4.52 :	-	-
Molybdenum	mg/L	D		-	-	5.4 :	-	-	4.72 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Mine 1 1/12/2004 MINE1-T01N-GRW GW3	Mine 1 1/12/2004 MINE-1-T01N-GRW GW3	MINE 1 1/12/2004 MINE1-D01N-GRW GW3	Mine 1 4/22/2004 MINE1-T01N-GRW GW3	Mine 1 4/22/2004 MINE-1-T01N-GRW GW3	MINE 1 4/22/2004 MINE1-D01N-GRW GW3
Nickel	mg/L	T	0.14 :	-	-	0.24 :	-	-
Nickel	mg/L	D	-	-	0.134 :	-	-	0.239 :
Potassium	mg/L	T	10.3 :	-	-	11. :	-	-
Potassium	mg/L	D	-	-	10.4 :	-	-	12.3 :
Selenium	mg/L	T	0.0025 J	-	-	<0.0014 :	-	-
Selenium	mg/L	D	-	-	0.00061 J	-	-	<0.0014 :
Silver	mg/L	T	<0.0002 :	-	-	<0.0002 J	-	-
Silver	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 J
Sodium	mg/L	T	56.5 :	-	-	52.8 :	-	-
Sodium	mg/L	D	-	-	53.2 :	-	-	51.3 :
Thallium	mg/L	T	<0.0002 :	-	-	0.00028 :	-	-
Thallium	mg/L	D	-	-	<0.0002 :	-	-	0.00025 :
Vanadium	mg/L	T	<0.0004 :	-	-	<0.0004 :	-	-
Vanadium	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :
Zinc	mg/L	T	1.85 :	-	-	3.16 :	-	-
Zinc	mg/L	D	-	-	1.29 :	-	-	2.48 :
Isotopes								
Lead	mg/L	T	0.0027 :	-	-	0.0025 :	-	-
Lead	mg/L	D	-	-	<0.0002 :	-	-	<0.0008 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 11/4/2002 MMW-10B-T01N-GRWRE GW4		MMW-10B 11/4/2002 MMW-10B-T01N-GRW GW4		MMW-10B 11/4/2002 MMW-10B-D01N-GRWRE GW4		MMW-10B 11/4/2002 MMW-10B-D01N-GRW GW4		MMW-10B 1/15/2003 MMW-10B-T01N-GW GW4		MMW-10B 1/15/2003 MMW-10B-T01N-GRW GW4	
Field Measurements														
DO	mg/L	T	-		2.3	:	-		-		2.21	:	2.21	:
EH	millivolts	T	-		227.1	:	-		-		430.1	:	430.1	:
pH	SU	T	-		6.	:	-		-		5.91	:	5.91	:
Specific Conductance	uS/cm	T	-		2555.	:	-		-		2231.	:	2231.	:
Temperature	Celsius	T	-		6.2	:	-		-		7.68	:	7.68	:
Turbidity	NTU	T	-		2.3	:	-		-		3.2	:	3.2	:
General Chemistry														
Ammonia	mg/L	T	-		<0.11	:	-		-		-		<0.12	:
Bicarbonate (as CaCO3)	mg/L	T	-		56.7	:	-		-		-		53.5	J
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	J
Chloride	mg/L	T	-		24.4	:	-		-		-		29.	:
Fluoride	mg/L	T	17.3	J	-		-		-		-		17.9	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		53.5	J
Nitrate	mg/L	T	-		0.79	J	-		-		-		<0.78	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		<0.2	J
Phosphorus	mg/L	T	-		0.022	:	-		-		-		<0.022	J
Sulfate	mg/L	T	1740.	J	-		-		-		-		1800.	J
Total Alkalinity	mg/L	T	-		56.7	:	-		-		-		53.5	J
Total Dissolved Solids	mg/L	T	-		2650.	:	-		-		-		2610.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		-		<1.	:
Total Suspended Solids	mg/L	T	-		18.	:	-		-		-		11.7	:
Laboratory Parameters														
pH	SU	T	-		6.	:	-		-		5.91	:	5.91	:
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		-		-		-		-		1750.	:
Hardness	mg/L	D	-		-		1720.	:	-		-		-	
Metals														
Aluminum	mg/L	T	-		-		-		-		-		11.7	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 11/4/2002 MMW-10B-T01N-GRWRE GW4	MMW-10B 11/4/2002 MMW-10B-T01N-GRW GW4	MMW-10B 11/4/2002 MMW-10B-D01N-GRWRE GW4	MMW-10B 11/4/2002 MMW-10B-D01N-GRW GW4	MMW-10B 1/15/2003 MMW-10B-T01N-GW GW4	MMW-10B 1/15/2003 MMW-10B-T01N-GRW GW4
Aluminum	mg/L	D	-	-	10.2 :	-	-	-
Antimony	mg/L	T	-	-	-	-	-	<0.0006 :
Antimony	mg/L	D	-	-	<0.0006 :	-	-	-
Arsenic	mg/L	T	-	-	-	-	-	<0.0004 :
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	-
Barium	mg/L	T	-	-	-	-	-	0.0179 :
Barium	mg/L	D	-	-	0.0169 :	-	-	-
Beryllium	mg/L	T	-	-	-	-	-	0.0097 :
Beryllium	mg/L	D	-	-	0.0091 :	-	-	-
Boron	mg/L	T	-	-	-	-	-	<0.0029 :
Boron	mg/L	D	-	-	<0.0046 :	-	-	-
Cadmium	mg/L	T	-	-	-	-	-	0.0199 :
Cadmium	mg/L	D	-	-	0.0197 :	-	-	-
Calcium	mg/L	T	-	-	-	-	-	507. :
Calcium	mg/L	D	-	-	495. :	-	-	-
Chromium	mg/L	T	-	-	-	-	-	<0.0037 :
Chromium	mg/L	D	-	-	<0.0037 :	-	-	-
Chromium, Hexavalent	mg/L	D	-	<0.01 :	-	-	-	-
Cobalt	mg/L	T	-	-	-	-	-	0.113 :
Cobalt	mg/L	D	-	-	0.115 :	-	-	-
Copper	mg/L	T	-	-	-	-	-	0.161 :
Copper	mg/L	D	-	-	0.133 :	-	-	-
Iron	mg/L	T	-	-	-	-	-	0.966 :
Iron	mg/L	D	-	-	<0.489 :	-	-	-
Lead	mg/L	T	-	-	-	-	-	0.132 :
Lead	mg/L	D	-	-	0.105 :	-	-	-
Magnesium	mg/L	T	-	-	-	-	-	119. :
Magnesium	mg/L	D	-	-	118. :	-	-	-
Manganese	mg/L	T	-	-	-	-	-	17. :
Manganese	mg/L	D	-	-	17.1 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	-	-	-	<0.0011 J
Molybdenum	mg/L	D	-	-	<0.0011 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 11/4/2002 MMW-10B-T01N-GRW GW4	MMW-10B 11/4/2002 MMW-10B-T01N-GRW GW4	MMW-10B 11/4/2002 MMW-10B-D01N-GRW GW4	MMW-10B 11/4/2002 MMW-10B-D01N-GRW GW4	MMW-10B 1/15/2003 MMW-10B-T01N-GW GW4	MMW-10B 1/15/2003 MMW-10B-T01N-GRW GW4
Nickel	mg/L	T	-	-	-	-	-	0.251 :
Nickel	mg/L	D	-	-	0.253 :	-	-	-
Potassium	mg/L	T	-	-	-	-	-	3.03 :
Potassium	mg/L	D	-	-	2.58 :	-	-	-
Selenium	mg/L	T	-	-	-	-	-	0.0038 :
Selenium	mg/L	D	-	-	0.0067 :	-	-	-
Silver	mg/L	T	-	-	-	-	-	<0.0002 :
Silver	mg/L	D	-	-	<0.0002 :	-	-	-
Sodium	mg/L	T	-	-	-	-	-	30. :
Sodium	mg/L	D	-	-	28.1 :	-	-	-
Thallium	mg/L	T	-	-	-	-	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.0002 :	-	-	-
Vanadium	mg/L	T	-	-	-	-	-	0.0011 :
Vanadium	mg/L	D	-	-	<0.0004 :	-	-	-
Zinc	mg/L	T	-	-	-	-	-	2.82 :
Zinc	mg/L	D	-	-	2.66 :	-	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	-	<0.01 :
Isotopes								
Lead	mg/L	T	-	-	-	-	-	0.132 :
Lead	mg/L	D	-	-	0.105 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID									
			MMW-10B 1/15/2003 MMW-10B-D01N-GR W GW4		MMW-10B 4/6/2003 MMW-10B-T01N-GR W GW4		MMW-10B 4/6/2003 MMW-10B-D01N-GR W GW4		MMW-10B 7/20/2003 MMW-10B-T01N-GR W GW4		MMW-10B 7/20/2003 MMW-10B-D01N-GR W GW4		MMW-10B 10/20/2003 MMW-10B-T01N-GR W GW4	
Field Measurements														
DO	mg/L	T	-		-1.92	:	-		0.41	:	-		0.	:
EH	millivolts	T	-		205.8	:	-		352.1	:	-		252.1	:
pH	SU	T	-		6.2	J	-		6.2	J	-		6.1	J
Specific Conductance	uS/cm	T	-		2624.	:	-		2576.	:	-		2605.	:
Temperature	Celsius	T	-		6.67	:	-		16.55	:	-		8.81	:
Turbidity	NTU	T	-		87.5	:	-		38.5	:	-		221.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.087	:	-		<0.054	J	-		<0.088	J
Bicarbonate (as CaCO3)	mg/L	T	-		56.9	:	-		60.3	:	-		59.2	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		22.2	:	-		25.	:	-		26.7	:
Fluoride	mg/L	T	-		18.2	:	-		15.4	:	-		17.5	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<1.1	:	-		<0.2	J	-		<0.2	:
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	:	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Phosphorus	mg/L	T	-		0.019	:	-		0.072	:	-		0.16	:
Sulfate	mg/L	T	-		1570.	J	-		1570.	J	-		1830.	J
Total Alkalinity	mg/L	T	-		56.9	:	-		60.3	:	-		59.2	:
Total Dissolved Solids	mg/L	T	-		2660.	:	-		2600.	:	-		2900.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.5	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		<12.8	:	-		34.2	:	-		95.6	:
Laboratory Parameters														
pH	SU	T	-		6.2	J	-		6.2	J	-		6.1	J
Specific Conductance	umhos/cm	T	-		2500.	J	-		2520.	J	-		2570.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1870.	:	-		1740.	:	-		1810.	:
Hardness	mg/L	D	1760.	:	-		1840.	:	-		1830.	:	-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 1/15/2003 MMW-10B-D01N-GR GW4 W		MMW-10B 4/6/2003 MMW-10B-T01N-GR GW4 W		MMW-10B 4/6/2003 MMW-10B-D01N-GR GW4 W		MMW-10B 7/20/2003 MMW-10B-T01N-GR GW4 W		MMW-10B 7/20/2003 MMW-10B-D01N-GR GW4 W		MMW-10B 10/20/2003 MMW-10B-T01N-GR GW4 W	
Aluminum	mg/L	T	-		12.1	:	-		11.3	:	-		15.6	:
Aluminum	mg/L	D	10.2	:	-		12.2	:	-		10.2	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.001	:	-		<0.052	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.002	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0171	:	-		0.023	:	-		<0.115	:
Barium	mg/L	D	0.0168	:	-		0.0169	:	-		0.017	:	-	
Beryllium	mg/L	T	-		0.0157	:	-		0.012	:	-		0.0152	:
Beryllium	mg/L	D	0.0095	:	-		0.0157	:	-		0.0116	:	-	
Boron	mg/L	T	-		<0.0084	:	-		0.0049	:	-		<0.063	:
Boron	mg/L	D	<0.003	:	-		<0.0084	:	-		0.0048	:	-	
Cadmium	mg/L	T	-		0.0189	:	-		0.0206	:	-		<0.13	:
Cadmium	mg/L	D	0.02	:	-		0.0193	:	-		0.021	:	-	
Calcium	mg/L	T	-		535.	:	-		498.	:	-		518.	:
Calcium	mg/L	D	508.	:	-		527.	:	-		525.	:	-	
Chromium	mg/L	T	-		<0.001	:	-		0.0397	:	-		<0.23	J
Chromium	mg/L	D	<0.0037	:	-		<0.001	:	-		0.004	:	-	
Cobalt	mg/L	T	-		0.108	:	-		0.115	:	-		<0.32	:
Cobalt	mg/L	D	0.114	:	-		0.111	:	-		0.116	:	-	
Copper	mg/L	T	-		0.144	:	-		0.151	:	-		0.26	:
Copper	mg/L	D	0.142	:	-		0.137	:	-		0.131	:	-	
Iron	mg/L	T	-		0.65	:	-		2.08	:	-		8.17	:
Iron	mg/L	D	<0.489	:	-		<0.422	:	-		<0.667	:	-	
Lead	mg/L	T	-		0.112	:	-		0.129	:	-		0.18	:
Lead	mg/L	D	0.0915	:	-		0.0838	:	-		0.0785	:	-	
Magnesium	mg/L	T	-		130.	:	-		120.	:	-		126.	:
Magnesium	mg/L	D	118.	:	-		128.	:	-		126.	:	-	
Manganese	mg/L	T	-		18.9	:	-		16.7	:	-		17.8	:
Manganese	mg/L	D	17.1	:	-		18.7	:	-		17.6	:	-	
Mercury	mg/L	T	-		0.0001	:	-		<0.00014	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.00017	:	-	
Molybdenum	mg/L	T	-		<0.0023	:	-		<0.0016	:	-		<0.011	:
Molybdenum	mg/L	D	<0.0011	J	-		<0.0023	:	-		<0.0016	:	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 1/15/2003 MMW-10B-D01N-GRW GW4		MMW-10B 4/6/2003 MMW-10B-T01N-GRW GW4		MMW-10B 4/6/2003 MMW-10B-D01N-GRW GW4		MMW-10B 7/20/2003 MMW-10B-T01N-GRW GW4		MMW-10B 7/20/2003 MMW-10B-D01N-GRW GW4		MMW-10B 10/20/2003 MMW-10B-T01N-GRW GW4	
Nickel	mg/L	T	-		0.251	:	-		0.257	:	-		0.455	:
Nickel	mg/L	D	0.253	:	-		0.255	:	-		0.257	:	-	
Potassium	mg/L	T	-		2.86	:	-		3.65	:	-		<63.8	:
Potassium	mg/L	D	3.1	:	-		2.9	:	-		3.54	:	-	
Selenium	mg/L	T	-		0.0048	:	-		0.0048	:	-		0.0084	:
Selenium	mg/L	D	0.0038	:	-		0.0026	:	-		0.0039	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.001	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		31.1	:	-		22.7	J	-		<99.1	:
Sodium	mg/L	D	29.4	:	-		29.6	:	-		29.1	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.001	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00044	:	-		0.0017	:	-		0.0075	:
Vanadium	mg/L	D	0.00063	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		2.9	:	-		2.76	:	-		<3.	:
Zinc	mg/L	D	2.84	:	-		2.86	:	-		2.88	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	:	-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		-		-		-	
Isotopes														
Lead	mg/L	T	-		0.112	:	-		0.129	:	-		0.18	:
Lead	mg/L	D	0.0915	:	-		0.0838	:	-		0.0785	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 10/20/2003 MMW-10B-D01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-T01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-D01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-T01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-D01N-GRW GW4		MMW-11 11/4/2002 MMW-11-T01N-GRWRE GW4	
Field Measurements														
DO	mg/L	T	-		0.92	:	-		0.62	:	-		-	
EH	millivolts	T	-		206.6	:	-		235.4	:	-		-	
pH	SU	T	-		6.3	J	-		6.5	J	-		-	
Specific Conductance	uS/cm	T	-		2727.	:	-		2619.	:	-		-	
Temperature	Celsius	T	-		6.26	:	-		8.11	:	-		-	
Turbidity	NTU	T	-		42.4	:	-		-		-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.13	J	-		<0.13	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		56.6	J	-		70.5	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		28.	:	-		26.9	:	-		-	
Fluoride	mg/L	T	-		17.7	:	-		16.7	:	-		8.1	J
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		<0.2	J	-		0.86	J	-		-	
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		<0.01	J	-		-	
Phosphorus	mg/L	T	-		0.16	:	-		0.12	:	-		-	
Sulfate	mg/L	T	-		1750.	:	-		1680.	:	-		-	
Total Alkalinity	mg/L	T	-		56.6	J	-		70.5	:	-		-	
Total Dissolved Solids	mg/L	T	-		2570.	:	-		2600.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.5	J	-		-	
Total Suspended Solids	mg/L	T	-		46.	:	-		32.7	J	-		-	
Laboratory Parameters														
pH	SU	T	-		6.3	J	-		6.5	J	-		-	
Specific Conductance	umhos/cm	T	-		2460.	J	-		2320.	J	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Physical Properties														
Hardness	mg/L	T	-		1740.	:	-		1700.	:	-		-	
Hardness	mg/L	D	1800.	:	-		1770.	:	-		1650.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 10/20/2003 MMW-10B-D01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-T01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-D01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-T01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-D01N-GRW GW4		MMW-11 11/4/2002 MMW-11-T01N-GRWRE GW4	
Aluminum	mg/L	T	-		10.7	:	-		11.	:	-		-	
Aluminum	mg/L	D	9.37	:	-		9.52	:	-		9.31	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0012	:	-		-	
Antimony	mg/L	D	<0.052	:	-		<0.0024	:	-		<0.0012	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		-	
Arsenic	mg/L	D	<0.002	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0226	:	-		0.0235	:	-		-	
Barium	mg/L	D	<0.115	:	-		0.0192	:	-		0.0199	:	-	
Beryllium	mg/L	T	-		0.0137	:	-		0.0132	:	-		-	
Beryllium	mg/L	D	0.0153	:	-		0.0134	:	-		0.0128	:	-	
Boron	mg/L	T	-		<0.0117	:	-		0.0051	:	-		-	
Boron	mg/L	D	<0.063	:	-		<0.0117	:	-		0.0046	:	-	
Cadmium	mg/L	T	-		0.019	J	-		0.0174	:	-		-	
Cadmium	mg/L	D	<0.13	:	-		0.0189	:	-		0.0183	J	-	
Calcium	mg/L	T	-		500.	:	-		488.	:	-		-	
Calcium	mg/L	D	517.	:	-		508.	:	-		475.	:	-	
Chromium	mg/L	T	-		<0.0057	:	-		<0.0012	:	-		-	
Chromium	mg/L	D	<0.23	J	-		<0.0057	:	-		<0.0006	:	-	
Cobalt	mg/L	T	-		0.118	J	-		0.106	:	-		-	
Cobalt	mg/L	D	<0.32	:	-		0.121	:	-		0.113	:	-	
Copper	mg/L	T	-		0.161	:	-		0.137	:	-		-	
Copper	mg/L	D	<0.23	:	-		0.116	:	-		0.114	:	-	
Iron	mg/L	T	-		3.28	:	-		1.94	J	-		-	
Iron	mg/L	D	<4.55	:	-		1.12	:	-		<0.192	:	-	
Lead	mg/L	T	-		0.123	:	-		0.0988	:	-		-	
Lead	mg/L	D	0.0694	:	-		0.0726	:	-		0.0663	:	-	
Magnesium	mg/L	T	-		120.	:	-		116.	:	-		-	
Magnesium	mg/L	D	124.	:	-		121.	:	-		112.	:	-	
Manganese	mg/L	T	-		17.1	:	-		17.1	:	-		-	
Manganese	mg/L	D	17.6	:	-		17.3	:	-		16.7	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.003	:	-		<0.0014	:	-		-	
Molybdenum	mg/L	D	<0.011	:	-		<0.003	:	-		<0.0014	:	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-10B 10/20/2003 MMW-10B-D01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-T01N-GRW GW4		MMW-10B 1/13/2004 MMW-10B-D01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-T01N-GRW GW4		MMW-10B 4/22/2004 MMW-10B-D01N-GRW GW4		MMW-11 11/4/2002 MMW-11-T01N-GRW RE GW4	
Nickel	mg/L	T	-		0.263	:	-		0.229	:	-		-	
Nickel	mg/L	D	<0.45	:	-		0.261	:	-		0.239	:	-	
Potassium	mg/L	T	-		3.5	:	-		3.39	:	-		-	
Potassium	mg/L	D	<63.8	:	-		3.66	:	-		3.5	:	-	
Selenium	mg/L	T	-		0.0064	J	-		0.0034	:	-		-	
Selenium	mg/L	D	0.008	:	-		0.006	:	-		0.003	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		-	
Silver	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		27.8	:	-		30.3	:	-		-	
Sodium	mg/L	D	<99.1	:	-		29.3	:	-		28.6	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0018	:	-		0.0023	:	-		-	
Vanadium	mg/L	D	<0.001	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		2.94	:	-		2.55	:	-		-	
Zinc	mg/L	D	<2.9	:	-		2.94	:	-		2.46	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-95.6	:	-		-	
Delta O-18	per mil	T	-		-		-		-13.1	:	-		-	
Lead	mg/L	T	-		0.123	:	-		0.0988	:	-		-	
Lead	mg/L	D	0.0694	:	-		0.0726	:	-		0.0663	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-11 11/4/2002 MMW-11-T01N-GRW GW4		MMW-11 11/4/2002 MMW-11-D01N-GRW RE GW4		MMW-11 11/4/2002 MMW-11-D01N-GRW GW4		MMW-11 1/13/2003 MMW-11-T01N-GW GW4		MMW-11 1/13/2003 MMW-11-T01N-GRW GW4		MMW-11 1/13/2003 MMW-11-D01N-GRW GW4	
Field Measurements														
DO	mg/L	T	0.79	:	-		-		4.23	:	4.23	:	-	
EH	millivolts	T	119.1	:	-		-		424.7	:	424.7	:	-	
pH	SU	T	5.58	:	-		-		3.97	:	3.97	:	-	
Specific Conductance	uS/cm	T	2976.	:	-		-		5220.	:	5220.	:	-	
Temperature	Celsius	T	7.48	:	-		-		8.12	:	8.12	:	-	
Turbidity	NTU	T	21.2	:	-		-		0.	:	0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.088	:	-		-		-		<0.095	:	-	
Bicarbonate (as CaCO3)	mg/L	T	11.1	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	25.2	:	-		-		-		22.1	J	-	
Fluoride	mg/L	T	-		-		-		-		38.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	5.1	J	-		-		-		4.7	:	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	0.024	J	-		-		-		<0.84	J	-	
Phosphorus	mg/L	T	0.11	:	-		-		-		0.037	J	-	
Sulfate	mg/L	T	1850.	:	-		-		-		1680.	J	-	
Total Alkalinity	mg/L	T	11.1	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	2670.	:	-		-		-		2530.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		-		1.3	:	-	
Total Suspended Solids	mg/L	T	3.4	:	-		-		-		<1.8	:	-	
Laboratory Parameters														
pH	SU	T	5.58	:	-		-		3.97	:	3.97	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1720.	:	-		-		-		1400.	:	-	
Hardness	mg/L	D	-		1430.	:	-		-		-		1460.	:
Metals														
Aluminum	mg/L	T	-		-		-		-		81.7	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11 11/4/2002 MMW-11-T01N-GRW GW4	MMW-11 11/4/2002 MMW-11-D01N-GRW RE GW4	MMW-11 11/4/2002 MMW-11-D01N-GRW GW4	MMW-11 1/13/2003 MMW-11-T01N-GW GW4	MMW-11 1/13/2003 MMW-11-T01N-GRW GW4	MMW-11 1/13/2003 MMW-11-D01N-GRW GW4
Aluminum	mg/L	D	-	72.3 :	-	-	-	85.1 :
Antimony	mg/L	T	-	-	-	-	<0.028 :	-
Antimony	mg/L	D	-	<0.028 :	-	-	-	<0.028 :
Arsenic	mg/L	T	-	-	-	-	<0.023 :	-
Arsenic	mg/L	D	-	<0.023 :	-	-	-	<0.023 :
Barium	mg/L	T	-	-	-	-	<0.048 :	-
Barium	mg/L	D	-	<0.048 :	-	-	-	<0.048 :
Beryllium	mg/L	T	-	-	-	-	0.0174 :	-
Beryllium	mg/L	D	-	0.0169 :	-	-	-	0.017 :
Boron	mg/L	T	-	-	-	-	<0.0288 :	-
Boron	mg/L	D	-	<0.027 :	-	-	-	<0.027 :
Cadmium	mg/L	T	-	-	-	-	<0.08 :	-
Cadmium	mg/L	D	-	0.0614 :	-	-	-	<0.08 :
Calcium	mg/L	T	-	-	-	-	260. :	-
Calcium	mg/L	D	-	279. :	-	-	-	271. :
Chromium	mg/L	T	-	-	-	-	<0.16 :	-
Chromium	mg/L	D	-	<0.37 :	-	-	-	<0.16 :
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	-	-	-	-	0.377 :	-
Cobalt	mg/L	D	-	0.297 :	-	-	-	0.406 :
Copper	mg/L	T	-	-	-	-	1.21 :	-
Copper	mg/L	D	-	<0.968 :	-	-	-	1.29 :
Iron	mg/L	T	-	-	-	-	<2.66 :	-
Iron	mg/L	D	-	<4.89 :	-	-	-	<2.66 :
Lead	mg/L	T	-	-	-	-	0.0146 :	-
Lead	mg/L	D	-	0.0124 :	-	-	-	0.0143 :
Magnesium	mg/L	T	-	-	-	-	182. :	-
Magnesium	mg/L	D	-	178. :	-	-	-	190. :
Manganese	mg/L	T	-	-	-	-	42.7 :	-
Manganese	mg/L	D	-	39.2 :	-	-	-	44.6 :
Mercury	mg/L	T	<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	-	-	-	-	<0.011 :	-
Molybdenum	mg/L	D	-	<0.011 :	-	-	-	<0.011 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11 11/4/2002 MMW-11-T01N-GRW GW4	MMW-11 11/4/2002 MMW-11-D01N-GRW RE GW4	MMW-11 11/4/2002 MMW-11-D01N-GRW GW4	MMW-11 1/13/2003 MMW-11-T01N-GW GW4	MMW-11 1/13/2003 MMW-11-T01N-GRW GW4	MMW-11 1/13/2003 MMW-11-D01N-GRW GW4
Nickel	mg/L	T	-	-	-	-	0.951 :	-
Nickel	mg/L	D	-	0.889 :	-	-	-	0.905 :
Potassium	mg/L	T	-	-	-	-	<31.4 :	-
Potassium	mg/L	D	-	31.4 :	-	-	-	<31.4 :
Selenium	mg/L	T	-	-	-	-	<0.008 :	-
Selenium	mg/L	D	-	0.0099 :	-	-	-	<0.008 :
Silver	mg/L	T	-	-	-	-	<0.001 :	-
Silver	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Sodium	mg/L	T	-	-	-	-	<36.6 :	-
Sodium	mg/L	D	-	44.4 :	-	-	-	<36.6 :
Thallium	mg/L	T	-	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	T	-	-	-	-	<0.002 :	-
Vanadium	mg/L	D	-	<0.002 :	-	-	-	0.0022 :
Zinc	mg/L	T	-	-	-	-	8.08 :	-
Zinc	mg/L	D	-	7.37 :	-	-	-	8.52 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	<0.00025 J	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	-	-	-	0.0146 :	-
Lead	mg/L	D	-	0.0124 :	-	-	-	0.0143 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID	MMW-11	MMW-11	MMW-11	MMW-11	MMW-11	MMW-11
			Sample Date	4/8/2003	4/8/2003	7/21/2003	7/21/2003	10/20/2003	10/20/2003
			Sample ID	MMW-11-T01N-GRW	MMW-11-D01N-GRW	MMW-11-T01N-GRW	MMW-11-D01N-GRW	MMW-11-T01N-GRW	MMW-11-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		4.9 :	-	5.36 :	-	4.44 :	-
EH	millivolts	T		329.7 :	-	437.8 :	-	325.2 :	-
pH	SU	T		4. J	-	4.5 J	-	4.4 J	-
Specific Conductance	uS/cm	T		2543. :	-	2312. :	-	2177. :	-
Temperature	Celsius	T		8.37 :	-	10.29 :	-	8.27 :	-
Turbidity	NTU	T		6.1 :	-	0. :	-	0.2 :	-
General Chemistry									
Ammonia	mg/L	T		<0.12 :	-	<0.04 J	-	<0.081 J	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		29. :	-	31.7 :	-	22.6 :	-
Fluoride	mg/L	T		37.3 :	-	34.9 :	-	33. :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		4.3 J	-	4.6 J	-	4.1 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.031 J	-	<0.028 :	-	<0.024 J	-
Phosphorus	mg/L	T		0.042 :	-	0.037 :	-	0.043 :	-
Sulfate	mg/L	T		1580. J	-	1500. J	-	1290. J	-
Total Alkalinity	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		2510. :	-	3180. :	-	2230. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.8 J	-	<1.3 J	-	1.4 J	-
Total Suspended Solids	mg/L	T		<1.7 :	-	2.7 :	-	<1.5 :	-
Laboratory Parameters									
pH	SU	T		4. J	-	4.5 J	-	4.4 J	-
Specific Conductance	umhos/cm	T		2330. J	-	2210. J	-	2060. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1230. :	-	1210. :	-	1200. :	-
Hardness	mg/L	D		-	1220. :	-	1210. :	-	1110. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11 4/8/2003 MMW-11-T01N-GRW GW4 T		MMW-11 4/8/2003 MMW-11-D01N-GRW GW4 D		MMW-11 7/21/2003 MMW-11-T01N-GRW GW4 T		MMW-11 7/21/2003 MMW-11-D01N-GRW GW4 D		MMW-11 10/20/2003 MMW-11-T01N-GRW GW4 T		MMW-11 10/20/2003 MMW-11-D01N-GRW GW4 D	
Aluminum	mg/L	T	71.2	:	-		71.2	:	-		67.1	:	-	
Aluminum	mg/L	D	-		71.4	:	-		72.2	:	-		68.	:
Antimony	mg/L	T	<0.003	:	-		<0.038	:	-		<0.052	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.038	:	-		<0.052	:
Arsenic	mg/L	T	<0.04	:	-		0.0251	:	-		<0.002	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		0.04	:	-		<0.002	:
Barium	mg/L	T	<0.123	:	-		<0.073	:	-		<0.115	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.073	:	-		<0.115	:
Beryllium	mg/L	T	0.0171	J	-		0.0178	:	-		0.016	:	-	
Beryllium	mg/L	D	-		0.0184	J	-		0.0188	:	-		0.015	:
Boron	mg/L	T	<0.084	:	-		<0.046	:	-		<0.063	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.046	:	-		<0.063	:
Cadmium	mg/L	T	0.0596	:	-		<0.12	:	-		<0.13	:	-	
Cadmium	mg/L	D	-		0.0594	:	-		<0.12	:	-		<0.13	:
Calcium	mg/L	T	228.	:	-		224.	:	-		226.	:	-	
Calcium	mg/L	D	-		228.	:	-		225.	:	-		195.	:
Chromium	mg/L	T	<0.01	:	-		<0.19	J	-		<0.23	J	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.19	J	-		<0.23	J
Cobalt	mg/L	T	0.351	:	-		<0.37	:	-		0.322	:	-	
Cobalt	mg/L	D	-		0.352	:	-		<0.37	:	-		0.349	:
Copper	mg/L	T	1.17	:	-		0.858	:	-		1.04	:	-	
Copper	mg/L	D	-		1.18	:	-		0.939	:	-		1.1	:
Iron	mg/L	T	<0.311	:	-		<6.67	:	-		<4.55	:	-	
Iron	mg/L	D	-		<0.311	:	-		<6.67	:	-		<4.55	:
Lead	mg/L	T	0.0104	J	-		0.0122	:	-		0.0111	:	-	
Lead	mg/L	D	-		0.0103	J	-		0.0129	:	-		0.012	:
Magnesium	mg/L	T	160.	:	-		157.	:	-		154.	:	-	
Magnesium	mg/L	D	-		159.	:	-		158.	:	-		152.	:
Manganese	mg/L	T	39.	:	-		36.4	:	-		34.8	:	-	
Manganese	mg/L	D	-		38.9	:	-		36.6	:	-		34.5	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.016	:	-		<0.011	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.016	:	-		<0.011	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11 4/8/2003 MMW-11-T01N-GRW GW4		MMW-11 4/8/2003 MMW-11-D01N-GRW GW4		MMW-11 7/21/2003 MMW-11-T01N-GRW GW4		MMW-11 7/21/2003 MMW-11-D01N-GRW GW4		MMW-11 10/20/2003 MMW-11-T01N-GRW GW4		MMW-11 10/20/2003 MMW-11-D01N-GRW GW4	
Nickel	mg/L	T	0.844	:	-		0.558	:	-		0.841	J	-	
Nickel	mg/L	D	-		0.849	:	-		0.784	:	-		2.54	J
Potassium	mg/L	T	<3.26	:	-		<37.1	:	-		<63.8	:	-	
Potassium	mg/L	D	-		<3.26	:	-		<37.1	:	-		<63.8	:
Selenium	mg/L	T	0.0076	:	-		0.0111	:	-		0.0085	:	-	
Selenium	mg/L	D	-		0.0077	:	-		0.0115	J	-		0.0079	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	24.2	:	-		<53.2	:	-		<99.1	:	-	
Sodium	mg/L	D	-		25.	:	-		<53.2	:	-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	7.21	:	-		6.2	:	-		6.91	:	-	
Zinc	mg/L	D	-		7.25	:	-		6.27	:	-		6.87	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	0.0104	J	-		0.0122	:	-		0.0111	:	-	
Lead	mg/L	D	-		0.0103	J	-		0.0129	:	-		0.012	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction	MMW-11	MMW-11	MMW-11	MMW-11	MMW-17B	MMW-17B
Sample Date			1/14/2004	1/14/2004	4/21/2004	4/21/2004	10/30/2002	10/31/2002
Sample ID			MMW-11-T01N-GRW	MMW-11-D01N-GRW	MMW-11-T01N-GRW	MMW-11-D01N-GRW	MMW-17B-T01N-GRW	MMW-17B-T01N-GRWRE
Exposure Area			GW4	GW4	GW4	GW4	MR	MR
Field Measurements								
DO	mg/L	T	4.28 :	-	2.26 :	-	-	-
EH	millivolts	T	238.8 :	-	439.2 :	-	-	-
pH	SU	T	4.3 J	-	4.8 J	-	-	-
Specific Conductance	uS/cm	T	2034. :	-	2039. :	-	-	-
Temperature	Celsius	T	6.92 :	-	8.49 :	-	-	-
Turbidity	NTU	T	2.3 :	-	2. :	-	-	-
General Chemistry								
Ammonia	mg/L	T	<0.091 J	-	<0.11 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	-
Chloride	mg/L	T	21.6 :	-	24.4 :	-	-	-
Fluoride	mg/L	T	30. :	-	28.9 :	-	-	1.6 J
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	-
Nitrate	mg/L	T	3.6 J	-	3.3 :	-	-	-
Nitrite	mg/L	T	<0.005 J	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T	<0.026 J	-	0.024 :	-	-	-
Phosphorus	mg/L	T	0.038 :	-	0.033 :	-	-	-
Sulfate	mg/L	T	1280. :	-	1390. :	-	-	631. J
Total Alkalinity	mg/L	T	<1. :	-	<1. :	-	-	-
Total Dissolved Solids	mg/L	T	2130. :	-	1970. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	<1. J	-	1.6 J	-	-	-
Total Suspended Solids	mg/L	T	<1.9 :	-	<0.5 J	-	-	-
Laboratory Parameters								
pH	SU	T	4.3 J	-	4.8 J	-	-	-
Specific Conductance	umhos/cm	T	1890. J	-	1780. J	-	-	-
Inorganics								
Cyanide	mg/L	T	<0.01 J	-	<0.01 :	-	-	-
Physical Properties								
Hardness	mg/L	T	982. :	-	1040. :	-	-	-
Hardness	mg/L	D	-	991. :	-	1020. :	-	-
Metals								

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11 1/14/2004 MMW-11-T01N-GRW GW4 T	MMW-11 1/14/2004 MMW-11-D01N-GRW GW4 D	MMW-11 4/21/2004 MMW-11-T01N-GRW GW4 T	MMW-11 4/21/2004 MMW-11-D01N-GRW GW4 D	MMW-17B 10/30/2002 MMW-17B-T01N-GRW MR T	MMW-17B 10/31/2002 MMW-17B-T01N-GRWRE MR T
Aluminum	mg/L		51.8 :	-	57.9 :	-	-	-
Aluminum	mg/L		-	52.4 :	-	56.4 :	-	-
Antimony	mg/L		<0.029 :	-	<0.027 :	-	-	-
Antimony	mg/L		-	<0.029 :	-	<0.027 :	-	-
Arsenic	mg/L		<0.028 :	-	<0.026 :	-	-	-
Arsenic	mg/L		-	<0.028 :	-	<0.026 :	-	-
Barium	mg/L		<0.053 :	-	<0.012 :	-	-	-
Barium	mg/L		-	<0.053 :	-	<0.012 :	-	-
Beryllium	mg/L		0.0149 :	-	0.0153 :	-	-	-
Beryllium	mg/L		-	0.0155 :	-	0.015 :	-	-
Boron	mg/L		<0.023 :	-	<0.018 :	-	-	-
Boron	mg/L		-	<0.023 :	-	<0.018 :	-	-
Cadmium	mg/L		<0.07 J	-	<0.1 :	-	-	-
Cadmium	mg/L		-	<0.07 :	-	<0.1 :	-	-
Calcium	mg/L		188. :	-	198. :	-	-	-
Calcium	mg/L		-	190. :	-	194. :	-	-
Chromium	mg/L		<0.57 :	-	<0.13 :	-	-	-
Chromium	mg/L		-	<0.57 :	-	<0.13 :	-	-
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	<0.37 :	-	0.286 :	-	-	-
Cobalt	mg/L	D	-	<0.37 :	-	0.244 :	-	-
Copper	mg/L	T	0.887 :	-	0.771 :	-	-	-
Copper	mg/L	D	-	0.955 :	-	0.635 :	-	-
Iron	mg/L	T	<4.23 :	-	<2.93 J	-	-	-
Iron	mg/L	D	-	<4.23 :	-	<2.93 :	-	-
Lead	mg/L	T	0.0106 :	-	0.0109 :	-	-	-
Lead	mg/L	D	-	0.0114 :	-	0.0106 :	-	-
Magnesium	mg/L	T	124. :	-	134. :	-	-	-
Magnesium	mg/L	D	-	126. :	-	130. :	-	-
Manganese	mg/L	T	29. :	-	30.5 :	-	-	-
Manganese	mg/L	D	-	29.1 :	-	30. :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	-
Molybdenum	mg/L	T	<0.024 :	-	0.0118 :	-	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-11 1/14/2004 MMW-11-T01N-GRW		MMW-11 1/14/2004 MMW-11-D01N-GRW		MMW-11 4/21/2004 MMW-11-T01N-GRW		MMW-11 4/21/2004 MMW-11-D01N-GRW		MMW-17B 10/30/2002 MMW-17B-T01N-GRW		MMW-17B 10/31/2002 MMW-17B-T01N-GRWRE	
			GW4		GW4		GW4		GW4		MR		MR	
Molybdenum	mg/L	D	-		<0.024	:	-		<0.01	:	-		-	
Nickel	mg/L	T	<1.68	:	-		0.695	:	-		-		-	
Nickel	mg/L	D	-		<1.68	:	-		0.706	:	-		-	
Potassium	mg/L	T	<110.	J	-		<15.5	:	-		-		-	
Potassium	mg/L	D	-		<110.	J	-		<15.5	:	-		-	
Selenium	mg/L	T	0.0109	J	-		<0.007	:	-		-		-	
Selenium	mg/L	D	-		0.0127	:	-		<0.007	:	-		-	
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		-		-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Sodium	mg/L	T	<92.	:	-		<32.8	:	-		-		-	
Sodium	mg/L	D	-		<92.	:	-		<32.8	:	-		-	
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		-		-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		-		-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		-	
Zinc	mg/L	T	5.67	:	-		5.72	:	-		-		-	
Zinc	mg/L	D	-		5.75	:	-		5.54	:	-		-	
Isotopes														
Lead	mg/L	T	0.0106	:	-		0.0109	:	-		-		-	
Lead	mg/L	D	-		0.0114	:	-		0.0106	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	10/31/2002	10/31/2002	10/31/2002	12/3/2002	12/3/2002	12/3/2002
			Sample ID	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRWRE MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRWRE MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRWRE MR
Field Measurements									
DO	mg/L	T		3.55 :	-	-	-	3.57 :	-
EH	millivolts	T		438.1 :	-	-	-	159.7 :	-
pH	SU	T		4.44 :	-	-	-	5.13 :	-
Specific Conductance	uS/cm	T		769. :	-	-	-	793. :	-
Temperature	Celsius	T		9.37 :	-	-	-	7.21 :	-
Turbidity	NTU	T		12.5 :	-	-	-	41.5 :	-
General Chemistry									
Ammonia	mg/L	T		<0.066 :	-	-	-	<0.096 :	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<4.7 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		4.9 :	-	-	-	5.5 :	-
Fluoride	mg/L	T		-	-	-	1.7 J	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	-	-	0.41 J	-
Nitrite	mg/L	T		<0.005 J	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	-	-	<0.011 J	-
Phosphorus	mg/L	T		0.079 :	-	-	-	<0.01 J	-
Sulfate	mg/L	T		-	-	-	-	554. :	-
Total Alkalinity	mg/L	T		<1. :	-	-	-	<4.7 :	-
Total Dissolved Solids	mg/L	T		766. :	-	-	-	618. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.24 J	-
Total Organic Carbon	mg/L	T		<1. :	-	-	-	<1. :	-
Total Suspended Solids	mg/L	T		5.6 :	-	-	-	<0.5 J	-
Laboratory Parameters									
pH	SU	T		4.44 :	-	-	-	5.13 :	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	-	-	-	346. :	-
Hardness	mg/L	D		-	332. :	-	-	-	381. :
Metals									
Aluminum	mg/L	D		-	<9.51 :	-	-	-	<10.2 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	10/31/2002	10/31/2002	10/31/2002	12/3/2002	12/3/2002	12/3/2002
			Sample ID	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRWRE MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRWRE MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRWRE MR
Antimony	mg/L	D		-	<0.028 :	-	-	-	<0.028 :
Arsenic	mg/L	D		-	<0.023 :	-	-	-	<0.023 :
Barium	mg/L	D		-	<0.048 :	-	-	-	<0.048 :
Beryllium	mg/L	D		-	0.0025 :	-	-	-	<0.002 :
Boron	mg/L	D		-	<0.027 :	-	-	-	<0.027 :
Cadmium	mg/L	D		-	<0.08 :	-	-	-	<0.08 :
Calcium	mg/L	D		-	91. :	-	-	-	104. :
Chromium	mg/L	D		-	<0.16 J	-	-	-	<0.16 J
Cobalt	mg/L	D		-	<0.23 :	-	-	-	<0.23 :
Copper	mg/L	D		-	<0.17 :	-	-	-	<0.17 :
Iron	mg/L	D		-	<2.66 :	-	-	-	<2.66 :
Lead	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Magnesium	mg/L	D		-	<26.9 :	-	-	-	29.4 :
Manganese	mg/L	D		-	1.7 J	-	-	-	1.95 J
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 J	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	D		-	<0.011 :	-	-	-	<0.011 :
Nickel	mg/L	D		-	<0.34 J	-	-	-	<0.34 J
Potassium	mg/L	D		-	<31.4 J	-	-	-	<31.4 J
Selenium	mg/L	D		-	<0.008 :	-	-	-	<0.008 :
Silver	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Sodium	mg/L	D		-	<36.6 :	-	-	-	<36.6 :
Thallium	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	D		-	<0.002 :	-	-	-	<0.002 :
Zinc	mg/L	D		-	0.583 :	-	-	-	0.492 :
Isotopes									
Lead	mg/L	D		-	<0.001 :	-	-	-	<0.001 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 12/3/2002 MMW-17B-D01N-GR W MR	MMW-17B 1/9/2003 MMW-17B-T01N-GR W MR	MMW-17B 1/9/2003 MMW-17B-D01N-GR W MR	MMW-17B 2/8/2003 MMW-17B-T01N-GR W MR	MMW-17B 2/8/2003 MMW-17B-D01N-GR W MR	MMW-17B 3/3/2003 MMW-17B-T01N-GR W MR
Field Measurements								
DO	mg/L	T	-	32.54 :	-	3.34 :	-	2.79 :
EH	millivolts	T	-	289.4 :	-	489.5 :	-	378.8 :
pH	SU	T	-	4.66 :	-	4.43 :	-	4.42 :
Specific Conductance	uS/cm	T	-	846. :	-	739. :	-	96. :
Temperature	Celsius	T	-	5.96 :	-	7.22 :	-	7.24 :
Turbidity	NTU	T	-	1.5 :	-	0. :	-	1.8 :
General Chemistry								
Ammonia	mg/L	T	-	<0.071 :	-	<0.078 :	-	<0.057 J
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	<5.3 :	-	4.4 :	-	6.2 :
Fluoride	mg/L	T	-	1.2 :	-	1.5 :	-	1.6 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.41 J	-	0.41 J	-	<0.4 :
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	<0.012 J	-	<0.01 J	-	0.011 J
Phosphorus	mg/L	T	-	0.017 :	-	<0.019 :	-	<0.022 J
Sulfate	mg/L	T	-	413. J	-	463. J	-	467. :
Total Alkalinity	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T	-	<623. :	-	617. :	-	592. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T	-	<1.4 :	-	2.4 :	-	4.1 J
Laboratory Parameters								
pH	SU	T	-	4.66 :	-	4.43 :	-	4.42 :
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	370. :	-	387. :	-	406. :
Hardness	mg/L	D	-	-	351. :	-	401. :	-
Metals								
Aluminum	mg/L	T	-	11.1 :	-	<17.3 :	-	<11.5 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	12/3/2002	1/9/2003	1/9/2003	2/8/2003	2/8/2003	3/3/2003
			Sample ID	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR
Aluminum	mg/L	D		-	-	10.3 :	-	<18.3 :	-
Antimony	mg/L	T		-	<0.028 :	-	<0.028 :	-	<0.028 :
Antimony	mg/L	D		-	-	<0.028 :	-	<0.028 :	-
Arsenic	mg/L	T		-	<0.023 :	-	<0.023 :	-	<0.023 J
Arsenic	mg/L	D		-	-	<0.023 :	-	<0.023 :	-
Barium	mg/L	T		-	<0.048 :	-	<0.048 :	-	<0.048 :
Barium	mg/L	D		-	-	<0.048 :	-	<0.048 :	-
Beryllium	mg/L	T		-	0.0024 :	-	0.0034 :	-	0.003 :
Beryllium	mg/L	D		-	-	0.002 :	-	0.0035 :	-
Boron	mg/L	T		-	<0.027 :	-	<0.027 :	-	<0.027 :
Boron	mg/L	D		-	-	<0.027 :	-	<0.027 :	-
Cadmium	mg/L	T		-	<0.04 :	-	<0.08 :	-	<0.08 :
Cadmium	mg/L	D		-	-	<0.04 :	-	<0.08 :	-
Calcium	mg/L	T		-	102. :	-	105. :	-	111. J
Calcium	mg/L	D		-	-	96.8 :	-	109. :	-
Chromium	mg/L	T		-	<0.37 :	-	<0.16 :	-	<0.16 :
Chromium	mg/L	D		-	-	<0.37 :	-	<0.16 :	-
Cobalt	mg/L	T		-	<0.16 :	-	<0.23 :	-	<0.23 :
Cobalt	mg/L	D		-	-	<0.16 :	-	<0.23 :	-
Copper	mg/L	T		-	<0.17 :	-	<0.17 :	-	<0.17 :
Copper	mg/L	D		-	-	<0.17 :	-	<0.17 :	-
Iron	mg/L	T		-	<4.89 :	-	<2.66 J	-	<2.66 :
Iron	mg/L	D		-	-	<4.89 :	-	<2.66 J	-
Lead	mg/L	T		-	0.00021 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D		-	-	<0.0002 :	-	<0.001 :	-
Magnesium	mg/L	T		-	28.2 :	-	30.2 :	-	31.5 :
Magnesium	mg/L	D		-	-	26.5 :	-	31.3 :	-
Manganese	mg/L	T		-	1.84 :	-	1.99 J	-	2.1 :
Manganese	mg/L	D		-	-	1.75 :	-	2.05 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.011 :	-	0.0118 J	-	<0.011 :
Molybdenum	mg/L	D		-	-	<0.011 :	-	<0.011 J	-
Nickel	mg/L	T		-	<0.15 :	-	<0.34 :	-	<0.34 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	12/3/2002	1/9/2003	1/9/2003	2/8/2003	2/8/2003	3/3/2003
			Sample ID	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR
Nickel	mg/L	D		-	-	<0.15 :	-	<0.34 :	-
Potassium	mg/L	T		-	<20.2 :	-	3.66 :	-	<31.4 :
Potassium	mg/L	D		-	-	<20.2 :	-	<2.02 :	-
Selenium	mg/L	T		-	<0.0016 :	-	<0.008 :	-	<0.008 J
Selenium	mg/L	D		-	-	0.002 :	-	<0.008 :	-
Silver	mg/L	T		-	<0.0002 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D		-	-	<0.0002 :	-	<0.001 :	-
Sodium	mg/L	T		-	<32.7 :	-	<36.6 :	-	<36.6 :
Sodium	mg/L	D		-	-	<32.7 :	-	<36.6 :	-
Thallium	mg/L	T		-	<0.0002 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		-	-	<0.0002 :	-	<0.001 :	-
Vanadium	mg/L	T		-	<0.0004 :	-	<0.002 :	-	<0.002 :
Vanadium	mg/L	D		-	-	<0.0004 :	-	<0.002 :	-
Zinc	mg/L	T		-	<0.39 :	-	0.641 :	-	0.775 J
Zinc	mg/L	D		-	-	<0.39 :	-	0.616 :	-
Isotopes									
Lead	mg/L	T		-	0.00021 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D		-	-	<0.0002 :	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 3/3/2003 MMW-17B-D01N-GRW MR	MMW-17B 4/9/2003 MMW-17B-T01N-GRW MR	MMW-17B 4/9/2003 MMW-17B-D01N-GRW MR	MMW-17B 5/5/2003 MMW-17B-T01N-GRW MR	MMW-17B 5/5/2003 MMW-17B-D01N-GRW MR	MMW-17B 6/2/2003 MMW-17B-T01N-GRW MR
Field Measurements								
DO	mg/L	T	-	8.59 :	-	2.68 :	-	3.06 :
EH	millivolts	T	-	380.8 :	-	456.7 :	-	230.9 :
pH	SU	T	-	4.2 J	-	5.1 J	-	4.6 J
Specific Conductance	uS/cm	T	-	780. :	-	817. :	-	1446. :
Temperature	Celsius	T	-	8.89 :	-	8.31 :	-	10.04 :
Turbidity	NTU	T	-	80.5 :	-	12.4 :	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	<0.068 :	-	<0.093 :	-	<0.085 J
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	<2.4 :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	<2.1 :	-	<2.5 :	-	<13.6 :
Fluoride	mg/L	T	-	1.2 :	-	1.6 :	-	1.7 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.52 J	-	<0.4 J	-	<0.4 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 :	-	0.098 J
Phosphorus	mg/L	T	-	0.015 :	-	<0.017 :	-	0.029 J
Sulfate	mg/L	T	-	375. J	-	401. :	-	769. J
Total Alkalinity	mg/L	T	-	<1. :	-	<2.4 :	-	<1. :
Total Dissolved Solids	mg/L	T	-	634. :	-	596. :	-	706. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	<1. :	-	<1. :
Total Suspended Solids	mg/L	T	-	<2.1 :	-	<1.6 :	-	<1.9 :
Laboratory Parameters								
pH	SU	T	-	4.2 J	-	5.1 J	-	4.6 J
Specific Conductance	umhos/cm	T	-	729. J	-	771. J	-	775. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	369. :	-	364. :	-	399. :
Hardness	mg/L	D	393. :	-	341. :	-	360. :	-
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 3/3/2003 MMW-17B-D01N-GR W MR	MMW-17B 4/9/2003 MMW-17B-T01N-GR W MR	MMW-17B 4/9/2003 MMW-17B-D01N-GR W MR	MMW-17B 5/5/2003 MMW-17B-T01N-GR W MR	MMW-17B 5/5/2003 MMW-17B-D01N-GR W MR	MMW-17B 6/2/2003 MMW-17B-T01N-GR W MR
Aluminum	mg/L	T	-	12. :	-	9.89 :	-	13.1 :
Aluminum	mg/L	D	<11.2 :	-	10.3 :	-	9.22 :	-
Antimony	mg/L	T	-	<0.004 :	-	<0.072 :	-	<0.072 :
Antimony	mg/L	D	<0.028 :	-	<0.003 :	-	<0.072 :	-
Arsenic	mg/L	T	-	<0.04 J	-	<0.04 :	-	<0.04 :
Arsenic	mg/L	D	<0.023 J	-	<0.04 J	-	<0.04 :	-
Barium	mg/L	T	-	<0.123 :	-	<0.123 :	-	<0.123 :
Barium	mg/L	D	<0.048 :	-	<0.123 :	-	<0.123 :	-
Beryllium	mg/L	T	-	<0.003 J	-	<0.0054 :	-	0.0061 :
Beryllium	mg/L	D	0.0026 :	-	<0.003 J	-	<0.0049 :	-
Boron	mg/L	T	-	<0.084 :	-	<0.084 :	-	<0.084 :
Boron	mg/L	D	<0.027 :	-	<0.084 :	-	<0.084 :	-
Cadmium	mg/L	T	-	<0.005 :	-	<0.005 :	-	<0.07 :
Cadmium	mg/L	D	<0.08 :	-	<0.005 :	-	<0.005 :	-
Calcium	mg/L	T	-	100. :	-	99.3 :	-	108. :
Calcium	mg/L	D	107. J	-	93. :	-	98.6 :	-
Chromium	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.19 :
Chromium	mg/L	D	<0.16 :	-	<0.01 :	-	<0.01 :	-
Cobalt	mg/L	T	-	<0.038 :	-	<0.038 :	-	<0.36 :
Cobalt	mg/L	D	<0.23 :	-	0.0406 :	-	<0.038 :	-
Copper	mg/L	T	-	0.0447 J	-	0.032 J	-	0.234 :
Copper	mg/L	D	<0.17 :	-	0.0458 J	-	0.0309 J	-
Iron	mg/L	T	-	<0.311 :	-	<0.311 :	-	<4.22 :
Iron	mg/L	D	<2.66 J	-	<0.311 :	-	<0.311 :	-
Lead	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.001 J
Lead	mg/L	D	<0.001 :	-	<0.001 J	-	<0.001 :	-
Magnesium	mg/L	T	-	<35.2 :	-	<35.2 :	-	<35.2 :
Magnesium	mg/L	D	30.5 :	-	<35.2 :	-	<35.2 :	-
Manganese	mg/L	T	-	1.87 :	-	1.87 :	-	1.99 :
Manganese	mg/L	D	2.01 :	-	1.76 :	-	1.84 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.023 :	-	<0.023 :	-	<0.023 :
Molybdenum	mg/L	D	<0.011 :	-	<0.023 :	-	<0.023 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 3/3/2003 MMW-17B-D01N-GR W MR		MMW-17B 4/9/2003 MMW-17B-T01N-GR W MR		MMW-17B 4/9/2003 MMW-17B-D01N-GR W MR		MMW-17B 5/5/2003 MMW-17B-T01N-GR W MR		MMW-17B 5/5/2003 MMW-17B-D01N-GR W MR		MMW-17B 6/2/2003 MMW-17B-T01N-GR W MR	
Nickel	mg/L	T	-		0.0877	:	-		0.0913	:	-		<0.73	:
Nickel	mg/L	D	<0.34	:	-		0.0946	:	-		0.0891	:	-	
Potassium	mg/L	T	-		<3.26	:	-		<40.5	:	-		<40.5	:
Potassium	mg/L	D	<31.4	:	-		<3.26	:	-		<40.5	:	-	
Selenium	mg/L	T	-		<0.005	:	-		<0.005	:	-		<0.008	:
Selenium	mg/L	D	<0.008	:	-		<0.005	:	-		<0.005	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		7.64	:	-		<91.6	:	-		<91.6	:
Sodium	mg/L	D	<36.6	:	-		7.66	:	-		<91.6	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	<0.002	:	-		<0.001	:	-		<0.001	:	-	
Zinc	mg/L	T	-		0.588	:	-		0.632	:	-		0.718	:
Zinc	mg/L	D	0.747	J	-		0.534	:	-		0.552	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	J	-		<0.001	:	-		<0.001	J
Lead	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 6/2/2003 MMW-17B-D01N-GRW MR	MMW-17B 7/23/2003 MMW-17B-T01N-GRW MR	MMW-17B 7/23/2003 MMW-17B-D01N-GRW MR	MMW-17B 8/11/2003 MMW-17B-T01N-GRW MR	MMW-17B 8/11/2003 MMW-17B-D01N-GRW MR	MMW-17B 9/8/2003 MMW-17B-T01N-GRW MR
Field Measurements								
DO	mg/L	T	-	4.02 :	-	4.05 :	-	0.38 :
EH	millivolts	T	-	452.3 :	-	441.8 :	-	215.7 :
pH	SU	T	-	4.7 J	-	4.4 J	-	4.6 J
Specific Conductance	uS/cm	T	-	755. :	-	787. :	-	714. :
Temperature	Celsius	T	-	10.42 :	-	9.47 :	-	9.13 :
Turbidity	NTU	T	-	0.3 :	-	0.2 :	-	51.6 :
General Chemistry								
Ammonia	mg/L	T	-	<0.046 J	-	<0.04 :	-	<0.063 :
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	5.9 :	-	6. :	-	5.9 :
Fluoride	mg/L	T	-	1.9 :	-	1.5 :	-	3.8 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.4 :	-	0.21 J	-	0.21 :
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
Phosphorus	mg/L	T	-	0.018 :	-	0.026 :	-	0.013 :
Sulfate	mg/L	T	-	410. J	-	352. J	-	400. J
Total Alkalinity	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T	-	626. :	-	736. :	-	670. J
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	<1.2 J	-	<1. :
Total Suspended Solids	mg/L	T	-	<0.8 :	-	<0.9 :	-	1.7 :
Laboratory Parameters								
pH	SU	T	-	4.7 J	-	4.4 J	-	4.6 J
Specific Conductance	umhos/cm	T	-	748. J	-	671. J	-	673. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	351. :	-	331. :	-	356. :
Hardness	mg/L	D	359. :	-	355. :	-	334. :	-
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	6/2/2003	7/23/2003	7/23/2003	8/11/2003	8/11/2003	9/8/2003
			Sample ID	MMW-17B-D01N-GR	MMW-17B-T01N-GR	MMW-17B-D01N-GR	MMW-17B-T01N-GR	MMW-17B-D01N-GR	MMW-17B-T01N-GR
				W MR	W MR	W MR	W MR	W MR	W MR
Aluminum	mg/L	T		-	13. :	-	7.19 :	-	11.2 :
Aluminum	mg/L	D		10.2 :	-	14.7 :	-	8.56 :	-
Antimony	mg/L	T		-	<0.047 :	-	<0.038 :	-	<0.082 :
Antimony	mg/L	D		<0.072 :	-	<0.047 :	-	<0.038 :	-
Arsenic	mg/L	T		-	<0.048 :	-	<0.024 :	-	<0.035 :
Arsenic	mg/L	D		<0.04 :	-	<0.048 :	-	0.0273 :	-
Barium	mg/L	T		-	<0.059 :	-	<0.073 :	-	<0.117 :
Barium	mg/L	D		<0.123 :	-	<0.059 :	-	<0.073 :	-
Beryllium	mg/L	T		-	0.0031 :	-	0.0023 :	-	0.0039 :
Beryllium	mg/L	D		0.0036 :	-	0.0029 :	-	0.0024 :	-
Boron	mg/L	T		-	<0.048 :	-	<0.046 :	-	<0.064 :
Boron	mg/L	D		<0.084 :	-	<0.048 :	-	<0.046 :	-
Cadmium	mg/L	T		-	<0.12 :	-	<0.06 :	-	<0.13 J
Cadmium	mg/L	D		<0.07 :	-	<0.12 :	-	<0.06 :	-
Calcium	mg/L	T		-	94.9 :	-	94.1 :	-	96.6 :
Calcium	mg/L	D		98.5 :	-	95.3 :	-	95.5 :	-
Chromium	mg/L	T		-	<0.19 :	-	<0.14 :	-	<0.23 :
Chromium	mg/L	D		<0.19 :	-	<0.19 :	-	<0.14 :	-
Cobalt	mg/L	T		-	<0.37 :	-	<0.2 :	-	<0.32 :
Cobalt	mg/L	D		<0.36 :	-	<0.37 :	-	<0.2 :	-
Copper	mg/L	T		-	<0.33 J	-	<0.24 :	-	<0.23 :
Copper	mg/L	D		<0.2 :	-	<0.33 J	-	<0.24 :	-
Iron	mg/L	T		-	<0.333 :	-	<3.33 :	-	<4.55 J
Iron	mg/L	D		<4.22 :	-	<0.333 :	-	<3.33 :	-
Lead	mg/L	T		-	<0.001 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D		<0.001 J	-	<0.001 :	-	<0.002 :	-
Magnesium	mg/L	T		-	<29.3 :	-	23.4 :	-	27.8 :
Magnesium	mg/L	D		<35.2 :	-	<29.3 :	-	23.1 :	-
Manganese	mg/L	T		-	1.62 :	-	1.64 :	-	1.63 :
Manganese	mg/L	D		1.76 :	-	1.69 :	-	1.64 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.017 :	-	0.018 :	-	<0.012 :
Molybdenum	mg/L	D		<0.023 :	-	<0.017 :	-	<0.016 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 6/2/2003 MMW-17B-D01N-GR W MR	MMW-17B 7/23/2003 MMW-17B-T01N-GR W MR	MMW-17B 7/23/2003 MMW-17B-D01N-GR W MR	MMW-17B 8/11/2003 MMW-17B-T01N-GR W MR	MMW-17B 8/11/2003 MMW-17B-D01N-GR W MR	MMW-17B 9/8/2003 MMW-17B-T01N-GR W MR
Nickel	mg/L	T	-	<0.44 J	-	<0.21 :	-	<0.45 :
Nickel	mg/L	D	<0.73 :	-	<0.44 J	-	<0.21 :	-
Potassium	mg/L	T	-	<37.1 :	-	<39.3 :	-	<63.8 :
Potassium	mg/L	D	<40.5 :	-	<37.1 :	-	<39.3 :	-
Selenium	mg/L	T	-	<0.008 :	-	<0.003 :	-	<0.003 :
Selenium	mg/L	D	<0.008 :	-	<0.008 J	-	<0.003 :	-
Silver	mg/L	T	-	<0.001 J	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 J	-	<0.001 :	-
Sodium	mg/L	T	-	<53.2 :	-	<47.3 :	-	<99.1 :
Sodium	mg/L	D	<91.6 :	-	<53.2 :	-	<47.3 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	D	<0.002 :	-	<0.002 :	-	<0.001 :	-
Zinc	mg/L	T	-	0.482 J	-	<0.657 :	-	0.619 :
Zinc	mg/L	D	0.694 :	-	0.556 J	-	<0.612 :	-
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D	<0.001 J	-	<0.001 :	-	<0.002 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	9/8/2003	10/17/2003	10/17/2003	11/3/2003	11/3/2003	12/8/2003
			Sample ID	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR	MMW-17B-D01N-GRW MR	MMW-17B-T01N-GRW MR
Field Measurements									
DO	mg/L	T		-	3.47 :	-	3.52 :	-	3.89 :
EH	millivolts	T		-	210.5 :	-	411.1 :	-	306.1 :
pH	SU	T		-	4.7 J	-	4.6 J	-	5.2 J
Specific Conductance	uS/cm	T		-	752. :	-	735. :	-	781. :
Temperature	Celsius	T		-	8.71 :	-	8.26 :	-	6.91 :
Turbidity	NTU	T		-	3.8 :	-	3.5 :	-	1. :
General Chemistry									
Ammonia	mg/L	T		-	<0.047 J	-	<0.23 :	-	0.067 :
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1.1 :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	5.4 :	-	6.3 :	-	5.4 :
Fluoride	mg/L	T		-	1.9 :	-	1.6 :	-	1.6 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.24 :	-	0.24 J	-	0.21 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	0.01 J	-	<0.01 :
Phosphorus	mg/L	T		-	0.015 :	-	0.015 :	-	0.023 :
Sulfate	mg/L	T		-	336. J	-	412. J	-	411. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1.1 :	-	<1. :
Total Dissolved Solids	mg/L	T		-	658. :	-	732. :	-	574. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	<1. :	-	<1. :
Total Suspended Solids	mg/L	T		-	<0.7 :	-	<0.9 :	-	2.7 :
Laboratory Parameters									
pH	SU	T		-	4.7 J	-	4.6 J	-	5.2 J
Specific Conductance	umhos/cm	T		-	659. J	-	758. J	-	653. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	348. :	-	359. :	-	339. :
Hardness	mg/L	D		356. :	-	326. :	-	381. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 9/8/2003 MMW-17B-D01N-GR W MR		MMW-17B 10/17/2003 MMW-17B-T01N-GR W MR		MMW-17B 10/17/2003 MMW-17B-D01N-GR W MR		MMW-17B 11/3/2003 MMW-17B-T01N-GR W MR		MMW-17B 11/3/2003 MMW-17B-D01N-GR W MR		MMW-17B 12/8/2003 MMW-17B-T01N-GR W MR	
Aluminum	mg/L	T	-		10.6	:	-		10.8	:	-		8.5	J
Aluminum	mg/L	D	10.5	:	-		9.57	:	-		11.4	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.082	J	-		<0.052	:
Antimony	mg/L	D	<0.082	:	-		<0.052	:	-		<0.082	J	-	
Arsenic	mg/L	T	-		<0.041	:	-		<0.035	:	-		<0.041	:
Arsenic	mg/L	D	<0.035	:	-		<0.041	:	-		<0.035	:	-	
Barium	mg/L	T	-		<0.115	:	-		<0.117	:	-		<0.115	:
Barium	mg/L	D	<0.117	:	-		<0.115	:	-		<0.117	:	-	
Beryllium	mg/L	T	-		<0.004	:	-		<0.0119	:	-		<0.0046	:
Beryllium	mg/L	D	<0.003	:	-		<0.004	:	-		<0.0106	:	-	
Boron	mg/L	T	-		<0.063	:	-		<0.064	:	-		<0.064	J
Boron	mg/L	D	<0.064	:	-		<0.063	:	-		<0.064	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.13	:	-		<0.05	:
Cadmium	mg/L	D	<0.13	J	-		<0.13	:	-		<0.13	:	-	
Calcium	mg/L	T	-		94.9	:	-		98.8	:	-		93.4	:
Calcium	mg/L	D	97.2	:	-		86.5	:	-		105.	:	-	
Chromium	mg/L	T	-		<0.23	J	-		<0.23	:	-		<0.11	:
Chromium	mg/L	D	<0.23	:	-		<0.23	J	-		<0.23	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.32	:	-		<0.29	:
Cobalt	mg/L	D	<0.32	:	-		<0.32	:	-		<0.32	:	-	
Copper	mg/L	T	-		<0.23	:	-		<0.424	:	-		<0.22	:
Copper	mg/L	D	<0.23	:	-		<0.23	:	-		<0.394	:	-	
Iron	mg/L	T	-		<4.55	:	-		<4.55	:	-		<2.78	:
Iron	mg/L	D	<4.55	J	-		<4.55	:	-		<4.55	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		26.3	:	-		27.3	:	-		<30.1	:
Magnesium	mg/L	D	27.4	:	-		23.6	:	-		29.1	:	-	
Manganese	mg/L	T	-		1.64	:	-		1.67	J	-		1.57	:
Manganese	mg/L	D	1.68	:	-		1.48	:	-		1.8	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.0197	:	-		<0.011	J
Molybdenum	mg/L	D	<0.012	:	-		<0.011	:	-		<0.012	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-17B 9/8/2003 MMW-17B-D01N-GR MR		MMW-17B 10/17/2003 MMW-17B-T01N-GR MR		MMW-17B 10/17/2003 MMW-17B-D01N-GR MR		MMW-17B 11/3/2003 MMW-17B-T01N-GR MR		MMW-17B 11/3/2003 MMW-17B-D01N-GR MR		MMW-17B 12/8/2003 MMW-17B-T01N-GR MR	
Nickel	mg/L	T	-		<0.45 J		-		<0.45	:	-		<0.253	:
Nickel	mg/L	D	<0.45	:	-		<0.45 J		-		<0.45	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<63.8	:	-		<32.1	:
Potassium	mg/L	D	<63.8	:	-		<63.8	:	-		<63.8	:	-	
Selenium	mg/L	T	-		<0.003	:	-		<0.003	:	-		<0.003	:
Selenium	mg/L	D	<0.003	:	-		0.0036	:	-		<0.003	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<99.1	:	-		<45.9	:
Sodium	mg/L	D	<99.1	:	-		<99.1	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Zinc	mg/L	T	-		<0.594	:	-		<0.729	:	-		<0.622	:
Zinc	mg/L	D	0.586	:	-		<0.552	:	-		<0.681	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B	MMW-17B
			Sample Date	12/8/2003	1/7/2004	1/7/2004	2/22/2004	2/22/2004	3/22/2004
			Sample ID	MMW-17B-D01N-GRW	MMW-17B-T01N-GRW	MMW-17B-D01N-GRW	MMW-17B-T01N-GRW	MMW-17B-D01N-GRW	MMW-17-B
			Exposure Area	MR	MR	MR	MR	MR	MR
Field Measurements									
DO	mg/L	T		-	3.25 :	-	1.7 :	-	-
EH	millivolts	T		-	376.2 :	-	399.6 :	-	-
pH	SU	T		-	4.4 J	-	4.4 :	-	-
Specific Conductance	uS/cm	T		-	768. :	-	739. :	-	-
Temperature	Celsius	T		-	7.44 :	-	7.03 :	-	-
Turbidity	NTU	T		-	0.5 :	-	1.1 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.051 J	-	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	-
Chloride	mg/L	T		-	6. :	-	-	-	-
Fluoride	mg/L	T		-	1.6 :	-	1.6 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	-
Nitrate	mg/L	T		-	<0.22 :	-	-	-	-
Nitrite	mg/L	T		-	<0.005 :	-	-	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	-	-
Phosphorus	mg/L	T		-	<0.013 :	-	-	-	-
Sulfate	mg/L	T		-	371. :	-	434. :	-	-
Total Alkalinity	mg/L	T		-	<1. :	-	-	-	-
Total Dissolved Solids	mg/L	T		-	545. :	-	608. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	-	-	-
Total Suspended Solids	mg/L	T		-	<1.4 :	-	<0.5 :	-	-
Laboratory Parameters									
pH	SU	T		-	4.4 J	-	4.4 :	-	-
Specific Conductance	umhos/cm	T		-	695. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	-	-
Physical Properties									
Hardness	mg/L	T		-	356. :	-	367. :	-	-
Hardness	mg/L	D		353. :	-	334. :	-	362. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 12/8/2003 MMW-17B-D01N-GR W MR	MMW-17B 1/7/2004 MMW-17B-T01N-GR W MR	MMW-17B 1/7/2004 MMW-17B-D01N-GR W MR	MMW-17B 2/22/2004 MMW-17B-T01N-GR W MR	MMW-17B 2/22/2004 MMW-17B-D01N-GR W MR	MMW-17B 3/22/2004 MMW-17-B MR
Aluminum	mg/L	T	-	10. :	-	11. :	-	-
Aluminum	mg/L	D	14. J	-	10.1 :	-	10.9 :	-
Antimony	mg/L	T	-	<0.029 :	-	<0.029 :	-	-
Antimony	mg/L	D	<0.052 :	-	<0.029 :	-	<0.029 :	-
Arsenic	mg/L	T	-	<0.028 :	-	<0.028 :	-	-
Arsenic	mg/L	D	<0.041 :	-	<0.028 :	-	<0.028 :	-
Barium	mg/L	T	-	<0.053 :	-	<0.053 :	-	-
Barium	mg/L	D	<0.115 :	-	<0.053 :	-	<0.053 :	-
Beryllium	mg/L	T	-	0.0031 :	-	<0.003 J	-	-
Beryllium	mg/L	D	0.004 :	-	<0.003 :	-	<0.003 J	-
Boron	mg/L	T	-	<0.117 :	-	<0.023 :	-	-
Boron	mg/L	D	<0.064 J	-	<0.117 :	-	<0.023 :	-
Cadmium	mg/L	T	-	<0.07 J	-	<0.07 :	-	-
Cadmium	mg/L	D	0.107 :	-	<0.07 :	-	<0.07 J	-
Calcium	mg/L	T	-	99.2 :	-	99.2 :	-	-
Calcium	mg/L	D	97. :	-	90.8 :	-	98.5 :	-
Chromium	mg/L	T	-	<0.11 :	-	<0.11 :	-	-
Chromium	mg/L	D	<0.162 :	-	<0.11 :	-	<0.11 :	-
Cobalt	mg/L	T	-	<0.31 :	-	<0.31 :	-	-
Cobalt	mg/L	D	0.29 :	-	<0.31 :	-	<0.31 :	-
Copper	mg/L	T	-	<0.24 :	-	<0.24 :	-	-
Copper	mg/L	D	0.735 :	-	<0.24 :	-	<0.24 :	-
Iron	mg/L	T	-	<3.73 :	-	<3.73 :	-	-
Iron	mg/L	D	<11.3 :	-	<3.73 :	-	<3.73 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.0016 :	-	-
Lead	mg/L	D	<0.002 :	-	<0.001 :	-	<0.0015 :	-
Magnesium	mg/L	T	-	26.2 :	-	29. :	-	-
Magnesium	mg/L	D	<30.1 :	-	25.9 :	-	28.3 :	-
Manganese	mg/L	T	-	1.79 :	-	1.77 :	-	-
Manganese	mg/L	D	1.65 :	-	1.62 :	-	1.76 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.024 :	-	<0.024 :	-	-
Molybdenum	mg/L	D	<0.011 J	-	<0.024 :	-	<0.024 :	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 12/8/2003 MMW-17B-D01N-GRW MR	MMW-17B 1/7/2004 MMW-17B-T01N-GRW MR	MMW-17B 1/7/2004 MMW-17B-D01N-GRW MR	MMW-17B 2/22/2004 MMW-17B-T01N-GRW MR	MMW-17B 2/22/2004 MMW-17B-D01N-GRW MR	MMW-17B 3/22/2004 MMW-17-B MR
Nickel	mg/L	T	-	0.324 :	-	<0.27 :	-	-
Nickel	mg/L	D	<0.339 :	-	0.326 :	-	0.416 :	-
Potassium	mg/L	T	-	<24.3 :	-	<24.3 :	-	-
Potassium	mg/L	D	<31.8 :	-	<24.3 :	-	<24.3 :	-
Selenium	mg/L	T	-	<0.003 J	-	<0.002 J	-	-
Selenium	mg/L	D	<0.003 :	-	<0.003 :	-	<0.002 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	-
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<92. :	-	<49. J	-	-
Sodium	mg/L	D	<45.4 :	-	<92. :	-	<49. J	-
Thallium	mg/L	T	-	<0.001 :	-	<0.0017 :	-	-
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.0017 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.0019 :	-	-
Vanadium	mg/L	D	<0.001 :	-	<0.002 :	-	<0.0017 :	-
Zinc	mg/L	T	-	0.698 :	-	0.621 :	-	-
Zinc	mg/L	D	<0.7 :	-	0.618 :	-	0.63 :	-
Isotopes								
Delta D	per mil	T	-	-	-	-97.3 :	-	-
Delta O-18	per mil	T	-	-	-	-13.5 :	-	-
Lead	mg/L	T	-	<0.001 :	-	<0.0016 :	-	-
Lead	mg/L	D	<0.002 :	-	<0.001 :	-	<0.0015 :	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	-	-	13.52 :
DEL He3	%	T	-	-	-	-	-	34.1 :
DEL He4	%	T	-	-	-	-	-	18.9 :
He Corr	1E-8cc/g	T	-	-	-	-	-	5.671 :
Tritium TU	TU	T	-	-	-	-	-	7.915 :
Uncert Age	Years	T	-	-	-	-	-	0.56 :
Uncert TU	TU	T	-	-	-	-	-	0.237 :

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 4/20/2004 MMW-17B-T01N-GR W MR T		MMW-17B 4/20/2004 MMW-17B-D01N-GR W MR D		MMW-18B 11/4/2002 MMW-18B-T01N-GR W GW4 T		MMW-18B 11/4/2002 MMW-18B-D01N-GR W GW4 D		MMW-18B 1/14/2003 MMW-18B-T01N-GR W GW4 T		MMW-18B 1/14/2003 MMW-18B-D01N-GR W GW4 D	
Field Measurements														
DO	mg/L	T	2.68	:	-		0.6	:	-		4.28	:	-	
EH	millivolts	T	437.5	:	-		204.1	:	-		371.	:	-	
pH	SU	T	5.	J	-		6.98	:	-		6.35	:	-	
Specific Conductance	uS/cm	T	754.	:	-		3125.	:	-		3248.	:	-	
Temperature	Celsius	T	7.7	:	-		5.71	:	-		8.34	:	-	
Turbidity	NTU	T	0.6	:	-		1.9	:	-		30.7	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.052	:	-		<0.28	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		281.	:	-		277.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	4.9	:	-		3.4	:	-		<3.7	:	-	
Fluoride	mg/L	T	1.9	:	-		6.7	:	-		5.6	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.31	J	-		0.75	J	-		<1.1	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		0.0088	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		0.026	J	-		<0.037	J	-	
Phosphorus	mg/L	T	0.017	:	-		0.028	:	-		<0.01	J	-	
Sulfate	mg/L	T	437.	:	-		1800.	:	-		1860.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		281.	:	-		277.	:	-	
Total Dissolved Solids	mg/L	T	652.	:	-		2960.	:	-		2610.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	1.6	J	-		<1.	:	-		<1.	:	-	
Total Suspended Solids	mg/L	T	<1.7	J	-		6.7	:	-		18.4	:	-	
Laboratory Parameters														
pH	SU	T	5.	J	-		6.98	:	-		6.35	:	-	
Specific Conductance	umhos/cm	T	654.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	327.	:	-		2050.	:	-		2130.	:	-	
Hardness	mg/L	D	-		331.	:	-		2070.	:	-		2090.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 4/20/2004 MMW-17B-T01N-GR W MR		MMW-17B 4/20/2004 MMW-17B-D01N-GR W MR		MMW-18B 11/4/2002 MMW-18B-T01N-GR W GW4		MMW-18B 11/4/2002 MMW-18B-D01N-GR W GW4		MMW-18B 1/14/2003 MMW-18B-T01N-GR W GW4		MMW-18B 1/14/2003 MMW-18B-D01N-GR W GW4	
Aluminum	mg/L	T	<12.4	:	-		0.182	:	-		<0.387	:	-	
Aluminum	mg/L	D	-		<12.5	:	-		0.0306	:	-		<0.142	:
Antimony	mg/L	T	<0.053	:	-		<0.0004	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.053	:	-		<0.0004	:	-		<0.0006	:
Arsenic	mg/L	T	<0.037	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.037	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	<0.049	:	-		0.0141	:	-		0.0132	:	-	
Barium	mg/L	D	-		<0.049	:	-		0.0122	:	-		0.01	:
Beryllium	mg/L	T	<0.003	:	-		0.002	:	-		0.0049	:	-	
Beryllium	mg/L	D	-		0.0045	:	-		0.0018	:	-		0.0036	:
Boron	mg/L	T	<0.036	:	-		0.0361	:	-		0.0349	J	-	
Boron	mg/L	D	-		<0.036	:	-		0.0354	:	-		0.0341	J
Cadmium	mg/L	T	<0.03	:	-		0.0724	J	-		0.0639	:	-	
Cadmium	mg/L	D	-		<0.0563	:	-		0.0722	J	-		0.0694	:
Calcium	mg/L	T	89.6	:	-		586.	:	-		608.	:	-	
Calcium	mg/L	D	-		90.1	:	-		590.	:	-		599.	:
Chromium	mg/L	T	<0.08	:	-		0.0049	:	-		0.0105	:	-	
Chromium	mg/L	D	-		<0.08	:	-		<0.0046	:	-		0.0113	:
Chromium, Hexavalent	mg/L	D	-		-		<0.01	:	-		-		-	
Cobalt	mg/L	T	<0.11	:	-		<0.0022	:	-		<0.0047	:	-	
Cobalt	mg/L	D	-		0.116	:	-		<0.0022	:	-		<0.0016	:
Copper	mg/L	T	<0.16	:	-		0.122	:	-		0.0244	:	-	
Copper	mg/L	D	-		<0.295	:	-		0.124	:	-		0.0209	:
Iron	mg/L	T	<1.92	J	-		0.362	:	-		0.492	:	-	
Iron	mg/L	D	-		<3.53	:	-		<0.0277	:	-		<0.489	:
Lead	mg/L	T	<0.004	:	-		0.0281	:	-		0.0524	:	-	
Lead	mg/L	D	-		<0.004	:	-		0.0018	:	-		0.0052	:
Magnesium	mg/L	T	24.9	:	-		143.	:	-		148.	:	-	
Magnesium	mg/L	D	-		25.7	:	-		144.	:	-		145.	:
Manganese	mg/L	T	1.61	:	-		10.	:	-		15.4	:	-	
Manganese	mg/L	D	-		1.62	:	-		10.3	:	-		12.4	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.014	:	-		0.0046	:	-		0.0033	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-17B 4/20/2004 MMW-17B-T01N-GR W MR	MMW-17B 4/20/2004 MMW-17B-D01N-GR W MR	MMW-18B 11/4/2002 MMW-18B-T01N-GR W GW4	MMW-18B 11/4/2002 MMW-18B-D01N-GR W GW4	MMW-18B 1/14/2003 MMW-18B-T01N-GR W GW4	MMW-18B 1/14/2003 MMW-18B-D01N-GR W GW4
Molybdenum	mg/L	D	-	<0.014 :	-	0.0043 :	-	0.0024 :
Nickel	mg/L	T	<0.14 :	-	0.0307 J	-	0.0323 :	-
Nickel	mg/L	D	-	0.182 :	-	0.0315 J	-	0.0338 :
Potassium	mg/L	T	<10.9 J	-	6.92 :	-	6.5 :	-
Potassium	mg/L	D	-	<10.9 J	-	6.9 :	-	6.62 :
Selenium	mg/L	T	<0.007 :	-	0.0013 :	-	<0.0016 :	-
Selenium	mg/L	D	-	<0.007 :	-	0.0016 :	-	<0.0016 :
Silver	mg/L	T	<0.001 :	-	<0.0002 :	-	<0.0002 :	-
Silver	mg/L	D	-	<0.001 :	-	<0.0002 :	-	<0.0002 :
Sodium	mg/L	T	<17.3 :	-	74.6 :	-	69.7 :	-
Sodium	mg/L	D	-	<17.3 :	-	74.4 :	-	66.7 :
Thallium	mg/L	T	<0.001 :	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.001 :	-	<0.0002 :	-	<0.0002 :
Vanadium	mg/L	T	<0.002 :	-	0.00023 :	-	0.00071 :	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.0002 :	-	0.0007 :
Zinc	mg/L	T	0.556 :	-	11.9 :	-	12.2 :	-
Zinc	mg/L	D	-	0.582 :	-	11.7 :	-	12.9 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	<0.004 :	-	0.0281 :	-	0.0524 :	-
Lead	mg/L	D	-	<0.004 :	-	0.0018 :	-	0.0052 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-18B 4/6/2003 MMW-18B-T01N-GR W GW4		MMW-18B 4/6/2003 MMW-18B-D01N-GR W GW4		MMW-18B 7/18/2003 MMW-18B-T01N-GR W GW4		MMW-18B 7/18/2003 MMW-18B-D01N-GR W GW4		MMW-18B 10/21/2003 MMW-18B-T01N-GR W GW4		MMW-18B 10/21/2003 MMW-18B-D01N-GR W GW4	
Field Measurements														
DO	mg/L	T	3.3	:	-		2.97	:	-		5.05	:	-	
EH	millivolts	T	275.9	:	-		412.6	:	-		375.3	:	-	
pH	SU	T	7.	J	-		6.9	J	-		7.	J	-	
Specific Conductance	uS/cm	T	2916.	:	-		2977.	:	-		1534.	:	-	
Temperature	Celsius	T	8.54	:	-		16.91	:	-		8.02	:	-	
Turbidity	NTU	T	82.	:	-		160.1	:	-		62.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.098	:	-		<0.18	J	-		<0.091	J	-	
Bicarbonate (as CaCO3)	mg/L	T	270.	:	-		274.	:	-		267.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	3.6	:	-		4.6	:	-		5.3	:	-	
Fluoride	mg/L	T	6.3	:	-		5.6	:	-		5.7	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.83	J	-		0.6	J	-		0.6	J	-	
Nitrite	mg/L	T	0.012	:	-		0.016	J	-		0.0055	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.55	:	-		1.4	:	-		0.071	:	-	
Sulfate	mg/L	T	1670.	J	-		1780.	J	-		1520.	J	-	
Total Alkalinity	mg/L	T	270.	:	-		274.	:	-		267.	:	-	
Total Dissolved Solids	mg/L	T	2910.	:	-		3090.	:	-		2960.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		0.25	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.6	J	-		<1.4	J	-		<1.	J	-	
Total Suspended Solids	mg/L	T	10300.	:	-		1100.	:	-		15.6	:	-	
Laboratory Parameters														
pH	SU	T	7.	J	-		6.9	J	-		7.	J	-	
Specific Conductance	umhos/cm	T	2830.	J	-		2640.	J	-		2960.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	2580.	:	-		2200.	:	-		2050.	:	-	
Hardness	mg/L	D	-		2220.	:	-		2030.	:	-		2050.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-18B 4/6/2003 MMW-18B-T01N-GR GW4		MMW-18B 4/6/2003 MMW-18B-D01N-GR GW4		MMW-18B 7/18/2003 MMW-18B-T01N-GR GW4		MMW-18B 7/18/2003 MMW-18B-D01N-GR GW4		MMW-18B 10/21/2003 MMW-18B-T01N-GR GW4		MMW-18B 10/21/2003 MMW-18B-D01N-GR GW4	
Aluminum	mg/L	T	29.	:	-		4.95	:	-		<2.3	:	-	
Aluminum	mg/L	D	-		<0.426	J	-		<0.631	:	-		<0.221	J
Antimony	mg/L	T	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.0009	:	-		0.00088	:	-		0.00059	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.304	:	-		0.0178	:	-		0.0515	:	-	
Barium	mg/L	D	-		0.013	:	-		0.0139	:	-		0.0136	:
Beryllium	mg/L	T	0.0093	:	-		0.0092	:	-		0.0048	:	-	
Beryllium	mg/L	D	-		<0.0044	:	-		0.0043	:	-		0.0045	:
Boron	mg/L	T	0.0355	:	-		0.0301	:	-		0.0284	:	-	
Boron	mg/L	D	-		0.0344	:	-		0.0318	:	-		0.0272	:
Cadmium	mg/L	T	0.0842	:	-		0.0915	:	-		0.0571	:	-	
Cadmium	mg/L	D	-		0.0666	:	-		0.0695	:	-		0.054	:
Calcium	mg/L	T	781.	:	-		648.	:	-		591.	:	-	
Calcium	mg/L	D	-		632.	:	-		582.	:	-		590.	:
Chromium	mg/L	T	0.0403	:	-		0.0305	:	-		<0.0011	J	-	
Chromium	mg/L	D	-		<0.001	:	-		<0.0014	J	-		<0.0011	J
Cobalt	mg/L	T	0.0084	:	-		0.0044	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0038	:	-		<0.002	:	-		<0.0029	:
Copper	mg/L	T	0.202	:	-		0.17	:	-		0.192	:	-	
Copper	mg/L	D	-		<0.0015	J	-		0.007	:	-		0.0086	:
Iron	mg/L	T	36.9	:	-		20.5	:	-		3.56	:	-	
Iron	mg/L	D	-		<0.422	:	-		<0.667	:	-		<0.278	:
Lead	mg/L	T	1.61	:	-		1.66	:	-		0.298	:	-	
Lead	mg/L	D	-		0.0158	:	-		0.0219	:	-		0.0044	:
Magnesium	mg/L	T	154.	:	-		140.	:	-		140.	:	-	
Magnesium	mg/L	D	-		156.	:	-		141.	:	-		141.	:
Manganese	mg/L	T	13.1	:	-		13.7	:	-		6.91	:	-	
Manganese	mg/L	D	-		9.24	:	-		11.1	:	-		5.8	:
Mercury	mg/L	T	<0.0001	:	-		0.00017	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0266	:	-		<0.0017	:	-		0.0047	:	-	
Molybdenum	mg/L	D	-		0.0043	:	-		0.0029	:	-		0.0027	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		Site ID	MMW-18B		MMW-18B		MMW-18B		MMW-18B		MMW-18B		MMW-18B	
		Sample Date	4/6/2003		4/6/2003		7/18/2003		7/18/2003		10/21/2003		10/21/2003	
		Sample ID	MMW-18B-T01N-GRW		MMW-18B-D01N-GRW		MMW-18B-T01N-GRW		MMW-18B-D01N-GRW		MMW-18B-T01N-GRW		MMW-18B-D01N-GRW	
		Exposure Area	GW4		GW4		GW4		GW4		GW4		GW4	
Nickel	mg/L	T	0.0479	:	-		0.0302	:	-		0.0265	:	-	
Nickel	mg/L	D	-		0.0284	:	-		0.0245	J	-		0.0245	:
Potassium	mg/L	T	13.2	:	-		7.14	:	-		6.79	:	-	
Potassium	mg/L	D	-		6.37	:	-		6.56	:	-		5.47	:
Selenium	mg/L	T	0.0017	:	-		<0.0016	:	-		<0.0023	:	-	
Selenium	mg/L	D	-		<0.001	:	-		<0.0016	J	-		<0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	71.	:	-		67.2	:	-		61.8	:	-	
Sodium	mg/L	D	-		71.1	:	-		67.8	:	-		62.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0029	:	-		0.0041	:	-		0.0011	:	-	
Vanadium	mg/L	D	-		0.0002	:	-		<0.0004	:	-		<0.0002	:
Zinc	mg/L	T	14.1	:	-		14.	:	-		10.5	:	-	
Zinc	mg/L	D	-		11.5	:	-		11.5	:	-		10.4	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	1.61	:	-		1.66	:	-		0.298	:	-	
Lead	mg/L	D	-		0.0158	:	-		0.0219	:	-		0.0044	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-18B 1/12/2004 MMW-18B-T01N-GRW GW4		MMW-18B 1/12/2004 MMW-18B-D01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-T01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-D01N-GRW GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRWRE GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRW GW4	
Field Measurements														
DO	mg/L	T	4.36	:	-		6.23	:	-		-		2.81	:
EH	millivolts	T	421.9	:	-		227.5	:	-		-		-33.5	:
pH	SU	T	6.9	J	-		6.8	J	-		-		6.96	:
Specific Conductance	uS/cm	T	2736.	:	-		2856.	:	-		-		2665.	:
Temperature	Celsius	T	7.43	:	-		8.83	:	-		-		7.41	:
Turbidity	NTU	T	41.4	:	-		39.3	:	-		-		0.	:
General Chemistry														
Ammonia	mg/L	T	<0.095	J	-		<0.04	:	-		-		<0.081	J
Bicarbonate (as CaCO3)	mg/L	T	259.	:	-		253.	:	-		-		243.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	4.3	:	-		4.6	J	-		-		5.8	:
Fluoride	mg/L	T	5.7	:	-		5.8	:	-		3.2	J	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	0.63	J	-		0.86	J	-		-		<0.4	J
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		-		<0.01	J
Phosphorus	mg/L	T	0.11	:	-		0.087	:	-		-		0.029	:
Sulfate	mg/L	T	1950.	:	-		1780.	:	-		-		1830.	:
Total Alkalinity	mg/L	T	259.	:	-		253.	:	-		-		243.	:
Total Dissolved Solids	mg/L	T	2900.	:	-		1930.	:	-		-		2780.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		-		<1.	:
Total Suspended Solids	mg/L	T	42.	:	-		57.2	:	-		-		6.	:
Laboratory Parameters														
pH	SU	T	6.9	J	-		6.8	J	-		-		6.96	:
Specific Conductance	umhos/cm	T	2780.	J	-		2530.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	1990.	:	-		2020.	:	-		-		1860.	:
Hardness	mg/L	D	-		1960.	:	-		2000.	:	-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-18B 1/12/2004 MMW-18B-T01N-GRW GW4		MMW-18B 1/12/2004 MMW-18B-D01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-T01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-D01N-GRW GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRWRE GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRW GW4	
Aluminum	mg/L	T	<0.514	:	-		<0.34	:	-		-		0.0658	J
Aluminum	mg/L	D	-		<0.514	:	-		<0.248	:	-		-	
Antimony	mg/L	T	<0.0024	:	-		<0.0008	:	-		-		0.00042	:
Antimony	mg/L	D	-		<0.0024	:	-		<0.0008	:	-		-	
Arsenic	mg/L	T	0.0012	:	-		<0.0004	:	-		-		0.00047	J
Arsenic	mg/L	D	-		0.0012	:	-		<0.0004	:	-		-	
Barium	mg/L	T	0.0164	:	-		0.0149	:	-		-		0.0131	:
Barium	mg/L	D	-		0.0124	:	-		0.0118	:	-		-	
Beryllium	mg/L	T	0.0035	:	-		0.0034	:	-		-		0.0036	:
Beryllium	mg/L	D	-		0.003	:	-		0.0034	:	-		-	
Boron	mg/L	T	<0.0362	:	-		0.0289	:	-		-		<0.0147	:
Boron	mg/L	D	-		<0.0362	:	-		0.0292	:	-		-	
Cadmium	mg/L	T	0.0576	J	-		0.0446	:	-		-		0.0016	J
Cadmium	mg/L	D	-		0.0527	:	-		0.051	J	-		-	
Calcium	mg/L	T	574.	:	-		577.	:	-		-		599.	:
Calcium	mg/L	D	-		564.	:	-		571.	:	-		-	
Chromium	mg/L	T	0.0027	:	-		<0.0006	:	-		-		<0.0046	:
Chromium	mg/L	D	-		<0.0015	:	-		<0.0006	:	-		-	
Cobalt	mg/L	T	<0.0023	:	-		<0.0011	:	-		-		0.0112	:
Cobalt	mg/L	D	-		0.0025	:	-		<0.0011	:	-		-	
Copper	mg/L	T	0.0235	:	-		0.0132	:	-		-		0.0078	:
Copper	mg/L	D	-		0.0076	:	-		0.0068	J	-		-	
Iron	mg/L	T	1.64	:	-		<1.2	J	-		-		2.5	:
Iron	mg/L	D	-		<0.373	:	-		<0.459	:	-		-	
Lead	mg/L	T	0.133	:	-		0.0512	:	-		-		0.0107	:
Lead	mg/L	D	-		0.0013	J	-		0.0021	:	-		-	
Magnesium	mg/L	T	136.	:	-		141.	:	-		-		88.2	:
Magnesium	mg/L	D	-		135.	:	-		140.	:	-		-	
Manganese	mg/L	T	4.42	:	-		0.881	J	-		-		6.67	:
Manganese	mg/L	D	-		4.21	:	-		1.6	J	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0024	:	-		<0.001	:	-		-		0.0043	:
Molybdenum	mg/L	D	-		<0.0024	:	-		0.0016	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-18B 1/12/2004 MMW-18B-T01N-GRW GW4		MMW-18B 1/12/2004 MMW-18B-D01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-T01N-GRW GW4		MMW-18B 4/20/2004 MMW-18B-D01N-GRW GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRWRE GW4		MMW-19B 11/6/2002 MMW-19B-T01N-GRW GW4	
Nickel	mg/L	T	<0.0233	:	-		0.0187	:	-		-		0.032	J
Nickel	mg/L	D	-		0.0221	:	-		0.0193	:	-		-	
Potassium	mg/L	T	6.56	:	-		6.2	:	-		-		4.52	:
Potassium	mg/L	D	-		6.43	:	-		5.94	:	-		-	
Selenium	mg/L	T	0.0052	J	-		<0.0014	:	-		-		<0.0004	J
Selenium	mg/L	D	-		0.0052	:	-		<0.0014	:	-		-	
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		-	
Sodium	mg/L	T	61.7	J	-		57.2	:	-		-		49.1	:
Sodium	mg/L	D	-		57.5	J	-		60.2	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0002	:
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		-	
Zinc	mg/L	T	9.58	:	-		10.4	:	-		-		0.356	:
Zinc	mg/L	D	-		9.31	:	-		10.6	:	-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-		-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		-		-		-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-		-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-		-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-		-		<0.01	:
Isotopes														
Lead	mg/L	T	0.133	:	-		0.0512	:	-		-		0.0107	:
Lead	mg/L	D	-		0.0013	J	-		0.0021	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-19B	MMW-19B	MMW-19B	MMW-19B	MMW-19B	MMW-19B
			Sample Date	11/6/2002	12/4/2002	12/4/2002	1/12/2003	1/12/2003	2/6/2003
			Sample ID	MMW-19B-D01N-GRW GW4	MMW-19B-T01N-GRW GW4	MMW-19B-D01N-GRW GW4	MMW-19B-T01N-GRW GW4	MMW-19B-D01N-GRW GW4	MMW-19B-T01N-GRW GW4
Field Measurements									
DO	mg/L	T		-	1.54 :	-	0.11 :	-	1.99 :
EH	millivolts	T		-	53.8 :	-	63.5 :	-	49.7 :
pH	SU	T		-	6.87 :	-	6.72 :	-	6.71 :
Specific Conductance	uS/cm	T		-	2533. :	-	5653. :	-	2719. :
Temperature	Celsius	T		-	1.21 :	-	7.88 :	-	4.26 :
Turbidity	NTU	T		-	78. :	-	3.8 :	-	5.1 :
General Chemistry									
Ammonia	mg/L	T		-	0.14 :	-	<0.12 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	263. :	-	237. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	4.9 :	-	<5.8 :	-	-
Fluoride	mg/L	T		-	1.8 :	-	1.8 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.4 J	-	<0.4 J	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Phosphorus	mg/L	T		-	0.032 J	-	<0.01 :	-	-
Sulfate	mg/L	T		-	1470. :	-	1560. J	-	-
Total Alkalinity	mg/L	T		-	263. :	-	237. :	-	-
Total Dissolved Solids	mg/L	T		-	2640. :	-	2890. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 J	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	-
Total Suspended Solids	mg/L	T		-	16.2 J	-	5.1 :	-	-
Laboratory Parameters									
pH	SU	T		-	6.87 :	-	6.72 :	-	6.71 :
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	1810. :	-	2090. :	-	-
Hardness	mg/L	D		1900. :	-	1800. :	-	2110. :	-
Metals									
Aluminum	mg/L	T		-	0.354 :	-	<0.142 :	-	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 11/6/2002 MMW-19B-D01N-GR GW4	MMW-19B 12/4/2002 MMW-19B-T01N-GR GW4	MMW-19B 12/4/2002 MMW-19B-D01N-GR GW4	MMW-19B 1/12/2003 MMW-19B-T01N-GR GW4	MMW-19B 1/12/2003 MMW-19B-D01N-GR GW4	MMW-19B 2/6/2003 MMW-19B-T01N-GR GW4
Aluminum	mg/L	D	<0.006 J	-	<0.0106 :	-	<0.142 :	-
Antimony	mg/L	T	-	<0.0006 :	-	<0.0006 J	-	-
Antimony	mg/L	D	<0.0004 :	-	<0.0006 :	-	<0.0006 J	-
Arsenic	mg/L	T	-	0.0014 :	-	0.00064 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	0.00048 :	-	0.00067 :	-
Barium	mg/L	T	-	0.0136 :	-	0.0131 :	-	-
Barium	mg/L	D	0.0135 :	-	0.0126 :	-	0.0121 :	-
Beryllium	mg/L	T	-	0.0037 :	-	0.0037 :	-	-
Beryllium	mg/L	D	0.0033 :	-	0.0035 :	-	0.0036 :	-
Boron	mg/L	T	-	<0.0099 :	-	<0.0094 :	-	-
Boron	mg/L	D	<0.0131 :	-	<0.0105 :	-	<0.0089 :	-
Cadmium	mg/L	T	-	0.0039 :	-	0.0016 :	-	-
Cadmium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0004 :	-
Calcium	mg/L	T	-	578. :	-	669. :	-	-
Calcium	mg/L	D	614. :	-	576. :	-	675. :	-
Chromium	mg/L	T	-	<0.0037 :	-	<0.0037 :	-	-
Chromium	mg/L	D	<0.0046 :	-	<0.0037 :	-	<0.0037 :	-
Cobalt	mg/L	T	-	0.0125 :	-	0.0116 :	-	-
Cobalt	mg/L	D	0.0107 :	-	0.0107 J	-	0.011 :	-
Copper	mg/L	T	-	0.0226 :	-	<0.0089 :	-	-
Copper	mg/L	D	0.0048 :	-	0.0021 J	-	<0.0032 :	-
Iron	mg/L	T	-	3.08 :	-	3.06 :	-	-
Iron	mg/L	D	2.04 :	-	2.52 :	-	3.04 :	-
Lead	mg/L	T	-	0.0213 :	-	0.0119 :	-	-
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	87.7 :	-	102. :	-	-
Magnesium	mg/L	D	89.7 :	-	87.1 :	-	103. :	-
Manganese	mg/L	T	-	6.44 J	-	7.6 :	-	-
Manganese	mg/L	D	6.78 :	-	6.41 J	-	7.67 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0056 :	-	<0.0042 J	-	-
Molybdenum	mg/L	D	0.0038 :	-	0.0056 :	-	<0.0037 J	-
Nickel	mg/L	T	-	0.0501 :	-	0.0328 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 11/6/2002 MMW-19B-D01N-GRW GW4		MMW-19B 12/4/2002 MMW-19B-T01N-GRW GW4		MMW-19B 12/4/2002 MMW-19B-D01N-GRW GW4		MMW-19B 1/12/2003 MMW-19B-T01N-GRW GW4		MMW-19B 1/12/2003 MMW-19B-D01N-GRW GW4		MMW-19B 2/6/2003 MMW-19B-T01N-GRW GW4	
Nickel	mg/L	D	0.0308	J	-		0.0418	:	-		0.0321	:	-	
Potassium	mg/L	T	-		4.54	:	-		4.46	:	-		-	
Potassium	mg/L	D	4.57	:	-		4.52	:	-		4.31	:	-	
Selenium	mg/L	T	-		0.0021	J	-		<0.0016	:	-		-	
Selenium	mg/L	D	0.00042	:	-		<0.0004	J	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		48.8	:	-		52.4	:	-		-	
Sodium	mg/L	D	50.3	:	-		50.6	:	-		54.2	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00061	:	-		0.00042	:	-		-	
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.614	J	-		0.408	:	-		-	
Zinc	mg/L	D	0.123	:	-		0.114	J	-		0.301	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		<0.00025	J	-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	J	-		<0.00025	:	-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Isotopes														
Lead	mg/L	T	-		0.0213	:	-		0.0119	:	-		-	
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-19B 3/3/2003 MMW-19B-T01N-GR		MMW-19B 4/6/2003 MMW-19B-T01N-GR		MMW-19B 4/6/2003 MMW-19B-D01N-GR		MMW-19B 5/8/2003 MMW-19B-T01N-GR		MMW-19B 6/12/2003 MMW-19B-T01N-GR		MMW-19B 7/17/2003 MMW-19B-T01N-GR	
			GW4		GW4		GW4		GW4		GW4		GW4	
Field Measurements														
DO	mg/L	T	0.74	:	1.54	:	-		2.86	:	0.46	:	0.3	:
EH	millivolts	T	100.7	:	-2.	:	-		-30.5	:	122.	:	88.6	:
pH	SU	T	6.73	:	6.9	J	-		6.73	:	6.67	:	6.9	J
Specific Conductance	uS/cm	T	332.	:	6812.	:	-		2790.	:	2251.	:	2701.	:
Temperature	Celsius	T	5.74	:	5.4	:	-		9.21	:	12.49	:	14.31	:
Turbidity	NTU	T	6.1	:	14.3	:	-		4.2	:	8.5	:	3.5	:
General Chemistry														
Ammonia	mg/L	T	-		<0.078	:	-		-		-		<0.17	J
Bicarbonate (as CaCO3)	mg/L	T	-		243.	:	-		-		-		244.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		5.2	:	-		-		-		5.	:
Fluoride	mg/L	T	-		1.9	:	-		-		-		2.	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		-		-		<0.4	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Phosphorus	mg/L	T	-		0.017	:	-		-		-		0.029	:
Sulfate	mg/L	T	-		1570.	J	-		-		-		1360.	J
Total Alkalinity	mg/L	T	-		243.	:	-		-		-		244.	:
Total Dissolved Solids	mg/L	T	-		2570.	:	-		-		-		2560.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		-		-		<1.	J
Total Suspended Solids	mg/L	T	-		<5.9	:	-		-		-		5.7	:
Laboratory Parameters														
pH	SU	T	6.73	:	6.9	J	-		6.73	:	6.67	:	6.9	J
Specific Conductance	umhos/cm	T	-		2570.	J	-		-		-		2390.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		2070.	:	-		-		-		1880.	:
Hardness	mg/L	D	-		-		1980.	:	-		-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-19B 3/3/2003 MMW-19B-T01N-GRW GW4	MMW-19B 4/6/2003 MMW-19B-T01N-GRW GW4	MMW-19B 4/6/2003 MMW-19B-D01N-GRW GW4	MMW-19B 5/8/2003 MMW-19B-T01N-GRW GW4	MMW-19B 6/12/2003 MMW-19B-T01N-GRW GW4	MMW-19B 7/17/2003 MMW-19B-T01N-GRW GW4
Aluminum	mg/L	T	-	<0.426 :	-	-	-	<0.631 :
Aluminum	mg/L	D	-	-	<0.426 :	-	-	-
Antimony	mg/L	T	-	<0.0006 :	-	-	-	<0.001 :
Antimony	mg/L	D	-	-	<0.0006 :	-	-	-
Arsenic	mg/L	T	-	0.00084 :	-	-	-	0.00057 :
Arsenic	mg/L	D	-	-	0.00063 :	-	-	-
Barium	mg/L	T	-	0.0134 :	-	-	-	0.0124 :
Barium	mg/L	D	-	-	<0.0123 :	-	-	-
Beryllium	mg/L	T	-	<0.0056 :	-	-	-	0.0036 :
Beryllium	mg/L	D	-	-	<0.0052 :	-	-	-
Boron	mg/L	T	-	0.0113 :	-	-	-	0.0086 :
Boron	mg/L	D	-	-	0.0113 :	-	-	-
Cadmium	mg/L	T	-	0.00081 :	-	-	-	0.0017 :
Cadmium	mg/L	D	-	-	<0.0005 :	-	-	-
Calcium	mg/L	T	-	660. :	-	-	-	601. :
Calcium	mg/L	D	-	-	631. :	-	-	-
Chromium	mg/L	T	-	<0.001 :	-	-	-	<0.0014 J
Chromium	mg/L	D	-	-	<0.001 :	-	-	-
Cobalt	mg/L	T	-	0.0106 :	-	-	-	0.0114 :
Cobalt	mg/L	D	-	-	0.0098 :	-	-	-
Copper	mg/L	T	-	<0.0015 J	-	-	-	<0.0027 :
Copper	mg/L	D	-	-	<0.0015 J	-	-	-
Iron	mg/L	T	-	3.5 :	-	-	-	2.95 :
Iron	mg/L	D	-	-	3.07 :	-	-	-
Lead	mg/L	T	-	0.012 :	-	-	-	0.0152 :
Lead	mg/L	D	-	-	0.001 :	-	-	-
Magnesium	mg/L	T	-	102. :	-	-	-	92.1 :
Magnesium	mg/L	D	-	-	97.2 :	-	-	-
Manganese	mg/L	T	-	7.84 :	-	-	-	7.14 :
Manganese	mg/L	D	-	-	7.49 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 J
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.004 :	-	-	-	0.0025 :
Molybdenum	mg/L	D	-	-	0.0032 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-19B 3/3/2003 MMW-19B-T01N-GRW GW4		MMW-19B 4/6/2003 MMW-19B-T01N-GRW GW4		MMW-19B 4/6/2003 MMW-19B-D01N-GRW GW4		MMW-19B 5/8/2003 MMW-19B-T01N-GRW GW4		MMW-19B 6/12/2003 MMW-19B-T01N-GRW GW4		MMW-19B 7/17/2003 MMW-19B-T01N-GRW GW4	
Nickel	mg/L		T	-		0.0347	:	-		-		-		0.0272	:
Nickel	mg/L		D	-		-		0.0309	:	-		-		-	
Potassium	mg/L		T	-		4.36	:	-		-		-		4.46	:
Potassium	mg/L		D	-		-		4.14	:	-		-		-	
Selenium	mg/L		T	-		<0.001	:	-		-		-		<0.0016	:
Selenium	mg/L		D	-		-		<0.001	:	-		-		-	
Silver	mg/L		T	-		<0.0002	:	-		-		-		<0.0002	J
Silver	mg/L		D	-		-		<0.0002	:	-		-		-	
Sodium	mg/L		T	-		51.3	:	-		-		-		47.6	:
Sodium	mg/L		D	-		-		49.4	:	-		-		-	
Thallium	mg/L		T	-		<0.0002	:	-		-		-		<0.0002	:
Thallium	mg/L		D	-		-		<0.0002	:	-		-		-	
Vanadium	mg/L		T	-		0.00023	:	-		-		-		<0.0004	:
Vanadium	mg/L		D	-		-		<0.0002	:	-		-		-	
Zinc	mg/L		T	-		0.537	:	-		-		-		0.404	:
Zinc	mg/L		D	-		-		0.42	:	-		-		-	
Explosives															
2,4,6-Trinitrotoluene	mg/L		T	-		<0.00025	:	-		-		-		-	
2,6-Pyridinediamine,	mg/L		T	-		<0.00025	:	-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L		T	-		<0.00025	:	-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L		T	-		<0.00025	:	-		-		-		-	
Pentaerythritol tetranitrate	mg/L		T	-		<0.01	:	-		-		-		-	
Isotopes															
Lead	mg/L		T	-		0.012	:	-		-		-		0.0152	:
Lead	mg/L		D	-		-		0.001	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-19B 7/17/2003 MMW-19B-D01N-GR		MMW-19B 8/13/2003 MMW-19B-T01N-GR		MMW-19B 10/20/2003 MMW-19B-T01N-GR		MMW-19B 10/20/2003 MMW-19B-D01N-GR		MMW-19B 11/4/2003 MMW-19B-T01N-GR		MMW-19B 12/10/2003 MMW-19B-T01N-GR	
			W GW4		W GW4		W GW4		W GW4		W GW4		W GW4	
Field Measurements														
DO	mg/L	T	-		3.18	:	2.63	:	-		0.95	:	1.25	:
EH	millivolts	T	-		15.1	:	134.5	:	-		47.1	:	37.8	:
pH	SU	T	-		6.66	:	7.	J	-		6.61	:	6.64	:
Specific Conductance	uS/cm	T	-		2593.	:	2664.	:	-		2527.	:	2470.	:
Temperature	Celsius	T	-		17.62	:	13.18	:	-		10.59	:	6.46	:
Turbidity	NTU	T	-		6.6	:	2.4	:	-		3.	:	2.4	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.063	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		242.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		5.4	:	-		-		-	
Fluoride	mg/L	T	-		-		2.	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		<0.2	J	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	J	-		-		-	
Phosphorus	mg/L	T	-		-		0.018	:	-		-		-	
Sulfate	mg/L	T	-		-		1480.	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		242.	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		2090.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<1.	J	-		-		-	
Total Suspended Solids	mg/L	T	-		-		9.5	:	-		-		-	
Laboratory Parameters														
pH	SU	T	-		6.66	:	7.	J	-		6.61	:	6.64	:
Specific Conductance	umhos/cm	T	-		-		2670.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		1860.	:	-		-		-	
Hardness	mg/L	D	1870.	:	-		-		1870.	:	-		-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 7/17/2003 MMW-19B-D01N-GR GW4		MMW-19B 8/13/2003 MMW-19B-T01N-GR GW4		MMW-19B 10/20/2003 MMW-19B-T01N-GR GW4		MMW-19B 10/20/2003 MMW-19B-D01N-GR GW4		MMW-19B 11/4/2003 MMW-19B-T01N-GR GW4		MMW-19B 12/10/2003 MMW-19B-T01N-GR GW4	
Aluminum	mg/L	T	-		-		<0.307	:	-		-		-	
Aluminum	mg/L	D	<0.631	:	-		-		<0.307	:	-		-	
Antimony	mg/L	T	-		-		<0.001	:	-		-		-	
Antimony	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Arsenic	mg/L	T	-		-		0.0007	:	-		-		-	
Arsenic	mg/L	D	0.00058	:	-		-		0.00043	:	-		-	
Barium	mg/L	T	-		-		0.0123	:	-		-		-	
Barium	mg/L	D	0.0122	:	-		-		0.0124	:	-		-	
Beryllium	mg/L	T	-		-		0.0033	:	-		-		-	
Beryllium	mg/L	D	0.0036	:	-		-		0.0034	:	-		-	
Boron	mg/L	T	-		-		0.0091	:	-		-		-	
Boron	mg/L	D	0.0086	:	-		-		0.0084	:	-		-	
Cadmium	mg/L	T	-		-		<0.00083	:	-		-		-	
Cadmium	mg/L	D	<0.0006	:	-		-		<0.0005	:	-		-	
Calcium	mg/L	T	-		-		592.	:	-		-		-	
Calcium	mg/L	D	597.	:	-		-		598.	:	-		-	
Chromium	mg/L	T	-		-		0.0014	J	-		-		-	
Chromium	mg/L	D	<0.0014	J	-		-		0.0011	J	-		-	
Cobalt	mg/L	T	-		-		0.0113	:	-		-		-	
Cobalt	mg/L	D	0.012	:	-		-		0.0137	:	-		-	
Copper	mg/L	T	-		-		0.0027	:	-		-		-	
Copper	mg/L	D	<0.0024	:	-		-		<0.0022	:	-		-	
Iron	mg/L	T	-		-		3.22	:	-		-		-	
Iron	mg/L	D	2.99	:	-		-		3.2	:	-		-	
Lead	mg/L	T	-		-		0.0088	:	-		-		-	
Lead	mg/L	D	0.0012	:	-		-		0.0019	:	-		-	
Magnesium	mg/L	T	-		-		91.4	:	-		-		-	
Magnesium	mg/L	D	91.4	:	-		-		92.2	:	-		-	
Manganese	mg/L	T	-		-		6.77	:	-		-		-	
Manganese	mg/L	D	7.09	:	-		-		6.84	:	-		-	
Mercury	mg/L	T	-		-		<0.0001	:	-		-		-	
Mercury	mg/L	D	<0.0001	J	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		-		<0.0036	:	-		-		-	
Molybdenum	mg/L	D	0.0036	:	-		-		<0.0029	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 7/17/2003 MMW-19B-D01N-GR GW4		MMW-19B 8/13/2003 MMW-19B-T01N-GR GW4		MMW-19B 10/20/2003 MMW-19B-T01N-GR GW4		MMW-19B 10/20/2003 MMW-19B-D01N-GR GW4		MMW-19B 11/4/2003 MMW-19B-T01N-GR GW4		MMW-19B 12/10/2003 MMW-19B-T01N-GR GW4	
Nickel	mg/L	T	-		-		0.031	:	-		-		-	
Nickel	mg/L	D	0.0285	:	-		-		0.0312	:	-		-	
Potassium	mg/L	T	-		-		3.89	:	-		-		-	
Potassium	mg/L	D	4.58	:	-		-		4.	:	-		-	
Selenium	mg/L	T	-		-		<0.0006	:	-		-		-	
Selenium	mg/L	D	<0.0016	J	-		-		<0.0006	:	-		-	
Silver	mg/L	T	-		-		<0.0002	:	-		-		-	
Silver	mg/L	D	<0.0002	J	-		-		<0.0002	:	-		-	
Sodium	mg/L	T	-		-		46.3	:	-		-		-	
Sodium	mg/L	D	50.	:	-		-		46.1	:	-		-	
Thallium	mg/L	T	-		-		<0.0002	:	-		-		-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		-		0.00033	:	-		-		-	
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0002	:	-		-	
Zinc	mg/L	T	-		-		0.408	:	-		-		-	
Zinc	mg/L	D	0.397	:	-		-		0.372	:	-		-	
Isotopes														
Lead	mg/L	T	-		-		0.0088	:	-		-		-	
Lead	mg/L	D	0.0012	:	-		-		0.0019	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 1/11/2004 MMW-19B-T01N-GR GW4 T		MMW-19B 1/11/2004 MMW-19B-D01N-GR GW4 D		MMW-19B 4/18/2004 MMW-19B-T01N-GR GW4 T		MMW-19B 4/18/2004 MMW-19B-D01N-GR GW4 D		MMW-23B 10/30/2002 MMW-23B-T01N-GR GW1 T		MMW-23B 10/31/2002 MMW-23B-T01N-GR GW1 T	
Field Measurements														
DO	mg/L	T	0.8	:	-		0.62	:	-		-		1.36	:
EH	millivolts	T	350.1	:	-		13.8	:	-		-		79.1	:
pH	SU	T	7.	J	-		7.1	J	-		-		7.67	:
Specific Conductance	uS/cm	T	2740.	:	-		2824.	:	-		-		854.	:
Temperature	Celsius	T	8.18	:	-		9.82	:	-		-		7.2	:
Turbidity	NTU	T	1.7	:	-		1.5	:	-		-		0.	:
General Chemistry														
Ammonia	mg/L	T	<0.077	J	-		<0.072	:	-		-		<0.096	:
Bicarbonate (as CaCO3)	mg/L	T	236.	:	-		239.	:	-		-		126.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	5.7	:	-		5.8	:	-		-		1.	:
Fluoride	mg/L	T	1.8	:	-		2.	:	-		-		3.	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	<0.2	J	-		<0.2	J	-		-		<0.4	J
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		-		0.01	J
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		-		<0.01	:
Sulfate	mg/L	T	1780.	:	-		1700.	:	-		-		301.	:
Total Alkalinity	mg/L	T	236.	:	-		239.	:	-		-		126.	:
Total Dissolved Solids	mg/L	T	2700.	:	-		2700.	:	-		-		524.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		<1.8	:	-		-		<1.	:
Total Suspended Solids	mg/L	T	4.7	:	-		6.7	J	-		-		19.9	:
Laboratory Parameters														
pH	SU	T	7.	J	-		7.1	J	-		-		7.67	:
Specific Conductance	umhos/cm	T	2530.	J	-		2480.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	1880.	:	-		1790.	:	-		-		118.	:
Hardness	mg/L	D	-		1840.	:	-		1890.	:	-		-	
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-19B 1/11/2004 MMW-19B-T01N-GRW GW4	MMW-19B 1/11/2004 MMW-19B-D01N-GRW GW4	MMW-19B 4/18/2004 MMW-19B-T01N-GRW GW4	MMW-19B 4/18/2004 MMW-19B-D01N-GRW GW4	MMW-23B 10/30/2002 MMW-23B-T01N-GRW GW1	MMW-23B 10/31/2002 MMW-23B-T01N-GRW GW1
Aluminum	mg/L	T	<0.329 :	-	<0.233 :	-	-	0.559 :
Aluminum	mg/L	D	-	<0.329 :	-	<0.31 :	-	-
Antimony	mg/L	T	<0.0024 :	-	<0.0008 :	-	-	<0.0002 :
Antimony	mg/L	D	-	<0.0024 :	-	<0.0008 :	-	-
Arsenic	mg/L	T	0.00063 :	-	0.00046 :	-	-	0.0011 J
Arsenic	mg/L	D	-	0.00062 :	-	0.00045 :	-	-
Barium	mg/L	T	0.0119 :	-	0.0119 :	-	-	<0.0092 :
Barium	mg/L	D	-	0.0119 :	-	0.0127 :	-	-
Beryllium	mg/L	T	0.0036 :	-	0.0021 J	-	-	0.00037 :
Beryllium	mg/L	D	-	0.0035 :	-	0.0019 J	-	-
Boron	mg/L	T	<0.0057 :	-	0.01 :	-	-	0.0221 :
Boron	mg/L	D	-	<0.0048 :	-	0.0118 :	-	-
Cadmium	mg/L	T	0.00077 J	-	0.0011 :	-	-	0.00011 J
Cadmium	mg/L	D	-	<0.0007 :	-	0.00065 J	-	-
Calcium	mg/L	T	602. :	-	568. :	-	-	36.6 :
Calcium	mg/L	D	-	590. :	-	602. :	-	-
Chromium	mg/L	T	<0.0015 J	-	<0.0006 :	-	-	<0.0046 :
Chromium	mg/L	D	-	<0.0015 J	-	<0.0006 :	-	-
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	0.0112 J	-	0.0113 :	-	-	<0.0022 :
Cobalt	mg/L	D	-	0.0108 :	-	0.0127 :	-	-
Copper	mg/L	T	<0.003 :	-	<0.0027 :	-	-	0.0028 :
Copper	mg/L	D	-	<0.003 :	-	0.0023 :	-	-
Iron	mg/L	T	2.96 :	-	3.12 J	-	-	0.722 :
Iron	mg/L	D	-	2.84 :	-	3.47 :	-	-
Lead	mg/L	T	0.0083 :	-	0.0112 :	-	-	0.007 :
Lead	mg/L	D	-	0.0033 :	-	0.0042 :	-	-
Magnesium	mg/L	T	92. :	-	89.2 :	-	-	6.46 :
Magnesium	mg/L	D	-	90. :	-	94.4 :	-	-
Manganese	mg/L	T	7.05 :	-	6.97 :	-	-	0.093 :
Manganese	mg/L	D	-	6.9 :	-	7.39 :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	-
Molybdenum	mg/L	T	0.0043 :	-	0.0055 :	-	-	0.0077 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19B 1/11/2004 MMW-19B-T01N-GR W GW4		MMW-19B 1/11/2004 MMW-19B-D01N-GR W GW4		MMW-19B 4/18/2004 MMW-19B-T01N-GR W GW4		MMW-19B 4/18/2004 MMW-19B-D01N-GR W GW4		MMW-23B 10/30/2002 MMW-23B-T01N-GR W GW1		MMW-23B 10/31/2002 MMW-23B-T01N-GR W GW1	
Molybdenum	mg/L	D	-		0.0038	:	-		0.0074	:	-		-	
Nickel	mg/L	T	0.0299	:	-		0.0334	:	-		-		0.0015	J
Nickel	mg/L	D	-		0.0297	:	-		0.0359	:	-		-	
Potassium	mg/L	T	4.14	:	-		4.45	:	-		-		1.17	:
Potassium	mg/L	D	-		4.12	:	-		4.81	:	-		-	
Selenium	mg/L	T	0.00074	J	-		<0.0014	:	-		-		<0.0002	:
Selenium	mg/L	D	-		<0.0006	:	-		<0.0014	:	-		-	
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		-		<0.0001	:
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		-	
Sodium	mg/L	T	49.7	:	-		47.5	:	-		-		108.	:
Sodium	mg/L	D	-		45.8	:	-		51.2	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0001	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	T	<0.0004	:	-		0.00068	:	-		-		0.00018	:
Vanadium	mg/L	D	-		<0.0004	:	-		0.00057	:	-		-	
Zinc	mg/L	T	0.418	:	-		0.437	:	-		-		0.0188	:
Zinc	mg/L	D	-		0.382	:	-		0.43	:	-		-	
Isotopes														
Delta D	per mil	T	-		-		-76.2	:	-		-		-	
Delta O-18	per mil	T	-		-		-10.4	:	-		-		-	
Lead	mg/L	T	0.0083	:	-		0.0112	:	-		-		0.007	:
Lead	mg/L	D	-		0.0033	:	-		0.0042	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23B 10/31/2002 MMW-23B-D01N-GR W GW1		MMW-23B 1/8/2003 MMW-23B-T01N-GR W GW1		MMW-23B 1/8/2003 MMW-23B-D01N-GR W GW1		MMW-23B 4/10/2003 MMW-23B-T01N-GR W GW1		MMW-23B 4/10/2003 MMW-23B-D01N-GR W GW1		MMW-23B 7/20/2003 MMW-23B-T01N-GR W GW1	
Field Measurements														
DO	mg/L	T	-		5.2	:	-		0.53	:	-		0.31	:
EH	millivolts	T	-		96.1	:	-		342.	:	-		-36.5	:
pH	SU	T	-		7.54	:	-		4.8	J	-		7.7	J
Specific Conductance	uS/cm	T	-		828.	:	-		836.	:	-		745.	:
Temperature	Celsius	T	-		2.04	:	-		15.1	:	-		14.42	:
Turbidity	NTU	T	-		50.2	:	-		69.1	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.12	:	-		<0.04	:	-		<0.04	J
Bicarbonate (as CaCO3)	mg/L	T	-		125.	:	-		126.	:	-		127.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<1.3	:	-		<1.4	:	-		1.3	:
Fluoride	mg/L	T	-		2.7	:	-		2.5	:	-		2.6	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		<0.4	J	-		<0.2	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		<0.014	:	-		<0.01	J
Phosphorus	mg/L	T	-		0.052	:	-		0.041	:	-		<0.01	:
Sulfate	mg/L	T	-		289.	J	-		222.	J	-		204.	J
Total Alkalinity	mg/L	T	-		125.	:	-		126.	:	-		127.	:
Total Dissolved Solids	mg/L	T	-		<491.	:	-		924.	:	-		558.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	J	-		<1.6	J
Total Suspended Solids	mg/L	T	-		298.	:	-		26.5	:	-		3.2	:
Laboratory Parameters														
pH	SU	T	-		7.54	:	-		4.8	J	-		7.7	J
Specific Conductance	umhos/cm	T	-		-		-		712.	J	-		716.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		121.	:	-		116.	:	-		122.	:
Hardness	mg/L	D	114.	:	-		114.	:	-		115.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-23B 10/31/2002 MMW-23B-D01N-GR GW1		MMW-23B 1/8/2003 MMW-23B-T01N-GR GW1		MMW-23B 1/8/2003 MMW-23B-D01N-GR GW1		MMW-23B 4/10/2003 MMW-23B-T01N-GR GW1		MMW-23B 4/10/2003 MMW-23B-D01N-GR GW1		MMW-23B 7/20/2003 MMW-23B-T01N-GR GW1	
Aluminum	mg/L	T	-		5.59	:	-		<0.426	:	-		<0.631	:
Aluminum	mg/L	D	<0.0123	:	-		<0.142	J	-		<0.426	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.001	:
Antimony	mg/L	D	<0.0002	:	-		<0.0006	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		0.0025	:	-		0.0011	:	-		0.0011	:
Arsenic	mg/L	D	0.00085	J	-		0.0011	:	-		0.0009	:	-	
Barium	mg/L	T	-		0.02	:	-		<0.0135	:	-		<0.0073	:
Barium	mg/L	D	<0.0092	:	-		0.0071	:	-		<0.0135	:	-	
Beryllium	mg/L	T	-		0.0018	:	-		<0.0003	:	-		<0.0002	J
Beryllium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0239	:	-		0.0282	:	-		0.025	:
Boron	mg/L	D	0.022	:	-		0.0249	:	-		0.0274	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0003	:
Cadmium	mg/L	D	<0.0001	:	-		<0.0004	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		36.9	:	-		35.4	:	-		37.5	:
Calcium	mg/L	D	35.3	:	-		35.5	:	-		35.2	:	-	
Chromium	mg/L	T	-		0.0054	:	-		<0.0011	:	-		<0.0019	:
Chromium	mg/L	D	<0.0046	:	-		<0.0037	:	-		<0.0009	:	-	
Cobalt	mg/L	T	-		<0.0016	:	-		<0.0029	:	-		<0.0018	:
Cobalt	mg/L	D	<0.0022	:	-		<0.0016	:	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.0072	:	-		<0.0024	J	-		<0.0022	:
Copper	mg/L	D	<0.0003	:	-		<0.0017	:	-		<0.0024	J	-	
Iron	mg/L	T	-		3.08	:	-		<0.422	:	-		<0.667	:
Iron	mg/L	D	<0.0418	:	-		<0.489	:	-		<0.422	:	-	
Lead	mg/L	T	-		0.0372	:	-		<0.0061	:	-		<0.00055	:
Lead	mg/L	D	<0.0001	:	-		<0.0002	:	-		<0.0014	:	-	
Magnesium	mg/L	T	-		6.94	:	-		6.76	:	-		6.84	:
Magnesium	mg/L	D	6.26	:	-		6.23	:	-		6.66	:	-	
Manganese	mg/L	T	-		0.298	:	-		0.0697	:	-		0.0529	:
Manganese	mg/L	D	0.0393	:	-		<0.0484	:	-		0.0347	J	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.00012	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0126	:	-		0.0107	:	-		0.0088	:
Molybdenum	mg/L	D	0.009	:	-		0.0081	:	-		0.0095	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23B 10/31/2002 MMW-23B-D01N-GRW GW1	MMW-23B 1/8/2003 MMW-23B-T01N-GRW GW1	MMW-23B 1/8/2003 MMW-23B-D01N-GRW GW1	MMW-23B 4/10/2003 MMW-23B-T01N-GRW GW1	MMW-23B 4/10/2003 MMW-23B-D01N-GRW GW1	MMW-23B 7/20/2003 MMW-23B-T01N-GRW GW1
Nickel	mg/L	T	-	<0.0025 :	-	<0.0026 :	-	<0.002 J
Nickel	mg/L	D	<0.0002 J	-	<0.0015 :	-	<0.0026 :	-
Potassium	mg/L	T	-	3.82 :	-	<1.89 :	-	1.49 :
Potassium	mg/L	D	0.818 :	-	1.38 :	-	<1.93 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.001 :	-	<0.0016 :
Selenium	mg/L	D	<0.0002 :	-	<0.0016 :	-	<0.001 :	-
Silver	mg/L	T	-	0.00029 :	-	<0.0002 :	-	<0.0002 J
Silver	mg/L	D	<0.0001 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	111. :	-	112. :	-	116. :
Sodium	mg/L	D	105. :	-	112. :	-	110. :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0001 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.0012 :	-	<0.0002 :	-	<0.0004 :
Vanadium	mg/L	D	<0.0001 :	-	<0.0004 :	-	<0.0002 :	-
Zinc	mg/L	T	-	<0.0792 :	-	<0.05 :	-	<0.02 :
Zinc	mg/L	D	0.0103 :	-	<0.039 :	-	<0.039 :	-
Isotopes								
Lead	mg/L	T	-	0.0372 :	-	<0.0061 :	-	<0.00055 :
Lead	mg/L	D	<0.0001 :	-	<0.0002 :	-	<0.0014 :	-

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23B 7/20/2003 MMW-23B-D01N-GRW GW1	MMW-23B 10/21/2003 MMW-23B-T01N-GRW GW1	MMW-23B 10/21/2003 MMW-23B-D01N-GRW GW1	MMW-23B 4/20/2004 MMW-23B-T01N-GRW GW1	MMW-23B 4/20/2004 MMW-23B-D01N-GRW GW1	MMW-24 11/1/2002 MMW-24-T01N-GRWRE GW4
Field Measurements								
DO	mg/L	T	-	0.3 :	-	0.67 :	-	-
EH	millivolts	T	-	-49.5 :	-	-15.5 :	-	-
pH	SU	T	-	7.8 J	-	8. J	-	-
Specific Conductance	uS/cm	T	-	480. :	-	813. :	-	-
Temperature	Celsius	T	-	7.9 :	-	7.74 :	-	-
Turbidity	NTU	T	-	3.1 :	-	4.6 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	<0.059 J	-	<0.044 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	131. J	-	122. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Chloride	mg/L	T	-	<0.97 :	-	1.2 J	-	-
Fluoride	mg/L	T	-	2.5 :	-	2.6 :	-	39.9 J
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T	-	<0.2 J	-	<0.2 J	-	-
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Phosphorus	mg/L	T	-	0.013 :	-	<0.01 :	-	-
Sulfate	mg/L	T	-	218. J	-	241. :	-	1810. J
Total Alkalinity	mg/L	T	-	131. :	-	122. :	-	-
Total Dissolved Solids	mg/L	T	-	722. :	-	468. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	1.5 J	-	<1. J	-	-
Total Suspended Solids	mg/L	T	-	3.8 :	-	<3.8 J	-	-
Laboratory Parameters								
pH	SU	T	-	7.8 J	-	8. J	-	-
Specific Conductance	umhos/cm	T	-	768. J	-	645. J	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Physical Properties								
Hardness	mg/L	T	-	131. :	-	127. :	-	-
Hardness	mg/L	D	120. :	-	127. :	-	120. :	-
Metals								

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-23B 7/20/2003 MMW-23B-D01N-GRW		MMW-23B 10/21/2003 MMW-23B-T01N-GRW		MMW-23B 10/21/2003 MMW-23B-D01N-GRW		MMW-23B 4/20/2004 MMW-23B-T01N-GRW		MMW-23B 4/20/2004 MMW-23B-D01N-GRW		MMW-24 11/1/2002 MMW-24-T01N-GRW RE	
			GW1		GW1		GW1		GW1		GW1		GW4	
Aluminum	mg/L	T	-		<0.221	J	-		<0.284	:	-		-	
Aluminum	mg/L	D	<0.631	:	-		<0.221	J	-		<0.219	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0008	:	-		-	
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0008	:	-	
Arsenic	mg/L	T	-		0.0014	:	-		0.001	:	-		-	
Arsenic	mg/L	D	0.001	:	-		0.0013	:	-		0.00095	:	-	
Barium	mg/L	T	-		<0.0115	:	-		0.006	:	-		-	
Barium	mg/L	D	<0.0073	:	-		<0.0115	:	-		0.0056	:	-	
Beryllium	mg/L	T	-		<0.00085	:	-		<0.0002	:	-		-	
Beryllium	mg/L	D	<0.0002	J	-		<0.00085	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0248	:	-		0.0241	:	-		-	
Boron	mg/L	D	0.0235	:	-		0.0232	:	-		0.0232	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0003	:	-		-	
Cadmium	mg/L	D	<0.0003	:	-		<0.0005	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		41.7	:	-		38.7	:	-		-	
Calcium	mg/L	D	37.	:	-		40.8	:	-		37.	:	-	
Chromium	mg/L	T	-		<0.0011	J	-		<0.0006	:	-		-	
Chromium	mg/L	D	<0.0019	:	-		<0.0011	J	-		<0.0006	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0011	:	-		-	
Cobalt	mg/L	D	<0.0018	:	-		0.0032	:	-		<0.0011	:	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.0007	J	-		-	
Copper	mg/L	D	0.0018	:	-		<0.0022	:	-		<0.0007	J	-	
Iron	mg/L	T	-		<0.278	:	-		<0.391	J	-		-	
Iron	mg/L	D	<0.667	:	-		<0.278	:	-		<0.333	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0008	:	-		-	
Lead	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		6.4	:	-		7.24	:	-		-	
Magnesium	mg/L	D	6.74	:	-		6.12	:	-		6.78	:	-	
Manganese	mg/L	T	-		0.0552	:	-		0.104	:	-		-	
Manganese	mg/L	D	0.0391	:	-		0.0485	:	-		0.0359	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0002	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0091	:	-		0.0098	:	-		-	
Molybdenum	mg/L	D	0.0085	:	-		0.0082	:	-		0.0087	:	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23B 7/20/2003 MMW-23B-D01N-GRW GW1		MMW-23B 10/21/2003 MMW-23B-T01N-GRW GW1		MMW-23B 10/21/2003 MMW-23B-D01N-GRW GW1		MMW-23B 4/20/2004 MMW-23B-T01N-GRW GW1		MMW-23B 4/20/2004 MMW-23B-D01N-GRW GW1		MMW-24 11/1/2002 MMW-24-T01N-GRWRE GW4	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0015	J	-		-	
Nickel	mg/L	D	<0.002	J	-		<0.0024	:	-		<0.0015	J	-	
Potassium	mg/L	T	-		0.815	J	-		<1.44	:	-		-	
Potassium	mg/L	D	1.5	:	-		0.748	J	-		<1.34	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0014	:	-		-	
Selenium	mg/L	D	<0.0016	J	-		<0.0006	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		-	
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		121.	:	-		117.	:	-		-	
Sodium	mg/L	D	116.	:	-		121.	:	-		116.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		-	
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		<0.023	:	-		0.0164	:	-		-	
Zinc	mg/L	D	<0.016	:	-		<0.023	:	-		0.0153	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-86.8	:	-		-	
Delta O-18	per mil	T	-		-		-		-12.1	:	-		-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0008	:	-		-	
Lead	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0008	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24
			Sample Date	11/1/2002	11/1/2002	11/1/2002	12/3/2002	1/9/2003	1/9/2003
			Sample ID	MMW-24-T01N-GRW	MMW-24-D01N-GRW RE	MMW-24-D01N-GRW	MMW-24-T01N-GRW	MMW-24-T01N-GRW	MMW-24-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		4.79 :	-	-	3.78 :	80.72 :	-
EH	millivolts	T		380.7 :	-	-	174. :	335.3 :	-
pH	SU	T		4.58 :	-	-	5.51 :	4.81 :	-
Specific Conductance	uS/cm	T		3013. :	-	-	2827. :	2776. :	-
Temperature	Celsius	T		16.32 :	-	-	4.49 :	7.01 :	-
Turbidity	NTU	T		16.7 :	-	-	50.2 :	1.2 :	-
General Chemistry									
Ammonia	mg/L	T		<0.14 :	-	-	-	<0.093 :	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1.5 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		275. :	-	-	-	25.1 :	-
Fluoride	mg/L	T		-	-	-	-	33.5 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		74.3 J	-	-	-	29.9 J	-
Nitrite	mg/L	T		<0.005 J	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Phosphorus	mg/L	T		<0.01 :	-	-	-	0.027 :	-
Sulfate	mg/L	T		-	-	-	-	1710. J	-
Total Alkalinity	mg/L	T		<1. :	-	-	-	<1.5 :	-
Total Dissolved Solids	mg/L	T		2960. :	-	-	-	2690. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		2. :	-	-	-	2.6 :	-
Total Suspended Solids	mg/L	T		16.5 :	-	-	-	10.3 :	-
Laboratory Parameters									
pH	SU	T		4.58 :	-	-	5.51 :	4.81 :	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1540. :	-	-	-	1570. :	-
Hardness	mg/L	D		-	1650. :	-	-	-	1580. :
Metals									
Aluminum	mg/L	T		-	-	-	-	50.5 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24
			Sample Date	11/1/2002	11/1/2002	11/1/2002	12/3/2002	1/9/2003	1/9/2003
			Sample ID	MMW-24-T01N-GRW	MMW-24-D01N-GRW RE	MMW-24-D01N-GRW	MMW-24-T01N-GRW	MMW-24-T01N-GRW	MMW-24-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	D		-	50.9 :	-	-	-	48.1 :
Antimony	mg/L	T		-	-	-	-	<0.028 :	-
Antimony	mg/L	D		-	<0.028 :	-	-	-	<0.028 :
Arsenic	mg/L	T		-	-	-	-	<0.023 :	-
Arsenic	mg/L	D		-	<0.023 :	-	-	-	<0.023 :
Barium	mg/L	T		-	-	-	-	<0.048 :	-
Barium	mg/L	D		-	<0.048 :	-	-	-	<0.048 :
Beryllium	mg/L	T		-	-	-	-	0.0177 :	-
Beryllium	mg/L	D		-	0.0209 :	-	-	-	0.0177 :
Boron	mg/L	T		-	-	-	-	<0.0305 :	-
Boron	mg/L	D		-	<0.027 :	-	-	-	<0.027 :
Cadmium	mg/L	T		-	-	-	-	<0.04 :	-
Cadmium	mg/L	D		-	<0.08 :	-	-	-	<0.04 :
Calcium	mg/L	T		-	-	-	-	491. :	-
Calcium	mg/L	D		-	510. :	-	-	-	497. :
Chromium	mg/L	T		-	-	-	-	<0.37 :	-
Chromium	mg/L	D		-	<0.16 J	-	-	-	<0.37 :
Chromium, Hexavalent	mg/L	D		0.0205 :	-	-	-	-	-
Cobalt	mg/L	T		-	-	-	-	<0.16 :	-
Cobalt	mg/L	D		-	<0.23 :	-	-	-	<0.16 :
Copper	mg/L	T		-	-	-	-	1.32 :	-
Copper	mg/L	D		-	<1.27 :	-	-	-	1.25 :
Iron	mg/L	T		-	-	-	-	<4.89 :	-
Iron	mg/L	D		-	<2.66 :	-	-	-	<4.89 :
Lead	mg/L	T		-	-	-	-	0.0083 :	-
Lead	mg/L	D		-	0.015 :	-	-	-	0.0075 :
Magnesium	mg/L	T		-	-	-	-	82.5 :	-
Magnesium	mg/L	D		-	92.5 :	-	-	-	81.9 :
Manganese	mg/L	T		-	-	-	-	13.8 :	-
Manganese	mg/L	D		-	14.6 :	-	-	-	13.7 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	-	-	-	<0.011 :	-
Molybdenum	mg/L	D		-	<0.011 :	-	-	-	<0.011 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-24 11/1/2002 MMW-24-T01N-GRW GW4 T	MMW-24 11/1/2002 MMW-24-D01N-GRW RE GW4 D	MMW-24 11/1/2002 MMW-24-D01N-GRW GW4 T	MMW-24 12/3/2002 MMW-24-T01N-GRW GW4 T	MMW-24 1/9/2003 MMW-24-T01N-GRW GW4 T	MMW-24 1/9/2003 MMW-24-D01N-GRW GW4 D
Nickel	mg/L	T	-	-	-	-	0.436 :	-
Nickel	mg/L	D	-	<0.34 :	-	-	-	0.382 :
Potassium	mg/L	T	-	-	-	-	<20.2 :	-
Potassium	mg/L	D	-	<31.4 J	-	-	-	<20.2 :
Selenium	mg/L	T	-	-	-	-	0.0133 :	-
Selenium	mg/L	D	-	<0.008 :	-	-	-	0.0118 :
Silver	mg/L	T	-	-	-	-	<0.001 :	-
Silver	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Sodium	mg/L	T	-	-	-	-	37.5 :	-
Sodium	mg/L	D	-	61.8 :	-	-	-	<32.7 :
Thallium	mg/L	T	-	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	T	-	-	-	-	<0.002 :	-
Vanadium	mg/L	D	-	<0.002 :	-	-	-	<0.002 :
Zinc	mg/L	T	-	-	-	-	2.37 :	-
Zinc	mg/L	D	-	2.71 :	-	-	-	2.36 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 J	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	<0.00025 J	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 J	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 J	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	<0.01 J	-	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	-	-	-	0.0083 :	-
Lead	mg/L	D	-	0.015 :	-	-	-	0.0075 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-24	2/7/2003	MMW-24-T01N-GRW	MMW-24	3/5/2003	MMW-24-T01N-GRW	MMW-24	4/9/2003	MMW-24-T01N-GRW	MMW-24	4/9/2003	MMW-24-D01N-GRW
			MMW-24	5/8/2003	MMW-24-T01N-GRW	MMW-24	6/5/2003	MMW-24-T01N-GRW						
		Exposure Area	GW4			GW4			GW4			GW4		
			GW4			GW4								
Field Measurements														
DO	mg/L	T	8.62	:		10.92	:		7.96	:		-		
EH	millivolts	T	466.5	:		367.	:		256.9	:		-		
pH	SU	T	4.38	:		4.45	:		4.8	J		-		
Specific Conductance	uS/cm	T	3054.	:		3012.	:		3070.	:		-		
Temperature	Celsius	T	8.69	:		7.97	:		10.05	:		-		
Turbidity	NTU	T	0.	:		0.	:		73.9	:		-		
General Chemistry														
Ammonia	mg/L	T	-			-			<0.11	:		-		
Bicarbonate (as CaCO3)	mg/L	T	-			-			<2.3	:		-		
Carbonate (as CaCO3)	mg/L	T	-			-			<1.	:		-		
Chloride	mg/L	T	-			-			40.1	:		-		
Fluoride	mg/L	T	-			-			40.	:		-		
Hydroxide (as CaCO3)	mg/L	T	-			-			<1.	:		-		
Nitrate	mg/L	T	-			-			64.1	J		-		
Nitrite	mg/L	T	-			-			0.0085	:		-		
Phosphate, Ortho As P	mg/L	T	-			-			<0.068	:		-		
Phosphorus	mg/L	T	-			-			0.14	:		-		
Sulfate	mg/L	T	-			-			1620.	J		-		
Total Alkalinity	mg/L	T	-			-			<2.3	:		-		
Total Dissolved Solids	mg/L	T	-			-			3210.	:		-		
Total Kjeldahl Nitrogen	mg/L	T	-			-			<0.24	:		-		
Total Organic Carbon	mg/L	T	-			-			7.2	J		-		
Total Suspended Solids	mg/L	T	-			-			84.	:		-		
Laboratory Parameters														
pH	SU	T	4.38	:		4.45	:		4.8	J		-		
Specific Conductance	umhos/cm	T	-			-			2950.	J		-		
Inorganics														
Cyanide	mg/L	T	-			-			<0.01	J		-		
Physical Properties														
Hardness	mg/L	T	-			-			1760.	:		-		
Hardness	mg/L	D	-			-			-			1720.	:	
Metals														

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-24	5/8/2003	MMW-24-T01N-GRW	MMW-24	6/5/2003	MMW-24-T01N-GRW						
		Exposure Area	GW4			GW4								
			GW4			GW4								
Field Measurements														
DO	mg/L	T	9.54	:		10.27	:							
EH	millivolts	T	444.9	:		394.4	:							
pH	SU	T	4.63	:		4.25	:							
Specific Conductance	uS/cm	T	3092.	:		3077.	:							
Temperature	Celsius	T	9.36	:		10.17	:							
Turbidity	NTU	T	16.4	:		1.3	:							
General Chemistry														
Ammonia	mg/L	T	-			-								
Bicarbonate (as CaCO3)	mg/L	T	-			-								
Carbonate (as CaCO3)	mg/L	T	-			-								
Chloride	mg/L	T	-			-								
Fluoride	mg/L	T	-			-								
Hydroxide (as CaCO3)	mg/L	T	-			-								
Nitrate	mg/L	T	-			-								
Nitrite	mg/L	T	-			-								
Phosphate, Ortho As P	mg/L	T	-			-								
Phosphorus	mg/L	T	-			-								
Sulfate	mg/L	T	-			-								
Total Alkalinity	mg/L	T	-			-								
Total Dissolved Solids	mg/L	T	-			-								
Total Kjeldahl Nitrogen	mg/L	T	-			-								
Total Organic Carbon	mg/L	T	-			-								
Total Suspended Solids	mg/L	T	-			-								
Laboratory Parameters														
pH	SU	T	4.63	:		4.25	:							
Specific Conductance	umhos/cm	T	-			-								
Inorganics														
Cyanide	mg/L	T	-			-								
Physical Properties														
Hardness	mg/L	T	-			-								
Hardness	mg/L	D	-			-								
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-24 2/7/2003 MMW-24-T01N-GRW	MMW-24 3/5/2003 MMW-24-T01N-GRW	MMW-24 4/9/2003 MMW-24-T01N-GRW	MMW-24 4/9/2003 MMW-24-D01N-GRW	MMW-24 5/8/2003 MMW-24-T01N-GRW	MMW-24 6/5/2003 MMW-24-T01N-GRW
			GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	T	-	-	66.6 :	-	-	-
Aluminum	mg/L	D	-	-	-	60.5 :	-	-
Antimony	mg/L	T	-	-	<0.0042 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.003 :	-	-
Arsenic	mg/L	T	-	-	<0.04 J	-	-	-
Arsenic	mg/L	D	-	-	-	<0.04 J	-	-
Barium	mg/L	T	-	-	<0.123 :	-	-	-
Barium	mg/L	D	-	-	-	<0.123 :	-	-
Beryllium	mg/L	T	-	-	0.0284 J	-	-	-
Beryllium	mg/L	D	-	-	-	0.0265 J	-	-
Boron	mg/L	T	-	-	<0.084 :	-	-	-
Boron	mg/L	D	-	-	-	<0.084 :	-	-
Cadmium	mg/L	T	-	-	0.0278 :	-	-	-
Cadmium	mg/L	D	-	-	-	0.0264 :	-	-
Calcium	mg/L	T	-	-	519. :	-	-	-
Calcium	mg/L	D	-	-	-	506. :	-	-
Chromium	mg/L	T	-	-	<0.01 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.01 :	-	-
Cobalt	mg/L	T	-	-	0.254 :	-	-	-
Cobalt	mg/L	D	-	-	-	0.249 :	-	-
Copper	mg/L	T	-	-	1.69 :	-	-	-
Copper	mg/L	D	-	-	-	1.54 :	-	-
Iron	mg/L	T	-	-	2.06 :	-	-	-
Iron	mg/L	D	-	-	-	<0.311 :	-	-
Lead	mg/L	T	-	-	0.017 J	-	-	-
Lead	mg/L	D	-	-	-	0.0091 J	-	-
Magnesium	mg/L	T	-	-	113. :	-	-	-
Magnesium	mg/L	D	-	-	-	111. :	-	-
Manganese	mg/L	T	-	-	17.8 :	-	-	-
Manganese	mg/L	D	-	-	-	17.3 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.023 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.023 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-24 2/7/2003 MMW-24-T01N-GRW GW4	MMW-24 3/5/2003 MMW-24-T01N-GRW GW4	MMW-24 4/9/2003 MMW-24-T01N-GRW GW4	MMW-24 4/9/2003 MMW-24-D01N-GRW GW4	MMW-24 5/8/2003 MMW-24-T01N-GRW GW4	MMW-24 6/5/2003 MMW-24-T01N-GRW GW4
Nickel	mg/L	T	-	-	0.525 :	-	-	-
Nickel	mg/L	D	-	-	-	0.501 :	-	-
Potassium	mg/L	T	-	-	9.41 :	-	-	-
Potassium	mg/L	D	-	-	-	8.27 :	-	-
Selenium	mg/L	T	-	-	0.0077 :	-	-	-
Selenium	mg/L	D	-	-	-	0.0082 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	62.3 :	-	-	-
Sodium	mg/L	D	-	-	-	59.2 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	0.0014 :	-	-	-
Vanadium	mg/L	D	-	-	-	<0.001 :	-	-
Zinc	mg/L	T	-	-	3.66 :	-	-	-
Zinc	mg/L	D	-	-	-	3.58 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	0.017 J	-	-	-
Lead	mg/L	D	-	-	-	0.0091 J	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-24 7/23/2003 MMW-24-T01N-GRW GW4		MMW-24 7/23/2003 MMW-24-D01N-GRW GW4		MMW-24 8/13/2003 MMW-24-T01N-GRW GW4		MMW-24 9/11/2003 MMW-24-T01N-GRW GW4		MMW-24 10/20/2003 MMW-24-T01N-GRW GW4		MMW-24 10/20/2003 MMW-24-D01N-GRW GW4	
Field Measurements														
DO	mg/L	T	3.62	:	-		3.69	:	4.71	:	6.78	:	-	
EH	millivolts	T	224.7	:	-		254.8	:	410.5	:	646.1	:	-	
pH	SU	T	4.9	J	-		4.69	:	4.44	:	5.	J	-	
Specific Conductance	uS/cm	T	3089.	:	-		2818.	:	2828.	:	2977.	:	-	
Temperature	Celsius	T	13.81	:	-		13.62	:	10.58	:	13.12	:	-	
Turbidity	NTU	T	0.	:	-		17.6	:	9.2	:	27.9	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.16	J	-		-		-		<0.13	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<2.4	:	-		-		-		<6.8	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	33.3	:	-		-		-		25.4	:	-	
Fluoride	mg/L	T	42.3	:	-		-		-		39.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	49.5	J	-		-		-		32.6	:	-	
Nitrite	mg/L	T	0.05	:	-		-		-		4.2	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		-		<0.01	:	-	
Phosphorus	mg/L	T	0.024	:	-		-		-		0.017	:	-	
Sulfate	mg/L	T	1670.	J	-		-		-		1620.	J	-	
Total Alkalinity	mg/L	T	<2.4	:	-		-		-		<6.8	:	-	
Total Dissolved Solids	mg/L	T	3660.	:	-		-		-		3190.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	4.6	J	-		-		-		7.4	J	-	
Total Suspended Solids	mg/L	T	<2.3	:	-		-		-		81.3	:	-	
Laboratory Parameters														
pH	SU	T	4.9	J	-		4.69	:	4.44	:	5.	J	-	
Specific Conductance	umhos/cm	T	3020.	J	-		-		-		2740.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1860.	:	-		-		-		1920.	:	-	
Hardness	mg/L	D	-		1820.	:	-		-		-		1940.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24	MMW-24
			Sample Date	7/23/2003	7/23/2003	8/13/2003	9/11/2003	10/20/2003	10/20/2003
			Sample ID	MMW-24-T01N-GRW	MMW-24-D01N-GRW	MMW-24-T01N-GRW	MMW-24-T01N-GRW	MMW-24-T01N-GRW	MMW-24-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	T		57.4 :	-	-	-	71. :	-
Aluminum	mg/L	D		-	56.2 :	-	-	-	75.2 :
Antimony	mg/L	T		<0.047 :	-	-	-	<0.052 :	-
Antimony	mg/L	D		-	<0.047 :	-	-	-	<0.052 :
Arsenic	mg/L	T		<0.048 :	-	-	-	<0.002 :	-
Arsenic	mg/L	D		-	<0.048 :	-	-	-	<0.002 :
Barium	mg/L	T		<0.059 :	-	-	-	<0.115 :	-
Barium	mg/L	D		-	<0.059 :	-	-	-	<0.115 :
Beryllium	mg/L	T		0.0201 :	-	-	-	0.0255 :	-
Beryllium	mg/L	D		-	0.0199 :	-	-	-	0.0278 :
Boron	mg/L	T		<0.048 :	-	-	-	<0.063 :	-
Boron	mg/L	D		-	<0.048 :	-	-	-	<0.063 :
Cadmium	mg/L	T		<0.12 :	-	-	-	<0.13 :	-
Cadmium	mg/L	D		-	<0.12 :	-	-	-	<0.13 :
Calcium	mg/L	T		540. :	-	-	-	560. :	-
Calcium	mg/L	D		-	529. :	-	-	-	542. :
Chromium	mg/L	T		<0.19 :	-	-	-	<0.23 J	-
Chromium	mg/L	D		-	<0.19 :	-	-	-	<0.23 J
Cobalt	mg/L	T		<0.37 :	-	-	-	0.324 :	-
Cobalt	mg/L	D		-	<0.37 :	-	-	-	0.337 :
Copper	mg/L	T		0.604 J	-	-	-	1.66 :	-
Copper	mg/L	D		-	0.625 J	-	-	-	1.86 :
Iron	mg/L	T		<0.333 :	-	-	-	<4.55 :	-
Iron	mg/L	D		-	<0.333 :	-	-	-	<4.55 :
Lead	mg/L	T		0.0117 :	-	-	-	0.0162 :	-
Lead	mg/L	D		-	0.0112 :	-	-	-	0.0197 :
Magnesium	mg/L	T		123. :	-	-	-	127. :	-
Magnesium	mg/L	D		-	120. :	-	-	-	142. :
Manganese	mg/L	T		18.3 :	-	-	-	18.6 :	-
Manganese	mg/L	D		-	17.9 :	-	-	-	20.7 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T		<0.017 :	-	-	-	<0.011 :	-
Molybdenum	mg/L	D		-	<0.017 :	-	-	-	<0.011 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-24 7/23/2003 MMW-24-T01N-GRW	MMW-24 7/23/2003 MMW-24-D01N-GRW	MMW-24 8/13/2003 MMW-24-T01N-GRW	MMW-24 9/11/2003 MMW-24-T01N-GRW	MMW-24 10/20/2003 MMW-24-T01N-GRW	MMW-24 10/20/2003 MMW-24-D01N-GRW
			GW4	GW4	GW4	GW4	GW4	GW4
Nickel	mg/L	T	<0.44 J	-	-	-	0.702 :	-
Nickel	mg/L	D	-	<0.44 J	-	-	-	0.726 :
Potassium	mg/L	T	<37.1 :	-	-	-	<63.8 :	-
Potassium	mg/L	D	-	<37.1 :	-	-	-	<63.8 :
Selenium	mg/L	T	0.0089 :	-	-	-	0.0119 :	-
Selenium	mg/L	D	-	<0.008 J	-	-	-	0.0138 :
Silver	mg/L	T	<0.001 J	-	-	-	<0.001 :	-
Silver	mg/L	D	-	<0.001 J	-	-	-	<0.001 :
Sodium	mg/L	T	<53.2 :	-	-	-	<99.1 :	-
Sodium	mg/L	D	-	<53.2 :	-	-	-	<99.1 :
Thallium	mg/L	T	<0.001 :	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	T	<0.002 :	-	-	-	<0.001 :	-
Vanadium	mg/L	D	-	<0.002 :	-	-	-	<0.001 :
Zinc	mg/L	T	3.44 :	-	-	-	4.56 :	-
Zinc	mg/L	D	-	3.47 :	-	-	-	5.14 :
Isotopes								
Lead	mg/L	T	0.0117 :	-	-	-	0.0162 :	-
Lead	mg/L	D	-	0.0112 :	-	-	-	0.0197 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-24 11/4/2003 MMW-24-T01N-GRW GW4		MMW-24 12/9/2003 MMW-24-T01N-GRW GW4		MMW-24 1/11/2004 MMW-24-T01N-GRW GW4		MMW-24 1/11/2004 MMW-24-D01N-GRW GW4		MMW-24 2/23/2004 MMW-24-T01N-GRW GW4		MMW-24 2/23/2004 MMW-24-D01N-GRW GW4	
Field Measurements														
DO	mg/L	T	4.33	:	3.79	:	0.4	:	-		3.18	:	-	
EH	millivolts	T	225.6	:	231.2	:	344.7	:	-		456.7	:	-	
pH	SU	T	4.66	:	4.81	:	4.8	J	-		4.26	:	-	
Specific Conductance	uS/cm	T	2743.	:	2584.	:	2718.	:	-		3088.	:	-	
Temperature	Celsius	T	9.58	:	8.86	:	8.82	:	-		8.45	:	-	
Turbidity	NTU	T	34.1	:	44.5	:	1.2	:	-		0.6	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.085	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		<2.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		19.9	:	-		-		-	
Fluoride	mg/L	T	-		-		36.2	:	-		48.	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		37.4	J	-		-		-	
Nitrite	mg/L	T	-		-		2.6	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	:	-		-		-	
Phosphorus	mg/L	T	-		-		<0.01	:	-		-		-	
Sulfate	mg/L	T	-		-		1710.	J	-		1930.	:	-	
Total Alkalinity	mg/L	T	-		-		<2.	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		2870.	:	-		3120.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		6.1	:	-		-		-	
Total Suspended Solids	mg/L	T	-		-		3.	:	-		<1.4	:	-	
Laboratory Parameters														
pH	SU	T	4.66	:	4.81	:	4.8	J	-		4.26	:	-	
Specific Conductance	umhos/cm	T	-		-		2700.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		1710.	:	-		1820.	:	-	
Hardness	mg/L	D	-		-		-		1780.	:	-		1720.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-24 11/4/2003 MMW-24-T01N-GRW	MMW-24 12/9/2003 MMW-24-T01N-GRW	MMW-24 1/11/2004 MMW-24-T01N-GRW	MMW-24 1/11/2004 MMW-24-D01N-GRW	MMW-24 2/23/2004 MMW-24-T01N-GRW	MMW-24 2/23/2004 MMW-24-D01N-GRW
			GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	T	-	-	52.1 :	-	67.3 :	-
Aluminum	mg/L	D	-	-	-	55.1 :	-	64.5 :
Antimony	mg/L	T	-	-	<0.029 :	-	<0.029 :	-
Antimony	mg/L	D	-	-	-	<0.029 :	-	<0.029 :
Arsenic	mg/L	T	-	-	<0.028 :	-	<0.0324 :	-
Arsenic	mg/L	D	-	-	-	<0.028 :	-	<0.028 :
Barium	mg/L	T	-	-	<0.053 :	-	<0.053 :	-
Barium	mg/L	D	-	-	-	<0.053 :	-	<0.053 :
Beryllium	mg/L	T	-	-	0.019 :	-	0.0209 :	-
Beryllium	mg/L	D	-	-	-	0.02 :	-	0.0221 :
Boron	mg/L	T	-	-	<0.0254 :	-	<0.023 :	-
Boron	mg/L	D	-	-	-	<0.023 :	-	<0.023 :
Cadmium	mg/L	T	-	-	<0.07 J	-	<0.07 :	-
Cadmium	mg/L	D	-	-	-	<0.07 :	-	<0.07 J
Calcium	mg/L	T	-	-	513. :	-	533. :	-
Calcium	mg/L	D	-	-	-	534. :	-	502. :
Chromium	mg/L	T	-	-	<0.11 :	-	<0.11 :	-
Chromium	mg/L	D	-	-	-	0.111 :	-	<0.11 :
Cobalt	mg/L	T	-	-	<0.31 :	-	<0.31 :	-
Cobalt	mg/L	D	-	-	-	<0.31 :	-	<0.31 :
Copper	mg/L	T	-	-	1.2 :	-	1.51 :	-
Copper	mg/L	D	-	-	-	1.35 :	-	1.52 :
Iron	mg/L	T	-	-	<3.73 :	-	<3.73 :	-
Iron	mg/L	D	-	-	-	<3.73 :	-	<3.73 :
Lead	mg/L	T	-	-	0.0129 :	-	<0.0186 :	-
Lead	mg/L	D	-	-	-	0.0134 :	-	<0.0191 :
Magnesium	mg/L	T	-	-	104. :	-	118. :	-
Magnesium	mg/L	D	-	-	-	109. :	-	113. :
Manganese	mg/L	T	-	-	16.2 :	-	18. :	-
Manganese	mg/L	D	-	-	-	17.1 :	-	17.2 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.024 :	-	<0.024 :	-
Molybdenum	mg/L	D	-	-	-	<0.024 :	-	<0.024 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-24 11/4/2003 MMW-24-T01N-GRW GW4	MMW-24 12/9/2003 MMW-24-T01N-GRW GW4	MMW-24 1/11/2004 MMW-24-T01N-GRW GW4	MMW-24 1/11/2004 MMW-24-D01N-GRW GW4	MMW-24 2/23/2004 MMW-24-T01N-GRW GW4	MMW-24 2/23/2004 MMW-24-D01N-GRW GW4
Nickel	mg/L	T	-	-	0.501 :	-	<0.348 :	-
Nickel	mg/L	D	-	-	-	0.588 :	-	<0.587 :
Potassium	mg/L	T	-	-	<24.3 :	-	<24.3 :	-
Potassium	mg/L	D	-	-	-	30. :	-	<24.3 :
Selenium	mg/L	T	-	-	0.0078 J	-	0.0108 :	-
Selenium	mg/L	D	-	-	-	0.0105 :	-	0.0086 :
Silver	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	-	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	-	-	<49. :	-	<49. :	-
Sodium	mg/L	D	-	-	-	54.9 :	-	94. :
Thallium	mg/L	T	-	-	<0.001 :	-	<0.0018 :	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	<0.0019 :
Vanadium	mg/L	T	-	-	<0.002 :	-	<0.0046 :	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	<0.0051 :
Zinc	mg/L	T	-	-	3.38 :	-	4.1 :	-
Zinc	mg/L	D	-	-	-	3.52 :	-	3.91 :
Isotopes								
Delta D	per mil	T	-	-	-	-	-90. :	-
Delta O-18	per mil	T	-	-	-	-	-12.3 :	-
Lead	mg/L	T	-	-	0.0129 :	-	<0.0186 :	-
Lead	mg/L	D	-	-	-	0.0134 :	-	<0.0191 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MMW-24	3/22/2004	MMW-24	GW4	MMW-24	4/20/2004	MMW-24-T01N-GRW	GW4	MMW-24	4/20/2004	MMW-24-D01N-GRW	GW4	MMW-25B	11/1/2002	MMW-25B-T01N-GRW	GW4	MMW-25B	11/1/2002	MMW-25B-D01N-GRW	GW4
Field Measurements																						
DO	mg/L	T	-				7.1	:			-				-				6.51	:	-	
EH	millivolts	T	-				530.9	:			-				-				214.5	:	-	
pH	SU	T	-				5.1	J			-				-				6.88	:	-	
Specific Conductance	uS/cm	T	-				3026.	:			-				-				2562.	:	-	
Temperature	Celsius	T	-				10.01	:			-				-				10.45	:	-	
Turbidity	NTU	T	-				0.4	:			-				-				12.21	:	-	
General Chemistry																						
Ammonia	mg/L	T	-				<0.056	:			-				-				<0.17	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-				<1.	:			-				-				188.	:	-	
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				-				<1.	:	-	
Chloride	mg/L	T	-				29.	:			-				-				31.	:	-	
Fluoride	mg/L	T	-				47.5	:			-				1.7	J			-		-	
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				-				<1.	:	-	
Nitrate	mg/L	T	-				51.5	:			-				-				<0.4	J	-	
Nitrite	mg/L	T	-				<0.005	:			-				-				<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-				<0.01	:			-				-				<0.01	J	-	
Phosphorus	mg/L	T	-				0.015	:			-				-				<0.01	:	-	
Sulfate	mg/L	T	-				1990.	:			-				-				1530.	:	-	
Total Alkalinity	mg/L	T	-				<1.	:			-				-				188.	:	-	
Total Dissolved Solids	mg/L	T	-				3020.	:			-				-				2440.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				-				<0.24	:	-	
Total Organic Carbon	mg/L	T	-				3.2	J			-				-				1.3	:	-	
Total Suspended Solids	mg/L	T	-				<1.9	J			-				-				58.9	:	-	
Laboratory Parameters																						
pH	SU	T	-				5.1	J			-				-				6.88	:	-	
Specific Conductance	umhos/cm	T	-				2570.	J			-				-				-		-	
Inorganics																						
Cyanide	mg/L	T	-				<0.01	:			-				-				<0.01	J	-	
Physical Properties																						
Hardness	mg/L	T	-				1640.	:			-				-				1660.	:	-	
Hardness	mg/L	D	-				-				1610.	:			-				-		1670.	:
Metals																						

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-24	3/22/2004	MMW-24	GW4
			MMW-24	4/20/2004	MMW-24-T01N-GRW	GW4
			MMW-24	4/20/2004	MMW-24-D01N-GRW	GW4
			MMW-25B	11/1/2002	MMW-25B-T01N-GRWRE	GW4
			MMW-25B	11/1/2002	MMW-25B-T01N-GRW	GW4
			MMW-25B	11/1/2002	MMW-25B-D01N-GRW	GW4
Aluminum	mg/L	T	-	63.9 :	-	-	0.578 :	-
Aluminum	mg/L	D	-	-	62.1 :	-	-	<0.006 :
Antimony	mg/L	T	-	<0.053 :	-	-	<0.0004 :	-
Antimony	mg/L	D	-	-	<0.053 :	-	-	<0.0004 :
Arsenic	mg/L	T	-	<0.037 :	-	-	<0.0004 :	-
Arsenic	mg/L	D	-	-	<0.037 :	-	-	<0.0004 :
Barium	mg/L	T	-	<0.049 :	-	-	0.0154 :	-
Barium	mg/L	D	-	-	<0.049 :	-	-	0.0104 :
Beryllium	mg/L	T	-	0.0225 :	-	-	0.00022 :	-
Beryllium	mg/L	D	-	-	0.0254 :	-	-	<0.0002 :
Boron	mg/L	T	-	<0.036 :	-	-	0.0126 :	-
Boron	mg/L	D	-	-	<0.036 :	-	-	0.0121 :
Cadmium	mg/L	T	-	<0.0756 :	-	-	0.00052 J	-
Cadmium	mg/L	D	-	-	<0.0399 :	-	-	0.00057 J
Calcium	mg/L	T	-	486. :	-	-	572. :	-
Calcium	mg/L	D	-	-	476. :	-	-	574. :
Chromium	mg/L	T	-	<0.08 :	-	-	0.0053 :	-
Chromium	mg/L	D	-	-	<0.08 :	-	-	<0.0046 :
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	-	0.265 :	-	-	<0.0022 :	-
Cobalt	mg/L	D	-	-	0.222 :	-	-	<0.0022 :
Copper	mg/L	T	-	1.68 :	-	-	0.0085 :	-
Copper	mg/L	D	-	-	1.47 :	-	-	<0.006 :
Iron	mg/L	T	-	<1.92 J	-	-	1.11 :	-
Iron	mg/L	D	-	-	<1.92 :	-	-	0.0409 :
Lead	mg/L	T	-	0.0132 :	-	-	0.0077 :	-
Lead	mg/L	D	-	-	0.0142 :	-	-	<0.0002 :
Magnesium	mg/L	T	-	104. :	-	-	56.1 :	-
Magnesium	mg/L	D	-	-	103. :	-	-	56.1 :
Manganese	mg/L	T	-	16.7 :	-	-	0.0649 :	-
Manganese	mg/L	D	-	-	16.5 :	-	-	0.0052 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	-	<0.014 :	-	-	0.0336 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-24 3/22/2004 MMW-24 GW4	MMW-24 4/20/2004 MMW-24-T01N-GRW GW4	MMW-24 4/20/2004 MMW-24-D01N-GRW GW4	MMW-25B 11/1/2002 MMW-25B-T01N-GRWRE GW4	MMW-25B 11/1/2002 MMW-25B-T01N-GRW GW4	MMW-25B 11/1/2002 MMW-25B-D01N-GRW GW4
Molybdenum	mg/L	D	-	-	<0.014 :	-	-	0.0358 :
Nickel	mg/L	T	-	0.477 :	-	-	<0.0004 J	-
Nickel	mg/L	D	-	-	0.434 :	-	-	<0.0004 J
Potassium	mg/L	T	-	<10.9 J	-	-	7.22 :	-
Potassium	mg/L	D	-	-	<10.9 J	-	-	7.18 :
Selenium	mg/L	T	-	0.0106 :	-	-	0.0066 :	-
Selenium	mg/L	D	-	-	0.0114 :	-	-	0.0062 :
Silver	mg/L	T	-	<0.001 :	-	-	<0.0002 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.0002 :
Sodium	mg/L	T	-	<58.6 :	-	-	49. :	-
Sodium	mg/L	D	-	-	<53.5 :	-	-	49.2 :
Thallium	mg/L	T	-	<0.001 :	-	-	<0.0002 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.0002 :
Vanadium	mg/L	T	-	<0.002 :	-	-	0.0007 :	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	<0.0002 :
Zinc	mg/L	T	-	3.72 :	-	-	0.304 :	-
Zinc	mg/L	D	-	-	3.77 :	-	-	0.288 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	0.0132 :	-	-	0.0077 :	-
Lead	mg/L	D	-	-	0.0142 :	-	-	<0.0002 :
Helium Isotope and Tritium								
3H-3He	Years	T	1.95 :	-	-	-	-	-
DEL He3	%	T	2.9 :	-	-	-	-	-
DEL He4	%	T	9.6 :	-	-	-	-	-
He Corr	1E-8cc/g	T	5.189 :	-	-	-	-	-
Tritium TU	TU	T	6.466 :	-	-	-	-	-
Uncert Age	Years	T	0.7 :	-	-	-	-	-
Uncert TU	TU	T	0.194 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-25B 12/3/2002 MMW-25B-T01N-GR	MMW-25B 1/10/2003 MMW-25B-T01N-GR	MMW-25B 1/10/2003 MMW-25B-D01N-GR	MMW-25B 2/6/2003 MMW-25B-T01N-GR	MMW-25B 3/5/2003 MMW-25B-T01N-GR	MMW-25B 4/6/2003 MMW-25B-T01N-GR
			W GW4	W GW4	W GW4	W GW4	W GW4	W GW4
Field Measurements								
DO	mg/L	T	6.36 :	12.61 :	-	4.24 :	9.1 :	4.2 :
EH	millivolts	T	180. :	199.5 :	-	299.7 :	322. :	184.2 :
pH	SU	T	6.98 :	6.28 :	-	6.74 :	6.56 :	7.2 J
Specific Conductance	uS/cm	T	2568. :	2382. :	-	2373. :	2373. :	2492. :
Temperature	Celsius	T	3.38 :	8.18 :	-	9.65 :	8.84 :	9.33 :
Turbidity	NTU	T	139.8 :	1.3 :	-	60.4 :	17. :	109.8 :
General Chemistry								
Ammonia	mg/L	T	-	<0.19 :	-	-	-	<0.049 :
Bicarbonate (as CaCO3)	mg/L	T	-	181. :	-	-	-	186. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Chloride	mg/L	T	-	28.6 :	-	-	-	28.7 :
Fluoride	mg/L	T	-	1.5 :	-	-	-	1.6 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T	-	<0.4 J	-	-	-	<0.4 J
Nitrite	mg/L	T	-	<0.005 J	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.015 J	-	-	-	<0.01 J
Phosphorus	mg/L	T	-	0.095 :	-	-	-	0.017 :
Sulfate	mg/L	T	-	1370. J	-	-	-	1300. J
Total Alkalinity	mg/L	T	-	181. :	-	-	-	186. :
Total Dissolved Solids	mg/L	T	-	2370. :	-	-	-	2230. J
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	1.6 :	-	-	-	<1.3 J
Total Suspended Solids	mg/L	T	-	35.4 :	-	-	-	22.8 :
Laboratory Parameters								
pH	SU	T	6.98 :	6.28 :	-	6.74 :	6.56 :	7.2 J
Specific Conductance	umhos/cm	T	-	-	-	-	-	2410. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	1680. :	-	-	-	1700. :
Hardness	mg/L	D	-	-	1610. :	-	-	-
Metals								

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 12/3/2002 MMW-25B-T01N-GRW GW4		MMW-25B 1/10/2003 MMW-25B-T01N-GRW GW4		MMW-25B 1/10/2003 MMW-25B-D01N-GRW GW4		MMW-25B 2/6/2003 MMW-25B-T01N-GRW GW4		MMW-25B 3/5/2003 MMW-25B-T01N-GRW GW4		MMW-25B 4/6/2003 MMW-25B-T01N-GRW GW4	
Aluminum	mg/L	T	-		<0.142	:	-		-		-		<0.426	:
Aluminum	mg/L	D	-		-		<0.142	J	-		-		-	
Antimony	mg/L	T	-		<0.0006	:	-		-		-		<0.00069	J
Antimony	mg/L	D	-		-		<0.0006	:	-		-		-	
Arsenic	mg/L	T	-		0.0011	:	-		-		-		<0.0004	:
Arsenic	mg/L	D	-		-		0.00058	:	-		-		-	
Barium	mg/L	T	-		0.161	:	-		-		-		0.0135	:
Barium	mg/L	D	-		-		0.0106	:	-		-		-	
Beryllium	mg/L	T	-		0.0012	:	-		-		-		<0.0003	:
Beryllium	mg/L	D	-		-		<0.0002	:	-		-		-	
Boron	mg/L	T	-		<0.0147	:	-		-		-		0.0162	:
Boron	mg/L	D	-		-		<0.0132	:	-		-		-	
Cadmium	mg/L	T	-		0.00059	:	-		-		-		<0.0005	:
Cadmium	mg/L	D	-		-		0.00051	:	-		-		-	
Calcium	mg/L	T	-		578.	:	-		-		-		589.	J
Calcium	mg/L	D	-		-		555.	:	-		-		-	
Chromium	mg/L	T	-		0.0172	:	-		-		-		<0.001	:
Chromium	mg/L	D	-		-		<0.0037	:	-		-		-	
Cobalt	mg/L	T	-		<0.0036	:	-		-		-		<0.0038	:
Cobalt	mg/L	D	-		-		<0.0016	:	-		-		-	
Copper	mg/L	T	-		0.0249	:	-		-		-		0.0036	:
Copper	mg/L	D	-		-		<0.0053	:	-		-		-	
Iron	mg/L	T	-		10.1	:	-		-		-		<0.422	:
Iron	mg/L	D	-		-		<0.489	:	-		-		-	
Lead	mg/L	T	-		0.0532	:	-		-		-		0.0034	:
Lead	mg/L	D	-		-		<0.0002	:	-		-		-	
Magnesium	mg/L	T	-		57.1	:	-		-		-		56.1	:
Magnesium	mg/L	D	-		-		54.1	:	-		-		-	
Manganese	mg/L	T	-		0.461	:	-		-		-		0.0238	:
Manganese	mg/L	D	-		-		<0.005	:	-		-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		0.0336	:	-		-		-		0.0275	:
Molybdenum	mg/L	D	-		-		0.0303	:	-		-		-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 12/3/2002 MMW-25B-T01N-GRW GW4		MMW-25B 1/10/2003 MMW-25B-T01N-GRW GW4		MMW-25B 1/10/2003 MMW-25B-D01N-GRW GW4		MMW-25B 2/6/2003 MMW-25B-T01N-GRW GW4		MMW-25B 3/5/2003 MMW-25B-T01N-GRW GW4		MMW-25B 4/6/2003 MMW-25B-T01N-GRW GW4	
Nickel	mg/L	T	-		0.0088	:	-		-		-		<0.003	:
Nickel	mg/L	D	-		-		<0.0015	:	-		-		-	
Potassium	mg/L	T	-		10.1	:	-		-		-		5.58	:
Potassium	mg/L	D	-		-		6.89	:	-		-		-	
Selenium	mg/L	T	-		0.005	:	-		-		-		0.0037	:
Selenium	mg/L	D	-		-		0.0053	:	-		-		-	
Silver	mg/L	T	-		0.00037	:	-		-		-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	:	-		-		-	
Sodium	mg/L	T	-		43.7	:	-		-		-		44.5	:
Sodium	mg/L	D	-		-		41.9	:	-		-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		-		-	
Vanadium	mg/L	T	-		0.0058	:	-		-		-		<0.0002	:
Vanadium	mg/L	D	-		-		<0.0004	:	-		-		-	
Zinc	mg/L	T	-		0.336	:	-		-		-		0.246	:
Zinc	mg/L	D	-		-		<0.242	:	-		-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		-		-		<0.00025	:
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		-		-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		-		-		<0.01	:
Isotopes														
Lead	mg/L	T	-		0.0532	:	-		-		-		0.0034	:
Lead	mg/L	D	-		-		<0.0002	:	-		-		-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 4/6/2003 MMW-25B-D01N-GR GW4	MMW-25B 5/8/2003 MMW-25B-T01N-GR GW4	MMW-25B 6/5/2003 MMW-25B-T01N-GR GW4	MMW-25B 7/18/2003 MMW-25B-T01N-GR GW4	MMW-25B 7/18/2003 MMW-25B-D01N-GR GW4	MMW-25B 8/12/2003 MMW-25B-T01N-GR GW4
Field Measurements								
DO	mg/L	T	-	6.53 :	2.75 :	3.56 :	-	4.24 :
EH	millivolts	T	-	119.1 :	151.4 :	610.5 :	-	376.5 :
pH	SU	T	-	6.89 :	6.87 :	7. J	-	6.86 :
Specific Conductance	uS/cm	T	-	2521. :	2492. :	2653. :	-	2432. :
Temperature	Celsius	T	-	15.63 :	13.18 :	17.41 :	-	25.11 :
Turbidity	NTU	T	-	10.8 :	17.4 :	2.8 :	-	25.1 :
General Chemistry								
Ammonia	mg/L	T	-	-	-	<0.17 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	185. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Chloride	mg/L	T	-	-	-	28.2 :	-	-
Fluoride	mg/L	T	-	-	-	1.6 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	-
Nitrate	mg/L	T	-	-	-	<0.2 J	-	-
Nitrite	mg/L	T	-	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	-	-	-	<0.014 J	-	-
Phosphorus	mg/L	T	-	-	-	0.024 :	-	-
Sulfate	mg/L	T	-	-	-	1440. J	-	-
Total Alkalinity	mg/L	T	-	-	-	185. :	-	-
Total Dissolved Solids	mg/L	T	-	-	-	2610. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	-	-	<1.9 J	-	-
Total Suspended Solids	mg/L	T	-	-	-	5.6 :	-	-
Laboratory Parameters								
pH	SU	T	-	6.89 :	6.87 :	7. J	-	6.86 :
Specific Conductance	umhos/cm	T	-	-	-	2180. J	-	-
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	-	-	1690. :	-	-
Hardness	mg/L	D	1740. :	-	-	-	1610. :	-
Metals								

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 4/6/2003 MMW-25B-D01N-GR GW4	MMW-25B 5/8/2003 MMW-25B-T01N-GR GW4	MMW-25B 6/5/2003 MMW-25B-T01N-GR GW4	MMW-25B 7/18/2003 MMW-25B-T01N-GR GW4	MMW-25B 7/18/2003 MMW-25B-D01N-GR GW4	MMW-25B 8/12/2003 MMW-25B-T01N-GR GW4
Aluminum	mg/L	T	-	-	-	<0.631 :	-	-
Aluminum	mg/L	D	<0.426 :	-	-	-	<0.631 :	-
Antimony	mg/L	T	-	-	-	<0.001 :	-	-
Antimony	mg/L	D	<0.0006 J	-	-	-	<0.001 :	-
Arsenic	mg/L	T	-	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	-	0.0134 :	-	-
Barium	mg/L	D	0.0129 :	-	-	-	0.0125 :	-
Beryllium	mg/L	T	-	-	-	<0.0002 :	-	-
Beryllium	mg/L	D	<0.0003 :	-	-	-	<0.0002 :	-
Boron	mg/L	T	-	-	-	0.0116 :	-	-
Boron	mg/L	D	0.0107 :	-	-	-	0.0114 :	-
Cadmium	mg/L	T	-	-	-	<0.0006 :	-	-
Cadmium	mg/L	D	0.00064 :	-	-	-	<0.0006 :	-
Calcium	mg/L	T	-	-	-	583. :	-	-
Calcium	mg/L	D	601. J	-	-	-	557. :	-
Chromium	mg/L	T	-	-	-	<0.0014 J	-	-
Chromium	mg/L	D	<0.0011 :	-	-	-	<0.0014 J	-
Cobalt	mg/L	T	-	-	-	<0.002 :	-	-
Cobalt	mg/L	D	<0.0038 :	-	-	-	<0.002 :	-
Copper	mg/L	T	-	-	-	<0.0024 :	-	-
Copper	mg/L	D	0.0034 :	-	-	-	<0.0024 :	-
Iron	mg/L	T	-	-	-	<0.667 :	-	-
Iron	mg/L	D	<0.422 :	-	-	-	<0.667 :	-
Lead	mg/L	T	-	-	-	<0.00071 :	-	-
Lead	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	-	56.4 :	-	-
Magnesium	mg/L	D	57.1 :	-	-	-	53.9 :	-
Manganese	mg/L	T	-	-	-	<0.019 :	-	-
Manganese	mg/L	D	<0.013 :	-	-	-	<0.019 :	-
Mercury	mg/L	T	-	-	-	<0.0001 J	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	<0.0001 J	-
Molybdenum	mg/L	T	-	-	-	0.0282 :	-	-
Molybdenum	mg/L	D	0.0266 :	-	-	-	0.0259 :	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 4/6/2003 MMW-25B-D01N-GRW GW4	MMW-25B 5/8/2003 MMW-25B-T01N-GRW GW4	MMW-25B 6/5/2003 MMW-25B-T01N-GRW GW4	MMW-25B 7/18/2003 MMW-25B-T01N-GRW GW4	MMW-25B 7/18/2003 MMW-25B-D01N-GRW GW4	MMW-25B 8/12/2003 MMW-25B-T01N-GRW GW4
Nickel	mg/L	T	-	-	-	<0.0021 J	-	-
Nickel	mg/L	D	<0.003 :	-	-	-	<0.0021 J	-
Potassium	mg/L	T	-	-	-	7.17 :	-	-
Potassium	mg/L	D	5.46 :	-	-	-	6.73 :	-
Selenium	mg/L	T	-	-	-	0.0042 :	-	-
Selenium	mg/L	D	0.0033 :	-	-	-	0.0043 J	-
Silver	mg/L	T	-	-	-	<0.0002 J	-	-
Silver	mg/L	D	<0.0002 :	-	-	-	<0.0002 J	-
Sodium	mg/L	T	-	-	-	46.1 :	-	-
Sodium	mg/L	D	44.5 :	-	-	-	42.6 :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	<0.0004 :	-	-
Vanadium	mg/L	D	<0.0002 :	-	-	-	<0.0004 :	-
Zinc	mg/L	T	-	-	-	0.273 :	-	-
Zinc	mg/L	D	0.243 :	-	-	-	0.248 :	-
Isotopes								
Lead	mg/L	T	-	-	-	<0.00071 :	-	-
Lead	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction												
Site ID			MMW-25B		MMW-25B		MMW-25B		MMW-25B		MMW-25B		MMW-25B	
Sample Date			9/11/2003		10/21/2003		10/21/2003		11/4/2003		12/9/2003		1/14/2004	
Sample ID			MMW-25B-T01N-GRW		MMW-25B-T01N-GRW		MMW-25B-D01N-GRW		MMW-25B-T01N-GRW		MMW-25B-T01N-GRW		MMW-25B-T01N-GRW	
Exposure Area			GW4		GW4		GW4		GW4		GW4		GW4	
Field Measurements														
DO	mg/L	T	4.73	:	6.69	:	-		6.03	:	6.09	:	4.76	:
EH	millivolts	T	365.8	:	496.5	:	-		112.2	:	135.1	:	207.2	:
pH	SU	T	6.78	:	7.1	J	-		6.82	:	6.85	:	7.	J
Specific Conductance	uS/cm	T	2436.	:	2386.	:	-		2286.	:	2287.	:	2410.	:
Temperature	Celsius	T	13.48	:	16.82	:	-		9.38	:	0.7	:	6.	:
Turbidity	NTU	T	11.9	:	8.9	:	-		26.1	:	10.4	:	18.9	:
General Chemistry														
Ammonia	mg/L	T	-		<0.04	J	-		-		-		<0.058	J
Bicarbonate (as CaCO3)	mg/L	T	-		188.	:	-		-		-		186.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		26.6	:	-		-		-		30.1	:
Fluoride	mg/L	T	-		1.6	:	-		-		-		1.5	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		<0.2	J	-		-		-		<0.32	:
Nitrite	mg/L	T	-		<0.005	J	-		-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		-		<0.01	:
Phosphorus	mg/L	T	-		<0.01	:	-		-		-		<0.01	:
Sulfate	mg/L	T	-		1300.	J	-		-		-		1370.	:
Total Alkalinity	mg/L	T	-		188.	:	-		-		-		186.	:
Total Dissolved Solids	mg/L	T	-		2430.	:	-		-		-		2310.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.8	J	-		-		-		<0.85	J
Total Suspended Solids	mg/L	T	-		8.9	:	-		-		-		9.5	:
Laboratory Parameters														
pH	SU	T	6.78	:	7.1	J	-		6.82	:	6.85	:	7.	J
Specific Conductance	umhos/cm	T	-		2600.	J	-		-		-		2070.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1690.	:	-		-		-		1600.	:
Hardness	mg/L	D	-		-		1800.	:	-		-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 9/11/2003 MMW-25B-T01N-GR W GW4	MMW-25B 10/21/2003 MMW-25B-T01N-GR W GW4	MMW-25B 10/21/2003 MMW-25B-D01N-GR W GW4	MMW-25B 11/4/2003 MMW-25B-T01N-GR W GW4	MMW-25B 12/9/2003 MMW-25B-T01N-GR W GW4	MMW-25B 1/14/2004 MMW-25B-T01N-GR W GW4
Aluminum	mg/L	T	-	<0.221 J	-	-	-	<0.621 :
Aluminum	mg/L	D	-	-	<0.221 J	-	-	-
Antimony	mg/L	T	-	<0.001 :	-	-	-	<0.0017 :
Antimony	mg/L	D	-	-	<0.001 :	-	-	-
Arsenic	mg/L	T	-	<0.0004 :	-	-	-	0.00029 :
Arsenic	mg/L	D	-	-	0.00063 :	-	-	-
Barium	mg/L	T	-	0.0134 :	-	-	-	<0.0188 :
Barium	mg/L	D	-	-	0.0118 :	-	-	-
Beryllium	mg/L	T	-	<0.00058 :	-	-	-	<0.001 :
Beryllium	mg/L	D	-	-	<0.00057 :	-	-	-
Boron	mg/L	T	-	0.0092 :	-	-	-	0.0136 :
Boron	mg/L	D	-	-	0.0104 :	-	-	-
Cadmium	mg/L	T	-	<0.00067 :	-	-	-	<0.0007 J
Cadmium	mg/L	D	-	-	0.00069 :	-	-	-
Calcium	mg/L	T	-	585. :	-	-	-	552. :
Calcium	mg/L	D	-	-	624. :	-	-	-
Chromium	mg/L	T	-	<0.0011 J	-	-	-	<0.0057 :
Chromium	mg/L	D	-	-	<0.0011 J	-	-	-
Cobalt	mg/L	T	-	<0.0029 :	-	-	-	<0.0037 :
Cobalt	mg/L	D	-	-	<0.0029 :	-	-	-
Copper	mg/L	T	-	<0.0022 :	-	-	-	<0.0035 :
Copper	mg/L	D	-	-	<0.0022 :	-	-	-
Iron	mg/L	T	-	<0.278 :	-	-	-	<0.423 :
Iron	mg/L	D	-	-	<0.278 :	-	-	-
Lead	mg/L	T	-	0.00048 :	-	-	-	0.00088 :
Lead	mg/L	D	-	-	<0.0004 :	-	-	-
Magnesium	mg/L	T	-	56.2 :	-	-	-	53.4 :
Magnesium	mg/L	D	-	-	59.9 :	-	-	-
Manganese	mg/L	T	-	<0.012 :	-	-	-	<0.019 :
Manganese	mg/L	D	-	-	<0.012 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	0.033 :	-	-	-	0.0286 :
Molybdenum	mg/L	D	-	-	0.0318 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	MMW-25B 9/11/2003 MMW-25B-T01N-GRW GW4		MMW-25B 10/21/2003 MMW-25B-T01N-GRW GW4		MMW-25B 10/21/2003 MMW-25B-D01N-GRW GW4		MMW-25B 11/4/2003 MMW-25B-T01N-GRW GW4		MMW-25B 12/9/2003 MMW-25B-T01N-GRW GW4		MMW-25B 1/14/2004 MMW-25B-T01N-GRW GW4	
Nickel	mg/L		T	-		<0.0024	:	-		-		-		<0.0168	:
Nickel	mg/L		D	-		-		<0.0024	:	-		-		-	
Potassium	mg/L		T	-		6.08	:	-		-		-		6.57	:
Potassium	mg/L		D	-		-		6.44	:	-		-		-	
Selenium	mg/L		T	-		0.0064	:	-		-		-		0.0037	J
Selenium	mg/L		D	-		-		0.0064	:	-		-		-	
Silver	mg/L		T	-		<0.0002	:	-		-		-		<0.0002	:
Silver	mg/L		D	-		-		<0.0002	:	-		-		-	
Sodium	mg/L		T	-		41.6	:	-		-		-		42.6	:
Sodium	mg/L		D	-		-		45.2	:	-		-		-	
Thallium	mg/L		T	-		<0.0002	:	-		-		-		<0.0002	:
Thallium	mg/L		D	-		-		<0.0002	:	-		-		-	
Vanadium	mg/L		T	-		<0.0002	:	-		-		-		0.00023	:
Vanadium	mg/L		D	-		-		<0.0002	:	-		-		-	
Zinc	mg/L		T	-		<0.276	:	-		-		-		0.237	:
Zinc	mg/L		D	-		-		<0.286	:	-		-		-	
Isotopes															
Lead	mg/L		T	-		0.00048	:	-		-		-		0.00088	:
Lead	mg/L		D	-		-		<0.0004	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 1/14/2004 MMW-25B-D01N-GRW GW4 T		MMW-25B 4/22/2004 MMW-25B-T01N-GRW GW4 T		MMW-25B 4/22/2004 MMW-25B-D01N-GRW GW4 D		MMW-28B 11/5/2002 MMW-28B-T01N-GRWRE GW6 T		MMW-28B 11/5/2002 MMW-28B-T01N-GRW GW6 T		MMW-28B 11/5/2002 MMW-28B-D01N-GRWRE GW6 D	
Field Measurements														
DO	mg/L	T	-		1.94	:	-		-		2.63	:	-	
EH	millivolts	T	-		168.8	:	-		-		450.8	:	-	
pH	SU	T	-		7.3	J	-		-		4.48	:	-	
Specific Conductance	uS/cm	T	-		2464.	:	-		-		888.	:	-	
Temperature	Celsius	T	-		11.03	:	-		-		8.17	:	-	
Turbidity	NTU	T	-		6.5	:	-		-		25.8	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.077	:	-		-		<0.14	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		181.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		30.5	:	-		-		7.9	:	-	
Fluoride	mg/L	T	-		1.5	:	-		2.2	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.26	:	-		-		0.61	J	-	
Nitrite	mg/L	T	-		<0.005	:	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		0.023	:	-		-		0.02	:	-	
Sulfate	mg/L	T	-		1500.	:	-		434.	J	-		-	
Total Alkalinity	mg/L	T	-		181.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		2420.	:	-		-		734.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.7	J	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		<4.7	J	-		-		10.1	:	-	
Laboratory Parameters														
pH	SU	T	-		7.3	J	-		-		4.48	:	-	
Specific Conductance	umhos/cm	T	-		2210.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		1570.	:	-		-		-		-	
Hardness	mg/L	D	1590.	:	-		1610.	:	-		-		480.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-25B 1/14/2004 MMW-25B-D01N-GRW GW4		MMW-25B 4/22/2004 MMW-25B-T01N-GRW GW4		MMW-25B 4/22/2004 MMW-25B-D01N-GRW GW4		MMW-28B 11/5/2002 MMW-28B-T01N-GRWRE GW6		MMW-28B 11/5/2002 MMW-28B-T01N-GRW GW6		MMW-28B 11/5/2002 MMW-28B-D01N-GRWRE GW6	
Aluminum	mg/L	T	-		<0.176	:	-		-		-		-	
Aluminum	mg/L	D	<0.621	:	-		<0.176	:	-		-		<8.22	:
Antimony	mg/L	T	-		<0.0012	:	-		-		-		-	
Antimony	mg/L	D	<0.0018	:	-		<0.0012	:	-		-		<0.028	:
Arsenic	mg/L	T	-		<0.0004	:	-		-		-		-	
Arsenic	mg/L	D	0.00031	:	-		<0.0004	:	-		-		<0.023	:
Barium	mg/L	T	-		0.0113	:	-		-		-		-	
Barium	mg/L	D	<0.0188	:	-		0.0115	:	-		-		<0.048	:
Beryllium	mg/L	T	-		<0.0003	:	-		-		-		-	
Beryllium	mg/L	D	<0.001	:	-		<0.0003	:	-		-		<0.002	:
Boron	mg/L	T	-		0.0096	:	-		-		-		-	
Boron	mg/L	D	0.0166	:	-		0.0107	:	-		-		<0.027	:
Cadmium	mg/L	T	-		0.00043	:	-		-		-		-	
Cadmium	mg/L	D	<0.0007	:	-		0.00041	J	-		-		<0.08	:
Calcium	mg/L	T	-		544.	:	-		-		-		-	
Calcium	mg/L	D	550.	:	-		559.	:	-		-		133.	:
Chromium	mg/L	T	-		<0.0023	J	-		-		-		-	
Chromium	mg/L	D	<0.0057	:	-		0.0012	J	-		-		<0.16	J
Cobalt	mg/L	T	-		<0.0016	:	-		-		-		-	
Cobalt	mg/L	D	<0.0037	:	-		<0.0016	:	-		-		<0.23	:
Copper	mg/L	T	-		<0.0029	:	-		-		-		-	
Copper	mg/L	D	<0.0035	:	-		0.0041	:	-		-		<0.17	:
Iron	mg/L	T	-		<0.192	J	-		-		-		-	
Iron	mg/L	D	<0.423	:	-		<0.192	:	-		-		<2.66	:
Lead	mg/L	T	-		<0.0013	:	-		-		-		-	
Lead	mg/L	D	<0.00023	:	-		<0.0008	:	-		-		0.001	:
Magnesium	mg/L	T	-		51.7	:	-		-		-		-	
Magnesium	mg/L	D	53.	:	-		53.2	:	-		-		36.	:
Manganese	mg/L	T	-		<0.019	:	-		-		-		-	
Manganese	mg/L	D	<0.019	:	-		<0.019	:	-		-		2.3	:
Mercury	mg/L	T	-		<0.0001	J	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		-		-	
Molybdenum	mg/L	T	-		0.0225	:	-		-		-		-	
Molybdenum	mg/L	D	0.0279	:	-		0.0244	:	-		-		<0.011	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID																	
			MMW-25B 1/14/2004 MMW-25B-D01N-GR		MMW-25B 4/22/2004 MMW-25B-T01N-GR		MMW-25B 4/22/2004 MMW-25B-D01N-GR		MMW-28B 11/5/2002 MMW-28B-T01N-GR		MMW-28B 11/5/2002 MMW-28B-T01N-GR		MMW-28B 11/5/2002 MMW-28B-D01N-GR							
			W GW4		W GW4		W GW4		WRE GW6		W GW6		WRE GW6							
Nickel	mg/L	T	-		<0.0015	J	-		-		-		-							
Nickel	mg/L	D	<0.0168	:	-		<0.0015	J	-		-		<0.34	:						
Potassium	mg/L	T	-		6.02	:	-		-		-		-							
Potassium	mg/L	D	6.65	:	-		6.45	:	-		-		<31.4	J						
Selenium	mg/L	T	-		0.003	:	-		-		-		-							
Selenium	mg/L	D	0.0038	:	-		0.0033	:	-		-		<0.008	:						
Silver	mg/L	T	-		<0.0002	J	-		-		-		-							
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		-		<0.001	:						
Sodium	mg/L	T	-		41.2	:	-		-		-		-							
Sodium	mg/L	D	41.8	:	-		42.7	:	-		-		<36.6	:						
Thallium	mg/L	T	-		<0.0002	:	-		-		-		-							
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:						
Vanadium	mg/L	T	-		<0.0004	:	-		-		-		-							
Vanadium	mg/L	D	0.00026	:	-		<0.0004	:	-		-		<0.002	:						
Zinc	mg/L	T	-		0.213	:	-		-		-		-							
Zinc	mg/L	D	0.234	:	-		0.224	:	-		-		0.613	:						
Volatile Organics																				
1,1,1-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,1,2-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,1-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,1-Dichloroethene	mg/L	T	-		-		-		-		<0.01	:	-							
1,2,4-Trichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-							
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-		-		<0.01	:	-							
1,2-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-							
1,2-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-							
1,2-Dichloroethene (total)	mg/L	T	-		-		-		-		<0.01	:	-							
1,2-Dichloropropane	mg/L	T	-		-		-		-		<0.01	:	-							
1,3-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-							
1,4-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-							
2-Butanone	mg/L	T	-		-		-		-		<0.01	:	-							
2-Hexanone	mg/L	T	-		-		-		-		<0.01	:	-							
4-Methyl-2-pentanone	mg/L	T	-		-		-		-		<0.01	:	-							

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-25B	MMW-25B	MMW-25B	MMW-28B	MMW-28B	MMW-28B
			Sample Date	1/14/2004	4/22/2004	4/22/2004	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-25B-D01N-GRW	MMW-25B-T01N-GRW	MMW-25B-D01N-GRW	MMW-28B-T01N-GRWRE	MMW-28B-T01N-GRW	MMW-28B-D01N-GRWRE
			Exposure Area	GW4	GW4	GW4	GW6	GW6	GW6
Acetone	mg/L	T		-	-	-	-	<0.01 :	-
Benzene	mg/L	T		-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Bromoform	mg/L	T		-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		-	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		-	-	-	-	<0.01 :	-
Chloroform	mg/L	T		-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		-	-	-	-	<0.01 :	-
Styrene	mg/L	T		-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Toluene	mg/L	T		-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	-	-	-	<0.026 :	-
2,4,6-Trichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	-	-	-	<0.026 :	-
2,4-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-25B	MMW-25B	MMW-25B	MMW-28B	MMW-28B	MMW-28B
			Sample Date	1/14/2004	4/22/2004	4/22/2004	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-25B-D01N-GRW	MMW-25B-T01N-GRW	MMW-25B-D01N-GRW	MMW-28B-T01N-GRWRE	MMW-28B-T01N-GRW	MMW-28B-D01N-GRWRE
			Exposure Area	GW4	GW4	GW4	GW6	GW6	GW6
2,6-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
2-Nitrophenol	mg/L	T		-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	<0.026 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
4-Nitrophenol	mg/L	T		-	-	-	-	<0.026 :	-
Acenaphthene	mg/L	T		-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	-	-	<0.01 :	-
Anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Carbazole	mg/L	T		-	-	-	-	<0.01 :	-
Chrysene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenzofuran	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-25B 1/14/2004 MMW-25B-D01N-GRW GW4	MMW-25B 4/22/2004 MMW-25B-T01N-GRW GW4	MMW-25B 4/22/2004 MMW-25B-D01N-GRW GW4	MMW-28B 11/5/2002 MMW-28B-T01N-GRWRE GW6	MMW-28B 11/5/2002 MMW-28B-T01N-GRW GW6	MMW-28B 11/5/2002 MMW-28B-D01N-GRWRE GW6
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 :	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.026 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	<0.0013 :	-	-	-	-
Lead	mg/L	D	<0.00023 :	-	<0.0008 :	-	-	0.001 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 11/5/2002 MMW-28B-D01N-GR GW6		MMW-28B 12/4/2002 MMW-28B-T01N-GR GW6		MMW-28B 1/10/2003 MMW-28B-T01N-GR GW6		MMW-28B 1/10/2003 MMW-28B-D01N-GR GW6		MMW-28B 2/7/2003 MMW-28B-T01N-GR GW6		MMW-28B 3/3/2003 MMW-28B-T01N-GR GW6	
Field Measurements														
DO	mg/L	T	-		2.63	:	8.75	:	-		3.37	:	3.	:
EH	millivolts	T	-		351.4	:	311.1	:	-		455.2	:	338.6	:
pH	SU	T	-		4.41	:	4.67	:	-		4.5	:	4.57	:
Specific Conductance	uS/cm	T	-		949.	:	946.	:	-		904.	:	909.	:
Temperature	Celsius	T	-		7.04	:	4.55	:	-		7.23	:	7.99	:
Turbidity	NTU	T	-		47.1	:	1.5	:	-		0.	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.1	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		<2.3	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		7.8	:	-		-		-	
Fluoride	mg/L	T	-		-		1.8	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		<0.77	J	-		-		-	
Nitrite	mg/L	T	-		-		0.0062	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		1.7	J	-		-		-	
Phosphorus	mg/L	T	-		-		0.019	J	-		-		-	
Sulfate	mg/L	T	-		-		494.	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		<2.3	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		764.	J	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<1.	:	-		-		-	
Total Suspended Solids	mg/L	T	-		-		6.2	:	-		-		-	
Laboratory Parameters														
pH	SU	T	-		4.41	:	4.67	:	-		4.5	:	4.57	:
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	:	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		455.	:	-		-		-	
Hardness	mg/L	D	-		-		-		429.	:	-		-	
Metals														
Aluminum	mg/L	T	-		-		7.47	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 11/5/2002 MMW-28B-D01N-GRW GW6	MMW-28B 12/4/2002 MMW-28B-T01N-GRW GW6	MMW-28B 1/10/2003 MMW-28B-T01N-GRW GW6	MMW-28B 1/10/2003 MMW-28B-D01N-GRW GW6	MMW-28B 2/7/2003 MMW-28B-T01N-GRW GW6	MMW-28B 3/3/2003 MMW-28B-T01N-GRW GW6
Aluminum	mg/L	D	-	-	-	6.38 :	-	-
Antimony	mg/L	T	-	-	<0.028 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.028 :	-	-
Arsenic	mg/L	T	-	-	<0.023 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.023 :	-	-
Barium	mg/L	T	-	-	<0.048 :	-	-	-
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	T	-	-	0.0034 :	-	-	-
Beryllium	mg/L	D	-	-	-	0.0035 :	-	-
Boron	mg/L	T	-	-	<0.027 :	-	-	-
Boron	mg/L	D	-	-	-	<0.027 :	-	-
Cadmium	mg/L	T	-	-	<0.04 :	-	-	-
Cadmium	mg/L	D	-	-	-	<0.04 :	-	-
Calcium	mg/L	T	-	-	128. :	-	-	-
Calcium	mg/L	D	-	-	-	122. :	-	-
Chromium	mg/L	T	-	-	<0.37 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.37 :	-	-
Cobalt	mg/L	T	-	-	<0.16 :	-	-	-
Cobalt	mg/L	D	-	-	-	<0.16 :	-	-
Copper	mg/L	T	-	-	<0.17 :	-	-	-
Copper	mg/L	D	-	-	-	<0.17 :	-	-
Iron	mg/L	T	-	-	<4.89 :	-	-	-
Iron	mg/L	D	-	-	-	<4.89 :	-	-
Lead	mg/L	T	-	-	0.0012 :	-	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-
Magnesium	mg/L	T	-	-	32.7 :	-	-	-
Magnesium	mg/L	D	-	-	-	30.6 :	-	-
Manganese	mg/L	T	-	-	2.06 :	-	-	-
Manganese	mg/L	D	-	-	-	1.95 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.011 :	-	-
Nickel	mg/L	T	-	-	<0.15 :	-	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 11/5/2002 MMW-28B-D01N-GR W GW6	MMW-28B 12/4/2002 MMW-28B-T01N-GR W GW6	MMW-28B 1/10/2003 MMW-28B-T01N-GR W GW6	MMW-28B 1/10/2003 MMW-28B-D01N-GR W GW6	MMW-28B 2/7/2003 MMW-28B-T01N-GR W GW6	MMW-28B 3/3/2003 MMW-28B-T01N-GR W GW6
Nickel	mg/L	D	-	-	-	<0.15 :	-	-
Potassium	mg/L	T	-	-	<20.2 :	-	-	-
Potassium	mg/L	D	-	-	-	<20.2 :	-	-
Selenium	mg/L	T	-	-	<0.008 J	-	-	-
Selenium	mg/L	D	-	-	-	<0.008 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<32.7 :	-	-	-
Sodium	mg/L	D	-	-	-	<32.7 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	<0.002 J	-	-	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	-
Zinc	mg/L	T	-	-	0.692 :	-	-	-
Zinc	mg/L	D	-	-	-	0.584 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	0.001 J	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T	-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T	-	-	<0.01 :	-	-	-
4-Methyl-2-pentanone	mg/L	T	-	-	<0.01 :	-	-	-
Acetone	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 11/5/2002 MMW-28B-D01N-GR GW6	MMW-28B 12/4/2002 MMW-28B-T01N-GR GW6	MMW-28B 1/10/2003 MMW-28B-T01N-GR GW6	MMW-28B 1/10/2003 MMW-28B-D01N-GR GW6	MMW-28B 2/7/2003 MMW-28B-T01N-GR GW6	MMW-28B 3/3/2003 MMW-28B-T01N-GR GW6
Benzene	mg/L	T	-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Bromoform	mg/L	T	-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T	-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T	-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T	-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Chloroform	mg/L	T	-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T	-	-	<0.01 :	-	-	-
Methylene chloride	mg/L	T	-	-	<0.01 :	-	-	-
Styrene	mg/L	T	-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Toluene	mg/L	T	-	-	<0.01 :	-	-	-
Total Xylene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T	-	-	<0.01 :	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	<0.01 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T	-	-	<0.025 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dimethylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dinitrophenol	mg/L	T	-	-	<0.025 :	-	-	-
2,4-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-
2,6-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-28B 11/5/2002 MMW-28B-D01N-GR	MMW-28B 12/4/2002 MMW-28B-T01N-GR	MMW-28B 1/10/2003 MMW-28B-T01N-GR	MMW-28B 1/10/2003 MMW-28B-D01N-GR	MMW-28B 2/7/2003 MMW-28B-T01N-GR	MMW-28B 3/3/2003 MMW-28B-T01N-GR
			W GW6	W GW6	W GW6	W GW6	W GW6	W GW6
2-Chloronaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Chlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylnaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Nitroaniline	mg/L	T	-	-	<0.025 :	-	-	-
2-Nitrophenol	mg/L	T	-	-	<0.01 :	-	-	-
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.01 :	-	-	-
3-Nitroaniline	mg/L	T	-	-	<0.025 :	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.025 :	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloroaniline	mg/L	T	-	-	<0.01 :	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Nitroaniline	mg/L	T	-	-	<0.025 :	-	-	-
4-Nitrophenol	mg/L	T	-	-	<0.025 :	-	-	-
Acenaphthene	mg/L	T	-	-	<0.01 :	-	-	-
Acenaphthylene	mg/L	T	-	-	<0.01 :	-	-	-
Anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzaldehyde	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(a)anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(a)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(b)fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(k)fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	0.002 J	-	-	-
Butyl benzyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Carbazole	mg/L	T	-	-	<0.01 :	-	-	-
Chrysene	mg/L	T	-	-	<0.01 :	-	-	-
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Dibenzofuran	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodiisopropyl ether	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 11/5/2002 MMW-28B-D01N-GR GW6	MMW-28B 12/4/2002 MMW-28B-T01N-GR GW6	MMW-28B 1/10/2003 MMW-28B-T01N-GR GW6	MMW-28B 1/10/2003 MMW-28B-D01N-GR GW6	MMW-28B 2/7/2003 MMW-28B-T01N-GR GW6	MMW-28B 3/3/2003 MMW-28B-T01N-GR GW6
Diethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Dimethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Butyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Octyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Fluorene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorocyclopentadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Isophorone	mg/L	T	-	-	<0.01 :	-	-	-
Naphthalene	mg/L	T	-	-	<0.01 :	-	-	-
Nitrobenzene	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodiphenylamine	mg/L	T	-	-	<0.01 :	-	-	-
Pentachlorophenol	mg/L	T	-	-	<0.025 :	-	-	-
Phenanthrene	mg/L	T	-	-	<0.01 :	-	-	-
Phenol	mg/L	T	-	-	<0.01 :	-	-	-
Pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0012 :	-	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 4/8/2003 MMW-28B-T01N-GR W GW6		MMW-28B 4/8/2003 MMW-28B-D01N-GR W GW6		MMW-28B 5/8/2003 MMW-28B-T01N-GR W GW6		MMW-28B 6/5/2003 MMW-28B-T01N-GR W GW6		MMW-28B 7/22/2003 MMW-28B-T01N-GR W GW6		MMW-28B 7/22/2003 MMW-28B-D01N-GR W GW6	
Field Measurements														
DO	mg/L	T	2.26	:	-		2.33	:	2.61	:	2.22	:	-	
EH	millivolts	T	338.9	:	-		344.2	:	242.8	:	459.1	:	-	
pH	SU	T	4.6	J	-		4.41	:	4.16	:	4.7	J	-	
Specific Conductance	uS/cm	T	939.	:	-		920.	:	911.	:	933.	:	-	
Temperature	Celsius	T	8.01	:	-		9.13	:	9.97	:	13.72	:	-	
Turbidity	NTU	T	0.5	:	-		3.5	:	3.8	:	3.6	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		-		-		<0.041	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<2.	:	-		-		-		<1.6	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	7.1	:	-		-		-		6.5	:	-	
Fluoride	mg/L	T	2.1	:	-		-		-		2.1	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.7	J	-		-		-		0.66	J	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Phosphorus	mg/L	T	0.024	:	-		-		-		0.02	:	-	
Sulfate	mg/L	T	450.	J	-		-		-		479.	J	-	
Total Alkalinity	mg/L	T	<2.	:	-		-		-		<1.6	:	-	
Total Dissolved Solids	mg/L	T	778.	:	-		-		-		830.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		-		-		<1.6	J	-	
Total Suspended Solids	mg/L	T	<3.5	:	-		-		-		20.1	:	-	
Laboratory Parameters														
pH	SU	T	4.6	J	-		4.41	:	4.16	:	4.7	J	-	
Specific Conductance	umhos/cm	T	851.	J	-		-		-		895.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	426.	:	-		-		-		448.	:	-	
Hardness	mg/L	D	-		445.	:	-		-		-		440.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-28B 4/8/2003 MMW-28B-T01N-GRW GW6	MMW-28B 4/8/2003 MMW-28B-D01N-GRW GW6	MMW-28B 5/8/2003 MMW-28B-T01N-GRW GW6	MMW-28B 6/5/2003 MMW-28B-T01N-GRW GW6	MMW-28B 7/22/2003 MMW-28B-T01N-GRW GW6	MMW-28B 7/22/2003 MMW-28B-D01N-GRW GW6
Aluminum	mg/L	T	<8.86 :	-	-	-	8.57 :	-
Aluminum	mg/L	D	-	<9.36 :	-	-	-	7.4 :
Antimony	mg/L	T	<0.0051 :	-	-	-	<0.047 :	-
Antimony	mg/L	D	-	<0.003 :	-	-	-	<0.047 :
Arsenic	mg/L	T	<0.04 :	-	-	-	<0.048 :	-
Arsenic	mg/L	D	-	<0.04 :	-	-	-	<0.048 :
Barium	mg/L	T	<0.123 :	-	-	-	<0.059 :	-
Barium	mg/L	D	-	<0.123 :	-	-	-	<0.059 :
Beryllium	mg/L	T	0.0075 :	-	-	-	0.0032 :	-
Beryllium	mg/L	D	-	0.0091 :	-	-	-	0.0026 :
Boron	mg/L	T	<0.084 :	-	-	-	<0.048 :	-
Boron	mg/L	D	-	<0.084 :	-	-	-	<0.048 :
Cadmium	mg/L	T	<0.005 J	-	-	-	<0.12 :	-
Cadmium	mg/L	D	-	<0.005 J	-	-	-	<0.12 :
Calcium	mg/L	T	119. :	-	-	-	123. :	-
Calcium	mg/L	D	-	125. :	-	-	-	122. :
Chromium	mg/L	T	<0.01 :	-	-	-	<0.19 :	-
Chromium	mg/L	D	-	<0.01 :	-	-	-	<0.19 :
Cobalt	mg/L	T	<0.038 :	-	-	-	<0.37 :	-
Cobalt	mg/L	D	-	<0.038 :	-	-	-	<0.37 :
Copper	mg/L	T	<0.0557 :	-	-	-	<0.33 :	-
Copper	mg/L	D	-	<0.0485 :	-	-	-	<0.33 :
Iron	mg/L	T	<3.11 :	-	-	-	<6.67 :	-
Iron	mg/L	D	-	<3.11 :	-	-	-	<6.67 :
Lead	mg/L	T	0.0012 :	-	-	-	0.0015 :	-
Lead	mg/L	D	-	0.0011 :	-	-	-	0.0013 :
Magnesium	mg/L	T	31.1 :	-	-	-	34. :	-
Magnesium	mg/L	D	-	32.5 :	-	-	-	33.2 :
Manganese	mg/L	T	1.89 :	-	-	-	1.79 :	-
Manganese	mg/L	D	-	1.97 :	-	-	-	1.82 :
Mercury	mg/L	T	<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.023 :	-	-	-	<0.017 :	-
Molybdenum	mg/L	D	-	<0.023 :	-	-	-	<0.017 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 4/8/2003 MMW-28B-T01N-GR W GW6		MMW-28B 4/8/2003 MMW-28B-D01N-GR W GW6		MMW-28B 5/8/2003 MMW-28B-T01N-GR W GW6		MMW-28B 6/5/2003 MMW-28B-T01N-GR W GW6		MMW-28B 7/22/2003 MMW-28B-T01N-GR W GW6		MMW-28B 7/22/2003 MMW-28B-D01N-GR W GW6	
Nickel	mg/L	T	<0.0787	:	-		-		-		<0.44	:	-	
Nickel	mg/L	D	-		<0.0757	:	-		-		-		<0.44	:
Potassium	mg/L	T	<3.26	:	-		-		-		41.4	:	-	
Potassium	mg/L	D	-		<3.26	:	-		-		-		<37.1	:
Selenium	mg/L	T	<0.005	:	-		-		-		<0.008	:	-	
Selenium	mg/L	D	-		<0.005	:	-		-		-		<0.008	J
Silver	mg/L	T	<0.001	:	-		-		-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		-		-		<0.001	J
Sodium	mg/L	T	<35.2	:	-		-		-		113.	:	-	
Sodium	mg/L	D	-		<35.2	:	-		-		-		<53.2	:
Thallium	mg/L	T	<0.001	:	-		-		-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		-		-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		-		-		<0.002	:
Zinc	mg/L	T	0.656	:	-		-		-		0.738	:	-	
Zinc	mg/L	D	-		0.763	:	-		-		-		0.644	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	0.001	J	-		-		-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		-		-		-		-	
2-Hexanone	mg/L	T	<0.01	J	-		-		-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		-		-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		Site ID	MMW-28B	MMW-28B	MMW-28B	MMW-28B	MMW-28B	MMW-28B
		Sample Date	4/8/2003	4/8/2003	5/8/2003	6/5/2003	7/22/2003	7/22/2003
		Sample ID	MMW-28B-T01N-GRW	MMW-28B-D01N-GRW	MMW-28B-T01N-GRW	MMW-28B-T01N-GRW	MMW-28B-T01N-GRW	MMW-28B-D01N-GRW
		Exposure Area	GW6	GW6	GW6	GW6	GW6	GW6
Acetone	mg/L	T	<0.01 :	-	-	-	-	-
Benzene	mg/L	T	<0.01 :	-	-	-	-	-
Bromodichloromethane	mg/L	T	<0.01 :	-	-	-	-	-
Bromoform	mg/L	T	<0.01 :	-	-	-	-	-
Bromomethane	mg/L	T	<0.01 :	-	-	-	-	-
Carbon disulfide	mg/L	T	<0.01 :	-	-	-	-	-
Carbon tetrachloride	mg/L	T	<0.01 :	-	-	-	-	-
Chlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
Chloroethane	mg/L	T	<0.01 :	-	-	-	-	-
Chloroform	mg/L	T	<0.01 :	-	-	-	-	-
Chloromethane	mg/L	T	<0.01 :	-	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	-	-	-
Dibromochloromethane	mg/L	T	<0.01 :	-	-	-	-	-
Dichlorodifluoromethane	mg/L	T	<0.01 :	-	-	-	-	-
Ethylbenzene	mg/L	T	<0.01 :	-	-	-	-	-
Methylene chloride	mg/L	T	<0.01 :	-	-	-	-	-
Styrene	mg/L	T	<0.01 :	-	-	-	-	-
Tetrachloroethene	mg/L	T	<0.01 :	-	-	-	-	-
Toluene	mg/L	T	<0.01 :	-	-	-	-	-
Total Xylene	mg/L	T	<0.01 :	-	-	-	-	-
trans-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
trans-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	-	-	-
Trichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
Trichlorofluoromethane	mg/L	T	<0.01 :	-	-	-	-	-
Vinyl chloride	mg/L	T	<0.01 :	-	-	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	<0.01 :	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	T	<0.026 :	-	-	-	-	-
2,4,6-Trichlorophenol	mg/L	T	<0.01 :	-	-	-	-	-
2,4-Dichlorophenol	mg/L	T	<0.01 :	-	-	-	-	-
2,4-Dimethylphenol	mg/L	T	<0.01 J	-	-	-	-	-
2,4-Dinitrophenol	mg/L	T	<0.026 J	-	-	-	-	-
2,4-Dinitrotoluene	mg/L	T	<0.01 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-28B 4/8/2003 MMW-28B-T01N-GR GW6	MMW-28B 4/8/2003 MMW-28B-D01N-GR GW6	MMW-28B 5/8/2003 MMW-28B-T01N-GR GW6	MMW-28B 6/5/2003 MMW-28B-T01N-GR GW6	MMW-28B 7/22/2003 MMW-28B-T01N-GR GW6	MMW-28B 7/22/2003 MMW-28B-D01N-GR GW6
2,6-Dinitrotoluene	mg/L	T	<0.01 :	-	-	-	-	-
2-Chloronaphthalene	mg/L	T	<0.01 :	-	-	-	-	-
2-Chlorophenol	mg/L	T	<0.01 :	-	-	-	-	-
2-Methylnaphthalene	mg/L	T	<0.01 :	-	-	-	-	-
2-Methylphenol	mg/L	T	<0.01 :	-	-	-	-	-
2-Nitroaniline	mg/L	T	<0.026 :	-	-	-	-	-
2-Nitrophenol	mg/L	T	<0.01 :	-	-	-	-	-
3,3-Dichlorobenzidine	mg/L	T	<0.01 :	-	-	-	-	-
3-Nitroaniline	mg/L	T	<0.026 J	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026 :	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	<0.01 :	-	-	-	-	-
4-Chloro-3-methylphenol	mg/L	T	<0.01 :	-	-	-	-	-
4-Chloroaniline	mg/L	T	<0.01 :	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.01 :	-	-	-	-	-
4-Methylphenol	mg/L	T	<0.01 :	-	-	-	-	-
4-Nitroaniline	mg/L	T	<0.026 :	-	-	-	-	-
4-Nitrophenol	mg/L	T	<0.026 J	-	-	-	-	-
Acenaphthene	mg/L	T	<0.01 :	-	-	-	-	-
Acenaphthylene	mg/L	T	<0.01 :	-	-	-	-	-
Anthracene	mg/L	T	<0.01 :	-	-	-	-	-
Benzaldehyde	mg/L	T	<0.01 :	-	-	-	-	-
Benzo(a)anthracene	mg/L	T	<0.01 :	-	-	-	-	-
Benzo(a)pyrene	mg/L	T	<0.01 :	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	<0.01 :	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.01 :	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	<0.01 :	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.01 :	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	<0.01 :	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01 :	-	-	-	-	-
Butyl benzyl phthalate	mg/L	T	<0.01 :	-	-	-	-	-
Carbazole	mg/L	T	<0.01 :	-	-	-	-	-
Chrysene	mg/L	T	<0.01 :	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.01 :	-	-	-	-	-
Dibenzofuran	mg/L	T	<0.01 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction													
		Site ID	MMW-28B		MMW-28B		MMW-28B		MMW-28B		MMW-28B		MMW-28B		
		Sample Date	4/8/2003		4/8/2003		5/8/2003		6/5/2003		7/22/2003		7/22/2003		
		Sample ID	MMW-28B-T01N-GRW		MMW-28B-D01N-GRW		MMW-28B-T01N-GRW		MMW-28B-T01N-GRW		MMW-28B-T01N-GRW		MMW-28B-D01N-GRW		
		Exposure Area	GW6		GW6		GW6		GW6		GW6		GW6		
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-		-		-		-		-		
Diethylphthalate	mg/L	T	<0.01	:	-		-		-		-		-		
Dimethylphthalate	mg/L	T	<0.01	:	-		-		-		-		-		
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		-		-		-		-		
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-		-		-		-		-		
Fluoranthene	mg/L	T	<0.01	:	-		-		-		-		-		
Fluorene	mg/L	T	<0.01	:	-		-		-		-		-		
Hexachlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-		
Hexachlorobutadiene	mg/L	T	<0.01	:	-		-		-		-		-		
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-		-		-		-		-		
Hexachloroethane	mg/L	T	<0.01	:	-		-		-		-		-		
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		-		-		-		-		
Isophorone	mg/L	T	<0.01	:	-		-		-		-		-		
Naphthalene	mg/L	T	<0.01	:	-		-		-		-		-		
Nitrobenzene	mg/L	T	<0.01	:	-		-		-		-		-		
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		-		-		-		-		
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		-		-		-		-		
Pentachlorophenol	mg/L	T	<0.026	:	-		-		-		-		-		
Phenanthrene	mg/L	T	<0.01	:	-		-		-		-		-		
Phenol	mg/L	T	<0.01	:	-		-		-		-		-		
Pyrene	mg/L	T	<0.01	:	-		-		-		-		-		
Explosives															
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	J	-		-		-		-		-		
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-		
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	J	-		-		-		-		-		
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	J	-		-		-		-		-		
Pentaerythritol tetranitrate	mg/L	T	<0.01	J	-		-		-		-		-		
Isotopes															
Lead	mg/L	T	0.0012	:	-		-		-		0.0015	:	-		
Lead	mg/L	D	-		0.0011	:	-		-		-		0.0013	:	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 8/11/2003 MMW-28B-T01N-GR W GW6		MMW-28B 9/10/2003 MMW-28B-T01N-GR W GW6		MMW-28B 10/22/2003 MMW-28B-T01N-GR W GW6		MMW-28B 10/22/2003 MMW-28B-D01N-GR W GW6		MMW-28B 11/3/2003 MMW-28B-T01N-GR W GW6		MMW-28B 12/10/2003 MMW-28B-T01N-GR W GW6	
Field Measurements														
DO	mg/L	T	2.39	:	2.54	:	2.25	:	-		2.35	:	2.33	:
EH	millivolts	T	179.2	:	305.8	:	444.3	:	-		373.9	:	208.8	:
pH	SU	T	4.28	:	4.46	:	5.4	J	-		4.34	:	4.43	:
Specific Conductance	uS/cm	T	842.	:	901.	:	966.	:	-		845.	:	891.	:
Temperature	Celsius	T	11.56	:	9.1	:	9.03	:	-		8.75	:	7.28	:
Turbidity	NTU	T	26.7	:	10.7	:	1.4	:	-		5.9	:	5.	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.054	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		<2.1	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		7.	:	-		-		-	
Fluoride	mg/L	T	-		-		2.1	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		0.43	:	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	:	-		-		-	
Phosphorus	mg/L	T	-		-		0.021	:	-		-		-	
Sulfate	mg/L	T	-		-		457.	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		<2.1	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		974.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<2.2	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		1.	J	-		-		-	
Total Suspended Solids	mg/L	T	-		-		2.6	:	-		-		-	
Laboratory Parameters														
pH	SU	T	4.28	:	4.46	:	5.4	J	-		4.34	:	4.43	:
Specific Conductance	umhos/cm	T	-		-		889.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		412.	:	-		-		-	
Hardness	mg/L	D	-		-		-		366.	:	-		-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 8/11/2003 MMW-28B-T01N-GRW GW6	MMW-28B 9/10/2003 MMW-28B-T01N-GRW GW6	MMW-28B 10/22/2003 MMW-28B-T01N-GRW GW6	MMW-28B 10/22/2003 MMW-28B-D01N-GRW GW6	MMW-28B 11/3/2003 MMW-28B-T01N-GRW GW6	MMW-28B 12/10/2003 MMW-28B-T01N-GRW GW6
Aluminum	mg/L	T	-	-	8.14 :	-	-	-
Aluminum	mg/L	D	-	-	-	5.89 :	-	-
Antimony	mg/L	T	-	-	<0.082 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.082 :	-	-
Arsenic	mg/L	T	-	-	<0.035 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.035 :	-	-
Barium	mg/L	T	-	-	<0.117 :	-	-	-
Barium	mg/L	D	-	-	-	<0.117 :	-	-
Beryllium	mg/L	T	-	-	<0.003 :	-	-	-
Beryllium	mg/L	D	-	-	-	<0.003 :	-	-
Boron	mg/L	T	-	-	<0.064 :	-	-	-
Boron	mg/L	D	-	-	-	<0.064 :	-	-
Cadmium	mg/L	T	-	-	<0.13 :	-	-	-
Cadmium	mg/L	D	-	-	-	<0.13 :	-	-
Calcium	mg/L	T	-	-	115. :	-	-	-
Calcium	mg/L	D	-	-	-	102. :	-	-
Chromium	mg/L	T	-	-	<0.23 J	-	-	-
Chromium	mg/L	D	-	-	-	<0.23 J	-	-
Cobalt	mg/L	T	-	-	<0.32 :	-	-	-
Cobalt	mg/L	D	-	-	-	<0.32 :	-	-
Copper	mg/L	T	-	-	<0.23 :	-	-	-
Copper	mg/L	D	-	-	-	<0.23 :	-	-
Iron	mg/L	T	-	-	<4.55 :	-	-	-
Iron	mg/L	D	-	-	-	<4.55 :	-	-
Lead	mg/L	T	-	-	<0.002 :	-	-	-
Lead	mg/L	D	-	-	-	<0.002 :	-	-
Magnesium	mg/L	T	-	-	30.6 :	-	-	-
Magnesium	mg/L	D	-	-	-	26.8 :	-	-
Manganese	mg/L	T	-	-	1.68 :	-	-	-
Manganese	mg/L	D	-	-	-	1.5 :	-	-
Mercury	mg/L	T	-	-	<0.00013 :	-	-	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.012 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.012 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-28B 8/11/2003 MMW-28B-T01N-GRW GW6	MMW-28B 9/10/2003 MMW-28B-T01N-GRW GW6	MMW-28B 10/22/2003 MMW-28B-T01N-GRW GW6	MMW-28B 10/22/2003 MMW-28B-D01N-GRW GW6	MMW-28B 11/3/2003 MMW-28B-T01N-GRW GW6	MMW-28B 12/10/2003 MMW-28B-T01N-GRW GW6
Nickel	mg/L	T	-	-	<0.45 :	-	-	-
Nickel	mg/L	D	-	-	-	<0.45 :	-	-
Potassium	mg/L	T	-	-	<63.8 :	-	-	-
Potassium	mg/L	D	-	-	-	<63.8 :	-	-
Selenium	mg/L	T	-	-	<0.003 :	-	-	-
Selenium	mg/L	D	-	-	-	<0.003 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<99.1 :	-	-	-
Sodium	mg/L	D	-	-	-	<99.1 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	<0.001 :	-	-	-
Vanadium	mg/L	D	-	-	-	<0.001 :	-	-
Zinc	mg/L	T	-	-	0.729 :	-	-	-
Zinc	mg/L	D	-	-	-	0.692 :	-	-
Isotopes								
Lead	mg/L	T	-	-	<0.002 :	-	-	-
Lead	mg/L	D	-	-	-	<0.002 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-28B 1/13/2004 MMW-28B-T01N-GRW GW6		MMW-28B 1/13/2004 MMW-28B-D01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-T01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-D01N-GRW GW6		MMW-28B 3/22/2004 MMW-28-B GW6		MMW-28B 4/20/2004 MMW-28B-T01N-GRW GW6	
Field Measurements														
DO	mg/L	T	2.13	:	-		2.02	:	-		-		2.69	:
EH	millivolts	T	204.6	:	-		268.6	:	-		-		408.1	:
pH	SU	T	4.7	J	-		4.5	:	-		-		3.6	J
Specific Conductance	uS/cm	T	847.	:	-		892.	:	-		-		884.	:
Temperature	Celsius	T	6.38	:	-		7.31	:	-		-		8.87	:
Turbidity	NTU	T	4.5	:	-		1.8	:	-		-		3.8	:
General Chemistry														
Ammonia	mg/L	T	<0.062	J	-		-		-		-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	<1.9	:	-		-		-		-		<1.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		-		<1.	:
Chloride	mg/L	T	7.4	:	-		-		-		-		8.5	:
Fluoride	mg/L	T	2.6	:	-		2.4	:	-		-		2.1	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		-		<1.	:
Nitrate	mg/L	T	<0.58	J	-		-		-		-		0.52	J
Nitrite	mg/L	T	<0.005	J	-		-		-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	<0.011	J	-		-		-		-		<0.01	:
Phosphorus	mg/L	T	<0.03	:	-		-		-		-		0.015	:
Sulfate	mg/L	T	484.	:	-		521.	:	-		-		510.	:
Total Alkalinity	mg/L	T	<1.9	:	-		-		-		-		<1.	:
Total Dissolved Solids	mg/L	T	738.	:	-		746.	:	-		-		710.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		-		<0.24	J
Total Organic Carbon	mg/L	T	<1.	:	-		-		-		-		<1.	J
Total Suspended Solids	mg/L	T	6.5	:	-		2.2	:	-		-		<2.9	J
Laboratory Parameters														
pH	SU	T	4.7	J	-		4.5	:	-		-		3.6	J
Specific Conductance	umhos/cm	T	900.	J	-		-		-		-		893.	J
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		-		<0.01	:
Physical Properties														
Hardness	mg/L	T	417.	:	-		446.	:	-		-		420.	:
Hardness	mg/L	D	-		430.	:	-		447.	:	-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 1/13/2004 MMW-28B-T01N-GRW GW6		MMW-28B 1/13/2004 MMW-28B-D01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-T01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-D01N-GRW GW6		MMW-28B 3/22/2004 MMW-28-B GW6		MMW-28B 4/20/2004 MMW-28B-T01N-GRW GW6	
Aluminum	mg/L	T	6.55	:	-		6.28	:	-		-		<9.17	:
Aluminum	mg/L	D	-		7.26	:	-		6.97	:	-		-	
Antimony	mg/L	T	<0.097	:	-		<0.029	:	-		-		<0.053	:
Antimony	mg/L	D	-		<0.097	:	-		<0.029	:	-		-	
Arsenic	mg/L	T	<0.052	:	-		<0.028	:	-		-		<0.037	:
Arsenic	mg/L	D	-		<0.052	:	-		<0.028	:	-		-	
Barium	mg/L	T	<0.188	:	-		<0.053	:	-		-		<0.049	:
Barium	mg/L	D	-		<0.188	:	-		<0.053	:	-		-	
Beryllium	mg/L	T	<0.01	:	-		<0.003	:	-		-		<0.003	:
Beryllium	mg/L	D	-		<0.01	:	-		<0.003	:	-		-	
Boron	mg/L	T	<0.117	:	-		<0.023	:	-		-		<0.036	:
Boron	mg/L	D	-		<0.117	:	-		<0.023	:	-		-	
Cadmium	mg/L	T	<0.07	J	-		<0.07	:	-		-		<0.0377	:
Cadmium	mg/L	D	-		<0.07	:	-		<0.07	J	-		-	
Calcium	mg/L	T	117.	:	-		125.	:	-		-		118.	:
Calcium	mg/L	D	-		120.	:	-		126.	:	-		-	
Chromium	mg/L	T	<0.11	:	-		<0.11	:	-		-		<0.08	:
Chromium	mg/L	D	-		<0.11	:	-		<0.11	:	-		-	
Cobalt	mg/L	T	<0.31	:	-		<0.31	:	-		-		<0.11	:
Cobalt	mg/L	D	-		<0.31	:	-		<0.31	:	-		-	
Copper	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.186	:
Copper	mg/L	D	-		<0.24	:	-		<0.24	:	-		-	
Iron	mg/L	T	<3.73	:	-		<3.73	:	-		-		<2.08	J
Iron	mg/L	D	-		<3.73	:	-		<3.73	:	-		-	
Lead	mg/L	T	<0.001	:	-		<0.0023	:	-		-		<0.004	:
Lead	mg/L	D	-		0.001	:	-		<0.0022	:	-		-	
Magnesium	mg/L	T	30.2	:	-		32.5	:	-		-		30.8	:
Magnesium	mg/L	D	-		31.3	:	-		32.4	:	-		-	
Manganese	mg/L	T	1.75	:	-		1.91	:	-		-		1.77	:
Manganese	mg/L	D	-		1.88	:	-		1.87	:	-		-	
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.03	:	-		<0.024	:	-		-		<0.014	:
Molybdenum	mg/L	D	-		<0.03	:	-		<0.024	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 1/13/2004 MMW-28B-T01N-GRW GW6		MMW-28B 1/13/2004 MMW-28B-D01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-T01N-GRW GW6		MMW-28B 2/23/2004 MMW-28B-D01N-GRW GW6		MMW-28B 3/22/2004 MMW-28-B GW6		MMW-28B 4/20/2004 MMW-28B-T01N-GRW GW6	
Nickel	mg/L	T	<0.27	:	-		<0.27	:	-		-		<0.14	:
Nickel	mg/L	D	-		<0.27	:	-		<0.27	:	-		-	
Potassium	mg/L	T	<24.3	:	-		<24.3	:	-		-		<10.9	J
Potassium	mg/L	D	-		<24.3	:	-		<24.3	:	-		-	
Selenium	mg/L	T	0.0058	J	-		<0.002	:	-		-		<0.007	:
Selenium	mg/L	D	-		<0.003	:	-		<0.002	:	-		-	
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		-		<0.001	:
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Sodium	mg/L	T	<49.	:	-		<49.	:	-		-		<28.7	:
Sodium	mg/L	D	-		<49.	:	-		<49.	:	-		-	
Thallium	mg/L	T	<0.001	:	-		<0.0017	:	-		-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		<0.0017	:	-		-	
Vanadium	mg/L	T	<0.002	:	-		<0.0045	:	-		-		<0.002	:
Vanadium	mg/L	D	-		<0.002	:	-		<0.0047	:	-		-	
Zinc	mg/L	T	0.666	:	-		0.691	:	-		-		0.683	:
Zinc	mg/L	D	-		0.717	:	-		0.775	:	-		-	
Isotopes														
Delta D	per mil	T	-		-		-97.3	:	-		-		-	
Delta O-18	per mil	T	-		-		-13.3	:	-		-		-	
Lead	mg/L	T	<0.001	:	-		<0.0023	:	-		-		<0.004	:
Lead	mg/L	D	-		0.001	:	-		<0.0022	:	-		-	
Helium Isotope and Tritium														
3H-3He	Years	T	-		-		-		-		18.94	:	-	
DEL He3	%	T	-		-		-		-		69.4	:	-	
DEL He4	%	T	-		-		-		-		60.5	:	-	
He Corr	1E-8cc/g	T	-		-		-		-		7.643	:	-	
Tritium TU	TU	T	-		-		-		-		9.658	:	-	
Uncert Age	Years	T	-		-		-		-		0.52	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-28B 4/20/2004 MMW-28B-D01N-GRW GW6		MMW-29B 11/1/2002 MMW-29B-T01N-GRW GW4		MMW-29B 11/1/2002 MMW-29B-D01N-GRW GW4		MMW-29B 1/13/2003 MMW-29B-T01N-GRW GW4		MMW-29B 1/13/2003 MMW-29B-D01N-GRW GW4		MMW-29B 4/6/2003 MMW-29B-T01N-GRW GW4	
Field Measurements														
DO	mg/L	T	-		0.89	:	-		0.37	:	-		0.1	:
EH	millivolts	T	-		-82.7	:	-		-67.	:	-		-63.5	:
pH	SU	T	-		7.52	:	-		7.39	:	-		7.2	J
Specific Conductance	uS/cm	T	-		1119.	:	-		1128.	:	-		1114.	:
Temperature	Celsius	T	-		11.47	:	-		7.82	:	-		8.33	:
Turbidity	NTU	T	-		43.2	:	-		51.4	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.16	:	-		<0.12	:	-		<0.067	:
Bicarbonate (as CaCO3)	mg/L	T	-		189.	:	-		165.	:	-		158.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		4.1	:	-		<4.1	:	-		4.3	:
Fluoride	mg/L	T	-		4.2	:	-		2.8	:	-		3.2	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		<0.4	:	-		<0.4	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.013	J	-		<0.013	:	-		<0.01	J
Phosphorus	mg/L	T	-		0.066	:	-		0.028	:	-		0.02	:
Sulfate	mg/L	T	-		461.	:	-		457.	J	-		445.	J
Total Alkalinity	mg/L	T	-		189.	:	-		165.	:	-		158.	:
Total Dissolved Solids	mg/L	T	-		871.	:	-		876.	:	-		848.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		1.3	:	-		<1.3	J
Total Suspended Solids	mg/L	T	-		17.5	:	-		8.8	:	-		<3.5	:
Laboratory Parameters														
pH	SU	T	-		7.52	:	-		7.39	:	-		7.2	J
Specific Conductance	umhos/cm	T	-		-		-		-		-		1060.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		628.	:	-		634.	:	-		681.	:
Hardness	mg/L	D	412.	:	-		606.	:	-		641.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-28B 4/20/2004 MMW-28B-D01N-GRW GW6		MMW-29B 11/1/2002 MMW-29B-T01N-GRW GW4		MMW-29B 11/1/2002 MMW-29B-D01N-GRW GW4		MMW-29B 1/13/2003 MMW-29B-T01N-GRW GW4		MMW-29B 1/13/2003 MMW-29B-D01N-GRW GW4		MMW-29B 4/6/2003 MMW-29B-T01N-GRW GW4	
Aluminum	mg/L	T	-		0.98	:	-		<0.345	:	-		<0.426	:
Aluminum	mg/L	D	<8.82	:	-		<0.006	:	-		<0.142	:	-	
Antimony	mg/L	T	-		<0.0004	:	-		<0.0006	:	-		<0.0006	:
Antimony	mg/L	D	<0.053	:	-		<0.0004	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		0.0014	J	-		0.001	:	-		0.0012	:
Arsenic	mg/L	D	<0.037	:	-		0.0015	J	-		0.00068	:	-	
Barium	mg/L	T	-		0.042	:	-		0.0228	:	-		0.017	:
Barium	mg/L	D	<0.049	:	-		0.0377	:	-		0.0208	:	-	
Beryllium	mg/L	T	-		0.00074	:	-		<0.00081	:	-		<0.003	:
Beryllium	mg/L	D	<0.003	:	-		<0.0002	:	-		0.00083	:	-	
Boron	mg/L	T	-		0.0141	:	-		<0.0096	:	-		0.0116	:
Boron	mg/L	D	<0.036	:	-		0.0133	:	-		<0.009	:	-	
Cadmium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0005	:
Cadmium	mg/L	D	<0.046	:	-		<0.0002	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		202.	:	-		203.	:	-		218.	:
Calcium	mg/L	D	116.	:	-		195.	:	-		205.	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		<0.001	:
Chromium	mg/L	D	<0.08	:	-		<0.0046	:	-		<0.0037	:	-	
Chromium, Hexavalent	mg/L	D	-		0.0058	J	-		-		-		-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	<0.11	:	-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		0.00079	:	-		<0.0017	:	-		<0.0015	J
Copper	mg/L	D	<0.159	:	-		<0.0006	:	-		<0.0017	:	-	
Iron	mg/L	T	-		0.922	:	-		0.62	:	-		0.788	:
Iron	mg/L	D	<2.36	:	-		0.151	:	-		0.622	:	-	
Lead	mg/L	T	-		0.0023	:	-		0.00039	:	-		<0.0002	:
Lead	mg/L	D	<0.004	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		29.9	:	-		31.1	:	-		33.4	:
Magnesium	mg/L	D	29.9	:	-		29.	:	-		31.5	:	-	
Manganese	mg/L	T	-		2.92	:	-		3.35	:	-		3.9	:
Manganese	mg/L	D	1.77	:	-		2.82	:	-		3.42	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0021	:	-		0.0094	:	-		0.0114	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-28B 4/20/2004 MMW-28B-D01N-GR GW6		MMW-29B 11/1/2002 MMW-29B-T01N-GR GW4		MMW-29B 11/1/2002 MMW-29B-D01N-GR GW4		MMW-29B 1/13/2003 MMW-29B-T01N-GR GW4		MMW-29B 1/13/2003 MMW-29B-D01N-GR GW4		MMW-29B 4/6/2003 MMW-29B-T01N-GR GW4	
Molybdenum	mg/L	D	<0.014	:	-		0.0021	:	-		0.0078	:	-	
Nickel	mg/L	T	-		0.00056	J	-		<0.0015	:	-		<0.003	J
Nickel	mg/L	D	<0.14	:	-		<0.0004	J	-		<0.0015	:	-	
Potassium	mg/L	T	-		2.98	:	-		2.64	:	-		2.12	:
Potassium	mg/L	D	<10.9	J	-		2.89	:	-		2.61	:	-	
Selenium	mg/L	T	-		<0.0004	:	-		<0.0016	:	-		<0.001	:
Selenium	mg/L	D	<0.007	:	-		<0.0004	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		20.6	:	-		16.4	:	-		16.8	:
Sodium	mg/L	D	<32.8	:	-		20.2	:	-		15.9	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0012	:	-		<0.0004	:	-		<0.0002	:
Vanadium	mg/L	D	<0.002	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0125	:	-		<0.039	J	-		<0.039	:
Zinc	mg/L	D	0.645	:	-		0.0134	:	-		<0.039	J	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		<0.00025	J	-		<0.00025	J	-		<0.00025	:
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		0.0023	:	-		0.00039	:	-		<0.0002	:
Lead	mg/L	D	<0.004	:	-		<0.0002	:	-		<0.0002	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	MMW-29B		MMW-29B		MMW-29B		MMW-29B		MMW-29B	
			Sample Date	4/6/2003		7/18/2003		7/18/2003		10/21/2003		10/21/2003		1/13/2004	
			Sample ID	MMW-29B-D01N-GRW		MMW-29B-T01N-GRW		MMW-29B-D01N-GRW		MMW-29B-T01N-GRW		MMW-29B-D01N-GRW		MMW-29B-T01N-GRW	
			Exposure Area	GW4		GW4		GW4		GW4		GW4		GW4	
		Fraction													
Field Measurements															
DO	mg/L	T		-		0.44	:	-		0.66	:	-		0.41	:
EH	millivolts	T		-		-129.9	:	-		-113.5	:	-		-73.2	:
pH	SU	T		-		7.4	J	-		7.4	J	-		7.2	J
Specific Conductance	uS/cm	T		-		1107.	:	-		1062.	:	-		1023.	:
Temperature	Celsius	T		-		15.93	:	-		9.11	:	-		8.78	:
Turbidity	NTU	T		-		22.5	:	-		2.6	:	-		2.	:
General Chemistry															
Ammonia	mg/L	T		-		<0.32	J	-		<0.088	J	-		<0.08	J
Bicarbonate (as CaCO3)	mg/L	T		-		173.	:	-		163.	:	-		155.	J
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T		-		4.1	:	-		4.4	:	-		4.9	:
Fluoride	mg/L	T		-		3.1	:	-		3.1	:	-		3.2	:
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T		-		<0.4	J	-		<0.2	J	-		<0.2	J
Nitrite	mg/L	T		-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T		-		<0.017	J	-		<0.01	J	-		<0.01	J
Phosphorus	mg/L	T		-		0.075	:	-		0.014	:	-		0.037	:
Sulfate	mg/L	T		-		449.	J	-		394.	J	-		490.	:
Total Alkalinity	mg/L	T		-		173.	:	-		163.	:	-		155.	J
Total Dissolved Solids	mg/L	T		-		862.	:	-		802.	:	-		866.	:
Total Kjeldahl Nitrogen	mg/L	T		-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T		-		<1.	J	-		<1.	J	-		<1.	:
Total Suspended Solids	mg/L	T		-		13.8	:	-		4.7	:	-		3.8	:
Laboratory Parameters															
pH	SU	T		-		7.4	J	-		7.4	J	-		7.2	J
Specific Conductance	umhos/cm	T		-		967.	J	-		1020.	J	-		1010.	J
Inorganics															
Cyanide	mg/L	T		-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties															
Hardness	mg/L	T		-		634.	:	-		623.	:	-		603.	:
Hardness	mg/L	D		670.	:	-		615.	:	-		625.	:	-	
Metals															

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29B 4/6/2003 MMW-29B-D01N-GR GW4		MMW-29B 7/18/2003 MMW-29B-T01N-GR GW4		MMW-29B 7/18/2003 MMW-29B-D01N-GR GW4		MMW-29B 10/21/2003 MMW-29B-T01N-GR GW4		MMW-29B 10/21/2003 MMW-29B-D01N-GR GW4		MMW-29B 1/13/2004 MMW-29B-T01N-GR GW4	
Aluminum	mg/L	T	-		<0.631	:	-		<0.221	J	-		<0.621	:
Aluminum	mg/L	D	<0.426	:	-		<0.631	:	-		<0.221	J	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0015	J	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0011	:	-		0.001	:	-		0.0011	:
Arsenic	mg/L	D	0.00097	:	-		0.001	:	-		0.0011	:	-	
Barium	mg/L	T	-		0.0297	:	-		0.0164	:	-		<0.0188	:
Barium	mg/L	D	0.0155	:	-		0.024	:	-		0.0171	:	-	
Beryllium	mg/L	T	-		0.00071	:	-		<0.0019	:	-		<0.001	:
Beryllium	mg/L	D	<0.0031	:	-		0.00062	:	-		<0.0018	:	-	
Boron	mg/L	T	-		0.013	:	-		0.008	:	-		<0.0117	:
Boron	mg/L	D	0.0099	:	-		0.0109	:	-		0.0064	:	-	
Cadmium	mg/L	T	-		<0.0006	:	-		<0.0005	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0006	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		203.	:	-		201.	:	-		192.	:
Calcium	mg/L	D	214.	:	-		197.	:	-		201.	J	-	
Chromium	mg/L	T	-		<0.0014	J	-		<0.0011	J	-		<0.0057	:
Chromium	mg/L	D	<0.001	:	-		<0.0014	J	-		<0.0011	J	-	
Cobalt	mg/L	T	-		<0.002	:	-		<0.0029	:	-		<0.0037	:
Cobalt	mg/L	D	<0.0038	:	-		<0.002	:	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0022	:	-		<0.0035	J
Copper	mg/L	D	<0.0015	J	-		<0.0024	:	-		<0.0022	:	-	
Iron	mg/L	T	-		0.748	:	-		0.309	:	-		0.75	:
Iron	mg/L	D	<0.422	:	-		<0.667	:	-		0.525	:	-	
Lead	mg/L	T	-		0.001	:	-		<0.0004	:	-		0.00046	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		31.	:	-		29.6	:	-		29.7	:
Magnesium	mg/L	D	32.9	:	-		30.2	:	-		29.7	:	-	
Manganese	mg/L	T	-		3.24	:	-		3.48	:	-		3.41	:
Manganese	mg/L	D	3.86	:	-		3.28	:	-		3.54	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0034	:	-		0.0103	:	-		0.0104	:
Molybdenum	mg/L	D	0.0118	:	-		0.0034	:	-		0.0111	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-29B 4/6/2003 MMW-29B-D01N-GR		MMW-29B 7/18/2003 MMW-29B-T01N-GR		MMW-29B 7/18/2003 MMW-29B-D01N-GR		MMW-29B 10/21/2003 MMW-29B-T01N-GR		MMW-29B 10/21/2003 MMW-29B-D01N-GR		MMW-29B 1/13/2004 MMW-29B-T01N-GR	
			W GW4		W GW4		W GW4		W GW4		W GW4		W GW4	
Nickel	mg/L	T	-		<0.0021	J	-		<0.0024	:	-		<0.0168	:
Nickel	mg/L	D	<0.003	J	-		<0.0021	J	-		<0.0024	:	-	
Potassium	mg/L	T	-		2.87	:	-		1.65	J	-		2.15	:
Potassium	mg/L	D	2.02	:	-		2.71	:	-		1.65	J	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.00065	:	-		<0.0006	J
Selenium	mg/L	D	<0.001	:	-		<0.0016	J	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		19.	:	-		13.9	J	-		15.6	:
Sodium	mg/L	D	16.4	:	-		21.7	:	-		17.8	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00048	:	-		<0.0002	:	-		<0.0004	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		<0.016	:	-		<0.023	:	-		<0.091	:
Zinc	mg/L	D	<0.039	:	-		<0.016	:	-		<0.023	:	-	
Isotopes														
Lead	mg/L	T	-		0.001	:	-		<0.0004	:	-		0.00046	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-29B	MMW-29B	MMW-29B	MMW-29B	MMW-29B	MMW-29B
			Sample Date	1/13/2004	2/24/2004	2/24/2004	3/22/2004	4/21/2004	4/21/2004
			Sample ID	MMW-29B-D01N-GRW	MMW-29B-T01N-GRW	MMW-29B-D01N-GRW	MMW-29-B	MMW-29B-T01N-GRW	MMW-29B-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	0.36 :	-	-	2.31 :	-
EH	millivolts	T		-	-72.2 :	-	-	193.2 :	-
pH	SU	T		-	7.19 :	-	-	7.6 J	-
Specific Conductance	uS/cm	T		-	1057. :	-	-	1026. :	-
Temperature	Celsius	T		-	6.97 :	-	-	8.7 :	-
Turbidity	NTU	T		-	2. :	-	-	3.3 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	-	<0.072 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	-	154. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Chloride	mg/L	T		-	-	-	-	5.3 :	-
Fluoride	mg/L	T		-	3.5 :	-	-	3.3 :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Nitrate	mg/L	T		-	-	-	-	<0.2 J	-
Nitrite	mg/L	T		-	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		-	-	-	-	<0.01 J	-
Phosphorus	mg/L	T		-	-	-	-	0.025 :	-
Sulfate	mg/L	T		-	442. :	-	-	473. :	-
Total Alkalinity	mg/L	T		-	-	-	-	154. :	-
Total Dissolved Solids	mg/L	T		-	922. :	-	-	838. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	-	-	-	<1. J	-
Total Suspended Solids	mg/L	T		-	3.8 :	-	-	<6.6 J	-
Laboratory Parameters									
pH	SU	T		-	7.19 :	-	-	7.6 J	-
Specific Conductance	umhos/cm	T		-	-	-	-	944. J	-
Inorganics									
Cyanide	mg/L	T		-	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	607. :	-	-	617. :	-
Hardness	mg/L	D		599. :	-	584. :	-	-	580. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29B 1/13/2004 MMW-29B-D01N-GRW GW4		MMW-29B 2/24/2004 MMW-29B-T01N-GRW GW4		MMW-29B 2/24/2004 MMW-29B-D01N-GRW GW4		MMW-29B 3/22/2004 MMW-29-B GW4		MMW-29B 4/21/2004 MMW-29B-T01N-GRW GW4		MMW-29B 4/21/2004 MMW-29B-D01N-GRW GW4	
Aluminum	mg/L	T	-		<0.514	:	-		-		<0.606	:	-	
Aluminum	mg/L	D	<0.621	:	-		<0.514	:	-		-		<0.234	:
Antimony	mg/L	T	-		<0.00097	:	-		-		<0.0014	:	-	
Antimony	mg/L	D	<0.0024	:	-		<0.00098	:	-		-		<0.0014	:
Arsenic	mg/L	T	-		0.0012	:	-		-		0.00085	:	-	
Arsenic	mg/L	D	0.0012	:	-		0.0012	J	-		-		0.00083	:
Barium	mg/L	T	-		0.0154	J	-		-		0.0178	:	-	
Barium	mg/L	D	<0.0188	:	-		0.0148	J	-		-		0.0163	:
Beryllium	mg/L	T	-		0.0011	:	-		-		<0.0012	:	-	
Beryllium	mg/L	D	0.0014	:	-		0.001	:	-		-		<0.0012	:
Boron	mg/L	T	-		0.0075	:	-		-		<0.0091	:	-	
Boron	mg/L	D	<0.0117	:	-		0.007	:	-		-		<0.0085	:
Cadmium	mg/L	T	-		<0.0007	:	-		-		<0.0003	J	-	
Cadmium	mg/L	D	<0.0007	J	-		<0.0007	J	-		-		<0.0003	J
Calcium	mg/L	T	-		194.	:	-		-		197.	:	-	
Calcium	mg/L	D	191.	:	-		187.	:	-		-		185.	:
Chromium	mg/L	T	-		<0.0015	:	-		-		<0.00092	:	-	
Chromium	mg/L	D	<0.0057	:	-		<0.0015	:	-		-		0.0017	:
Cobalt	mg/L	T	-		<0.0023	:	-		-		<0.0011	:	-	
Cobalt	mg/L	D	<0.0037	:	-		<0.0023	:	-		-		<0.0011	:
Copper	mg/L	T	-		<0.003	:	-		-		<0.0007	J	-	
Copper	mg/L	D	<0.0035	J	-		<0.003	:	-		-		<0.0007	J
Iron	mg/L	T	-		0.515	:	-		-		<0.892	J	-	
Iron	mg/L	D	0.665	:	-		<0.373	:	-		-		<0.586	:
Lead	mg/L	T	-		<0.0002	:	-		-		<0.0008	:	-	
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0008	:
Magnesium	mg/L	T	-		29.8	:	-		-		30.5	:	-	
Magnesium	mg/L	D	29.4	:	-		28.7	:	-		-		28.6	:
Manganese	mg/L	T	-		3.42	:	-		-		3.4	:	-	
Manganese	mg/L	D	3.39	:	-		3.3	:	-		-		3.39	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		0.0101	:	-		-		0.011	:	-	
Molybdenum	mg/L	D	0.0096	:	-		0.0102	:	-		-		0.0089	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-29B 1/13/2004 MMW-29B-D01N-GRW GW4	MMW-29B 2/24/2004 MMW-29B-T01N-GRW GW4	MMW-29B 2/24/2004 MMW-29B-D01N-GRW GW4	MMW-29B 3/22/2004 MMW-29-B GW4	MMW-29B 4/21/2004 MMW-29B-T01N-GRW GW4	MMW-29B 4/21/2004 MMW-29B-D01N-GRW GW4
Nickel	mg/L	T	-	<0.0024 :	-	-	<0.0014 :	-
Nickel	mg/L	D	<0.0168 :	-	<0.0024 :	-	-	<0.0014 :
Potassium	mg/L	T	-	2.17 :	-	-	<1.87 :	-
Potassium	mg/L	D	2.06 :	-	2.07 :	-	-	<1.6 :
Selenium	mg/L	T	-	0.00059 J	-	-	<0.0014 :	-
Selenium	mg/L	D	<0.0006 J	-	<0.0004 J	-	-	<0.0014 :
Silver	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Sodium	mg/L	T	-	19.6 :	-	-	<9.93 J	-
Sodium	mg/L	D	16.1 :	-	18.2 :	-	-	<18.4 :
Thallium	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T	-	<0.0002 :	-	-	0.00054 :	-
Vanadium	mg/L	D	<0.0004 :	-	<0.0002 :	-	-	<0.0004 :
Zinc	mg/L	T	-	<0.026 :	-	-	0.02 :	-
Zinc	mg/L	D	<0.091 :	-	<0.026 :	-	-	<0.015 :
Isotopes								
Delta D	per mil	T	-	-94.6 :	-	-	-	-
Delta O-18	per mil	T	-	-13.1 :	-	-	-	-
Lead	mg/L	T	-	<0.0002 :	-	-	<0.0008 :	-
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0008 :
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	58.15 :	-	-
DEL He3	%	T	-	-	-	53.9 :	-	-
DEL He4	%	T	-	-	-	121.2 :	-	-
He Corr	1E-8cc/g	T	-	-	-	10.553 :	-	-
Tritium TU	TU	T	-	-	-	0.573 :	-	-
Uncert Age	Years	T	-	-	-	0.84 :	-	-
Uncert TU	TU	T	-	-	-	0.017 :	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	MMW-3		MMW-3		MMW-3		MMW-3		MMW-3		MMW-3	
			Sample Date	11/6/2002		11/6/2002		12/6/2002		1/7/2003		1/7/2003		2/8/2003	
			Sample ID	MMW-3-T01N-GRW		MMW-3-D01N-GRW		MMW-3-T01N-GRW		MMW-3-T01N-GRW		MMW-3-D01N-GRW		MMW-3-T01N-GRW	
			Exposure Area	GW1		GW1		GW1		GW1		GW1		GW1	
		Fraction													
Field Measurements															
DO	mg/L	T		0.35	:	-		1.16	:	0.28	:	-		0.67	:
EH	millivolts	T		65.8	:	-		214.3	:	151.	:	-		162.2	:
pH	SU	T		6.75	:	-		6.83	:	6.84	:	-		6.79	:
Specific Conductance	uS/cm	T		2258.	:	-		4651.	:	2269.	:	-		2365.	:
Temperature	Celsius	T		8.26	:	-		5.32	:	7.15	:	-		2.45	:
Turbidity	NTU	T		17.	:	-		27.4	:	3.2	:	-		0.	:
General Chemistry															
Ammonia	mg/L	T		<0.08	J	-		-		<0.11	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T		247.	:	-		-		401.	:	-		-	
Carbonate (as CaCO3)	mg/L	T		<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T		4.6	:	-		-		5.	:	-		-	
Fluoride	mg/L	T		2.4	:	-		-		2.6	:	-		-	
Hydroxide (as CaCO3)	mg/L	T		<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T		<0.4	J	-		-		<0.4	J	-		-	
Nitrite	mg/L	T		<0.005	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T		<0.01	J	-		-		<0.011	J	-		-	
Phosphorus	mg/L	T		0.039	:	-		-		<0.01	:	-		-	
Sulfate	mg/L	T		1760.	:	-		-		1260.	J	-		-	
Total Alkalinity	mg/L	T		247.	:	-		-		401.	:	-		-	
Total Dissolved Solids	mg/L	T		2130.	:	-		-		2160.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T		<0.24	:	-		-		<0.26	:	-		-	
Total Organic Carbon	mg/L	T		1.8	:	-		-		1.8	:	-		-	
Total Suspended Solids	mg/L	T		3.8	:	-		-		4.5	:	-		-	
Laboratory Parameters															
pH	SU	T		6.75	:	-		6.83	:	6.84	:	-		6.79	:
Inorganics															
Cyanide	mg/L	T		<0.01	J	-		-		<0.01	J	-		-	
Physical Properties															
Hardness	mg/L	T		1370.	:	-		-		1410.	:	-		-	
Hardness	mg/L	D		-		1370.	:	-		-		1450.	:	-	
Metals															
Aluminum	mg/L	T		0.115	J	-		-		<0.437	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3
			Sample Date	11/6/2002	11/6/2002	12/6/2002	1/7/2003	1/7/2003	2/8/2003
			Sample ID	MMW-3-T01N-GRW	MMW-3-D01N-GRW	MMW-3-T01N-GRW	MMW-3-T01N-GRW	MMW-3-D01N-GRW	MMW-3-T01N-GRW
			Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Aluminum	mg/L	D		-	<0.0332 J	-	-	<0.142 :	-
Antimony	mg/L	T		<0.0004 :	-	-	<0.00075 :	-	-
Antimony	mg/L	D		-	<0.0004 :	-	-	<0.0006 :	-
Arsenic	mg/L	T		<0.0004 :	-	-	0.00076 :	-	-
Arsenic	mg/L	D		-	<0.0004 :	-	-	<0.0004 :	-
Barium	mg/L	T		0.0298 :	-	-	0.0308 :	-	-
Barium	mg/L	D		-	0.0298 :	-	-	0.0312 :	-
Beryllium	mg/L	T		0.00065 :	-	-	0.00085 :	-	-
Beryllium	mg/L	D		-	0.0006 :	-	-	0.00063 :	-
Boron	mg/L	T		<0.0139 :	-	-	0.0132 J	-	-
Boron	mg/L	D		-	<0.0147 :	-	-	0.0135 J	-
Cadmium	mg/L	T		0.00069 J	-	-	0.0012 :	-	-
Cadmium	mg/L	D		-	0.00063 J	-	-	<0.0004 :	-
Calcium	mg/L	T		466. :	-	-	475. :	-	-
Calcium	mg/L	D		-	465. :	-	-	489. :	-
Chromium	mg/L	T		<0.0046 :	-	-	<0.0037 :	-	-
Chromium	mg/L	D		-	<0.0046 :	-	-	<0.0037 :	-
Cobalt	mg/L	T		0.007 :	-	-	0.0069 :	-	-
Cobalt	mg/L	D		-	0.0078 :	-	-	0.0067 :	-
Copper	mg/L	T		0.0053 :	-	-	<0.0074 :	-	-
Copper	mg/L	D		-	<0.0019 J	-	-	<0.0017 :	-
Iron	mg/L	T		1.01 :	-	-	2.18 :	-	-
Iron	mg/L	D		-	0.484 :	-	-	0.633 :	-
Lead	mg/L	T		<0.00046 :	-	-	0.0022 :	-	-
Lead	mg/L	D		-	<0.0002 :	-	-	<0.0002 :	-
Magnesium	mg/L	T		50.7 :	-	-	53.4 :	-	-
Magnesium	mg/L	D		-	50.5 :	-	-	55. :	-
Manganese	mg/L	T		3.46 :	-	-	3.51 :	-	-
Manganese	mg/L	D		-	3.45 :	-	-	3.61 :	-
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D		-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T		0.0011 J	-	-	<0.0011 J	-	-
Molybdenum	mg/L	D		-	0.0012 J	-	-	<0.0011 J	-
Nickel	mg/L	T		0.0112 J	-	-	0.0113 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-3 11/6/2002 MMW-3-T01N-GRW GW1	MMW-3 11/6/2002 MMW-3-D01N-GRW GW1	MMW-3 12/6/2002 MMW-3-T01N-GRW GW1	MMW-3 1/7/2003 MMW-3-T01N-GRW GW1	MMW-3 1/7/2003 MMW-3-D01N-GRW GW1	MMW-3 2/8/2003 MMW-3-T01N-GRW GW1
Nickel	mg/L	D	-	0.012 J	-	-	0.0112 :	-
Potassium	mg/L	T	7.65 :	-	-	7.39 :	-	-
Potassium	mg/L	D	-	7.65 :	-	-	7.68 :	-
Selenium	mg/L	T	0.00046 J	-	-	<0.0016 :	-	-
Selenium	mg/L	D	-	<0.0004 :	-	-	<0.0016 :	-
Silver	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Silver	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Sodium	mg/L	T	99.5 :	-	-	100. :	-	-
Sodium	mg/L	D	-	100. :	-	-	102. :	-
Thallium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Thallium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	0.00039 :	-	-	0.0014 :	-	-
Vanadium	mg/L	D	-	<0.0002 :	-	-	<0.0004 :	-
Zinc	mg/L	T	0.17 :	-	-	0.172 :	-	-
Zinc	mg/L	D	-	0.134 :	-	-	<0.14 :	-
Isotopes								
Lead	mg/L	T	<0.00046 :	-	-	0.0022 :	-	-
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-3 3/6/2003 MMW-3-T01N-GRW		MMW-3 4/7/2003 MMW-3-T01N-GRW		MMW-3 4/7/2003 MMW-3-D01N-GRW		MMW-3 5/8/2003 MMW-3-T01N-GRW		MMW-3 6/5/2003 MMW-3-T01N-GRW		MMW-3 7/20/2003 MMW-3-T01N-GRW	
			GW1		GW1		GW1		GW1		GW1		GW1	
Field Measurements														
DO	mg/L	T	0.28	:	1.77	:	-		0.51	:	5.78	:	1.5	:
EH	millivolts	T	255.	:	316.8	:	-		217.7	:	334.	:	-14.	:
pH	SU	T	6.7	:	7.	J	-		6.61	:	6.62	:	7.	J
Specific Conductance	uS/cm	T	2400.	:	2294.	:	-		2429.	:	2399.	:	2401.	:
Temperature	Celsius	T	6.64	:	6.24	:	-		11.73	:	24.13	:	19.65	:
Turbidity	NTU	T	49.5	:	18.	:	-		24.1	:	4.3	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		0.085	:	-		-		-		<0.065	J
Bicarbonate (as CaCO3)	mg/L	T	-		239.	:	-		-		-		241.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		5.4	:	-		-		-		4.2	:
Fluoride	mg/L	T	-		2.6	:	-		-		-		2.5	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		-		-		<0.2	J
Nitrite	mg/L	T	-		<0.005	:	-		-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		-		<0.01	J
Phosphorus	mg/L	T	-		0.014	:	-		-		-		<0.01	:
Sulfate	mg/L	T	-		1240.	J	-		-		-		1220.	J
Total Alkalinity	mg/L	T	-		239.	:	-		-		-		241.	:
Total Dissolved Solids	mg/L	T	-		2390.	:	-		-		-		2200.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.7	J	-		-		-		<2.8	J
Total Suspended Solids	mg/L	T	-		<5.1	:	-		-		-		5.4	:
Laboratory Parameters														
pH	SU	T	6.7	:	7.	J	-		6.61	:	6.62	:	7.	J
Specific Conductance	umhos/cm	T	-		2450.	J	-		-		-		2290.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1540.	:	-		-		-		1370.	:
Hardness	mg/L	D	-		-		1500.	:	-		-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-3 3/6/2003 MMW-3-T01N-GRW GW1	MMW-3 4/7/2003 MMW-3-T01N-GRW GW1	MMW-3 4/7/2003 MMW-3-D01N-GRW GW1	MMW-3 5/8/2003 MMW-3-T01N-GRW GW1	MMW-3 6/5/2003 MMW-3-T01N-GRW GW1	MMW-3 7/20/2003 MMW-3-T01N-GRW GW1
Aluminum	mg/L	T	-	<0.863 J	-	-	-	<0.631 :
Aluminum	mg/L	D	-	-	<0.426 J	-	-	-
Antimony	mg/L	T	-	<0.0006 :	-	-	-	<0.001 :
Antimony	mg/L	D	-	-	<0.0006 :	-	-	-
Arsenic	mg/L	T	-	0.0005 :	-	-	-	<0.0004 :
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	-
Barium	mg/L	T	-	0.0327 :	-	-	-	0.0317 :
Barium	mg/L	D	-	-	0.0316 :	-	-	-
Beryllium	mg/L	T	-	<0.0022 :	-	-	-	0.00053 :
Beryllium	mg/L	D	-	-	<0.0017 :	-	-	-
Boron	mg/L	T	-	0.0149 :	-	-	-	0.012 :
Boron	mg/L	D	-	-	0.0142 :	-	-	-
Cadmium	mg/L	T	-	0.00069 :	-	-	-	0.00055 :
Cadmium	mg/L	D	-	-	<0.0005 :	-	-	-
Calcium	mg/L	T	-	519. :	-	-	-	462. :
Calcium	mg/L	D	-	-	506. :	-	-	-
Chromium	mg/L	T	-	<0.001 :	-	-	-	<0.0019 :
Chromium	mg/L	D	-	-	<0.001 :	-	-	-
Cobalt	mg/L	T	-	0.0082 :	-	-	-	0.008 :
Cobalt	mg/L	D	-	-	0.0076 :	-	-	-
Copper	mg/L	T	-	<0.0015 J	-	-	-	<0.0046 :
Copper	mg/L	D	-	-	<0.0015 J	-	-	-
Iron	mg/L	T	-	2.05 :	-	-	-	0.868 :
Iron	mg/L	D	-	-	<0.422 :	-	-	-
Lead	mg/L	T	-	0.00034 :	-	-	-	<0.00038 :
Lead	mg/L	D	-	-	<0.0002 :	-	-	-
Magnesium	mg/L	T	-	59. :	-	-	-	52.7 :
Magnesium	mg/L	D	-	-	57.6 :	-	-	-
Manganese	mg/L	T	-	4.46 :	-	-	-	3.69 :
Manganese	mg/L	D	-	-	4.34 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.00016 :
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.0023 :	-	-	-	<0.0016 :
Molybdenum	mg/L	D	-	-	<0.0023 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3
			Sample Date	3/6/2003	4/7/2003	4/7/2003	5/8/2003	6/5/2003	7/20/2003
			Sample ID	MMW-3-T01N-GRW	MMW-3-T01N-GRW	MMW-3-D01N-GRW	MMW-3-T01N-GRW	MMW-3-T01N-GRW	MMW-3-T01N-GRW
			Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Nickel	mg/L	T		-	0.0121 :	-	-	-	0.0085 J
Nickel	mg/L	D		-	-	<0.0113 J	-	-	-
Potassium	mg/L	T		-	7.43 :	-	-	-	8.26 :
Potassium	mg/L	D		-	-	7.39 :	-	-	-
Selenium	mg/L	T		-	<0.001 :	-	-	-	<0.0016 :
Selenium	mg/L	D		-	-	<0.001 :	-	-	-
Silver	mg/L	T		-	<0.0002 :	-	-	-	<0.0002 J
Silver	mg/L	D		-	-	<0.0002 :	-	-	-
Sodium	mg/L	T		-	103. :	-	-	-	95.9 :
Sodium	mg/L	D		-	-	100. :	-	-	-
Thallium	mg/L	T		-	<0.0002 :	-	-	-	<0.0002 :
Thallium	mg/L	D		-	-	<0.0002 :	-	-	-
Vanadium	mg/L	T		-	0.00048 :	-	-	-	<0.0004 :
Vanadium	mg/L	D		-	-	<0.0002 :	-	-	-
Zinc	mg/L	T		-	0.858 :	-	-	-	<0.161 :
Zinc	mg/L	D		-	-	0.184 :	-	-	-
Isotopes									
Lead	mg/L	T		-	0.00034 :	-	-	-	<0.00038 :
Lead	mg/L	D		-	-	<0.0002 :	-	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-3 7/20/2003 MMW-3-D01N-GRW	MMW-3 8/12/2003 MMW-3-T01N-GRW	MMW-3 9/11/2003 MMW-3-T01N-GRW	MMW-3 9/18/2003 MMW-3-T01N-GRW	MMW-3 9/18/2003 MMW-3-D01N-GRW	MMW-3 10/17/2003 MMW-3-T01N-GRW
		Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements								
DO	mg/L	T	-	0.54 :	2.06 :	0.37 :	-	1.89 :
EH	millivolts	T	-	351.1 :	34.1 :	71. :	-	65.1 :
pH	SU	T	-	6.79 :	6.59 :	6.8 J	-	7. J
Specific Conductance	uS/cm	T	-	2344. :	2374. :	1496. :	-	2639. :
Temperature	Celsius	T	-	24.77 :	10.41 :	9.24 :	-	7.97 :
Turbidity	NTU	T	-	20. :	55.5 :	0. :	-	8.3 :
General Chemistry								
Ammonia	mg/L	T	-	-	-	<0.074 :	-	<0.071 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	239. :	-	239. :
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Chloride	mg/L	T	-	-	-	4.9 :	-	4.8 :
Fluoride	mg/L	T	-	-	-	2.6 :	-	2.5 :
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	-	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T	-	-	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	-	-	<0.01 J	-	<0.01 :
Phosphorus	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Sulfate	mg/L	T	-	-	-	1180. J	-	1230. J
Total Alkalinity	mg/L	T	-	-	-	239. :	-	239. :
Total Dissolved Solids	mg/L	T	-	-	-	2220. :	-	2110. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	-	<3.3 :	-	2.2 J
Total Suspended Solids	mg/L	T	-	-	-	2.9 :	-	4.1 :
Laboratory Parameters								
pH	SU	T	-	6.79 :	6.59 :	6.8 J	-	7. J
Specific Conductance	umhos/cm	T	-	-	-	2080. J	-	2270. J
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 :	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	-	1450. :	-	1500. :
Hardness	mg/L	D	1390. :	-	-	-	1520. :	-
Metals								

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3	MMW-3
			Sample Date	7/20/2003	8/12/2003	9/11/2003	9/18/2003	9/18/2003	10/17/2003
			Sample ID	MMW-3-D01N-GRW	MMW-3-T01N-GRW	MMW-3-T01N-GRW	MMW-3-T01N-GRW	MMW-3-D01N-GRW	MMW-3-T01N-GRW
			Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Aluminum	mg/L	T		-	-	-	<0.217 :	-	<0.217 :
Aluminum	mg/L	D		<0.631 :	-	-	-	<0.217 :	-
Antimony	mg/L	T		-	-	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D		<0.001 :	-	-	-	<0.001 :	-
Arsenic	mg/L	T		-	-	-	<0.00044 :	-	0.00047 :
Arsenic	mg/L	D		<0.0004 :	-	-	-	<0.0004 :	-
Barium	mg/L	T		-	-	-	0.0306 :	-	0.0318 :
Barium	mg/L	D		0.0325 :	-	-	-	0.0321 :	-
Beryllium	mg/L	T		-	-	-	0.00081 :	-	0.00073 :
Beryllium	mg/L	D		0.00037 J	-	-	-	0.00075 :	-
Boron	mg/L	T		-	-	-	0.0149 :	-	0.013 :
Boron	mg/L	D		0.0121 :	-	-	-	0.0155 :	-
Cadmium	mg/L	T		-	-	-	<0.0012 J	-	<0.00076 :
Cadmium	mg/L	D		0.00082 :	-	-	-	<0.0012 J	-
Calcium	mg/L	T		-	-	-	487. :	-	506. :
Calcium	mg/L	D		469. :	-	-	-	509. :	-
Chromium	mg/L	T		-	-	-	<0.0031 :	-	<0.0011 J
Chromium	mg/L	D		0.0035 :	-	-	-	<0.003 :	-
Cobalt	mg/L	T		-	-	-	0.0108 :	-	0.009 J
Cobalt	mg/L	D		0.0108 :	-	-	-	0.0117 :	-
Copper	mg/L	T		-	-	-	<0.004 :	-	<0.0022 :
Copper	mg/L	D		0.0033 :	-	-	-	<0.0033 :	-
Iron	mg/L	T		-	-	-	1.27 :	-	1.66 :
Iron	mg/L	D		<0.667 :	-	-	-	1.51 :	-
Lead	mg/L	T		-	-	-	<0.0004 :	-	<0.0004 :
Lead	mg/L	D		<0.0002 :	-	-	-	<0.0004 :	-
Magnesium	mg/L	T		-	-	-	57.1 :	-	57.6 :
Magnesium	mg/L	D		53.3 :	-	-	-	59.7 :	-
Manganese	mg/L	T		-	-	-	3.89 :	-	4.26 :
Manganese	mg/L	D		3.75 :	-	-	-	4.07 :	-
Mercury	mg/L	T		-	-	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	-	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	-	<0.0039 :	-	<0.0011 J
Molybdenum	mg/L	D		<0.0016 :	-	-	-	<0.0038 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-3 7/20/2003 MMW-3-D01N-GRW GW1	MMW-3 8/12/2003 MMW-3-T01N-GRW GW1	MMW-3 9/11/2003 MMW-3-T01N-GRW GW1	MMW-3 9/18/2003 MMW-3-T01N-GRW GW1	MMW-3 9/18/2003 MMW-3-D01N-GRW GW1	MMW-3 10/17/2003 MMW-3-T01N-GRW GW1
Nickel	mg/L	T	-	-	-	0.0156 :	-	0.0117 :
Nickel	mg/L	D	0.0101 J	-	-	-	0.0168 :	-
Potassium	mg/L	T	-	-	-	7.67 :	-	7.4 :
Potassium	mg/L	D	8.5 :	-	-	-	8.2 :	-
Selenium	mg/L	T	-	-	-	0.00077 :	-	<0.0006 :
Selenium	mg/L	D	<0.0016 J	-	-	-	0.00092 :	-
Silver	mg/L	T	-	-	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 J	-	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	-	104. :	-	104. :
Sodium	mg/L	D	92.5 :	-	-	-	111. :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	0.00031 :	-	0.00043 :
Vanadium	mg/L	D	<0.0004 :	-	-	-	<0.0002 :	-
Zinc	mg/L	T	-	-	-	0.168 :	-	0.171 :
Zinc	mg/L	D	<0.16 :	-	-	-	0.174 :	-
Isotopes								
Lead	mg/L	T	-	-	-	<0.0004 :	-	<0.0004 :
Lead	mg/L	D	<0.0002 :	-	-	-	<0.0004 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-3 10/17/2003 MMW-3-D01N-GRW		MMW-3 11/4/2003 MMW-3-T01N-GRW		MMW-3 11/4/2003 MMW-3-D01N-GRW		MMW-3 12/10/2003 MMW-3-T01N-GRW		MMW-3 1/9/2004 MMW-3-T01N-GRW		MMW-3 1/9/2004 MMW-3-D01N-GRW	
			GW1		GW1		GW1		GW1		GW1		GW1	
Field Measurements														
DO	mg/L	T	-		0.32	:	-		0.22	:	0.05	:	-	
EH	millivolts	T	-		-58.7	:	-		134.2	:	50.2	:	-	
pH	SU	T	-		6.7	J	-		6.69	:	7.	J	-	
Specific Conductance	uS/cm	T	-		2179.	:	-		2404.	:	2321.	:	-	
Temperature	Celsius	T	-		9.28	:	-		8.84	:	7.09	:	-	
Turbidity	NTU	T	-		14.4	:	-		8.7	:	6.3	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.095	:	-		-		<0.08	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		221.	:	-		-		237.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		5.5	:	-		-		5.2	:	-	
Fluoride	mg/L	T	-		2.5	:	-		-		2.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.2	J	-		-		<0.2	:	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		<0.015	:	-	
Sulfate	mg/L	T	-		1230.	:	-		-		1240.	:	-	
Total Alkalinity	mg/L	T	-		221.	:	-		-		237.	:	-	
Total Dissolved Solids	mg/L	T	-		2150.	:	-		-		2140.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		<1.5	:	-	
Total Suspended Solids	mg/L	T	-		5.5	:	-		-		2.8	:	-	
Laboratory Parameters														
pH	SU	T	-		6.7	J	-		6.69	:	7.	J	-	
Specific Conductance	umhos/cm	T	-		2380.	J	-		-		2100.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		1300.	:	-		-		1360.	:	-	
Hardness	mg/L	D	1470.	:	-		1340.	:	-		-		1330.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			MMW-3 10/17/2003 MMW-3-D01N-GRW GW1		MMW-3 11/4/2003 MMW-3-T01N-GRW GW1		MMW-3 11/4/2003 MMW-3-D01N-GRW GW1		MMW-3 12/10/2003 MMW-3-T01N-GRW GW1		MMW-3 1/9/2004 MMW-3-T01N-GRW GW1		MMW-3 1/9/2004 MMW-3-D01N-GRW GW1	
Aluminum	mg/L	T	-		<0.217	:	-		-		<0.514	:	-	
Aluminum	mg/L	D	<0.217	:	-		<0.217	:	-		-		<0.514	:
Antimony	mg/L	T	-		<0.001	:	-		-		<0.0024	:	-	
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.0024	:
Arsenic	mg/L	T	-		0.00062	:	-		-		0.0006	:	-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		0.00054	:
Barium	mg/L	T	-		0.0289	:	-		-		0.0316	:	-	
Barium	mg/L	D	0.0321	:	-		0.031	:	-		-		0.031	:
Beryllium	mg/L	T	-		<0.0011	:	-		-		0.00064	:	-	
Beryllium	mg/L	D	0.00072	:	-		<0.00057	:	-		-		0.0006	:
Boron	mg/L	T	-		0.0071	:	-		-		<0.0122	:	-	
Boron	mg/L	D	0.0126	:	-		0.0103	:	-		-		<0.0125	:
Cadmium	mg/L	T	-		<0.0007	:	-		-		<0.0007	J	-	
Cadmium	mg/L	D	0.00095	:	-		<0.0007	:	-		-		<0.0007	:
Calcium	mg/L	T	-		440.	:	-		-		461.	:	-	
Calcium	mg/L	D	497.	:	-		453.	:	-		-		450.	:
Chromium	mg/L	T	-		<0.0013	:	-		-		<0.0015	J	-	
Chromium	mg/L	D	0.0012	J	-		<0.0013	:	-		-		<0.0015	J
Cobalt	mg/L	T	-		0.007	:	-		-		0.0081	J	-	
Cobalt	mg/L	D	0.0124	J	-		0.0078	:	-		-		0.0098	:
Copper	mg/L	T	-		<0.002	:	-		-		<0.003	:	-	
Copper	mg/L	D	<0.0022	:	-		<0.002	:	-		-		<0.003	:
Iron	mg/L	T	-		1.88	:	-		-		1.36	:	-	
Iron	mg/L	D	0.88	:	-		0.962	:	-		-		1.04	:
Lead	mg/L	T	-		<0.00052	:	-		-		0.00024	:	-	
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		<0.0002	:
Magnesium	mg/L	T	-		50.2	:	-		-		51.7	:	-	
Magnesium	mg/L	D	56.6	:	-		51.7	:	-		-		50.6	:
Manganese	mg/L	T	-		3.4	J	-		-		3.64	:	-	
Manganese	mg/L	D	4.17	:	-		3.5	:	-		-		3.56	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		0.0012	:	-		-		<0.0024	:	-	
Molybdenum	mg/L	D	<0.0011	J	-		0.0022	:	-		-		<0.0024	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MMW-3 10/17/2003 MMW-3-D01N-GRW		MMW-3 11/4/2003 MMW-3-T01N-GRW		MMW-3 11/4/2003 MMW-3-D01N-GRW		MMW-3 12/10/2003 MMW-3-T01N-GRW		MMW-3 1/9/2004 MMW-3-T01N-GRW		MMW-3 1/9/2004 MMW-3-D01N-GRW	
			GW1		GW1		GW1		GW1		GW1		GW1	
Nickel	mg/L	T	-		0.0102	:	-		-		<0.0024	J	-	
Nickel	mg/L	D	0.0133	:	-		0.0119	:	-		-		<0.0024	J
Potassium	mg/L	T	-		6.38	:	-		-		7.54	:	-	
Potassium	mg/L	D	7.49	:	-		6.92	:	-		-		7.49	:
Selenium	mg/L	T	-		0.001	:	-		-		0.00066	J	-	
Selenium	mg/L	D	<0.0006	:	-		<0.0006	:	-		-		0.0009	:
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Sodium	mg/L	T	-		91.8	:	-		-		95.2	:	-	
Sodium	mg/L	D	103.	:	-		93.8	:	-		-		94.1	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.00056	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	0.00023	:	-		<0.0002	:	-		-		<0.0004	:
Zinc	mg/L	T	-		0.317	:	-		-		0.14	:	-	
Zinc	mg/L	D	0.162	:	-		0.32	:	-		-		0.133	:
Isotopes														
Lead	mg/L	T	-		<0.00052	:	-		-		0.00024	:	-	
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		<0.0002	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID		Sample Date		Sample ID		Exposure Area													
			MMW-3		4/18/2004		MMW-3-T01N-GRW		GW1		MMW-3		4/18/2004		MMW-3-D01N-GRW		GW1		MMW-30B		11/2/2002		MMW-30B-T01N-GRW		GW4
			MMW-30B		11/2/2002		MMW-30B-D01N-GRW		GW4		MMW-30B		11/3/2002		MMW-30B-T01N-GRW		GW4		MMW-30B		1/14/2003		MMW-30B-T01N-GRW		GW4
Field Measurements																						
DO	mg/L	T	1.8	:			-				1.5	:			-							
EH	millivolts	T	68.2	:			-				-100.	:			-							
pH	SU	T	7.2	J			-				6.99	:			-							
Specific Conductance	uS/cm	T	1563.	:			-				3018.	:			-							
Temperature	Celsius	T	8.23	:			-				12.98	:			-							
Turbidity	NTU	T	-				-				12.4	:			-							
General Chemistry																						
Ammonia	mg/L	T	<0.067	:			-				0.96	:			-							
Bicarbonate (as CaCO3)	mg/L	T	234.	:			-				1230.	:			-							
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-							
Chloride	mg/L	T	5.3	:			-				24.8	:			-							
Fluoride	mg/L	T	2.5	:			-				3.2	:			-							
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-							
Nitrate	mg/L	T	<0.2	J			-				<0.4	J			-							
Nitrite	mg/L	T	<0.005	J			-				0.012	J			-							
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				0.5	J			-							
Phosphorus	mg/L	T	<0.01	:			-				0.064	J			-							
Sulfate	mg/L	T	1290.	:			-				467.	:			-							
Total Alkalinity	mg/L	T	234.	:			-				1230.	:			-							
Total Dissolved Solids	mg/L	T	2240.	:			-				2760.	:			-							
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				0.48	J			-							
Total Organic Carbon	mg/L	T	<3.5	:			-				373.	:			-							
Total Suspended Solids	mg/L	T	6.2	J			-				14.5	:			-							
Laboratory Parameters																						
pH	SU	T	7.2	J			-				6.99	:			-							
Specific Conductance	umhos/cm	T	2130.	J			-				-				-							
Inorganics																						
Cyanide	mg/L	T	<0.01	:			-				<0.01	J			-							
Physical Properties																						
Hardness	mg/L	T	1370.	:			-				1430.	:			-							
Hardness	mg/L	D	-				1370.	:			-				1440.	:						
Metals																						

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-3 4/18/2004 MMW-3-T01N-GRW GW1		MMW-3 4/18/2004 MMW-3-D01N-GRW GW1		MMW-30B 11/2/2002 MMW-30B-T01N-GRW GW4		MMW-30B 11/2/2002 MMW-30B-D01N-GRW GW4		MMW-30B 11/3/2002 MMW-30B-T01N-GRW GW4		MMW-30B 1/14/2003 MMW-30B-T01N-GRW GW4	
Aluminum	mg/L	T	<0.235	:	-		0.677	:	-		-		<0.142	:
Aluminum	mg/L	D	-		<0.432	:	-		0.014	:	-		-	
Antimony	mg/L	T	<0.0008	:	-		<0.0004	:	-		-		<0.0011	:
Antimony	mg/L	D	-		<0.0008	:	-		<0.0004	:	-		-	
Arsenic	mg/L	T	0.00056	:	-		0.0062	J	-		-		0.0186	:
Arsenic	mg/L	D	-		<0.0004	:	-		0.0054	J	-		-	
Barium	mg/L	T	0.0337	:	-		0.0626	:	-		-		0.0454	:
Barium	mg/L	D	-		0.0328	:	-		0.0553	:	-		-	
Beryllium	mg/L	T	<0.0003	J	-		0.00072	:	-		-		0.00039	:
Beryllium	mg/L	D	-		<0.0003	J	-		0.00039	:	-		-	
Boron	mg/L	T	0.0126	:	-		0.234	:	-		-		0.166	:
Boron	mg/L	D	-		0.013	:	-		0.22	:	-		-	
Cadmium	mg/L	T	0.0004	:	-		<0.0002	:	-		-		<0.0004	:
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		-	
Calcium	mg/L	T	463.	:	-		501.	:	-		-		476.	:
Calcium	mg/L	D	-		461.	:	-		505.	:	-		-	
Chromium	mg/L	T	<0.0006	:	-		<0.0046	:	-		-		<0.0037	:
Chromium	mg/L	D	-		<0.0006	:	-		<0.0046	:	-		-	
Chromium, Hexavalent	mg/L	D	-		-		-		-		0.0246	:	-	
Cobalt	mg/L	T	0.0081	:	-		<0.0022	:	-		-		<0.0016	:
Cobalt	mg/L	D	-		0.0099	:	-		<0.0022	:	-		-	
Copper	mg/L	T	0.0106	:	-		<0.00084	:	-		-		<0.0023	:
Copper	mg/L	D	-		<0.0014	:	-		<0.0006	:	-		-	
Iron	mg/L	T	1.82	J	-		0.723	:	-		-		<0.489	:
Iron	mg/L	D	-		0.719	:	-		0.0248	:	-		-	
Lead	mg/L	T	0.0011	:	-		0.00094	:	-		-		<0.0002	:
Lead	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		-	
Magnesium	mg/L	T	52.7	:	-		43.4	:	-		-		39.2	:
Magnesium	mg/L	D	-		52.7	:	-		43.6	:	-		-	
Manganese	mg/L	T	4.19	:	-		2.45	:	-		-		1.05	:
Manganese	mg/L	D	-		4.23	:	-		2.28	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0016	:	-		<0.0004	:	-		-		0.0022	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-3 4/18/2004 MMW-3-T01N-GRW GW1		MMW-3 4/18/2004 MMW-3-D01N-GRW GW1		MMW-30B 11/2/2002 MMW-30B-T01N-GRW GW4		MMW-30B 11/2/2002 MMW-30B-D01N-GRW GW4		MMW-30B 11/3/2002 MMW-30B-T01N-GRW GW4		MMW-30B 1/14/2003 MMW-30B-T01N-GRW GW4	
Molybdenum	mg/L	D	-		<0.0014	:	-		<0.0004	:	-		-	
Nickel	mg/L	T	0.0132	:	-		0.0027	J	-		-		<0.0015	:
Nickel	mg/L	D	-		0.013	:	-		0.00067	J	-		-	
Potassium	mg/L	T	8.06	:	-		7.46	:	-		-		5.9	:
Potassium	mg/L	D	-		7.95	:	-		7.23	:	-		-	
Selenium	mg/L	T	<0.0014	:	-		0.0011	:	-		-		<0.0016	:
Selenium	mg/L	D	-		<0.0014	:	-		0.00081	:	-		-	
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		-	
Sodium	mg/L	T	92.3	:	-		260.	:	-		-		223.	:
Sodium	mg/L	D	-		98.8	:	-		241.	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	T	0.0012	:	-		0.0074	:	-		-		0.0014	:
Vanadium	mg/L	D	-		0.00055	:	-		0.0052	:	-		-	
Zinc	mg/L	T	0.196	:	-		0.0121	:	-		-		<0.046	:
Zinc	mg/L	D	-		0.205	:	-		<0.0069	:	-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		0.0089	J	-		-		0.00031	J
2,6-Pyridinediamine,	mg/L	T	-		-		<0.00025	J	-		-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		<0.00025	:	-		-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		-		0.0038	J	-		-		0.0033	J
Pentaerythritol tetranitrate	mg/L	T	-		-		<0.01	:	-		-		<0.01	:
Isotopes														
Delta D	per mil	T	-80.9	:	-		-		-		-		-	
Delta O-18	per mil	T	-11.2	:	-		-		-		-		-	
Lead	mg/L	T	0.0011	:	-		0.00094	:	-		-		<0.0002	:
Lead	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	1/14/2003	4/6/2003	4/6/2003	4/7/2003	7/21/2003	7/21/2003
			Sample ID	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRW GW4	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4
Field Measurements									
DO	mg/L	T		-	0.42 :	-	4.82 :	-	-0.92 :
EH	millivolts	T		-	-355.5 :	-	-302. :	-	-325.9 :
pH	SU	T		-	7.2 J	-	7.1 :	-	7.2 J
Specific Conductance	uS/cm	T		-	2519. :	-	2622. :	-	2251. :
Temperature	Celsius	T		-	8.65 :	-	3.65 :	-	10.88 :
Turbidity	NTU	T		-	0. :	-	14.8 :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.47 :	-	-	-	0.57 J
Bicarbonate (as CaCO3)	mg/L	T		-	744. :	-	-	-	682. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Chloride	mg/L	T		-	18.4 :	-	-	-	20.1 :
Fluoride	mg/L	T		-	1.9 :	-	-	-	1.9 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T		-	<0.4 :	-	-	-	<0.2 J
Nitrite	mg/L	T		-	0.014 :	-	-	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	-	-	0.51 J
Phosphorus	mg/L	T		-	0.079 :	-	-	-	0.053 J
Sulfate	mg/L	T		-	757. J	-	-	-	727. J
Total Alkalinity	mg/L	T		-	744. :	-	-	-	682. :
Total Dissolved Solids	mg/L	T		-	2050. :	-	-	-	1930. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	62.2 J	-	-	-	52.2 J
Total Suspended Solids	mg/L	T		-	<3. :	-	-	-	2.9 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.1 :	-	7.2 J
Specific Conductance	umhos/cm	T		-	2460. J	-	-	-	2300. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1270. :	-	-	-	1120. :
Hardness	mg/L	D		1350. :	-	1260. :	-	-	-
Metals									

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/14/2003 MMW-30B-D01N-GR GW4 W		MMW-30B 4/6/2003 MMW-30B-T01N-GR GW4 W		MMW-30B 4/6/2003 MMW-30B-D01N-GR GW4 W		MMW-30B 4/7/2003 MMW-30B-T01N-GR GW4 W		MMW-30B 7/21/2003 MMW-30B-T01N-GR WDL GW4		MMW-30B 7/21/2003 MMW-30B-T01N-GR GW4 W	
Aluminum	mg/L	T	-		<0.426	:	-		-		-		<0.631	:
Aluminum	mg/L	D	<0.142	:	-		<0.426	:	-		-		-	
Antimony	mg/L	T	-		<0.0006	:	-		-		-		<0.001	J
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		-		-	
Arsenic	mg/L	T	-		0.0329	:	-		-		-		0.0091	:
Arsenic	mg/L	D	0.0256	:	-		0.0188	:	-		-		-	
Barium	mg/L	T	-		0.0468	:	-		-		-		0.0425	:
Barium	mg/L	D	0.0456	:	-		0.0426	:	-		-		-	
Beryllium	mg/L	T	-		<0.0014	:	-		-		-		<0.0002	:
Beryllium	mg/L	D	<0.00039	:	-		<0.0013	:	-		-		-	
Boron	mg/L	T	-		0.246	:	-		-		-		0.183	:
Boron	mg/L	D	0.168	:	-		0.224	:	-		-		-	
Cadmium	mg/L	T	-		<0.0005	:	-		-		-		<0.0003	:
Cadmium	mg/L	D	<0.0004	:	-		<0.0005	:	-		-		-	
Calcium	mg/L	T	-		445.	:	-		-		-		414.	:
Calcium	mg/L	D	477.	:	-		443.	:	-		-		-	
Chromium	mg/L	T	-		<0.001	:	-		-		-		<0.0006	:
Chromium	mg/L	D	<0.0037	:	-		<0.001	:	-		-		-	
Cobalt	mg/L	T	-		<0.0038	:	-		-		-		<0.0018	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0038	:	-		-		-	
Copper	mg/L	T	-		<0.0015	J	-		-		-		<0.0014	:
Copper	mg/L	D	<0.0017	:	-		<0.0015	J	-		-		-	
Iron	mg/L	T	-		<0.422	J	-		-		-		<0.667	:
Iron	mg/L	D	<0.489	:	-		1.18	J	-		-		-	
Lead	mg/L	T	-		<0.0002	:	-		-		-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		-	
Magnesium	mg/L	T	-		39.3	:	-		-		-		36.6	:
Magnesium	mg/L	D	39.2	:	-		38.2	:	-		-		-	
Manganese	mg/L	T	-		0.873	:	-		-		-		0.698	:
Manganese	mg/L	D	1.05	:	-		0.913	:	-		-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		<0.0023	:	-		-		-		<0.0016	:
Molybdenum	mg/L	D	0.0038	:	-		<0.0023	:	-		-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/14/2003 MMW-30B-D01N-GRW GW4	MMW-30B 4/6/2003 MMW-30B-T01N-GRW GW4	MMW-30B 4/6/2003 MMW-30B-D01N-GRW GW4	MMW-30B 4/7/2003 MMW-30B-T01N-GRW GW4	MMW-30B 7/21/2003 MMW-30B-T01N-GRWDL GW4	MMW-30B 7/21/2003 MMW-30B-T01N-GRW GW4
Nickel	mg/L	T	-	<0.003 J	-	-	-	<0.002 :
Nickel	mg/L	D	<0.0015 :	-	<0.003 J	-	-	-
Potassium	mg/L	T	-	6.01 :	-	-	-	5.58 :
Potassium	mg/L	D	5.95 :	-	5.43 :	-	-	-
Selenium	mg/L	T	-	<0.001 :	-	-	-	-
Selenium	mg/L	D	<0.0016 :	-	<0.001 :	-	-	-
Silver	mg/L	T	-	<0.0002 :	-	-	-	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-
Sodium	mg/L	T	-	245. :	-	-	-	208. :
Sodium	mg/L	D	223. :	-	234. :	-	-	-
Thallium	mg/L	T	-	<0.0002 :	-	-	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-
Vanadium	mg/L	T	-	0.0015 :	-	-	-	0.0014 :
Vanadium	mg/L	D	0.0016 :	-	0.0014 :	-	-	-
Zinc	mg/L	T	-	<0.039 :	-	-	-	<0.016 :
Zinc	mg/L	D	<0.039 :	-	0.0752 :	-	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,1-Dichloroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,1-Dichloroethene	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2-Dichlorobenzene	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2-Dichloroethane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,2-Dichloropropane	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,3-Dichlorobenzene	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
1,4-Dichlorobenzene	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :
2-Butanone	mg/L	T	-	-	-	<0.22 :	<0.059 :	0.006 J
2-Hexanone	mg/L	T	-	-	-	<0.22 J	<0.059 :	<0.01 :
4-Methyl-2-pentanone	mg/L	T	-	-	-	<0.22 :	<0.059 :	<0.01 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	1/14/2003	4/6/2003	4/6/2003	4/7/2003	7/21/2003	7/21/2003
			Sample ID	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRW GW4	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4
Acetone	mg/L	T		-	-	-	2.2 :	0.68 :	0.71 :
Benzene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Bromodichloromethane	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Bromoform	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Bromomethane	mg/L	T		-	-	-	<0.22 :	<0.059 J	<0.01 :
Carbon disulfide	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Carbon tetrachloride	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Chlorobenzene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Chloroethane	mg/L	T		-	-	-	<0.22 :	<0.059 J	<0.01 :
Chloroform	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.001 J
Chloromethane	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Dibromochloromethane	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Dichlorodifluoromethane	mg/L	T		-	-	-	<0.22 :	<0.059 J	<0.01 J
Ethylbenzene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Methylene chloride	mg/L	T		-	-	-	<0.22 :	<0.059 :	0.002 J
Styrene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Tetrachloroethene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Toluene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Total Xylene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Trichloroethene	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Trichlorofluoromethane	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Vinyl chloride	mg/L	T		-	-	-	<0.22 :	<0.059 :	<0.01 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	0.0045 J	-	-	-	<0.00025 J
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 :	-	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 :	-	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	0.0023 J	-	-	-	0.0036 J
HMX	mg/L	T		-	-	-	-	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 :	-	-	-	-
Isotopes									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/14/2003 MMW-30B-D01N-GRW GW4	MMW-30B 4/6/2003 MMW-30B-T01N-GRW GW4	MMW-30B 4/6/2003 MMW-30B-D01N-GRW GW4	MMW-30B 4/7/2003 MMW-30B-T01N-GRW GW4	MMW-30B 7/21/2003 MMW-30B-T01N-GRWDL GW4	MMW-30B 7/21/2003 MMW-30B-T01N-GRW GW4
Lead	mg/L	T	-	<0.0002 :	-	-	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 7/21/2003 MMW-30B-D01N-GRW GW4	MMW-30B 10/19/2003 MMW-30B-T01N-GRWDL GW4	MMW-30B 10/19/2003 MMW-30B-T01N-GRW GW4	MMW-30B 10/19/2003 MMW-30B-D01N-GRW GW4	MMW-30B 1/12/2004 MMW-30B-T01N-GRWDL GW4	MMW-30B 1/12/2004 MMW-30B-T01N-GRW GW4
Field Measurements								
DO	mg/L	T	-	-	0.21 :	-	-	0.66 :
EH	millivolts	T	-	-	-350.1 :	-	-	-299.4 :
pH	SU	T	-	-	7.3 J	-	-	7.2 J
Specific Conductance	uS/cm	T	-	-	2551. :	-	-	2367. :
Temperature	Celsius	T	-	-	9.55 :	-	-	8.71 :
Turbidity	NTU	T	-	-	2.4 :	-	-	1.8 :
General Chemistry								
Ammonia	mg/L	T	-	-	0.41 J	-	-	0.36 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	485. :	-	-	468. :
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Chloride	mg/L	T	-	-	14.4 :	-	-	14. :
Fluoride	mg/L	T	-	-	2. :	-	-	1.7 :
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	-	-	<0.2 J	-	-	<0.2 :
Nitrite	mg/L	T	-	-	0.016 J	-	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	-	<0.18 J	-	-	<0.024 J
Phosphorus	mg/L	T	-	-	0.042 J	-	-	0.052 :
Sulfate	mg/L	T	-	-	840. J	-	-	950. :
Total Alkalinity	mg/L	T	-	-	485. :	-	-	468. :
Total Dissolved Solids	mg/L	T	-	-	1890. J	-	-	2060. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	0.28 :
Total Organic Carbon	mg/L	T	-	-	21.7 J	-	-	4.3 :
Total Suspended Solids	mg/L	T	-	-	3.1 :	-	-	4.2 :
Laboratory Parameters								
pH	SU	T	-	-	7.3 J	-	-	7.2 J
Specific Conductance	umhos/cm	T	-	-	2180. J	-	-	2190. J
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	1100. :	-	-	1030. :
Hardness	mg/L	D	1140. :	-	-	1190. :	-	-
Metals								

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 7/21/2003 MMW-30B-D01N-GRW GW4		MMW-30B 10/19/2003 MMW-30B-T01N-GRWDL GW4		MMW-30B 10/19/2003 MMW-30B-T01N-GRW GW4		MMW-30B 10/19/2003 MMW-30B-D01N-GRW GW4		MMW-30B 1/12/2004 MMW-30B-T01N-GRWDL GW4		MMW-30B 1/12/2004 MMW-30B-T01N-GRW GW4	
Aluminum	mg/L	T	-		-		<0.217	:	-		-		<0.514	:
Aluminum	mg/L	D	<0.631	:	-		-		<0.217	:	-		-	
Antimony	mg/L	T	-		-		<0.0014	:	-		-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		-		<0.0011	:	-		-	
Arsenic	mg/L	T	-		-		0.0099	:	-		-		0.0136	:
Arsenic	mg/L	D	0.0073	:	-		-		0.0107	:	-		-	
Barium	mg/L	T	-		-		0.0374	:	-		-		0.038	:
Barium	mg/L	D	0.044	:	-		-		0.0389	:	-		-	
Beryllium	mg/L	T	-		-		<0.0004	:	-		-		<0.0003	:
Beryllium	mg/L	D	<0.0002	:	-		-		<0.0004	:	-		-	
Boron	mg/L	T	-		-		0.12	:	-		-		0.149	:
Boron	mg/L	D	0.179	:	-		-		0.124	:	-		-	
Cadmium	mg/L	T	-		-		<0.0005	:	-		-		<0.0007	J
Cadmium	mg/L	D	<0.0003	:	-		-		<0.0005	:	-		-	
Calcium	mg/L	T	-		-		385.	:	-		-		360.	:
Calcium	mg/L	D	403.	:	-		-		417.	:	-		-	
Chromium	mg/L	T	-		-		0.0015	J	-		-		<0.0015	:
Chromium	mg/L	D	<0.0006	:	-		-		<0.0011	J	-		-	
Cobalt	mg/L	T	-		-		<0.0029	:	-		-		<0.0023	:
Cobalt	mg/L	D	<0.0018	:	-		-		<0.0029	:	-		-	
Copper	mg/L	T	-		-		<0.0022	:	-		-		<0.003	:
Copper	mg/L	D	<0.0014	:	-		-		<0.0022	:	-		-	
Iron	mg/L	T	-		-		<0.455	:	-		-		<0.373	:
Iron	mg/L	D	<0.667	:	-		-		<0.455	:	-		-	
Lead	mg/L	T	-		-		<0.0004	:	-		-		0.00023	J
Lead	mg/L	D	<0.0002	:	-		-		<0.0004	:	-		-	
Magnesium	mg/L	T	-		-		33.8	:	-		-		31.8	:
Magnesium	mg/L	D	35.9	:	-		-		36.6	:	-		-	
Manganese	mg/L	T	-		-		0.652	:	-		-		0.564	:
Manganese	mg/L	D	0.697	:	-		-		0.707	:	-		-	
Mercury	mg/L	T	-		-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		-		0.0018	:	-		-		<0.0024	:
Molybdenum	mg/L	D	<0.0016	:	-		-		0.002	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	7/21/2003	10/19/2003	10/19/2003	10/19/2003	1/12/2004	1/12/2004
			Sample ID	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4
Nickel	mg/L	T		-	-	<0.0024 :	-	-	<0.0024 J
Nickel	mg/L	D		<0.002 :	-	-	<0.0024 :	-	-
Potassium	mg/L	T		-	-	4.66 :	-	-	5.28 :
Potassium	mg/L	D		5.81 :	-	-	5.66 :	-	-
Selenium	mg/L	T		-	-	0.001 :	-	-	0.00092 J
Selenium	mg/L	D		-	-	-	0.0013 :	-	-
Silver	mg/L	T		-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D		-	-	-	<0.0002 :	-	-
Sodium	mg/L	T		-	-	137. :	-	-	130. J
Sodium	mg/L	D		202. :	-	-	147. :	-	-
Thallium	mg/L	T		-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D		<0.0002 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	T		-	-	0.00084 :	-	-	0.0011 :
Vanadium	mg/L	D		0.0015 :	-	-	0.00087 :	-	-
Zinc	mg/L	T		-	-	<0.0203 :	-	-	0.0678 :
Zinc	mg/L	D		0.0187 :	-	-	<0.0308 :	-	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,1,2-Trichloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,1-Dichloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,1-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T		-	-	<0.01 J	-	<0.055 :	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,2-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,2-Dichloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,2-Dichloroethene (total)	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,2-Dichloropropane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,3-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
1,4-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
2-Butanone	mg/L	T		-	-	<0.01 :	-	0.015 J	<0.01 J
2-Hexanone	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
4-Methyl-2-pentanone	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	7/21/2003	10/19/2003	10/19/2003	10/19/2003	1/12/2004	1/12/2004
			Sample ID	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4	MMW-30B-D01N-GRW GW4	MMW-30B-T01N-GRWDL GW4	MMW-30B-T01N-GRW GW4
Acetone	mg/L	T		-	0.42 J	-	-	0.9 J	0.78 :
Benzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Bromodichloromethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Bromoform	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Bromomethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Carbon disulfide	mg/L	T		-	-	0.002 J	-	<0.055 :	0.001 J
Carbon tetrachloride	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Chlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Chloroethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Chloroform	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Chloromethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Dibromochloromethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Dichlorodifluoromethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Ethylbenzene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Methylene chloride	mg/L	T		-	-	0.002 J	-	<0.055 :	0.002 J
Styrene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Tetrachloroethene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Toluene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Total Xylene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Trichloroethene	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Trichlorofluoromethane	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 J
Vinyl chloride	mg/L	T		-	-	<0.01 :	-	<0.055 :	<0.01 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	0.0044 :	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	0.0021 :	-	-	0.0013 J
HMX	mg/L	T		-	-	<0.00025 :	-	-	<0.00025 J
Pentaerythritol tetranitrate	mg/L	T		-	-	0.088 :	-	-	<0.01 :
Isotopes									
Lead	mg/L	T		-	-	<0.0004 :	-	-	0.00023 J

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID					
		Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
		Sample Date	7/21/2003	10/19/2003	10/19/2003	10/19/2003	1/12/2004	1/12/2004
		Sample ID	MMW-30B-D01N-GRW	MMW-30B-T01N-GRWDL	MMW-30B-T01N-GRW	MMW-30B-D01N-GRW	MMW-30B-T01N-GRWDL	MMW-30B-T01N-GRW
		Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Lead	mg/L	D	<0.0002 :	-	-	<0.0004 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	1/12/2004	2/24/2004	2/24/2004	3/22/2004	4/18/2004	4/18/2004
			Sample ID	MMW-30B-D01N-GRW	MMW-30B-T01N-GRW	MMW-30B-D01N-GRW	MMW-30-B	MMW-30B-T01N-GRWDL	MMW-30B-T01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	0.49 :	-	-	-	0.32 :
EH	millivolts	T		-	-297.1 :	-	-	-	-276.7 :
pH	SU	T		-	6.95 :	-	-	-	6.4 J
Specific Conductance	uS/cm	T		-	2247. :	-	-	-	2426. :
Temperature	Celsius	T		-	8.03 :	-	-	-	9.11 :
Turbidity	NTU	T		-	7.4 :	-	-	-	5.3 :
General Chemistry									
Ammonia	mg/L	T		-	-	-	-	-	0.37 :
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	-	-	394. :
Carbonate (as CaCO3)	mg/L	T		-	-	-	-	-	<1. :
Chloride	mg/L	T		-	-	-	-	-	14.2 :
Fluoride	mg/L	T		-	2. :	-	-	-	1.9 :
Hydroxide (as CaCO3)	mg/L	T		-	-	-	-	-	<1. :
Nitrate	mg/L	T		-	-	-	-	-	<0.2 J
Nitrite	mg/L	T		-	-	-	-	-	0.0051 J
Phosphate, Ortho As P	mg/L	T		-	-	-	-	-	0.066 J
Phosphorus	mg/L	T		-	-	-	-	-	0.04 J
Sulfate	mg/L	T		-	934. :	-	-	-	1010. :
Total Alkalinity	mg/L	T		-	-	-	-	-	394. :
Total Dissolved Solids	mg/L	T		-	1970. :	-	-	-	2100. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	-	-	<0.27 :
Total Organic Carbon	mg/L	T		-	-	-	-	-	14.3 J
Total Suspended Solids	mg/L	T		-	12.9 :	-	-	-	<4. :
Laboratory Parameters									
pH	SU	T		-	6.95 :	-	-	-	6.4 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	2180. J
Inorganics									
Cyanide	mg/L	T		-	-	-	-	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	1210. :	-	-	-	1230. :
Hardness	mg/L	D		1050. :	-	1200. :	-	-	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/12/2004 MMW-30B-D01N-GRW GW4		MMW-30B 2/24/2004 MMW-30B-T01N-GRW GW4		MMW-30B 2/24/2004 MMW-30B-D01N-GRW GW4		MMW-30B 3/22/2004 MMW-30-B GW4		MMW-30B 4/18/2004 MMW-30B-T01N-GRWDL GW4		MMW-30B 4/18/2004 MMW-30B-T01N-GRW GW4	
Aluminum	mg/L	T	-		<0.514	:	-		-		-		<0.201	:
Aluminum	mg/L	D	<0.514	:	-		<0.514	:	-		-		-	
Antimony	mg/L	T	-		<0.001	:	-		-		-		<0.0008	:
Antimony	mg/L	D	<0.0024	:	-		<0.001	:	-		-		-	
Arsenic	mg/L	T	-		0.0076	:	-		-		-		0.0049	:
Arsenic	mg/L	D	0.0118	:	-		0.008	J	-		-		-	
Barium	mg/L	T	-		0.0392	J	-		-		-		0.0373	:
Barium	mg/L	D	0.0366	:	-		0.0383	J	-		-		-	
Beryllium	mg/L	T	-		<0.0003	:	-		-		-		<0.0003	J
Beryllium	mg/L	D	<0.0003	:	-		<0.0003	:	-		-		-	
Boron	mg/L	T	-		0.13	:	-		-		-		0.114	:
Boron	mg/L	D	0.149	:	-		0.132	:	-		-		-	
Cadmium	mg/L	T	-		<0.0007	:	-		-		-		<0.0003	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	J	-		-		-	
Calcium	mg/L	T	-		420.	:	-		-		-		429.	:
Calcium	mg/L	D	367.	:	-		417.	:	-		-		-	
Chromium	mg/L	T	-		<0.0015	:	-		-		-		<0.0006	:
Chromium	mg/L	D	<0.0015	:	-		<0.0015	:	-		-		-	
Cobalt	mg/L	T	-		<0.0023	:	-		-		-		<0.0016	:
Cobalt	mg/L	D	<0.0023	:	-		<0.0023	:	-		-		-	
Copper	mg/L	T	-		<0.003	:	-		-		-		<0.0016	:
Copper	mg/L	D	<0.003	:	-		<0.003	:	-		-		-	
Iron	mg/L	T	-		<0.373	:	-		-		-		<0.293	J
Iron	mg/L	D	<0.373	:	-		<0.373	:	-		-		-	
Lead	mg/L	T	-		0.00046	:	-		-		-		<0.0008	:
Lead	mg/L	D	<0.0002	J	-		<0.0002	:	-		-		-	
Magnesium	mg/L	T	-		37.8	:	-		-		-		38.	:
Magnesium	mg/L	D	32.2	:	-		37.3	:	-		-		-	
Manganese	mg/L	T	-		0.689	:	-		-		-		0.712	:
Manganese	mg/L	D	0.583	:	-		0.668	:	-		-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		0.0026	:	-		-		-		<0.003	:
Molybdenum	mg/L	D	<0.0024	:	-		<0.0024	:	-		-		-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/12/2004 MMW-30B-D01N-GRW GW4	MMW-30B 2/24/2004 MMW-30B-T01N-GRW GW4	MMW-30B 2/24/2004 MMW-30B-D01N-GRW GW4	MMW-30B 3/22/2004 MMW-30-B GW4	MMW-30B 4/18/2004 MMW-30B-T01N-GRWDL GW4	MMW-30B 4/18/2004 MMW-30B-T01N-GRW GW4
Nickel	mg/L	T	-	<0.0024 :	-	-	-	<0.0015 J
Nickel	mg/L	D	<0.0024 J	-	<0.0024 :	-	-	-
Potassium	mg/L	T	-	4.97 :	-	-	-	4.93 :
Potassium	mg/L	D	5.16 :	-	5.03 :	-	-	-
Selenium	mg/L	T	-	<0.0004 J	-	-	-	<0.0014 :
Selenium	mg/L	D	<0.0006 :	-	0.0013 J	-	-	-
Silver	mg/L	T	-	<0.0002 :	-	-	-	<0.0002 J
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-
Sodium	mg/L	T	-	147. :	-	-	-	134. :
Sodium	mg/L	D	137. J	-	147. :	-	-	-
Thallium	mg/L	T	-	<0.0002 :	-	-	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-
Vanadium	mg/L	T	-	0.0013 :	-	-	-	0.0013 :
Vanadium	mg/L	D	0.00092 :	-	0.0012 :	-	-	-
Zinc	mg/L	T	-	0.0313 :	-	-	-	<0.024 :
Zinc	mg/L	D	0.0464 :	-	<0.026 :	-	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,1,2-Trichloroethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,1-Dichloroethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,1-Dichloroethene	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,2-Dichloroethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,2-Dichloroethene (total)	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
1,2-Dichloropropane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
2-Butanone	mg/L	T	-	-	-	-	<0.034 :	0.004 J
2-Hexanone	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
Acetone	mg/L	T	-	-	-	-	0.46 :	0.52 :
Benzene	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
Bromodichloromethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
Bromoform	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
Bromomethane	mg/L	T	-	-	-	-	<0.034 :	<0.01 :
Carbon disulfide	mg/L	T	-	-	-	-	<0.034 :	<0.01 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B	MMW-30B
			Sample Date	1/12/2004	2/24/2004	2/24/2004	3/22/2004	4/18/2004	4/18/2004
			Sample ID	MMW-30B-D01N-GRW	MMW-30B-T01N-GRW	MMW-30B-D01N-GRW	MMW-30-B	MMW-30B-T01N-GRWDL	MMW-30B-T01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Carbon tetrachloride	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Chlorobenzene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Chloroethane	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Chloroform	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Chloromethane	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Dibromochloromethane	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Ethylbenzene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Methylene chloride	mg/L	T		-	-	-	-	<0.034 :	0.001 J
Styrene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Tetrachloroethene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Toluene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Total Xylene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Trichloroethene	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Vinyl chloride	mg/L	T		-	-	-	-	<0.034 :	<0.01 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		-	-	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T		-	-	-	-	-	0.0015 :
HMX	mg/L	T		-	-	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T		-	-	-	-	-	0.05 J
Lanthanides									
Cerium	mg/L	T		-	0.00169 :	-	-	-	-
Cerium	mg/L	D		-	-	0.00148 :	-	-	-
Dysprosium	mg/L	T		-	0.00018 :	-	-	-	-
Dysprosium	mg/L	D		-	-	0.0002 :	-	-	-
Erbium	mg/L	T		-	0.00012 :	-	-	-	-
Erbium	mg/L	D		-	-	0.00015 :	-	-	-
Europium	mg/L	T		-	0.00004 :	-	-	-	-
Europium	mg/L	D		-	-	0.00004 :	-	-	-
Gadolinium	mg/L	T		-	0.00019 :	-	-	-	-
Gadolinium	mg/L	D		-	-	0.00018 :	-	-	-
Holmium	mg/L	T		-	0.00004 :	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 1/12/2004 MMW-30B-D01N-GRW GW4	MMW-30B 2/24/2004 MMW-30B-T01N-GRW GW4	MMW-30B 2/24/2004 MMW-30B-D01N-GRW GW4	MMW-30B 3/22/2004 MMW-30-B GW4	MMW-30B 4/18/2004 MMW-30B-T01N-GRWDL GW4	MMW-30B 4/18/2004 MMW-30B-T01N-GRW GW4
Holmium	mg/L	D	-	-	0.00005 :	-	-	-
Lanthanum	mg/L	T	-	0.00046 :	-	-	-	-
Lanthanum	mg/L	D	-	-	0.00037 :	-	-	-
Lutetium	mg/L	T	-	0.00002 :	-	-	-	-
Lutetium	mg/L	D	-	-	0.00002 :	-	-	-
Neodymium	mg/L	T	-	0.00062 :	-	-	-	-
Neodymium	mg/L	D	-	-	0.0005 :	-	-	-
Praseodymium	mg/L	T	-	0.00014 :	-	-	-	-
Praseodymium	mg/L	D	-	-	0.00011 :	-	-	-
Samarium	mg/L	T	-	0.00016 :	-	-	-	-
Samarium	mg/L	D	-	-	0.00014 :	-	-	-
Terbium	mg/L	T	-	0.00003 :	-	-	-	-
Terbium	mg/L	D	-	-	0.00003 :	-	-	-
Thulium	mg/L	T	-	0.00002 :	-	-	-	-
Thulium	mg/L	D	-	-	0.00002 :	-	-	-
Ytterbium	mg/L	T	-	0.00011 :	-	-	-	-
Ytterbium	mg/L	D	-	-	0.00015 :	-	-	-
Yttrium	mg/L	T	-	0.0015 :	-	-	-	-
Yttrium	mg/L	D	-	-	0.00204 :	-	-	-
Isotopes								
Delta D	per mil	T	-	-79.1 :	-	-	-	-
Delta O-18	per mil	T	-	-10.8 :	-	-	-	-
Lead	mg/L	T	-	0.00046 :	-	-	-	<0.0008 :
Lead	mg/L	D	<0.0002 J	-	<0.0002 :	-	-	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	135.62 :	-	-
DEL He3	%	T	-	-	-	88.7 :	-	-
DEL He4	%	T	-	-	-	543. :	-	-
He Corr	1E-8cc/g	T	-	-	-	30.503 :	-	-
Tritium TU	TU	T	-	-	-	0.012 :	-	-
Uncert Age	Years	T	-	-	-	0.74 :	-	-
Uncert TU	TU	T	-	-	-	0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 4/18/2004 MMW-30B-D01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-D01N-GRW GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRW GW4
Field Measurements								
DO	mg/L	T	-	-	1.1 :	-	-	0.36 :
EH	millivolts	T	-	-	-405.1 :	-	-	-490.4 :
pH	SU	T	-	-	6.87 :	-	-	6.73 :
Specific Conductance	uS/cm	T	-	-	2862. :	-	-	2766. :
Temperature	Celsius	T	-	-	9.1 :	-	-	6.04 :
Turbidity	NTU	T	-	-	38.2 :	-	-	75.6 :
General Chemistry								
Ammonia	mg/L	T	-	-	<0.11 J	-	-	<0.056 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	120. :	-	-	<137. :
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Chloride	mg/L	T	-	-	31.8 :	-	-	28.7 :
Fluoride	mg/L	T	-	14.3 J	-	-	15.7 J	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	-	-	<0.4 J	-	-	<0.4 J
Nitrite	mg/L	T	-	-	<0.005 J	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 J	-	-	<0.01 J
Phosphorus	mg/L	T	-	-	0.016 :	-	-	<0.026 J
Sulfate	mg/L	T	-	-	1950. :	-	-	1830. :
Total Alkalinity	mg/L	T	-	-	120. :	-	-	<137. :
Total Dissolved Solids	mg/L	T	-	-	2790. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	<0.24 J
Total Organic Carbon	mg/L	T	-	-	2.4 :	-	-	4.1 :
Total Suspended Solids	mg/L	T	-	-	12.1 :	-	-	<51.7 J
Laboratory Parameters								
pH	SU	T	-	-	6.87 :	-	-	6.73 :
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	1920. :	-	-	2040. :
Hardness	mg/L	D	1330. :	-	-	1880. :	-	-
Metals								
Aluminum	mg/L	T	-	-	1.8 J	-	-	2.06 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 4/18/2004 MMW-30B-D01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-D01N-GRW GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRW GW4
Aluminum	mg/L	D	<0.327 :	-	-	1.41 J	-	-
Antimony	mg/L	T	-	-	<0.0004 :	-	-	<0.0006 :
Antimony	mg/L	D	<0.0008 :	-	-	<0.0004 :	-	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	0.00056 :
Arsenic	mg/L	D	0.0055 :	-	-	<0.0004 :	-	-
Barium	mg/L	T	-	-	0.0369 :	-	-	0.0218 :
Barium	mg/L	D	0.0408 :	-	-	0.0339 :	-	-
Beryllium	mg/L	T	-	-	0.0454 :	-	-	0.0823 :
Beryllium	mg/L	D	<0.0003 J	-	-	0.0399 :	-	-
Boron	mg/L	T	-	-	0.0282 :	-	-	<0.0052 :
Boron	mg/L	D	0.123 :	-	-	<0.0254 :	-	-
Cadmium	mg/L	T	-	-	0.0055 J	-	-	0.0039 :
Cadmium	mg/L	D	<0.0003 :	-	-	0.0041 J	-	-
Calcium	mg/L	T	-	-	572. :	-	-	609. :
Calcium	mg/L	D	464. :	-	-	563. :	-	-
Chromium	mg/L	T	-	-	0.005 :	-	-	0.0069 J
Chromium	mg/L	D	<0.0006 :	-	-	<0.0046 :	-	-
Chromium, Hexavalent	mg/L	D	-	-	<0.01 :	-	-	-
Cobalt	mg/L	T	-	-	0.0826 :	-	-	0.0856 :
Cobalt	mg/L	D	<0.0016 :	-	-	0.0748 :	-	-
Copper	mg/L	T	-	-	0.0265 :	-	-	<0.0239 :
Copper	mg/L	D	0.0035 :	-	-	0.0217 :	-	-
Iron	mg/L	T	-	-	23.5 :	-	-	14.9 :
Iron	mg/L	D	0.3 :	-	-	23.9 :	-	-
Lead	mg/L	T	-	-	0.0018 :	-	-	0.0451 :
Lead	mg/L	D	<0.0008 :	-	-	<0.00064 :	-	-
Magnesium	mg/L	T	-	-	118. :	-	-	125. :
Magnesium	mg/L	D	41.2 :	-	-	114. :	-	-
Manganese	mg/L	T	-	-	29. :	-	-	28.9 J
Manganese	mg/L	D	0.785 :	-	-	26.8 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	0.012 :	-	-	0.0044 :
Molybdenum	mg/L	D	0.0035 :	-	-	0.0087 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-30B 4/18/2004 MMW-30B-D01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 11/7/2002 MMW-31B-T01N-GRW GW4	MMW-31B 11/7/2002 MMW-31B-D01N-GRW GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRWRE GW4	MMW-31B 12/5/2002 MMW-31B-T01N-GRW GW4
Nickel	mg/L	T	-	-	0.248 J	-	-	0.243 :
Nickel	mg/L	D	<0.0015 J	-	-	0.217 J	-	-
Potassium	mg/L	T	-	-	7.59 :	-	-	5.46 :
Potassium	mg/L	D	5.46 :	-	-	7.51 :	-	-
Selenium	mg/L	T	-	-	<0.0004 J	-	-	<0.0016 :
Selenium	mg/L	D	<0.0014 :	-	-	<0.0004 :	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D	<0.0002 J	-	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	48.3 :	-	-	34.6 :
Sodium	mg/L	D	143. :	-	-	43.6 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	<0.0002 :	-	-	0.00042 :
Vanadium	mg/L	D	0.0013 :	-	-	<0.0002 :	-	-
Zinc	mg/L	T	-	-	2.84 :	-	-	2.74 J
Zinc	mg/L	D	<0.024 :	-	-	2.37 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	-	<0.01 :
Isotopes								
Lead	mg/L	T	-	-	0.0018 :	-	-	0.0451 :
Lead	mg/L	D	<0.0008 :	-	-	<0.00064 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B
			Sample Date	12/5/2002	1/10/2003	1/10/2003	2/4/2003	2/4/2003	2/4/2003
			Sample ID	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRWRE GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		-	6.91 :	-	-	0.64 :	-
EH	millivolts	T		-	-450.8 :	-	-	-321. :	-
pH	SU	T		-	6.75 :	-	-	6.48 :	-
Specific Conductance	uS/cm	T		-	3072. :	-	-	2984. :	-
Temperature	Celsius	T		-	8.82 :	-	-	8.17 :	-
Turbidity	NTU	T		-	1.3 :	-	-	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.046 :	-	-	<0.13 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	139. :	-	-	142. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	28.3 :	-	-	28.5 :	-
Fluoride	mg/L	T		-	22.5 :	-	-	19.6 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	<0.2 J	-	-	<0.4 J	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Phosphorus	mg/L	T		-	0.036 :	-	-	<0.018 :	-
Sulfate	mg/L	T		-	1890. J	-	-	1920. J	-
Total Alkalinity	mg/L	T		-	139. :	-	-	142. :	-
Total Dissolved Solids	mg/L	T		-	3060. :	-	-	3020. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	1.6 :	-	-	1.2 :	-
Total Suspended Solids	mg/L	T		-	24.8 :	-	-	8.1 :	-
Laboratory Parameters									
pH	SU	T		-	6.75 :	-	-	6.48 :	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	2150. :	-	-	2080. :	-
Hardness	mg/L	D		2120. :	-	2130. :	-	-	2080. :
Metals									
Aluminum	mg/L	T		-	4.27 :	-	-	3.61 :	-

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-31B 12/5/2002 MMW-31B-D01N-GRW GW4		MMW-31B 1/10/2003 MMW-31B-T01N-GRW GW4		MMW-31B 1/10/2003 MMW-31B-D01N-GRW GW4		MMW-31B 2/4/2003 MMW-31B-T01N-GRWRE GW4		MMW-31B 2/4/2003 MMW-31B-T01N-GRW GW4		MMW-31B 2/4/2003 MMW-31B-D01N-GRW GW4	
Aluminum	mg/L	D	1.87	:	-		4.04	:	-		-		3.63	:
Antimony	mg/L	T	-		<0.0006	:	-		-		<0.0006	:	-	
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		<0.0004	:	-		-		0.00063	:	-	
Arsenic	mg/L	D	<0.0004	:	-		0.00043	:	-		-		0.00048	:
Barium	mg/L	T	-		0.0224	:	-		-		0.0196	:	-	
Barium	mg/L	D	0.0204	:	-		0.0184	:	-		-		0.0185	:
Beryllium	mg/L	T	-		0.0963	:	-		-		0.099	:	-	
Beryllium	mg/L	D	0.0836	:	-		0.0937	:	-		-		0.101	:
Boron	mg/L	T	-		<0.009	:	-		-		<0.0027	:	-	
Boron	mg/L	D	<0.0054	:	-		<0.0113	:	-		-		0.0028	:
Cadmium	mg/L	T	-		0.0093	:	-		-		0.0118	:	-	
Cadmium	mg/L	D	0.0011	J	-		0.0076	:	-		-		0.0113	:
Calcium	mg/L	T	-		644.	:	-		-		622.	:	-	
Calcium	mg/L	D	640.	:	-		639.	:	-		-		623.	:
Chromium	mg/L	T	-		0.0056	:	-		-		0.0056	:	-	
Chromium	mg/L	D	0.0058	J	-		0.0045	:	-		-		0.0054	:
Cobalt	mg/L	T	-		0.0949	:	-		-		0.0958	:	-	
Cobalt	mg/L	D	0.0862	J	-		0.0946	J	-		-		0.0985	:
Copper	mg/L	T	-		<0.0017	:	-		-		<0.0017	:	-	
Copper	mg/L	D	0.0224	J	-		<0.0023	:	-		-		<0.002	:
Iron	mg/L	T	-		15.4	:	-		-		12.2	:	-	
Iron	mg/L	D	14.6	:	-		14.5	:	-		-		12.4	:
Lead	mg/L	T	-		0.0848	:	-		-		0.0867	:	-	
Lead	mg/L	D	0.0014	:	-		0.0341	:	-		-		0.0734	:
Magnesium	mg/L	T	-		131.	:	-		-		127.	:	-	
Magnesium	mg/L	D	126.	:	-		130.	:	-		-		128.	:
Manganese	mg/L	T	-		32.2	:	-		-		33.	J	-	
Manganese	mg/L	D	30.4	J	-		32.1	:	-		-		33.2	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.0011	:	-		-		<0.0011	:	-	
Molybdenum	mg/L	D	0.0044	:	-		<0.0011	:	-		-		<0.0011	:
Nickel	mg/L	T	-		0.269	:	-		-		0.28	:	-	

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B
			Sample Date	12/5/2002	1/10/2003	1/10/2003	2/4/2003	2/4/2003	2/4/2003
			Sample ID	MMW-31B-D01N-GRW	MMW-31B-T01N-GRW	MMW-31B-D01N-GRW	MMW-31B-T01N-GRWRE	MMW-31B-T01N-GRW	MMW-31B-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Nickel	mg/L	D		0.247 :	-	0.268 :	-	-	0.288 :
Potassium	mg/L	T		-	4.54 :	-	-	4.28 :	-
Potassium	mg/L	D		5.45 :	-	4.27 :	-	-	4.34 :
Selenium	mg/L	T		-	<0.0016 :	-	-	<0.0016 :	-
Selenium	mg/L	D		<0.0016 :	-	<0.0016 :	-	-	<0.0016 :
Silver	mg/L	T		-	<0.0002 :	-	-	<0.0002 :	-
Silver	mg/L	D		<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Sodium	mg/L	T		-	31.1 :	-	-	33. :	-
Sodium	mg/L	D		34.9 :	-	31.8 :	-	-	32.8 :
Thallium	mg/L	T		-	<0.0002 :	-	-	<0.0002 :	-
Thallium	mg/L	D		<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T		-	0.00063 :	-	-	<0.0004 :	-
Vanadium	mg/L	D		<0.0004 :	-	0.00043 :	-	-	<0.0004 :
Zinc	mg/L	T		-	3.22 :	-	-	3.36 :	-
Zinc	mg/L	D		2.76 J	-	3.19 :	-	-	3.37 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 J	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Isotopes									
Lead	mg/L	T		-	0.0848 :	-	-	0.0867 :	-
Lead	mg/L	D		0.0014 :	-	0.0341 :	-	-	0.0734 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	MMW-31B		MMW-31B		MMW-31B		MMW-31B		MMW-31B	
			Sample Date	3/3/2003		3/3/2003		4/6/2003		4/6/2003		5/4/2003		5/4/2003	
			Sample ID	MMW-31B-T01N-GRW		MMW-31B-D01N-GRW		MMW-31B-T01N-GRW		MMW-31B-D01N-GRW		MMW-31B-T01N-GRW		MMW-31B-D01N-GRW	
			Exposure Area	GW4		GW4		GW4		GW4		GW4		GW4	
		Fraction													
Field Measurements															
DO	mg/L	T		0.27	:	-		1.2	:	-		0.79	:	-	
EH	millivolts	T		-82.5	:	-		-34.	:	-		42.	:	-	
pH	SU	T		6.45	:	-		6.7	J	-		6.7	J	-	
Specific Conductance	uS/cm	T		368.	:	-		2965.	:	-		3083.	:	-	
Temperature	Celsius	T		8.53	:	-		8.84	:	-		9.37	:	-	
Turbidity	NTU	T		28.7	:	-		19.4	:	-		132.	:	-	
General Chemistry															
Ammonia	mg/L	T		<0.1	J	-		<0.074	:	-		<0.13	:	-	
Bicarbonate (as CaCO3)	mg/L	T		142.	:	-		135.	:	-		144.	:	-	
Carbonate (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T		32.	:	-		30.	:	-		35.	:	-	
Fluoride	mg/L	T		22.8	:	-		26.2	:	-		26.5	:	-	
Hydroxide (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T		<0.4	J	-		<0.4	:	-		<0.4	:	-	
Nitrite	mg/L	T		<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T		<0.01	J	-		<0.033	J	-		<0.01	J	-	
Phosphorus	mg/L	T		<0.024	J	-		0.039	:	-		<0.037	:	-	
Sulfate	mg/L	T		1930.	:	-		1890.	J	-		1860.	:	-	
Total Alkalinity	mg/L	T		142.	:	-		135.	:	-		144.	:	-	
Total Dissolved Solids	mg/L	T		3040.	:	-		3160.	:	-		3220.	:	-	
Total Kjeldahl Nitrogen	mg/L	T		<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T		<1.2	J	-		<1.	J	-		1.3	:	-	
Total Suspended Solids	mg/L	T		16.6	J	-		21.	:	-		16.2	:	-	
Laboratory Parameters															
pH	SU	T		6.45	:	-		6.7	J	-		6.7	J	-	
Specific Conductance	umhos/cm	T		-		-		2910.	J	-		2910.	J	-	
Inorganics															
Cyanide	mg/L	T		<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties															
Hardness	mg/L	T		2260.	:	-		2260.	:	-		2100.	:	-	
Hardness	mg/L	D		-		2180.	:	-		2200.	:	-		2060.	:
Metals															

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B
			Sample Date	3/3/2003	3/3/2003	4/6/2003	4/6/2003	5/4/2003	5/4/2003
			Sample ID	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4
Aluminum	mg/L	T		5.68 :	-	5.89 :	-	5.61 :	-
Aluminum	mg/L	D		-	4.94 :	-	5.13 :	-	5.72 :
Antimony	mg/L	T		<0.0006 :	-	<0.0006 :	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.0006 :	-	<0.0006 :	-	<0.0006 :
Arsenic	mg/L	T		0.00062 :	-	0.00052 :	-	0.00049 :	-
Arsenic	mg/L	D		-	0.00046 J	-	0.00041 :	-	<0.0004 :
Barium	mg/L	T		0.0215 :	-	0.0236 :	-	0.0195 :	-
Barium	mg/L	D		-	0.0178 :	-	0.0174 :	-	0.0181 :
Beryllium	mg/L	T		0.106 :	-	0.0946 :	-	0.0981 :	-
Beryllium	mg/L	D		-	0.1 :	-	0.0935 :	-	0.0976 :
Boron	mg/L	T		<0.0027 :	-	0.01 :	-	0.0104 :	-
Boron	mg/L	D		-	<0.0027 :	-	0.0099 :	-	0.0091 :
Cadmium	mg/L	T		0.0163 :	-	0.0176 :	-	0.0227 :	-
Cadmium	mg/L	D		-	0.0137 :	-	0.0148 :	-	0.0194 :
Calcium	mg/L	T		671. J	-	669. :	-	621. :	-
Calcium	mg/L	D		-	646. J	-	652. :	-	607. :
Chromium	mg/L	T		0.015 :	-	<0.001 :	-	0.0021 :	-
Chromium	mg/L	D		-	0.0137 :	-	<0.001 :	-	0.0013 :
Cobalt	mg/L	T		0.114 :	-	0.101 :	-	0.114 :	-
Cobalt	mg/L	D		-	0.11 :	-	0.0986 :	-	0.115 :
Copper	mg/L	T		<0.0017 J	-	<0.0015 J	-	<0.0024 :	-
Copper	mg/L	D		-	<0.0017 J	-	<0.0015 J	-	<0.0024 :
Iron	mg/L	T		14.4 :	-	12.7 :	-	11.3 :	-
Iron	mg/L	D		-	13. J	-	12. :	-	10.7 :
Lead	mg/L	T		0.115 :	-	0.142 :	-	0.145 :	-
Lead	mg/L	D		-	0.0879 :	-	0.104 :	-	0.106 :
Magnesium	mg/L	T		143. :	-	143. :	-	133. :	-
Magnesium	mg/L	D		-	137. :	-	139. :	-	131. :
Manganese	mg/L	T		36.5 J	-	36.5 :	-	35.1 :	-
Manganese	mg/L	D		-	35. J	-	35.5 :	-	34.7 :
Mercury	mg/L	T		<0.0001 :	-	0.00012 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		<0.0011 :	-	<0.0023 :	-	<0.0016 :	-
Molybdenum	mg/L	D		-	<0.0011 :	-	<0.0023 :	-	<0.0016 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		MMW-31B 3/3/2003 MMW-31B-T01N-GRW GW4		MMW-31B 3/3/2003 MMW-31B-D01N-GRW GW4		MMW-31B 4/6/2003 MMW-31B-T01N-GRW GW4		MMW-31B 4/6/2003 MMW-31B-D01N-GRW GW4		MMW-31B 5/4/2003 MMW-31B-T01N-GRW GW4		MMW-31B 5/4/2003 MMW-31B-D01N-GRW GW4	
Nickel	mg/L	T	0.33 :		-		0.311 :		-		0.328 :		-	
Nickel	mg/L	D	-		0.318 :		-		0.306 :		-		0.329 :	
Potassium	mg/L	T	<4.44 J		-		4.08 :		-		3.22 :		-	
Potassium	mg/L	D	-		<3.79 J		-		3.81 :		-		3.17 :	
Selenium	mg/L	T	<0.0016 J		-		<0.001 :		-		<0.001 :		-	
Selenium	mg/L	D	-		<0.0016 J		-		<0.001 :		-		<0.001 :	
Silver	mg/L	T	<0.0002 :		-		<0.0002 :		-		<0.0002 :		-	
Silver	mg/L	D	-		<0.0002 :		-		<0.0002 :		-		<0.0002 :	
Sodium	mg/L	T	36.9 :		-		33.6 :		-		31.9 :		-	
Sodium	mg/L	D	-		36.6 :		-		33.5 :		-		29. :	
Thallium	mg/L	T	<0.0002 :		-		<0.0002 :		-		<0.0002 :		-	
Thallium	mg/L	D	-		<0.0002 :		-		<0.0002 :		-		<0.0002 :	
Vanadium	mg/L	T	0.00074 :		-		0.00028 :		-		0.00037 :		-	
Vanadium	mg/L	D	-		0.0004 :		-		0.0003 :		-		<0.0002 :	
Zinc	mg/L	T	3.72 J		-		3.86 :		-		3.76 :		-	
Zinc	mg/L	D	-		3.57 :		-		3.74 :		-		3.62 :	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025 J		-		<0.00025 :		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01 J		-		<0.01 :		-		<0.01 :		-	
Isotopes														
Lead	mg/L	T	0.115 :		-		0.142 :		-		0.145 :		-	
Lead	mg/L	D	-		0.0879 :		-		0.104 :		-		0.106 :	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 6/2/2003 MMW-31B-T01N-GR GW4 T		MMW-31B 6/2/2003 MMW-31B-D01N-GR GW4 T		MMW-31B 7/22/2003 MMW-31B-T01N-GR GW4 T		MMW-31B 7/22/2003 MMW-31B-D01N-GR GW4 T		MMW-31B 8/10/2003 MMW-31B-T01N-GR GW4 T		MMW-31B 8/10/2003 MMW-31B-D01N-GR GW4 T	
Field Measurements														
DO	mg/L	T	0.47	:	-		1.23	:	-		0.3	:	-	
EH	millivolts	T	172.7	:	-		683.5	:	-		10.7	:	-	
pH	SU	T	5.6	J	-		6.6	J	-		6.5	J	-	
Specific Conductance	uS/cm	T	5637.	:	-		3003.	:	-		2791.	:	-	
Temperature	Celsius	T	10.78	:	-		11.51	:	-		10.01	:	-	
Turbidity	NTU	T	36.4	:	-		25.3	:	-		23.6	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.077	J	-		<0.054	J	-		0.088	:	-	
Bicarbonate (as CaCO3)	mg/L	T	136.	:	-		121.	:	-		136.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	<39.	:	-		26.2	:	-		26.	:	-	
Fluoride	mg/L	T	23.2	:	-		13.2	:	-		21.6	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	:	-		<0.4	J	-		<0.2	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	0.028	:	-		<0.01	J	-		<0.01	:	-	
Phosphorus	mg/L	T	0.034	J	-		0.041	:	-		0.019	:	-	
Sulfate	mg/L	T	1760.	J	-		1780.	J	-		1780.	J	-	
Total Alkalinity	mg/L	T	136.	:	-		121.	:	-		136.	:	-	
Total Dissolved Solids	mg/L	T	3030.	:	-		3410.	:	-		3020.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		<1.3	J	-	
Total Suspended Solids	mg/L	T	22.2	:	-		24.6	:	-		20.9	:	-	
Laboratory Parameters														
pH	SU	T	5.6	J	-		6.6	J	-		6.5	J	-	
Specific Conductance	umhos/cm	T	2950.	J	-		2920.	J	-		2780.	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	1980.	:	-		2060.	:	-		2400.	:	-	
Hardness	mg/L	D	-		2170.	:	-		2080.	:	-		2470.	:
Metals														

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 6/2/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 6/2/2003 MMW-31B-D01N-GR GW4 W		MMW-31B 7/22/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 7/22/2003 MMW-31B-D01N-GR GW4 W		MMW-31B 8/10/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 8/10/2003 MMW-31B-D01N-GR GW4 W	
Aluminum	mg/L	T	7.23	:	-		10.9	:	-		7.51	:	-	
Aluminum	mg/L	D	-		6.18	:	-		7.08	:	-		8.34	J
Antimony	mg/L	T	<0.072	:	-		<0.047	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.072	:	-		<0.047	:	-		<0.001	:
Arsenic	mg/L	T	<0.04	:	-		<0.048	:	-		0.00052	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.048	:	-		0.00065	:
Barium	mg/L	T	<0.123	:	-		<0.059	:	-		0.0175	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.059	:	-		0.0234	:
Beryllium	mg/L	T	0.103	:	-		0.0967	:	-		0.0865	:	-	
Beryllium	mg/L	D	-		0.1	:	-		0.0956	:	-		0.0891	:
Boron	mg/L	T	<0.084	:	-		<0.048	:	-		<0.0102	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.048	:	-		<0.0106	:
Cadmium	mg/L	T	<0.07	:	-		0.13	:	-		0.0241	:	-	
Cadmium	mg/L	D	-		<0.07	:	-		<0.12	:	-		0.027	:
Calcium	mg/L	T	583.	:	-		596.	:	-		695.	:	-	
Calcium	mg/L	D	-		640.	:	-		607.	:	-		715.	:
Chromium	mg/L	T	<0.19	:	-		0.246	:	-		<0.0014	:	-	
Chromium	mg/L	D	-		<0.19	:	-		<0.19	:	-		<0.0014	:
Cobalt	mg/L	T	<0.36	:	-		0.393	:	-		0.114	:	-	
Cobalt	mg/L	D	-		<0.36	:	-		<0.37	:	-		0.117	:
Copper	mg/L	T	<0.2	:	-		<0.33	:	-		<0.0066	:	-	
Copper	mg/L	D	-		<0.2	:	-		<0.33	:	-		<0.0024	:
Iron	mg/L	T	9.46	:	-		6.99	:	-		11.6	:	-	
Iron	mg/L	D	-		10.3	:	-		9.6	:	-		12.2	:
Lead	mg/L	T	0.141	:	-		0.191	:	-		0.108	:	-	
Lead	mg/L	D	-		0.104	:	-		0.112	:	-		0.138	:
Magnesium	mg/L	T	128.	:	-		138.	:	-		162.	:	-	
Magnesium	mg/L	D	-		140.	:	-		138.	:	-		166.	:
Manganese	mg/L	T	32.9	:	-		33.8	:	-		40.8	:	-	
Manganese	mg/L	D	-		36.1	:	-		34.2	:	-		41.9	:
Mercury	mg/L	T	<0.0001	:	-		0.0002	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		0.00013	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.017	:	-		<0.0017	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.017	:	-		<0.0017	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 6/2/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 6/2/2003 MMW-31B-D01N-GR GW4 W		MMW-31B 7/22/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 7/22/2003 MMW-31B-D01N-GR GW4 W		MMW-31B 8/10/2003 MMW-31B-T01N-GR GW4 W		MMW-31B 8/10/2003 MMW-31B-D01N-GR GW4 W	
Nickel	mg/L	T	<0.73	:	-		0.827	:	-		0.319	:	-	
Nickel	mg/L	D	-		<0.73	:	-		<0.44	:	-		0.328	:
Potassium	mg/L	T	<40.5	:	-		<37.1	:	-		3.99	:	-	
Potassium	mg/L	D	-		<40.5	:	-		<37.1	:	-		4.24	:
Selenium	mg/L	T	<0.008	:	-		<0.008	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.008	:	-		<0.008	J	-		<0.0016	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.0009	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.0009	J
Sodium	mg/L	T	<91.6	:	-		58.6	:	-		44.6	J	-	
Sodium	mg/L	D	-		<91.6	:	-		108.	:	-		37.5	J
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	<0.002	:	-		<0.002	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.0004	:
Zinc	mg/L	T	3.89	:	-		4.52	:	-		4.48	:	-	
Zinc	mg/L	D	-		4.	:	-		3.95	:	-		4.59	:
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		-		-		-		-	
2,4,5-Trichlorophenol	mg/L	T	<0.025	:	-		-		-		-		-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		-		-		-		-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		-		-		-		-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		-		-		-		-	
2,4-Dinitrophenol	mg/L	T	<0.025	:	-		-		-		-		-	
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		-		-		-		-	
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Chlorophenol	mg/L	T	<0.01	:	-		-		-		-		-	
2-Methylnaphthalene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Methylphenol	mg/L	T	<0.01	:	-		-		-		-		-	
2-Nitroaniline	mg/L	T	<0.025	:	-		-		-		-		-	
2-Nitrophenol	mg/L	T	<0.01	:	-		-		-		-		-	
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		-		-		-		-	
3-Nitroaniline	mg/L	T	<0.025	:	-		-		-		-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.025	:	-		-		-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 6/2/2003 MMW-31B-T01N-GR GW4 W T		MMW-31B 6/2/2003 MMW-31B-D01N-GR GW4 W T	MMW-31B 7/22/2003 MMW-31B-T01N-GR GW4 W T	MMW-31B 7/22/2003 MMW-31B-D01N-GR GW4 W T	MMW-31B 8/10/2003 MMW-31B-T01N-GR GW4 W T	MMW-31B 8/10/2003 MMW-31B-D01N-GR GW4 W T
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-	-	-	-	-
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-	-	-	-	-
4-Chloroaniline	mg/L	T	<0.01	:	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-	-	-	-	-
4-Methylphenol	mg/L	T	<0.01	:	-	-	-	-	-
4-Nitroaniline	mg/L	T	<0.025	:	-	-	-	-	-
4-Nitrophenol	mg/L	T	<0.025	:	-	-	-	-	-
Acenaphthene	mg/L	T	<0.01	:	-	-	-	-	-
Acenaphthylene	mg/L	T	<0.01	:	-	-	-	-	-
Anthracene	mg/L	T	<0.01	:	-	-	-	-	-
Benzaldehyde	mg/L	T	<0.01	J	-	-	-	-	-
Benzo(a)anthracene	mg/L	T	<0.01	:	-	-	-	-	-
Benzo(a)pyrene	mg/L	T	<0.01	:	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Butyl benzyl phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Carbazole	mg/L	T	<0.01	:	-	-	-	-	-
Chrysene	mg/L	T	<0.01	:	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-	-	-	-	-
Dibenzofuran	mg/L	T	<0.01	:	-	-	-	-	-
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-	-	-	-	-
Diethylphthalate	mg/L	T	<0.01	:	-	-	-	-	-
Dimethylphthalate	mg/L	T	<0.01	:	-	-	-	-	-
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Fluoranthene	mg/L	T	<0.01	:	-	-	-	-	-
Fluorene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorobenzene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorobutadiene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 6/2/2003 MMW-31B-T01N-GR GW4		MMW-31B 6/2/2003 MMW-31B-D01N-GR GW4		MMW-31B 7/22/2003 MMW-31B-T01N-GR GW4		MMW-31B 7/22/2003 MMW-31B-D01N-GR GW4		MMW-31B 8/10/2003 MMW-31B-T01N-GR GW4		MMW-31B 8/10/2003 MMW-31B-D01N-GR GW4	
Hexachloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		-		-		-		-	
Isophorone	mg/L	T	<0.01	:	-		-		-		-		-	
Naphthalene	mg/L	T	<0.01	:	-		-		-		-		-	
Nitrobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		-		-		-		-	
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		-		-		-		-	
Pentachlorophenol	mg/L	T	<0.025	:	-		-		-		-		-	
Phenanthrene	mg/L	T	<0.01	:	-		-		-		-		-	
Phenol	mg/L	T	<0.01	:	-		-		-		-		-	
Pyrene	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	0.141	:	-		0.191	:	-		0.108	:	-	
Lead	mg/L	D	-		0.104	:	-		0.112	:	-		0.138	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B
			Sample Date	9/8/2003	9/8/2003	10/17/2003	10/17/2003	11/3/2003	11/3/2003
			Sample ID	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		0.6 :	-	0.82 :	-	0.48 :	-
EH	millivolts	T		40.6 :	-	44.4 :	-	68.9 :	-
pH	SU	T		6.6 J	-	6.6 J	-	6.6 J	-
Specific Conductance	uS/cm	T		2961. :	-	2881. :	-	2695. :	-
Temperature	Celsius	T		11.63 :	-	8.59 :	-	8.85 :	-
Turbidity	NTU	T		9.5 :	-	16.2 :	-	21.8 :	-
General Chemistry									
Ammonia	mg/L	T		<0.052 :	-	<0.048 J	-	<0.045 :	-
Bicarbonate (as CaCO3)	mg/L	T		132. :	-	134. :	-	118. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		26.3 :	-	26.2 :	-	26.9 :	-
Fluoride	mg/L	T		5.3 :	-	28.5 :	-	5.3 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 :	-	<0.2 J	-	<0.2 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 J	-
Phosphorus	mg/L	T		0.027 :	-	0.029 :	-	<0.01 :	-
Sulfate	mg/L	T		2110. J	-	1820. J	-	1750. :	-
Total Alkalinity	mg/L	T		132. :	-	134. :	-	118. :	-
Total Dissolved Solids	mg/L	T		2850. :	-	3270. :	-	3000. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.27 :	-	<0.24 :	-	<0.24 J	-
Total Organic Carbon	mg/L	T		<1. :	-	<1. J	-	1.1 :	-
Total Suspended Solids	mg/L	T		9. :	-	62.6 :	-	20.1 :	-
Laboratory Parameters									
pH	SU	T		6.6 J	-	6.6 J	-	6.6 J	-
Specific Conductance	umhos/cm	T		2620. J	-	2720. J	-	2850. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		2020. :	-	1910. :	-	1900. :	-
Hardness	mg/L	D		-	2070. :	-	1930. :	-	1960. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-31B 9/8/2003 MMW-31B-T01N-GR GW4		MMW-31B 9/8/2003 MMW-31B-D01N-GR GW4		MMW-31B 10/17/2003 MMW-31B-T01N-GR GW4		MMW-31B 10/17/2003 MMW-31B-D01N-GR GW4		MMW-31B 11/3/2003 MMW-31B-T01N-GR GW4		MMW-31B 11/3/2003 MMW-31B-D01N-GR GW4	
Aluminum	mg/L	T	8.27	:	-		8.1	:	-		7.66	:	-	
Aluminum	mg/L	D	-		8.17	:	-		7.74	:	-		8.2	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		0.00043	:	-		0.00053	:	-	
Arsenic	mg/L	D	-		0.00041	:	-		0.00047	:	-		0.00043	:
Barium	mg/L	T	0.0184	:	-		0.0218	:	-		0.0204	:	-	
Barium	mg/L	D	-		0.0177	:	-		0.0173	:	-		0.0171	:
Beryllium	mg/L	T	0.0856	:	-		0.087	:	-		0.0919	:	-	
Beryllium	mg/L	D	-		0.0865	:	-		0.0863	:	-		0.0866	:
Boron	mg/L	T	<0.0063	:	-		0.0072	:	-		0.0111	:	-	
Boron	mg/L	D	-		<0.0063	:	-		0.0065	:	-		0.009	:
Cadmium	mg/L	T	0.0269	J	-		0.0354	:	-		0.0353	J	-	
Cadmium	mg/L	D	-		0.0259	J	-		0.0293	:	-		0.0282	:
Calcium	mg/L	T	582.	:	-		559.	:	-		555.	:	-	
Calcium	mg/L	D	-		598.	:	-		564.	:	-		572.	:
Chromium	mg/L	T	<0.0011	:	-		0.0097	J	-		<0.0013	:	-	
Chromium	mg/L	D	-		<0.0011	:	-		0.0081	J	-		<0.0013	:
Cobalt	mg/L	T	0.116	:	-		0.121	:	-		0.127	:	-	
Cobalt	mg/L	D	-		0.118	:	-		0.12	:	-		0.124	:
Copper	mg/L	T	<0.0022	:	-		<0.0022	:	-		<0.003	:	-	
Copper	mg/L	D	-		<0.0022	:	-		<0.0022	:	-		<0.002	:
Iron	mg/L	T	9.86	:	-		8.31	:	-		8.39	:	-	
Iron	mg/L	D	-		10.2	:	-		8.19	:	-		8.36	:
Lead	mg/L	T	0.128	:	-		0.168	:	-		0.173	:	-	
Lead	mg/L	D	-		0.115	:	-		0.115	:	-		0.114	:
Magnesium	mg/L	T	136.	:	-		126.	:	-		126.	:	-	
Magnesium	mg/L	D	-		140.	:	-		127.	:	-		129.	:
Manganese	mg/L	T	33.2	:	-		34.2	:	-		33.9	J	-	
Manganese	mg/L	D	-		33.8	:	-		34.4	:	-		35.1	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0011	:	-		<0.0011	:	-		<0.0012	J	-	
Molybdenum	mg/L	D	-		<0.0011	:	-		<0.0011	J	-		<0.0012	J

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 9/8/2003 MMW-31B-T01N-GR GW4		MMW-31B 9/8/2003 MMW-31B-D01N-GR GW4		MMW-31B 10/17/2003 MMW-31B-T01N-GR GW4		MMW-31B 10/17/2003 MMW-31B-D01N-GR GW4		MMW-31B 11/3/2003 MMW-31B-T01N-GR GW4		MMW-31B 11/3/2003 MMW-31B-D01N-GR GW4	
Nickel	mg/L	T	0.321	:	-		0.332	:	-		0.348	:	-	
Nickel	mg/L	D	-		0.326	:	-		0.332	:	-		0.327	:
Potassium	mg/L	T	3.35	:	-		<4.12	:	-		3.03	J	-	
Potassium	mg/L	D	-		3.52	:	-		<4.63	:	-		3.01	J
Selenium	mg/L	T	<0.0006	:	-		0.0006	:	-		<0.00085	:	-	
Selenium	mg/L	D	-		<0.0006	:	-		0.0012	:	-		<0.00071	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<26.4	:	-		32.2	:	-		30.7	:	-	
Sodium	mg/L	D	-		<32.2	:	-		32.2	:	-		<25.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0002	:	-		0.00037	:	-		0.00022	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Zinc	mg/L	T	3.67	:	-		3.87	:	-		3.99	:	-	
Zinc	mg/L	D	-		3.69	:	-		3.86	:	-		4.02	:
Isotopes														
Lead	mg/L	T	0.128	:	-		0.168	:	-		0.173	:	-	
Lead	mg/L	D	-		0.115	:	-		0.115	:	-		0.114	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B	MMW-31B
			Sample Date	12/8/2003	12/8/2003	1/12/2004	1/12/2004	4/21/2004	4/21/2004
			Sample ID	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4	MMW-31B-T01N-GRW GW4	MMW-31B-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		0.54 :	-	0.52 :	-	2.04 :	-
EH	millivolts	T		82.1 :	-	49.5 :	-	44.6 :	-
pH	SU	T		6.7 J	-	6.6 J	-	6.9 J	-
Specific Conductance	uS/cm	T		2877. :	-	2810. :	-	2890. :	-
Temperature	Celsius	T		7.35 :	-	8.6 :	-	9.99 :	-
Turbidity	NTU	T		40.3 :	-	32.8 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		0.098 :	-	<0.076 J	-	<0.14 :	-
Bicarbonate (as CaCO3)	mg/L	T		128. J	-	128. :	-	129. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		32.9 :	-	25.6 :	-	25.9 :	-
Fluoride	mg/L	T		28.5 :	-	27.5 :	-	26.4 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 :	-	<0.2 J	-	<0.2 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.023 :	-	0.061 :	-	0.027 :	-
Sulfate	mg/L	T		1690. :	-	2020. :	-	1950. :	-
Total Alkalinity	mg/L	T		128. J	-	128. :	-	129. :	-
Total Dissolved Solids	mg/L	T		2730. :	-	2930. :	-	2740. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	<1.1 :	-	<1. J	-
Total Suspended Solids	mg/L	T		4.1 :	-	12.3 :	-	20.8 J	-
Laboratory Parameters									
pH	SU	T		6.7 J	-	6.6 J	-	6.9 J	-
Specific Conductance	umhos/cm	T		2500. J	-	2790. J	-	2470. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		2000. :	-	1940. :	-	1960. :	-
Hardness	mg/L	D		-	2040. :	-	1840. :	-	1790. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 12/8/2003 MMW-31B-T01N-GR GW4		MMW-31B 12/8/2003 MMW-31B-D01N-GR GW4		MMW-31B 1/12/2004 MMW-31B-T01N-GR GW4		MMW-31B 1/12/2004 MMW-31B-D01N-GR GW4		MMW-31B 4/21/2004 MMW-31B-T01N-GR GW4		MMW-31B 4/21/2004 MMW-31B-D01N-GR GW4	
Aluminum	mg/L	T	8.62	:	-		8.63	:	-		9.04	:	-	
Aluminum	mg/L	D	-		8.29	:	-		8.02	:	-		8.04	:
Antimony	mg/L	T	<0.0024	:	-		<0.0024	:	-		<0.0015	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		<0.0024	:	-		<0.0015	:
Arsenic	mg/L	T	0.00069	:	-		0.0011	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		0.00074	:	-		0.0011	:	-		<0.0004	:
Barium	mg/L	T	0.0208	:	-		0.0175	:	-		0.018	:	-	
Barium	mg/L	D	-		0.0158	:	-		0.0161	:	-		0.0165	:
Beryllium	mg/L	T	0.0781	:	-		0.081	:	-		0.0805	:	-	
Beryllium	mg/L	D	-		0.0777	:	-		0.0794	:	-		0.0768	:
Boron	mg/L	T	<0.0068	:	-		<0.0155	:	-		<0.0087	:	-	
Boron	mg/L	D	-		<0.0082	:	-		<0.0117	:	-		<0.0077	:
Cadmium	mg/L	T	0.0339	:	-		0.0352	J	-		0.0441	J	-	
Cadmium	mg/L	D	-		0.0286	:	-		0.0314	:	-		0.0277	J
Calcium	mg/L	T	580.	:	-		564.	:	-		566.	:	-	
Calcium	mg/L	D	-		592.	:	-		534.	:	-		518.	:
Chromium	mg/L	T	0.0093	:	-		0.0067	:	-		0.0064	:	-	
Chromium	mg/L	D	-		0.0088	:	-		0.006	:	-		0.0056	:
Cobalt	mg/L	T	0.112	:	-		0.123	J	-		0.12	J	-	
Cobalt	mg/L	D	-		0.113	:	-		0.122	:	-		0.116	:
Copper	mg/L	T	<0.0022	:	-		<0.003	:	-		<0.0008	J	-	
Copper	mg/L	D	-		<0.0022	:	-		<0.003	:	-		<0.0007	J
Iron	mg/L	T	8.54	:	-		7.84	:	-		9.19	J	-	
Iron	mg/L	D	-		8.31	:	-		7.26	:	-		7.02	:
Lead	mg/L	T	0.152	:	-		0.134	:	-		0.156	:	-	
Lead	mg/L	D	-		0.0987	:	-		0.106	:	-		0.0815	:
Magnesium	mg/L	T	134.	:	-		129.	:	-		133.	:	-	
Magnesium	mg/L	D	-		137.	:	-		122.	:	-		121.	:
Manganese	mg/L	T	34.	:	-		33.4	:	-		34.7	:	-	
Manganese	mg/L	D	-		34.6	:	-		31.6	:	-		32.5	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0011	:	-		<0.0024	:	-		<0.001	:	-	
Molybdenum	mg/L	D	-		<0.0011	:	-		<0.0024	:	-		<0.001	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-31B 12/8/2003 MMW-31B-T01N-GR GW4		MMW-31B 12/8/2003 MMW-31B-D01N-GR GW4		MMW-31B 1/12/2004 MMW-31B-T01N-GR GW4		MMW-31B 1/12/2004 MMW-31B-D01N-GR GW4		MMW-31B 4/21/2004 MMW-31B-T01N-GR GW4		MMW-31B 4/21/2004 MMW-31B-D01N-GR GW4	
Nickel	mg/L	T	0.306	J	-		0.328	:	-		0.32	J	-	
Nickel	mg/L	D	-		0.306	J	-		0.32	:	-		0.306	:
Potassium	mg/L	T	<3.39	:	-		3.86	:	-		3.74	:	-	
Potassium	mg/L	D	-		<3.44	:	-		3.69	:	-		3.56	:
Selenium	mg/L	T	<0.0006	:	-		0.0024	J	-		<0.0014	:	-	
Selenium	mg/L	D	-		0.0011	:	-		0.0026	:	-		<0.0014	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<33.2	:	-		33.8	J	-		<34.	:	-	
Sodium	mg/L	D	-		35.1	:	-		33.1	J	-		<33.9	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00083	:	-		<0.0004	:	-		0.00094	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.0007	:
Zinc	mg/L	T	4.02	:	-		3.94	:	-		4.28	:	-	
Zinc	mg/L	D	-		4.07	:	-		3.7	:	-		3.91	:
Isotopes														
Lead	mg/L	T	0.152	:	-		0.134	:	-		0.156	:	-	
Lead	mg/L	D	-		0.0987	:	-		0.106	:	-		0.0815	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B
			Sample Date	11/6/2002	11/6/2002	1/16/2003	1/16/2003	4/6/2003	4/6/2003
			Sample ID	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		2.84 :	-	5.32 :	-	4.59 :	-
EH	millivolts	T		46.2 :	-	404.4 :	-	101.4 :	-
pH	SU	T		6.9 :	-	6.7 :	-	6.9 J	-
Specific Conductance	uS/cm	T		2796. :	-	2698. :	-	6804. :	-
Temperature	Celsius	T		9.03 :	-	6.54 :	-	5.52 :	-
Turbidity	NTU	T		0. :	-	0.4 :	-	17.7 :	-
General Chemistry									
Ammonia	mg/L	T		<0.081 J	-	<0.07 J	-	<0.06 :	-
Bicarbonate (as CaCO3)	mg/L	T		314. :	-	301. :	-	309. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		36.6 :	-	37.5 :	-	36. :	-
Fluoride	mg/L	T		2.2 :	-	2.2 :	-	2.2 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	<0.56 J	-	<0.4 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.07 :	-	<0.01 :	-	<0.01 :	-
Sulfate	mg/L	T		1700. :	-	1430. J	-	1380. J	-
Total Alkalinity	mg/L	T		314. :	-	301. :	-	309. :	-
Total Dissolved Solids	mg/L	T		2620. :	-	2580. :	-	2600. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	1.3 :	-	<1. J	-
Total Suspended Solids	mg/L	T		2. :	-	4. :	-	<2.7 :	-
Laboratory Parameters									
pH	SU	T		6.9 :	-	6.7 :	-	6.9 J	-
Specific Conductance	umhos/cm	T		-	-	-	-	2690. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1830. :	-	1810. :	-	1900. :	-
Hardness	mg/L	D		-	1760. :	-	1810. :	-	1990. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B
			Sample Date	11/6/2002	11/6/2002	1/16/2003	1/16/2003	4/6/2003	4/6/2003
			Sample ID	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4
Aluminum	mg/L	T		<0.006 :	-	<0.142 J	-	<0.426 :	-
Aluminum	mg/L	D		-	0.0083 :	-	<0.142 J	-	<0.426 :
Antimony	mg/L	T		<0.0004 :	-	<0.0006 J	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.0004 :	-	<0.0006 J	-	<0.0006 :
Arsenic	mg/L	T		0.0006 J	-	0.00042 :	-	0.00063 :	-
Arsenic	mg/L	D		-	0.00047 J	-	0.00044 :	-	0.0007 :
Barium	mg/L	T		0.0129 :	-	0.0124 :	-	0.0133 :	-
Barium	mg/L	D		-	0.0122 :	-	0.0121 :	-	<0.0123 :
Beryllium	mg/L	T		0.0048 :	-	<0.0045 :	-	<0.0055 :	-
Beryllium	mg/L	D		-	0.0047 :	-	<0.0044 :	-	<0.0058 :
Boron	mg/L	T		<0.0155 :	-	<0.0027 J	-	0.0177 :	-
Boron	mg/L	D		-	<0.017 :	-	<0.0027 J	-	0.0152 :
Cadmium	mg/L	T		0.00045 J	-	<0.0004 :	-	<0.0005 :	-
Cadmium	mg/L	D		-	0.00046 J	-	<0.0004 :	-	<0.0005 :
Calcium	mg/L	T		585. :	-	578. :	-	605. :	-
Calcium	mg/L	D		-	563. :	-	579. :	-	632. :
Chromium	mg/L	T		0.0091 :	-	<0.0037 :	-	<0.0024 :	-
Chromium	mg/L	D		-	0.008 :	-	<0.0037 :	-	<0.0019 :
Cobalt	mg/L	T		0.0041 :	-	<0.0031 :	-	<0.0038 :	-
Cobalt	mg/L	D		-	0.0029 :	-	0.0025 :	-	<0.0038 :
Copper	mg/L	T		0.0132 J	-	<0.0017 J	-	<0.0015 J	-
Copper	mg/L	D		-	0.0136 J	-	<0.0017 J	-	<0.0015 J
Iron	mg/L	T		2.13 :	-	2.14 :	-	2.24 :	-
Iron	mg/L	D		-	2.01 :	-	2.1 :	-	1.97 :
Lead	mg/L	T		0.0012 :	-	0.0015 :	-	0.0025 :	-
Lead	mg/L	D		-	<0.00092 :	-	0.00064 :	-	0.001 :
Magnesium	mg/L	T		89.6 :	-	89.5 :	-	95.3 :	-
Magnesium	mg/L	D		-	86. :	-	89.4 :	-	99.4 :
Manganese	mg/L	T		3.59 :	-	3.6 :	-	3.83 :	-
Manganese	mg/L	D		-	3.46 :	-	3.61 :	-	3.97 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.0075 :	-	0.007 :	-	0.006 :	-
Molybdenum	mg/L	D		-	0.0074 :	-	0.0051 :	-	0.0065 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-32B 11/6/2002 MMW-32B-T01N-GR GW4 T		MMW-32B 11/6/2002 MMW-32B-D01N-GR GW4 D		MMW-32B 1/16/2003 MMW-32B-T01N-GR GW4 T		MMW-32B 1/16/2003 MMW-32B-D01N-GR GW4 D		MMW-32B 4/6/2003 MMW-32B-T01N-GR GW4 T		MMW-32B 4/6/2003 MMW-32B-D01N-GR GW4 D	
Nickel	mg/L	T	0.0094	J	-		0.0107	:	-		0.0076	J	-	
Nickel	mg/L	D	-		0.01	J	-		0.0101	:	-		<0.0076	J
Potassium	mg/L	T	5.01	:	-		4.82	:	-		4.94	:	-	
Potassium	mg/L	D	-		4.64	:	-		4.78	:	-		4.86	:
Selenium	mg/L	T	0.00065	:	-		<0.0016	:	-		<0.001	:	-	
Selenium	mg/L	D	-		<0.0004	:	-		<0.0016	:	-		<0.001	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	75.1	:	-		71.1	:	-		72.7	:	-	
Sodium	mg/L	D	-		72.1	:	-		69.7	:	-		76.2	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Zinc	mg/L	T	1.55	:	-		1.5	:	-		1.58	:	-	
Zinc	mg/L	D	-		1.49	:	-		1.5	:	-		1.64	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		<0.00025	:	-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	0.0012	:	-		0.0015	:	-		0.0025	:	-	
Lead	mg/L	D	-		<0.00092	:	-		0.00064	:	-		0.001	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B
			Sample Date	7/23/2003	7/23/2003	10/21/2003	10/21/2003	1/9/2004	1/9/2004
			Sample ID	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4
Field Measurements									
DO	mg/L	T		0.4 :	-	2.03 :	-	0.42 :	-
EH	millivolts	T		111.4 :	-	462.7 :	-	90.2 :	-
pH	SU	T		6.8 J	-	6.9 J	-	6.9 J	-
Specific Conductance	uS/cm	T		2801. :	-	2674. :	-	2796. :	-
Temperature	Celsius	T		14.34 :	-	11.95 :	-	8.64 :	-
Turbidity	NTU	T		0. :	-	0. :	-	1. :	-
General Chemistry									
Ammonia	mg/L	T		<0.04 J	-	<0.05 J	-	<0.086 J	-
Bicarbonate (as CaCO3)	mg/L	T		309. :	-	312. :	-	305. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		33.7 :	-	30.6 :	-	34.5 :	-
Fluoride	mg/L	T		2.2 :	-	2.2 :	-	2.1 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	<0.4 J	-	<0.2 :	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.045 J	-	<0.01 J	-	<0.01 :	-
Phosphorus	mg/L	T		0.036 :	-	0.018 :	-	<0.016 :	-
Sulfate	mg/L	T		1500. J	-	1270. J	-	1400. :	-
Total Alkalinity	mg/L	T		309. :	-	312. :	-	305. :	-
Total Dissolved Solids	mg/L	T		2740. :	-	2680. :	-	2560. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.2 J	-	10.8 J	-	<2.7 :	-
Total Suspended Solids	mg/L	T		2.6 :	-	3.3 :	-	2.4 :	-
Laboratory Parameters									
pH	SU	T		6.8 J	-	6.9 J	-	6.9 J	-
Specific Conductance	umhos/cm	T		2740. J	-	2830. J	-	2480. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1830. :	-	1990. :	-	1770. :	-
Hardness	mg/L	D		-	1900. :	-	1870. :	-	1820. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B	MMW-32B
			Sample Date	7/23/2003	7/23/2003	10/21/2003	10/21/2003	1/9/2004	1/9/2004
			Sample ID	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4	MMW-32B-T01N-GRW GW4	MMW-32B-D01N-GRW GW4
Aluminum	mg/L	T		<0.183 J	-	<0.221 J	-	<0.514 :	-
Aluminum	mg/L	D		-	<0.183 J	-	<0.221 J	-	<0.514 :
Antimony	mg/L	T		<0.001 J	-	<0.001 :	-	<0.0024 :	-
Antimony	mg/L	D		-	<0.001 J	-	<0.001 :	-	<0.0024 :
Arsenic	mg/L	T		0.00057 :	-	0.00083 :	-	0.0012 :	-
Arsenic	mg/L	D		-	0.00058 :	-	0.00075 :	-	0.0013 :
Barium	mg/L	T		0.013 :	-	0.0136 :	-	0.012 :	-
Barium	mg/L	D		-	0.0136 :	-	0.0125 :	-	0.0123 :
Beryllium	mg/L	T		0.0046 :	-	0.0051 :	-	0.0044 :	-
Beryllium	mg/L	D		-	0.0047 :	-	0.005 :	-	0.0044 :
Boron	mg/L	T		0.017 :	-	0.014 :	-	<0.0147 :	-
Boron	mg/L	D		-	0.0195 :	-	0.0126 :	-	<0.0154 :
Cadmium	mg/L	T		<0.00043 :	-	<0.0005 :	-	<0.0007 J	-
Cadmium	mg/L	D		-	<0.00043 :	-	0.00054 :	-	<0.0007 :
Calcium	mg/L	T		584. :	-	636. :	-	566. :	-
Calcium	mg/L	D		-	605. :	-	600. :	-	582. :
Chromium	mg/L	T		0.0019 :	-	<0.0011 J	-	<0.0015 J	-
Chromium	mg/L	D		-	0.0011 :	-	<0.0011 J	-	<0.0015 J
Cobalt	mg/L	T		0.0039 :	-	<0.0029 :	-	0.003 J	-
Cobalt	mg/L	D		-	0.0051 :	-	0.0052 :	-	<0.0023 :
Copper	mg/L	T		<0.0014 J	-	<0.0022 :	-	<0.003 :	-
Copper	mg/L	D		-	<0.0014 J	-	<0.0022 :	-	<0.003 :
Iron	mg/L	T		1.98 :	-	1.97 :	-	1.91 :	-
Iron	mg/L	D		-	2.16 :	-	2.03 :	-	1.86 :
Lead	mg/L	T		<0.0009 :	-	0.00054 :	-	0.00071 :	-
Lead	mg/L	D		-	0.00083 :	-	0.00054 :	-	<0.00051 :
Magnesium	mg/L	T		91.2 :	-	96.7 :	-	86.3 :	-
Magnesium	mg/L	D		-	94.6 :	-	91. :	-	88.6 :
Manganese	mg/L	T		3.59 :	-	3.89 :	-	3.52 :	-
Manganese	mg/L	D		-	3.71 :	-	3.66 :	-	3.61 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		<0.0071 :	-	0.0074 :	-	0.0073 :	-
Molybdenum	mg/L	D		-	<0.0079 :	-	0.0081 :	-	0.0067 :

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-32B 7/23/2003 MMW-32B-T01N-GR		MMW-32B 7/23/2003 MMW-32B-D01N-GR		MMW-32B 10/21/2003 MMW-32B-T01N-GR		MMW-32B 10/21/2003 MMW-32B-D01N-GR		MMW-32B 1/9/2004 MMW-32B-T01N-GR		MMW-32B 1/9/2004 MMW-32B-D01N-GR	
			W GW4		W GW4		W GW4		W GW4		W GW4		W GW4	
Nickel	mg/L	T	0.0104	:	-		0.0092	:	-		<0.0024	J	-	
Nickel	mg/L	D	-		0.0105	:	-		0.0088	:	-		<0.0024	J
Potassium	mg/L	T	4.95	:	-		4.55	:	-		4.62	:	-	
Potassium	mg/L	D	-		5.22	:	-		4.39	:	-		4.89	:
Selenium	mg/L	T	<0.0016	:	-		<0.00089	:	-		0.0022	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.00083	:	-		0.0027	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<71.1	J	-		74.7	:	-		70.4	:	-	
Sodium	mg/L	D	-		74.7	:	-		67.	:	-		73.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Zinc	mg/L	T	1.38	:	-		1.56	:	-		1.4	:	-	
Zinc	mg/L	D	-		1.46	:	-		1.48	:	-		1.44	:
Isotopes														
Lead	mg/L	T	<0.0009	:	-		0.00054	:	-		0.00071	:	-	
Lead	mg/L	D	-		0.00083	:	-		0.00054	:	-		<0.00051	:

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-32B 4/22/2004 MMW-32B-T01N-GRW GW4 T		MMW-32B 4/22/2004 MMW-32B-D01N-GRW GW4 T		MMW-34B 10/30/2002 MMW-34B-T01N-GRW GW3 T		MMW-34B 10/31/2002 MMW-34B-T01N-GRWRE GW3 T		MMW-34B 10/31/2002 MMW-34B-T01N-GRW GW3 T		MMW-34B 10/31/2002 MMW-34B-D01N-GRW GW3 T	
Field Measurements														
DO	mg/L	T	0.42	:	-		-		-		5.2	:	-	
EH	millivolts	T	67.6	:	-		-		-		381.1	:	-	
pH	SU	T	7.1	J	-		-		-		4.6	:	-	
Specific Conductance	uS/cm	T	2775.	:	-		-		-		2885.	:	-	
Temperature	Celsius	T	8.97	:	-		-		-		11.35	:	-	
Turbidity	NTU	T	1.8	:	-		-		-		55.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.11	:	-		-		-		<0.2	:	-	
Bicarbonate (as CaCO3)	mg/L	T	306.	:	-		-		-		<1.1	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	34.6	:	-		-		-		57.	:	-	
Fluoride	mg/L	T	2.1	:	-		-		129.	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		-		-		2.6	J	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		-		0.016	J	-	
Phosphorus	mg/L	T	0.042	:	-		-		-		0.15	:	-	
Sulfate	mg/L	T	1600.	:	-		-		-		2100.	:	-	
Total Alkalinity	mg/L	T	306.	:	-		-		-		<1.1	:	-	
Total Dissolved Solids	mg/L	T	2590.	:	-		-		-		3230.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		-		-		1.5	:	-	
Total Suspended Solids	mg/L	T	<3.8	J	-		-		-		6.4	:	-	
Laboratory Parameters														
pH	SU	T	7.1	J	-		-		-		4.6	:	-	
Specific Conductance	umhos/cm	T	2490.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1800.	:	-		-		-		1310.	:	-	
Hardness	mg/L	D	-		1820.	:	-		-		-		1340.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	4/22/2004	4/22/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-32B-T01N-GRW	MMW-32B-D01N-GRW	MMW-34B-T01N-GRW	MMW-34B-T01N-GRWRE	MMW-34B-T01N-GRW	MMW-34B-D01N-GRW
			Exposure Area	GW4	GW4	GW3	GW3	GW3	GW3
Aluminum	mg/L	T		<0.176 :	-	-	-	55.4 :	-
Aluminum	mg/L	D		-	<0.192 :	-	-	-	56.8 :
Antimony	mg/L	T		<0.0012 :	-	-	-	<0.00048 :	-
Antimony	mg/L	D		-	<0.0012 :	-	-	-	<0.0002 :
Arsenic	mg/L	T		<0.0004 :	-	-	-	<0.0012 :	-
Arsenic	mg/L	D		-	0.00041 :	-	-	-	<0.0017 :
Barium	mg/L	T		0.0116 :	-	-	-	<0.0092 :	-
Barium	mg/L	D		-	0.0121 :	-	-	-	<0.0092 :
Beryllium	mg/L	T		0.0032 :	-	-	-	0.0984 :	-
Beryllium	mg/L	D		-	0.0036 :	-	-	-	0.1 :
Boron	mg/L	T		0.014 :	-	-	-	0.0279 :	-
Boron	mg/L	D		-	0.0138 :	-	-	-	0.027 :
Cadmium	mg/L	T		0.0005 :	-	-	-	0.0379 :	-
Cadmium	mg/L	D		-	<0.0003 :	-	-	-	0.0393 :
Calcium	mg/L	T		578. :	-	-	-	432. :	-
Calcium	mg/L	D		-	585. :	-	-	-	441. :
Chromium	mg/L	T		<0.0024 J	-	-	-	<0.0046 :	-
Chromium	mg/L	D		-	0.003 J	-	-	-	<0.0046 :
Chromium, Hexavalent	mg/L	D		-	-	<0.01 :	-	-	-
Cobalt	mg/L	T		0.0023 :	-	-	-	0.0047 :	-
Cobalt	mg/L	D		-	<0.0038 :	-	-	-	0.0046 :
Copper	mg/L	T		<0.0014 :	-	-	-	0.856 :	-
Copper	mg/L	D		-	0.0015 :	-	-	-	0.886 :
Iron	mg/L	T		<2.2 J	-	-	-	0.0345 :	-
Iron	mg/L	D		-	<2.23 :	-	-	-	<0.0226 :
Lead	mg/L	T		<0.0008 :	-	-	-	0.0389 :	-
Lead	mg/L	D		-	<0.0008 :	-	-	-	0.0126 :
Magnesium	mg/L	T		87.2 :	-	-	-	56.4 :	-
Magnesium	mg/L	D		-	88.3 :	-	-	-	57.4 :
Manganese	mg/L	T		3.6 :	-	-	-	16.6 :	-
Manganese	mg/L	D		-	3.65 :	-	-	-	16.9 :
Mercury	mg/L	T		<0.0001 J	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 J	-	-	-	<0.0001 :
Molybdenum	mg/L	T		0.0058 :	-	-	-	0.123 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	4/22/2004	4/22/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-32B-T01N-GRW	MMW-32B-D01N-GRW	MMW-34B-T01N-GRW	MMW-34B-T01N-GRWRE	MMW-34B-T01N-GRW	MMW-34B-D01N-GRW
			Exposure Area	GW4	GW4	GW3	GW3	GW3	GW3
Molybdenum	mg/L	D		-	0.0067 :	-	-	-	0.112 :
Nickel	mg/L	T		0.0089 J	-	-	-	0.121 :	-
Nickel	mg/L	D		-	0.0096 :	-	-	-	0.123 :
Potassium	mg/L	T		4.8 :	-	-	-	9.92 :	-
Potassium	mg/L	D		-	4.85 :	-	-	-	10.1 :
Selenium	mg/L	T		<0.0014 :	-	-	-	0.0222 :	-
Selenium	mg/L	D		-	<0.0014 :	-	-	-	0.0221 :
Silver	mg/L	T		<0.0002 J	-	-	-	0.00014 :	-
Silver	mg/L	D		-	<0.0002 J	-	-	-	0.00012 :
Sodium	mg/L	T		73.8 :	-	-	-	36.3 :	-
Sodium	mg/L	D		-	73.8 :	-	-	-	37.2 J
Thallium	mg/L	T		<0.0002 :	-	-	-	0.0005 :	-
Thallium	mg/L	D		-	<0.0002 :	-	-	-	0.00049 :
Vanadium	mg/L	T		<0.0004 :	-	-	-	0.00028 :	-
Vanadium	mg/L	D		-	<0.0004 :	-	-	-	0.00031 :
Zinc	mg/L	T		1.42 :	-	-	-	5.49 :	-
Zinc	mg/L	D		-	1.45 :	-	-	-	5.56 :
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	-	-	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T		-	-	-	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T		-	-	-	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T		-	-	-	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
2-Butanone	mg/L	T		-	-	-	-	<0.01 J	-
2-Hexanone	mg/L	T		-	-	-	-	<0.01 J	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	4/22/2004	4/22/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-32B-T01N-GRW	MMW-32B-D01N-GRW	MMW-34B-T01N-GRW	MMW-34B-T01N-GRWRE	MMW-34B-T01N-GRW	MMW-34B-D01N-GRW
				GW4	GW4	GW3	GW3	GW3	GW3
4-Methyl-2-pentanone	mg/L	T		-	-	-	-	<0.01 J	-
Acetone	mg/L	T		-	-	-	-	<0.01 J	-
Benzene	mg/L	T		-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Bromoform	mg/L	T		-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		-	-	-	-	<0.01 J	-
Carbon disulfide	mg/L	T		-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		-	-	-	-	<0.01 :	-
Chloroform	mg/L	T		-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		-	-	-	-	<0.01 :	-
Styrene	mg/L	T		-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Toluene	mg/L	T		-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	-	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	-	-	-	<0.025 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-32B	MMW-32B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	4/22/2004	4/22/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-32B-T01N-GRW	MMW-32B-D01N-GRW	MMW-34B-T01N-GRW	MMW-34B-T01N-GRWRE	MMW-34B-T01N-GRW	MMW-34B-D01N-GRW
			Exposure Area	GW4	GW4	GW3	GW3	GW3	GW3
2,4-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
2-Nitrophenol	mg/L	T		-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	<0.025 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4-Nitrophenol	mg/L	T		-	-	-	-	<0.025 :	-
Acenaphthene	mg/L	T		-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	-	-	<0.01 :	-
Anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Carbazole	mg/L	T		-	-	-	-	<0.01 :	-
Chrysene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		Site ID	MMW-32B	MMW-32B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
		Sample Date	4/22/2004	4/22/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
		Sample ID	MMW-32B-T01N-GRW	MMW-32B-D01N-GRW	MMW-34B-T01N-GRW	MMW-34B-T01N-GRWRE	MMW-34B-T01N-GRW	MMW-34B-D01N-GRW
		Exposure Area	GW4	GW4	GW3	GW3	GW3	GW3
Dibenzofuran	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 J	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.025 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta D	per mil	T	-72.4 :	-	-	-	-	-
Delta O-18	per mil	T	-10.1 :	-	-	-	-	-
Lead	mg/L	T	<0.0008 :	-	-	-	0.0389 :	-
Lead	mg/L	D	-	<0.0008 :	-	-	-	0.0126 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 1/11/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 1/11/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-D01N-GR GW3 W T	
Field Measurements														
DO	mg/L	T	4.41	:	-		4.2	:	-		3.53	:	-	
EH	millivolts	T	415.6	:	-		382.1	:	-		531.	:	-	
pH	SU	T	4.75	:	-		4.3	J	-		4.7	J	-	
Specific Conductance	uS/cm	T	2939.	:	-		2967.	:	-		2737.	:	-	
Temperature	Celsius	T	8.66	:	-		9.17	:	-		11.86	:	-	
Turbidity	NTU	T	0.	:	-		0.7	:	-		4.6	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.096	:	-		<0.097	:	-		<0.047	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<5.3	:	-		<4.6	:	-		<4.8	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	<3.6	:	-		<5.	:	-		5.5	:	-	
Fluoride	mg/L	T	124.	:	-		131.	:	-		122.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	2.2	J	-		3.	J	-		2.3	:	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.014	:	-		<0.01	:	-		0.022	:	-	
Sulfate	mg/L	T	1920.	J	-		1890.	J	-		1820.	J	-	
Total Alkalinity	mg/L	T	<5.3	:	-		<4.6	:	-		<4.8	:	-	
Total Dissolved Solids	mg/L	T	3250.	:	-		3660.	:	-		3420.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	1.	:	-		<1.3	J	-		<3.	J	-	
Total Suspended Solids	mg/L	T	3.5	:	-		<2.2	:	-		8.4	:	-	
Laboratory Parameters														
pH	SU	T	4.75	:	-		4.3	J	-		4.7	J	-	
Specific Conductance	umhos/cm	T	-		-		2630.	J	-		2860.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1940.	:	-		1690.	:	-		1840.	:	-	
Hardness	mg/L	D	-		2000.	:	-		1670.	:	-		1790.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 1/11/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 1/11/2003 MMW-34B-D01N-GR GW3 W D		MMW-34B 4/9/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-D01N-GR GW3 W D		MMW-34B 7/23/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-D01N-GR GW3 W D	
Aluminum	mg/L	T	85.	:	-		73.4	:	-		83.7	:	-	
Aluminum	mg/L	D	-		87.9	:	-		72.1	:	-		82.8	:
Antimony	mg/L	T	<0.028	:	-		<0.003	:	-		<0.047	:	-	
Antimony	mg/L	D	-		<0.028	:	-		<0.003	:	-		<0.047	:
Arsenic	mg/L	T	0.0245	:	-		<0.04	:	-		<0.048	:	-	
Arsenic	mg/L	D	-		0.0451	:	-		<0.04	:	-		<0.048	:
Barium	mg/L	T	<0.048	:	-		<0.123	:	-		<0.059	:	-	
Barium	mg/L	D	-		<0.048	:	-		<0.123	:	-		<0.059	:
Beryllium	mg/L	T	0.141	:	-		0.154	:	-		0.151	:	-	
Beryllium	mg/L	D	-		0.144	:	-		0.145	:	-		0.147	:
Boron	mg/L	T	<0.027	:	-		<0.084	:	-		<0.048	:	-	
Boron	mg/L	D	-		<0.027	:	-		<0.084	:	-		0.0497	:
Cadmium	mg/L	T	0.0689	:	-		0.0587	:	-		<0.12	:	-	
Cadmium	mg/L	D	-		0.0722	:	-		0.0573	:	-		<0.12	:
Calcium	mg/L	T	639.	:	-		555.	:	-		603.	:	-	
Calcium	mg/L	D	-		658.	:	-		547.	:	-		585.	:
Chromium	mg/L	T	<0.37	:	-		<0.01	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.37	:	-		<0.01	:	-		<0.19	:
Cobalt	mg/L	T	<0.16	:	-		<0.038	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		<0.16	:	-		<0.038	:	-		<0.37	:
Copper	mg/L	T	1.23	:	-		1.27	:	-		1.02	:	-	
Copper	mg/L	D	-		1.25	:	-		1.21	:	-		0.966	:
Iron	mg/L	T	<4.89	:	-		<0.311	:	-		<0.333	:	-	
Iron	mg/L	D	-		<4.89	:	-		<0.311	:	-		<0.333	:
Lead	mg/L	T	0.013	:	-		0.0061	J	-		0.0126	:	-	
Lead	mg/L	D	-		0.0077	:	-		0.0039	J	-		0.0066	:
Magnesium	mg/L	T	84.3	:	-		74.6	:	-		82.	:	-	
Magnesium	mg/L	D	-		86.7	:	-		73.4	:	-		79.9	:
Manganese	mg/L	T	27.2	:	-		27.	:	-		28.3	:	-	
Manganese	mg/L	D	-		28.	:	-		26.8	:	-		27.7	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0974	:	-		0.12	:	-		0.102	:	-	
Molybdenum	mg/L	D	-		0.0926	:	-		0.0947	:	-		0.0956	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-34B 1/11/2003 MMW-34B-T01N-GR GW3		MMW-34B 1/11/2003 MMW-34B-D01N-GR GW3		MMW-34B 4/9/2003 MMW-34B-T01N-GR GW3		MMW-34B 4/9/2003 MMW-34B-D01N-GR GW3		MMW-34B 7/23/2003 MMW-34B-T01N-GR GW3		MMW-34B 7/23/2003 MMW-34B-D01N-GR GW3	
Nickel	mg/L	T	<0.15	:	-		0.142	:	-		<0.44	:	-	
Nickel	mg/L	D	-		<0.15	:	-		0.128	:	-		<0.44	:
Potassium	mg/L	T	<20.2	J	-		11.3	:	-		<37.1	:	-	
Potassium	mg/L	D	-		<20.2	J	-		10.9	:	-		<37.1	:
Selenium	mg/L	T	0.0133	:	-		0.0108	:	-		0.0096	:	-	
Selenium	mg/L	D	-		0.0119	:	-		0.011	:	-		0.0115	J
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	48.6	:	-		39.	:	-		59.8	:	-	
Sodium	mg/L	D	-		49.1	:	-		37.8	:	-		<53.2	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.002	:
Zinc	mg/L	T	9.27	:	-		9.07	:	-		9.24	:	-	
Zinc	mg/L	D	-		9.55	:	-		8.95	:	-		9.01	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
2-Hexanone	mg/L	T	<0.01	:	-		<0.01	J	-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 1/11/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 1/11/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-D01N-GR GW3 W T	
Acetone	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2,4,5-Trichlorophenol	mg/L	T	<0.029	:	-		<0.026	:	-		-		-	
2,4,6-Trichlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2,4-Dichlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2,4-Dimethylphenol	mg/L	T	<0.011	:	-		<0.01	J	-		-		-	
2,4-Dinitrophenol	mg/L	T	<0.029	J	-		<0.026	J	-		-		-	
2,4-Dinitrotoluene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 1/11/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 1/11/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 4/9/2003 MMW-34B-D01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-T01N-GR GW3 W T		MMW-34B 7/23/2003 MMW-34B-D01N-GR GW3 W T	
2,6-Dinitrotoluene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2-Chloronaphthalene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2-Chlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2-Methylnaphthalene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2-Methylphenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
2-Nitroaniline	mg/L	T	<0.029	:	-		<0.026	:	-		-		-	
2-Nitrophenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
3,3-Dichlorobenzidine	mg/L	T	<0.011	:	-		<0.01	J	-		-		-	
3-Nitroaniline	mg/L	T	<0.029	:	-		<0.026	J	-		-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.029	:	-		<0.026	J	-		-		-	
4-Bromophenyl phenyl ether	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
4-Chloro-3-methylphenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
4-Chloroaniline	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
4-Methylphenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
4-Nitroaniline	mg/L	T	<0.029	:	-		<0.026	J	-		-		-	
4-Nitrophenol	mg/L	T	<0.029	J	-		<0.026	J	-		-		-	
Acenaphthene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Acenaphthylene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Anthracene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Benzaldehyde	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Benzo(a)anthracene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Benzo(a)pyrene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Benzo(b)fluoranthene	mg/L	T	<0.011	:	-		<0.01	J	-		-		-	
Benzo(g,h,i)perylene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Benzo(k)fluoranthene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Bis(2-chloroethyl)ether	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	0.0009	J	-		<0.01	:	-		-		-	
Butyl benzyl phthalate	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Carbazole	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Chrysene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Dibenz(a,h)anthracene	mg/L	T	<0.011	:	-		<0.01	J	-		-		-	
Dibenzofuran	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 1/11/2003 MMW-34B-T01N-GRW GW3 T		MMW-34B 1/11/2003 MMW-34B-D01N-GRW GW3 T		MMW-34B 4/9/2003 MMW-34B-T01N-GRW GW3 T		MMW-34B 4/9/2003 MMW-34B-D01N-GRW GW3 T		MMW-34B 7/23/2003 MMW-34B-T01N-GRW GW3 T		MMW-34B 7/23/2003 MMW-34B-D01N-GRW GW3 T	
Dichlorodiisopropyl ether	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Diethylphthalate	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Dimethylphthalate	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Di-n-Butyl phthalate	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Di-n-Octyl phthalate	mg/L	T	<0.011	J	-		<0.01	J	-		-		-	
Fluoranthene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Fluorene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Hexachlorobenzene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Hexachlorobutadiene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Hexachlorocyclopentadiene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Hexachloroethane	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.011	:	-		<0.01	J	-		-		-	
Isophorone	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Naphthalene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Nitrobenzene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
N-Nitrosodiphenylamine	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Pentachlorophenol	mg/L	T	<0.029	:	-		<0.026	J	-		-		-	
Phenanthrene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Phenol	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Pyrene	mg/L	T	<0.011	:	-		<0.01	:	-		-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		<0.00025	J	-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		<0.00025	:	-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Isotopes														
Lead	mg/L	T	0.013	:	-		0.0061	J	-		0.0126	:	-	
Lead	mg/L	D	-		0.0077	:	-		0.0039	J	-		0.0066	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-34B	MMW-34B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	10/21/2003	10/21/2003	1/11/2004	1/11/2004	4/19/2004	4/19/2004
			Sample ID	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3
Field Measurements									
DO	mg/L	T		3.9 :	-	4.71 :	-	4.09 :	-
EH	millivolts	T		402.6 :	-	442.1 :	-	444.2 :	-
pH	SU	T		5.1 J	-	5.1 J	-	5. J	-
Specific Conductance	uS/cm	T		2037. :	-	2840. :	-	2654. :	-
Temperature	Celsius	T		10.6 :	-	8.83 :	-	9.5 :	-
Turbidity	NTU	T		5.5 :	-	5.8 :	-	6.8 :	-
General Chemistry									
Ammonia	mg/L	T		0.083 J	-	<0.074 J	-	<0.052 :	-
Bicarbonate (as CaCO3)	mg/L	T		10.9 :	-	<3. :	-	<4.9 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		14. :	-	11.6 :	-	9.5 :	-
Fluoride	mg/L	T		124. :	-	121. :	-	124. :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		2.8 J	-	3.5 J	-	2.2 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Phosphorus	mg/L	T		0.028 :	-	<0.01 :	-	0.01 :	-
Sulfate	mg/L	T		1950. J	-	2020. :	-	2150. :	-
Total Alkalinity	mg/L	T		10.9 :	-	<3. :	-	<4.9 :	-
Total Dissolved Solids	mg/L	T		3140. :	-	3360. :	-	3200. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	0.25 :	-	<0.32 :	-
Total Organic Carbon	mg/L	T		1.7 J	-	<2.2 :	-	3. J	-
Total Suspended Solids	mg/L	T		8.5 :	-	6.3 :	-	<5.8 J	-
Laboratory Parameters									
pH	SU	T		5.1 J	-	5.1 J	-	5. J	-
Specific Conductance	umhos/cm	T		2810. J	-	2680. J	-	2530. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		1860. :	-	1840. :	-	1840. :	-
Hardness	mg/L	D		-	1770. :	-	1780. :	-	1790. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-34B	MMW-34B	MMW-34B	MMW-34B	MMW-34B	MMW-34B
			Sample Date	10/21/2003	10/21/2003	1/11/2004	1/11/2004	4/19/2004	4/19/2004
			Sample ID	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3	MMW-34B-T01N-GRW GW3	MMW-34B-D01N-GRW GW3
Aluminum	mg/L	T		82.2 :	-	80. :	-	80.7 :	-
Aluminum	mg/L	D		-	78.3 :	-	77.8 :	-	78.5 :
Antimony	mg/L	T		<0.082 :	-	<0.029 :	-	<0.053 :	-
Antimony	mg/L	D		-	<0.082 :	-	<0.029 :	-	<0.053 :
Arsenic	mg/L	T		0.0553 :	-	<0.028 :	-	<0.037 :	-
Arsenic	mg/L	D		-	<0.035 :	-	<0.028 :	-	<0.0428 :
Barium	mg/L	T		<0.117 :	-	<0.053 :	-	<0.049 :	-
Barium	mg/L	D		-	<0.117 :	-	<0.053 :	-	<0.049 :
Beryllium	mg/L	T		0.152 :	-	0.142 :	-	0.149 :	-
Beryllium	mg/L	D		-	0.142 :	-	0.133 :	-	0.141 :
Boron	mg/L	T		<0.064 :	-	<0.0389 :	-	<0.0694 :	-
Boron	mg/L	D		-	0.095 :	-	<0.0368 :	-	<0.0698 :
Cadmium	mg/L	T		<0.13 :	-	0.102 J	-	<0.1 :	-
Cadmium	mg/L	D		-	<0.13 :	-	0.0931 :	-	<0.1 :
Calcium	mg/L	T		607. :	-	603. :	-	603. :	-
Calcium	mg/L	D		-	578. :	-	585. :	-	587. :
Chromium	mg/L	T		<0.11 J	-	<0.11 :	-	<0.13 :	-
Chromium	mg/L	D		-	<0.11 J	-	<0.11 :	-	<0.13 :
Cobalt	mg/L	T		<0.32 :	-	<0.31 :	-	<0.18 :	-
Cobalt	mg/L	D		-	<0.32 :	-	<0.31 :	-	<0.18 :
Copper	mg/L	T		1.47 :	-	1.37 :	-	1.58 :	-
Copper	mg/L	D		-	1.65 :	-	1.38 :	-	1.63 :
Iron	mg/L	T		<4.55 :	-	<3.73 :	-	<2.93 J	-
Iron	mg/L	D		-	<4.55 :	-	<3.73 :	-	<2.93 J
Lead	mg/L	T		0.0149 :	-	0.0126 :	-	0.0118 :	-
Lead	mg/L	D		-	0.0065 :	-	0.0062 :	-	0.0062 :
Magnesium	mg/L	T		82.5 :	-	81. :	-	81.4 :	-
Magnesium	mg/L	D		-	78.4 :	-	78.6 :	-	79. :
Manganese	mg/L	T		30.4 :	-	29.4 :	-	30.2 :	-
Manganese	mg/L	D		-	30.3 :	-	28.6 :	-	29.4 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Molybdenum	mg/L	T		0.136 :	-	0.0971 :	-	0.127 :	-
Molybdenum	mg/L	D		-	0.182 :	-	0.0894 :	-	0.117 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-34B 10/21/2003 MMW-34B-T01N-GR GW3		MMW-34B 10/21/2003 MMW-34B-D01N-GR GW3		MMW-34B 1/11/2004 MMW-34B-T01N-GR GW3		MMW-34B 1/11/2004 MMW-34B-D01N-GR GW3		MMW-34B 4/19/2004 MMW-34B-T01N-GR GW3		MMW-34B 4/19/2004 MMW-34B-D01N-GR GW3	
Nickel	mg/L	T	<0.45	:	-		0.276	:	-		<0.33	J	-	
Nickel	mg/L	D	-		<0.45	:	-		<0.27	:	-		<0.33	J
Potassium	mg/L	T	<63.8	:	-		<24.3	:	-		17.1	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<24.3	:	-		<15.5	:
Selenium	mg/L	T	0.039	:	-		0.0194	J	-		0.0114	:	-	
Selenium	mg/L	D	-		0.0358	:	-		0.017	J	-		0.0116	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<99.1	:	-		<49.	:	-		<45.6	:	-	
Sodium	mg/L	D	-		<99.1	:	-		73.1	:	-		<32.8	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	11.3	:	-		9.78	:	-		9.63	:	-	
Zinc	mg/L	D	-		10.	:	-		9.65	:	-		9.44	:
Isotopes														
Delta D	per mil	T	-		-		-		-		-88.	:	-	
Delta O-18	per mil	T	-		-		-		-		-12.1	:	-	
Lead	mg/L	T	0.0149	:	-		0.0126	:	-		0.0118	:	-	
Lead	mg/L	D	-		0.0065	:	-		0.0062	:	-		0.0062	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-35B	MMW-35B	MMW-35B	MMW-35B	MMW-35B	MMW-35B
			Sample Date	11/1/2002	11/1/2002	1/12/2003	1/12/2003	4/6/2003	4/6/2003
			Sample ID	MMW-35B-T01N-GRW GW3	MMW-35B-D01N-GRW GW3	MMW-35B-T01N-GRW GW3	MMW-35B-D01N-GRW GW3	MMW-35B-T01N-GRW GW3	MMW-35B-D01N-GRW GW3
Field Measurements									
DO	mg/L	T		0.49 :	-	8.9 :	-	0.35 :	-
EH	millivolts	T		13.8 :	-	169.1 :	-	196.7 :	-
pH	SU	T		6.31 :	-	6.5 :	-	6.9 J	-
Specific Conductance	uS/cm	T		3413. :	-	3650. :	-	3267. :	-
Temperature	Celsius	T		11.6 :	-	9.93 :	-	10.36 :	-
Turbidity	NTU	T		241.9 :	-	1.4 :	-	31.9 :	-
General Chemistry									
Ammonia	mg/L	T		<0.19 :	-	<0.13 :	-	<0.068 :	-
Bicarbonate (as CaCO3)	mg/L	T		360. :	-	347. :	-	352. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		222. :	-	232. :	-	240. :	-
Fluoride	mg/L	T		2.8 :	-	2.1 :	-	2.2 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	<0.4 J	-	<0.4 J	-
Nitrite	mg/L	T		0.0085 J	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		<0.01 :	-	0.019 :	-	0.012 :	-
Sulfate	mg/L	T		1480. :	-	1540. J	-	1510. J	-
Total Alkalinity	mg/L	T		360. :	-	347. :	-	352. :	-
Total Dissolved Solids	mg/L	T		3090. :	-	3920. :	-	3120. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.28 :	-
Total Organic Carbon	mg/L	T		2. :	-	1.7 :	-	<2.8 J	-
Total Suspended Solids	mg/L	T		17.4 :	-	3.4 :	-	31.5 :	-
Laboratory Parameters									
pH	SU	T		6.31 :	-	6.5 :	-	6.9 J	-
Specific Conductance	umhos/cm	T		-	-	-	-	3090. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		2040. :	-	2050. :	-	2270. :	-
Hardness	mg/L	D		-	1970. :	-	2100. :	-	2300. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-35B 11/1/2002 MMW-35B-T01N-GR W GW3		MMW-35B 11/1/2002 MMW-35B-D01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-T01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-D01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-T01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-D01N-GR W GW3	
Aluminum	mg/L	T	0.17	:	-		<0.142	:	-		1.99	:	-	
Aluminum	mg/L	D	-		<0.0186	:	-		<0.142	:	-		<0.426	:
Antimony	mg/L	T	<0.00051	:	-		<0.00094	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.00047	:	-		<0.0011	:	-		<0.0006	:
Arsenic	mg/L	T	<0.00061	J	-		<0.0004	:	-		0.00055	:	-	
Arsenic	mg/L	D	-		<0.00023	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0248	:	-		0.0221	:	-		0.0296	:	-	
Barium	mg/L	D	-		0.023	:	-		0.0224	:	-		0.0217	:
Beryllium	mg/L	T	0.103	:	-		0.0977	:	-		0.0999	:	-	
Beryllium	mg/L	D	-		0.0993	:	-		0.0974	:	-		0.0978	:
Boron	mg/L	T	0.0126	:	-		<0.0118	:	-		0.0164	:	-	
Boron	mg/L	D	-		0.0118	:	-		<0.012	:	-		0.0159	:
Cadmium	mg/L	T	0.00076	J	-		0.00046	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		0.00061	:	-		0.00057	:	-		<0.0005	:
Calcium	mg/L	T	754.	:	-		757.	:	-		839.	:	-	
Calcium	mg/L	D	-		728.	:	-		779.	:	-		851.	:
Chromium	mg/L	T	<0.0046	:	-		<0.0037	:	-		<0.0025	:	-	
Chromium	mg/L	D	-		<0.0046	:	-		<0.0037	:	-		<0.0013	:
Chromium, Hexavalent	mg/L	D	0.0073	J	-		-		-		-		-	
Cobalt	mg/L	T	0.0274	:	-		0.0244	:	-		0.0226	:	-	
Cobalt	mg/L	D	-		0.0253	:	-		0.0249	:	-		0.0225	:
Copper	mg/L	T	0.0014	:	-		<0.0017	:	-		<0.0015	J	-	
Copper	mg/L	D	-		<0.00089	J	-		<0.0017	:	-		<0.0015	J
Iron	mg/L	T	0.831	:	-		0.55	:	-		2.46	:	-	
Iron	mg/L	D	-		0.549	:	-		0.636	:	-		0.843	:
Lead	mg/L	T	0.0014	:	-		0.00074	:	-		0.0104	:	-	
Lead	mg/L	D	-		<0.0002	:	-		0.00046	:	-		<0.0002	:
Magnesium	mg/L	T	39.	:	-		37.6	:	-		42.9	:	-	
Magnesium	mg/L	D	-		38.2	:	-		38.6	:	-		43.2	:
Manganese	mg/L	T	5.5	:	-		5.49	:	-		5.92	:	-	
Manganese	mg/L	D	-		5.36	:	-		5.64	:	-		6.06	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0719	:	-		0.0622	:	-		0.0724	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 11/1/2002 MMW-35B-T01N-GR GW3 W T		MMW-35B 11/1/2002 MMW-35B-D01N-GR GW3 W D		MMW-35B 1/12/2003 MMW-35B-T01N-GR GW3 W T		MMW-35B 1/12/2003 MMW-35B-D01N-GR GW3 W D		MMW-35B 4/6/2003 MMW-35B-T01N-GR GW3 W T		MMW-35B 4/6/2003 MMW-35B-D01N-GR GW3 W D	
Molybdenum	mg/L		-		0.0714	:	-		0.0625	:	-		0.0655	:
Nickel	mg/L		0.0529	J	-		0.0486	:	-		0.0482	:	-	
Nickel	mg/L		-		0.0516	:	-		0.0489	:	-		0.0472	:
Potassium	mg/L		17.8	:	-		17.2	:	-		16.5	:	-	
Potassium	mg/L		-		17.3	:	-		18.1	:	-		16.6	:
Selenium	mg/L		0.0009	:	-		<0.0016	:	-		<0.001	:	-	
Selenium	mg/L		-		0.00088	:	-		<0.0016	:	-		<0.001	:
Silver	mg/L		<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L		-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L		50.8	J	-		43.4	:	-		49.8	:	-	
Sodium	mg/L		-		49.6	J	-		44.	:	-		51.9	:
Thallium	mg/L		<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L		-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L		0.00021	:	-		<0.0004	:	-		0.00048	:	-	
Vanadium	mg/L		-		<0.0001	:	-		<0.0004	:	-		<0.0002	:
Zinc	mg/L		0.383	:	-		0.38	:	-		0.455	:	-	
Zinc	mg/L		-		0.374	:	-		0.378	:	-		0.451	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
2-Butanone	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
2-Hexanone	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 11/1/2002 MMW-35B-T01N-GR W GW3		MMW-35B 11/1/2002 MMW-35B-D01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-T01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-D01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-T01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-D01N-GR W GW3	
4-Methyl-2-pentanone	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Acetone	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromomethane	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4,5-Trichlorophenol	mg/L	T	<0.025	:	-		<0.026	:	-		<0.028	:	-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	:	-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.011	J	-	
2,4-Dinitrophenol	mg/L	T	<0.025	:	-		<0.026	J	-		<0.028	J	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-35B	MMW-35B	MMW-35B	MMW-35B	MMW-35B	MMW-35B
			Sample Date	11/1/2002	11/1/2002	1/12/2003	1/12/2003	4/6/2003	4/6/2003
			Sample ID	MMW-35B-T01N-GR	MMW-35B-D01N-GR	MMW-35B-T01N-GR	MMW-35B-D01N-GR	MMW-35B-T01N-GR	MMW-35B-D01N-GR
				W GW3	W GW3	W GW3	W GW3	W GW3	W GW3
2,4-Dinitrotoluene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2,6-Dinitrotoluene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2-Chloronaphthalene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2-Chlorophenol	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2-Methylnaphthalene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2-Methylphenol	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
2-Nitroaniline	mg/L	T		<0.025 :	-	<0.026 :	-	<0.028 :	-
2-Nitrophenol	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
3,3-Dichlorobenzidine	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 J	-
3-Nitroaniline	mg/L	T		<0.025 :	-	<0.026 :	-	<0.028 J	-
4,6-Dinitro-2-methylphenol	mg/L	T		<0.025 :	-	<0.026 :	-	<0.028 :	-
4-Bromophenyl phenyl ether	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
4-Chloro-3-methylphenol	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
4-Chloroaniline	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
4-Chlorophenyl phenyl ether	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
4-Methylphenol	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
4-Nitroaniline	mg/L	T		<0.025 :	-	<0.026 :	-	<0.028 :	-
4-Nitrophenol	mg/L	T		<0.025 :	-	<0.026 J	-	<0.028 J	-
Acenaphthene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Acenaphthylene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Anthracene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Benzaldehyde	mg/L	T		<0.01 J	-	<0.011 J	-	<0.011 :	-
Benzo(a)anthracene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Benzo(a)pyrene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Benzo(b)fluoranthene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Benzo(g,h,i)perylene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Benzo(k)fluoranthene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Bis(2-chloroethoxy)methane	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Bis(2-chloroethyl)ether	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Butyl benzyl phthalate	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Carbazole	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Chrysene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-
Dibenz(a,h)anthracene	mg/L	T		<0.01 :	-	<0.011 :	-	<0.011 :	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		MMW-35B 11/1/2002 MMW-35B-T01N-GR W GW3		MMW-35B 11/1/2002 MMW-35B-D01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-T01N-GR W GW3		MMW-35B 1/12/2003 MMW-35B-D01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-T01N-GR W GW3		MMW-35B 4/6/2003 MMW-35B-D01N-GR W GW3	
Dibenzofuran	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Dichlorodiisopropyl ether	mg/L	T	<0.01 J		-		<0.011 :		-		<0.011 :		-
Diethylphthalate	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Dimethylphthalate	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Di-n-Butyl phthalate	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Di-n-Octyl phthalate	mg/L	T	<0.01 :		-		<0.011 J		-		<0.011 :		-
Fluoranthene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Fluorene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Hexachlorobenzene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Hexachlorobutadiene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Hexachlorocyclopentadiene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Hexachloroethane	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Isophorone	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Naphthalene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Nitrobenzene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
N-Nitrosodi-n-propylamine	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
N-Nitrosodiphenylamine	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Pentachlorophenol	mg/L	T	<0.025 :		-		<0.026 :		-		<0.028 :		-
Phenanthrene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Phenol	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Pyrene	mg/L	T	<0.01 :		-		<0.011 :		-		<0.011 :		-
Explosives													
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-
2,6-Pyridinediamine,	mg/L	T	<0.00025 J		-		<0.00025 J		-		<0.00025 :		-
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :		-		<0.00025 :		-		<0.00025 :		-
Pentaerythritol tetranitrate	mg/L	T	<0.01 :		-		<0.01 :		-		<0.01 :		-
Isotopes													
Lead	mg/L	T	0.0014 :		-		0.00074 :		-		0.0104 :		-
Lead	mg/L	D	-		<0.0002 :		-		0.00046 :		-		<0.0002 :

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-35B 7/20/2003 MMW-35B-T01N-GR		MMW-35B 7/20/2003 MMW-35B-D01N-GR		MMW-35B 10/22/2003 MMW-35B-T01N-GR		MMW-35B 10/22/2003 MMW-35B-D01N-GR		MMW-35B 1/11/2004 MMW-35B-T01N-GR		MMW-35B 1/11/2004 MMW-35B-D01N-GR	
			W GW3		W GW3		W GW3		W GW3		W GW3		W GW3	
Field Measurements														
DO	mg/L	T	0.71	:	-		0.84	:	-		0.63	:	-	
EH	millivolts	T	86.7	:	-		30.5	:	-		37.2	:	-	
pH	SU	T	6.8	J	-		6.6	J	-		6.7	J	-	
Specific Conductance	uS/cm	T	3213.	:	-		2105.	:	-		3122.	:	-	
Temperature	Celsius	T	12.81	:	-		11.62	:	-		7.63	:	-	
Turbidity	NTU	T	6.7	:	-		31.5	:	-		15.8	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.045	J	-		<0.062	J	-		<0.13	J	-	
Bicarbonate (as CaCO3)	mg/L	T	352.	:	-		333.	:	-		339.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	214.	:	-		175.	:	-		223.	:	-	
Fluoride	mg/L	T	2.2	:	-		2.3	:	-		2.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		<0.4	J	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Phosphorus	mg/L	T	0.025	:	-		0.032	:	-		<0.01	:	-	
Sulfate	mg/L	T	1380.	J	-		1440.	J	-		1520.	:	-	
Total Alkalinity	mg/L	T	352.	:	-		333.	:	-		339.	:	-	
Total Dissolved Solids	mg/L	T	3280.	:	-		3560.	:	-		3050.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		2.7	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<2.1	J	-		1.8	J	-		<1.	:	-	
Total Suspended Solids	mg/L	T	7.7	:	-		41.2	:	-		29.4	:	-	
Laboratory Parameters														
pH	SU	T	6.8	J	-		6.6	J	-		6.7	J	-	
Specific Conductance	umhos/cm	T	3060.	J	-		3200.	J	-		2990.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	2080.	:	-		1860.	:	-		2160.	:	-	
Hardness	mg/L	D	-		2150.	:	-		1870.	:	-		2120.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 7/20/2003 MMW-35B-T01N-GR GW3 W		MMW-35B 7/20/2003 MMW-35B-D01N-GR GW3 W		MMW-35B 10/22/2003 MMW-35B-T01N-GR GW3 W		MMW-35B 10/22/2003 MMW-35B-D01N-GR GW3 W		MMW-35B 1/11/2004 MMW-35B-T01N-GR GW3 W		MMW-35B 1/11/2004 MMW-35B-D01N-GR GW3 W	
Aluminum	mg/L	T	<0.631	:	-		<2.17	:	-		<0.329	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<2.17	:	-		<0.329	:
Antimony	mg/L	T	<0.001	:	-		<0.082	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.082	:	-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		<0.035	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.035	:	-		<0.0004	:
Barium	mg/L	T	0.0216	:	-		<0.117	:	-		0.0216	:	-	
Barium	mg/L	D	-		0.0215	:	-		<0.117	:	-		0.0196	:
Beryllium	mg/L	T	0.115	:	-		0.124	:	-		0.123	:	-	
Beryllium	mg/L	D	-		0.114	:	-		0.123	:	-		0.116	:
Boron	mg/L	T	0.0131	:	-		<0.064	:	-		<0.0131	:	-	
Boron	mg/L	D	-		0.0121	:	-		<0.064	:	-		<0.0105	:
Cadmium	mg/L	T	0.00067	:	-		<0.13	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		0.00057	:	-		<0.13	:	-		<0.0007	:
Calcium	mg/L	T	769.	:	-		686.	:	-		801.	:	-	
Calcium	mg/L	D	-		793.	:	-		688.	:	-		782.	:
Chromium	mg/L	T	0.0023	:	-		<0.23	J	-		<0.0015	J	-	
Chromium	mg/L	D	-		<0.0019	:	-		<0.23	J	-		<0.0015	J
Cobalt	mg/L	T	0.0253	:	-		<0.32	:	-		0.0232	J	-	
Cobalt	mg/L	D	-		0.026	:	-		<0.32	:	-		0.0216	:
Copper	mg/L	T	<0.0031	:	-		<0.23	:	-		<0.003	:	-	
Copper	mg/L	D	-		0.0018	:	-		<0.23	:	-		<0.003	:
Iron	mg/L	T	<0.667	:	-		<4.55	:	-		0.898	:	-	
Iron	mg/L	D	-		<0.667	:	-		<4.55	:	-		0.779	:
Lead	mg/L	T	0.001	:	-		0.0051	:	-		0.003	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.002	:	-		<0.0002	:
Magnesium	mg/L	T	39.	:	-		35.3	:	-		40.2	:	-	
Magnesium	mg/L	D	-		40.2	:	-		35.4	:	-		39.6	:
Manganese	mg/L	T	5.34	:	-		4.63	:	-		5.28	:	-	
Manganese	mg/L	D	-		5.5	:	-		4.67	:	-		5.15	:
Mercury	mg/L	T	<0.00016	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.00024	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0707	:	-		0.0967	:	-		0.0873	:	-	
Molybdenum	mg/L	D	-		0.0722	:	-		0.0759	:	-		0.082	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			MMW-35B 7/20/2003 MMW-35B-T01N-GRW GW3		MMW-35B 7/20/2003 MMW-35B-D01N-GRW GW3		MMW-35B 10/22/2003 MMW-35B-T01N-GRW GW3		MMW-35B 10/22/2003 MMW-35B-D01N-GRW GW3		MMW-35B 1/11/2004 MMW-35B-T01N-GRW GW3		MMW-35B 1/11/2004 MMW-35B-D01N-GRW GW3	
Nickel	mg/L	T	0.0484	:	-		<0.45	:	-		0.0464	:	-	
Nickel	mg/L	D	-		0.0476	:	-		<0.45	:	-		0.0443	:
Potassium	mg/L	T	17.8	:	-		<63.8	:	-		16.9	:	-	
Potassium	mg/L	D	-		18.	:	-		<63.8	:	-		16.1	:
Selenium	mg/L	T	<0.0016	:	-		<0.003	:	-		<0.0006	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.003	:	-		<0.0006	:
Silver	mg/L	T	<0.0002	J	-		<0.001	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.001	:	-		<0.0002	:
Sodium	mg/L	T	38.1	J	-		<99.1	:	-		48.	:	-	
Sodium	mg/L	D	-		40.8	J	-		<99.1	:	-		48.	:
Thallium	mg/L	T	<0.0002	:	-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		<0.001	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.001	:	-		<0.0004	:
Zinc	mg/L	T	0.415	:	-		0.501	:	-		0.397	:	-	
Zinc	mg/L	D	-		0.409	:	-		0.479	:	-		0.333	:
Isotopes														
Lead	mg/L	T	0.001	:	-		0.0051	:	-		0.003	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.002	:	-		<0.0002	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 4/19/2004 MMW-35B-T01N-GRW GW3 T		MMW-35B 4/19/2004 MMW-35B-D01N-GRW GW3 T		MMW-36B 10/30/2002 MMW-36B-T01N-GRW GW5 T		MMW-36B 10/31/2002 MMW-36B-T01N-GRWRE GW5 T		MMW-36B 10/31/2002 MMW-36B-T01N-GRW GW5 T		MMW-36B 10/31/2002 MMW-36B-D01N-GRWRE GW5 T	
Field Measurements														
DO	mg/L	T	0.61	:	-		-		-		2.46	:	-	
EH	millivolts	T	144.4	:	-		-		-		386.7	:	-	
pH	SU	T	6.8	J	-		-		-		4.14	:	-	
Specific Conductance	uS/cm	T	2911.	:	-		-		-		4052.	:	-	
Temperature	Celsius	T	11.79	:	-		-		-		9.29	:	-	
Turbidity	NTU	T	22.5	:	-		-		-		33.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.06	:	-		-		-		<0.22	:	-	
Bicarbonate (as CaCO3)	mg/L	T	98.4	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	2.4	:	-		-		-		103.	:	-	
Fluoride	mg/L	T	7.4	:	-		-		34.8	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		-		-		<0.4	J	-	
Nitrite	mg/L	T	<0.005	:	-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		-		-		0.078	J	-	
Phosphorus	mg/L	T	0.042	:	-		-		-		0.5	:	-	
Sulfate	mg/L	T	1490.	:	-		-		3050.	J	-		-	
Total Alkalinity	mg/L	T	98.4	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	2260.	:	-		-		-		5010.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		0.25	:	-	
Total Organic Carbon	mg/L	T	<1.7	J	-		-		-		1.3	:	-	
Total Suspended Solids	mg/L	T	50.1	:	-		-		-		11.5	:	-	
Laboratory Parameters														
pH	SU	T	6.8	J	-		-		-		4.14	:	-	
Specific Conductance	umhos/cm	T	2080.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1510.	:	-		-		-		-		-	
Hardness	mg/L	D	-		1540.	:	-		-		-		2440.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-35B	MMW-35B	MMW-36B	MMW-36B	MMW-36B	MMW-36B
			Sample Date	4/19/2004	4/19/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-35B-T01N-GRW	MMW-35B-D01N-GRW	MMW-36B-T01N-GRW	MMW-36B-T01N-GRWRE	MMW-36B-T01N-GRW	MMW-36B-D01N-GRWRE
				GW3	GW3	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		4.55 :	-	-	-	-	-
Aluminum	mg/L	D		-	2.72 :	-	-	-	73.2 :
Antimony	mg/L	T		<0.0008 :	-	-	-	-	-
Antimony	mg/L	D		-	<0.0008 :	-	-	-	<0.028 :
Arsenic	mg/L	T		0.00047 :	-	-	-	-	-
Arsenic	mg/L	D		-	<0.0004 :	-	-	-	<0.023 :
Barium	mg/L	T		0.0097 :	-	-	-	-	-
Barium	mg/L	D		-	0.0054 :	-	-	-	<0.048 :
Beryllium	mg/L	T		0.046 :	-	-	-	-	-
Beryllium	mg/L	D		-	0.0437 :	-	-	-	0.0069 :
Boron	mg/L	T		0.0154 :	-	-	-	-	-
Boron	mg/L	D		-	0.0144 :	-	-	-	<0.027 :
Cadmium	mg/L	T		0.00056 :	-	-	-	-	-
Cadmium	mg/L	D		-	0.00042 J	-	-	-	<0.08 :
Calcium	mg/L	T		431. :	-	-	-	-	-
Calcium	mg/L	D		-	441. :	-	-	-	514. :
Chromium	mg/L	T		<0.0006 :	-	-	-	-	-
Chromium	mg/L	D		-	<0.0006 :	-	-	-	<0.16 J
Chromium, Hexavalent	mg/L	D		-	-	0.0033 J	-	-	-
Cobalt	mg/L	T		0.192 :	-	-	-	-	-
Cobalt	mg/L	D		-	0.2 :	-	-	-	0.342 :
Copper	mg/L	T		0.0206 :	-	-	-	-	-
Copper	mg/L	D		-	0.0008 J	-	-	-	2.27 :
Iron	mg/L	T		43.9 J	-	-	-	-	-
Iron	mg/L	D		-	39.5 :	-	-	-	162. :
Lead	mg/L	T		0.0029 :	-	-	-	-	-
Lead	mg/L	D		-	<0.0008 :	-	-	-	<0.001 :
Magnesium	mg/L	T		105. :	-	-	-	-	-
Magnesium	mg/L	D		-	107. :	-	-	-	281. :
Manganese	mg/L	T		20.5 :	-	-	-	-	-
Manganese	mg/L	D		-	21. :	-	-	-	25.4 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	-
Molybdenum	mg/L	T		<0.001 :	-	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-35B	4/19/2004	MMW-35B-T01N-GRW		MMW-35B	4/19/2004	MMW-35B-D01N-GRW		MMW-36B	10/30/2002	MMW-36B-T01N-GRW		MMW-36B	10/31/2002	MMW-36B-T01N-GRWRE		MMW-36B	10/31/2002	MMW-36B-T01N-GRW	
			GW3				GW3				GW5				GW5				GW5			
Molybdenum	mg/L	D	-		<0.001	:	-				-		-		-		<0.011	:	-			
Nickel	mg/L	T	0.5	:	-		-				-		-		-		-		-			
Nickel	mg/L	D	-		0.515	:	-				-		-		-		0.519	:	-			
Potassium	mg/L	T	3.05	:	-		-				-		-		-		-		-			
Potassium	mg/L	D	-		2.94	:	-				-		-		-		<31.4	J	-			
Selenium	mg/L	T	<0.0014	:	-		-				-		-		-		-		-			
Selenium	mg/L	D	-		<0.0014	:	-				-		-		-		<0.008	:	-			
Silver	mg/L	T	<0.0002	J	-		-				-		-		-		-		-			
Silver	mg/L	D	-		<0.0002	J	-				-		-		-		<0.001	:	-			
Sodium	mg/L	T	14.8	:	-		-				-		-		-		-		-			
Sodium	mg/L	D	-		14.2	:	-				-		-		-		52.1	:	-			
Thallium	mg/L	T	<0.0002	:	-		-				-		-		-		-		-			
Thallium	mg/L	D	-		<0.0002	:	-				-		-		-		<0.001	:	-			
Vanadium	mg/L	T	<0.0004	:	-		-				-		-		-		-		-			
Vanadium	mg/L	D	-		<0.0004	:	-				-		-		-		0.0323	:	-			
Zinc	mg/L	T	2.33	:	-		-				-		-		-		-		-			
Zinc	mg/L	D	-		2.35	:	-				-		-		-		1.55	:	-			
Volatile Organics																						
1,1,1-Trichloroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,1,2-Trichloroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,1-Dichloroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,1-Dichloroethene	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2,4-Trichlorobenzene	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2-Dichlorobenzene	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2-Dichloroethane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2-Dichloroethene (total)	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,2-Dichloropropane	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,3-Dichlorobenzene	mg/L	T	-		-		-				-		-		<0.01	:	-					
1,4-Dichlorobenzene	mg/L	T	-		-		-				-		-		<0.01	:	-					
2-Butanone	mg/L	T	-		-		-				-		-		<0.01	J	-					
2-Hexanone	mg/L	T	-		-		-				-		-		<0.01	J	-					

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 4/19/2004 MMW-35B-T01N-GRW GW3	MMW-35B 4/19/2004 MMW-35B-D01N-GRW GW3	MMW-36B 10/30/2002 MMW-36B-T01N-GRW GW5	MMW-36B 10/31/2002 MMW-36B-T01N-GRWRE GW5	MMW-36B 10/31/2002 MMW-36B-T01N-GRW GW5	MMW-36B 10/31/2002 MMW-36B-D01N-GRWRE GW5
4-Methyl-2-pentanone	mg/L	T	-	-	-	-	<0.01 J	-
Acetone	mg/L	T	-	-	-	-	<0.01 J	-
Benzene	mg/L	T	-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Bromoform	mg/L	T	-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T	-	-	-	-	<0.01 J	-
Carbon disulfide	mg/L	T	-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T	-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Chloroform	mg/L	T	-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T	-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T	-	-	-	-	<0.01 :	-
Styrene	mg/L	T	-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Toluene	mg/L	T	-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T	-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T	-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T	-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T	-	-	-	-	<0.01 :	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T	-	-	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T	-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T	-	-	-	-	<0.025 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-35B	MMW-35B	MMW-36B	MMW-36B	MMW-36B	MMW-36B
			Sample Date	4/19/2004	4/19/2004	10/30/2002	10/31/2002	10/31/2002	10/31/2002
			Sample ID	MMW-35B-T01N-GRW	MMW-35B-D01N-GRW	MMW-36B-T01N-GRW	MMW-36B-T01N-GRWRE	MMW-36B-T01N-GRW	MMW-36B-D01N-GRWRE
				GW3	GW3	GW5	GW5	GW5	GW5
2,4-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
2-Nitrophenol	mg/L	T		-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	<0.025 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4-Nitrophenol	mg/L	T		-	-	-	-	<0.025 :	-
Acenaphthene	mg/L	T		-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	-	-	<0.01 :	-
Anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Carbazole	mg/L	T		-	-	-	-	<0.01 :	-
Chrysene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-35B 4/19/2004 MMW-35B-T01N-GRW GW3 T	MMW-35B 4/19/2004 MMW-35B-D01N-GRW GW3 T	MMW-36B 10/30/2002 MMW-36B-T01N-GRW GW5 T	MMW-36B 10/31/2002 MMW-36B-T01N-GRWRE GW5 T	MMW-36B 10/31/2002 MMW-36B-T01N-GRW GW5 T	MMW-36B 10/31/2002 MMW-36B-D01N-GRWRE GW5 T
Dibenzofuran	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 J	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.025 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta D	per mil	T	-97.2 :	-	-	-	-	-
Delta O-18	per mil	T	-12.9 :	-	-	-	-	-
Lead	mg/L	T	0.0029 :	-	-	-	-	-
Lead	mg/L	D	-	<0.0008 :	-	-	-	<0.001 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-36B	MMW-36B	MMW-36B	MMW-36B	MMW-36B	MMW-36B
			Sample Date	10/31/2002	1/13/2003	1/13/2003	4/7/2003	4/7/2003	7/22/2003
			Sample ID	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5
Field Measurements									
DO	mg/L	T		-	0.9 :	-	2.23 :	-	0.28 :
EH	millivolts	T		-	274.1 :	-	390.5 :	-	255.2 :
pH	SU	T		-	3.82 :	-	4.8 J	-	4.6 J
Specific Conductance	uS/cm	T		-	3986. :	-	3990. :	-	4204. :
Temperature	Celsius	T		-	8.6 :	-	7.87 :	-	12.06 :
Turbidity	NTU	T		-	0.1 :	-	0. :	-	1.4 :
General Chemistry									
Ammonia	mg/L	T		-	<0.18 :	-	<0.11 :	-	<0.081 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	13. :	-	38. :	-	44.2 :
Fluoride	mg/L	T		-	2.8 :	-	37.3 :	-	34.9 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 :	-	<0.2 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.27 :	-	<0.2 :	-	0.16 J
Phosphorus	mg/L	T		-	0.98 :	-	0.4 :	-	0.28 :
Sulfate	mg/L	T		-	3680. J	-	2900. J	-	3420. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	4690. J	-	3790. :	-	3550. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.26 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.6 :	-	<1. J	-	<2.1 J
Total Suspended Solids	mg/L	T		-	85.4 :	-	<5.9 :	-	11.8 :
Laboratory Parameters									
pH	SU	T		-	3.82 :	-	4.8 J	-	4.6 J
Specific Conductance	umhos/cm	T		-	-	-	3860. J	-	4150. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	2710. :	-	2430. :	-	2490. :
Hardness	mg/L	D		-	-	2710. :	-	2450. :	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-36B 10/31/2002 MMW-36B-D01N-GR GW5 W		MMW-36B 1/13/2003 MMW-36B-T01N-GR GW5 W		MMW-36B 1/13/2003 MMW-36B-D01N-GR GW5 W		MMW-36B 4/7/2003 MMW-36B-T01N-GR GW5 W		MMW-36B 4/7/2003 MMW-36B-D01N-GR GW5 W		MMW-36B 7/22/2003 MMW-36B-T01N-GR GW5 W	
Aluminum	mg/L	T	-		78.6	:	-		70.3	:	-		71.	:
Aluminum	mg/L	D	-		-		80.2	:	-		70.8	:	-	
Antimony	mg/L	T	-		<0.028	:	-		<0.003	:	-		<0.047	:
Antimony	mg/L	D	-		-		<0.028	:	-		<0.003	:	-	
Arsenic	mg/L	T	-		0.0355	:	-		0.0027	:	-		<0.048	:
Arsenic	mg/L	D	-		-		<0.023	:	-		0.0024	:	-	
Barium	mg/L	T	-		<0.048	:	-		<0.125	:	-		<0.059	:
Barium	mg/L	D	-		-		<0.048	:	-		<0.125	:	-	
Beryllium	mg/L	T	-		0.0071	:	-		<0.004	:	-		0.0068	:
Beryllium	mg/L	D	-		-		0.0071	:	-		<0.004	:	-	
Boron	mg/L	T	-		<0.027	:	-		<0.084	:	-		<0.048	:
Boron	mg/L	D	-		-		<0.027	:	-		<0.084	:	-	
Cadmium	mg/L	T	-		<0.08	:	-		0.0234	:	-		<0.12	:
Cadmium	mg/L	D	-		-		<0.08	:	-		0.0234	:	-	
Calcium	mg/L	T	-		564.	:	-		517.	:	-		518.	:
Calcium	mg/L	D	-		-		562.	:	-		520.	:	-	
Chromium	mg/L	T	-		<0.16	:	-		<0.019	:	-		<0.19	:
Chromium	mg/L	D	-		-		<0.16	:	-		<0.019	:	-	
Cobalt	mg/L	T	-		0.456	:	-		0.38	:	-		<0.37	:
Cobalt	mg/L	D	-		-		0.473	:	-		0.378	:	-	
Copper	mg/L	T	-		3.88	:	-		4.53	:	-		2.82	:
Copper	mg/L	D	-		-		4.	:	-		4.55	:	-	
Iron	mg/L	T	-		174.	:	-		154.	:	-		169.	:
Iron	mg/L	D	-		-		173.	:	-		155.	:	-	
Lead	mg/L	T	-		<0.001	:	-		0.0016	:	-		<0.001	:
Lead	mg/L	D	-		-		<0.001	:	-		0.0016	:	-	
Magnesium	mg/L	T	-		316.	:	-		278.	:	-		291.	:
Magnesium	mg/L	D	-		-		317.	:	-		280.	:	-	
Manganese	mg/L	T	-		29.4	:	-		25.8	:	-		26.	:
Manganese	mg/L	D	-		-		29.4	:	-		26.	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		0.00058	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.022	:	-		<0.017	:
Molybdenum	mg/L	D	-		-		<0.011	:	-		<0.022	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-36B	MMW-36B	MMW-36B	MMW-36B	MMW-36B	MMW-36B
			Sample Date	10/31/2002	1/13/2003	1/13/2003	4/7/2003	4/7/2003	7/22/2003
			Sample ID	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5	MMW-36B-D01N-GRW GW5	MMW-36B-T01N-GRW GW5
Nickel	mg/L	T		-	0.86 :	-	0.692 :	-	0.706 :
Nickel	mg/L	D		-	-	0.841 :	-	0.699 :	-
Potassium	mg/L	T		-	<31.4 :	-	9.14 :	-	<37.1 :
Potassium	mg/L	D		-	-	<31.4 :	-	9.18 :	-
Selenium	mg/L	T		-	<0.008 :	-	<0.005 :	-	<0.008 :
Selenium	mg/L	D		-	-	<0.008 :	-	<0.005 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 J
Silver	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T		-	50.8 :	-	56.6 :	-	120. :
Sodium	mg/L	D		-	-	58. :	-	56.4 :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	0.0377 :	-	0.0332 :	-	0.029 :
Vanadium	mg/L	D		-	-	0.0377 :	-	0.0337 :	-
Zinc	mg/L	T		-	1.91 :	-	1.57 :	-	1.56 :
Zinc	mg/L	D		-	-	1.88 :	-	1.59 :	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Butanone	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
2-Hexanone	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
4-Methyl-2-pentanone	mg/L	T		-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-36B 10/31/2002 MMW-36B-D01N-GR W GW5	MMW-36B 1/13/2003 MMW-36B-T01N-GR W GW5	MMW-36B 1/13/2003 MMW-36B-D01N-GR W GW5	MMW-36B 4/7/2003 MMW-36B-T01N-GR W GW5	MMW-36B 4/7/2003 MMW-36B-D01N-GR W GW5	MMW-36B 7/22/2003 MMW-36B-T01N-GR W GW5
Acetone	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
2,4,6-Trichlorophenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T	-	<0.011 :	-	<0.01 J	-	-
2,4-Dinitrophenol	mg/L	T	-	<0.026 :	-	<0.025 J	-	-
2,4-Dinitrotoluene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-36B 10/31/2002 MMW-36B-D01N-GRW GW5	MMW-36B 1/13/2003 MMW-36B-T01N-GRW GW5	MMW-36B 1/13/2003 MMW-36B-D01N-GRW GW5	MMW-36B 4/7/2003 MMW-36B-T01N-GRW GW5	MMW-36B 4/7/2003 MMW-36B-D01N-GRW GW5	MMW-36B 7/22/2003 MMW-36B-T01N-GRW GW5
2,6-Dinitrotoluene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2-Chloronaphthalene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2-Methylphenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
2-Nitrophenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T	-	<0.011 :	-	<0.01 J	-	-
3-Nitroaniline	mg/L	T	-	<0.026 :	-	<0.025 J	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	<0.026 :	-	<0.025 J	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
4-Methylphenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
4-Nitrophenol	mg/L	T	-	<0.026 :	-	<0.025 J	-	-
Acenaphthene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Acenaphthylene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Anthracene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Benzaldehyde	mg/L	T	-	<0.011 J	-	<0.01 :	-	-
Benzo(a)anthracene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Carbazole	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Chrysene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T	-	<0.011 :	-	<0.01 J	-	-
Dibenzofuran	mg/L	T	-	<0.011 :	-	<0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: MMW-36B Sample Date: 10/31/2002 Sample ID: MMW-36B-D01N-GRW GW5	Site ID: MMW-36B Sample Date: 1/13/2003 Sample ID: MMW-36B-T01N-GRW GW5	Site ID: MMW-36B Sample Date: 1/13/2003 Sample ID: MMW-36B-D01N-GRW GW5	Site ID: MMW-36B Sample Date: 4/7/2003 Sample ID: MMW-36B-T01N-GRW GW5	Site ID: MMW-36B Sample Date: 4/7/2003 Sample ID: MMW-36B-D01N-GRW GW5	Site ID: MMW-36B Sample Date: 7/22/2003 Sample ID: MMW-36B-T01N-GRW GW5
Dichlorodiisopropyl ether	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Di-n-Butyl phthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Di-n-Octyl phthalate	mg/L	T	-	<0.011 J	-	<0.01 J	-	-
Fluoranthene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Fluorene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Isophorone	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Naphthalene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
Phenanthrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Phenol	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Pyrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 :	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	0.0016 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	0.0016 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction	MMW-36B		MMW-36B		MMW-36B		MMW-36B		MMW-36B		MMW-36B	
Sample Date			7/22/2003		10/19/2003		10/19/2003		1/11/2004		1/11/2004		2/23/2004	
Sample ID			MMW-36B-D01N-GRW		MMW-36B-T01N-GRW		MMW-36B-D01N-GRW		MMW-36B-T01N-GRW		MMW-36B-D01N-GRW		MMW-36B-T01N-GRW	
Exposure Area			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	-		1.22	:	-		0.82	:	-		0.45	:
EH	millivolts	T	-		243.8	:	-		240.8	:	-		293.8	:
pH	SU	T	-		4.3	J	-		4.5	J	-		4.03	:
Specific Conductance	uS/cm	T	-		4556.	:	-		3497.	:	-		4229.	:
Temperature	Celsius	T	-		11.32	:	-		7.5	:	-		6.58	:
Turbidity	NTU	T	-		29.8	:	-		14.6	:	-		29.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.12	J	-		0.43	J	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		50.8	:	-		43.1	:	-		-	
Fluoride	mg/L	T	-		35.7	:	-		33.8	:	-		21.6	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		<0.2	:	-		<0.2	:	-		-	
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	:	-		-	
Phosphate, Ortho As P	mg/L	T	-		<0.13	:	-		0.19	:	-		-	
Phosphorus	mg/L	T	-		0.43	:	-		<0.01	:	-		-	
Sulfate	mg/L	T	-		2970.	J	-		3430.	:	-		3640.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Total Dissolved Solids	mg/L	T	-		5110.	J	-		4750.	:	-		4940.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		1.8	J	-		<1.6	:	-		-	
Total Suspended Solids	mg/L	T	-		10.	:	-		9.6	:	-		14.3	:
Laboratory Parameters														
pH	SU	T	-		4.3	J	-		4.5	J	-		4.03	:
Specific Conductance	umhos/cm	T	-		3980.	J	-		3920.	J	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	-		2750.	:	-		2630.	:	-		2760.	:
Hardness	mg/L	D	2650.	:	-		2740.	:	-		2590.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-36B 7/22/2003 MMW-36B-D01N-GR GW5 W		MMW-36B 10/19/2003 MMW-36B-T01N-GR GW5 W		MMW-36B 10/19/2003 MMW-36B-D01N-GR GW5 W		MMW-36B 1/11/2004 MMW-36B-T01N-GR GW5 W		MMW-36B 1/11/2004 MMW-36B-D01N-GR GW5 W		MMW-36B 2/23/2004 MMW-36B-T01N-GR GW5 W	
Aluminum	mg/L	T	-		84.2	:	-		79.5	:	-		105.	:
Aluminum	mg/L	D	76.6	:	-		85.1	:	-		78.7	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.029	:	-		<0.029	:
Antimony	mg/L	D	<0.047	:	-		<0.052	:	-		<0.029	:	-	
Arsenic	mg/L	T	-		<0.041	:	-		<0.028	:	-		0.028	:
Arsenic	mg/L	D	<0.048	:	-		<0.041	:	-		<0.028	:	-	
Barium	mg/L	T	-		<0.115	:	-		<0.053	:	-		<0.053	:
Barium	mg/L	D	<0.059	:	-		<0.115	:	-		<0.053	:	-	
Beryllium	mg/L	T	-		<0.004	J	-		0.0065	:	-		0.0085	:
Beryllium	mg/L	D	0.0066	:	-		<0.004	J	-		0.0062	:	-	
Boron	mg/L	T	-		0.0757	:	-		<0.023	:	-		<0.023	:
Boron	mg/L	D	<0.048	:	-		0.0777	:	-		<0.023	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		<0.07	:
Cadmium	mg/L	D	<0.12	:	-		<0.13	:	-		<0.07	:	-	
Calcium	mg/L	T	-		566.	:	-		543.	:	-		574.	:
Calcium	mg/L	D	546.	:	-		564.	:	-		535.	:	-	
Chromium	mg/L	T	-		<0.11	J	-		<0.11	:	-		<0.11	:
Chromium	mg/L	D	<0.19	:	-		0.503	J	-		<0.11	:	-	
Cobalt	mg/L	T	-		0.516	:	-		0.352	J	-		0.554	:
Cobalt	mg/L	D	0.539	:	-		0.513	:	-		0.542	:	-	
Copper	mg/L	T	-		6.4	:	-		8.75	:	-		10.5	:
Copper	mg/L	D	3.29	:	-		6.51	:	-		8.48	:	-	
Iron	mg/L	T	-		184.	:	-		154.	:	-		160.	:
Iron	mg/L	D	168.	:	-		181.	:	-		152.	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.0023	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		324.	:	-		310.	:	-		322.	:
Magnesium	mg/L	D	311.	:	-		324.	:	-		305.	:	-	
Manganese	mg/L	T	-		32.4	:	-		30.1	:	-		31.5	:
Manganese	mg/L	D	27.6	:	-		32.3	:	-		29.7	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	0.0002	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		<0.011	J	-		<0.024	:	-		<0.024	:
Molybdenum	mg/L	D	<0.017	:	-		<0.011	J	-		<0.024	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: MMW-36B Sample Date: 7/22/2003 Sample ID: MMW-36B-D01N-GRW GW5		Site ID: MMW-36B Sample Date: 10/19/2003 Sample ID: MMW-36B-T01N-GRW GW5		Site ID: MMW-36B Sample Date: 10/19/2003 Sample ID: MMW-36B-D01N-GRW GW5		Site ID: MMW-36B Sample Date: 1/11/2004 Sample ID: MMW-36B-T01N-GRW GW5		Site ID: MMW-36B Sample Date: 1/11/2004 Sample ID: MMW-36B-D01N-GRW GW5		Site ID: MMW-36B Sample Date: 2/23/2004 Sample ID: MMW-36B-T01N-GRW GW5	
Nickel	mg/L	T	-		1.05	J	-		0.843	:	-		0.994	:
Nickel	mg/L	D	1.03	:	-		0.883	J	-		0.812	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<24.3	:	-		<24.3	:
Potassium	mg/L	D	<37.1	:	-		<63.8	:	-		<24.3	:	-	
Selenium	mg/L	T	-		0.0061	:	-		0.0061	J	-		<0.0072	:
Selenium	mg/L	D	<0.008	J	-		0.006	:	-		0.0052	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	J	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		79.6	:	-		<49.	:
Sodium	mg/L	D	95.6	:	-		<99.1	:	-		49.3	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.034	:	-		0.0214	:	-		<0.0358	:
Vanadium	mg/L	D	0.0308	:	-		0.0348	:	-		0.0249	:	-	
Zinc	mg/L	T	-		<1.98	:	-		1.9	:	-		2.42	:
Zinc	mg/L	D	1.79	:	-		<1.98	:	-		1.91	:	-	
Lanthanides														
Cerium	mg/L	T	-		-		-		-		-		0.0242	:
Dysprosium	mg/L	T	-		-		-		-		-		0.0263	:
Erbium	mg/L	T	-		-		-		-		-		0.0122	:
Europium	mg/L	T	-		-		-		-		-		0.00609	:
Gadolinium	mg/L	T	-		-		-		-		-		0.0271	:
Holmium	mg/L	T	-		-		-		-		-		0.00494	:
Lanthanum	mg/L	T	-		-		-		-		-		0.00727	:
Lutetium	mg/L	T	-		-		-		-		-		0.00092	:
Neodymium	mg/L	T	-		-		-		-		-		0.0295	:
Praseodymium	mg/L	T	-		-		-		-		-		0.00435	:
Samarium	mg/L	T	-		-		-		-		-		0.0144	:
Terbium	mg/L	T	-		-		-		-		-		0.00469	:
Thulium	mg/L	T	-		-		-		-		-		0.00138	:
Ytterbium	mg/L	T	-		-		-		-		-		0.00719	:
Yttrium	mg/L	T	-		-		-		-		-		0.153	:
Isotopes														
204Pb/206Pb	mg/L	T	-		-		-		-		-		0.00022	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID					
			MMW-36B 7/22/2003 MMW-36B-D01N-GRW GW5	MMW-36B 10/19/2003 MMW-36B-T01N-GRW GW5	MMW-36B 10/19/2003 MMW-36B-D01N-GRW GW5	MMW-36B 1/11/2004 MMW-36B-T01N-GRW GW5	MMW-36B 1/11/2004 MMW-36B-D01N-GRW GW5	MMW-36B 2/23/2004 MMW-36B-T01N-GRW GW5
207Pb/206Pb	mg/L	T	-	-	-	-	-	0.00076 :
208Pb/206Pb	mg/L	T	-	-	-	-	-	0.00097 :
Delta D	per mil	T	-	-	-	-	-	-84.5 :
Delta O-18	per mil	T	-	-	-	-	-	-11.4 :
Lead	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.0023 :
Lead	mg/L	D	<0.001 :	-	<0.002 :	-	<0.001 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	MMW-36B	MMW-36B	MMW-36B	MMW-36B	MMW-42B	MMW-42B
			Sample Date	2/23/2004	3/22/2004	4/21/2004	4/21/2004	11/14/2002	11/14/2002
			Sample ID	MMW-36B-D01N-GRW	MMW-36-B	MMW-36B-T01N-GRW	MMW-36B-D01N-GRW	MMW-42B-T01N-GRW	MMW-42B-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
		Fraction							
Field Measurements									
DO	mg/L	T		-	-	1.1 :	-	9.54 :	-
EH	millivolts	T		-	-	237.4 :	-	-307.6 :	-
pH	SU	T		-	-	4.7 J	-	6.72 :	-
Specific Conductance	uS/cm	T		-	-	4305. :	-	2987. :	-
Temperature	Celsius	T		-	-	9.67 :	-	9.54 :	-
Turbidity	NTU	T		-	-	0. :	-	47.8 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	<0.26 :	-	<0.084 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	460. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Chloride	mg/L	T		-	-	43.6 :	-	6.2 :	-
Fluoride	mg/L	T		-	-	35.1 :	-	1.4 :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		-	-	<0.2 :	-	<0.4 J	-
Nitrite	mg/L	T		-	-	<0.005 :	-	0.021 J	-
Phosphate, Ortho As P	mg/L	T		-	-	0.22 :	-	<0.01 J	-
Phosphorus	mg/L	T		-	-	0.53 :	-	0.079 :	-
Sulfate	mg/L	T		-	-	3280. :	-	1750. :	-
Total Alkalinity	mg/L	T		-	-	<1. :	-	460. :	-
Total Dissolved Solids	mg/L	T		-	-	4900. :	-	2860. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	0.71 :	-
Total Organic Carbon	mg/L	T		-	-	2.1 J	-	1.7 :	-
Total Suspended Solids	mg/L	T		-	-	<6. J	-	55.4 :	-
Laboratory Parameters									
pH	SU	T		-	-	4.7 J	-	6.72 :	-
Specific Conductance	umhos/cm	T		-	-	3900. J	-	-	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		-	-	2520. :	-	1860. :	-
Hardness	mg/L	D		2700. :	-	-	2530. :	-	1950. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-36B 2/23/2004 MMW-36B-D01N-GR		MMW-36B 3/22/2004 MMW-36-B		MMW-36B 4/21/2004 MMW-36B-T01N-GR		MMW-36B 4/21/2004 MMW-36B-D01N-GR		MMW-42B 11/14/2002 MMW-42B-T01N-GR		MMW-42B 11/14/2002 MMW-42B-D01N-GR	
			W GW5		GW5		W GW5		W GW5		W GW5		W GW5	
Aluminum	mg/L	T	-		-		82.7	:	-		1.19	:	-	
Aluminum	mg/L	D	98.8	:	-		-		83.3	:	-		0.0159	:
Antimony	mg/L	T	-		-		<0.053	:	-		0.00094	:	-	
Antimony	mg/L	D	<0.029	:	-		-		<0.053	:	-		0.001	:
Arsenic	mg/L	T	-		-		<0.037	:	-		0.0007	J	-	
Arsenic	mg/L	D	<0.028	:	-		-		<0.037	:	-		0.00059	J
Barium	mg/L	T	-		-		<0.049	:	-		0.0458	:	-	
Barium	mg/L	D	<0.053	:	-		-		<0.049	:	-		0.0326	:
Beryllium	mg/L	T	-		-		0.0112	J	-		0.0012	:	-	
Beryllium	mg/L	D	0.0066	:	-		-		0.0097	J	-		0.00039	:
Boron	mg/L	T	-		-		<0.036	:	-		0.0221	:	-	
Boron	mg/L	D	<0.023	:	-		-		<0.036	:	-		0.0202	:
Cadmium	mg/L	T	-		-		<0.1	:	-		0.00022	J	-	
Cadmium	mg/L	D	<0.07	J	-		-		0.104	J	-		<0.0002	:
Calcium	mg/L	T	-		-		519.	:	-		596.	:	-	
Calcium	mg/L	D	552.	:	-		-		519.	:	-		629.	:
Chromium	mg/L	T	-		-		<0.13	:	-		<0.0046	:	-	
Chromium	mg/L	D	<0.11	:	-		-		<0.13	:	-		<0.0046	:
Cobalt	mg/L	T	-		-		0.444	:	-		0.0033	:	-	
Cobalt	mg/L	D	0.518	:	-		-		0.49	:	-		0.003	:
Copper	mg/L	T	-		-		8.68	:	-		0.0086	:	-	
Copper	mg/L	D	12.	:	-		-		8.88	:	-		0.0068	:
Iron	mg/L	T	-		-		146.	J	-		3.14	:	-	
Iron	mg/L	D	152.	:	-		-		146.	:	-		2.38	:
Lead	mg/L	T	-		-		<0.004	:	-		0.002	:	-	
Lead	mg/L	D	<0.002	:	-		-		<0.004	:	-		<0.0002	:
Magnesium	mg/L	T	-		-		298.	:	-		90.7	:	-	
Magnesium	mg/L	D	321.	:	-		-		299.	:	-		91.4	:
Manganese	mg/L	T	-		-		29.9	:	-		1.55	:	-	
Manganese	mg/L	D	31.2	:	-		-		29.9	:	-		1.54	:
Mercury	mg/L	T	-		-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	-		-		0.0168	:	-		0.0114	:	-	
Molybdenum	mg/L	D	<0.024	:	-		-		<0.014	:	-		0.0091	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-36B 2/23/2004 MMW-36B-D01N-GR W GW5	MMW-36B 3/22/2004 MMW-36-B GW5	MMW-36B 4/21/2004 MMW-36B-T01N-GR W GW5	MMW-36B 4/21/2004 MMW-36B-D01N-GR W GW5	MMW-42B 11/14/2002 MMW-42B-T01N-GR W GW5	MMW-42B 11/14/2002 MMW-42B-D01N-GR W GW5
Nickel	mg/L	T	-	-	0.855 :	-	0.0148 J	-
Nickel	mg/L	D	0.971 :	-	-	0.966 :	-	0.0135 J
Potassium	mg/L	T	-	-	<15.5 :	-	8.13 :	-
Potassium	mg/L	D	<24.3 :	-	-	<15.5 :	-	7.5 :
Selenium	mg/L	T	-	-	<0.007 :	-	0.00099 :	-
Selenium	mg/L	D	<0.0059 :	-	-	<0.007 :	-	0.0011 :
Silver	mg/L	T	-	-	<0.001 J	-	<0.0002 :	-
Silver	mg/L	D	<0.001 :	-	-	<0.001 J	-	<0.0002 :
Sodium	mg/L	T	-	-	<48.8 :	-	90.9 :	-
Sodium	mg/L	D	101. :	-	-	<39. :	-	91.6 :
Thallium	mg/L	T	-	-	<0.001 :	-	<0.0002 :	-
Thallium	mg/L	D	<0.002 :	-	-	<0.001 :	-	<0.0002 :
Vanadium	mg/L	T	-	-	0.0302 :	-	0.00049 :	-
Vanadium	mg/L	D	<0.0304 :	-	-	0.0318 :	-	0.00029 :
Zinc	mg/L	T	-	-	1.62 :	-	0.914 :	-
Zinc	mg/L	D	2.41 :	-	-	1.64 :	-	0.783 :
Lanthanides								
Cerium	mg/L	D	0.0264 :	-	-	-	-	-
Dysprosium	mg/L	D	0.0238 :	-	-	-	-	-
Erbium	mg/L	D	0.011 :	-	-	-	-	-
Europium	mg/L	D	0.00598 :	-	-	-	-	-
Gadolinium	mg/L	D	0.028 :	-	-	-	-	-
Holmium	mg/L	D	0.00452 :	-	-	-	-	-
Lanthanum	mg/L	D	0.00829 :	-	-	-	-	-
Lutetium	mg/L	D	0.00083 :	-	-	-	-	-
Neodymium	mg/L	D	0.0308 :	-	-	-	-	-
Praseodymium	mg/L	D	0.00471 :	-	-	-	-	-
Samarium	mg/L	D	0.0138 :	-	-	-	-	-
Terbium	mg/L	D	0.00448 :	-	-	-	-	-
Thulium	mg/L	D	0.00124 :	-	-	-	-	-
Ytterbium	mg/L	D	0.00652 :	-	-	-	-	-
Yttrium	mg/L	D	0.154 :	-	-	-	-	-
Isotopes								
204Pb/206Pb	mg/L	D	0.00005 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-36B 2/23/2004 MMW-36B-D01N-GRW GW5	MMW-36B 3/22/2004 MMW-36-B GW5	MMW-36B 4/21/2004 MMW-36B-T01N-GRW GW5	MMW-36B 4/21/2004 MMW-36B-D01N-GRW GW5	MMW-42B 11/14/2002 MMW-42B-T01N-GRW GW5	MMW-42B 11/14/2002 MMW-42B-D01N-GRW GW5
207Pb/206Pb	mg/L	D	0.00085 :	-	-	-	-	-
208Pb/206Pb	mg/L	D	0.00207 :	-	-	-	-	-
Delta 34S	per mil	D	-5.3 :	-	-	-	-	-
Lead	mg/L	T	-	-	<0.004 :	-	0.002 :	-
Lead	mg/L	D	<0.002 :	-	-	<0.004 :	-	<0.0002 :
Helium Isotope and Tritium								
3H-3He	Years	T	-	71.47 :	-	-	-	-
DEL He3	%	T	-	596.8 :	-	-	-	-
DEL He4	%	T	-	842. :	-	-	-	-
He Corr	1E-8cc/g	T	-	45.026 :	-	-	-	-
Tritium TU	TU	T	-	2.963 :	-	-	-	-
Uncert Age	Years	T	-	0.56 :	-	-	-	-
Uncert TU	TU	T	-	0.089 :	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 12/4/2002 MMW-42B-T01N-GR W GW5		MMW-42B 12/4/2002 MMW-42B-D01N-GR W GW5		MMW-42B 1/10/2003 MMW-42B-T01N-GR W GW5		MMW-42B 1/10/2003 MMW-42B-D01N-GR W GW5		MMW-42B 2/5/2003 MMW-42B-T01N-GR W GW5		MMW-42B 2/5/2003 MMW-42B-D01N-GR W GW5	
Field Measurements														
DO	mg/L	T	0.76	:	-		0.7	:	-		0.9	:	-	
EH	millivolts	T	-415.8	:	-		-51.8	:	-		-58.5	:	-	
pH	SU	T	6.8	:	-		6.8	:	-		6.79	:	-	
Specific Conductance	uS/cm	T	3340.	:	-		3061.	:	-		2774.	:	-	
Temperature	Celsius	T	8.97	:	-		8.15	:	-		8.25	:	-	
Turbidity	NTU	T	55.3	:	-		22.	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.07	:	-		<0.11	:	-		<0.099	:	-	
Bicarbonate (as CaCO3)	mg/L	T	465.	:	-		427.	:	-		411.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	14.4	:	-		6.6	:	-		6.4	:	-	
Fluoride	mg/L	T	1.3	:	-		1.3	:	-		1.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		<0.4	J	-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		0.01	:	-	
Phosphorus	mg/L	T	<0.021	J	-		0.053	J	-		<0.029	:	-	
Sulfate	mg/L	T	1400.	:	-		1600.	J	-		1570.	J	-	
Total Alkalinity	mg/L	T	465.	:	-		427.	:	-		411.	:	-	
Total Dissolved Solids	mg/L	T	2770.	:	-		3300.	:	-		2820.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	2.	:	-		1.7	:	-		1.7	:	-	
Total Suspended Solids	mg/L	T	80.	J	-		31.2	:	-		10.8	:	-	
Laboratory Parameters														
pH	SU	T	6.8	:	-		6.8	:	-		6.79	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1780.	:	-		1920.	:	-		1940.	:	-	
Hardness	mg/L	D	-		1810.	:	-		1840.	:	-		1970.	:
Metals														
Aluminum	mg/L	T	0.307	:	-		0.525	:	-		<0.142	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 12/4/2002 MMW-42B-T01N-GR GW5		MMW-42B 12/4/2002 MMW-42B-D01N-GR GW5		MMW-42B 1/10/2003 MMW-42B-T01N-GR GW5		MMW-42B 1/10/2003 MMW-42B-D01N-GR GW5		MMW-42B 2/5/2003 MMW-42B-T01N-GR GW5		MMW-42B 2/5/2003 MMW-42B-D01N-GR GW5	
Aluminum	mg/L	D	-		<0.0106	:	-		<0.142	:	-		<0.142	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Arsenic	mg/L	T	0.00053	:	-		0.00068	:	-		0.00097	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.00042	:	-		0.00094	:
Barium	mg/L	T	0.0381	:	-		0.053	:	-		0.0268	:	-	
Barium	mg/L	D	-		0.0378	:	-		0.0415	:	-		0.0251	:
Beryllium	mg/L	T	0.00043	:	-		0.0006	:	-		0.00044	:	-	
Beryllium	mg/L	D	-		0.00021	:	-		<0.0002	:	-		0.00041	:
Boron	mg/L	T	0.0167	:	-		0.023	:	-		<0.0148	J	-	
Boron	mg/L	D	-		0.0165	:	-		0.0221	:	-		<0.0146	J
Cadmium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0004	:
Calcium	mg/L	T	562.	:	-		613.	:	-		619.	:	-	
Calcium	mg/L	D	-		570.	:	-		588.	:	-		630.	:
Chromium	mg/L	T	<0.0016	J	-		<0.0037	:	-		<0.0037	:	-	
Chromium	mg/L	D	-		<0.0016	J	-		<0.0037	:	-		<0.0037	:
Cobalt	mg/L	T	0.0039	:	-		<0.0034	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		0.0039	J	-		0.0028	:	-		<0.0016	:
Copper	mg/L	T	<0.0043	:	-		<0.0021	:	-		<0.0017	:	-	
Copper	mg/L	D	-		<0.0032	:	-		<0.0017	:	-		0.0029	:
Iron	mg/L	T	3.54	:	-		10.8	:	-		8.62	:	-	
Iron	mg/L	D	-		3.13	:	-		9.97	:	-		8.63	:
Lead	mg/L	T	0.0021	:	-		0.0013	:	-		0.00026	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	92.1	:	-		94.2	:	-		96.4	:	-	
Magnesium	mg/L	D	-		92.8	:	-		90.2	:	-		97.5	:
Manganese	mg/L	T	1.59	J	-		1.77	:	-		1.38	J	-	
Manganese	mg/L	D	-		1.58	J	-		1.68	:	-		1.38	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0088	:	-		0.0081	:	-		0.0101	:	-	
Molybdenum	mg/L	D	-		0.0088	:	-		0.0053	:	-		0.0082	:
Nickel	mg/L	T	0.0135	:	-		0.005	:	-		0.002	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 12/4/2002 MMW-42B-T01N-GR GW5		MMW-42B 12/4/2002 MMW-42B-D01N-GR GW5		MMW-42B 1/10/2003 MMW-42B-T01N-GR GW5		MMW-42B 1/10/2003 MMW-42B-D01N-GR GW5		MMW-42B 2/5/2003 MMW-42B-T01N-GR GW5		MMW-42B 2/5/2003 MMW-42B-D01N-GR GW5	
Nickel	mg/L	D	-		0.0124	:	-		0.0043	:	-		<0.0015	:
Potassium	mg/L	T	10.	:	-		10.5	:	-		9.51	:	-	
Potassium	mg/L	D	-		9.9	:	-		9.83	:	-		9.3	:
Selenium	mg/L	T	<0.0016	:	-		<0.0016	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.0016	:	-		<0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	91.5	:	-		88.5	:	-		138.	J	-	
Sodium	mg/L	D	-		90.8	:	-		84.9	:	-		131.	J
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0004	:	-		0.00059	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Zinc	mg/L	T	0.344	J	-		0.336	:	-		0.31	:	-	
Zinc	mg/L	D	-		0.334	J	-		<0.039	:	-		0.146	:
Isotopes														
Lead	mg/L	T	0.0021	:	-		0.0013	:	-		0.00026	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 3/2/2003 MMW-42B-T01N-GR W GW5		MMW-42B 3/2/2003 MMW-42B-D01N-GR W GW5		MMW-42B 4/6/2003 MMW-42B-T01N-GR W GW5		MMW-42B 4/6/2003 MMW-42B-D01N-GR W GW5		MMW-42B 5/4/2003 MMW-42B-T01N-GR W GW5		MMW-42B 5/4/2003 MMW-42B-D01N-GR W GW5	
Field Measurements														
DO	mg/L	T	0.52	:	-		1.62	:	-		0.23	:	-	
EH	millivolts	T	58.2	:	-		-109.3	:	-		-144.1	:	-	
pH	SU	T	6.91	:	-		7.	J	-		6.8	J	-	
Specific Conductance	uS/cm	T	3042.	:	-		2886.	:	-		2858.	:	-	
Temperature	Celsius	T	6.05	:	-		10.11	:	-		10.89	:	-	
Turbidity	NTU	T	0.	:	-		16.4	:	-		11.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.061	J	-		<0.066	:	-		<0.13	:	-	
Bicarbonate (as CaCO3)	mg/L	T	440.	:	-		453.	:	-		470.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	7.1	:	-		6.7	:	-		<11.2	:	-	
Fluoride	mg/L	T	1.4	:	-		1.4	:	-		1.5	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	:	-		<0.4	J	-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Phosphorus	mg/L	T	<0.045	J	-		0.054	:	-		<0.039	:	-	
Sulfate	mg/L	T	1510.	:	-		1490.	J	-		1510.	:	-	
Total Alkalinity	mg/L	T	440.	:	-		453.	:	-		470.	:	-	
Total Dissolved Solids	mg/L	T	2800.	:	-		2690.	:	-		2810.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<2.	J	-		<3.2	J	-		6.6	:	-	
Total Suspended Solids	mg/L	T	35.4	J	-		44.4	:	-		33.5	:	-	
Laboratory Parameters														
pH	SU	T	6.91	:	-		7.	J	-		6.8	J	-	
Specific Conductance	umhos/cm	T	-		-		2900.	J	-		2790.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1900.	:	-		1970.	:	-		1870.	:	-	
Hardness	mg/L	D	-		1950.	:	-		1980.	:	-		1920.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 3/2/2003 MMW-42B-T01N-GR GW5		MMW-42B 3/2/2003 MMW-42B-D01N-GR GW5		MMW-42B 4/6/2003 MMW-42B-T01N-GR GW5		MMW-42B 4/6/2003 MMW-42B-D01N-GR GW5		MMW-42B 5/4/2003 MMW-42B-T01N-GR GW5		MMW-42B 5/4/2003 MMW-42B-D01N-GR GW5	
Aluminum	mg/L	T	<0.318	:	-		<0.426	:	-		<0.503	:	-	
Aluminum	mg/L	D	-		<0.142	:	-		<0.426	:	-		<0.503	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	J	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	J	-		<0.0006	:
Arsenic	mg/L	T	0.0014	:	-		0.00077	:	-		0.00088	:	-	
Arsenic	mg/L	D	-		0.00052	J	-		0.00069	:	-		0.00074	:
Barium	mg/L	T	0.0338	:	-		0.0318	:	-		0.0285	:	-	
Barium	mg/L	D	-		0.0303	:	-		0.0282	:	-		0.0282	:
Beryllium	mg/L	T	<0.00069	:	-		0.00035	:	-		0.00039	:	-	
Beryllium	mg/L	D	-		<0.00052	:	-		<0.0003	:	-		0.00036	:
Boron	mg/L	T	0.014	:	-		0.0207	:	-		0.0212	:	-	
Boron	mg/L	D	-		0.0152	:	-		0.0191	:	-		0.0212	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0005	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	:	-		<0.0004	:
Calcium	mg/L	T	602.	J	-		627.	:	-		595.	:	-	
Calcium	mg/L	D	-		619.	J	-		632.	:	-		612.	:
Chromium	mg/L	T	<0.0037	:	-		<0.001	:	-		<0.0009	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.001	:	-		<0.0009	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0038	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0038	:	-		<0.0029	:
Copper	mg/L	T	<0.0017	J	-		0.0017	:	-		<0.0024	:	-	
Copper	mg/L	D	-		<0.0017	J	-		<0.0015	:	-		<0.0024	:
Iron	mg/L	T	12.6	:	-		15.	:	-		11.5	:	-	
Iron	mg/L	D	-		12.4	J	-		14.8	:	-		11.8	:
Lead	mg/L	T	0.0011	:	-		0.00037	:	-		0.00073	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	96.6	:	-		98.5	:	-		93.2	:	-	
Magnesium	mg/L	D	-		98.6	:	-		98.6	:	-		95.9	:
Manganese	mg/L	T	1.53	J	-		1.54	:	-		1.5	:	-	
Manganese	mg/L	D	-		1.56	J	-		1.53	:	-		1.54	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0059	:	-		<0.0058	:	-		0.0041	:	-	
Molybdenum	mg/L	D	-		0.0059	:	-		<0.005	:	-		0.005	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		MMW-42B 3/2/2003 MMW-42B-T01N-GRW GW5		MMW-42B 3/2/2003 MMW-42B-D01N-GRW GW5		MMW-42B 4/6/2003 MMW-42B-T01N-GRW GW5		MMW-42B 4/6/2003 MMW-42B-D01N-GRW GW5		MMW-42B 5/4/2003 MMW-42B-T01N-GRW GW5		MMW-42B 5/4/2003 MMW-42B-D01N-GRW GW5	
Nickel	mg/L	T	<0.0022 :		-		<0.003 :		-		<0.0026 :		-	
Nickel	mg/L	D	-		<0.0028 :		-		<0.003 :		-		<0.0026 :	
Potassium	mg/L	T	7.83 J		-		7.78 :		-		8.12 :		-	
Potassium	mg/L	D	-		8.22 J		-		7.51 :		-		8.12 :	
Selenium	mg/L	T	<0.0016 J		-		<0.001 :		-		<0.001 :		-	
Selenium	mg/L	D	-		<0.0016 :		-		<0.001 :		-		<0.001 :	
Silver	mg/L	T	<0.0002 :		-		<0.0002 :		-		<0.0002 :		-	
Silver	mg/L	D	-		<0.0002 :		-		<0.0002 :		-		<0.0002 :	
Sodium	mg/L	T	104. :		-		97.8 :		-		97.8 :		-	
Sodium	mg/L	D	-		103. :		-		97.7 :		-		101. :	
Thallium	mg/L	T	<0.0002 :		-		<0.0002 :		-		<0.0002 :		-	
Thallium	mg/L	D	-		<0.0002 :		-		<0.0002 :		-		<0.0002 :	
Vanadium	mg/L	T	0.00062 :		-		0.00055 :		-		0.00074 :		-	
Vanadium	mg/L	D	-		0.00051 :		-		0.0004 :		-		0.00065 :	
Zinc	mg/L	T	0.648 J		-		0.576 :		-		0.957 :		-	
Zinc	mg/L	D	-		<0.039 :		-		<0.039 :		-		<0.0292 :	
Isotopes														
Lead	mg/L	T	0.0011 :		-		0.00037 :		-		0.00073 :		-	
Lead	mg/L	D	-		<0.0002 :		-		<0.0002 :		-		<0.0002 :	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 6/1/2003 MMW-42B-T01N-GR		MMW-42B 6/1/2003 MMW-42B-D01N-GR		MMW-42B 7/17/2003 MMW-42B-T01N-GR		MMW-42B 7/17/2003 MMW-42B-D01N-GR		MMW-42B 8/12/2003 MMW-42B-T01N-GR		MMW-42B 8/12/2003 MMW-42B-D01N-GR	
			W GW5		W GW5		W GW5		W GW5		W GW5		W GW5	
Field Measurements														
DO	mg/L	T	0.6	:	-		0.17	:	-		0.01	:	-	
EH	millivolts	T	-259.9	:	-		-235.8	:	-		-220.1	:	-	
pH	SU	T	7.1	J	-		7.1	J	-		7.	J	-	
Specific Conductance	uS/cm	T	5235.	:	-		2713.	:	-		3055.	:	-	
Temperature	Celsius	T	10.44	:	-		12.88	:	-		11.5	:	-	
Turbidity	NTU	T	21.	:	-		17.2	:	-		12.3	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.088	J	-		<0.2	J	-		0.26	:	-	
Bicarbonate (as CaCO3)	mg/L	T	476.	:	-		503.	:	-		563.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	<15.1	:	-		6.5	:	-		7.3	:	-	
Fluoride	mg/L	T	1.5	:	-		1.5	:	-		1.5	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	:	-		<0.2	J	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.16	J	-		<0.054	:	-		0.056	:	-	
Phosphorus	mg/L	T	0.043	J	-		0.089	:	-		0.087	:	-	
Sulfate	mg/L	T	1350.	J	-		1380.	J	-		1260.	J	-	
Total Alkalinity	mg/L	T	476.	:	-		503.	:	-		563.	:	-	
Total Dissolved Solids	mg/L	T	2940.	:	-		2750.	:	-		2720.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		0.36	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	15.1	J	-		6.3	J	-		3.3	J	-	
Total Suspended Solids	mg/L	T	20.4	:	-		21.2	:	-		12.2	:	-	
Laboratory Parameters														
pH	SU	T	7.1	J	-		7.1	J	-		7.	J	-	
Specific Conductance	umhos/cm	T	2830.	J	-		2690.	J	-		2650.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	1960.	:	-		1840.	:	-		1820.	:	-	
Hardness	mg/L	D	-		1810.	:	-		1850.	:	-		1850.	:
Metals														

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 6/1/2003 MMW-42B-T01N-GRW GW5		MMW-42B 6/1/2003 MMW-42B-D01N-GRW GW5		MMW-42B 7/17/2003 MMW-42B-T01N-GRW GW5		MMW-42B 7/17/2003 MMW-42B-D01N-GRW GW5		MMW-42B 8/12/2003 MMW-42B-T01N-GRW GW5		MMW-42B 8/12/2003 MMW-42B-D01N-GRW GW5	
Aluminum	mg/L	T	<0.503	:	-		<0.631	:	-		<0.183	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.631	:	-		<0.183	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.00068	:	-		0.00065	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		0.00047	:	-		0.00042	:	-		<0.0004	:
Barium	mg/L	T	0.028	:	-		0.0302	:	-		0.0292	:	-	
Barium	mg/L	D	-		0.0259	:	-		0.0297	:	-		0.028	:
Beryllium	mg/L	T	<0.0003	:	-		0.00039	:	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		0.00026	:	-		<0.0004	:
Boron	mg/L	T	0.0217	:	-		0.0184	:	-		0.0201	:	-	
Boron	mg/L	D	-		0.0226	:	-		0.0183	:	-		0.0197	:
Cadmium	mg/L	T	<0.0005	:	-		<0.0006	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0006	:	-		<0.0005	:
Calcium	mg/L	T	625.	:	-		587.	:	-		578.	:	-	
Calcium	mg/L	D	-		577.	:	-		590.	:	-		588.	:
Chromium	mg/L	T	<0.013	:	-		<0.0014	J	-		<0.0012	:	-	
Chromium	mg/L	D	-		<0.001	:	-		<0.0014	J	-		<0.0011	:
Cobalt	mg/L	T	<0.0038	:	-		<0.002	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0038	:	-		<0.002	:	-		<0.0029	:
Copper	mg/L	T	0.0026	:	-		<0.0024	:	-		<0.0022	:	-	
Copper	mg/L	D	-		<0.0015	:	-		<0.0024	:	-		0.0022	:
Iron	mg/L	T	9.54	:	-		2.53	:	-		2.42	:	-	
Iron	mg/L	D	-		8.42	:	-		2.04	:	-		2.33	:
Lead	mg/L	T	<0.00059	:	-		<0.00033	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.00035	:	-		<0.0002	:	-		<0.0004	:
Magnesium	mg/L	T	96.8	:	-		91.5	:	-		91.9	:	-	
Magnesium	mg/L	D	-		90.6	:	-		92.1	:	-		93.5	:
Manganese	mg/L	T	1.54	:	-		1.45	:	-		1.32	:	-	
Manganese	mg/L	D	-		1.43	:	-		1.43	:	-		1.33	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	0.0083	:	-		<0.0017	:	-		<0.0011	:	-	
Molybdenum	mg/L	D	-		<0.0053	:	-		<0.0017	:	-		<0.0013	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 6/1/2003 MMW-42B-T01N-GRW GW5		MMW-42B 6/1/2003 MMW-42B-D01N-GRW GW5		MMW-42B 7/17/2003 MMW-42B-T01N-GRW GW5		MMW-42B 7/17/2003 MMW-42B-D01N-GRW GW5		MMW-42B 8/12/2003 MMW-42B-T01N-GRW GW5		MMW-42B 8/12/2003 MMW-42B-D01N-GRW GW5	
Nickel	mg/L	T	<0.003	:	-		<0.0021	J	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.003	:	-		<0.0021	J	-		<0.0024	:
Potassium	mg/L	T	8.98	:	-		9.37	:	-		8.31	:	-	
Potassium	mg/L	D	-		9.31	:	-		9.3	:	-		8.19	:
Selenium	mg/L	T	<0.0016	:	-		<0.0016	:	-		<0.0006	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.0016	J	-		<0.0006	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	103.	:	-		105.	:	-		100.	:	-	
Sodium	mg/L	D	-		99.	:	-		108.	:	-		102.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0039	:	-		0.0027	:	-		0.0022	:	-	
Vanadium	mg/L	D	-		<0.0039	:	-		0.0022	:	-		0.0022	:
Zinc	mg/L	T	0.676	:	-		0.863	:	-		0.344	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.016	:	-		<0.057	:
Isotopes														
Lead	mg/L	T	<0.00059	:	-		<0.00033	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.00035	:	-		<0.0002	:	-		<0.0004	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-42B	MMW-42B	MMW-42B	MMW-42B	MMW-42B	MMW-42B
			Sample Date	9/9/2003	9/9/2003	10/16/2003	10/16/2003	11/3/2003	11/4/2003
			Sample ID	MMW-42B-T01N-GRW-GW5	MMW-42B-D01N-GRW-GW5	MMW-42B-T01N-GRW-GW5	MMW-42B-D01N-GRW-GW5	MMW-42B-T01N-GRW-GW5	MMW-42B-T01N-GRW-GW5
Field Measurements									
DO	mg/L	T		1.13 :	-	1.65 :	-	0.25 :	-
EH	millivolts	T		-231.8 :	-	-138.4 :	-	-109.2 :	-
pH	SU	T		6.9 J	-	7. J	-	6.65 :	6.9 J
Specific Conductance	uS/cm	T		2936. :	-	2795. :	-	2934. :	-
Temperature	Celsius	T		10.72 :	-	12.15 :	-	8.86 :	-
Turbidity	NTU	T		51.8 :	-	1.2 :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		<0.12 :	-	<0.12 J	-	-	<0.15 :
Bicarbonate (as CaCO3)	mg/L	T		545. :	-	546. :	-	-	499. :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	<1. :
Chloride	mg/L	T		6.5 :	-	6.8 :	-	-	7.3 :
Fluoride	mg/L	T		1.4 :	-	1.5 :	-	-	1.5 :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	<1. :
Nitrate	mg/L	T		<0.2 J	-	<0.2 J	-	-	<0.2 J
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		<0.065 :	-	<0.01 :	-	-	0.027 J
Phosphorus	mg/L	T		0.076 :	-	0.069 :	-	-	0.082 :
Sulfate	mg/L	T		1390. J	-	1190. J	-	-	1480. :
Total Alkalinity	mg/L	T		545. :	-	546. :	-	-	499. :
Total Dissolved Solids	mg/L	T		2800. :	-	2710. :	-	-	2600. :
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T		<4.2 :	-	1. J	-	-	1.8 :
Total Suspended Solids	mg/L	T		8.6 :	-	7.3 :	-	-	17.6 :
Laboratory Parameters									
pH	SU	T		6.9 J	-	7. J	-	6.65 :	6.9 J
Specific Conductance	umhos/cm	T		2750. J	-	2750. J	-	-	2880. J
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		1860. :	-	1920. :	-	-	1790. :
Hardness	mg/L	D		-	1910. :	-	1900. :	-	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 9/9/2003 MMW-42B-T01N-GRW GW5		MMW-42B 9/9/2003 MMW-42B-D01N-GRW GW5		MMW-42B 10/16/2003 MMW-42B-T01N-GRW GW5		MMW-42B 10/16/2003 MMW-42B-D01N-GRW GW5		MMW-42B 11/3/2003 MMW-42B-T01N-GRW GW5		MMW-42B 11/4/2003 MMW-42B-T01N-GRW GW5	
Aluminum	mg/L	T	<0.217	:	-		<0.217	:	-		-		<0.299	:
Aluminum	mg/L	D	-		<0.217	:	-		<0.217	:	-		-	
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		-		<0.001	:
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		-	
Barium	mg/L	T	0.0254	:	-		0.0241	:	-		-		0.0255	:
Barium	mg/L	D	-		0.0257	:	-		0.0226	:	-		-	
Beryllium	mg/L	T	<0.0004	:	-		0.00082	:	-		-		<0.0005	:
Beryllium	mg/L	D	-		<0.0004	:	-		0.00076	:	-		-	
Boron	mg/L	T	0.0192	:	-		0.022	:	-		-		0.031	:
Boron	mg/L	D	-		0.0191	:	-		0.0204	:	-		-	
Cadmium	mg/L	T	<0.0005	:	-		<0.0005	:	-		-		<0.0007	:
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0005	:	-		-	
Calcium	mg/L	T	587.	:	-		609.	:	-		-		567.	:
Calcium	mg/L	D	-		604.	:	-		604.	:	-		-	
Chromium	mg/L	T	<0.0011	:	-		<0.0011	J	-		-		<0.0013	:
Chromium	mg/L	D	-		<0.0011	:	-		<0.0011	J	-		-	
Cobalt	mg/L	T	<0.0029	:	-		<0.0029	J	-		-		<0.0031	:
Cobalt	mg/L	D	-		<0.0029	:	-		0.0126	J	-		-	
Copper	mg/L	T	<0.0022	:	-		<0.0022	:	-		-		<0.002	:
Copper	mg/L	D	-		<0.0022	:	-		<0.0022	:	-		-	
Iron	mg/L	T	2.6	:	-		3.97	:	-		-		4.26	:
Iron	mg/L	D	-		2.85	:	-		3.88	:	-		-	
Lead	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Lead	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		-	
Magnesium	mg/L	T	95.2	:	-		97.3	:	-		-		90.7	:
Magnesium	mg/L	D	-		98.3	:	-		96.2	:	-		-	
Manganese	mg/L	T	1.25	:	-		1.3	:	-		-		1.15	J
Manganese	mg/L	D	-		1.29	:	-		1.3	:	-		-	
Mercury	mg/L	T	<0.0001	J	-		<0.0001	J	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	J	-		-	
Molybdenum	mg/L	T	<0.0011	J	-		<0.0011	:	-		-		<0.0012	:
Molybdenum	mg/L	D	-		<0.0011	J	-		<0.0011	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-42B 9/9/2003 MMW-42B-T01N-GRW GW5		MMW-42B 9/9/2003 MMW-42B-D01N-GRW GW5		MMW-42B 10/16/2003 MMW-42B-T01N-GRW GW5		MMW-42B 10/16/2003 MMW-42B-D01N-GRW GW5		MMW-42B 11/3/2003 MMW-42B-T01N-GRW GW5		MMW-42B 11/4/2003 MMW-42B-T01N-GRW GW5	
Nickel	mg/L	T	<0.0024	:	-		<0.0024	:	-		-		<0.0028	:
Nickel	mg/L	D	-		<0.0024	:	-		<0.0024	:	-		-	
Potassium	mg/L	T	<7.09	:	-		7.36	:	-		-		8.53	:
Potassium	mg/L	D	-		<7.38	:	-		7.27	:	-		-	
Selenium	mg/L	T	<0.0006	:	-		<0.0006	:	-		-		<0.0006	:
Selenium	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		-	
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Sodium	mg/L	T	97.7	:	-		96.4	:	-		-		91.7	:
Sodium	mg/L	D	-		101.	:	-		96.	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	T	0.0024	:	-		0.0022	:	-		-		0.002	:
Vanadium	mg/L	D	-		0.0023	:	-		0.0021	:	-		-	
Zinc	mg/L	T	<0.019	J	-		0.0655	:	-		-		0.168	:
Zinc	mg/L	D	-		0.139	J	-		<0.019	:	-		-	
Isotopes														
Lead	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Lead	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-42B	MMW-42B	MMW-42B	MMW-42B	MMW-42B	MMW-42B
			Sample Date	11/4/2003	12/8/2003	12/8/2003	1/15/2004	1/15/2004	4/18/2004
			Sample ID	MMW-42B-D01N-GRW GW5	MMW-42B-T01N-GRW GW5	MMW-42B-D01N-GRW GW5	MMW-42B-T01N-GRW GW5	MMW-42B-D01N-GRW GW5	MMW-42B-T01N-GRW GW5
Field Measurements									
DO	mg/L	T		-	0.1 :	-	0.26 :	-	2.8 :
EH	millivolts	T		-	107.8 :	-	-112.2 :	-	-204.7 :
pH	SU	T		-	6.9 J	-	7. J	-	7.2 J
Specific Conductance	uS/cm	T		-	2926. :	-	2862. :	-	2864. :
Temperature	Celsius	T		-	7.7 :	-	8.29 :	-	9.69 :
Turbidity	NTU	T		-	9.2 :	-	6.4 :	-	8.7 :
General Chemistry									
Ammonia	mg/L	T		-	0.11 :	-	<0.059 J	-	<0.069 :
Bicarbonate (as CaCO3)	mg/L	T		-	474. J	-	491. :	-	496. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	6.9 :	-	8.5 :	-	8.2 :
Fluoride	mg/L	T		-	1.5 :	-	1.4 :	-	1.5 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 :	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	0.021 :	-	0.037 J	-	<0.01 :
Phosphorus	mg/L	T		-	0.065 :	-	<0.026 :	-	<0.01 :
Sulfate	mg/L	T		-	1560. :	-	1460. :	-	1450. :
Total Alkalinity	mg/L	T		-	474. J	-	491. :	-	496. :
Total Dissolved Solids	mg/L	T		-	2650. :	-	2880. :	-	2800. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.1 :	-	<1. :	-	<3. J
Total Suspended Solids	mg/L	T		-	12.1 :	-	9. :	-	8.4 J
Laboratory Parameters									
pH	SU	T		-	6.9 J	-	7. J	-	7.2 J
Specific Conductance	umhos/cm	T		-	2390. J	-	2420. J	-	2580. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1940. :	-	1920. :	-	1830. :
Hardness	mg/L	D		1930. :	-	1910. :	-	1860. :	-
Metals									

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 11/4/2003 MMW-42B-D01N-GRW GW5		MMW-42B 12/8/2003 MMW-42B-T01N-GRW GW5		MMW-42B 12/8/2003 MMW-42B-D01N-GRW GW5		MMW-42B 1/15/2004 MMW-42B-T01N-GRW GW5		MMW-42B 1/15/2004 MMW-42B-D01N-GRW GW5		MMW-42B 4/18/2004 MMW-42B-T01N-GRW GW5	
Aluminum	mg/L	T	-		<0.221	:	-		<0.621	:	-		<0.201	:
Aluminum	mg/L	D	<0.217	:	-		<0.221	:	-		<0.621	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.003	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.003	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0002	:	-	
Barium	mg/L	T	-		0.0214	:	-		0.0219	:	-		0.0216	:
Barium	mg/L	D	0.0256	:	-		0.021	:	-		0.0208	:	-	
Beryllium	mg/L	T	-		0.00075	:	-		<0.001	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0003	:	-		0.00071	:	-		<0.001	:	-	
Boron	mg/L	T	-		0.019	:	-		0.0181	:	-		0.0208	:
Boron	mg/L	D	0.0178	:	-		0.0181	:	-		0.0154	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0005	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		616.	:	-		610.	:	-		580.	:
Calcium	mg/L	D	613.	:	-		606.	:	-		590.	:	-	
Chromium	mg/L	T	-		<0.0011	:	-		<0.0057	:	-		<0.0006	:
Chromium	mg/L	D	<0.0013	:	-		0.0012	:	-		<0.0057	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0037	:	-		<0.0016	:
Cobalt	mg/L	D	<0.0031	:	-		<0.0029	:	-		0.0037	:	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.0035	:	-		<0.0014	:
Copper	mg/L	D	<0.002	:	-		<0.0022	:	-		<0.0035	:	-	
Iron	mg/L	T	-		5.73	:	-		6.47	:	-		6.33	J
Iron	mg/L	D	4.07	:	-		5.38	:	-		6.03	:	-	
Lead	mg/L	T	-		<0.0002	J	-		0.00027	:	-		<0.0008	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	J	-		<0.0002	:	-	
Magnesium	mg/L	T	-		98.	:	-		95.8	:	-		92.6	:
Magnesium	mg/L	D	98.2	:	-		96.4	:	-		92.8	:	-	
Manganese	mg/L	T	-		1.28	:	-		1.26	:	-		1.22	:
Manganese	mg/L	D	1.24	:	-		1.25	:	-		1.23	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0011	:	-		<0.003	:	-		<0.0014	:
Molybdenum	mg/L	D	<0.0012	:	-		<0.0011	:	-		<0.003	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 11/4/2003 MMW-42B-D01N-GRW GW5		MMW-42B 12/8/2003 MMW-42B-T01N-GRW GW5		MMW-42B 12/8/2003 MMW-42B-D01N-GRW GW5		MMW-42B 1/15/2004 MMW-42B-T01N-GRW GW5		MMW-42B 1/15/2004 MMW-42B-D01N-GRW GW5		MMW-42B 4/18/2004 MMW-42B-T01N-GRW GW5	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0168	J	-		<0.0015	J
Nickel	mg/L	D	<0.0028	:	-		<0.0024	:	-		<0.0168	:	-	
Potassium	mg/L	T	-		7.95	:	-		7.	:	-		8.47	:
Potassium	mg/L	D	8.56	:	-		8.13	:	-		6.9	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0004	:	-		<0.0014	:
Selenium	mg/L	D	0.00078	:	-		<0.0006	:	-		<0.0004	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		98.	:	-		98.6	:	-		80.8	:
Sodium	mg/L	D	99.	:	-		98.2	:	-		96.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.00027	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00027	:	-	
Vanadium	mg/L	T	-		0.0016	:	-		<0.0016	:	-		0.0016	:
Vanadium	mg/L	D	0.002	:	-		0.0012	:	-		<0.0016	:	-	
Zinc	mg/L	T	-		0.0848	:	-		<0.091	:	-		0.0265	:
Zinc	mg/L	D	<0.019	:	-		<0.023	:	-		<0.091	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-		-		-68.1	:
Delta O-18	per mil	T	-		-		-		-		-		-10.2	:
Lead	mg/L	T	-		<0.0002	J	-		0.00027	:	-		<0.0008	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	J	-		<0.0002	:	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 4/18/2004 MMW-42B-D01N-GR W GW5	MMW-44B 11/13/2002 MMW-44B-T01N-GR W GW5	MMW-44B 11/13/2002 MMW-44B-D01N-GR W GW5	MMW-44B 12/5/2002 MMW-44B-T01N-GR W GW5	MMW-44B 1/14/2003 MMW-44B-T01N-GR W GW5	MMW-44B 1/14/2003 MMW-44B-D01N-GR W GW5
Field Measurements								
DO	mg/L	T	-	2.13 :	-	3.25 :	0.73 :	-
EH	millivolts	T	-	-343. :	-	-486.9 :	-21.8 :	-
pH	SU	T	-	6.85 :	-	7.53 :	6.66 :	-
Specific Conductance	uS/cm	T	-	2729. :	-	3310. :	2689. :	-
Temperature	Celsius	T	-	10.89 :	-	8.24 :	10.52 :	-
Turbidity	NTU	T	-	1210.9 :	-	263.3 :	4.4 :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.095 :	-	-	<0.12 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	231. :	-	-	254. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	23.5 :	-	-	29.8 :	-
Fluoride	mg/L	T	-	2.2 :	-	-	2.1 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	<0.4 :	-	-	<0.4 :	-
Nitrite	mg/L	T	-	<0.005 :	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-	-	<0.01 J	-
Phosphorus	mg/L	T	-	0.35 :	-	-	<0.01 :	-
Sulfate	mg/L	T	-	1630. :	-	-	1640. J	-
Total Alkalinity	mg/L	T	-	231. :	-	-	254. :	-
Total Dissolved Solids	mg/L	T	-	2650. :	-	-	2610. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	<1. :	-	-	1.9 :	-
Total Suspended Solids	mg/L	T	-	279. :	-	-	35.2 :	-
Laboratory Parameters								
pH	SU	T	-	6.85 :	-	7.53 :	6.66 :	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	1580. :	-	-	1820. :	-
Hardness	mg/L	D	1820. :	-	1660. :	-	-	1820. :
Metals								
Aluminum	mg/L	T	-	9. :	-	-	<0.226 :	-

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 4/18/2004 MMW-42B-D01N-GRW GW5		MMW-44B 11/13/2002 MMW-44B-T01N-GRW GW5		MMW-44B 11/13/2002 MMW-44B-D01N-GRW GW5		MMW-44B 12/5/2002 MMW-44B-T01N-GRW GW5		MMW-44B 1/14/2003 MMW-44B-T01N-GRW GW5		MMW-44B 1/14/2003 MMW-44B-D01N-GRW GW5	
Aluminum	mg/L	D	<0.201	:	-		0.115	:	-		-		<0.142	:
Antimony	mg/L	T	-		0.0042	:	-		-		<0.0017	:	-	
Antimony	mg/L	D	<0.0008	:	-		0.004	:	-		-		<0.0017	:
Arsenic	mg/L	T	-		0.0033	J	-		-		0.0021	:	-	
Arsenic	mg/L	D	<0.0004	:	-		0.0023	J	-		-		0.002	:
Barium	mg/L	T	-		0.101	:	-		-		0.0141	:	-	
Barium	mg/L	D	0.0208	:	-		0.033	:	-		-		0.0138	:
Beryllium	mg/L	T	-		0.003	:	-		-		0.0038	:	-	
Beryllium	mg/L	D	<0.0003	J	-		0.0031	:	-		-		0.0037	:
Boron	mg/L	T	-		0.0394	:	-		-		0.0398	:	-	
Boron	mg/L	D	0.0209	:	-		0.0409	:	-		-		0.0396	:
Cadmium	mg/L	T	-		<0.0002	:	-		-		<0.0004	:	-	
Cadmium	mg/L	D	<0.0003	:	-		<0.0002	:	-		-		<0.0004	:
Calcium	mg/L	T	-		555.	:	-		-		637.	:	-	
Calcium	mg/L	D	576.	:	-		590.	:	-		-		635.	:
Chromium	mg/L	T	-		0.0334	:	-		-		<0.0037	:	-	
Chromium	mg/L	D	<0.0006	:	-		<0.0046	:	-		-		<0.0037	:
Cobalt	mg/L	T	-		0.0341	:	-		-		0.0281	:	-	
Cobalt	mg/L	D	<0.0025	:	-		0.0328	:	-		-		0.0286	:
Copper	mg/L	T	-		0.0232	J	-		-		<0.0017	:	-	
Copper	mg/L	D	<0.0014	:	-		0.0505	J	-		-		<0.0017	:
Iron	mg/L	T	-		22.6	:	-		-		12.7	:	-	
Iron	mg/L	D	6.7	:	-		10.8	:	-		-		12.8	:
Lead	mg/L	T	-		0.0101	:	-		-		0.00041	:	-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		<0.0002	:
Magnesium	mg/L	T	-		47.6	:	-		-		56.4	:	-	
Magnesium	mg/L	D	92.	:	-		45.4	:	-		-		56.	:
Manganese	mg/L	T	-		8.	:	-		-		9.47	:	-	
Manganese	mg/L	D	1.24	:	-		8.28	:	-		-		9.39	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.0092	:	-		-		0.0015	:	-	
Molybdenum	mg/L	D	0.0017	:	-		<0.0067	:	-		-		<0.0011	:
Nickel	mg/L	T	-		0.0667	J	-		-		0.0353	:	-	

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 4/18/2004 MMW-42B-D01N-GRW GW5		MMW-44B 11/13/2002 MMW-44B-T01N-GRW GW5		MMW-44B 11/13/2002 MMW-44B-D01N-GRW GW5		MMW-44B 12/5/2002 MMW-44B-T01N-GRW GW5		MMW-44B 1/14/2003 MMW-44B-T01N-GRW GW5		MMW-44B 1/14/2003 MMW-44B-D01N-GRW GW5	
Nickel	mg/L	D	<0.0015	J	-		0.0413	J	-		-		0.036	:
Potassium	mg/L	T	-		14.1	:	-		-		5.24	:	-	
Potassium	mg/L	D	8.11	:	-		9.22	:	-		-		7.18	:
Selenium	mg/L	T	-		0.0019	:	-		-		<0.0016	:	-	
Selenium	mg/L	D	<0.0014	:	-		0.0021	:	-		-		<0.0016	:
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		-		<0.0002	:
Sodium	mg/L	T	-		85.9	:	-		-		101.	:	-	
Sodium	mg/L	D	93.7	:	-		87.9	:	-		-		104.	:
Thallium	mg/L	T	-		0.00034	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0305	:	-		-		0.00057	:	-	
Vanadium	mg/L	D	0.0016	:	-		0.00029	:	-		-		0.0004	:
Zinc	mg/L	T	-		10.4	:	-		-		<0.126	:	-	
Zinc	mg/L	D	<0.024	:	-		7.46	:	-		-		<0.0827	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		-		0.002	J	-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
2-Butanone	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
2-Hexanone	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
Acetone	mg/L	T	-		0.004	J	-		-		<0.01	J	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-42B	MMW-44B	MMW-44B	MMW-44B	MMW-44B	MMW-44B
			Sample Date	4/18/2004	11/13/2002	11/13/2002	12/5/2002	1/14/2003	1/14/2003
			Sample ID	MMW-42B-D01N-GRW-GW5	MMW-44B-T01N-GRW-GW5	MMW-44B-D01N-GRW-GW5	MMW-44B-T01N-GRW-GW5	MMW-44B-T01N-GRW-GW5	MMW-44B-D01N-GRW-GW5
Benzene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Bromoform	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Bromomethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Chloroethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Chloroform	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Chloromethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Methylene chloride	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Styrene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Toluene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Total Xylene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Trichloroethene	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.011 :	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	<0.028 :	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T		-	<0.011 :	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	<0.011 :	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	<0.011 :	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	<0.028 :	-	-	<0.025 :	-
2,4-Dinitrotoluene	mg/L	T		-	<0.011 :	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T		-	<0.011 :	-	-	<0.01 :	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-42B 4/18/2004 MMW-42B-D01N-GR W GW5	MMW-44B 11/13/2002 MMW-44B-T01N-GR W GW5	MMW-44B 11/13/2002 MMW-44B-D01N-GR W GW5	MMW-44B 12/5/2002 MMW-44B-T01N-GR W GW5	MMW-44B 1/14/2003 MMW-44B-T01N-GR W GW5	MMW-44B 1/14/2003 MMW-44B-D01N-GR W GW5
2-Chloronaphthalene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
2-Methylphenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T	-	<0.028 :	-	-	<0.025 :	-
2-Nitrophenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T	-	<0.028 :	-	-	<0.025 :	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	<0.028 :	-	-	<0.025 :	-
4-Bromophenyl phenyl ether	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
4-Methylphenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T	-	<0.028 :	-	-	<0.025 :	-
4-Nitrophenol	mg/L	T	-	<0.028 :	-	-	<0.025 :	-
Acenaphthene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Acenaphthylene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Anthracene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Benzaldehyde	mg/L	T	-	<0.011 :	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T	-	0.0006 J	-	-	<0.01 :	-
Carbazole	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Chrysene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Dibenzofuran	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T	-	<0.011 :	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-42B 4/18/2004 MMW-42B-D01N-GRW GW5	MMW-44B 11/13/2002 MMW-44B-T01N-GRW GW5	MMW-44B 11/13/2002 MMW-44B-D01N-GRW GW5	MMW-44B 12/5/2002 MMW-44B-T01N-GRW GW5	MMW-44B 1/14/2003 MMW-44B-T01N-GRW GW5	MMW-44B 1/14/2003 MMW-44B-D01N-GRW GW5
Diethylphthalate	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	0.006 J	-	-	0.001 J	-
Di-n-Butyl phthalate	mg/L	T	-	0.0006 J	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	<0.011 :	-	-	<0.01 J	-
Fluoranthene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Fluorene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Isophorone	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	<0.028 :	-	-	<0.025 J	-
Phenanthrene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Phenol	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Pyrene	mg/L	T	-	<0.011 :	-	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	-	<0.01 :	-
Isotopes								
Lead	mg/L	T	-	0.0101 :	-	-	0.00041 :	-
Lead	mg/L	D	<0.0008 :	-	<0.0002 :	-	-	<0.0002 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 2/5/2003 MMW-44B-T01N-GR		MMW-44B 2/5/2003 MMW-44B-T01N-GR		MMW-44B 2/5/2003 MMW-44B-D01N-GR		MMW-44B 3/2/2003 MMW-44B-T01N-GR		MMW-44B 3/2/2003 MMW-44B-D01N-GR		MMW-44B 4/4/2003 MMW-44B-T01N-GR	
			WRE GW5		W GW5		W GW5		W GW5		W GW5		W GW5	
Field Measurements														
DO	mg/L	T	-		0.49	:	-		0.63	:	-		1.12	:
EH	millivolts	T	-		-40.7	:	-		64.3	:	-		-101.8	:
pH	SU	T	-		6.68	:	-		6.94	:	-		7.	J
Specific Conductance	uS/cm	T	-		2761.	:	-		2770.	:	-		2766.	:
Temperature	Celsius	T	-		8.55	:	-		9.14	:	-		9.45	:
Turbidity	NTU	T	-		3.8	:	-		0.	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.087	:	-		<0.059	J	-		<0.075	:
Bicarbonate (as CaCO3)	mg/L	T	-		187.	:	-		273.	:	-		297.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	J	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		31.9	:	-		36.3	:	-		34.5	:
Fluoride	mg/L	T	-		2.1	:	-		2.2	:	-		2.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	J	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		1.3	J	-		<0.4	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		0.011	:	-		<0.01	J	-		<0.22	:
Phosphorus	mg/L	T	-		<0.032	:	-		<0.061	J	-		0.034	:
Sulfate	mg/L	T	-		1490.	J	-		1450.	:	-		1380.	J
Total Alkalinity	mg/L	T	-		187.	:	-		273.	:	-		297.	:
Total Dissolved Solids	mg/L	T	-		2750.	:	-		2610.	:	-		2630.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	J	-		0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		5.1	:	-		<5.	J	-		<1.8	J
Total Suspended Solids	mg/L	T	-		18.4	:	-		36.	J	-		33.3	:
Laboratory Parameters														
pH	SU	T	-		6.68	:	-		6.94	:	-		7.	J
Specific Conductance	umhos/cm	T	-		-		-		-		-		2720.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1850.	:	-		1780.	:	-		1710.	:
Hardness	mg/L	D	-		-		1830.	:	-		1950.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 2/5/2003 MMW-44B-T01N-GRWRE GW5		MMW-44B 2/5/2003 MMW-44B-T01N-GRW GW5		MMW-44B 2/5/2003 MMW-44B-D01N-GRW GW5		MMW-44B 3/2/2003 MMW-44B-T01N-GRW GW5		MMW-44B 3/2/2003 MMW-44B-D01N-GRW GW5		MMW-44B 4/4/2003 MMW-44B-T01N-GRW GW5	
Aluminum	mg/L	T	-		0.272	:	-		<0.63	:	-		<0.192	:
Aluminum	mg/L	D	-		-		<0.142	:	-		<0.142	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.001	:	-		<0.0006	J
Antimony	mg/L	D	-		-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.0029	:	-		0.0019	:
Arsenic	mg/L	D	-		-		0.0019	:	-		0.0025	J	-	
Barium	mg/L	T	-		0.0177	:	-		0.0218	:	-		0.0159	:
Barium	mg/L	D	-		-		0.0155	:	-		0.0158	:	-	
Beryllium	mg/L	T	-		0.0035	:	-		0.0038	:	-		0.0035	:
Beryllium	mg/L	D	-		-		0.0037	:	-		0.004	:	-	
Boron	mg/L	T	-		0.0413	J	-		0.0405	:	-		0.052	J
Boron	mg/L	D	-		-		0.0398	J	-		0.0439	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Cadmium	mg/L	D	-		-		<0.0004	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		647.	:	-		616.	J	-		596.	:
Calcium	mg/L	D	-		-		639.	:	-		674.	J	-	
Chromium	mg/L	T	-		<0.0037	:	-		0.0068	:	-		<0.0009	:
Chromium	mg/L	D	-		-		<0.0037	:	-		0.0045	:	-	
Cobalt	mg/L	T	-		0.0208	:	-		0.0238	:	-		0.0175	:
Cobalt	mg/L	D	-		-		0.0228	:	-		0.0226	:	-	
Copper	mg/L	T	-		0.0092	:	-		<0.0017	J	-		<0.0024	:
Copper	mg/L	D	-		-		<0.0017	:	-		<0.0017	J	-	
Iron	mg/L	T	-		15.4	:	-		17.4	:	-		13.4	:
Iron	mg/L	D	-		-		14.6	:	-		17.4	J	-	
Lead	mg/L	T	-		0.00021	:	-		0.0012	:	-		<0.0002	:
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		57.7	:	-		59.	:	-		54.2	:
Magnesium	mg/L	D	-		-		57.8	:	-		64.2	:	-	
Manganese	mg/L	T	-		9.28	J	-		9.52	:	-		8.78	:
Manganese	mg/L	D	-		-		9.33	:	-		10.4	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0011	:	-		<0.0011	:	-		<0.0016	J
Molybdenum	mg/L	D	-		-		<0.0011	:	-		<0.0011	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 2/5/2003 MMW-44B-T01N-GR		MMW-44B 2/5/2003 MMW-44B-T01N-GR		MMW-44B 2/5/2003 MMW-44B-D01N-GR		MMW-44B 3/2/2003 MMW-44B-T01N-GR		MMW-44B 3/2/2003 MMW-44B-D01N-GR		MMW-44B 4/4/2003 MMW-44B-T01N-GR	
			WRE GW5		W GW5		W GW5		W GW5		W GW5		W GW5	
Nickel	mg/L	T	-		0.0289	:	-		0.0377	:	-		0.0211	:
Nickel	mg/L	D	-		-		0.0296	:	-		0.0295	:	-	
Potassium	mg/L	T	-		7.41	:	-		6.01	:	-		6.27	:
Potassium	mg/L	D	-		-		5.95	:	-		<6.48	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0016	J	-		<0.001	:
Selenium	mg/L	D	-		-		<0.0016	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		102.	J	-		109.	:	-		108.	:
Sodium	mg/L	D	-		-		102.	J	-		121.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00075	:	-		0.0018	:	-		0.00057	J
Vanadium	mg/L	D	-		-		<0.0004	:	-		0.00042	:	-	
Zinc	mg/L	T	-		0.0646	:	-		0.374	J	-		0.0396	J
Zinc	mg/L	D	-		-		<0.039	:	-		<0.039	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Butanone	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
2-Hexanone	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	:
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44B	MMW-44B	MMW-44B	MMW-44B	MMW-44B	MMW-44B
			Sample Date	2/5/2003	2/5/2003	2/5/2003	3/2/2003	3/2/2003	4/4/2003
			Sample ID	MMW-44B-T01N-GR	MMW-44B-T01N-GR	MMW-44B-D01N-GR	MMW-44B-T01N-GR	MMW-44B-D01N-GR	MMW-44B-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Acetone	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Benzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2,4,5-Trichlorophenol	mg/L	T		-	<0.026 :	-	<0.026 :	-	<0.028 :
2,4,6-Trichlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2,4-Dichlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2,4-Dimethylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 J
2,4-Dinitrophenol	mg/L	T		-	<0.026 :	-	<0.026 :	-	<0.028 J
2,4-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 2/5/2003 MMW-44B-T01N-GRWRE GW5		MMW-44B 2/5/2003 MMW-44B-T01N-GRW GW5		MMW-44B 2/5/2003 MMW-44B-D01N-GRW GW5		MMW-44B 3/2/2003 MMW-44B-T01N-GRW GW5		MMW-44B 3/2/2003 MMW-44B-D01N-GRW GW5		MMW-44B 4/4/2003 MMW-44B-T01N-GRW GW5	
2,6-Dinitrotoluene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
2-Chloronaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
2-Chlorophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
2-Methylnaphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
2-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
2-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.028	:
2-Nitrophenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
3,3-Dichlorobenzidine	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	J
3-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.028	J
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.028	:
4-Bromophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
4-Chloro-3-methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
4-Chloroaniline	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
4-Methylphenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
4-Nitroaniline	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.028	:
4-Nitrophenol	mg/L	T	-		<0.026	:	-		<0.026	:	-		<0.028	J
Acenaphthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Acenaphthylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzaldehyde	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzo(a)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzo(a)pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzo(b)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzo(g,h,i)perylene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Benzo(k)fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Bis(2-chloroethyl)ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Bis(2-ethylhexyl)phthalate	mg/L	T	-		0.0009	J	-		0.002	J	-		<0.011	:
Butyl benzyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Carbazole	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Chrysene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Dibenz(a,h)anthracene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:
Dibenzofuran	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.011	:

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 2/5/2003 MMW-44B-T01N-GR WRE GW5	MMW-44B 2/5/2003 MMW-44B-T01N-GR W GW5	MMW-44B 2/5/2003 MMW-44B-D01N-GR W GW5	MMW-44B 3/2/2003 MMW-44B-T01N-GR W GW5	MMW-44B 3/2/2003 MMW-44B-D01N-GR W GW5	MMW-44B 4/4/2003 MMW-44B-T01N-GR W GW5
Dichlorodiisopropyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Diethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Dimethylphthalate	mg/L	T	-	0.002 J	-	0.001 J	-	0.0008 J
Di-n-Butyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Di-n-Octyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.011 :
Fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Fluorene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorobutadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorocyclopentadiene	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.011 :
Hexachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Isophorone	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Naphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Nitrobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
N-Nitrosodiphenylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Pentachlorophenol	mg/L	T	-	<0.026 :	-	<0.026 :	-	<0.028 :
Phenanthrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Phenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.011 :
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T	<0.00025 J	-	-	<0.00025 J	-	<0.00025 :
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025 :	-	-	<0.00025 :	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T	<0.01 :	-	-	<0.01 J	-	<0.01 :
Isotopes								
Lead	mg/L	T	-	0.00021 :	-	0.0012 :	-	<0.0002 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-44B	4/4/2003	MMW-44B-D01N-GRW GW5		MMW-44B	5/4/2003	MMW-44B-T01N-GRW GW5		MMW-44B	5/4/2003	MMW-44B-D01N-GRW GW5		MMW-44B	6/1/2003	MMW-44B-T01N-GRW GW5		MMW-44B	6/1/2003	MMW-44B-D01N-GRW GW5		MMW-44B	7/20/2003	MMW-44B-T01N-GRW GW5	
Field Measurements																										
DO	mg/L	T		-				0.52		:		-				2.33		:		-				2.18		:
EH	millivolts	T		-				-114.		:		-				-137.2		:		-				-35.		:
pH	SU	T		-				7.	J			-				6.7	J			-				6.8	J	
Specific Conductance	uS/cm	T		-				2705.		:		-				5133.		:		-				2934.		:
Temperature	Celsius	T		-				9.12		:		-				10.33		:		-				15.11		:
Turbidity	NTU	T		-				5.4		:		-				1.8		:		-				11.8		:
General Chemistry																										
Ammonia	mg/L	T		-				<0.11		:		-				<0.064	J			-				<0.05	J	
Bicarbonate (as CaCO3)	mg/L	T		-				331.		:		-				274.		:		-				291.		:
Carbonate (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Chloride	mg/L	T		-				37.5		:		-				75.7		:		-				39.		:
Fluoride	mg/L	T		-				1.9		:		-				3.3		:		-				3.		:
Hydroxide (as CaCO3)	mg/L	T		-				<1.		:		-				<1.		:		-				<1.		:
Nitrate	mg/L	T		-				<0.2	J			-				<0.4		:		-				<0.2	J	
Nitrite	mg/L	T		-				<0.005	J			-				<0.005		:		-				<0.005	J	
Phosphate, Ortho As P	mg/L	T		-				<0.01	J			-				0.078	J			-				<0.01	J	
Phosphorus	mg/L	T		-				<0.036		:		-				0.034	J			-				0.097		:
Sulfate	mg/L	T		-				1500.		:		-				1380.	J			-				1530.	J	
Total Alkalinity	mg/L	T		-				331.		:		-				274.		:		-				291.		:
Total Dissolved Solids	mg/L	T		-				2780.		:		-				2910.		:		-				2720.		:
Total Kjeldahl Nitrogen	mg/L	T		-				<0.24		:		-				<0.24		:		-				<0.24		:
Total Organic Carbon	mg/L	T		-				1.5		:		-				1.1	J			-				<1.3	J	
Total Suspended Solids	mg/L	T		-				12.7		:		-				11.5		:		-				27.7		:
Laboratory Parameters																										
pH	SU	T		-				7.	J			-				6.7	J			-				6.8	J	
Specific Conductance	umhos/cm	T		-				2630.	J			-				2800.	J			-				2780.	J	
Inorganics																										
Cyanide	mg/L	T		-				<0.01	J			-				<0.01	J			-				<0.01	J	
Physical Properties																										
Hardness	mg/L	T		-				1740.		:		-				1790.		:		-				1750.		:
Hardness	mg/L	D		1700.		:		-				1750.		:		-				1600.		:		-		
Metals																										

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44B	MMW-44B	MMW-44B	MMW-44B	MMW-44B	MMW-44B
			Sample Date	4/4/2003	5/4/2003	5/4/2003	6/1/2003	6/1/2003	7/20/2003
			Sample ID	MMW-44B-D01N-GRW GW5	MMW-44B-T01N-GRW GW5	MMW-44B-D01N-GRW GW5	MMW-44B-T01N-GRW GW5	MMW-44B-D01N-GRW GW5	MMW-44B-T01N-GRW GW5
Aluminum	mg/L	T		-	<0.503 :	-	0.891 :	-	<0.631 :
Aluminum	mg/L	D		<0.0896 :	-	<0.503 :	-	0.505 :	-
Antimony	mg/L	T		-	<0.0013 :	-	<0.001 :	-	<0.0011 :
Antimony	mg/L	D		<0.0006 J	-	<0.0011 :	-	<0.001 :	-
Arsenic	mg/L	T		-	0.002 :	-	0.0012 :	-	0.0022 :
Arsenic	mg/L	D		0.002 :	-	0.0019 :	-	0.0015 :	-
Barium	mg/L	T		-	0.0176 :	-	0.0136 :	-	0.0186 :
Barium	mg/L	D		0.015 :	-	0.0146 :	-	0.0123 :	-
Beryllium	mg/L	T		-	0.0028 :	-	0.0087 :	-	0.0039 :
Beryllium	mg/L	D		0.0035 :	-	0.0035 :	-	0.0085 :	-
Boron	mg/L	T		-	0.0525 :	-	0.0484 :	-	0.0493 :
Boron	mg/L	D		0.0506 J	-	0.0483 :	-	0.0464 :	-
Cadmium	mg/L	T		-	<0.0005 :	-	<0.0005 :	-	<0.0003 :
Cadmium	mg/L	D		<0.0004 :	-	<0.0005 :	-	<0.0005 :	-
Calcium	mg/L	T		-	606. :	-	596. :	-	592. :
Calcium	mg/L	D		594. :	-	607. :	-	534. :	-
Chromium	mg/L	T		-	<0.001 :	-	<0.001 :	-	0.0051 :
Chromium	mg/L	D		<0.0009 :	-	<0.001 :	-	<0.001 :	-
Cobalt	mg/L	T		-	0.0145 :	-	0.0503 :	-	0.0163 :
Cobalt	mg/L	D		0.0167 :	-	0.0171 :	-	0.0507 :	-
Copper	mg/L	T		-	<0.0016 :	-	0.0015 :	-	<0.0022 :
Copper	mg/L	D		<0.0024 :	-	<0.0015 :	-	0.0019 :	-
Iron	mg/L	T		-	16.5 :	-	19.6 :	-	24.2 :
Iron	mg/L	D		13.1 :	-	15.2 :	-	17.3 :	-
Lead	mg/L	T		-	0.00023 :	-	<0.00055 :	-	<0.0002 :
Lead	mg/L	D		<0.0002 :	-	0.0004 :	-	<0.00041 :	-
Magnesium	mg/L	T		-	56. :	-	72.4 :	-	66.9 :
Magnesium	mg/L	D		54. :	-	56.6 :	-	65.3 :	-
Manganese	mg/L	T		-	9.34 :	-	11.8 :	-	10.3 :
Manganese	mg/L	D		8.66 :	-	9.6 :	-	10.7 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	0.00052 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.0023 :	-	<0.0034 :	-	<0.0016 :
Molybdenum	mg/L	D		<0.0016 J	-	<0.0023 :	-	<0.0024 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 4/4/2003 MMW-44B-D01N-GRW GW5		MMW-44B 5/4/2003 MMW-44B-T01N-GRW GW5		MMW-44B 5/4/2003 MMW-44B-D01N-GRW GW5		MMW-44B 6/1/2003 MMW-44B-T01N-GRW GW5		MMW-44B 6/1/2003 MMW-44B-D01N-GRW GW5		MMW-44B 7/20/2003 MMW-44B-T01N-GRW GW5	
Nickel	mg/L	T	-		0.0188	:	-		0.0662	:	-		0.0162	J
Nickel	mg/L	D	0.0193	:	-		0.0208	:	-		0.0665	:	-	
Potassium	mg/L	T	-		6.34	:	-		4.83	:	-		6.98	:
Potassium	mg/L	D	6.54	:	-		5.32	:	-		4.72	:	-	
Selenium	mg/L	T	-		<0.001	:	-		<0.0016	:	-		<0.0016	:
Selenium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		106.	:	-		91.	:	-		98.1	:
Sodium	mg/L	D	101.	:	-		104.	:	-		82.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0011	:	-		<0.0039	:	-		0.00079	:
Vanadium	mg/L	D	<0.0002	J	-		0.00037	:	-		<0.0039	:	-	
Zinc	mg/L	T	-		<0.0414	:	-		0.0859	:	-		<0.0315	:
Zinc	mg/L	D	0.009	J	-		<0.0178	:	-		0.0676	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Butanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Hexanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 4/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-T01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-T01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-D01N-GRW GW5	MMW-44B 7/20/2003 MMW-44B-T01N-GRW GW5
Acetone	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 4/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-T01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-T01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-D01N-GRW GW5	MMW-44B 7/20/2003 MMW-44B-T01N-GRW GW5
2,6-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Chloronaphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Methylphenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
2-Nitrophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
3-Nitroaniline	mg/L	T	-	<0.026 J	-	<0.025 :	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
4-Methylphenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
4-Nitrophenol	mg/L	T	-	<0.026 J	-	<0.025 :	-	-
Acenaphthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Acenaphthylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Anthracene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Benzaldehyde	mg/L	T	-	<0.01 :	-	<0.01 J	-	-
Benzo(a)anthracene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbazole	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Chrysene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Dibenzofuran	mg/L	T	-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-44B 4/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-T01N-GRW GW5	MMW-44B 5/4/2003 MMW-44B-D01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-T01N-GRW GW5	MMW-44B 6/1/2003 MMW-44B-D01N-GRW GW5	MMW-44B 7/20/2003 MMW-44B-T01N-GRW GW5
Dichlorodiisopropyl ether	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Di-n-Butyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Di-n-Octyl phthalate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Fluoranthene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Fluorene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Isophorone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Naphthalene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	-	<0.026 :	-	<0.025 :	-	-
Phenanthrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Phenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Pyrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	0.00023 :	-	<0.00055 :	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	0.0004 :	-	<0.00041 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 7/20/2003 MMW-44B-D01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-T01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-D01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-T01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-D01N-GRW GW5		MMW-44B 10/19/2003 MMW-44B-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	-		0.4	:	-		1.23	:	-		1.42	:
EH	millivolts	T	-		-67.7	:	-		-53.4	:	-		-69.	:
pH	SU	T	-		6.7	J	-		6.7	J	-		6.9	J
Specific Conductance	uS/cm	T	-		3036.	:	-		2886.	:	-		3181.	:
Temperature	Celsius	T	-		13.31	:	-		12.63	:	-		13.09	:
Turbidity	NTU	T	-		5.3	:	-		34.2	:	-		31.5	:
General Chemistry														
Ammonia	mg/L	T	-		0.053	:	-		<0.055	:	-		<0.13	J
Bicarbonate (as CaCO3)	mg/L	T	-		287.	:	-		299.	:	-		321.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		42.6	:	-		38.	:	-		38.7	:
Fluoride	mg/L	T	-		2.5	:	-		2.5	:	-		2.3	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.2	J	-		<0.2	J	-		<0.2	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		<5.	J	-		<0.01	J
Phosphorus	mg/L	T	-		0.047	:	-		0.05	J	-		0.043	:
Sulfate	mg/L	T	-		1320.	J	-		1580.	J	-		1470.	J
Total Alkalinity	mg/L	T	-		287.	:	-		299.	:	-		321.	:
Total Dissolved Solids	mg/L	T	-		2300.	:	-		2700.	:	-		2730.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		2.	J	-		<1.9	:	-		2.1	J
Total Suspended Solids	mg/L	T	-		15.8	:	-		38.7	:	-		30.1	:
Laboratory Parameters														
pH	SU	T	-		6.7	J	-		6.7	J	-		6.9	J
Specific Conductance	umhos/cm	T	-		2590.	J	-		2680.	J	-		2640.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1800.	:	-		1790.	:	-		2030.	:
Hardness	mg/L	D	1750.	:	-		1790.	:	-		1780.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44B 7/20/2003 MMW-44B-D01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-T01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-D01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-T01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-D01N-GRW GW5		MMW-44B 10/19/2003 MMW-44B-T01N-GRW GW5	
Aluminum	mg/L	T	-		<0.183	:	-		0.766	:	-		0.342	:
Aluminum	mg/L	D	<0.631	:	-		<0.183	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.0017	:	-		<0.0014	:	-		<0.001	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0016	:	-		0.0018	:	-		0.0019	:
Arsenic	mg/L	D	0.0022	:	-		0.0016	:	-		0.0016	:	-	
Barium	mg/L	T	-		0.0152	:	-		0.0218	:	-		0.0294	:
Barium	mg/L	D	0.0181	:	-		0.014	:	-		0.0171	:	-	
Beryllium	mg/L	T	-		0.0046	:	-		0.004	:	-		0.0032	J
Beryllium	mg/L	D	0.0038	:	-		0.0044	:	-		0.0041	:	-	
Boron	mg/L	T	-		0.0402	:	-		0.05	:	-		0.0672	:
Boron	mg/L	D	0.0501	:	-		0.0372	:	-		0.0497	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0005	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0005	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		610.	:	-		601.	:	-		692.	:
Calcium	mg/L	D	592.	:	-		607.	:	-		599.	:	-	
Chromium	mg/L	T	-		<0.0011	:	-		<0.0032	:	-		<0.0011	J
Chromium	mg/L	D	0.0027	:	-		<0.0011	:	-		<0.0011	:	-	
Cobalt	mg/L	T	-		0.0253	:	-		<0.0155	:	-		0.0069	J
Cobalt	mg/L	D	0.0149	:	-		0.0265	:	-		<0.0162	:	-	
Copper	mg/L	T	-		<0.0038	:	-		<0.0022	:	-		0.0032	:
Copper	mg/L	D	0.0018	:	-		<0.0022	:	-		<0.0022	:	-	
Iron	mg/L	T	-		19.2	:	-		22.4	:	-		26.4	:
Iron	mg/L	D	23.3	:	-		18.9	:	-		21.2	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		66.4	:	-		69.5	:	-		73.3	:
Magnesium	mg/L	D	66.5	:	-		66.2	:	-		68.8	:	-	
Manganese	mg/L	T	-		10.7	:	-		10.2	:	-		11.3	:
Manganese	mg/L	D	10.2	:	-		10.7	:	-		10.2	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.00033	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		<0.0023	:	-		<0.0011	J	-		<0.00072	:
Molybdenum	mg/L	D	<0.0016	:	-		<0.0011	:	-		<0.0011	J	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 7/20/2003 MMW-44B-D01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-T01N-GRW GW5		MMW-44B 8/12/2003 MMW-44B-D01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-T01N-GRW GW5		MMW-44B 9/9/2003 MMW-44B-D01N-GRW GW5		MMW-44B 10/19/2003 MMW-44B-T01N-GRW GW5	
Nickel	mg/L	T	-		0.0311	:	-		<0.0187	:	-		0.011	J
Nickel	mg/L	D	0.0137	J	-		0.0287	:	-		0.0167	:	-	
Potassium	mg/L	T	-		4.71	:	-		6.04	:	-		<8.31	:
Potassium	mg/L	D	6.96	:	-		4.44	:	-		5.92	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Selenium	mg/L	D	<0.0016	J	-		<0.0006	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		102.	:	-		106.	:	-		120.	:
Sodium	mg/L	D	96.8	:	-		101.	:	-		104.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00046	J	-		0.002	:	-		0.00084	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	J	-		0.00023	:	-	
Zinc	mg/L	T	-		<0.057	:	-		0.0408	:	-		<0.0364	:
Zinc	mg/L	D	<0.0169	:	-		<0.057	:	-		<0.019	:	-	
Isotopes														
Lead	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 10/19/2003 MMW-44B-D01N-GRW GW5		MMW-44B 11/3/2003 MMW-44B-T01N-GRW GW5		MMW-44B 11/3/2003 MMW-44B-D01N-GRW GW5		MMW-44B 12/8/2003 MMW-44B-T01N-GRW GW5		MMW-44B 12/8/2003 MMW-44B-D01N-GRW GW5		MMW-44B 1/11/2004 MMW-44B-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	-		0.33	:	-		0.43	:	-		0.6	:
EH	millivolts	T	-		29.1	:	-		37.6	:	-		-71.5	:
pH	SU	T	-		6.7	J	-		6.4	J	-		6.8	J
Specific Conductance	uS/cm	T	-		2881.	:	-		2935.	:	-		2790.	:
Temperature	Celsius	T	-		9.83	:	-		5.1	:	-		6.78	:
Turbidity	NTU	T	-		3.5	:	-		6.2	:	-		19.5	:
General Chemistry														
Ammonia	mg/L	T	-		<0.065	:	-		0.069	:	-		<0.09	J
Bicarbonate (as CaCO3)	mg/L	T	-		279.	:	-		300.	J	-		305.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		39.3	:	-		44.4	:	-		42.4	:
Fluoride	mg/L	T	-		2.2	:	-		2.5	:	-		2.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.2	:	-		<0.2	:	-		<0.2	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		0.008	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		0.041	:	-		<0.01	J
Phosphorus	mg/L	T	-		0.012	:	-		0.068	:	-		<0.01	:
Sulfate	mg/L	T	-		1510.	:	-		1540.	:	-		1720.	:
Total Alkalinity	mg/L	T	-		279.	:	-		300.	J	-		305.	:
Total Dissolved Solids	mg/L	T	-		2930.	:	-		2550.	:	-		2870.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	J	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.2	:	-		<1.	:	-		<1.5	:
Total Suspended Solids	mg/L	T	-		8.3	:	-		15.	:	-		9.2	:
Laboratory Parameters														
pH	SU	T	-		6.7	J	-		6.4	J	-		6.8	J
Specific Conductance	umhos/cm	T	-		2750.	J	-		2430.	J	-		2800.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		1630.	:	-		1770.	:	-		1890.	:
Hardness	mg/L	D	1840.	:	-		1740.	:	-		1820.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 10/19/2003 MMW-44B-D01N-GRW GW5		MMW-44B 11/3/2003 MMW-44B-T01N-GRW GW5		MMW-44B 11/3/2003 MMW-44B-D01N-GRW GW5		MMW-44B 12/8/2003 MMW-44B-T01N-GRW GW5		MMW-44B 12/8/2003 MMW-44B-D01N-GRW GW5		MMW-44B 1/11/2004 MMW-44B-T01N-GRW GW5	
Aluminum	mg/L	T	-		<0.307	:	-		<0.221	:	-		<0.329	:
Aluminum	mg/L	D	<0.217	:	-		<0.307	:	-		<0.221	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		0.0017	:	-		0.0013	:	-		0.0018	:
Arsenic	mg/L	D	0.002	:	-		0.0015	:	-		0.0012	:	-	
Barium	mg/L	T	-		0.0145	:	-		0.0131	:	-		0.0173	:
Barium	mg/L	D	0.0231	:	-		0.0135	:	-		0.0124	:	-	
Beryllium	mg/L	T	-		0.0046	:	-		0.0055	:	-		0.0049	:
Beryllium	mg/L	D	0.003	J	-		0.0049	:	-		0.0056	:	-	
Boron	mg/L	T	-		0.0465	:	-		0.044	:	-		0.0352	:
Boron	mg/L	D	<0.0567	:	-		0.0467	:	-		0.0443	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0005	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		555.	:	-		595.	:	-		639.	:
Calcium	mg/L	D	626.	:	-		590.	:	-		614.	:	-	
Chromium	mg/L	T	-		<0.0013	:	-		0.0046	:	-		<0.0015	J
Chromium	mg/L	D	<0.0011	J	-		<0.0013	:	-		0.0039	:	-	
Cobalt	mg/L	T	-		0.0244	:	-		0.0288	:	-		0.0162	J
Cobalt	mg/L	D	0.0078	J	-		0.0284	:	-		0.032	:	-	
Copper	mg/L	T	-		<0.0021	:	-		<0.0022	:	-		<0.003	:
Copper	mg/L	D	<0.0022	:	-		<0.0037	:	-		<0.0022	:	-	
Iron	mg/L	T	-		15.7	:	-		17.	:	-		25.6	:
Iron	mg/L	D	22.	:	-		17.4	:	-		17.6	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0002	J	-		<0.0002	:
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0002	J	-	
Magnesium	mg/L	T	-		60.6	:	-		68.1	:	-		72.8	:
Magnesium	mg/L	D	65.8	:	-		64.9	:	-		70.3	:	-	
Manganese	mg/L	T	-		10.	J	-		10.8	:	-		11.5	:
Manganese	mg/L	D	10.2	:	-		10.8	:	-		11.1	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		<0.0012	J	-		<0.0011	:	-		<0.0024	:
Molybdenum	mg/L	D	<0.00069	:	-		<0.0012	J	-		<0.0011	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-44B 10/19/2003 MMW-44B-D01N-GRW GW5	MMW-44B 11/3/2003 MMW-44B-T01N-GRW GW5	MMW-44B 11/3/2003 MMW-44B-D01N-GRW GW5	MMW-44B 12/8/2003 MMW-44B-T01N-GRW GW5	MMW-44B 12/8/2003 MMW-44B-D01N-GRW GW5	MMW-44B 1/11/2004 MMW-44B-T01N-GRW GW5
Nickel	mg/L	T	-	0.0276 :	-	0.0338 J	-	<0.0173 :
Nickel	mg/L	D	0.0097 J	-	0.0287 :	-	0.0342 J	-
Potassium	mg/L	T	-	3.9 J	-	5.11 :	-	5.89 :
Potassium	mg/L	D	<6.84 :	-	3.9 J	-	5.01 :	-
Selenium	mg/L	T	-	<0.00072 :	-	<0.0006 :	-	<0.0006 J
Selenium	mg/L	D	<0.0006 :	-	<0.00075 :	-	<0.0006 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	91.7 :	-	95.9 :	-	104. :
Sodium	mg/L	D	110. :	-	96.3 :	-	98.2 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00053 :	-	<0.0004 :	-	0.00043 :
Vanadium	mg/L	D	0.00027 :	-	0.0003 :	-	<0.0004 :	-
Zinc	mg/L	T	-	<0.0474 :	-	0.0345 :	-	<0.04 :
Zinc	mg/L	D	<0.0245 :	-	<0.0403 :	-	0.0282 :	-
Isotopes								
Lead	mg/L	T	-	<0.0004 :	-	<0.0002 J	-	<0.0002 :
Lead	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0002 J	-

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44B	MMW-44B	MMW-44B	MMW-45B	MMW-45B	MMW-45B
			Sample Date	1/11/2004	4/21/2004	4/21/2004	2/6/2003	2/6/2003	2/6/2003
			Sample ID	MMW-44B-D01N-GRW-GW5	MMW-44B-T01N-GRW-GW5	MMW-44B-D01N-GRW-GW5	MMW-45B-T01N-GRWRE-GW1	MMW-45B-T01N-GRW-GW1	MMW-45B-D01N-GRW-GW1
Field Measurements									
DO	mg/L	T		-	3.23 :	-	-	0.49 :	-
EH	millivolts	T		-	-118.4 :	-	-	130.8 :	-
pH	SU	T		-	7.2 J	-	-	4.14 :	-
Specific Conductance	uS/cm	T		-	2750. :	-	-	2628. :	-
Temperature	Celsius	T		-	10.4 :	-	-	8.49 :	-
Turbidity	NTU	T		-	6.3 :	-	-	6.3 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.073 :	-	-	<0.095 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	309. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	42.4 :	-	-	41.3 :	-
Fluoride	mg/L	T		-	2.3 :	-	66.1 J	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	<0.2 J	-	-	<0.4 :	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	0.033 :	-
Phosphorus	mg/L	T		-	0.11 :	-	-	0.027 :	-
Sulfate	mg/L	T		-	1710. :	-	-	1960. J	-
Total Alkalinity	mg/L	T		-	309. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	2670. :	-	-	3010. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<1.3 J	-	-	1.6 :	-
Total Suspended Solids	mg/L	T		-	20.1 J	-	-	6.1 :	-
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	-	4.14 :	-
Specific Conductance	umhos/cm	T		-	2540. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	1810. :	-	-	1200. :	-
Hardness	mg/L	D		1820. :	-	1770. :	-	-	1200. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44B	MMW-44B	MMW-44B	MMW-45B	MMW-45B	MMW-45B
			Sample Date	1/11/2004	4/21/2004	4/21/2004	2/6/2003	2/6/2003	2/6/2003
			Sample ID	MMW-44B-D01N-GRW GW5	MMW-44B-T01N-GRW GW5	MMW-44B-D01N-GRW GW5	MMW-45B-T01N-GRWRE GW1	MMW-45B-T01N-GRW GW1	MMW-45B-D01N-GRW GW1
Aluminum	mg/L	T		-	<0.191 :	-	-	174. :	-
Aluminum	mg/L	D		<0.329 :	-	<0.176 :	-	-	174. :
Antimony	mg/L	T		-	<0.0018 :	-	-	<0.028 :	-
Antimony	mg/L	D		<0.0024 :	-	<0.0019 :	-	-	<0.028 :
Arsenic	mg/L	T		-	0.0012 :	-	-	<0.023 J	-
Arsenic	mg/L	D		0.0018 :	-	0.0012 :	-	-	<0.023 J
Barium	mg/L	T		-	0.0173 :	-	-	<0.048 :	-
Barium	mg/L	D		0.0154 :	-	0.0162 :	-	-	<0.048 :
Beryllium	mg/L	T		-	0.0031 :	-	-	0.0504 :	-
Beryllium	mg/L	D		0.0047 :	-	0.0033 :	-	-	0.05 :
Boron	mg/L	T		-	0.0538 :	-	-	<0.027 :	-
Boron	mg/L	D		0.0339 :	-	0.0518 :	-	-	<0.027 :
Cadmium	mg/L	T		-	<0.0003 J	-	-	<0.08 :	-
Cadmium	mg/L	D		<0.0007 :	-	<0.0003 J	-	-	0.0924 :
Calcium	mg/L	T		-	616. :	-	-	289. :	-
Calcium	mg/L	D		614. :	-	605. :	-	-	288. :
Chromium	mg/L	T		-	<0.0024 :	-	-	<0.16 :	-
Chromium	mg/L	D		<0.0015 J	-	0.0022 :	-	-	<0.16 :
Cobalt	mg/L	T		-	0.0119 :	-	-	0.358 :	-
Cobalt	mg/L	D		0.0163 :	-	0.0148 :	-	-	0.409 :
Copper	mg/L	T		-	<0.00078 J	-	-	0.891 :	-
Copper	mg/L	D		<0.003 :	-	<0.0007 J	-	-	0.959 :
Iron	mg/L	T		-	21. J	-	-	40. :	-
Iron	mg/L	D		20.8 :	-	19.4 :	-	-	41. :
Lead	mg/L	T		-	<0.0008 :	-	-	0.13 J	-
Lead	mg/L	D		<0.0002 :	-	<0.0008 :	-	-	0.217 J
Magnesium	mg/L	T		-	65.3 :	-	-	116. :	-
Magnesium	mg/L	D		70. :	-	64. :	-	-	116. :
Manganese	mg/L	T		-	10.3 :	-	-	50.6 J	-
Manganese	mg/L	D		11. :	-	10.2 :	-	-	50.6 :
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	<0.001 :	-	-	<0.011 J	-
Molybdenum	mg/L	D		<0.0024 :	-	<0.001 :	-	-	<0.011 J

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44B 1/11/2004 MMW-44B-D01N-GRW GW5		MMW-44B 4/21/2004 MMW-44B-T01N-GRW GW5		MMW-44B 4/21/2004 MMW-44B-D01N-GRW GW5		MMW-45B 2/6/2003 MMW-45B-T01N-GRWRE GW1		MMW-45B 2/6/2003 MMW-45B-T01N-GRW GW1		MMW-45B 2/6/2003 MMW-45B-D01N-GRW GW1	
Nickel	mg/L	T	-		0.0146	:	-		-		0.9	:	-	
Nickel	mg/L	D	0.0173	:	-		0.0161	:	-		-		1.02	:
Potassium	mg/L	T	-		6.09	:	-		-		<31.4	:	-	
Potassium	mg/L	D	5.39	:	-		6.71	:	-		-		<31.4	:
Selenium	mg/L	T	-		<0.0014	:	-		-		0.0081	:	-	
Selenium	mg/L	D	0.0008	:	-		<0.0014	:	-		-		<0.008	:
Silver	mg/L	T	-		<0.0002	:	-		-		<0.001	:	-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:
Sodium	mg/L	T	-		107.	:	-		-		<36.6	:	-	
Sodium	mg/L	D	99.8	:	-		108.	:	-		-		<36.6	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.001	:	-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:
Vanadium	mg/L	T	-		0.0011	:	-		-		0.0024	:	-	
Vanadium	mg/L	D	<0.0004	:	-		0.0008	:	-		-		0.0031	:
Zinc	mg/L	T	-		0.0237	:	-		-		12.	:	-	
Zinc	mg/L	D	<0.04	:	-		0.0192	:	-		-		12.	:
Isotopes														
Delta D	per mil	T	-		-92.2	:	-		-		-		-	
Delta O-18	per mil	T	-		-12.9	:	-		-		-		-	
Lead	mg/L	T	-		<0.0008	:	-		-		0.13	J	-	
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		-		0.217	J

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-45B	MMW-45B	MMW-45B	MMW-45B	MMW-45B	MMW-45B
			Sample Date	3/3/2003	3/3/2003	3/3/2003	4/8/2003	4/8/2003	5/5/2003
			Sample ID	MMW-45B-T01N-GRWRE	MMW-45B-T01N-GRW	MMW-45B-D01N-GRW	MMW-45B-T01N-GRW	MMW-45B-D01N-GRW	MMW-45B-T01N-GRW
			Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements									
DO	mg/L	T		-	1.71 :	-	0.15 :	-	2.33 :
EH	millivolts	T		-	329.2 :	-	291.7 :	-	291.8 :
pH	SU	T		-	3.96 :	-	4.1 J	-	4.4 J
Specific Conductance	uS/cm	T		-	2446. :	-	2544. :	-	2668. :
Temperature	Celsius	T		-	7.92 :	-	7.7 :	-	9.46 :
Turbidity	NTU	T		-	0. :	-	115.1 :	-	6.6 :
General Chemistry									
Ammonia	mg/L	T		-	0.09 J	-	<0.094 :	-	<0.1 :
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	18.8 :	-	11.6 :	-	21.6 :
Fluoride	mg/L	T		62.4 J	-	-	57.8 J	-	60. :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.4 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.031 J	-	<0.035 J	-	0.032 J
Phosphorus	mg/L	T		-	0.049 J	-	0.069 :	-	0.068 :
Sulfate	mg/L	T		-	1950. :	-	1760. J	-	1730. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	2950. :	-	3040. :	-	3190. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 J	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<2. J	-	1.3 J	-	1.5 :
Total Suspended Solids	mg/L	T		-	15.3 J	-	40.5 :	-	6.5 :
Laboratory Parameters									
pH	SU	T		-	3.96 :	-	4.1 J	-	4.4 J
Specific Conductance	umhos/cm	T		-	-	-	2390. J	-	2460. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1190. :	-	1070. :	-	1080. :
Hardness	mg/L	D		-	-	1130. :	-	1070. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction													
		Site ID	MMW-45B		MMW-45B		MMW-45B		MMW-45B		MMW-45B		MMW-45B	
		Sample Date	3/3/2003		3/3/2003		3/3/2003		4/8/2003		4/8/2003		5/5/2003	
		Sample ID	MMW-45B-T01N-GR		MMW-45B-T01N-GR		MMW-45B-D01N-GR		MMW-45B-T01N-GR		MMW-45B-D01N-GR		MMW-45B-T01N-GR	
		Exposure Area	WRE GW1		W GW1		W GW1		W GW1		W GW1		W GW1	
Aluminum	mg/L	T	-		180.	:	-		162.	:	-		166.	:
Aluminum	mg/L	D	-		-		173.	:	-		160.	:	-	
Antimony	mg/L	T	-		<0.028	:	-		<0.003	:	-		<0.072	:
Antimony	mg/L	D	-		-		<0.028	:	-		<0.003	:	-	
Arsenic	mg/L	T	-		0.0641	J	-		<0.04	:	-		<0.04	:
Arsenic	mg/L	D	-		-		0.0301	J	-		<0.04	:	-	
Barium	mg/L	T	-		<0.048	:	-		<0.123	:	-		<0.123	:
Barium	mg/L	D	-		-		<0.048	:	-		<0.123	:	-	
Beryllium	mg/L	T	-		0.0527	:	-		0.068	:	-		0.0588	:
Beryllium	mg/L	D	-		-		0.0519	:	-		0.068	:	-	
Boron	mg/L	T	-		<0.027	:	-		<0.084	:	-		<0.084	:
Boron	mg/L	D	-		-		<0.027	:	-		<0.084	:	-	
Cadmium	mg/L	T	-		<0.08	:	-		0.0419	:	-		0.046	:
Cadmium	mg/L	D	-		-		<0.08	:	-		0.0432	:	-	
Calcium	mg/L	T	-		289.	J	-		265.	:	-		265.	:
Calcium	mg/L	D	-		-		276.	J	-		265.	:	-	
Chromium	mg/L	T	-		<0.16	:	-		<0.01	:	-		<0.01	:
Chromium	mg/L	D	-		-		<0.16	:	-		<0.01	:	-	
Cobalt	mg/L	T	-		0.409	:	-		0.346	:	-		0.36	:
Cobalt	mg/L	D	-		-		0.343	:	-		0.338	:	-	
Copper	mg/L	T	-		0.93	:	-		0.854	:	-		0.795	:
Copper	mg/L	D	-		-		0.897	:	-		0.914	:	-	
Iron	mg/L	T	-		39.8	:	-		37.2	:	-		32.6	:
Iron	mg/L	D	-		-		37.7	J	-		37.6	:	-	
Lead	mg/L	T	-		0.16	:	-		0.19	:	-		0.189	:
Lead	mg/L	D	-		-		0.151	:	-		0.189	:	-	
Magnesium	mg/L	T	-		113.	:	-		100.	:	-		102.	:
Magnesium	mg/L	D	-		-		107.	:	-		100.	:	-	
Manganese	mg/L	T	-		51.	:	-		44.2	:	-		46.1	:
Manganese	mg/L	D	-		-		48.8	:	-		44.5	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.023	:	-		<0.023	:
Molybdenum	mg/L	D	-		-		<0.011	:	-		<0.023	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 3/3/2003 MMW-45B-T01N-GR WRE GW1	MMW-45B 3/3/2003 MMW-45B-T01N-GR W GW1	MMW-45B 3/3/2003 MMW-45B-D01N-GR W GW1	MMW-45B 4/8/2003 MMW-45B-T01N-GR W GW1	MMW-45B 4/8/2003 MMW-45B-D01N-GR W GW1	MMW-45B 5/5/2003 MMW-45B-T01N-GR W GW1
Nickel	mg/L	T	-	0.91 :	-	0.766 :	-	0.786 :
Nickel	mg/L	D	-	-	0.775 :	-	0.754 :	-
Potassium	mg/L	T	-	<31.4 :	-	<3.26 :	-	<40.5 :
Potassium	mg/L	D	-	-	<31.4 :	-	<3.26 :	-
Selenium	mg/L	T	-	0.0211 J	-	0.0055 J	-	0.0227 :
Selenium	mg/L	D	-	-	0.0242 :	-	0.0132 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<36.6 :	-	<35.2 :	-	<91.6 :
Sodium	mg/L	D	-	-	<43.3 :	-	35.8 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	0.0035 :	-	0.0026 :	-	0.0021 :
Vanadium	mg/L	D	-	-	0.0035 :	-	0.002 :	-
Zinc	mg/L	T	-	12.1 J	-	10.5 :	-	10.8 :
Zinc	mg/L	D	-	-	11.6 :	-	10.4 :	-
Isotopes								
Lead	mg/L	T	-	0.16 :	-	0.19 :	-	0.189 :
Lead	mg/L	D	-	-	0.151 :	-	0.189 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 5/5/2003 MMW-45B-D01N-GR GW1		MMW-45B 6/2/2003 MMW-45B-T01N-GR GW1		MMW-45B 6/2/2003 MMW-45B-D01N-GR GW1		MMW-45B 7/23/2003 MMW-45B-T01N-GR GW1		MMW-45B 7/23/2003 MMW-45B-D01N-GR GW1		MMW-45B 8/11/2003 MMW-45B-T01N-GR GW1	
Field Measurements														
DO	mg/L	T	-		0.85	:	-		0.54	:	-		0.43	:
EH	millivolts	T	-		327.5	:	-		341.3	:	-		353.3	:
pH	SU	T	-		4.1	J	-		4.	J	-		3.9	J
Specific Conductance	uS/cm	T	-		2578.	:	-		2579.	:	-		2723.	:
Temperature	Celsius	T	-		10.07	:	-		11.22	:	-		12.02	:
Turbidity	NTU	T	-		4.7	:	-		19.	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.062	J	-		<0.057	J	-		0.058	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		<27.3	:	-		18.2	:	-		17.4	:
Fluoride	mg/L	T	-		60.	:	-		60.	:	-		57.8	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		<0.4	:	-		<0.2	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.22	J	-		<0.032	:	-		0.033	:
Phosphorus	mg/L	T	-		0.076	J	-		0.068	:	-		0.07	:
Sulfate	mg/L	T	-		1890.	J	-		1710.	J	-		1680.	J
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		3040.	:	-		3490.	:	-		3190.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.6	J	-		<2.1	J	-		<2.	J
Total Suspended Solids	mg/L	T	-		4.9	:	-		14.3	:	-		5.3	:
Laboratory Parameters														
pH	SU	T	-		4.1	J	-		4.	J	-		3.9	J
Specific Conductance	umhos/cm	T	-		2520.	J	-		2600.	J	-		2390.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		998.	:	-		1110.	:	-		1080.	:
Hardness	mg/L	D	1120.	:	-		976.	:	-		1110.	:	-	
Metals														

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 5/5/2003 MMW-45B-D01N-GR GW1 W		MMW-45B 6/2/2003 MMW-45B-T01N-GR GW1 W		MMW-45B 6/2/2003 MMW-45B-D01N-GR GW1 W		MMW-45B 7/23/2003 MMW-45B-T01N-GR GW1 W		MMW-45B 7/23/2003 MMW-45B-D01N-GR GW1 W		MMW-45B 8/11/2003 MMW-45B-T01N-GR GW1 W	
Aluminum	mg/L	T	-		148.	:	-		172.	:	-		172.	:
Aluminum	mg/L	D	170.	:	-		144.	:	-		175.	:	-	
Antimony	mg/L	T	-		<0.072	:	-		<0.047	:	-		<0.038	:
Antimony	mg/L	D	<0.072	:	-		<0.072	:	-		<0.047	:	-	
Arsenic	mg/L	T	-		<0.04	:	-		<0.048	:	-		0.0603	:
Arsenic	mg/L	D	<0.04	:	-		<0.04	:	-		<0.048	:	-	
Barium	mg/L	T	-		<0.123	:	-		<0.059	:	-		<0.073	:
Barium	mg/L	D	<0.123	:	-		<0.123	:	-		<0.059	:	-	
Beryllium	mg/L	T	-		0.053	:	-		0.0538	:	-		0.0553	:
Beryllium	mg/L	D	0.0568	:	-		0.0538	:	-		0.0487	:	-	
Boron	mg/L	T	-		<0.084	:	-		<0.048	:	-		<0.046	:
Boron	mg/L	D	<0.084	:	-		<0.084	:	-		<0.048	:	-	
Cadmium	mg/L	T	-		0.0471	:	-		<0.12	:	-		0.0722	:
Cadmium	mg/L	D	0.0496	:	-		0.0458	:	-		<0.12	:	-	
Calcium	mg/L	T	-		247.	:	-		271.	:	-		269.	:
Calcium	mg/L	D	274.	:	-		242.	:	-		272.	:	-	
Chromium	mg/L	T	-		<0.01	:	-		<0.19	:	-		<0.14	:
Chromium	mg/L	D	<0.01	:	-		<0.01	:	-		<0.19	:	-	
Cobalt	mg/L	T	-		0.355	:	-		<0.37	:	-		0.436	:
Cobalt	mg/L	D	0.381	:	-		0.343	:	-		0.414	:	-	
Copper	mg/L	T	-		0.816	:	-		0.489	:	-		1.01	:
Copper	mg/L	D	0.856	:	-		0.782	:	-		0.62	:	-	
Iron	mg/L	T	-		33.4	:	-		39.8	:	-		37.6	:
Iron	mg/L	D	34.8	:	-		32.1	:	-		34.9	:	-	
Lead	mg/L	T	-		0.198	:	-		0.163	:	-		0.192	:
Lead	mg/L	D	0.191	:	-		0.194	:	-		0.153	:	-	
Magnesium	mg/L	T	-		92.4	:	-		104.	:	-		98.8	:
Magnesium	mg/L	D	105.	:	-		90.3	:	-		105.	:	-	
Manganese	mg/L	T	-		41.4	:	-		43.9	:	-		42.4	:
Manganese	mg/L	D	47.6	:	-		40.5	:	-		44.3	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		0.00035	:	-		0.00011	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		0.00049	:	-	
Molybdenum	mg/L	T	-		<0.023	:	-		<0.017	:	-		<0.016	:
Molybdenum	mg/L	D	<0.023	:	-		<0.023	:	-		<0.017	:	-	

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 5/5/2003 MMW-45B-D01N-GRW GW1		MMW-45B 6/2/2003 MMW-45B-T01N-GRW GW1		MMW-45B 6/2/2003 MMW-45B-D01N-GRW GW1		MMW-45B 7/23/2003 MMW-45B-T01N-GRW GW1		MMW-45B 7/23/2003 MMW-45B-D01N-GRW GW1		MMW-45B 8/11/2003 MMW-45B-T01N-GRW GW1	
Nickel	mg/L	T	-		0.788	:	-		0.468	:	-		0.961	:
Nickel	mg/L	D	0.842	:	-		0.765	:	-		0.582	:	-	
Potassium	mg/L	T	-		<3.26	:	-		<37.1	:	-		39.8	:
Potassium	mg/L	D	<40.5	:	-		<3.26	:	-		<37.1	:	-	
Selenium	mg/L	T	-		0.0186	:	-		0.0155	:	-		0.0129	:
Selenium	mg/L	D	0.0236	:	-		0.0206	:	-		0.0153	J	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	J	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Sodium	mg/L	T	-		16.3	:	-		<53.2	:	-		<47.3	:
Sodium	mg/L	D	<91.6	:	-		15.5	:	-		<53.2	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		0.0021	:
Vanadium	mg/L	D	0.0021	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		9.37	:	-		10.2	:	-		10.3	:
Zinc	mg/L	D	11.5	:	-		9.19	:	-		10.3	:	-	
Isotopes														
Lead	mg/L	T	-		0.198	:	-		0.163	:	-		0.192	:
Lead	mg/L	D	0.191	:	-		0.194	:	-		0.153	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-45B	MMW-45B	MMW-45B	MMW-45B	MMW-45B	MMW-45B
			Sample Date	8/11/2003	9/8/2003	9/8/2003	9/18/2003	9/18/2003	10/16/2003
			Sample ID	MMW-45B-D01N-GRW GW1	MMW-45B-T01N-GRW GW1	MMW-45B-D01N-GRW GW1	MMW-45B-T01N-GRW GW1	MMW-45B-D01N-GRW GW1	MMW-45B-T01N-GRW GW1
Field Measurements									
DO	mg/L	T		-	0.49 :	-	0.61 :	-	0.26 :
EH	millivolts	T		-	577.1 :	-	284.8 :	-	381.4 :
pH	SU	T		-	3.9 J	-	4.1 J	-	4. J
Specific Conductance	uS/cm	T		-	2617. :	-	1594. :	-	2460. :
Temperature	Celsius	T		-	11.69 :	-	11.69 :	-	11.45 :
Turbidity	NTU	T		-	9. :	-	0. :	-	31.8 :
General Chemistry									
Ammonia	mg/L	T		-	<0.077 :	-	<0.072 :	-	<0.076 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	15.7 :	-	19.6 :	-	19.1 :
Fluoride	mg/L	T		-	60. :	-	58.9 :	-	57.7 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 :	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.04 :	-	0.039 :	-	<0.038 J
Phosphorus	mg/L	T		-	0.059 :	-	0.086 :	-	0.068 :
Sulfate	mg/L	T		-	1770. J	-	1790. J	-	1610. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	2970. :	-	2970. :	-	3000. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.7 :	-	<1.9 :	-	1.5 J
Total Suspended Solids	mg/L	T		-	5.6 :	-	39.2 :	-	24. :
Laboratory Parameters									
pH	SU	T		-	3.9 J	-	4.1 J	-	4. J
Specific Conductance	umhos/cm	T		-	2360. J	-	2210. J	-	2240. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1070. :	-	1070. :	-	1020. :
Hardness	mg/L	D		1040. :	-	1090. :	-	1170. :	-
Metals									

J = Qualified as estimated during data validation
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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-45B 8/11/2003 MMW-45B-D01N-GR	MMW-45B 9/8/2003 MMW-45B-T01N-GR	MMW-45B 9/8/2003 MMW-45B-D01N-GR	MMW-45B 9/18/2003 MMW-45B-T01N-GR	MMW-45B 9/18/2003 MMW-45B-D01N-GR	MMW-45B 10/16/2003 MMW-45B-T01N-GR
			GW GW1	GW GW1	GW GW1	GW GW1	GW GW1	GW GW1
Aluminum	mg/L	T	-	166. :	-	164. :	-	153. :
Aluminum	mg/L	D	167. :	-	169. :	-	178. :	-
Antimony	mg/L	T	-	<0.082 :	-	<0.052 :	-	<0.052 :
Antimony	mg/L	D	<0.038 :	-	<0.082 :	-	<0.052 :	-
Arsenic	mg/L	T	-	0.0421 :	-	<0.0952 :	-	<0.041 :
Arsenic	mg/L	D	0.0548 :	-	0.0392 :	-	<0.0773 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.115 :	-	<0.115 :
Barium	mg/L	D	<0.073 :	-	<0.117 :	-	<0.115 :	-
Beryllium	mg/L	T	-	0.0511 :	-	0.0477 :	-	0.0451 :
Beryllium	mg/L	D	0.0546 :	-	0.0525 :	-	0.0518 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.063 :	-	<0.063 :
Boron	mg/L	D	<0.046 :	-	<0.064 :	-	<0.063 :	-
Cadmium	mg/L	T	-	<0.13 :	-	<0.13 :	-	<0.13 :
Cadmium	mg/L	D	<0.06 :	-	<0.13 :	-	<0.13 :	-
Calcium	mg/L	T	-	264. :	-	262. :	-	257. :
Calcium	mg/L	D	260. :	-	268. :	-	286. :	-
Chromium	mg/L	T	-	<0.23 :	-	<0.23 :	-	<0.23 J
Chromium	mg/L	D	<0.14 :	-	<0.23 :	-	<0.23 :	-
Cobalt	mg/L	T	-	0.344 :	-	<0.32 :	-	0.359 :
Cobalt	mg/L	D	0.328 :	-	0.342 :	-	<0.32 :	-
Copper	mg/L	T	-	0.857 :	-	0.806 :	-	0.901 :
Copper	mg/L	D	0.96 :	-	0.875 :	-	0.849 :	-
Iron	mg/L	T	-	36.2 :	-	36.1 :	-	33.5 :
Iron	mg/L	D	34.9 :	-	36.8 :	-	40.3 :	-
Lead	mg/L	T	-	0.19 :	-	0.199 :	-	0.189 :
Lead	mg/L	D	0.19 :	-	0.192 :	-	0.196 :	-
Magnesium	mg/L	T	-	99.7 :	-	99.9 :	-	93.5 :
Magnesium	mg/L	D	94.4 :	-	102. :	-	110. :	-
Manganese	mg/L	T	-	41.5 :	-	40.1 :	-	40.4 :
Manganese	mg/L	D	41. :	-	42.6 :	-	43.7 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.012 :	-	<0.0179 :	-	<0.011 :
Molybdenum	mg/L	D	<0.016 :	-	<0.012 :	-	<0.011 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			MMW-45B 8/11/2003 MMW-45B-D01N-GR GW1		MMW-45B 9/8/2003 MMW-45B-T01N-GR GW1		MMW-45B 9/8/2003 MMW-45B-D01N-GR GW1		MMW-45B 9/18/2003 MMW-45B-T01N-GR GW1		MMW-45B 9/18/2003 MMW-45B-D01N-GR GW1		MMW-45B 10/16/2003 MMW-45B-T01N-GR GW1	
Nickel	mg/L	T	-		0.745	:	-		0.866	:	-		<0.45	J
Nickel	mg/L	D	0.856	:	-		0.8	:	-		0.789	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<63.8	:	-		<63.8	:
Potassium	mg/L	D	<39.3	:	-		<63.8	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0204	:	-		0.0226	:	-		0.0203	:
Selenium	mg/L	D	0.0169	:	-		0.0206	:	-		0.0231	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<99.1	:	-		<99.1	:
Sodium	mg/L	D	<47.3	:	-		<99.1	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0023	:	-		0.0024	:	-		<0.001	:
Vanadium	mg/L	D	0.0019	:	-		0.0023	:	-		0.0024	:	-	
Zinc	mg/L	T	-		9.9	:	-		9.82	:	-		10.2	:
Zinc	mg/L	D	10.4	:	-		10.2	:	-		10.7	:	-	
Isotopes														
Lead	mg/L	T	-		0.19	:	-		0.199	:	-		0.189	:
Lead	mg/L	D	0.19	:	-		0.192	:	-		0.196	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-45B 10/16/2003 MMW-45B-D01N-GRW GW1		MMW-45B 11/3/2003 MMW-45B-T01N-GRW GW1		MMW-45B 11/3/2003 MMW-45B-D01N-GRW GW1		MMW-45B 12/8/2003 MMW-45B-T01N-GRW GW1		MMW-45B 12/8/2003 MMW-45B-D01N-GRW GW1		MMW-45B 1/11/2004 MMW-45B-T01N-GRW GW1	
Field Measurements														
DO	mg/L	T	-		0.17	:	-		-		-		0.05	:
EH	millivolts	T	-		257.1	:	-		-		-		249.7	:
pH	SU	T	-		3.9	J	-		4.	J	-		4.	J
Specific Conductance	uS/cm	T	-		2427.	:	-		-		-		2455.	:
Temperature	Celsius	T	-		9.71	:	-		-		-		8.59	:
Turbidity	NTU	T	-		10.1	:	-		-		-		5.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.047	:	-		0.089	:	-		<0.13	J
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		18.8	:	-		33.1	:	-		17.2	:
Fluoride	mg/L	T	-		61.1	:	-		60.	:	-		55.3	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.2	J	-		<0.2	:	-		<0.2	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.049	J	-		0.047	:	-		0.048	J
Phosphorus	mg/L	T	-		0.072	:	-		0.09	:	-		<0.01	J
Sulfate	mg/L	T	-		1830.	:	-		1960.	:	-		1670.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		3000.	:	-		2810.	:	-		3020.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.8	:	-		<1.	:	-		<1.8	:
Total Suspended Solids	mg/L	T	-		8.4	:	-		6.	:	-		4.5	:
Laboratory Parameters														
pH	SU	T	-		3.9	J	-		4.	J	-		4.	J
Specific Conductance	umhos/cm	T	-		2560.	J	-		2100.	J	-		2430.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		977.	:	-		1040.	:	-		1030.	:
Hardness	mg/L	D	960.	:	-		1010.	:	-		1020.	:	-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-45B	10/16/2003	MMW-45B-D01N-GRW GW1		MMW-45B	11/3/2003	MMW-45B-T01N-GRW GW1		MMW-45B	11/3/2003	MMW-45B-D01N-GRW GW1		MMW-45B	12/8/2003	MMW-45B-T01N-GRW GW1		MMW-45B	12/8/2003	MMW-45B-D01N-GRW GW1		MMW-45B	1/11/2004	MMW-45B-T01N-GRW GW1	
Aluminum	mg/L	T	-		151.	:	-		156.	:	-		152.	:												
Aluminum	mg/L	D	143.	:	-		156.	:	-		152.	:	-													
Antimony	mg/L	T	-		<0.052	:	-		<0.052	:	-		<0.029	:												
Antimony	mg/L	D	<0.052	:	-		<0.052	:	-		<0.052	:	-													
Arsenic	mg/L	T	-		<0.041	:	-		<0.041	:	-		<0.028	:												
Arsenic	mg/L	D	<0.041	:	-		0.0443	:	-		<0.041	:	-													
Barium	mg/L	T	-		<0.115	:	-		<0.115	:	-		<0.053	:												
Barium	mg/L	D	<0.115	:	-		<0.115	:	-		<0.115	:	-													
Beryllium	mg/L	T	-		0.0427	:	-		0.0465	:	-		0.0453	:												
Beryllium	mg/L	D	0.0449	:	-		0.0434	:	-		0.0442	:	-													
Boron	mg/L	T	-		<0.063	:	-		<0.064	J	-		<0.023	:												
Boron	mg/L	D	<0.063	:	-		<0.063	:	-		<0.064	J	-													
Cadmium	mg/L	T	-		<0.05	:	-		<0.05	:	-		<0.07	J												
Cadmium	mg/L	D	<0.13	:	-		<0.05	:	-		<0.05	:	-													
Calcium	mg/L	T	-		237.	:	-		262.	:	-		258.	:												
Calcium	mg/L	D	237.	:	-		245.	:	-		256.	:	-													
Chromium	mg/L	T	-		<0.11	J	-		<0.11	:	-		0.163	:												
Chromium	mg/L	D	<0.23	J	-		<0.11	J	-		<0.11	:	-													
Cobalt	mg/L	T	-		0.358	:	-		0.304	:	-		0.344	J												
Cobalt	mg/L	D	0.38	:	-		0.306	:	-		0.293	:	-													
Copper	mg/L	T	-		0.822	:	-		0.79	:	-		0.848	:												
Copper	mg/L	D	0.821	:	-		0.846	:	-		0.742	:	-													
Iron	mg/L	T	-		32.1	:	-		35.9	:	-		37.2	:												
Iron	mg/L	D	31.	:	-		34.	:	-		33.8	:	-													
Lead	mg/L	T	-		0.19	:	-		0.182	:	-		0.198	:												
Lead	mg/L	D	0.19	:	-		0.186	:	-		0.183	:	-													
Magnesium	mg/L	T	-		93.4	:	-		94.6	:	-		94.4	:												
Magnesium	mg/L	D	87.7	:	-		96.	:	-		92.8	:	-													
Manganese	mg/L	T	-		39.3	J	-		41.2	:	-		39.2	:												
Manganese	mg/L	D	37.8	:	-		40.8	:	-		40.3	:	-													
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J												
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-													
Molybdenum	mg/L	T	-		<0.011	:	-		<0.011	J	-		<0.024	:												
Molybdenum	mg/L	D	<0.011	:	-		<0.011	:	-		<0.011	J	-													

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 10/16/2003 MMW-45B-D01N-GRW GW1		MMW-45B 11/3/2003 MMW-45B-T01N-GRW GW1		MMW-45B 11/3/2003 MMW-45B-D01N-GRW GW1		MMW-45B 12/8/2003 MMW-45B-T01N-GRW GW1		MMW-45B 12/8/2003 MMW-45B-D01N-GRW GW1		MMW-45B 1/11/2004 MMW-45B-T01N-GRW GW1	
Nickel	mg/L	T	-		0.423	J	-		<0.846	J	-		0.952	:
Nickel	mg/L	D	<0.45	J	-		0.517	J	-		<0.904	:	-	
Potassium	mg/L	T	-		39.3	:	-		<34.1	:	-		<24.3	:
Potassium	mg/L	D	<63.8	:	-		35.4	:	-		<31.8	:	-	
Selenium	mg/L	T	-		0.0211	:	-		0.0164	:	-		0.0284	J
Selenium	mg/L	D	0.0205	:	-		0.0227	:	-		0.0162	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		46.	:	-		<45.4	:	-		<49.	:
Sodium	mg/L	D	<99.1	:	-		<45.4	:	-		<90.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0022	:	-		0.0018	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		0.0018	:	-		0.0018	:	-	
Zinc	mg/L	T	-		9.	:	-		10.1	:	-		9.69	:
Zinc	mg/L	D	9.28	:	-		9.35	:	-		9.85	:	-	
Isotopes														
Lead	mg/L	T	-		0.19	:	-		0.182	:	-		0.198	:
Lead	mg/L	D	0.19	:	-		0.186	:	-		0.183	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID	MMW-45B	MMW-45B	MMW-45B	MMW-7	MMW-7	MMW-7
			Sample Date	1/11/2004	4/18/2004	4/18/2004	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-45B-D01N-GRW	MMW-45B-T01N-GRW	MMW-45B-D01N-GRW	MMW-7-T01N-GRWRE	MMW-7-T01N-GRW	MMW-7-D01N-GRWRE
			Exposure Area	GW1	GW1	GW1	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		-	9.3 :	-	-	3.54 :	-
EH	millivolts	T		-	273.8 :	-	-	264.7 :	-
pH	SU	T		-	4. :	-	-	4.2 :	-
Specific Conductance	uS/cm	T		-	1721. :	-	-	6965. :	-
Temperature	Celsius	T		-	9.6 :	-	-	9.07 :	-
Turbidity	NTU	T		-	-	-	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.065 :	-	-	<0.36 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	21.4 J	-	-	34.9 :	-
Fluoride	mg/L	T		-	55.7 :	-	124. J	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	<0.2 J	-	-	<0.4 J	-
Nitrite	mg/L	T		-	<0.005 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	0.061 J	-	-	14.6 J	-
Phosphorus	mg/L	T		-	0.063 :	-	-	2.4 J	-
Sulfate	mg/L	T		-	1800. :	-	5860. J	-	-
Total Alkalinity	mg/L	T		-	<1. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	2810. :	-	-	9640. J	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	0.34 :	-
Total Organic Carbon	mg/L	T		-	2.6 J	-	-	3.3 :	-
Total Suspended Solids	mg/L	T		-	<6.4 J	-	-	45.3 J	-
Laboratory Parameters									
pH	SU	T		-	4. :	-	-	4.2 :	-
Specific Conductance	umhos/cm	T		-	2210. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	1100. :	-	-	-	-
Hardness	mg/L	D		1050. :	-	1110. :	-	-	4190. J
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 1/11/2004 MMW-45B-D01N-GRW GW1	MMW-45B 4/18/2004 MMW-45B-T01N-GRW GW1	MMW-45B 4/18/2004 MMW-45B-D01N-GRW GW1	MMW-7 11/5/2002 MMW-7-T01N-GRWRE GW5	MMW-7 11/5/2002 MMW-7-T01N-GRW GW5	MMW-7 11/5/2002 MMW-7-D01N-GRWRE GW5
Aluminum	mg/L	T	-	159. :	-	-	-	-
Aluminum	mg/L	D	156. :	-	161. :	-	-	524. :
Antimony	mg/L	T	-	<0.027 :	-	-	-	-
Antimony	mg/L	D	<0.029 :	-	<0.027 :	-	-	<0.0308 :
Arsenic	mg/L	T	-	<0.026 :	-	-	-	-
Arsenic	mg/L	D	<0.028 :	-	<0.026 :	-	-	<0.0482 :
Barium	mg/L	T	-	<0.012 :	-	-	-	-
Barium	mg/L	D	<0.053 :	-	<0.012 :	-	-	<0.048 :
Beryllium	mg/L	T	-	0.05 :	-	-	-	-
Beryllium	mg/L	D	0.0456 :	-	0.0501 :	-	-	0.0698 :
Boron	mg/L	T	-	0.0226 :	-	-	-	-
Boron	mg/L	D	<0.023 :	-	<0.018 :	-	-	<0.027 :
Cadmium	mg/L	T	-	<0.0642 :	-	-	-	-
Cadmium	mg/L	D	<0.07 :	-	<0.0675 :	-	-	<0.08 :
Calcium	mg/L	T	-	274. :	-	-	-	-
Calcium	mg/L	D	263. :	-	277. :	-	-	516. :
Chromium	mg/L	T	-	<0.08 :	-	-	-	-
Chromium	mg/L	D	<0.11 :	-	<0.08 :	-	-	<0.16 J
Cobalt	mg/L	T	-	0.491 :	-	-	-	-
Cobalt	mg/L	D	0.37 :	-	0.419 :	-	-	2.72 :
Copper	mg/L	T	-	0.984 :	-	-	-	-
Copper	mg/L	D	0.821 :	-	1.01 :	-	-	<1.4 :
Iron	mg/L	T	-	40.4 J	-	-	-	-
Iron	mg/L	D	37.1 :	-	41. :	-	-	279. :
Lead	mg/L	T	-	0.197 :	-	-	-	-
Lead	mg/L	D	0.198 :	-	0.204 :	-	-	0.02 :
Magnesium	mg/L	T	-	100. :	-	-	-	-
Magnesium	mg/L	D	96.4 :	-	101. :	-	-	706. :
Manganese	mg/L	T	-	40.8 :	-	-	-	-
Manganese	mg/L	D	40.1 :	-	41.5 :	-	-	38.6 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.01 :	-	-	-	-
Molybdenum	mg/L	D	<0.024 :	-	<0.01 :	-	-	<0.011 :

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 1/11/2004 MMW-45B-D01N-GRW GW1		MMW-45B 4/18/2004 MMW-45B-T01N-GRW GW1		MMW-45B 4/18/2004 MMW-45B-D01N-GRW GW1		MMW-7 11/5/2002 MMW-7-T01N-GRWRE GW5		MMW-7 11/5/2002 MMW-7-T01N-GRW GW5		MMW-7 11/5/2002 MMW-7-D01N-GRWRE GW5	
Nickel	mg/L	T	-		0.846	:	-		-		-		-	
Nickel	mg/L	D	0.81	:	-		0.729	:	-		-		5.85	:
Potassium	mg/L	T	-		<10.9	J	-		-		-		-	
Potassium	mg/L	D	<24.3	:	-		<10.9	J	-		-		<31.4	J
Selenium	mg/L	T	-		0.0166	:	-		-		-		-	
Selenium	mg/L	D	0.02	:	-		0.0174	:	-		-		<0.008	:
Silver	mg/L	T	-		<0.001	J	-		-		-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		-		<0.001	:
Sodium	mg/L	T	-		<34.3	:	-		-		-		-	
Sodium	mg/L	D	<49.	:	-		<57.3	:	-		-		107.	:
Thallium	mg/L	T	-		<0.001	:	-		-		-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		0.0034	:	-		-		-		-	
Vanadium	mg/L	D	<0.002	:	-		0.0034	:	-		-		0.126	:
Zinc	mg/L	T	-		10.	:	-		-		-		-	
Zinc	mg/L	D	9.84	:	-		10.2	:	-		-		5.98	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	-		-		-		-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
2-Butanone	mg/L	T	-		-		-		-		<0.01	:	-	
2-Hexanone	mg/L	T	-		-		-		-		<0.01	:	-	
4-Methyl-2-pentanone	mg/L	T	-		-		-		-		<0.01	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-45B	MMW-45B	MMW-45B	MMW-7	MMW-7	MMW-7
			Sample Date	1/11/2004	4/18/2004	4/18/2004	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-45B-D01N-GRW	MMW-45B-T01N-GRW	MMW-45B-D01N-GRW	MMW-7-T01N-GRWRE	MMW-7-T01N-GRW	MMW-7-D01N-GRWRE
			Exposure Area	GW1	GW1	GW1	GW5	GW5	GW5
Acetone	mg/L	T		-	-	-	-	<0.01 :	-
Benzene	mg/L	T		-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Bromoform	mg/L	T		-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		-	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		-	-	-	-	<0.01 :	-
Chloroform	mg/L	T		-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		-	-	-	-	<0.01 :	-
Styrene	mg/L	T		-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Toluene	mg/L	T		-	-	-	-	0.008 J	-
Total Xylene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	-	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	-	-	-	<0.025 :	-
2,4-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-45B	MMW-45B	MMW-45B	MMW-7	MMW-7	MMW-7
			Sample Date	1/11/2004	4/18/2004	4/18/2004	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-45B-D01N-GRW	MMW-45B-T01N-GRW	MMW-45B-D01N-GRW	MMW-7-T01N-GRWRE	MMW-7-T01N-GRW	MMW-7-D01N-GRWRE
			Exposure Area	GW1	GW1	GW1	GW5	GW5	GW5
2,6-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
2-Nitrophenol	mg/L	T		-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	<0.025 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	-	-	<0.025 :	-
4-Nitrophenol	mg/L	T		-	-	-	-	<0.025 :	-
Acenaphthene	mg/L	T		-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	-	-	<0.01 :	-
Anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	-	-	<0.01 J	-
Benzo(a)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Carbazole	mg/L	T		-	-	-	-	<0.01 :	-
Chrysene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenzofuran	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-45B 1/11/2004 MMW-45B-D01N-GRW GW1	MMW-45B 4/18/2004 MMW-45B-T01N-GRW GW1	MMW-45B 4/18/2004 MMW-45B-D01N-GRW GW1	MMW-7 11/5/2002 MMW-7-T01N-GRWRE GW5	MMW-7 11/5/2002 MMW-7-T01N-GRW GW5	MMW-7 11/5/2002 MMW-7-D01N-GRWRE GW5
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 :	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.025 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta D	per mil	T	-	-89.7 :	-	-	-	-
Delta O-18	per mil	T	-	-12.5 :	-	-	-	-
Lead	mg/L	T	-	0.197 :	-	-	-	-
Lead	mg/L	D	0.198 :	-	0.204 :	-	-	0.02 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units		Site ID		Sample Date		Sample ID		Exposure Area															
			MMW-7		11/5/2002		MMW-7-D01N-GRW		GW5															
			MMW-7		12/4/2002		MMW-7-T01N-GRW		GW5															
			MMW-7		1/9/2003		MMW-7-T01N-GRW		GW5															
			MMW-7		1/9/2003		MMW-7-D01N-GRW		GW5															
			MMW-7		2/5/2003		MMW-7-T01N-GRW		GW5															
			MMW-7		3/6/2003		MMW-7-T01N-GRW		GW5															
Field Measurements																								
DO	mg/L	T	-		2.35	:	1.1	:	-		1.44	:	0.49	:										
EH	millivolts	T	-		441.7	:	380.4	:	-		269.8	:	305.2	:										
pH	SU	T	-		4.19	:	4.15	:	-		4.15	:	4.15	:										
Specific Conductance	uS/cm	T	-		7652.	:	6713.	:	-		6515.	:	6742.	:										
Temperature	Celsius	T	-		8.04	:	10.4	:	-		6.05	:	8.65	:										
Turbidity	NTU	T	-		22.7	:	43.4	:	-		0.	:	5.6	:										
General Chemistry																								
Ammonia	mg/L	T	-		-		<0.22	:	-		-		-											
Bicarbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-											
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-											
Chloride	mg/L	T	-		-		13.	:	-		-		-											
Fluoride	mg/L	T	-		-		121.	:	-		-		-											
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-											
Nitrate	mg/L	T	-		-		<0.4	J	-		-		-											
Nitrite	mg/L	T	-		-		<0.005	J	-		-		-											
Phosphate, Ortho As P	mg/L	T	-		-		16.3	J	-		-		-											
Phosphorus	mg/L	T	-		-		18.9	:	-		-		-											
Sulfate	mg/L	T	-		-		6680.	J	-		-		-											
Total Alkalinity	mg/L	T	-		-		<1.	:	-		-		-											
Total Dissolved Solids	mg/L	T	-		-		9790.	:	-		-		-											
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.42	:	-		-		-											
Total Organic Carbon	mg/L	T	-		-		2.6	:	-		-		-											
Total Suspended Solids	mg/L	T	-		-		29.8	:	-		-		-											
Laboratory Parameters																								
pH	SU	T	-		4.19	:	4.15	:	-		4.15	:	4.15	:										
Inorganics																								
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-											
Physical Properties																								
Hardness	mg/L	T	-		-		3670.	:	-		-		-											
Hardness	mg/L	D	-		-		-		3620.	:	-		-											
Metals																								
Aluminum	mg/L	T	-		-		451.	:	-		-		-											

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-7 11/5/2002 MMW-7-D01N-GRW GW5	MMW-7 12/4/2002 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-D01N-GRW GW5	MMW-7 2/5/2003 MMW-7-T01N-GRW GW5	MMW-7 3/6/2003 MMW-7-T01N-GRW GW5
Aluminum	mg/L	D	-	-	-	443. :	-	-
Antimony	mg/L	T	-	-	<0.028 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.028 :	-	-
Arsenic	mg/L	T	-	-	<0.023 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.023 :	-	-
Barium	mg/L	T	-	-	<0.048 :	-	-	-
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	T	-	-	0.0635 :	-	-	-
Beryllium	mg/L	D	-	-	-	0.0623 :	-	-
Boron	mg/L	T	-	-	0.127 :	-	-	-
Boron	mg/L	D	-	-	-	0.12 :	-	-
Cadmium	mg/L	T	-	-	0.0634 :	-	-	-
Cadmium	mg/L	D	-	-	-	0.048 :	-	-
Calcium	mg/L	T	-	-	472. :	-	-	-
Calcium	mg/L	D	-	-	-	465. :	-	-
Chromium	mg/L	T	-	-	<0.37 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.37 :	-	-
Cobalt	mg/L	T	-	-	2.31 :	-	-	-
Cobalt	mg/L	D	-	-	-	2.27 :	-	-
Copper	mg/L	T	-	-	1.16 :	-	-	-
Copper	mg/L	D	-	-	-	1.12 :	-	-
Iron	mg/L	T	-	-	244. :	-	-	-
Iron	mg/L	D	-	-	-	240. :	-	-
Lead	mg/L	T	-	-	0.0194 :	-	-	-
Lead	mg/L	D	-	-	-	0.0187 :	-	-
Magnesium	mg/L	T	-	-	605. :	-	-	-
Magnesium	mg/L	D	-	-	-	596. :	-	-
Manganese	mg/L	T	-	-	33.4 :	-	-	-
Manganese	mg/L	D	-	-	-	33. :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.011 :	-	-
Nickel	mg/L	T	-	-	5.1 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 11/5/2002 MMW-7-D01N-GRW GW5	MMW-7 12/4/2002 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-D01N-GRW GW5	MMW-7 2/5/2003 MMW-7-T01N-GRW GW5	MMW-7 3/6/2003 MMW-7-T01N-GRW GW5
Nickel	mg/L	D	-	-	-	5.03 :	-	-
Potassium	mg/L	T	-	-	<20.2 :	-	-	-
Potassium	mg/L	D	-	-	-	<20.2 :	-	-
Selenium	mg/L	T	-	-	0.0174 :	-	-	-
Selenium	mg/L	D	-	-	-	0.0201 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	85.6 :	-	-	-
Sodium	mg/L	D	-	-	-	85.3 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	0.125 :	-	-	-
Vanadium	mg/L	D	-	-	-	0.124 :	-	-
Zinc	mg/L	T	-	-	5.31 :	-	-	-
Zinc	mg/L	D	-	-	-	5.26 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	<0.01 J	-	-	-
1,2-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T	-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T	-	-	<0.01 :	-	-	-
4-Methyl-2-pentanone	mg/L	T	-	-	<0.01 :	-	-	-
Acetone	mg/L	T	-	-	<0.01 J	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-7 11/5/2002 MMW-7-D01N-GRW	MMW-7 12/4/2002 MMW-7-T01N-GRW	MMW-7 1/9/2003 MMW-7-T01N-GRW	MMW-7 1/9/2003 MMW-7-D01N-GRW	MMW-7 2/5/2003 MMW-7-T01N-GRW	MMW-7 3/6/2003 MMW-7-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Benzene	mg/L	T	-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Bromoform	mg/L	T	-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T	-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T	-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T	-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Chloroform	mg/L	T	-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T	-	-	<0.01 :	-	-	-
Methylene chloride	mg/L	T	-	-	<0.01 :	-	-	-
Styrene	mg/L	T	-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Toluene	mg/L	T	-	-	0.008 J	-	-	-
Total Xylene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T	-	-	<0.01 :	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	<0.01 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T	-	-	<0.026 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dimethylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dinitrophenol	mg/L	T	-	-	<0.026 :	-	-	-
2,4-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-
2,6-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-7	MMW-7	MMW-7	MMW-7	MMW-7	MMW-7
			Sample Date	11/5/2002	12/4/2002	1/9/2003	1/9/2003	2/5/2003	3/6/2003
			Sample ID	MMW-7-D01N-GRW	MMW-7-T01N-GRW	MMW-7-T01N-GRW	MMW-7-D01N-GRW	MMW-7-T01N-GRW	MMW-7-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
2-Chloronaphthalene	mg/L	T		-	-	<0.01 :	-	-	-
2-Chlorophenol	mg/L	T		-	-	<0.01 :	-	-	-
2-Methylnaphthalene	mg/L	T		-	-	<0.01 :	-	-	-
2-Methylphenol	mg/L	T		-	-	<0.01 :	-	-	-
2-Nitroaniline	mg/L	T		-	-	<0.026 :	-	-	-
2-Nitrophenol	mg/L	T		-	-	<0.01 :	-	-	-
3,3-Dichlorobenzidine	mg/L	T		-	-	<0.01 J	-	-	-
3-Nitroaniline	mg/L	T		-	-	<0.026 :	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	<0.026 :	-	-	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	<0.01 :	-	-	-
4-Chloro-3-methylphenol	mg/L	T		-	-	<0.01 :	-	-	-
4-Chloroaniline	mg/L	T		-	-	<0.01 :	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	<0.01 :	-	-	-
4-Methylphenol	mg/L	T		-	-	<0.01 :	-	-	-
4-Nitroaniline	mg/L	T		-	-	<0.026 :	-	-	-
4-Nitrophenol	mg/L	T		-	-	<0.026 :	-	-	-
Acenaphthene	mg/L	T		-	-	<0.01 :	-	-	-
Acenaphthylene	mg/L	T		-	-	<0.01 :	-	-	-
Anthracene	mg/L	T		-	-	<0.01 :	-	-	-
Benzaldehyde	mg/L	T		-	-	<0.01 J	-	-	-
Benzo(a)anthracene	mg/L	T		-	-	<0.01 :	-	-	-
Benzo(a)pyrene	mg/L	T		-	-	<0.01 :	-	-	-
Benzo(b)fluoranthene	mg/L	T		-	-	<0.01 :	-	-	-
Benzo(g,h,i)perylene	mg/L	T		-	-	<0.01 :	-	-	-
Benzo(k)fluoranthene	mg/L	T		-	-	<0.01 :	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	<0.01 :	-	-	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	<0.01 :	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	<0.01 :	-	-	-
Butyl benzyl phthalate	mg/L	T		-	-	<0.01 :	-	-	-
Carbazole	mg/L	T		-	-	<0.01 :	-	-	-
Chrysene	mg/L	T		-	-	<0.01 :	-	-	-
Dibenz(a,h)anthracene	mg/L	T		-	-	<0.01 :	-	-	-
Dibenzofuran	mg/L	T		-	-	<0.01 :	-	-	-
Dichlorodiisopropyl ether	mg/L	T		-	-	<0.01 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 11/5/2002 MMW-7-D01N-GRW GW5	MMW-7 12/4/2002 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-T01N-GRW GW5	MMW-7 1/9/2003 MMW-7-D01N-GRW GW5	MMW-7 2/5/2003 MMW-7-T01N-GRW GW5	MMW-7 3/6/2003 MMW-7-T01N-GRW GW5
Diethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Dimethylphthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Butyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Di-n-Octyl phthalate	mg/L	T	-	-	<0.01 J	-	-	-
Fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Fluorene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorocyclopentadiene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Isophorone	mg/L	T	-	-	<0.01 :	-	-	-
Naphthalene	mg/L	T	-	-	<0.01 :	-	-	-
Nitrobenzene	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	<0.01 :	-	-	-
N-Nitrosodiphenylamine	mg/L	T	-	-	<0.01 :	-	-	-
Pentachlorophenol	mg/L	T	-	-	<0.026 :	-	-	-
Phenanthrene	mg/L	T	-	-	<0.01 :	-	-	-
Phenol	mg/L	T	-	-	<0.01 :	-	-	-
Pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025 J	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0194 :	-	-	-
Lead	mg/L	D	-	-	-	0.0187 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-7 4/8/2003 MMW-7-T01N-GRW		MMW-7 4/8/2003 MMW-7-D01N-GRW		MMW-7 5/9/2003 MMW-7-T01N-GRW		MMW-7 6/9/2003 MMW-7-T01N-GRW		MMW-7 7/23/2003 MMW-7-T01N-GRW		MMW-7 7/23/2003 MMW-7-D01N-GRW	
			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	3.83	:	-		1.35	:	0.67	:	3.25	:	-	
EH	millivolts	T	279.2	:	-		213.	:	368.7	:	195.9	:	-	
pH	SU	T	4.3	J	-		4.	:	3.97	:	4.2	J	-	
Specific Conductance	uS/cm	T	6432.	:	-		6930.	:	6777.	:	6891.	:	-	
Temperature	Celsius	T	10.68	:	-		12.18	:	13.31	:	15.19	:	-	
Turbidity	NTU	T	0.	:	-		0.	:	0.	:	0.	:	-	
General Chemistry														
Ammonia	mg/L	T	0.74	:	-		-		-		<0.081	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	12.8	:	-		-		-		21.6	:	-	
Fluoride	mg/L	T	131.	:	-		-		-		141.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		-		-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	:	-		-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	16.6	:	-		-		-		0.52	:	-	
Phosphorus	mg/L	T	19.6	:	-		-		-		18.6	:	-	
Sulfate	mg/L	T	6940.	J	-		-		-		6300.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	9770.	:	-		-		-		11200.	J	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	2.6	J	-		-		-		<3.	J	-	
Total Suspended Solids	mg/L	T	<6.8	:	-		-		-		10.7	:	-	
Laboratory Parameters														
pH	SU	T	4.3	J	-		4.	:	3.97	:	4.2	J	-	
Specific Conductance	umhos/cm	T	6140.	J	-		-		-		6700.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	3850.	:	-		-		-		3600.	:	-	
Hardness	mg/L	D	-		3850.	:	-		-		-		3590.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-7 4/8/2003 MMW-7-T01N-GRW GW5	MMW-7 4/8/2003 MMW-7-D01N-GRW GW5	MMW-7 5/9/2003 MMW-7-T01N-GRW GW5	MMW-7 6/9/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-D01N-GRW GW5
Aluminum	mg/L	T	495. :	-	-	-	455. :	-
Aluminum	mg/L	D	-	500. :	-	-	-	452. :
Antimony	mg/L	T	<0.003 :	-	-	-	<0.038 :	-
Antimony	mg/L	D	-	<0.003 :	-	-	-	<0.038 :
Arsenic	mg/L	T	<0.04 :	-	-	-	<0.024 :	-
Arsenic	mg/L	D	-	<0.04 :	-	-	-	<0.024 :
Barium	mg/L	T	<0.123 :	-	-	-	<0.073 :	-
Barium	mg/L	D	-	<0.123 :	-	-	-	<0.073 :
Beryllium	mg/L	T	0.0947 :	-	-	-	0.0819 :	-
Beryllium	mg/L	D	-	0.089 :	-	-	-	0.0822 :
Boron	mg/L	T	<0.084 :	-	-	-	<0.046 :	-
Boron	mg/L	D	-	<0.084 :	-	-	-	<0.046 :
Cadmium	mg/L	T	0.052 :	-	-	-	0.0744 :	-
Cadmium	mg/L	D	-	0.0532 :	-	-	-	0.0725 :
Calcium	mg/L	T	475. :	-	-	-	440. :	-
Calcium	mg/L	D	-	471. :	-	-	-	439. :
Chromium	mg/L	T	0.0812 :	-	-	-	<0.06 :	-
Chromium	mg/L	D	-	0.0791 :	-	-	-	<0.06 :
Cobalt	mg/L	T	2.32 :	-	-	-	2.39 :	-
Cobalt	mg/L	D	-	2.29 :	-	-	-	2.41 :
Copper	mg/L	T	1.16 :	-	-	-	1.09 :	-
Copper	mg/L	D	-	1.16 :	-	-	-	1.07 :
Iron	mg/L	T	260. :	-	-	-	252. :	-
Iron	mg/L	D	-	259. :	-	-	-	248. :
Lead	mg/L	T	0.0194 :	-	-	-	0.019 :	-
Lead	mg/L	D	-	0.0192 :	-	-	-	0.0198 :
Magnesium	mg/L	T	646. :	-	-	-	606. :	-
Magnesium	mg/L	D	-	649. :	-	-	-	606. :
Manganese	mg/L	T	35. :	-	-	-	33.3 :	-
Manganese	mg/L	D	-	34.8 :	-	-	-	33.2 :
Mercury	mg/L	T	<0.0001 :	-	-	-	0.00078 :	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.00021 :
Molybdenum	mg/L	T	<0.023 :	-	-	-	<0.016 :	-
Molybdenum	mg/L	D	-	<0.023 :	-	-	-	<0.016 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-7 4/8/2003 MMW-7-T01N-GRW GW5	MMW-7 4/8/2003 MMW-7-D01N-GRW GW5	MMW-7 5/9/2003 MMW-7-T01N-GRW GW5	MMW-7 6/9/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-D01N-GRW GW5
Nickel	mg/L	T	5.07 :	-	-	-	5.18 :	-
Nickel	mg/L	D	-	5.06 :	-	-	-	5.28 :
Potassium	mg/L	T	6.73 :	-	-	-	<25. :	-
Potassium	mg/L	D	-	7.24 :	-	-	-	<25. :
Selenium	mg/L	T	<0.005 :	-	-	-	0.015 :	-
Selenium	mg/L	D	-	<0.005 :	-	-	-	0.0171 J
Silver	mg/L	T	<0.001 :	-	-	-	<0.001 J	-
Silver	mg/L	D	-	<0.001 :	-	-	-	<0.001 J
Sodium	mg/L	T	122. :	-	-	-	114. :	-
Sodium	mg/L	D	-	114. :	-	-	-	118. :
Thallium	mg/L	T	<0.001 :	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	T	0.137 :	-	-	-	0.126 :	-
Vanadium	mg/L	D	-	0.139 :	-	-	-	0.132 :
Zinc	mg/L	T	5.49 :	-	-	-	5.25 :	-
Zinc	mg/L	D	-	5.41 :	-	-	-	5.24 :
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,1,2-Trichloroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,1-Dichloroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,1-Dichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01 :	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
1,2-Dichloroethane	mg/L	T	<0.01 :	-	-	-	-	-
1,2-Dichloroethene (total)	mg/L	T	<0.01 :	-	-	-	-	-
1,2-Dichloropropane	mg/L	T	<0.01 :	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
2-Butanone	mg/L	T	<0.01 :	-	-	-	-	-
2-Hexanone	mg/L	T	<0.01 J	-	-	-	-	-
4-Methyl-2-pentanone	mg/L	T	<0.01 :	-	-	-	-	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		MMW-7 4/8/2003 MMW-7-T01N-GRW GW5	MMW-7 4/8/2003 MMW-7-D01N-GRW GW5	MMW-7 5/9/2003 MMW-7-T01N-GRW GW5	MMW-7 6/9/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-D01N-GRW GW5	
Acetone	mg/L	T	<0.01 :	-	-	-	-	-
Benzene	mg/L	T	<0.01 :	-	-	-	-	-
Bromodichloromethane	mg/L	T	<0.01 :	-	-	-	-	-
Bromoform	mg/L	T	<0.01 :	-	-	-	-	-
Bromomethane	mg/L	T	<0.01 :	-	-	-	-	-
Carbon disulfide	mg/L	T	<0.01 :	-	-	-	-	-
Carbon tetrachloride	mg/L	T	<0.01 :	-	-	-	-	-
Chlorobenzene	mg/L	T	<0.01 :	-	-	-	-	-
Chloroethane	mg/L	T	<0.01 :	-	-	-	-	-
Chloroform	mg/L	T	<0.01 :	-	-	-	-	-
Chloromethane	mg/L	T	<0.01 :	-	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	-	-	-
Dibromochloromethane	mg/L	T	<0.01 :	-	-	-	-	-
Dichlorodifluoromethane	mg/L	T	<0.01 :	-	-	-	-	-
Ethylbenzene	mg/L	T	<0.01 :	-	-	-	-	-
Methylene chloride	mg/L	T	<0.01 :	-	-	-	-	-
Styrene	mg/L	T	<0.01 :	-	-	-	-	-
Tetrachloroethene	mg/L	T	<0.01 :	-	-	-	-	-
Toluene	mg/L	T	0.007 J	-	-	-	-	-
Total Xylene	mg/L	T	<0.01 :	-	-	-	-	-
trans-1,2-Dichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
trans-1,3-Dichloropropene	mg/L	T	<0.01 :	-	-	-	-	-
Trichloroethene	mg/L	T	<0.01 :	-	-	-	-	-
Trichlorofluoromethane	mg/L	T	<0.01 :	-	-	-	-	-
Vinyl chloride	mg/L	T	<0.01 :	-	-	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	<0.011 :	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	T	<0.026 :	-	-	-	-	-
2,4,6-Trichlorophenol	mg/L	T	<0.011 :	-	-	-	-	-
2,4-Dichlorophenol	mg/L	T	<0.011 :	-	-	-	-	-
2,4-Dimethylphenol	mg/L	T	<0.011 J	-	-	-	-	-
2,4-Dinitrophenol	mg/L	T	<0.026 J	-	-	-	-	-
2,4-Dinitrotoluene	mg/L	T	<0.011 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area						
			MMW-7 4/8/2003 MMW-7-T01N-GRW GW5	MMW-7 4/8/2003 MMW-7-D01N-GRW GW5	MMW-7 5/9/2003 MMW-7-T01N-GRW GW5	MMW-7 6/9/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-D01N-GRW GW5
2,6-Dinitrotoluene	mg/L	T	<0.011 :	-	-	-	-	-
2-Chloronaphthalene	mg/L	T	<0.011 :	-	-	-	-	-
2-Chlorophenol	mg/L	T	<0.011 :	-	-	-	-	-
2-Methylnaphthalene	mg/L	T	<0.011 :	-	-	-	-	-
2-Methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
2-Nitroaniline	mg/L	T	<0.026 :	-	-	-	-	-
2-Nitrophenol	mg/L	T	<0.011 :	-	-	-	-	-
3,3-Dichlorobenzidine	mg/L	T	<0.011 :	-	-	-	-	-
3-Nitroaniline	mg/L	T	<0.026 J	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026 :	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	<0.011 :	-	-	-	-	-
4-Chloro-3-methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
4-Chloroaniline	mg/L	T	<0.011 :	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.011 :	-	-	-	-	-
4-Methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
4-Nitroaniline	mg/L	T	<0.026 :	-	-	-	-	-
4-Nitrophenol	mg/L	T	<0.026 J	-	-	-	-	-
Acenaphthene	mg/L	T	<0.011 :	-	-	-	-	-
Acenaphthylene	mg/L	T	<0.011 :	-	-	-	-	-
Anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Benzaldehyde	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(a)anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(a)pyrene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.011 :	-	-	-	-	-
Butyl benzyl phthalate	mg/L	T	<0.011 :	-	-	-	-	-
Carbazole	mg/L	T	<0.011 :	-	-	-	-	-
Chrysene	mg/L	T	<0.011 :	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Dibenzofuran	mg/L	T	<0.011 :	-	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 4/8/2003 MMW-7-T01N-GRW GW5		MMW-7 4/8/2003 MMW-7-D01N-GRW GW5		MMW-7 5/9/2003 MMW-7-T01N-GRW GW5	MMW-7 6/9/2003 MMW-7-T01N-GRW GW5	MMW-7 7/23/2003 MMW-7-T01N-GRW GW5		MMW-7 7/23/2003 MMW-7-D01N-GRW GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.011	:	-		-	-	-		-	
Diethylphthalate	mg/L	T	<0.011	:	-		-	-	-		-	
Dimethylphthalate	mg/L	T	<0.011	:	-		-	-	-		-	
Di-n-Butyl phthalate	mg/L	T	<0.011	:	-		-	-	-		-	
Di-n-Octyl phthalate	mg/L	T	<0.011	:	-		-	-	-		-	
Fluoranthene	mg/L	T	<0.011	:	-		-	-	-		-	
Fluorene	mg/L	T	<0.011	:	-		-	-	-		-	
Hexachlorobenzene	mg/L	T	<0.011	:	-		-	-	-		-	
Hexachlorobutadiene	mg/L	T	<0.011	:	-		-	-	-		-	
Hexachlorocyclopentadiene	mg/L	T	<0.011	:	-		-	-	-		-	
Hexachloroethane	mg/L	T	<0.011	:	-		-	-	-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.011	:	-		-	-	-		-	
Isophorone	mg/L	T	<0.011	:	-		-	-	-		-	
Naphthalene	mg/L	T	<0.011	:	-		-	-	-		-	
Nitrobenzene	mg/L	T	<0.011	:	-		-	-	-		-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.011	:	-		-	-	-		-	
N-Nitrosodiphenylamine	mg/L	T	<0.011	:	-		-	-	-		-	
Pentachlorophenol	mg/L	T	<0.026	:	-		-	-	-		-	
Phenanthrene	mg/L	T	<0.011	:	-		-	-	-		-	
Phenol	mg/L	T	<0.011	:	-		-	-	-		-	
Pyrene	mg/L	T	<0.011	:	-		-	-	-		-	
Explosives												
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-	-	-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-	-	-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-	-	-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-	-	-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-	-	-		-	
Isotopes												
Lead	mg/L	T	0.0194	:	-		-	-	0.019	:	-	
Lead	mg/L	D	-		0.0192	:	-	-	-		0.0198	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 8/13/2003 MMW-7-T01N-GRW GW5		MMW-7 9/10/2003 MMW-7-T01N-GRW GW5		MMW-7 10/19/2003 MMW-7-T01N-GRW GW5		MMW-7 10/19/2003 MMW-7-D01N-GRW GW5		MMW-7 11/4/2003 MMW-7-T01N-GRW GW5		MMW-7 1/12/2004 MMW-7-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	1.46	:	0.82	:	5.19	:	-		0.35	:	0.41	:
EH	millivolts	T	420.6	:	222.8	:	595.	:	-		236.2	:	203.5	:
pH	SU	T	3.8	:	4.05	:	4.4	J	-		3.92	:	4.3	J
Specific Conductance	uS/cm	T	6990.	:	6699.	:	6218.	:	-		6453.	:	6230.	:
Temperature	Celsius	T	17.17	:	11.99	:	13.63	:	-		9.54	:	8.89	:
Turbidity	NTU	T	354.3	:	82.6	:	17.4	:	-		0.	:	8.3	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.27	J	-		-		<0.17	:
Bicarbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	-		-		8.9	:	-		-		53.6	:
Fluoride	mg/L	T	-		-		118.	:	-		-		115.	:
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	-		-		1.2	J	-		-		1.4	J
Nitrite	mg/L	T	-		-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		-		16.1	J	-		-		15.5	J
Phosphorus	mg/L	T	-		-		0.31	J	-		-		34.6	:
Sulfate	mg/L	T	-		-		5410.	J	-		-		6490.	:
Total Alkalinity	mg/L	T	-		-		<1.	:	-		-		<1.	:
Total Dissolved Solids	mg/L	T	-		-		7480.	:	-		-		11200.	:
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		0.37	:
Total Organic Carbon	mg/L	T	-		-		3.5	J	-		-		<1.9	:
Total Suspended Solids	mg/L	T	-		-		34.	:	-		-		14.8	:
Laboratory Parameters														
pH	SU	T	3.8	:	4.05	:	4.4	J	-		3.92	:	4.3	J
Specific Conductance	umhos/cm	T	-		-		5540.	J	-		-		6310.	J
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		-		3750.	:	-		-		3600.	:
Hardness	mg/L	D	-		-		-		3750.	:	-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 8/13/2003 MMW-7-T01N-GRW GW5	MMW-7 9/10/2003 MMW-7-T01N-GRW GW5	MMW-7 10/19/2003 MMW-7-T01N-GRW GW5	MMW-7 10/19/2003 MMW-7-D01N-GRW GW5	MMW-7 11/4/2003 MMW-7-T01N-GRW GW5	MMW-7 1/12/2004 MMW-7-T01N-GRW GW5
Aluminum	mg/L	T	-	-	458. :	-	-	444. :
Aluminum	mg/L	D	-	-	-	458. :	-	-
Antimony	mg/L	T	-	-	<0.052 :	-	-	<0.029 :
Antimony	mg/L	D	-	-	-	<0.052 :	-	-
Arsenic	mg/L	T	-	-	0.0432 :	-	-	<0.028 J
Arsenic	mg/L	D	-	-	-	<0.041 :	-	-
Barium	mg/L	T	-	-	<0.115 :	-	-	<0.053 :
Barium	mg/L	D	-	-	-	<0.115 :	-	-
Beryllium	mg/L	T	-	-	0.0717 :	-	-	0.0672 :
Beryllium	mg/L	D	-	-	-	0.0708 :	-	-
Boron	mg/L	T	-	-	<0.0988 :	-	-	<0.0324 :
Boron	mg/L	D	-	-	-	<0.0723 :	-	-
Cadmium	mg/L	T	-	-	<0.13 :	-	-	<0.07 J
Cadmium	mg/L	D	-	-	-	<0.13 :	-	-
Calcium	mg/L	T	-	-	483. :	-	-	463. :
Calcium	mg/L	D	-	-	-	482. :	-	-
Chromium	mg/L	T	-	-	<0.23 J	-	-	<0.57 :
Chromium	mg/L	D	-	-	-	<0.23 J	-	-
Cobalt	mg/L	T	-	-	2.45 :	-	-	2.32 J
Cobalt	mg/L	D	-	-	-	2.42 :	-	-
Copper	mg/L	T	-	-	1.28 :	-	-	1.2 :
Copper	mg/L	D	-	-	-	1.31 :	-	-
Iron	mg/L	T	-	-	255. :	-	-	254. :
Iron	mg/L	D	-	-	-	255. :	-	-
Lead	mg/L	T	-	-	0.0192 :	-	-	0.018 :
Lead	mg/L	D	-	-	-	0.0182 :	-	-
Magnesium	mg/L	T	-	-	618. :	-	-	594. :
Magnesium	mg/L	D	-	-	-	618. :	-	-
Manganese	mg/L	T	-	-	34.2 :	-	-	33.1 :
Manganese	mg/L	D	-	-	-	34.2 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 J	-	-	<0.024 :
Molybdenum	mg/L	D	-	-	-	<0.011 J	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 8/13/2003 MMW-7-T01N-GRW GW5	MMW-7 9/10/2003 MMW-7-T01N-GRW GW5	MMW-7 10/19/2003 MMW-7-T01N-GRW GW5	MMW-7 10/19/2003 MMW-7-D01N-GRW GW5	MMW-7 11/4/2003 MMW-7-T01N-GRW GW5	MMW-7 1/12/2004 MMW-7-T01N-GRW GW5
Nickel	mg/L	T	-	-	4.19 J	-	-	5.19 :
Nickel	mg/L	D	-	-	-	4.14 J	-	-
Potassium	mg/L	T	-	-	<63.8 :	-	-	<110. :
Potassium	mg/L	D	-	-	-	<63.8 :	-	-
Selenium	mg/L	T	-	-	0.0119 :	-	-	0.0084 J
Selenium	mg/L	D	-	-	-	0.0145 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	106. :	-	-	<92. :
Sodium	mg/L	D	-	-	-	<99.1 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	0.115 :	-	-	0.115 :
Vanadium	mg/L	D	-	-	-	0.119 :	-	-
Zinc	mg/L	T	-	-	<5.77 :	-	-	5.46 :
Zinc	mg/L	D	-	-	-	<5.76 :	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0192 :	-	-	0.018 :
Lead	mg/L	D	-	-	-	0.0182 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-7 1/12/2004 MMW-7-D01N-GRW GW5	MMW-7 2/22/2004 MMW-7-T01N-GRW GW5	MMW-7 2/22/2004 MMW-7-D01N-GRW GW5	MMW-7 3/22/2004 MMW-7 GW5	MMW-7 4/19/2004 MMW-7-T01N-GRW GW5	MMW-7 4/19/2004 MMW-7-D01N-GRW GW5
Field Measurements								
DO	mg/L	T	-	0.85 :	-	-	0.3 :	-
EH	millivolts	T	-	179.2 :	-	-	204.6 :	-
pH	SU	T	-	4.08 :	-	-	4.5 J	-
Specific Conductance	uS/cm	T	-	6469. :	-	-	6625. :	-
Temperature	Celsius	T	-	9.45 :	-	-	11.42 :	-
Turbidity	NTU	T	-	13.9 :	-	-	-	-
General Chemistry								
Ammonia	mg/L	T	-	-	-	-	<0.22 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	-	-	<1. :	-
Chloride	mg/L	T	-	-	-	-	25.6 J	-
Fluoride	mg/L	T	-	123. :	-	-	113. :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-	-	<1. :	-
Nitrate	mg/L	T	-	-	-	-	<0.2 J	-
Nitrite	mg/L	T	-	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	-	-	-	16.9 J	-
Phosphorus	mg/L	T	-	-	-	-	19.7 :	-
Sulfate	mg/L	T	-	6350. :	-	-	6870. :	-
Total Alkalinity	mg/L	T	-	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	9390. J	-	-	9380. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	-	<0.29 :	-
Total Organic Carbon	mg/L	T	-	-	-	-	3.8 J	-
Total Suspended Solids	mg/L	T	-	22.7 :	-	-	<9. J	-
Laboratory Parameters								
pH	SU	T	-	4.08 :	-	-	4.5 J	-
Specific Conductance	umhos/cm	T	-	-	-	-	5810. J	-
Inorganics								
Cyanide	mg/L	T	-	-	-	-	<0.01 :	-
Physical Properties								
Hardness	mg/L	T	-	3880. :	-	-	3650. :	-
Hardness	mg/L	D	3900. :	-	4020. :	-	-	3830. :
Metals								

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-7 1/12/2004 MMW-7-D01N-GRW	MMW-7 2/22/2004 MMW-7-T01N-GRW	MMW-7 2/22/2004 MMW-7-D01N-GRW	MMW-7 3/22/2004 MMW-7	MMW-7 4/19/2004 MMW-7-T01N-GRW	MMW-7 4/19/2004 MMW-7-D01N-GRW
			GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T	-	489. :	-	-	454. :	-
Aluminum	mg/L	D	470. :	-	503. :	-	-	485. :
Antimony	mg/L	T	-	<0.029 :	-	-	<0.053 :	-
Antimony	mg/L	D	<0.029 :	-	<0.029 :	-	-	<0.053 :
Arsenic	mg/L	T	-	<0.028 :	-	-	<0.0491 :	-
Arsenic	mg/L	D	<0.028 J	-	<0.028 :	-	-	<0.0484 :
Barium	mg/L	T	-	<0.053 :	-	-	<0.049 :	-
Barium	mg/L	D	<0.053 :	-	<0.053 :	-	-	<0.049 :
Beryllium	mg/L	T	-	0.0618 :	-	-	0.0672 :	-
Beryllium	mg/L	D	0.0682 :	-	0.0645 :	-	-	0.0718 :
Boron	mg/L	T	-	<0.023 :	-	-	<0.036 :	-
Boron	mg/L	D	<0.0302 :	-	<0.023 :	-	-	<0.0385 :
Cadmium	mg/L	T	-	0.082 :	-	-	<0.1 :	-
Cadmium	mg/L	D	<0.07 :	-	<0.07 J	-	-	<0.1 :
Calcium	mg/L	T	-	482. :	-	-	460. :	-
Calcium	mg/L	D	499. :	-	498. :	-	-	485. :
Chromium	mg/L	T	-	0.115 :	-	-	<0.19 :	-
Chromium	mg/L	D	<0.57 :	-	0.122 :	-	-	<0.13 :
Cobalt	mg/L	T	-	2.5 :	-	-	2.38 :	-
Cobalt	mg/L	D	2.5 :	-	2.65 :	-	-	2.47 :
Copper	mg/L	T	-	1.4 :	-	-	<1.49 :	-
Copper	mg/L	D	1.34 :	-	1.38 :	-	-	<1.5 :
Iron	mg/L	T	-	276. :	-	-	257. J	-
Iron	mg/L	D	277. :	-	285. :	-	-	269. :
Lead	mg/L	T	-	<0.0198 :	-	-	0.0182 :	-
Lead	mg/L	D	0.0171 :	-	<0.019 :	-	-	0.0182 :
Magnesium	mg/L	T	-	651. :	-	-	608. :	-
Magnesium	mg/L	D	644. :	-	673. :	-	-	636. :
Manganese	mg/L	T	-	36.6 :	-	-	33. :	-
Manganese	mg/L	D	35.6 :	-	37.8 :	-	-	34.8 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	-	<0.024 :	-	-	<0.014 :	-
Molybdenum	mg/L	D	<0.024 :	-	<0.024 :	-	-	<0.014 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 1/12/2004 MMW-7-D01N-GRW GW5		MMW-7 2/22/2004 MMW-7-T01N-GRW GW5		MMW-7 2/22/2004 MMW-7-D01N-GRW GW5		MMW-7 3/22/2004 MMW-7 GW5		MMW-7 4/19/2004 MMW-7-T01N-GRW GW5		MMW-7 4/19/2004 MMW-7-D01N-GRW GW5	
Nickel	mg/L	T	-		5.52	:	-		-		5.02	:	-	
Nickel	mg/L	D	5.63	:	-		5.64	:	-		-		5.	:
Potassium	mg/L	T	-		<24.3	:	-		-		<15.5	:	-	
Potassium	mg/L	D	<110.	:	-		<24.3	:	-		-		<15.5	:
Selenium	mg/L	T	-		0.0075	J	-		-		0.0113	:	-	
Selenium	mg/L	D	0.0085	:	-		0.0051	J	-		-		0.0096	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.001	J	-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	J
Sodium	mg/L	T	-		75.2	J	-		-		<32.8	:	-	
Sodium	mg/L	D	100.	:	-		78.4	J	-		-		<123.	:
Thallium	mg/L	T	-		<0.002	:	-		-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.002	:	-		-		<0.001	:
Vanadium	mg/L	T	-		0.123	:	-		-		0.129	:	-	
Vanadium	mg/L	D	0.113	:	-		0.13	:	-		-		0.134	:
Zinc	mg/L	T	-		5.3	:	-		-		5.17	:	-	
Zinc	mg/L	D	6.22	:	-		5.44	:	-		-		5.54	:
Lanthanides														
Cerium	mg/L	T	-		0.188	:	-		-		-		-	
Cerium	mg/L	D	-		-		0.203	:	-		-		-	
Dysprosium	mg/L	T	-		0.0873	:	-		-		-		-	
Dysprosium	mg/L	D	-		-		0.0748	:	-		-		-	
Erbium	mg/L	T	-		0.0376	:	-		-		-		-	
Erbium	mg/L	D	-		-		0.0318	:	-		-		-	
Europium	mg/L	T	-		0.0257	:	-		-		-		-	
Europium	mg/L	D	-		-		0.0244	:	-		-		-	
Gadolinium	mg/L	T	-		0.102	:	-		-		-		-	
Gadolinium	mg/L	D	-		-		0.099	:	-		-		-	
Holmium	mg/L	T	-		0.0159	:	-		-		-		-	
Holmium	mg/L	D	-		-		0.0135	:	-		-		-	
Lanthanum	mg/L	T	-		0.0576	:	-		-		-		-	
Lanthanum	mg/L	D	-		-		0.0624	:	-		-		-	
Lutetium	mg/L	T	-		0.00294	:	-		-		-		-	
Lutetium	mg/L	D	-		-		0.00249	:	-		-		-	
Neodymium	mg/L	T	-		0.233	:	-		-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-7 1/12/2004 MMW-7-D01N-GRW GW5	MMW-7 2/22/2004 MMW-7-T01N-GRW GW5	MMW-7 2/22/2004 MMW-7-D01N-GRW GW5	MMW-7 3/22/2004 MMW-7 GW5	MMW-7 4/19/2004 MMW-7-T01N-GRW GW5	MMW-7 4/19/2004 MMW-7-D01N-GRW GW5
Neodymium	mg/L	D	-	-	0.235 :	-	-	-
Praseodymium	mg/L	T	-	0.0371 :	-	-	-	-
Praseodymium	mg/L	D	-	-	0.039 :	-	-	-
Samarium	mg/L	T	-	0.0781 :	-	-	-	-
Samarium	mg/L	D	-	-	0.0733 :	-	-	-
Terbium	mg/L	T	-	0.016 :	-	-	-	-
Terbium	mg/L	D	-	-	0.0144 :	-	-	-
Thulium	mg/L	T	-	0.00417 :	-	-	-	-
Thulium	mg/L	D	-	-	0.00356 :	-	-	-
Ytterbium	mg/L	T	-	0.0228 :	-	-	-	-
Ytterbium	mg/L	D	-	-	0.0199 :	-	-	-
Yttrium	mg/L	T	-	0.531 :	-	-	-	-
Yttrium	mg/L	D	-	-	0.53 :	-	-	-
Isotopes								
204Pb/206Pb	mg/L	T	-	0.00011 :	-	-	-	-
204Pb/206Pb	mg/L	D	-	-	0.00011 :	-	-	-
207Pb/206Pb	mg/L	T	-	0.00071 :	-	-	-	-
207Pb/206Pb	mg/L	D	-	-	0.0007 :	-	-	-
208Pb/206Pb	mg/L	T	-	0.00132 :	-	-	-	-
208Pb/206Pb	mg/L	D	-	-	0.00125 :	-	-	-
Delta 34S	per mil	D	-	-	-4.5 :	-	-	-
Delta D	per mil	T	-	-80.1 :	-	-	-	-
Delta O-18	per mil	T	-	-11. :	-	-	-	-
Lead	mg/L	T	-	<0.0198 :	-	-	0.0182 :	-
Lead	mg/L	D	0.0171 :	-	<0.019 :	-	-	0.0182 :
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	10.16 :	-	-
DEL He3	%	T	-	-	-	5.4 :	-	-
DEL He4	%	T	-	-	-	13.9 :	-	-
He Corr	1E-8cc/g	T	-	-	-	5.364 :	-	-
Tritium TU	TU	T	-	-	-	1.83 :	-	-
Uncert Age	Years	T	-	-	-	1.67 :	-	-
Uncert TU	TU	T	-	-	-	0.055 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-8A 11/3/2002 MMW-8A-T01N-GRW GW5		MMW-8A 11/3/2002 MMW-8A-D01N-GRW GW5		MMW-8A 11/4/2002 MMW-8A-T01N-GRW GW5		MMW-8A 12/6/2002 MMW-8A-T01N-GRW GW5		MMW-8A 1/7/2003 MMW-8A-T01N-GRW GW5		MMW-8A 1/7/2003 MMW-8A-D01N-GRW GW5	
Field Measurements														
DO	mg/L	T	2.21	:	-		-		3.04	:	2.47	:	-	
EH	millivolts	T	81.	:	-		-		51.1	:	144.3	:	-	
pH	SU	T	6.78	:	-		-		6.93	:	6.93	:	-	
Specific Conductance	uS/cm	T	2154.	:	-		-		5167.	:	5015.	:	-	
Temperature	Celsius	T	10.23	:	-		-		4.47	:	8.43	:	-	
Turbidity	NTU	T	8.	:	-		-		17.2	:	20.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.13	J	-		-		-		<0.12	:	-	
Bicarbonate (as CaCO3)	mg/L	T	144.	:	-		-		-		231.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	6.4	:	-		-		-		6.1	:	-	
Fluoride	mg/L	T	2.9	J	-		-		-		2.1	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		-		-		<0.4	J	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.02	J	-		-		-		31.6	J	-	
Phosphorus	mg/L	T	0.033	:	-		-		-		0.1	J	-	
Sulfate	mg/L	T	1350.	:	-		-		-		1790.	J	-	
Total Alkalinity	mg/L	T	144.	:	-		-		-		231.	:	-	
Total Dissolved Solids	mg/L	T	2140.	:	-		-		-		2620.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	1.8	:	-		-		-		2.6	:	-	
Laboratory Parameters														
pH	SU	T	6.78	:	-		-		6.93	:	6.93	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1470.	:	-		-		-		1730.	:	-	
Hardness	mg/L	D	-		1460.	:	-		-		-		1820.	:
Metals														
Aluminum	mg/L	T	<0.0172	:	-		-		-		<0.142	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/6/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	D		-	<0.0108 :	-	-	-	<0.142 :
Antimony	mg/L	T		<0.0002 :	-	-	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.00028 :	-	-	-	<0.0006 :
Arsenic	mg/L	T		<0.00092 :	-	-	-	0.0017 :	-
Arsenic	mg/L	D		-	<0.001 :	-	-	-	0.0016 :
Barium	mg/L	T		0.0332 :	-	-	-	0.0366 :	-
Barium	mg/L	D		-	0.0323 :	-	-	-	0.037 :
Beryllium	mg/L	T		<0.0002 :	-	-	-	<0.0002 :	-
Beryllium	mg/L	D		-	<0.0002 :	-	-	-	<0.0002 :
Boron	mg/L	T		0.0061 :	-	-	-	0.009 J	-
Boron	mg/L	D		-	0.0076 :	-	-	-	0.0085 J
Cadmium	mg/L	T		0.00025 :	-	-	-	<0.0004 :	-
Cadmium	mg/L	D		-	0.00022 :	-	-	-	<0.0004 :
Calcium	mg/L	T		440. :	-	-	-	532. :	-
Calcium	mg/L	D		-	437. :	-	-	-	558. :
Chromium	mg/L	T		<0.0046 :	-	-	-	<0.0037 :	-
Chromium	mg/L	D		-	<0.0046 :	-	-	-	<0.0037 :
Chromium, Hexavalent	mg/L	D		-	-	<0.01 :	-	-	-
Cobalt	mg/L	T		0.0028 :	-	-	-	0.0035 :	-
Cobalt	mg/L	D		-	0.0025 :	-	-	-	<0.0034 :
Copper	mg/L	T		<0.0003 J	-	-	-	<0.0017 :	-
Copper	mg/L	D		-	<0.0003 J	-	-	-	<0.0017 :
Iron	mg/L	T		0.17 :	-	-	-	1.01 :	-
Iron	mg/L	D		-	0.0931 :	-	-	-	0.986 :
Lead	mg/L	T		<0.0001 :	-	-	-	<0.0002 :	-
Lead	mg/L	D		-	<0.0001 :	-	-	-	<0.0002 :
Magnesium	mg/L	T		89.6 :	-	-	-	97.4 :	-
Magnesium	mg/L	D		-	88.8 :	-	-	-	102. :
Manganese	mg/L	T		2.3 :	-	-	-	4.69 :	-
Manganese	mg/L	D		-	2.22 :	-	-	-	4.9 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T		0.0093 :	-	-	-	0.0046 J	-
Molybdenum	mg/L	D		-	0.0096 :	-	-	-	0.0049 J

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-8A 11/3/2002 MMW-8A-T01N-GRW	MMW-8A 11/3/2002 MMW-8A-D01N-GRW	MMW-8A 11/4/2002 MMW-8A-T01N-GRW	MMW-8A 12/6/2002 MMW-8A-T01N-GRW	MMW-8A 1/7/2003 MMW-8A-T01N-GRW	MMW-8A 1/7/2003 MMW-8A-D01N-GRW
			GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T	0.0035 :	-	-	-	0.0021 :	-
Nickel	mg/L	D	-	0.0026 :	-	-	-	<0.0023 :
Potassium	mg/L	T	4.72 :	-	-	-	4.66 :	-
Potassium	mg/L	D	-	4.86 :	-	-	-	4.75 :
Selenium	mg/L	T	0.00096 :	-	-	-	<0.0016 :	-
Selenium	mg/L	D	-	0.00056 :	-	-	-	<0.0016 :
Silver	mg/L	T	<0.0001 :	-	-	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0001 :	-	-	-	<0.0002 :
Sodium	mg/L	T	36.5 J	-	-	-	37.7 :	-
Sodium	mg/L	D	-	35.6 J	-	-	-	40.2 :
Thallium	mg/L	T	<0.0001 :	-	-	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0001 :	-	-	-	<0.0002 :
Vanadium	mg/L	T	0.00013 :	-	-	-	<0.0004 :	-
Vanadium	mg/L	D	-	0.00013 :	-	-	-	<0.0004 :
Zinc	mg/L	T	0.0095 :	-	-	-	<0.039 :	-
Zinc	mg/L	D	-	0.0099 :	-	-	-	<0.039 :
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T	0.001 J	-	-	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01 :	-	-	-	<0.01 J	-
1,2-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T	<0.01 :	-	-	-	<0.01 :	-
2-Butanone	mg/L	T	<0.01 J	-	-	-	<0.01 :	-
2-Hexanone	mg/L	T	<0.01 J	-	-	-	<0.01 :	-
4-Methyl-2-pentanone	mg/L	T	<0.01 J	-	-	-	<0.01 :	-

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/6/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Benzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromoform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		<0.01 J	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Styrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Toluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		<0.025 :	-	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		<0.025 :	-	-	-	<0.025 J	-
2,4-Dinitrotoluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MMW-8A	11/3/2002	MMW-8A-T01N-GRW	GW5	MMW-8A	11/3/2002	MMW-8A-D01N-GRW	GW5	MMW-8A	11/4/2002	MMW-8A-T01N-GRW	GW5	MMW-8A	12/6/2002	MMW-8A-T01N-GRW	GW5	MMW-8A	1/7/2003	MMW-8A-T01N-GRW	GW5	MMW-8A	1/7/2003	MMW-8A-D01N-GRW	GW5
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
2-Chloronaphthalene	mg/L	T	<0.01	:	-		-		-		-		<0.01	J	-											
2-Chlorophenol	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
2-Methylnaphthalene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
2-Methylphenol	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
2-Nitroaniline	mg/L	T	<0.025	:	-		-		-		-		<0.025	:	-											
2-Nitrophenol	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
3-Nitroaniline	mg/L	T	<0.025	:	-		-		-		-		<0.025	:	-											
4,6-Dinitro-2-methylphenol	mg/L	T	<0.025	:	-		-		-		-		<0.025	J	-											
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
4-Chloroaniline	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
4-Methylphenol	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
4-Nitroaniline	mg/L	T	<0.025	:	-		-		-		-		<0.025	:	-											
4-Nitrophenol	mg/L	T	<0.025	:	-		-		-		-		<0.025	:	-											
Acenaphthene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Acenaphthylene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Anthracene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Benzaldehyde	mg/L	T	<0.01	J	-		-		-		-		<0.01	:	-											
Benzo(a)anthracene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Benzo(a)pyrene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Carbazole	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Chrysene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											
Dibenzofuran	mg/L	T	<0.01	:	-		-		-		-		<0.01	:	-											

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			MMW-8A 11/3/2002 MMW-8A-T01N-GRW GW5		MMW-8A 11/3/2002 MMW-8A-D01N-GRW GW5		MMW-8A 11/4/2002 MMW-8A-T01N-GRW GW5		MMW-8A 12/6/2002 MMW-8A-T01N-GRW GW5		MMW-8A 1/7/2003 MMW-8A-T01N-GRW GW5		MMW-8A 1/7/2003 MMW-8A-D01N-GRW GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.01	J	-		-		-		<0.01	:	-	
Diethylphthalate	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Dimethylphthalate	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Fluoranthene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Fluorene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Hexachlorobenzene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Hexachlorobutadiene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Hexachloroethane	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Isophorone	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Naphthalene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Nitrobenzene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Pentachlorophenol	mg/L	T	<0.025	:	-		-		-		<0.025	J	-	
Phenanthrene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Phenol	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Pyrene	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	<0.0001	:	-		-		-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0001	:	-		-		-		<0.0002	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			MMW-8A 2/7/2003 MMW-8A-T01N-GRW GW5		MMW-8A 3/6/2003 MMW-8A-T01N-GRW GW5		MMW-8A 4/7/2003 MMW-8A-T01N-GRW GW5		MMW-8A 4/7/2003 MMW-8A-D01N-GRW GW5		MMW-8A 5/7/2003 MMW-8A-T01N-GRW GW5		MMW-8A 6/5/2003 MMW-8A-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	1.56	:	0.5	:	1.23	:	-		2.95	:	1.97	:
EH	millivolts	T	73.6	:	160.3	:	13.	:	-		17.4	:	27.3	:
pH	SU	T	6.96	:	6.88	:	7.	J	-		6.74	:	6.76	:
Specific Conductance	uS/cm	T	2518.	:	2611.	:	2595.	:	-		2655.	:	2512.	:
Temperature	Celsius	T	5.22	:	10.42	:	7.92	:	-		14.98	:	23.57	:
Turbidity	NTU	T	0.	:	47.4	:	0.	:	-		0.4	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.074	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		161.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		6.4	:	-		-		-	
Fluoride	mg/L	T	-		-		2.1	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		<0.4	J	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.16	:	-		-		-	
Phosphorus	mg/L	T	-		-		0.13	:	-		-		-	
Sulfate	mg/L	T	-		-		1420.	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		161.	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		2400.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<1.5	J	-		-		-	
Total Suspended Solids	mg/L	T	-		-		<3.9	:	-		-		-	
Laboratory Parameters														
pH	SU	T	6.96	:	6.88	:	7.	J	-		6.74	:	6.76	:
Specific Conductance	umhos/cm	T	-		-		2480.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		1820.	:	-		-		-	
Hardness	mg/L	D	-		-		-		1780.	:	-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8A 2/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 3/6/2003 MMW-8A-T01N-GRW GW5	MMW-8A 4/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 4/7/2003 MMW-8A-D01N-GRW GW5	MMW-8A 5/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 6/5/2003 MMW-8A-T01N-GRW GW5
Aluminum	mg/L	T	-	-	<0.426 :	-	-	-
Aluminum	mg/L	D	-	-	-	<0.426 :	-	-
Antimony	mg/L	T	-	-	<0.0006 J	-	-	-
Antimony	mg/L	D	-	-	-	<0.0006 J	-	-
Arsenic	mg/L	T	-	-	0.0016 :	-	-	-
Arsenic	mg/L	D	-	-	-	0.0019 :	-	-
Barium	mg/L	T	-	-	0.0346 :	-	-	-
Barium	mg/L	D	-	-	-	0.0338 :	-	-
Beryllium	mg/L	T	-	-	<0.0003 :	-	-	-
Beryllium	mg/L	D	-	-	-	<0.0003 :	-	-
Boron	mg/L	T	-	-	<0.0084 :	-	-	-
Boron	mg/L	D	-	-	-	<0.0084 :	-	-
Cadmium	mg/L	T	-	-	<0.0005 :	-	-	-
Cadmium	mg/L	D	-	-	-	<0.0005 :	-	-
Calcium	mg/L	T	-	-	562. :	-	-	-
Calcium	mg/L	D	-	-	-	551. :	-	-
Chromium	mg/L	T	-	-	<0.001 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.001 :	-	-
Cobalt	mg/L	T	-	-	<0.0038 :	-	-	-
Cobalt	mg/L	D	-	-	-	<0.0038 :	-	-
Copper	mg/L	T	-	-	<0.0015 :	-	-	-
Copper	mg/L	D	-	-	-	0.0016 :	-	-
Iron	mg/L	T	-	-	0.802 :	-	-	-
Iron	mg/L	D	-	-	-	0.944 :	-	-
Lead	mg/L	T	-	-	<0.0002 :	-	-	-
Lead	mg/L	D	-	-	-	<0.0002 :	-	-
Magnesium	mg/L	T	-	-	102. :	-	-	-
Magnesium	mg/L	D	-	-	-	98.2 :	-	-
Manganese	mg/L	T	-	-	4.48 :	-	-	-
Manganese	mg/L	D	-	-	-	4.51 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.006 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.0062 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8A 2/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 3/6/2003 MMW-8A-T01N-GRW GW5	MMW-8A 4/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 4/7/2003 MMW-8A-D01N-GRW GW5	MMW-8A 5/7/2003 MMW-8A-T01N-GRW GW5	MMW-8A 6/5/2003 MMW-8A-T01N-GRW GW5
Nickel	mg/L	T	-	-	<0.003 :	-	-	-
Nickel	mg/L	D	-	-	-	<0.003 :	-	-
Potassium	mg/L	T	-	-	3.98 :	-	-	-
Potassium	mg/L	D	-	-	-	3.99 :	-	-
Selenium	mg/L	T	-	-	<0.001 :	-	-	-
Selenium	mg/L	D	-	-	-	<0.001 :	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	-
Silver	mg/L	D	-	-	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	40.1 :	-	-	-
Sodium	mg/L	D	-	-	-	38.5 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	<0.0002 :	-	-	-
Vanadium	mg/L	D	-	-	-	<0.0002 :	-	-
Zinc	mg/L	T	-	-	<0.039 :	-	-	-
Zinc	mg/L	D	-	-	-	<0.039 :	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T	-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T	-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T	-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T	-	-	<0.01 J	-	-	-
4-Methyl-2-pentanone	mg/L	T	-	-	<0.01 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T		-	-	<0.01 :	-	-	-
Benzene	mg/L	T		-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T		-	-	<0.01 :	-	-	-
Bromoform	mg/L	T		-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T		-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T		-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T		-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T		-	-	<0.01 :	-	-	-
Chloroform	mg/L	T		-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T		-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T		-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T		-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T		-	-	<0.01 :	-	-	-
Methylene chloride	mg/L	T		-	-	<0.01 :	-	-	-
Styrene	mg/L	T		-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T		-	-	<0.01 :	-	-	-
Toluene	mg/L	T		-	-	<0.01 :	-	-	-
Total Xylene	mg/L	T		-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T		-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T		-	-	<0.01 :	-	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	<0.013 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T		-	-	<0.032 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T		-	-	<0.013 :	-	-	-
2,4-Dichlorophenol	mg/L	T		-	-	<0.013 :	-	-	-
2,4-Dimethylphenol	mg/L	T		-	-	<0.013 J	-	-	-
2,4-Dinitrophenol	mg/L	T		-	-	<0.032 J	-	-	-
2,4-Dinitrotoluene	mg/L	T		-	-	<0.013 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-8A 2/7/2003 MMW-8A-T01N-GRW	MMW-8A 3/6/2003 MMW-8A-T01N-GRW	MMW-8A 4/7/2003 MMW-8A-T01N-GRW	MMW-8A 4/7/2003 MMW-8A-D01N-GRW	MMW-8A 5/7/2003 MMW-8A-T01N-GRW	MMW-8A 6/5/2003 MMW-8A-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
2,6-Dinitrotoluene	mg/L	T	-	-	<0.013 :	-	-	-
2-Chloronaphthalene	mg/L	T	-	-	<0.013 :	-	-	-
2-Chlorophenol	mg/L	T	-	-	<0.013 :	-	-	-
2-Methylnaphthalene	mg/L	T	-	-	<0.013 :	-	-	-
2-Methylphenol	mg/L	T	-	-	<0.013 :	-	-	-
2-Nitroaniline	mg/L	T	-	-	<0.032 :	-	-	-
2-Nitrophenol	mg/L	T	-	-	<0.013 :	-	-	-
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.013 J	-	-	-
3-Nitroaniline	mg/L	T	-	-	<0.032 J	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.032 :	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.013 :	-	-	-
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.013 :	-	-	-
4-Chloroaniline	mg/L	T	-	-	<0.013 :	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.013 :	-	-	-
4-Methylphenol	mg/L	T	-	-	<0.013 :	-	-	-
4-Nitroaniline	mg/L	T	-	-	<0.032 :	-	-	-
4-Nitrophenol	mg/L	T	-	-	<0.032 J	-	-	-
Acenaphthene	mg/L	T	-	-	<0.013 :	-	-	-
Acenaphthylene	mg/L	T	-	-	<0.013 :	-	-	-
Anthracene	mg/L	T	-	-	<0.013 :	-	-	-
Benzaldehyde	mg/L	T	-	-	<0.013 :	-	-	-
Benzo(a)anthracene	mg/L	T	-	-	<0.013 :	-	-	-
Benzo(a)pyrene	mg/L	T	-	-	<0.013 :	-	-	-
Benzo(b)fluoranthene	mg/L	T	-	-	<0.013 :	-	-	-
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.013 :	-	-	-
Benzo(k)fluoranthene	mg/L	T	-	-	<0.013 :	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.013 :	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.013 :	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	<0.013 :	-	-	-
Butyl benzyl phthalate	mg/L	T	-	-	<0.013 :	-	-	-
Carbazole	mg/L	T	-	-	<0.013 :	-	-	-
Chrysene	mg/L	T	-	-	<0.013 :	-	-	-
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.013 :	-	-	-
Dibenzofuran	mg/L	T	-	-	<0.013 :	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Dichlorodiisopropyl ether	mg/L	T		-	-	<0.013 :	-	-	-
Diethylphthalate	mg/L	T		-	-	<0.013 :	-	-	-
Dimethylphthalate	mg/L	T		-	-	<0.013 :	-	-	-
Di-n-Butyl phthalate	mg/L	T		-	-	<0.013 :	-	-	-
Di-n-Octyl phthalate	mg/L	T		-	-	<0.013 :	-	-	-
Fluoranthene	mg/L	T		-	-	<0.013 :	-	-	-
Fluorene	mg/L	T		-	-	<0.013 :	-	-	-
Hexachlorobenzene	mg/L	T		-	-	<0.013 :	-	-	-
Hexachlorobutadiene	mg/L	T		-	-	<0.013 :	-	-	-
Hexachlorocyclopentadiene	mg/L	T		-	-	<0.013 :	-	-	-
Hexachloroethane	mg/L	T		-	-	<0.013 :	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T		-	-	<0.013 :	-	-	-
Isophorone	mg/L	T		-	-	<0.013 :	-	-	-
Naphthalene	mg/L	T		-	-	<0.013 :	-	-	-
Nitrobenzene	mg/L	T		-	-	<0.013 :	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T		-	-	<0.013 :	-	-	-
N-Nitrosodiphenylamine	mg/L	T		-	-	<0.013 :	-	-	-
Pentachlorophenol	mg/L	T		-	-	<0.032 :	-	-	-
Phenanthrene	mg/L	T		-	-	<0.013 :	-	-	-
Phenol	mg/L	T		-	-	<0.013 :	-	-	-
Pyrene	mg/L	T		-	-	<0.013 :	-	-	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T		-	-	<0.01 :	-	-	-
Isotopes									
Lead	mg/L	T		-	-	<0.0002 :	-	-	-
Lead	mg/L	D		-	-	-	<0.0002 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-8A 7/21/2003 MMW-8A-T01N-GRW		MMW-8A 7/21/2003 MMW-8A-D01N-GRW		MMW-8A 8/13/2003 MMW-8A-T01N-GRW		MMW-8A 9/10/2003 MMW-8A-T01N-GRW		MMW-8A 10/16/2003 MMW-8A-T01N-GRW		MMW-8A 10/16/2003 MMW-8A-D01N-GRW	
			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	0.08	:	-		0.98	:	0.51	:	1.06	:	-	
EH	millivolts	T	-10.	:	-		-35.7	:	26.3	:	-13.6	:	-	
pH	SU	T	7.	J	-		7.1	:	6.77	:	7.	J	-	
Specific Conductance	uS/cm	T	2491.	:	-		2549.	:	2572.	:	2441.	:	-	
Temperature	Celsius	T	12.73	:	-		15.86	:	13.75	:	12.87	:	-	
Turbidity	NTU	T	0.	:	-		0.8	:	7.3	:	1.5	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.072	J	-		-		-		<0.13	J	-	
Bicarbonate (as CaCO3)	mg/L	T	163.	:	-		-		-		164.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	7.1	:	-		-		-		6.7	:	-	
Fluoride	mg/L	T	1.9	:	-		-		-		2.1	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		-		-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.03	J	-		-		-		<0.023	:	-	
Phosphorus	mg/L	T	0.1	:	-		-		-		0.099	:	-	
Sulfate	mg/L	T	1570.	J	-		-		-		1340.	J	-	
Total Alkalinity	mg/L	T	163.	:	-		-		-		164.	:	-	
Total Dissolved Solids	mg/L	T	2480.	:	-		-		-		2610.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		-		-		<1.	J	-	
Total Suspended Solids	mg/L	T	2.9	:	-		-		-		2.7	:	-	
Laboratory Parameters														
pH	SU	T	7.	J	-		7.1	:	6.77	:	7.	J	-	
Specific Conductance	umhos/cm	T	2430.	J	-		-		-		2400.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1670.	:	-		-		-		1810.	:	-	
Hardness	mg/L	D	-		1760.	:	-		-		-		1840.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	7/21/2003	7/21/2003	8/13/2003	9/10/2003	10/16/2003	10/16/2003
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		<0.631 :	-	-	-	<0.217 :	-
Aluminum	mg/L	D		-	<0.631 :	-	-	-	<0.217 :
Antimony	mg/L	T		<0.001 :	-	-	-	<0.001 :	-
Antimony	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Arsenic	mg/L	T		0.0013 :	-	-	-	0.0014 :	-
Arsenic	mg/L	D		-	0.0013 :	-	-	-	0.0012 :
Barium	mg/L	T		0.0338 :	-	-	-	0.0367 :	-
Barium	mg/L	D		-	0.0334 :	-	-	-	0.0343 :
Beryllium	mg/L	T		<0.0002 :	-	-	-	<0.0004 :	-
Beryllium	mg/L	D		-	<0.0002 :	-	-	-	<0.0004 :
Boron	mg/L	T		0.0097 :	-	-	-	0.0102 :	-
Boron	mg/L	D		-	0.0097 :	-	-	-	0.0089 :
Cadmium	mg/L	T		<0.0003 :	-	-	-	<0.0005 :	-
Cadmium	mg/L	D		-	<0.0003 :	-	-	-	<0.0005 :
Calcium	mg/L	T		561. :	-	-	-	554. :	-
Calcium	mg/L	D		-	540. :	-	-	-	565. :
Chromium	mg/L	T		<0.0006 :	-	-	-	0.0015 J	-
Chromium	mg/L	D		-	<0.0006 :	-	-	-	0.0013 J
Cobalt	mg/L	T		0.0043 :	-	-	-	0.0047 :	-
Cobalt	mg/L	D		-	0.0062 :	-	-	-	0.0045 :
Copper	mg/L	T		<0.0014 :	-	-	-	<0.0022 :	-
Copper	mg/L	D		-	<0.0014 :	-	-	-	<0.0022 :
Iron	mg/L	T		0.669 :	-	-	-	0.867 :	-
Iron	mg/L	D		-	0.9 :	-	-	-	0.955 :
Lead	mg/L	T		<0.0002 :	-	-	-	<0.0004 :	-
Lead	mg/L	D		-	<0.0002 :	-	-	-	<0.0004 :
Magnesium	mg/L	T		104. :	-	-	-	103. :	-
Magnesium	mg/L	D		-	100. :	-	-	-	105. :
Manganese	mg/L	T		4.66 :	-	-	-	4.71 :	-
Manganese	mg/L	D		-	4.48 :	-	-	-	4.82 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 J	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 J
Molybdenum	mg/L	T		0.0041 :	-	-	-	0.0036 J	-
Molybdenum	mg/L	D		-	0.0049 :	-	-	-	0.0043 J

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8A 7/21/2003 MMW-8A-T01N-GRW GW5		MMW-8A 7/21/2003 MMW-8A-D01N-GRW GW5		MMW-8A 8/13/2003 MMW-8A-T01N-GRW GW5	MMW-8A 9/10/2003 MMW-8A-T01N-GRW GW5	MMW-8A 10/16/2003 MMW-8A-T01N-GRW GW5		MMW-8A 10/16/2003 MMW-8A-D01N-GRW GW5	
Nickel	mg/L	T	<0.0023	:	-		-	-	<0.0024	:	-	
Nickel	mg/L	D	-		<0.0032	:	-	-	-		<0.0024	:
Potassium	mg/L	T	5.06	:	-		-	-	<4.86	:	-	
Potassium	mg/L	D	-		5.02	:	-	-	-		<4.54	:
Selenium	mg/L	T	<0.0016	:	-		-	-	<0.0006	:	-	
Selenium	mg/L	D	-		<0.0016	J	-	-	-		<0.0006	:
Silver	mg/L	T	<0.0002	J	-		-	-	<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-	-	-		<0.0002	:
Sodium	mg/L	T	39.2	:	-		-	-	42.	:	-	
Sodium	mg/L	D	-		39.3	:	-	-	-		44.1	:
Thallium	mg/L	T	<0.0002	:	-		-	-	<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-	-	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		-	-	0.00024	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-	-	-		<0.0002	:
Zinc	mg/L	T	<0.016	:	-		-	-	<0.019	:	-	
Zinc	mg/L	D	-		<0.016	:	-	-	-		<0.019	:
Isotopes												
Lead	mg/L	T	<0.0002	:	-		-	-	<0.0004	:	-	
Lead	mg/L	D	-		<0.0002	:	-	-	-		<0.0004	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A	MMW-8A
			Sample Date	11/2/2003	11/4/2003	12/10/2003	1/9/2004	1/9/2004	4/19/2004
			Sample ID	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-T01N-GRW	MMW-8A-D01N-GRW	MMW-8A-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		-	0.84 :	1.67 :	0.85 :	-	0.57 :
EH	millivolts	T		-	-108.4 :	32.9 :	-8.6 :	-	-48.1 :
pH	SU	T		-	6.86 :	6.75 :	7.2 J	-	7.1 J
Specific Conductance	uS/cm	T		-	2324. :	2348. :	2498. :	-	2579. :
Temperature	Celsius	T		-	8.84 :	10.79 :	8.98 :	-	10.7 :
Turbidity	NTU	T		-	1.7 :	0.7 :	0.5 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.067 J	-	2.3 :
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	162. :	-	446. :
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Chloride	mg/L	T		-	-	-	6.5 :	-	25.8 J
Fluoride	mg/L	T		-	-	-	2. :	-	1.1 :
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	-	-	<0.2 :	-	<0.2 :
Nitrite	mg/L	T		-	-	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	-	-	0.049 :	-	0.04 :
Phosphorus	mg/L	T		-	-	-	0.1 :	-	0.027 :
Sulfate	mg/L	T		-	-	-	1630. :	-	1890. :
Total Alkalinity	mg/L	T		-	-	-	162. :	-	446. :
Total Dissolved Solids	mg/L	T		-	-	-	2500. :	-	2880. :
Total Kjeldahl Nitrogen	mg/L	T		2.6 :	-	-	<0.24 :	-	<2.1 :
Total Organic Carbon	mg/L	T		-	-	-	<1.6 :	-	11.6 J
Total Suspended Solids	mg/L	T		-	-	-	3. :	-	7.5 J
Laboratory Parameters									
pH	SU	T		-	6.86 :	6.75 :	7.2 J	-	7.1 J
Specific Conductance	umhos/cm	T		-	-	-	2320. J	-	2840. J
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	-	-	1700. :	-	2190. :
Hardness	mg/L	D		-	-	-	-	1740. :	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction	MMW-8A 11/2/2003 MMW-8A-T01N-GRW GW5		MMW-8A 11/4/2003 MMW-8A-T01N-GRW GW5		MMW-8A 12/10/2003 MMW-8A-T01N-GRW GW5		MMW-8A 1/9/2004 MMW-8A-T01N-GRW GW5		MMW-8A 1/9/2004 MMW-8A-D01N-GRW GW5		MMW-8A 4/19/2004 MMW-8A-T01N-GRW GW5	
Aluminum	mg/L	T	-		-		-		<0.514	:	-		<0.275	:
Aluminum	mg/L	D	-		-		-		-		<0.514	:	-	
Antimony	mg/L	T	-		-		-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	-		-		-		-		<0.0024	:	-	
Arsenic	mg/L	T	-		-		-		0.0014	:	-		<0.0004	:
Arsenic	mg/L	D	-		-		-		-		0.0016	:	-	
Barium	mg/L	T	-		-		-		0.0337	:	-		0.0074	:
Barium	mg/L	D	-		-		-		-		0.0344	:	-	
Beryllium	mg/L	T	-		-		-		<0.001	J	-		0.00094	:
Beryllium	mg/L	D	-		-		-		-		<0.001	J	-	
Boron	mg/L	T	-		-		-		<0.0117	:	-		0.0295	:
Boron	mg/L	D	-		-		-		-		<0.0117	:	-	
Cadmium	mg/L	T	-		-		-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	-		-		-		-		<0.0007	J	-	
Calcium	mg/L	T	-		-		-		520.	:	-		516.	:
Calcium	mg/L	D	-		-		-		-		533.	:	-	
Chromium	mg/L	T	-		-		-		<0.0057	:	-		<0.0006	:
Chromium	mg/L	D	-		-		-		-		<0.0057	:	-	
Cobalt	mg/L	T	-		-		-		<0.0037	:	-		<0.0011	:
Cobalt	mg/L	D	-		-		-		-		0.004	:	-	
Copper	mg/L	T	-		-		-		<0.0035	:	-		<0.0007	:
Copper	mg/L	D	-		-		-		-		<0.0035	:	-	
Iron	mg/L	T	-		-		-		0.832	:	-		2.92	J
Iron	mg/L	D	-		-		-		-		0.76	:	-	
Lead	mg/L	T	-		-		-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	-		-		-		-		<0.0002	:	-	
Magnesium	mg/L	T	-		-		-		96.3	:	-		218.	:
Magnesium	mg/L	D	-		-		-		-		98.7	:	-	
Manganese	mg/L	T	-		-		-		4.15	:	-		5.88	:
Manganese	mg/L	D	-		-		-		-		4.23	:	-	
Mercury	mg/L	T	-		-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		-		-		<0.0001	:	-	
Molybdenum	mg/L	T	-		-		-		0.0053	:	-		<0.001	:
Molybdenum	mg/L	D	-		-		-		-		0.0059	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8A 11/2/2003 MMW-8A-T01N-GRW GW5	MMW-8A 11/4/2003 MMW-8A-T01N-GRW GW5	MMW-8A 12/10/2003 MMW-8A-T01N-GRW GW5	MMW-8A 1/9/2004 MMW-8A-T01N-GRW GW5	MMW-8A 1/9/2004 MMW-8A-D01N-GRW GW5	MMW-8A 4/19/2004 MMW-8A-T01N-GRW GW5
Nickel	mg/L	T	-	-	-	<0.0168 :	-	<0.0015 J
Nickel	mg/L	D	-	-	-	-	<0.0168 :	-
Potassium	mg/L	T	-	-	-	5.62 :	-	15.4 :
Potassium	mg/L	D	-	-	-	-	7.43 :	-
Selenium	mg/L	T	-	-	-	<0.0006 J	-	<0.0014 :
Selenium	mg/L	D	-	-	-	-	<0.0006 :	-
Silver	mg/L	T	-	-	-	<0.0002 :	-	<0.0002 J
Silver	mg/L	D	-	-	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	-	39.5 :	-	72.3 :
Sodium	mg/L	D	-	-	-	-	40.5 :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	-	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	<0.0004 :	-	0.00078 :
Vanadium	mg/L	D	-	-	-	-	<0.0004 :	-
Zinc	mg/L	T	-	-	-	<0.026 :	-	<0.015 :
Zinc	mg/L	D	-	-	-	-	<0.026 :	-
Isotopes								
Delta D	per mil	T	-	-	-	-	-	-82.8 :
Delta O-18	per mil	T	-	-	-	-	-	-11.2 :
Lead	mg/L	T	-	-	-	<0.0002 :	-	<0.0008 :
Lead	mg/L	D	-	-	-	-	<0.0002 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID													
			MMW-8A 4/19/2004 MMW-8A-D01N-GRW GW5		MolyTunnel 4/23/2003 MolyTunnel-T01N-GRW GW4		MolyTunnel 4/23/2003 MolyTunnel-D01N-GRW GW4		Neckfault 4/22/2004 NECKFAULT-T01N-GRW GW5		P1 4/22/2004 P1-ug-T01N-GRW GW3		P4 4/22/2004 P4-T01N-GRW GW5	
Field Measurements														
EH	millivolts	T	-		-		-		180.5	:	176.6	:	153.5	:
pH	SU	T	-		7.3	J	-		7.19	:	7.16	:	7.61	:
Specific Conductance	uS/cm	T	-		-		-		2934.	:	3127.	:	1877.	:
Temperature	Celsius	T	-		-		-		8.8	:	11.3	:	10.64	:
Turbidity	NTU	T	-		-		-		119.6	:	120.8	:	121.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.06	:	-		-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		251.	:	-		-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Chloride	mg/L	T	-		7.9	:	-		-		-		-	
Fluoride	mg/L	T	-		2.1	:	-		-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Nitrate	mg/L	T	-		<0.4	:	-		-		-		-	
Nitrite	mg/L	T	-		<0.005	:	-		-		-		-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		-		-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		-		-	
Sulfate	mg/L	T	-		943.	J	-		-		-		-	
Total Alkalinity	mg/L	T	-		251.	:	-		-		-		-	
Total Dissolved Solids	mg/L	T	-		1890.	:	-		-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		0.25	:	-		-		-		-	
Total Organic Carbon	mg/L	T	-		<1.7	J	-		-		-		-	
Total Suspended Solids	mg/L	T	-		55.7	:	-		-		-		-	
Laboratory Parameters														
pH	SU	T	-		7.3	J	-		7.19	:	7.16	:	7.61	:
Specific Conductance	umhos/cm	T	-		1950.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		-	
Physical Properties														
Hardness	mg/L	T	-		1310.	:	-		-		-		-	
Hardness	mg/L	D	2170.	:	-		1290.	:	-		-		-	
Metals														
Aluminum	mg/L	T	-		<0.503	:	-		-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area													
			MMW-8A 4/19/2004 MMW-8A-D01N-GRW GW5		MolyTunnel 4/23/2003 MolyTunnel-T01N-GRW GW4		MolyTunnel 4/23/2003 MolyTunnel-D01N-GRW GW4		Neckfault 4/22/2004 NECKFAULT-T01N-GRW GW5		P1 4/22/2004 P1-UG-T01N-GRW GW3		P4 4/22/2004 P4-T01N-GRW GW5	
Aluminum	mg/L	D	<0.402	:	-		<0.503	:	-		-		-	
Antimony	mg/L	T	-		<0.001	:	-		-		-		-	
Antimony	mg/L	D	<0.0008	:	-		<0.001	:	-		-		-	
Arsenic	mg/L	T	-		<0.0004	:	-		-		-		-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		-	
Barium	mg/L	T	-		0.0151	:	-		-		-		-	
Barium	mg/L	D	0.0077	:	-		0.0145	:	-		-		-	
Beryllium	mg/L	T	-		<0.0003	:	-		-		-		-	
Beryllium	mg/L	D	0.00075	:	-		<0.0003	:	-		-		-	
Boron	mg/L	T	-		0.0144	:	-		-		-		-	
Boron	mg/L	D	0.0291	:	-		0.0129	:	-		-		-	
Cadmium	mg/L	T	-		<0.0005	:	-		-		-		-	
Cadmium	mg/L	D	<0.0003	:	-		<0.0005	:	-		-		-	
Calcium	mg/L	T	-		443.	:	-		-		-		-	
Calcium	mg/L	D	512.	:	-		436.	:	-		-		-	
Chromium	mg/L	T	-		<0.001	J	-		-		-		-	
Chromium	mg/L	D	<0.0006	:	-		<0.001	J	-		-		-	
Cobalt	mg/L	T	-		<0.0038	:	-		-		-		-	
Cobalt	mg/L	D	<0.0011	:	-		<0.0038	:	-		-		-	
Copper	mg/L	T	-		<0.0015	:	-		-		-		-	
Copper	mg/L	D	<0.0007	:	-		<0.0015	:	-		-		-	
Iron	mg/L	T	-		32.5	:	-		-		-		-	
Iron	mg/L	D	2.99	:	-		27.4	:	-		-		-	
Lead	mg/L	T	-		0.0023	:	-		-		-		-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		-	
Magnesium	mg/L	T	-		49.3	:	-		-		-		-	
Magnesium	mg/L	D	217.	:	-		48.6	:	-		-		-	
Manganese	mg/L	T	-		2.26	:	-		-		-		-	
Manganese	mg/L	D	5.89	:	-		2.22	:	-		-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		0.0363	:	-		-		-		-	
Molybdenum	mg/L	D	<0.001	:	-		0.0359	:	-		-		-	
Nickel	mg/L	T	-		<0.003	:	-		-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Fraction	MMW-8A	MolyTunnel	MolyTunnel	Neckfault	P1	P4
Site ID			MMW-8A	MolyTunnel	MolyTunnel	Neckfault	P1	P4
Sample Date			4/19/2004	4/23/2003	4/23/2003	4/22/2004	4/22/2004	4/22/2004
Sample ID			MMW-8A-D01N-GRW	MolyTunnel-T01N-GRW	MolyTunnel-D01N-GRW	NECKFAULT-T01N-GRW	P1-UG-T01N-GRW	P4-T01N-GRW
Exposure Area			GW5	GW4	GW4	GW5	GW3	GW5
Nickel	mg/L	D	<0.0015 J	-	<0.003 :	-	-	-
Potassium	mg/L	T	-	4.39 :	-	-	-	-
Potassium	mg/L	D	15.6 :	-	4.25 :	-	-	-
Selenium	mg/L	T	-	<0.0016 :	-	-	-	-
Selenium	mg/L	D	<0.0014 :	-	<0.0016 :	-	-	-
Silver	mg/L	T	-	<0.0002 :	-	-	-	-
Silver	mg/L	D	<0.0002 J	-	<0.0002 :	-	-	-
Sodium	mg/L	T	-	39.6 :	-	-	-	-
Sodium	mg/L	D	69.7 :	-	38.3 :	-	-	-
Thallium	mg/L	T	-	<0.0002 :	-	-	-	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	-
Vanadium	mg/L	T	-	<0.0004 :	-	-	-	-
Vanadium	mg/L	D	0.00067 :	-	<0.0004 :	-	-	-
Zinc	mg/L	T	-	0.0975 :	-	-	-	-
Zinc	mg/L	D	<0.015 :	-	<0.014 :	-	-	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	<0.01 :	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 J	-	-	-	-
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	-	-	-
1,1-Dichloroethane	mg/L	T	-	0.0009 J	-	-	-	-
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 J	-	-	-	-
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	-	-
1,2-Dichloroethane	mg/L	T	-	<0.01 J	-	-	-	-
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	-	-	-
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	-	-	-
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	-	-
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	-	-	-
2-Butanone	mg/L	T	-	<0.01 J	-	-	-	-
2-Hexanone	mg/L	T	-	<0.01 J	-	-	-	-
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	-	-	-
Acetone	mg/L	T	-	<0.01 J	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8A	MolyTunnel	MolyTunnel	Neckfault	P1	P4
			Sample Date	4/19/2004	4/23/2003	4/23/2003	4/22/2004	4/22/2004	4/22/2004
			Sample ID	MMW-8A-D01N-GRW	MolyTunnel-T01N-GRW	MolyTunnel-D01N-GRW	NECKFAULT-T01N-GRW	P1-UG-T01N-GRW	P4-T01N-GRW
				GW5	GW4	GW4	GW5	GW3	GW5
Benzene	mg/L	T		-	<0.01 :	-	-	-	-
Bromodichloromethane	mg/L	T		-	<0.01 :	-	-	-	-
Bromoform	mg/L	T		-	<0.01 :	-	-	-	-
Bromomethane	mg/L	T		-	<0.01 :	-	-	-	-
Carbon disulfide	mg/L	T		-	<0.01 :	-	-	-	-
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	-	-	-
Chlorobenzene	mg/L	T		-	<0.01 :	-	-	-	-
Chloroethane	mg/L	T		-	<0.01 :	-	-	-	-
Chloroform	mg/L	T		-	<0.01 J	-	-	-	-
Chloromethane	mg/L	T		-	<0.01 :	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	-	-
Dibromochloromethane	mg/L	T		-	<0.01 :	-	-	-	-
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	-	-	-
Ethylbenzene	mg/L	T		-	<0.01 :	-	-	-	-
Methylene chloride	mg/L	T		-	<0.01 :	-	-	-	-
Styrene	mg/L	T		-	<0.01 :	-	-	-	-
Tetrachloroethene	mg/L	T		-	<0.01 :	-	-	-	-
Toluene	mg/L	T		-	<0.01 :	-	-	-	-
Total Xylene	mg/L	T		-	<0.01 :	-	-	-	-
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	-	-
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	-	-
Trichloroethene	mg/L	T		-	<0.01 :	-	-	-	-
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	-	-	-
Vinyl chloride	mg/L	T		-	<0.01 :	-	-	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.01 :	-	-	-	-
2,4,5-Trichlorophenol	mg/L	T		-	<0.026 :	-	-	-	-
2,4,6-Trichlorophenol	mg/L	T		-	<0.01 :	-	-	-	-
2,4-Dichlorophenol	mg/L	T		-	<0.01 :	-	-	-	-
2,4-Dimethylphenol	mg/L	T		-	<0.01 J	-	-	-	-
2,4-Dinitrophenol	mg/L	T		-	<0.026 J	-	-	-	-
2,4-Dinitrotoluene	mg/L	T		-	<0.01 J	-	-	-	-
2,6-Dinitrotoluene	mg/L	T		-	<0.01 :	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		MMW-8A	MolyTunnel	MolyTunnel	Neckfault	P1	P4	
		4/19/2004	4/23/2003	4/23/2003	4/22/2004	4/22/2004	4/22/2004	
		MMW-8A-D01N-GRW	MolyTunnel-T01N-GRW	MolyTunnel-D01N-GRW	NECKFAULT-T01N-GRW	P1-UG-T01N-GRW	P4-T01N-GRW	
		GW5	GW4	GW4	GW5	GW3	GW5	
2-Chloronaphthalene	mg/L	T	-	<0.01 :	-	-	-	-
2-Chlorophenol	mg/L	T	-	<0.01 :	-	-	-	-
2-Methylnaphthalene	mg/L	T	-	<0.01 :	-	-	-	-
2-Methylphenol	mg/L	T	-	<0.01 :	-	-	-	-
2-Nitroaniline	mg/L	T	-	<0.026 :	-	-	-	-
2-Nitrophenol	mg/L	T	-	<0.01 :	-	-	-	-
3,3-Dichlorobenzidine	mg/L	T	-	<0.01 :	-	-	-	-
3-Nitroaniline	mg/L	T	-	<0.026 J	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	<0.026 J	-	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	<0.01 :	-	-	-	-
4-Chloro-3-methylphenol	mg/L	T	-	<0.01 :	-	-	-	-
4-Chloroaniline	mg/L	T	-	<0.01 :	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	<0.01 :	-	-	-	-
4-Methylphenol	mg/L	T	-	<0.01 :	-	-	-	-
4-Nitroaniline	mg/L	T	-	<0.026 J	-	-	-	-
4-Nitrophenol	mg/L	T	-	<0.026 J	-	-	-	-
Acenaphthene	mg/L	T	-	<0.01 :	-	-	-	-
Acenaphthylene	mg/L	T	-	<0.01 :	-	-	-	-
Anthracene	mg/L	T	-	<0.01 :	-	-	-	-
Benzaldehyde	mg/L	T	-	<0.01 J	-	-	-	-
Benzo(a)anthracene	mg/L	T	-	<0.01 :	-	-	-	-
Benzo(a)pyrene	mg/L	T	-	<0.01 :	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	-	<0.01 :	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	-	<0.01 :	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	-	<0.01 :	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	<0.01 :	-	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	<0.01 :	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	<0.01 :	-	-	-	-
Butyl benzyl phthalate	mg/L	T	-	<0.01 :	-	-	-	-
Carbazole	mg/L	T	-	<0.01 :	-	-	-	-
Chrysene	mg/L	T	-	<0.01 :	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	-	<0.01 :	-	-	-	-
Dibenzofuran	mg/L	T	-	<0.01 :	-	-	-	-
Dichlorodiisopropyl ether	mg/L	T	-	<0.01 :	-	-	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-8A 4/19/2004 MMW-8A-D01N-GRW GW5		MolyTunnel 4/23/2003 MolyTunnel-T01N-GRW GW4		MolyTunnel 4/23/2003 MolyTunnel-D01N-GRW GW4		Neckfault 4/22/2004 NECKFAULT-T01N-GRW GW5		P1 4/22/2004 P1-UG-T01N-GRW GW3		P4 4/22/2004 P4-T01N-GRW GW5	
Diethylphthalate	mg/L	T	-		<0.01	:	-		-		-		-	
Dimethylphthalate	mg/L	T	-		<0.01	:	-		-		-		-	
Di-n-Butyl phthalate	mg/L	T	-		<0.01	:	-		-		-		-	
Di-n-Octyl phthalate	mg/L	T	-		<0.01	:	-		-		-		-	
Fluoranthene	mg/L	T	-		<0.01	:	-		-		-		-	
Fluorene	mg/L	T	-		<0.01	:	-		-		-		-	
Hexachlorobenzene	mg/L	T	-		<0.01	:	-		-		-		-	
Hexachlorobutadiene	mg/L	T	-		<0.01	:	-		-		-		-	
Hexachlorocyclopentadiene	mg/L	T	-		<0.01	:	-		-		-		-	
Hexachloroethane	mg/L	T	-		<0.01	:	-		-		-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	-		<0.01	:	-		-		-		-	
Isophorone	mg/L	T	-		<0.01	:	-		-		-		-	
Naphthalene	mg/L	T	-		<0.01	:	-		-		-		-	
Nitrobenzene	mg/L	T	-		<0.01	:	-		-		-		-	
N-Nitrosodi-n-propylamine	mg/L	T	-		<0.01	:	-		-		-		-	
N-Nitrosodiphenylamine	mg/L	T	-		<0.01	:	-		-		-		-	
Pentachlorophenol	mg/L	T	-		<0.026	:	-		-		-		-	
Phenanthrene	mg/L	T	-		<0.01	:	-		-		-		-	
Phenol	mg/L	T	-		<0.01	:	-		-		-		-	
Pyrene	mg/L	T	-		<0.01	:	-		-		-		-	
Pesticides-PCBs														
Aroclor 1016	mg/L	T	-		<0.001	:	-		-		-		-	
Aroclor 1221	mg/L	T	-		<0.002	:	-		-		-		-	
Aroclor 1232	mg/L	T	-		<0.001	:	-		-		-		-	
Aroclor 1242	mg/L	T	-		<0.001	:	-		-		-		-	
Aroclor 1248	mg/L	T	-		<0.001	:	-		-		-		-	
Aroclor 1254	mg/L	T	-		<0.001	:	-		-		-		-	
Aroclor 1260	mg/L	T	-		<0.001	:	-		-		-		-	
Isotopes														
Delta D	per mil	T	-		-		-		-75.7	:	-82.1	:	-84.2	:
Delta O-18	per mil	T	-		-		-		-9.9	:	-11.2	:	-11.4	:
Lead	mg/L	T	-		0.0023	:	-		-		-		-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			P-5C 11/5/2002 P-5C-T01N-GRWRE GW4		P-5C 11/5/2002 P-5C-T01N-GRW GW4		P-5C 11/5/2002 P-5C-D01N-GRWRE GW4		P-5C 11/5/2002 P-5C-D01N-GRW GW4		P-5C 1/14/2003 P-5C-T01N-GRW GW4		P-5C 1/14/2003 P-5C-D01N-GRW GW4	
Field Measurements														
DO	mg/L	T	-		6.2	:	-		-		5.28	:	-	
EH	millivolts	T	-		286.2	:	-		-		507.6	:	-	
pH	SU	T	-		4.33	:	-		-		4.47	:	-	
Specific Conductance	uS/cm	T	-		1940.	:	-		-		1911.	:	-	
Temperature	Celsius	T	-		8.	:	-		-		7.67	:	-	
Turbidity	NTU	T	-		34.4	:	-		-		0.7	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.22	:	-		-		<0.26	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		19.8	:	-		-		25.	:	-	
Fluoride	mg/L	T	26.7	J	-		-		-		23.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		4.6	J	-		-		3.7	:	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		0.042	:	-		-		0.02	:	-	
Sulfate	mg/L	T	1190.	J	-		-		-		1210.	J	-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		1960.	:	-		-		1930.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		29.6	:	-		-		3.8	:	-	
Laboratory Parameters														
pH	SU	T	-		4.33	:	-		-		4.47	:	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		795.	:	-		-		993.	:	-	
Hardness	mg/L	D	-		-		1140.	:	-		-		984.	:
Metals														
Aluminum	mg/L	T	-		-		-		-		38.9	:	-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			P-5C 11/5/2002 P-5C-T01N-GRWRE GW4	P-5C 11/5/2002 P-5C-T01N-GRW GW4	P-5C 11/5/2002 P-5C-D01N-GRWRE GW4	P-5C 11/5/2002 P-5C-D01N-GRW GW4	P-5C 1/14/2003 P-5C-T01N-GRW GW4	P-5C 1/14/2003 P-5C-D01N-GRW GW4
Aluminum	mg/L	D	-	-	43.6 :	-	-	37.6 :
Antimony	mg/L	T	-	-	-	-	<0.028 :	-
Antimony	mg/L	D	-	-	<0.028 :	-	-	<0.028 :
Arsenic	mg/L	T	-	-	-	-	<0.023 J	-
Arsenic	mg/L	D	-	-	<0.023 :	-	-	<0.023 J
Barium	mg/L	T	-	-	-	-	<0.048 :	-
Barium	mg/L	D	-	-	<0.048 :	-	-	<0.048 :
Beryllium	mg/L	T	-	-	-	-	0.0229 :	-
Beryllium	mg/L	D	-	-	0.0219 :	-	-	0.0228 :
Boron	mg/L	T	-	-	-	-	<0.027 J	-
Boron	mg/L	D	-	-	<0.027 :	-	-	<0.027 J
Cadmium	mg/L	T	-	-	-	-	<0.08 :	-
Cadmium	mg/L	D	-	-	<0.08 :	-	-	<0.08 :
Calcium	mg/L	T	-	-	-	-	208. :	-
Calcium	mg/L	D	-	-	240. :	-	-	207. :
Chromium	mg/L	T	-	-	-	-	<0.16 :	-
Chromium	mg/L	D	-	-	<0.16 J	-	-	<0.16 :
Cobalt	mg/L	T	-	-	-	-	<0.23 :	-
Cobalt	mg/L	D	-	-	<0.23 :	-	-	<0.23 :
Copper	mg/L	T	-	-	-	-	1. :	-
Copper	mg/L	D	-	-	<1.15 :	-	-	0.985 :
Iron	mg/L	T	-	-	-	-	<2.66 :	-
Iron	mg/L	D	-	-	<2.66 :	-	-	<2.66 :
Lead	mg/L	T	-	-	-	-	0.0251 :	-
Lead	mg/L	D	-	-	0.0192 :	-	-	0.022 :
Magnesium	mg/L	T	-	-	-	-	115. :	-
Magnesium	mg/L	D	-	-	131. :	-	-	114. :
Manganese	mg/L	T	-	-	-	-	23.4 :	-
Manganese	mg/L	D	-	-	26.6 :	-	-	23. :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	-	-	<0.011 J	-
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	<0.011 J
Nickel	mg/L	T	-	-	-	-	0.877 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	P-5C	P-5C	P-5C	P-5C	P-5C	P-5C
			Sample Date	11/5/2002	11/5/2002	11/5/2002	11/5/2002	1/14/2003	1/14/2003
			Sample ID	P-5C-T01N-GRWRE	P-5C-T01N-GRW	P-5C-D01N-GRWRE	P-5C-D01N-GRW	P-5C-T01N-GRW	P-5C-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Nickel	mg/L	D		-	-	0.756 :	-	-	0.767 :
Potassium	mg/L	T		-	-	-	-	<31.4 :	-
Potassium	mg/L	D		-	-	<31.4 J	-	-	<31.4 :
Selenium	mg/L	T		-	-	-	-	0.0089 :	-
Selenium	mg/L	D		-	-	0.0102 :	-	-	0.0135 :
Silver	mg/L	T		-	-	-	-	<0.001 :	-
Silver	mg/L	D		-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T		-	-	-	-	55.7 :	-
Sodium	mg/L	D		-	-	<36.6 :	-	-	51.1 :
Thallium	mg/L	T		-	-	-	-	<0.001 :	-
Thallium	mg/L	D		-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T		-	-	-	-	<0.002 :	-
Vanadium	mg/L	D		-	-	<0.002 :	-	-	<0.002 :
Zinc	mg/L	T		-	-	-	-	6.05 :	-
Zinc	mg/L	D		-	-	6.65 :	-	-	5.89 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	<0.00025 J	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 J	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 J	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T		-	<0.00025 J	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 J	-	-	<0.01 :	-
Isotopes									
Lead	mg/L	T		-	-	-	-	0.0251 :	-
Lead	mg/L	D		-	-	0.0192 :	-	-	0.022 :

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			P-5C 4/8/2003 P-5C-T01N-GRW GW4		P-5C 4/8/2003 P-5C-D01N-GRW GW4		P-5C 7/11/2003 P-5C-T01N-GRW GW4		P-5C 7/11/2003 P-5C-D01N-GRW GW4		P-5C 10/16/2003 P-5C-T01N-GRW GW4		P-5C 10/16/2003 P-5C-D01N-GRW GW4	
Field Measurements														
DO	mg/L	T	4.39	:	-		4.75	:	-		5.28	:	-	
EH	millivolts	T	271.2	:	-		322.4	:	-		721.6	:	-	
pH	SU	T	4.5	J	-		4.7	J	-		4.8	J	-	
Specific Conductance	uS/cm	T	1996.	:	-		1688.	:	-		1630.	:	-	
Temperature	Celsius	T	7.44	:	-		13.43	:	-		8.23	:	-	
Turbidity	NTU	T	10.8	:	-		0.	:	-		3.7	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.098	:	-		<0.074	J	-		<0.12	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.3	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	28.5	:	-		18.2	:	-		16.7	:	-	
Fluoride	mg/L	T	29.9	:	-		27.7	:	-		24.7	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	3.5	J	-		3.1	J	-		2.6	:	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.02	J	-		<0.01	:	-		<0.01	:	-	
Phosphorus	mg/L	T	0.023	:	-		0.03	:	-		0.016	:	-	
Sulfate	mg/L	T	1070.	J	-		1100.	J	-		907.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.3	:	-	
Total Dissolved Solids	mg/L	T	1950.	:	-		1700.	:	-		1520.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	J	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.1	J	-		<1.	J	-		<1.	J	-	
Total Suspended Solids	mg/L	T	<3.9	:	-		4.2	:	-		3.4	:	-	
Laboratory Parameters														
pH	SU	T	4.5	J	-		4.7	J	-		4.8	J	-	
Specific Conductance	umhos/cm	T	1810.	J	-		1730.	J	-		1450.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1060.	:	-		892.	:	-		814.	:	-	
Hardness	mg/L	D	-		1080.	:	-		904.	:	-		825.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P-5C 4/8/2003 P-5C-T01N-GRW GW4		P-5C 4/8/2003 P-5C-D01N-GRW GW4		P-5C 7/11/2003 P-5C-T01N-GRW GW4		P-5C 7/11/2003 P-5C-D01N-GRW GW4		P-5C 10/16/2003 P-5C-T01N-GRW GW4		P-5C 10/16/2003 P-5C-D01N-GRW GW4	
Aluminum	mg/L	T	38.8	:	-		34.8	:	-		26.3	:	-	
Aluminum	mg/L	D	-		38.5	:	-		34.7	:	-		26.3	:
Antimony	mg/L	T	<0.003	:	-		<0.047	:	-		<0.082	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.047	:	-		<0.082	:
Arsenic	mg/L	T	<0.04	:	-		<0.048	:	-		<0.035	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.048	:	-		<0.035	:
Barium	mg/L	T	<0.123	:	-		<0.059	:	-		<0.117	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.059	:	-		<0.117	:
Beryllium	mg/L	T	<0.0382	:	-		0.0247	:	-		<0.0153	J	-	
Beryllium	mg/L	D	-		0.0423	:	-		0.024	:	-		<0.0168	J
Boron	mg/L	T	<0.084	:	-		<0.048	J	-		<0.064	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.048	J	-		<0.064	:
Cadmium	mg/L	T	0.0502	:	-		0.0545	:	-		<0.377	:	-	
Cadmium	mg/L	D	-		0.0517	:	-		0.0532	:	-		<0.415	:
Calcium	mg/L	T	224.	:	-		190.	:	-		175.	:	-	
Calcium	mg/L	D	-		228.	:	-		192.	:	-		177.	:
Chromium	mg/L	T	<0.01	:	-		<0.014	:	-		<0.13	J	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.014	:	-		<0.13	J
Cobalt	mg/L	T	<0.038	:	-		<0.02	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		<0.038	:	-		0.0233	:	-		<0.31	:
Copper	mg/L	T	1.08	:	-		0.976	:	-		0.702	:	-	
Copper	mg/L	D	-		1.14	:	-		0.969	:	-		0.73	:
Iron	mg/L	T	<3.11	:	-		0.561	:	-		<4.55	:	-	
Iron	mg/L	D	-		<3.11	:	-		<0.333	:	-		<4.55	:
Lead	mg/L	T	0.0245	:	-		0.0162	:	-		0.0144	:	-	
Lead	mg/L	D	-		0.0208	:	-		0.0166	:	-		0.0129	:
Magnesium	mg/L	T	121.	:	-		102.	:	-		91.4	:	-	
Magnesium	mg/L	D	-		124.	:	-		103.	:	-		92.9	:
Manganese	mg/L	T	24.6	:	-		19.7	:	-		18.4	:	-	
Manganese	mg/L	D	-		25.	:	-		19.9	:	-		18.5	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.017	:	-		<0.012	J	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.017	:	-		<0.012	J

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P-5C 4/8/2003 P-5C-T01N-GRW GW4		P-5C 4/8/2003 P-5C-D01N-GRW GW4		P-5C 7/11/2003 P-5C-T01N-GRW GW4		P-5C 7/11/2003 P-5C-D01N-GRW GW4		P-5C 10/16/2003 P-5C-T01N-GRW GW4		P-5C 10/16/2003 P-5C-D01N-GRW GW4	
Nickel	mg/L	T	0.763	:	-		0.848	:	-		<0.78	:	-	
Nickel	mg/L	D	-		0.766	:	-		0.851	:	-		<1.11	:
Potassium	mg/L	T	<3.26	:	-		<3.93	:	-		<52.2	:	-	
Potassium	mg/L	D	-		<3.26	:	-		<3.93	:	-		<52.2	:
Selenium	mg/L	T	0.0068	J	-		0.0221	:	-		<0.0121	:	-	
Selenium	mg/L	D	-		0.0053	J	-		0.0223	J	-		<0.0093	:
Silver	mg/L	T	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	:
Sodium	mg/L	T	<35.2	:	-		20.8	:	-		<50.2	:	-	
Sodium	mg/L	D	-		<35.2	:	-		20.6	:	-		<50.2	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.001	:
Zinc	mg/L	T	6.19	:	-		8.3	:	-		4.72	:	-	
Zinc	mg/L	D	-		6.41	:	-		8.39	:	-		5.1	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	:	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	:	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	:	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	0.0245	:	-		0.0162	:	-		0.0144	:	-	
Lead	mg/L	D	-		0.0208	:	-		0.0166	:	-		0.0129	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			P-5C 1/12/2004 P-5C-T01N-GRW		P-5C 1/12/2004 P-5C-D01N-GRW		P-5C 4/20/2004 P-5C-T01N-GRW		P-5C 4/20/2004 P-5C-D01N-GRW		P6 4/22/2004 P6-T01N-GRW		P9 4/22/2004 P9-T01N-GRW	
			GW4		GW4		GW4		GW4		GW5		GW5	
Field Measurements														
DO	mg/L	T	6.06	:	-		5.11	:	-		-		-	
EH	millivolts	T	605.4	:	-		360.6	:	-		154.3	:	176.2	:
pH	SU	T	4.3	J	-		4.9	J	-		7.94	:	7.3	:
Specific Conductance	uS/cm	T	1494.	:	-		1536.	:	-		4380.	:	4385.	:
Temperature	Celsius	T	7.67	:	-		8.43	:	-		16.78	:	15.63	:
Turbidity	NTU	T	0.	:	-		-		-		122.	:	122.3	:
General Chemistry														
Ammonia	mg/L	T	<0.04	J	-		<0.058	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.1	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Chloride	mg/L	T	14.9	:	-		18.9	:	-		-		-	
Fluoride	mg/L	T	21.2	:	-		21.6	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Nitrate	mg/L	T	2.7	J	-		2.2	:	-		-		-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		-		-	
Sulfate	mg/L	T	940.	:	-		980.	:	-		-		-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.1	:	-		-		-	
Total Dissolved Solids	mg/L	T	1430.	:	-		1380.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		-		-	
Total Suspended Solids	mg/L	T	<1.5	:	-		<1.7	J	-		-		-	
Laboratory Parameters														
pH	SU	T	4.3	J	-		4.9	J	-		7.94	:	7.3	:
Specific Conductance	umhos/cm	T	1550.	J	-		1300.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Physical Properties														
Hardness	mg/L	T	742.	:	-		703.	:	-		-		-	
Hardness	mg/L	D	-		806.	:	-		717.	:	-		-	
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P-5C 1/12/2004 P-5C-T01N-GRW GW4		P-5C 1/12/2004 P-5C-D01N-GRW GW4		P-5C 4/20/2004 P-5C-T01N-GRW GW4		P-5C 4/20/2004 P-5C-D01N-GRW GW4		P6 4/22/2004 P6-T01N-GRW GW5		P9 4/22/2004 P9-T01N-GRW GW5	
Aluminum	mg/L	T	26.5	:	-		33.9	:	-		-		-	
Aluminum	mg/L	D	-		30.9	:	-		33.6	:	-		-	
Antimony	mg/L	T	<0.029	:	-		<0.053	:	-		-		-	
Antimony	mg/L	D	-		<0.029	:	-		<0.053	:	-		-	
Arsenic	mg/L	T	<0.028	J	-		<0.037	:	-		-		-	
Arsenic	mg/L	D	-		<0.028	J	-		<0.037	:	-		-	
Barium	mg/L	T	<0.053	:	-		<0.049	:	-		-		-	
Barium	mg/L	D	-		<0.053	:	-		<0.049	:	-		-	
Beryllium	mg/L	T	0.0175	:	-		0.02	:	-		-		-	
Beryllium	mg/L	D	-		0.0178	:	-		0.0239	:	-		-	
Boron	mg/L	T	<0.023	:	-		<0.036	:	-		-		-	
Boron	mg/L	D	-		<0.023	:	-		<0.036	:	-		-	
Cadmium	mg/L	T	<0.07	J	-		<0.0752	:	-		-		-	
Cadmium	mg/L	D	-		<0.07	:	-		<0.0636	:	-		-	
Calcium	mg/L	T	156.	:	-		147.	:	-		-		-	
Calcium	mg/L	D	-		170.	:	-		150.	:	-		-	
Chromium	mg/L	T	<0.57	:	-		<0.08	:	-		-		-	
Chromium	mg/L	D	-		<0.57	:	-		<0.08	:	-		-	
Cobalt	mg/L	T	<0.37	:	-		<0.11	:	-		-		-	
Cobalt	mg/L	D	-		<0.37	:	-		<0.11	:	-		-	
Copper	mg/L	T	0.838	:	-		0.914	:	-		-		-	
Copper	mg/L	D	-		1.04	:	-		0.902	:	-		-	
Iron	mg/L	T	<4.23	:	-		<2.34	J	-		-		-	
Iron	mg/L	D	-		<4.23	:	-		<1.92	:	-		-	
Lead	mg/L	T	0.014	:	-		0.017	:	-		-		-	
Lead	mg/L	D	-		0.0139	:	-		0.0161	:	-		-	
Magnesium	mg/L	T	85.5	:	-		81.7	:	-		-		-	
Magnesium	mg/L	D	-		92.8	:	-		83.3	:	-		-	
Manganese	mg/L	T	17.2	:	-		16.4	:	-		-		-	
Manganese	mg/L	D	-		18.9	:	-		16.8	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.024	:	-		<0.014	:	-		-		-	
Molybdenum	mg/L	D	-		<0.024	:	-		<0.014	:	-		-	

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P-5C 1/12/2004 P-5C-T01N-GRW GW4	P-5C 1/12/2004 P-5C-D01N-GRW GW4	P-5C 4/20/2004 P-5C-T01N-GRW GW4	P-5C 4/20/2004 P-5C-D01N-GRW GW4	P6 4/22/2004 P6-T01N-GRW GW5	P9 4/22/2004 P9-T01N-GRW GW5
Nickel	mg/L	T	<1.68 :	-	0.52 :	-	-	-
Nickel	mg/L	D	-	<1.68 :	-	0.514 :	-	-
Potassium	mg/L	T	<110. :	-	<10.9 J	-	-	-
Potassium	mg/L	D	-	<110. :	-	<10.9 J	-	-
Selenium	mg/L	T	0.0104 J	-	<0.007 :	-	-	-
Selenium	mg/L	D	-	0.0117 :	-	0.0072 :	-	-
Silver	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Silver	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Sodium	mg/L	T	<92. :	-	<17.3 J	-	-	-
Sodium	mg/L	D	-	<92. :	-	<67.3 J	-	-
Thallium	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Vanadium	mg/L	T	<0.002 :	-	<0.002 :	-	-	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.002 :	-	-
Zinc	mg/L	T	4.76 :	-	4.37 :	-	-	-
Zinc	mg/L	D	-	5.11 :	-	4.46 :	-	-
Isotopes								
Delta D	per mil	T	-	-	-	-	-90. :	-
Delta O-18	per mil	T	-	-	-	-	-12.3 :	-
Lead	mg/L	T	0.014 :	-	0.017 :	-	-	-
Lead	mg/L	D	-	0.0139 :	-	0.0161 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID	P9	SC-1B	SC-1B	SC-1B	SC-1B	SC-1B
			Sample Date	4/22/2004	6/2/2003	6/2/2003	10/21/2003	10/21/2003	1/15/2004
			Sample ID	P-9-T01N-GRW	SC-1B-T01N-GRW	SC-1B-D01N-GRW	SC-1B-T01N-GRW	SC-1B-D01N-GRW	SC-1B-T01N-GRW
		Exposure Area		GW5	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		-	0.24 :	-	-1. :	-	0.26 :
EH	millivolts	T		-	-291. :	-	-357.5 :	-	-263.6 :
pH	SU	T		-	6.8 J	-	7. J	-	6.9 J
Specific Conductance	uS/cm	T		-	3220. :	-	2867. :	-	3239. :
Temperature	Celsius	T		-	11.1 :	-	13.38 :	-	4.84 :
Turbidity	NTU	T		-	3.02 :	-	5.9 :	-	0.5 :
General Chemistry									
Ammonia	mg/L	T		-	-	-	1.9 J	-	2.7 :
Bicarbonate (as CaCO3)	mg/L	T		-	453. :	-	458. :	-	446. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	<21.2 :	-	16. :	-	6.8 :
Fluoride	mg/L	T		-	1.1 :	-	1.1 :	-	1.1 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.2 J	-	<0.2 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	0.19 :	-	<0.048 J	-	0.039 :
Phosphorus	mg/L	T		-	-	-	0.02 J	-	<0.02 :
Sulfate	mg/L	T		-	1770. J	-	1550. J	-	1750. :
Total Alkalinity	mg/L	T		-	453. :	-	458. :	-	446. :
Total Dissolved Solids	mg/L	T		-	-	-	3130. :	-	3160. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<1.5 :	-	2.5 :
Total Organic Carbon	mg/L	T		-	-	-	1.4 J	-	11.2 :
Total Suspended Solids	mg/L	T		-	-	-	18.2 :	-	6.7 :
Laboratory Parameters									
pH	SU	T		-	6.8 J	-	7. J	-	6.9 J
Specific Conductance	umhos/cm	T		-	3100. J	-	3270. J	-	2740. J
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	2160. :	-	2340. :	-	2180. :
Hardness	mg/L	D		-	-	2150. :	-	2320. :	-
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	P9 4/22/2004 P-9-T01N-GRW GW5	SC-1B 6/2/2003 SC-1B-T01N-GRW OMR	SC-1B 6/2/2003 SC-1B-D01N-GRW OMR	SC-1B 10/21/2003 SC-1B-T01N-GRW OMR	SC-1B 10/21/2003 SC-1B-D01N-GRW OMR	SC-1B 1/15/2004 SC-1B-T01N-GRW OMR
Aluminum	mg/L	T	-	<0.503 :	-	<0.221 J	-	<0.621 :
Aluminum	mg/L	D	-	-	<0.503 :	-	<0.221 J	-
Antimony	mg/L	T	-	<0.072 :	-	<0.001 :	-	<0.003 :
Antimony	mg/L	D	-	-	<0.072 :	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.04 :	-	<0.0004 :	-	<0.0002 :
Arsenic	mg/L	D	-	-	<0.04 :	-	<0.0004 :	-
Barium	mg/L	T	-	<0.123 :	-	<0.0115 :	-	<0.0188 :
Barium	mg/L	D	-	-	<0.123 :	-	<0.0115 :	-
Beryllium	mg/L	T	-	<0.003 :	-	<0.0013 :	-	<0.001 :
Beryllium	mg/L	D	-	-	<0.0055 :	-	<0.0015 :	-
Boron	mg/L	T	-	<0.084 :	-	0.0301 :	-	0.0292 :
Boron	mg/L	D	-	-	<0.084 :	-	0.0305 :	-
Cadmium	mg/L	T	-	<0.005 :	-	<0.0005 :	-	<0.0007 J
Cadmium	mg/L	D	-	-	<0.005 :	-	<0.0005 :	-
Calcium	mg/L	T	-	512. :	-	554. :	-	517. :
Calcium	mg/L	D	-	-	509. :	-	548. :	-
Chromium	mg/L	T	-	<0.01 :	-	<0.0011 J	-	<0.0057 :
Chromium	mg/L	D	-	-	<0.01 :	-	<0.0011 J	-
Cobalt	mg/L	T	-	<0.038 :	-	<0.0029 :	-	<0.0037 :
Cobalt	mg/L	D	-	-	<0.038 :	-	0.0049 :	-
Copper	mg/L	T	-	<0.015 :	-	<0.0022 :	-	<0.0035 :
Copper	mg/L	D	-	-	<0.015 :	-	<0.0022 :	-
Iron	mg/L	T	-	1.85 :	-	1.78 :	-	1.89 :
Iron	mg/L	D	-	-	2.07 :	-	1.37 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.0004 :	-	<0.0002 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.0004 :	-
Magnesium	mg/L	T	-	213. :	-	232. :	-	216. :
Magnesium	mg/L	D	-	-	212. :	-	230. :	-
Manganese	mg/L	T	-	6.03 :	-	6.1 :	-	5.68 :
Manganese	mg/L	D	-	-	5.99 :	-	6.04 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.023 :	-	0.00058 :	-	<0.003 :
Molybdenum	mg/L	D	-	-	<0.023 :	-	<0.0004 :	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	P9 4/22/2004 P-9-T01N-GRW GW5	SC-1B 6/2/2003 SC-1B-T01N-GRW OMR	SC-1B 6/2/2003 SC-1B-D01N-GRW OMR	SC-1B 10/21/2003 SC-1B-T01N-GRW OMR	SC-1B 10/21/2003 SC-1B-D01N-GRW OMR	SC-1B 1/15/2004 SC-1B-T01N-GRW OMR
Nickel	mg/L		T	-	<0.03 :	-	<0.0024 :	-	<0.0168 :
Nickel	mg/L		D	-	-	<0.03 :	-	<0.0024 :	-
Potassium	mg/L		T	-	11.6 :	-	15.4 :	-	17.4 :
Potassium	mg/L		D	-	-	10.8 :	-	15.3 :	-
Selenium	mg/L		T	-	<0.008 :	-	<0.00088 :	-	<0.0004 J
Selenium	mg/L		D	-	-	<0.008 :	-	<0.00069 :	-
Silver	mg/L		T	-	<0.001 :	-	<0.0002 :	-	<0.0002 J
Silver	mg/L		D	-	-	<0.001 :	-	<0.0002 :	-
Sodium	mg/L		T	-	50.4 :	-	69.7 :	-	74.1 :
Sodium	mg/L		D	-	-	50.9 :	-	68.7 :	-
Thallium	mg/L		T	-	<0.001 :	-	<0.0002 :	-	<0.00027 :
Thallium	mg/L		D	-	-	<0.001 :	-	<0.0002 :	-
Vanadium	mg/L		T	-	<0.002 :	-	0.00072 :	-	<0.00092 :
Vanadium	mg/L		D	-	-	<0.002 :	-	0.00068 :	-
Zinc	mg/L		T	-	<0.014 :	-	<0.023 :	-	<0.091 :
Zinc	mg/L		D	-	-	<0.193 :	-	<0.023 :	-
Isotopes									
Delta D	per mil		T	-90.7 :	-	-	-	-	-
Delta O-18	per mil		T	-12.4 :	-	-	-	-	-
Lead	mg/L		T	-	<0.001 :	-	<0.0004 :	-	<0.0002 :
Lead	mg/L		D	-	-	<0.001 :	-	<0.0004 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-1B 1/15/2004 SC-1B-D01N-GRW OMR		SC-1B 2/25/2004 SC-1B-T01N-GRW OMR		SC-1B 2/25/2004 SC-1B-D01N-GRW OMR		SC-1B 3/22/2004 SC-1B OMR		SC-1B 4/19/2004 SC-1B-T01N-GRW OMR		SC-1B 4/19/2004 SC-1B-D01N-GRW OMR	
Field Measurements														
DO	mg/L	T	-		1.38	:	-		-		1.13	:	-	
EH	millivolts	T	-		-260.2	:	-		-		-253.3	:	-	
pH	SU	T	-		6.65	:	-		-		7.	J	-	
Specific Conductance	uS/cm	T	-		3361.	:	-		-		3313.	:	-	
Temperature	Celsius	T	-		4.4	:	-		-		6.71	:	-	
Turbidity	NTU	T	-		5.	:	-		-		8.7	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		-		-		<0.066	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		-		-		162.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Chloride	mg/L	T	-		-		-		-		7.1	:	-	
Fluoride	mg/L	T	-		1.2	:	-		-		2.	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Nitrate	mg/L	T	-		-		-		-		<0.2	J	-	
Nitrite	mg/L	T	-		-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		-		-		0.071	J	-	
Phosphorus	mg/L	T	-		-		-		-		0.099	:	-	
Sulfate	mg/L	T	-		1980.	:	-		-		1640.	:	-	
Total Alkalinity	mg/L	T	-		-		-		-		162.	:	-	
Total Dissolved Solids	mg/L	T	-		3130.	:	-		-		2560.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		-		-		<1.8	J	-	
Total Suspended Solids	mg/L	T	-		13.2	:	-		-		<2.4	J	-	
Laboratory Parameters														
pH	SU	T	-		6.65	:	-		-		7.	J	-	
Specific Conductance	umhos/cm	T	-		-		-		-		2200.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		-		-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		2190.	:	-		-		1740.	:	-	
Hardness	mg/L	D	2200.	:	-		2240.	:	-		-		1740.	:
Metals														

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-1B 1/15/2004 SC-1B-D01N-GRW OMR		SC-1B 2/25/2004 SC-1B-T01N-GRW OMR		SC-1B 2/25/2004 SC-1B-D01N-GRW OMR		SC-1B 3/22/2004 SC-1B OMR		SC-1B 4/19/2004 SC-1B-T01N-GRW OMR		SC-1B 4/19/2004 SC-1B-D01N-GRW OMR	
Aluminum	mg/L	T	-		<0.514	:	-		-		<0.176	:	-	
Aluminum	mg/L	D	<0.621	:	-		<0.514	:	-		-		<0.176	:
Antimony	mg/L	T	-		<0.001	:	-		-		<0.0008	:	-	
Antimony	mg/L	D	<0.003	:	-		<0.001	:	-		-		<0.0008	:
Arsenic	mg/L	T	-		<0.0003	:	-		-		0.0014	:	-	
Arsenic	mg/L	D	<0.0002	:	-		<0.0003	:	-		-		0.0014	:
Barium	mg/L	T	-		0.0089	J	-		-		0.031	:	-	
Barium	mg/L	D	<0.0188	:	-		0.0086	J	-		-		0.0311	:
Beryllium	mg/L	T	-		0.00051	:	-		-		<0.0002	:	-	
Beryllium	mg/L	D	0.0011	:	-		0.00058	:	-		-		<0.0002	:
Boron	mg/L	T	-		0.0294	:	-		-		<0.0085	:	-	
Boron	mg/L	D	0.0296	:	-		0.029	:	-		-		<0.0081	:
Cadmium	mg/L	T	-		<0.0007	:	-		-		<0.0003	:	-	
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	J	-		-		<0.0003	:
Calcium	mg/L	T	-		518.	:	-		-		534.	:	-	
Calcium	mg/L	D	522.	:	-		532.	:	-		-		533.	:
Chromium	mg/L	T	-		<0.0015	:	-		-		<0.0006	:	-	
Chromium	mg/L	D	<0.0057	:	-		<0.0015	:	-		-		<0.0006	:
Cobalt	mg/L	T	-		<0.0023	:	-		-		0.003	J	-	
Cobalt	mg/L	D	<0.0037	:	-		0.0044	:	-		-		0.0063	J
Copper	mg/L	T	-		<0.003	:	-		-		<0.0007	J	-	
Copper	mg/L	D	<0.0035	:	-		<0.003	:	-		-		<0.0007	J
Iron	mg/L	T	-		2.7	:	-		-		<1.34	J	-	
Iron	mg/L	D	1.97	:	-		1.34	:	-		-		<1.44	:
Lead	mg/L	T	-		0.00029	:	-		-		<0.0008	:	-	
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0008	:
Magnesium	mg/L	T	-		216.	:	-		-		99.8	:	-	
Magnesium	mg/L	D	218.	:	-		222.	:	-		-		99.5	:
Manganese	mg/L	T	-		5.68	:	-		-		4.3	:	-	
Manganese	mg/L	D	5.76	:	-		5.83	:	-		-		4.31	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.0024	:	-		-		0.0049	:	-	
Molybdenum	mg/L	D	<0.003	:	-		<0.0024	:	-		-		0.0062	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-1B 1/15/2004 SC-1B-D01N-GRW OMR	SC-1B 2/25/2004 SC-1B-T01N-GRW OMR	SC-1B 2/25/2004 SC-1B-D01N-GRW OMR	SC-1B 3/22/2004 SC-1B OMR	SC-1B 4/19/2004 SC-1B-T01N-GRW OMR	SC-1B 4/19/2004 SC-1B-D01N-GRW OMR
Nickel	mg/L	T	-	<0.0024 :	-	-	<0.0015 J	-
Nickel	mg/L	D	<0.0168 :	-	<0.0024 :	-	-	<0.0015 J
Potassium	mg/L	T	-	18.5 :	-	-	4.5 :	-
Potassium	mg/L	D	17. :	-	18.7 :	-	-	4.54 :
Selenium	mg/L	T	-	<0.0004 J	-	-	<0.0014 :	-
Selenium	mg/L	D	<0.0004 :	-	<0.0004 J	-	-	<0.0014 :
Silver	mg/L	T	-	<0.0002 :	-	-	<0.0002 J	-
Silver	mg/L	D	<0.0002 J	-	<0.0002 :	-	-	<0.0002 J
Sodium	mg/L	T	-	81.2 :	-	-	41. :	-
Sodium	mg/L	D	75. :	-	80.1 :	-	-	39.7 :
Thallium	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Thallium	mg/L	D	<0.00027 :	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T	-	0.00087 :	-	-	<0.0004 :	-
Vanadium	mg/L	D	<0.00096 :	-	0.00077 :	-	-	<0.0004 :
Zinc	mg/L	T	-	<0.026 :	-	-	<0.015 :	-
Zinc	mg/L	D	<0.091 :	-	<0.026 :	-	-	<0.015 :
Isotopes								
Delta D	per mil	T	-	-99.7 :	-	-	-	-
Delta O-18	per mil	T	-	-13.5 :	-	-	-	-
Lead	mg/L	T	-	0.00029 :	-	-	<0.0008 :	-
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0008 :
Helium Isotope and Tritium								
Tritium TU	TU	T	-	-	-	0.03 :	-	-
Uncert TU	TU	T	-	-	-	0.01 :	-	-

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID	SC-2B	SC-2B	SC-2B	SC-2B	SC-2B	SC-2B
			Sample Date	10/22/2003	10/22/2003	1/15/2004	1/15/2004	4/19/2004	4/19/2004
			Sample ID	SC-2B-T01N-GRW	SC-2B-D01N-GRW	SC-2B-T01N-GRW	SC-2B-D01N-GRW	SC-2B-T01N-GRW	SC-2B-D01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		2.57 :	-	0.33 :	-	3.23 :	-
EH	millivolts	T		227.5 :	-	-65.4 :	-	26.7 :	-
pH	SU	T		6.6 J	-	6.6 J	-	6.6 J	-
Specific Conductance	uS/cm	T		2485. :	-	2267. :	-	2383. :	-
Temperature	Celsius	T		10.51 :	-	6.71 :	-	8.76 :	-
Turbidity	NTU	T		9.5 :	-	10.2 :	-	45.5 :	-
General Chemistry									
Ammonia	mg/L	T		<0.097 J	-	<0.047 J	-	<0.059 :	-
Bicarbonate (as CaCO3)	mg/L	T		97.8 :	-	120. :	-	343. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		3.8 :	-	3. :	-	261. J	-
Fluoride	mg/L	T		7.3 :	-	8.4 :	-	2.2 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 J	-	<0.2 J	-	<0.2 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.041 :	-	<0.01 :	-	<0.01 :	-
Sulfate	mg/L	T		1420. J	-	1420. :	-	1430. :	-
Total Alkalinity	mg/L	T		97.8 :	-	120. :	-	343. :	-
Total Dissolved Solids	mg/L	T		2320. :	-	2150. :	-	2910. :	-
Total Kjeldahl Nitrogen	mg/L	T		2.8 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		2.2 J	-	<2.3 :	-	<1.8 J	-
Total Suspended Solids	mg/L	T		33.2 :	-	16.9 :	-	11.3 J	-
Laboratory Parameters									
pH	SU	T		6.6 J	-	6.6 J	-	6.6 J	-
Specific Conductance	umhos/cm	T		1890. J	-	1850. J	-	2740. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		1580. :	-	1460. :	-	2070. :	-
Hardness	mg/L	D		-	1370. :	-	1500. :	-	2120. :
Metals									

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-2B 10/22/2003 SC-2B-T01N-GRW OMR		SC-2B 10/22/2003 SC-2B-D01N-GRW OMR		SC-2B 1/15/2004 SC-2B-T01N-GRW OMR		SC-2B 1/15/2004 SC-2B-D01N-GRW OMR		SC-2B 4/19/2004 SC-2B-T01N-GRW OMR		SC-2B 4/19/2004 SC-2B-D01N-GRW OMR	
Aluminum	mg/L	T	2.78	:	-		1.85	:	-		<0.176	:	-	
Aluminum	mg/L	D	-		2.2	:	-		1.93	:	-		<0.176	:
Antimony	mg/L	T	<0.001	:	-		<0.003	:	-		0.00097	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.003	:	-		0.0011	:
Arsenic	mg/L	T	0.0005	:	-		0.00037	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.00023	:	-		<0.0004	:
Barium	mg/L	T	<0.0062	:	-		<0.0188	:	-		0.0192	:	-	
Barium	mg/L	D	-		<0.0062	:	-		<0.0188	:	-		0.0188	:
Beryllium	mg/L	T	0.0452	:	-		0.0447	:	-		0.124	:	-	
Beryllium	mg/L	D	-		0.0407	:	-		0.0439	:	-		0.124	:
Boron	mg/L	T	<0.0081	:	-		<0.0117	:	-		<0.0123	:	-	
Boron	mg/L	D	-		<0.0116	:	-		<0.0117	:	-		0.0129	:
Cadmium	mg/L	T	<0.0013	:	-		<0.0007	J	-		<0.0003	:	-	
Cadmium	mg/L	D	-		<0.0013	:	-		<0.0007	:	-		<0.0003	:
Calcium	mg/L	T	454.	:	-		420.	:	-		762.	:	-	
Calcium	mg/L	D	-		394.	:	-		430.	:	-		781.	:
Chromium	mg/L	T	0.0082	J	-		<0.0057	:	-		<0.0006	:	-	
Chromium	mg/L	D	-		0.0079	J	-		<0.0057	:	-		<0.0006	:
Cobalt	mg/L	T	0.207	:	-		<0.187	J	-		0.0219	:	-	
Cobalt	mg/L	D	-		0.195	:	-		0.189	:	-		0.0242	:
Copper	mg/L	T	0.0353	:	-		0.0171	:	-		<0.0007	:	-	
Copper	mg/L	D	-		0.0324	:	-		0.0105	:	-		<0.0007	:
Iron	mg/L	T	38.3	:	-		36.6	:	-		<0.921	J	-	
Iron	mg/L	D	-		32.8	:	-		36.3	:	-		<0.867	:
Lead	mg/L	T	0.00056	:	-		0.0011	:	-		0.0023	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.00021	:	-		<0.0008	:
Magnesium	mg/L	T	109.	:	-		100.	:	-		39.5	:	-	
Magnesium	mg/L	D	-		94.6	:	-		103.	:	-		40.6	:
Manganese	mg/L	T	21.	:	-		19.	:	-		5.22	:	-	
Manganese	mg/L	D	-		18.2	:	-		19.4	:	-		5.31	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.00045	:	-		<0.003	:	-		0.0814	:	-	
Molybdenum	mg/L	D	-		<0.00041	:	-		<0.003	:	-		0.083	:

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Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Exposure Area Fraction	SC-2B 10/22/2003 SC-2B-T01N-GRW OMR		SC-2B 10/22/2003 SC-2B-D01N-GRW OMR		SC-2B 1/15/2004 SC-2B-T01N-GRW OMR		SC-2B 1/15/2004 SC-2B-D01N-GRW OMR		SC-2B 4/19/2004 SC-2B-T01N-GRW OMR		SC-2B 4/19/2004 SC-2B-D01N-GRW OMR	
Nickel	mg/L	T		0.572	:	-		0.511	:	-		0.0461	:	-	
Nickel	mg/L	D		-		0.527	:	-		0.512	:	-		0.0471	:
Potassium	mg/L	T		3.08	:	-		2.13	J	-		15.4	:	-	
Potassium	mg/L	D		-		2.84	:	-		2.33	J	-		15.4	:
Selenium	mg/L	T		<0.0006	:	-		<0.0004	J	-		<0.0014	:	-	
Selenium	mg/L	D		-		<0.0006	:	-		<0.0004	:	-		<0.0014	:
Silver	mg/L	T		<0.0002	:	-		<0.0002	J	-		<0.0002	J	-	
Silver	mg/L	D		-		<0.0002	:	-		<0.0002	J	-		<0.0002	J
Sodium	mg/L	T		18.5	:	-		11.8	:	-		49.9	:	-	
Sodium	mg/L	D		-		16.6	:	-		12.3	:	-		47.6	:
Thallium	mg/L	T		<0.0002	:	-		<0.00028	:	-		<0.0002	:	-	
Thallium	mg/L	D		-		<0.0002	:	-		<0.00028	:	-		<0.0002	:
Vanadium	mg/L	T		<0.0002	:	-		<0.00037	:	-		<0.0004	:	-	
Vanadium	mg/L	D		-		<0.0002	:	-		<0.00046	:	-		<0.0004	:
Zinc	mg/L	T		2.37	:	-		2.17	:	-		0.425	:	-	
Zinc	mg/L	D		-		2.06	:	-		2.21	:	-		0.426	:
Isotopes															
Lead	mg/L	T		0.00056	:	-		0.0011	:	-		0.0023	:	-	
Lead	mg/L	D		-		<0.0004	:	-		<0.00021	:	-		<0.0008	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID	SC-3B	SC-3B	SC-3B	SC-3B	SC-3B	SC-3B
			Sample Date	6/9/2003	6/9/2003	10/22/2003	10/22/2003	1/14/2004	1/14/2004
			Sample ID	SC-3B-T01N-GRW	SC-3B-D01N-GRW	SC-3B-T01N-GRW	SC-3B-D01N-GRW	SC-3B-T01N-GRW	SC-3B-D01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		2.03 :	-	0.48 :	-	0.62 :	-
EH	millivolts	T		307.5 :	-	109.1 :	-	92.6 :	-
pH	SU	T		5.8 :	-	5.9 J	-	5.9 J	-
Specific Conductance	uS/cm	T		2981. :	-	2496. :	-	2743. :	-
Temperature	Celsius	T		14.45 :	-	11.69 :	-	5.12 :	-
Turbidity	NTU	T		46.8 :	-	13.5 :	-	53.5 :	-
General Chemistry									
Ammonia	mg/L	T		0.26 J	-	<0.16 J	-	<0.16 J	-
Bicarbonate (as CaCO3)	mg/L	T		53.8 :	-	45.1 :	-	47.4 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<2.4 :	-	6.4 :	-	5.7 :	-
Fluoride	mg/L	T		7.3 :	-	7.3 :	-	7.3 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	<0.2 J	-	<0.2 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Phosphorus	mg/L	T		0.01 J	-	0.012 :	-	<0.03 :	-
Sulfate	mg/L	T		1780. J	-	1940. J	-	1910. :	-
Total Alkalinity	mg/L	T		53.8 :	-	45.1 :	-	47.4 :	-
Total Dissolved Solids	mg/L	T		3110. :	-	2860. :	-	2750. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.2 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		3.2 J	-	3.7 J	-	<1.1 J	-
Total Suspended Solids	mg/L	T		5.8 :	-	7.6 :	-	21.7 :	-
Laboratory Parameters									
pH	SU	T		5.8 :	-	5.9 J	-	5.9 J	-
Specific Conductance	umhos/cm	T		2670. :	-	2280. J	-	2320. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1740. :	-	1760. :	-	1790. :	-
Hardness	mg/L	D		-	1770. :	-	1710. :	-	1830. :
Metals									

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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3B 6/9/2003 SC-3B-T01N-GRW OMR		SC-3B 6/9/2003 SC-3B-D01N-GRW OMR		SC-3B 10/22/2003 SC-3B-T01N-GRW OMR		SC-3B 10/22/2003 SC-3B-D01N-GRW OMR		SC-3B 1/14/2004 SC-3B-T01N-GRW OMR		SC-3B 1/14/2004 SC-3B-D01N-GRW OMR	
Aluminum	mg/L	T	4.78	:	-		<7.32	:	-		6.9	:	-	
Aluminum	mg/L	D	-		5.07	:	-		<6.87	:	-		6.6	:
Antimony	mg/L	T	<0.072	:	-		<0.052	:	-		<0.0018	:	-	
Antimony	mg/L	D	-		<0.072	:	-		<0.052	:	-		<0.0017	:
Arsenic	mg/L	T	<0.04	:	-		<0.041	:	-		<0.0002	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.041	:	-		<0.0002	:
Barium	mg/L	T	<0.123	:	-		<0.115	:	-		<0.0188	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.115	:	-		<0.0188	:
Beryllium	mg/L	T	0.0282	:	-		0.024	:	-		0.0238	:	-	
Beryllium	mg/L	D	-		0.0285	:	-		0.022	:	-		0.0223	:
Boron	mg/L	T	<0.084	:	-		<0.063	:	-		<0.0117	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.063	:	-		<0.0117	:
Cadmium	mg/L	T	<0.005	:	-		<0.13	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.005	:	-		<0.13	:	-		<0.0007	:
Calcium	mg/L	T	463.	:	-		464.	:	-		472.	:	-	
Calcium	mg/L	D	-		471.	:	-		450.	:	-		482.	:
Chromium	mg/L	T	<0.01	:	-		<0.23	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.23	J	-		<0.0057	:
Cobalt	mg/L	T	0.245	:	-		<0.32	:	-		0.167	J	-	
Cobalt	mg/L	D	-		0.252	:	-		<0.32	:	-		0.172	:
Copper	mg/L	T	<0.015	:	-		<0.23	:	-		<0.0035	:	-	
Copper	mg/L	D	-		<0.015	:	-		<0.23	:	-		<0.0035	:
Iron	mg/L	T	62.5	:	-		67.3	:	-		64.4	:	-	
Iron	mg/L	D	-		64.1	:	-		64.6	:	-		65.8	:
Lead	mg/L	T	<0.001	:	-		0.0078	:	-		0.0137	:	-	
Lead	mg/L	D	-		<0.001	:	-		0.0023	:	-		<0.0002	:
Magnesium	mg/L	T	140.	:	-		147.	:	-		148.	:	-	
Magnesium	mg/L	D	-		144.	:	-		143.	:	-		152.	:
Manganese	mg/L	T	26.8	:	-		28.	:	-		27.7	:	-	
Manganese	mg/L	D	-		27.4	:	-		27.2	:	-		28.4	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.011	:	-		<0.003	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.011	:	-		<0.003	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3B 6/9/2003 SC-3B-T01N-GRW OMR		SC-3B 6/9/2003 SC-3B-D01N-GRW OMR		SC-3B 10/22/2003 SC-3B-T01N-GRW OMR		SC-3B 10/22/2003 SC-3B-D01N-GRW OMR		SC-3B 1/14/2004 SC-3B-T01N-GRW OMR		SC-3B 1/14/2004 SC-3B-D01N-GRW OMR	
Nickel	mg/L	T	0.432	:	-	:	0.632	:	-	:	0.29	:	-	:
Nickel	mg/L	D	-	:	0.444	:	-	:	0.625	:	-	:	0.297	:
Potassium	mg/L	T	<3.26	:	-	:	<63.8	:	-	:	2.43	:	-	:
Potassium	mg/L	D	-	:	<3.26	:	-	:	<63.8	:	-	:	2.18	:
Selenium	mg/L	T	<0.008	:	-	:	0.0125	:	-	:	0.0036	J	-	:
Selenium	mg/L	D	-	:	<0.008	:	-	:	0.0079	:	-	:	0.0038	:
Silver	mg/L	T	<0.001	:	-	:	<0.001	:	-	:	<0.0002	:	-	:
Silver	mg/L	D	-	:	<0.001	:	-	:	<0.001	:	-	:	<0.0002	:
Sodium	mg/L	T	24.	:	-	:	<99.1	:	-	:	23.6	:	-	:
Sodium	mg/L	D	-	:	23.3	:	-	:	<99.1	:	-	:	26.1	:
Thallium	mg/L	T	<0.001	:	-	:	<0.001	:	-	:	<0.0002	:	-	:
Thallium	mg/L	D	-	:	<0.001	:	-	:	<0.001	:	-	:	<0.0002	:
Vanadium	mg/L	T	<0.002	:	-	:	<0.001	:	-	:	0.00058	:	-	:
Vanadium	mg/L	D	-	:	<0.002	:	-	:	<0.001	:	-	:	0.00027	:
Zinc	mg/L	T	4.1	:	-	:	4.3	:	-	:	5.86	:	-	:
Zinc	mg/L	D	-	:	4.24	:	-	:	4.08	:	-	:	3.68	:
Isotopes														
Lead	mg/L	T	<0.001	:	-	:	0.0078	:	-	:	0.0137	:	-	:
Lead	mg/L	D	-	:	<0.001	:	-	:	0.0023	:	-	:	<0.0002	:

J = Qualified as estimated during data validation
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T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3B 4/19/2004 SC-3B-T01N-GRW OMR T	SC-3B 4/19/2004 SC-3B-D01N-GRW OMR T	SC-5B 6/5/2003 SC-5B-T01N-GRW OMR T	SC-5B 6/5/2003 SC-5B-D01N-GRW OMR T	SC-5B 10/22/2003 SC-5B-T01N-GRW OMR T	SC-5B 10/22/2003 SC-5B-D01N-GRW OMR T
Field Measurements								
DO	mg/L	T	-	-	0.31 :	-	0.77 :	-
EH	millivolts	T	-	-	279. :	-	-214.4 :	-
pH	SU	T	6. J	-	7.1 J	-	7.3 J	-
Specific Conductance	uS/cm	T	-	-	2420. :	-	2625. :	-
Temperature	Celsius	T	-	-	9.2 :	-	9.06 :	-
Turbidity	NTU	T	-	-	23. :	-	3.7 :	-
General Chemistry								
Ammonia	mg/L	T	<0.28 :	-	-	-	0.56 J	-
Bicarbonate (as CaCO3)	mg/L	T	47.4 :	-	199. :	-	202. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T	5.4 :	-	<3.3 :	-	7.2 :	-
Fluoride	mg/L	T	7.7 :	-	1.2 :	-	1.1 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	<0.2 J	-	<0.4 J	-	<0.2 :	-
Nitrite	mg/L	T	<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	0.11 J	-	<0.029 :	-
Phosphorus	mg/L	T	<0.01 :	-	-	-	0.051 :	-
Sulfate	mg/L	T	1970. :	-	1380. J	-	1420. J	-
Total Alkalinity	mg/L	T	47.4 :	-	199. :	-	202. :	-
Total Dissolved Solids	mg/L	T	2940. :	-	2340. :	-	2140. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	-	3.3 :	-
Total Organic Carbon	mg/L	T	3.3 J	-	-	-	1.8 J	-
Total Suspended Solids	mg/L	T	<5.8 J	-	-	-	5.4 :	-
Laboratory Parameters								
pH	SU	T	6. J	-	7.1 J	-	7.3 J	-
Specific Conductance	umhos/cm	T	2400. J	-	2260. J	-	2010. J	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	1750. :	-	1370. :	-	1470. :	-
Hardness	mg/L	D	-	1790. :	-	1410. :	-	1320. :
Metals								

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3B 4/19/2004 SC-3B-T01N-GRW OMR T	SC-3B 4/19/2004 SC-3B-D01N-GRW OMR D	SC-5B 6/5/2003 SC-5B-T01N-GRW OMR T	SC-5B 6/5/2003 SC-5B-D01N-GRW OMR D	SC-5B 10/22/2003 SC-5B-T01N-GRW OMR T	SC-5B 10/22/2003 SC-5B-D01N-GRW OMR D
Aluminum	mg/L	T / D	6.27 :	-	<0.426 :	-	<0.217 :	-
Aluminum	mg/L	D / T	-	6.49 :	-	<0.426 :	-	<0.217 :
Antimony	mg/L	T / D	<0.053 :	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D / T	-	<0.053 :	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T / D	<0.0469 :	-	<0.0004 :	-	0.00067 :	-
Arsenic	mg/L	D / T	-	<0.0426 :	-	<0.0004 :	-	0.00044 :
Barium	mg/L	T / D	<0.049 :	-	0.0219 :	-	0.0281 :	-
Barium	mg/L	D / T	-	<0.049 :	-	0.0211 :	-	0.0259 :
Beryllium	mg/L	T / D	0.0317 :	-	<0.0003 J	-	<0.0002 :	-
Beryllium	mg/L	D / T	-	0.0257 :	-	<0.0003 J	-	<0.0002 :
Boron	mg/L	T / D	<0.0554 :	-	0.0102 :	-	<0.025 :	-
Boron	mg/L	D / T	-	<0.0486 :	-	0.0122 :	-	<0.0156 :
Cadmium	mg/L	T / D	<0.1 :	-	<0.0005 :	-	<0.0013 :	-
Cadmium	mg/L	D / T	-	<0.1 :	-	<0.0005 :	-	<0.0013 :
Calcium	mg/L	T / D	460. :	-	537. :	-	528. :	-
Calcium	mg/L	D / T	-	470. :	-	530. :	-	476. :
Chromium	mg/L	T / D	<0.13 :	-	<0.001 :	-	<0.0023 J	-
Chromium	mg/L	D / T	-	<0.13 :	-	<0.001 :	-	<0.0023 J
Cobalt	mg/L	T / D	0.197 :	-	<0.0038 :	-	<0.0032 :	-
Cobalt	mg/L	D / T	-	0.308 :	-	<0.0038 :	-	<0.0032 :
Copper	mg/L	T / D	<0.27 :	-	<0.0015 :	-	0.0026 :	-
Copper	mg/L	D / T	-	<0.27 :	-	<0.0015 :	-	<0.0023 :
Iron	mg/L	T / D	62.7 J	-	3.63 :	-	<0.455 :	-
Iron	mg/L	D / T	-	64.8 :	-	1.1 :	-	<0.455 :
Lead	mg/L	T / D	<0.004 :	-	<0.00069 :	-	<0.0004 :	-
Lead	mg/L	D / T	-	<0.004 :	-	<0.0002 :	-	<0.0004 :
Magnesium	mg/L	T / D	145. :	-	39.4 :	-	36.2 :	-
Magnesium	mg/L	D / T	-	149. :	-	39.1 :	-	33.3 :
Manganese	mg/L	T / D	27. :	-	2.8 :	-	2.48 :	-
Manganese	mg/L	D / T	-	27.7 :	-	2.77 :	-	2.34 :
Mercury	mg/L	T / D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Mercury	mg/L	D / T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Molybdenum	mg/L	T / D	<0.014 :	-	<0.0023 :	-	<0.0004 :	-
Molybdenum	mg/L	D / T	-	<0.014 :	-	<0.0023 :	-	<0.0004 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3B 4/19/2004 SC-3B-T01N-GRW OMR T		SC-3B 4/19/2004 SC-3B-D01N-GRW OMR D		SC-5B 6/5/2003 SC-5B-T01N-GRW OMR T		SC-5B 6/5/2003 SC-5B-D01N-GRW OMR D		SC-5B 10/22/2003 SC-5B-T01N-GRW OMR T		SC-5B 10/22/2003 SC-5B-D01N-GRW OMR D	
Nickel	mg/L		<0.33	J	-		<0.003	:	-		<0.0045	:	-	
Nickel	mg/L		-		<0.33	J	-		<0.003	:	-		<0.0045	:
Potassium	mg/L		<15.5	:	-		3.56	:	-		16.5	:	-	
Potassium	mg/L		-		<15.5	:	-		3.53	:	-		17.	:
Selenium	mg/L		<0.007	:	-		<0.0016	:	-		<0.0006	:	-	
Selenium	mg/L		-		<0.007	:	-		<0.0016	:	-		<0.0006	:
Silver	mg/L		<0.001	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L		-		<0.001	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L		<67.8	:	-		33.5	:	-		88.2	:	-	
Sodium	mg/L		-		<33.6	:	-		30.7	:	-		88.6	:
Thallium	mg/L		<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L		-		<0.001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L		<0.002	:	-		0.00056	:	-		<0.0002	:	-	
Vanadium	mg/L		-		<0.002	:	-		<0.0004	:	-		<0.0002	:
Zinc	mg/L		3.24	:	-		0.0445	:	-		<0.019	:	-	
Zinc	mg/L		-		3.06	:	-		<0.039	:	-		<0.019	:
Isotopes														
Lead	mg/L		<0.004	:	-		<0.00069	:	-		<0.0004	:	-	
Lead	mg/L		-		<0.004	:	-		<0.0002	:	-		<0.0004	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Exposure Area / Fraction	Site ID	SC-5B	SC-5B	SC-5B	SC-5B		
			Sample Date	1/15/2004	1/15/2004	4/20/2004	4/20/2004		
			Sample ID	SC-5B-T01N-GRW	SC-5B-D01N-GRW	SC-5B-T01N-GRW	SC-5B-D01N-GRW	----	----
		Exposure Area		OMR	OMR	OMR	OMR		
Field Measurements									
DO	mg/L	T		0.49 :	-	2.66 :	-	-	-
EH	millivolts	T		-168.3 :	-	-151.1 :	-	-	-
pH	SU	T		7.2 J	-	7.2 J	-	-	-
Specific Conductance	uS/cm	T		2336. :	-	2509. :	-	-	-
Temperature	Celsius	T		7.03 :	-	7.65 :	-	-	-
Turbidity	NTU	T		7.1 :	-	0.8 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.21 J	-	0.72 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		184. :	-	179. :	-	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Chloride	mg/L	T		6.8 :	-	27.5 J	-	-	-
Fluoride	mg/L	T		1.3 :	-	1.3 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	-	-
Nitrate	mg/L	T		<0.2 J	-	<0.2 J	-	-	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	0.58 J	-	-	-
Phosphorus	mg/L	T		0.042 :	-	0.028 J	-	-	-
Sulfate	mg/L	T		1370. :	-	1460. :	-	-	-
Total Alkalinity	mg/L	T		184. :	-	179. :	-	-	-
Total Dissolved Solids	mg/L	T		2300. :	-	2360. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		0.39 :	-	<1. :	-	-	-
Total Organic Carbon	mg/L	T		<1.4 :	-	<1.3 J	-	-	-
Total Suspended Solids	mg/L	T		4.8 :	-	5.4 J	-	-	-
Laboratory Parameters									
pH	SU	T		7.2 J	-	7.2 J	-	-	-
Specific Conductance	umhos/cm	T		1950. J	-	2130. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	-	-
Physical Properties									
Hardness	mg/L	T		1600. :	-	1610. :	-	-	-
Hardness	mg/L	D		-	1630. :	-	1580. :	-	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction													
		SC-5B 1/15/2004 SC-5B-T01N-GRW OMR		SC-5B 1/15/2004 SC-5B-D01N-GRW OMR		SC-5B 4/20/2004 SC-5B-T01N-GRW OMR		SC-5B 4/20/2004 SC-5B-D01N-GRW OMR		----		----	
Aluminum	mg/L	T	<0.621	:	-		<0.176	:	-		-		-	
Aluminum	mg/L	D	-		<0.621	:	-		<0.179	:	-		-	
Antimony	mg/L	T	<0.003	:	-		<0.0008	:	-		-		-	
Antimony	mg/L	D	-		<0.003	:	-		<0.0008	:	-		-	
Arsenic	mg/L	T	0.00029	:	-		<0.0004	:	-		-		-	
Arsenic	mg/L	D	-		0.0003	:	-		<0.0004	:	-		-	
Barium	mg/L	T	0.02	:	-		0.0183	:	-		-		-	
Barium	mg/L	D	-		0.0199	:	-		0.0185	:	-		-	
Beryllium	mg/L	T	<0.001	:	-		0.00037	:	-		-		-	
Beryllium	mg/L	D	-		<0.001	:	-		<0.0002	:	-		-	
Boron	mg/L	T	<0.0117	:	-		0.0139	:	-		-		-	
Boron	mg/L	D	-		0.0117	:	-		0.0138	:	-		-	
Cadmium	mg/L	T	<0.0007	J	-		<0.0003	:	-		-		-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0003	:	-		-	
Calcium	mg/L	T	575.	:	-		576.	:	-		-		-	
Calcium	mg/L	D	-		583.	:	-		565.	:	-		-	
Chromium	mg/L	T	<0.0057	:	-		<0.0006	:	-		-		-	
Chromium	mg/L	D	-		<0.0057	:	-		<0.0006	:	-		-	
Cobalt	mg/L	T	<0.0037	:	-		<0.0011	:	-		-		-	
Cobalt	mg/L	D	-		<0.0037	:	-		<0.0011	:	-		-	
Copper	mg/L	T	<0.0035	:	-		<0.0007	J	-		-		-	
Copper	mg/L	D	-		<0.0035	:	-		0.0008	J	-		-	
Iron	mg/L	T	1.98	:	-		<2.28	J	-		-		-	
Iron	mg/L	D	-		2.05	:	-		<2.19	:	-		-	
Lead	mg/L	T	0.00026	:	-		<0.0008	:	-		-		-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0008	:	-		-	
Magnesium	mg/L	T	40.6	:	-		41.5	:	-		-		-	
Magnesium	mg/L	D	-		41.3	:	-		40.7	:	-		-	
Manganese	mg/L	T	2.97	:	-		3.06	:	-		-		-	
Manganese	mg/L	D	-		3.03	:	-		3.	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.003	:	-		<0.001	:	-		-		-	
Molybdenum	mg/L	D	-		<0.003	:	-		<0.001	:	-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction D = Dissolved Fraction

Appendix A-6d
Groundwater - Bedrock
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction																
		SC-5B / 1/15/2004 / SC-5B-T01N-GRW / OMR			SC-5B / 1/15/2004 / SC-5B-D01N-GRW / OMR			SC-5B / 4/20/2004 / SC-5B-T01N-GRW / OMR			SC-5B / 4/20/2004 / SC-5B-D01N-GRW / OMR			----			----	
Nickel	mg/L	T	<0.0168	:		-			<0.0015	J		-			-			-	
Nickel	mg/L	D	-			<0.0168	:		-			<0.0015	J		-			-	
Potassium	mg/L	T	3.46	J		-			7.02	:		-			-			-	
Potassium	mg/L	D	-			3.86	J		-			7.29	:		-			-	
Selenium	mg/L	T	<0.0004	J		-			<0.0014	:		-			-			-	
Selenium	mg/L	D	-			<0.0004	:		-			<0.0014	:		-			-	
Silver	mg/L	T	<0.0002	J		-			<0.0002	J		-			-			-	
Silver	mg/L	D	-			<0.0002	J		-			<0.0002	J		-			-	
Sodium	mg/L	T	31.6	:		-			55.3	:		-			-			-	
Sodium	mg/L	D	-			34.4	:		-			51.7	:		-			-	
Thallium	mg/L	T	<0.00026	:		-			<0.0002	:		-			-			-	
Thallium	mg/L	D	-			<0.00027	:		-			<0.0002	:		-			-	
Vanadium	mg/L	T	<0.00045	:		-			<0.0004	:		-			-			-	
Vanadium	mg/L	D	-			<0.00039	:		-			<0.0004	:		-			-	
Zinc	mg/L	T	<0.091	:		-			<0.015	:		-			-			-	
Zinc	mg/L	D	-			<0.091	:		-			<0.015	:		-			-	
Isotopes																			
Lead	mg/L	T	0.00026	:		-			<0.0008	:		-			-			-	
Lead	mg/L	D	-			<0.0002	:		-			<0.0008	:		-			-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			AWWT-1 10/23/2003 AWWT-1-T01N-GRW OMR		AWWT-1 10/23/2003 AWWT-1-D01N-GRW OMR		AWWT-1 2/24/2004 AWWT-1-T01N-GRW OMR		AWWT-1 2/24/2004 AWWT-1-D01N-GRW OMR		AWWT-2 10/23/2003 AWWT-2-T01N-GRW OMR		AWWT-2 10/23/2003 AWWT-2-D01N-GRW OMR	
Field Measurements														
DO	mg/L	T	0.36	:	-		0.63	:	-		2.36	:	-	
Eh	millivolts	T	272.1	:	-		192.6	:	-		202.1	:	-	
pH	SU	T	4.1	J	-		4.3	J	-		6.9	J	-	
Specific Conductance	uS/cm	T	1473.	:	-		1380.	:	-		2996.	:	-	
Temperature	Celsius	T	9.81	:	-		6.54	:	-		12.61	:	-	
Turbidity	NTU	T	18.1	:	-		6.3	:	-		52.5	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.13	J	-		<0.062	:	-		<0.084	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		306.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	5.	:	-		6.	:	-		4.5	:	-	
Fluoride	mg/L	T	4.1	:	-		3.9	:	-		4.6	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	:	-		<0.2	:	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Phosphorus	mg/L	T	0.023	:	-		0.03	:	-		<0.01	:	-	
Sulfate	mg/L	T	991.	J	-		819.	:	-		1700.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		306.	:	-	
Total Dissolved Solids	mg/L	T	1410.	:	-		1380.	:	-		2990.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<2.3	:	-		<0.24	:	-		3.	:	-	
Total Organic Carbon	mg/L	T	1.4	J	-		1.2	:	-		1.9	J	-	
Total Suspended Solids	mg/L	T	<1.5	:	-		3.3	:	-		12.1	:	-	
Laboratory Parameters														
pH	SU	T	4.1	J	-		4.3	J	-		6.9	J	-	
Specific Conductance	umhos/cm	T	1280.	J	-		1200.	J	-		2520.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	580.	:	-		606.	:	-		2220.	:	-	
Hardness	mg/L	D	-		577.	:	-		623.	:	-		1950.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			AWWT-1	10/23/2003	AWWT-1-T01N-GRW	OMR
			AWWT-1	10/23/2003	AWWT-1-D01N-GRW	OMR
			AWWT-1	2/24/2004	AWWT-1-T01N-GRW	OMR
			AWWT-1	2/24/2004	AWWT-1-D01N-GRW	OMR
			AWWT-2	10/23/2003	AWWT-2-T01N-GRW	OMR
			AWWT-2	10/23/2003	AWWT-2-D01N-GRW	OMR
Aluminum	mg/L	T	39.2 :	-	37.4 :	-	<0.217 :	-
Aluminum	mg/L	D	-	39.4 :	-	38.3 :	-	<0.217 :
Antimony	mg/L	T	0.0884 :	-	<0.029 :	-	<0.001 :	-
Antimony	mg/L	D	-	<0.082 :	-	<0.029 :	-	<0.001 :
Arsenic	mg/L	T	<0.035 :	-	<0.028 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	<0.035 :	-	<0.028 :	-	<0.0004 :
Barium	mg/L	T	<0.117 :	-	<0.053 :	-	<0.0115 :	-
Barium	mg/L	D	-	<0.117 :	-	<0.053 :	-	<0.0115 :
Beryllium	mg/L	T	<0.0147 :	-	0.0053 :	-	0.0045 :	-
Beryllium	mg/L	D	-	<0.0151 :	-	0.006 :	-	0.0032 :
Boron	mg/L	T	<0.064 :	-	<0.023 :	-	0.0097 :	-
Boron	mg/L	D	-	<0.064 :	-	<0.023 :	-	0.0109 :
Cadmium	mg/L	T	0.0781 :	-	<0.07 :	-	<0.0005 :	-
Cadmium	mg/L	D	-	<0.07 :	-	<0.07 J	-	<0.0005 :
Calcium	mg/L	T	150. :	-	156. :	-	430. :	-
Calcium	mg/L	D	-	149. :	-	161. :	-	377. :
Chromium	mg/L	T	<0.231 J	-	<0.15 :	-	<0.0011 J	-
Chromium	mg/L	D	-	<0.247 J	-	<0.15 :	-	<0.0011 J
Cobalt	mg/L	T	<0.31 :	-	<0.23 :	-	0.103 :	-
Cobalt	mg/L	D	-	<0.31 :	-	<0.23 :	-	0.0967 :
Copper	mg/L	T	<0.2 J	-	<0.3 :	-	0.0052 :	-
Copper	mg/L	D	-	<0.2 J	-	<0.3 :	-	<0.0022 :
Iron	mg/L	T	35.5 :	-	35. :	-	4.29 :	-
Iron	mg/L	D	-	34.4 :	-	36.2 :	-	<0.455 :
Lead	mg/L	T	<0.002 :	-	<0.001 :	-	0.0011 :	-
Lead	mg/L	D	-	<0.002 :	-	<0.001 :	-	<0.0004 :
Magnesium	mg/L	T	50.3 :	-	52.3 :	-	279. :	-
Magnesium	mg/L	D	-	50. :	-	53.5 :	-	244. :
Manganese	mg/L	T	5.44 :	-	5.53 :	-	5.85 :	-
Manganese	mg/L	D	-	5.42 :	-	5.7 :	-	5.11 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	<0.012 :	-	<0.024 :	-	<0.0011 :	-
Molybdenum	mg/L	D	-	<0.012 :	-	<0.024 :	-	0.0021 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	AWWT-1 10/23/2003 AWWT-1-T01N-GRW OMR		AWWT-1 10/23/2003 AWWT-1-D01N-GRW OMR		AWWT-1 2/24/2004 AWWT-1-T01N-GRW OMR		AWWT-1 2/24/2004 AWWT-1-D01N-GRW OMR		AWWT-2 10/23/2003 AWWT-2-T01N-GRW OMR		AWWT-2 10/23/2003 AWWT-2-D01N-GRW OMR	
Nickel	mg/L	T	0.389	:	-		0.267	:	-		0.199	:	-	
Nickel	mg/L	D	-		0.419	:	-		<0.24	:	-		0.188	:
Potassium	mg/L	T	<52.2	:	-		<39.1	:	-		<4.32	:	-	
Potassium	mg/L	D	-		<52.2	:	-		<39.1	:	-		<4.36	:
Selenium	mg/L	T	<0.003	:	-		0.0021	J	-		0.0006	:	-	
Selenium	mg/L	D	-		<0.003	:	-		0.0039	J	-		<0.0006	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Sodium	mg/L	T	<100.	:	-		<51.5	:	-		42.7	:	-	
Sodium	mg/L	D	-		<77.6	:	-		<51.5	:	-		38.5	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.001	:	-		0.00025	:
Zinc	mg/L	T	<2.01	:	-		2.12	:	-		0.55	:	-	
Zinc	mg/L	D	-		<1.96	:	-		2.09	:	-		0.465	:
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		0.0011	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.0004	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	AWWT-2	AWWT-2	CC-1A	CC-1A	CC-1A	CC-1A
			Sample Date	2/24/2004	2/24/2004	5/7/2003	5/7/2003	6/4/2003	6/4/2003
			Sample ID	AWWT-2-T01N-GRW	AWWT-2-D01N-GRW	CC-1A-T01N-GRW	CC-1A-D01N-GRW	CC1A-T01N-GRW	CC-1A-T01N-GRW
			Exposure Area	OMR	OMR	MR	MR	MR	MR
Field Measurements									
DO	mg/L	T		3.35 :	-	4.99 :	-	-	1.1 :
Eh	millivolts	T		90.1 :	-	365.5 :	-	-	179.1 :
pH	SU	T		6.7 J	-	7. :	-	7.2 J	4.57 :
Specific Conductance	uS/cm	T		2993. :	-	499. :	-	-	507. :
Temperature	Celsius	T		8.51 :	-	7.63 :	-	-	8.97 :
Turbidity	NTU	T		20.4 :	-	39.5 :	-	-	88. :
General Chemistry									
Ammonia	mg/L	T		<0.066 :	-	<0.097 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		301. :	-	109. :	-	157. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		4.1 :	-	23.9 :	-	<15.4 :	-
Fluoride	mg/L	T		4.6 :	-	1.1 :	-	0.89 J	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 :	-	<0.4 J	-	<0.4 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	0.1 :	-
Phosphorus	mg/L	T		0.01 :	-	0.64 :	-	-	-
Sulfate	mg/L	T		1860. :	-	112. :	-	130. J	-
Total Alkalinity	mg/L	T		301. :	-	109. :	-	157. :	-
Total Dissolved Solids	mg/L	T		2830. :	-	368. :	-	318. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	0.42 :	-	-	-
Total Organic Carbon	mg/L	T		1.5 :	-	-	-	-	-
Total Suspended Solids	mg/L	T		13.4 :	-	-	-	-	-
Laboratory Parameters									
pH	SU	T		6.7 J	-	7. :	-	7.2 J	4.57 :
Specific Conductance	umhos/cm	T		2560. J	-	436. :	-	484. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	-	-
Physical Properties									
Hardness	mg/L	T		2130. :	-	215. :	-	232. :	-
Hardness	mg/L	D		-	2060. :	-	185. :	-	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	AWWT-2 2/24/2004 AWWT-2-T01N-GRW OMR		AWWT-2 2/24/2004 AWWT-2-D01N-GRW OMR		CC-1A 5/7/2003 CC-1A-T01N-GRW MR		CC-1A 5/7/2003 CC-1A-D01N-GRW MR		CC-1A 6/4/2003 CC1A-T01N-GRW MR		CC-1A 6/4/2003 CC-1A-T01N-GRW MR	
Aluminum	mg/L	T	<0.514	:	-		29.4	:	-		6.33	:	-	
Aluminum	mg/L	D	-		<0.514	:	-		<0.426	:	-		-	
Antimony	mg/L	T	<0.001	:	-		<0.0006	:	-		<0.072	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0006	:	-		-	
Arsenic	mg/L	T	0.00034	:	-		0.004	:	-		<0.04	:	-	
Arsenic	mg/L	D	-		0.00037	J	-		<0.0004	:	-		-	
Barium	mg/L	T	0.0074	J	-		0.127	:	-		<0.123	:	-	
Barium	mg/L	D	-		0.0073	J	-		0.0246	:	-		-	
Beryllium	mg/L	T	0.005	:	-		0.0041	:	-		<0.0076	:	-	
Beryllium	mg/L	D	-		0.0037	:	-		<0.0003	J	-		-	
Boron	mg/L	T	0.0113	:	-		0.0256	:	-		<0.084	:	-	
Boron	mg/L	D	-		0.0114	:	-		0.0173	:	-		-	
Cadmium	mg/L	T	<0.0007	:	-		<0.0005	:	-		<0.005	:	-	
Cadmium	mg/L	D	-		<0.0007	J	-		<0.0005	:	-		-	
Calcium	mg/L	T	413.	:	-		62.3	:	-		72.	:	-	
Calcium	mg/L	D	-		401.	:	-		57.9	:	-		-	
Chromium	mg/L	T	<0.0015	:	-		0.0417	:	-		0.0234	:	-	
Chromium	mg/L	D	-		<0.0015	:	-		0.0085	:	-		-	
Cobalt	mg/L	T	0.105	:	-		0.0047	:	-		<0.038	:	-	
Cobalt	mg/L	D	-		0.1	:	-		<0.0038	:	-		-	
Copper	mg/L	T	<0.003	:	-		0.0216	:	-		0.023	:	-	
Copper	mg/L	D	-		<0.003	:	-		0.0035	:	-		-	
Iron	mg/L	T	5.18	:	-		22.3	:	-		6.84	:	-	
Iron	mg/L	D	-		<0.373	:	-		<0.422	:	-		-	
Lead	mg/L	T	0.0019	:	-		0.0376	:	-		0.0291	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Magnesium	mg/L	T	266.	:	-		14.5	:	-		12.8	:	-	
Magnesium	mg/L	D	-		258.	:	-		9.7	:	-		-	
Manganese	mg/L	T	5.66	:	-		0.353	:	-		0.336	:	-	
Manganese	mg/L	D	-		5.35	:	-		0.126	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		0.00012	:	-		<0.00026	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0024	:	-		0.0221	:	-		<0.023	:	-	
Molybdenum	mg/L	D	-		<0.0024	:	-		0.0215	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		AWWT-2 / 2/24/2004 / AWWT-2-T01N-GRW / OMR / T		AWWT-2 / 2/24/2004 / AWWT-2-D01N-GRW / OMR / D		CC-1A / 5/7/2003 / CC-1A-T01N-GRW / MR / T		CC-1A / 5/7/2003 / CC-1A-D01N-GRW / MR / D		CC-1A / 6/4/2003 / CC1A-T01N-GRW / MR / T		CC-1A / 6/4/2003 / CC-1A-T01N-GRW / MR / D	
Nickel	mg/L	0.197	:	-		0.0144	:	-		<0.03	:	-	
Nickel	mg/L	-		0.194	:	-		<0.003	:	-		-	
Potassium	mg/L	4.35	:	-		7.32	:	-		<3.26	:	-	
Potassium	mg/L	-		4.36	:	-		2.72	:	-		-	
Selenium	mg/L	<0.0004	J	-		0.0035	:	-		<0.008	:	-	
Selenium	mg/L	-		0.0008	J	-		<0.001	:	-		-	
Silver	mg/L	<0.0002	:	-		0.00045	:	-		<0.001	:	-	
Silver	mg/L	-		<0.0002	:	-		<0.0002	:	-		-	
Sodium	mg/L	42.9	:	-		23.2	:	-		24.4	:	-	
Sodium	mg/L	-		41.8	:	-		24.8	:	-		-	
Thallium	mg/L	<0.0002	:	-		0.00031	:	-		<0.001	:	-	
Thallium	mg/L	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	<0.0002	:	-		0.0221	:	-		<0.002	:	-	
Vanadium	mg/L	-		<0.0002	:	-		<0.0002	:	-		-	
Zinc	mg/L	0.553	:	-		0.132	:	-		0.0616	:	-	
Zinc	mg/L	-		0.478	:	-		<0.039	:	-		-	
Isotopes													
Lead	mg/L	0.0019	:	-		0.0376	:	-		0.0291	:	-	
Lead	mg/L	-		<0.0002	:	-		<0.0002	:	-		-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID	CC-1A 6/4/2003 CC1A-D01N-GRW MR	CC-1A 7/21/2003 CC1A-T01N-GRW MR	CC-1A 7/21/2003 CC-1A-T01N-GRW MR	CC-1A 7/21/2003 CC1A-D01N-GRW MR	CC-1A 8/12/2003 CC1A-T01N-GRW MR	CC-1A 8/12/2003 CC-1A-T01N-GRW MR
Field Measurements									
DO	mg/L	T		-	-	3.74 :	-	-	5.85 :
Eh	millivolts	T		-	-	61.5 :	-	-	-28. :
pH	SU	T		-	7.1 J	7.1 :	-	7.2 J	7.2 :
Specific Conductance	uS/cm	T		-	-	559. :	-	-	488. :
Temperature	Celsius	T		-	-	15.07 :	-	-	15.7 :
Turbidity	NTU	T		-	-	63.4 :	-	-	42.3 :
General Chemistry									
Bicarbonate (as CaCO3)	mg/L	T		-	179. :	-	-	172. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	7.6 :	-	-	7.3 :	-
Fluoride	mg/L	T		-	0.93 :	-	-	1.1 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	<0.2 J	-	-	0.24 J	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Sulfate	mg/L	T		-	113. J	-	-	106. J	-
Total Alkalinity	mg/L	T		-	179. :	-	-	172. :	-
Total Dissolved Solids	mg/L	T		-	454. :	-	-	392. :	-
Total Suspended Solids	mg/L	T		-	-	-	-	101. :	-
Laboratory Parameters									
pH	SU	T		-	7.1 J	7.1 :	-	7.2 J	7.2 :
Specific Conductance	umhos/cm	T		-	551. J	-	-	515. J	-
Physical Properties									
Hardness	mg/L	T		-	278. :	-	-	226. :	-
Hardness	mg/L	D		211. :	-	-	248. :	-	-
Metals									
Aluminum	mg/L	T		-	11.1 :	-	-	1.79 :	-
Aluminum	mg/L	D		<0.503 :	-	-	<0.631 :	-	-
Antimony	mg/L	T		-	<0.001 :	-	-	<0.001 :	-
Antimony	mg/L	D		<0.072 :	-	-	<0.001 :	-	-
Arsenic	mg/L	T		-	0.00053 :	-	-	0.0006 :	-
Arsenic	mg/L	D		<0.04 :	-	-	<0.0004 :	-	-
Barium	mg/L	T		-	0.128 :	-	-	0.0798 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-1A	CC-1A	CC-1A	CC-1A	CC-1A	CC-1A
			Sample Date	6/4/2003	7/21/2003	7/21/2003	7/21/2003	8/12/2003	8/12/2003
			Sample ID	CC1A-D01N-GRW	CC1A-T01N-GRW	CC-1A-T01N-GRW	CC1A-D01N-GRW	CC1A-T01N-GRW	CC-1A-T01N-GRW
				MR	MR	MR	MR	MR	MR
Barium	mg/L	D		<0.123 :	-	-	0.0365 :	-	-
Beryllium	mg/L	T		-	<0.0011 :	-	-	0.00046 :	-
Beryllium	mg/L	D		<0.0061 :	-	-	<0.00028 :	-	-
Boron	mg/L	T		-	0.02 :	-	-	0.0179 :	-
Boron	mg/L	D		<0.084 :	-	-	0.0188 :	-	-
Cadmium	mg/L	T		-	<0.0003 :	-	-	<0.0005 :	-
Cadmium	mg/L	D		<0.005 :	-	-	<0.0003 :	-	-
Calcium	mg/L	T		-	76. :	-	-	71.3 :	-
Calcium	mg/L	D		67. :	-	-	77.8 :	-	-
Chromium	mg/L	T		-	0.0236 :	-	-	<0.0101 :	-
Chromium	mg/L	D		<0.01 :	-	-	<0.0006 :	-	-
Cobalt	mg/L	T		-	0.0033 :	-	-	<0.0029 :	-
Cobalt	mg/L	D		<0.038 :	-	-	0.0025 :	-	-
Copper	mg/L	T		-	0.0116 :	-	-	<0.012 :	-
Copper	mg/L	D		<0.015 :	-	-	<0.0014 J	-	-
Iron	mg/L	T		-	9.68 :	-	-	3.24 :	-
Iron	mg/L	D		<0.311 :	-	-	<0.667 :	-	-
Lead	mg/L	T		-	0.0094 :	-	-	0.0066 :	-
Lead	mg/L	D		<0.001 :	-	-	<0.0002 :	-	-
Magnesium	mg/L	T		-	15. :	-	-	11.8 :	-
Magnesium	mg/L	D		10.7 :	-	-	12.8 :	-	-
Manganese	mg/L	T		-	0.353 :	-	-	0.311 :	-
Manganese	mg/L	D		0.198 :	-	-	0.198 :	-	-
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 J	-
Mercury	mg/L	D		<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T		-	0.0156 :	-	-	0.0198 :	-
Molybdenum	mg/L	D		<0.023 :	-	-	0.0144 :	-	-
Nickel	mg/L	T		-	<0.01 :	-	-	<0.0048 :	-
Nickel	mg/L	D		<0.03 :	-	-	<0.0024 :	-	-
Potassium	mg/L	T		-	6.03 :	-	-	3.76 :	-
Potassium	mg/L	D		<3.26 :	-	-	3.88 :	-	-
Selenium	mg/L	T		-	<0.0016 :	-	-	0.0016 :	-
Selenium	mg/L	D		<0.008 :	-	-	<0.0016 J	-	-
Silver	mg/L	T		-	<0.0002 J	-	-	<0.0002 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1A 6/4/2003 CC1A-D01N-GRW MR		CC-1A 7/21/2003 CC1A-T01N-GRW MR		CC-1A 7/21/2003 CC-1A-T01N-GRW MR		CC-1A 7/21/2003 CC1A-D01N-GRW MR		CC-1A 8/12/2003 CC1A-T01N-GRW MR		CC-1A 8/12/2003 CC-1A-T01N-GRW MR	
Silver	mg/L	D	<0.001	:	-		-		<0.0002	J	-		-	
Sodium	mg/L	T	-		25.2	:	-		-		25.9	:	-	
Sodium	mg/L	D	24.4	:	-		-		27.7	:	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		0.004	:	-		-		0.0028	:	-	
Vanadium	mg/L	D	<0.002	:	-		-		<0.0004	:	-		-	
Zinc	mg/L	T	-		0.0559	:	-		-		<0.057	:	-	
Zinc	mg/L	D	<0.014	:	-		-		<0.016	:	-		-	
Isotopes														
Lead	mg/L	T	-		0.0094	:	-		-		0.0066	:	-	
Lead	mg/L	D	<0.001	:	-		-		<0.0002	:	-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-1A	CC-1A	CC-1A	CC-1A	CC-1A	CC-1A
			Sample Date	8/12/2003	9/11/2003	9/11/2003	9/11/2003	10/23/2003	10/23/2003
			Sample ID	CC1A-D01N-GRW	CC1A-T01N-GRW	CC-1A-T01N-GRW	CC1A-D01N-GRW	CC1A-T01N-GRW	CC-1A-T01N-GRW
				MR	MR	MR	MR	MR	MR
Field Measurements									
DO	mg/L	T		-	-	6.76 :	-	-	4.93 :
Eh	millivolts	T		-	-	26.6 :	-	-	-99.3 :
pH	SU	T		-	7.4 J	7.04 :	-	6.9 J	7.04 :
Specific Conductance	uS/cm	T		-	-	541. :	-	-	295. :
Temperature	Celsius	T		-	-	13.36 :	-	-	14.46 :
Turbidity	NTU	T		-	-	21.2 :	-	-	92.6 :
General Chemistry									
Bicarbonate (as CaCO3)	mg/L	T		-	158. :	-	-	188. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	6.2 :	-	-	6.7 :	-
Fluoride	mg/L	T		-	1. :	-	-	1. :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.47 :	-	-	<0.2 J	-
Nitrite	mg/L	T		-	0.0057 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Sulfate	mg/L	T		-	95.3 J	-	-	131. J	-
Total Alkalinity	mg/L	T		-	158. :	-	-	188. :	-
Total Dissolved Solids	mg/L	T		-	462. :	-	-	380. :	-
Laboratory Parameters									
pH	SU	T		-	7.4 J	7.04 :	-	6.9 J	7.04 :
Specific Conductance	umhos/cm	T		-	446. J	-	-	498. J	-
Physical Properties									
Hardness	mg/L	T		-	218. :	-	-	251. :	-
Hardness	mg/L	D		226. :	-	-	198. :	-	-
Metals									
Aluminum	mg/L	T		-	2.22 :	-	-	3.6 :	-
Aluminum	mg/L	D		<0.183 :	-	-	<0.217 :	-	-
Antimony	mg/L	T		-	<0.001 :	-	-	<0.001 :	-
Antimony	mg/L	D		<0.001 :	-	-	<0.001 :	-	-
Arsenic	mg/L	T		-	0.00055 :	-	-	0.00077 :	-
Arsenic	mg/L	D		<0.0004 :	-	-	<0.0004 :	-	-
Barium	mg/L	T		-	0.0485 :	-	-	0.0811 :	-
Barium	mg/L	D		0.0414 :	-	-	0.0317 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1A 8/12/2003 CC1A-D01N-GRW MR	CC-1A 9/11/2003 CC1A-T01N-GRW MR	CC-1A 9/11/2003 CC-1A-T01N-GRW MR	CC-1A 9/11/2003 CC1A-D01N-GRW MR	CC-1A 10/23/2003 CC1A-T01N-GRW MR	CC-1A 10/23/2003 CC-1A-T01N-GRW MR
Beryllium	mg/L	T	-	0.00045 :	-	-	<0.0004 J	-
Beryllium	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	-
Boron	mg/L	T	-	0.0227 :	-	-	0.0175 :	-
Boron	mg/L	D	0.0191 :	-	-	0.0196 :	-	-
Cadmium	mg/L	T	-	<0.0005 :	-	-	<0.0005 :	-
Cadmium	mg/L	D	<0.0005 :	-	-	<0.0005 :	-	-
Calcium	mg/L	T	-	68. :	-	-	78.6 :	-
Calcium	mg/L	D	72.3 :	-	-	62.2 :	-	-
Chromium	mg/L	T	-	<0.0068 :	-	-	0.0057 J	-
Chromium	mg/L	D	<0.002 :	-	-	<0.0017 :	-	-
Cobalt	mg/L	T	-	<0.0029 :	-	-	<0.0029 :	-
Cobalt	mg/L	D	0.0039 :	-	-	0.003 :	-	-
Copper	mg/L	T	-	<0.007 :	-	-	0.0088 :	-
Copper	mg/L	D	<0.0057 :	-	-	<0.0033 :	-	-
Iron	mg/L	T	-	1.89 :	-	-	3.05 :	-
Iron	mg/L	D	<0.168 :	-	-	<0.455 :	-	-
Lead	mg/L	T	-	<0.0039 :	-	-	0.0043 :	-
Lead	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	-
Magnesium	mg/L	T	-	11.8 :	-	-	13.3 :	-
Magnesium	mg/L	D	11.1 :	-	-	10.4 :	-	-
Manganese	mg/L	T	-	0.151 :	-	-	0.241 :	-
Manganese	mg/L	D	0.306 :	-	-	0.0961 :	-	-
Mercury	mg/L	T	-	<0.0001 J	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 J	-	-	<0.0001 J	-	-
Molybdenum	mg/L	T	-	0.0191 :	-	-	0.0185 :	-
Molybdenum	mg/L	D	0.0253 :	-	-	0.0227 :	-	-
Nickel	mg/L	T	-	<0.004 :	-	-	<0.0024 J	-
Nickel	mg/L	D	<0.0024 :	-	-	<0.0024 :	-	-
Potassium	mg/L	T	-	<3.98 :	-	-	<4.98 :	-
Potassium	mg/L	D	3.78 :	-	-	<3.82 :	-	-
Selenium	mg/L	T	-	0.0014 :	-	-	0.0019 :	-
Selenium	mg/L	D	0.00083 :	-	-	0.0013 :	-	-
Silver	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Silver	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	CC-1A		CC-1A		CC-1A		CC-1A		CC-1A		CC-1A	
Sample Date			8/12/2003		9/11/2003		9/11/2003		9/11/2003		10/23/2003		10/23/2003	
Sample ID			CC1A-D01N-GRW		CC1A-T01N-GRW		CC-1A-T01N-GRW		CC1A-D01N-GRW		CC1A-T01N-GRW		CC-1A-T01N-GRW	
Exposure Area			MR		MR		MR		MR		MR		MR	
Sodium	mg/L	T	-		27.3	:	-		-		26.	:	-	
Sodium	mg/L	D	26.1	:	-		-		26.4	:	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		0.0015	:	-		-		0.0038	:	-	
Vanadium	mg/L	D	0.00023	J	-		-		0.00035	:	-		-	
Zinc	mg/L	T	-		0.0386	:	-		-		0.0289	:	-	
Zinc	mg/L	D	<0.057	:	-		-		<0.0218	:	-		-	
Isotopes														
Lead	mg/L	T	-		<0.0039	:	-		-		0.0043	:	-	
Lead	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area													
			CC-1A 10/23/2003 CC1A-D01N-GRW MR		CC-1A 11/4/2003 CC1A-T01N-GRW MR		CC-1A 11/4/2003 CC-1A-T01N-GRW MR		CC-1A 11/4/2003 CC1A-D01N-GRW MR		CC-1A 12/11/2003 CC1A-T01N-GRW MR		CC-1A 12/11/2003 CC-1A-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		-		8.92	:	-		-		8.74	:
Eh	millivolts	T	-		-		33.9	:	-		-		177.8	:
pH	SU	T	-		7.2	J	6.76	:	-		7.	J	5.89	:
Specific Conductance	uS/cm	T	-		-		576.	:	-		-		485.	:
Temperature	Celsius	T	-		-		8.75	:	-		-		7.61	:
Turbidity	NTU	T	-		-		74.9	:	-		-		75.5	:
General Chemistry														
Bicarbonate (as CaCO3)	mg/L	T	-		175.	:	-		-		141.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		7.3	:	-		-		7.6	:	-	
Fluoride	mg/L	T	-		0.98	:	-		-		0.91	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.2	J	-		-		0.64	:	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Sulfate	mg/L	T	-		121.	:	-		-		123.	:	-	
Total Alkalinity	mg/L	T	-		175.	:	-		-		141.	:	-	
Total Dissolved Solids	mg/L	T	-		474.	:	-		-		356.	:	-	
Laboratory Parameters														
pH	SU	T	-		7.2	J	6.76	:	-		7.	J	5.89	:
Specific Conductance	umhos/cm	T	-		634.	J	-		-		429.	J	-	
Physical Properties														
Hardness	mg/L	T	-		281.	:	-		-		250.	:	-	
Hardness	mg/L	D	248.	:	-		-		265.	:	-		-	
Metals														
Aluminum	mg/L	T	-		10.8	:	-		-		2.42	:	-	
Aluminum	mg/L	D	<0.217	:	-		-		<0.217	:	-		-	
Antimony	mg/L	T	-		<0.001	:	-		-		<0.0024	:	-	
Antimony	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Arsenic	mg/L	T	-		0.0015	:	-		-		0.00065	:	-	
Arsenic	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Barium	mg/L	T	-		0.267	:	-		-		0.0551	:	-	
Barium	mg/L	D	0.0408	:	-		-		0.0488	:	-		-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1A 10/23/2003 CC1A-D01N-GRW MR		CC-1A 11/4/2003 CC1A-T01N-GRW MR		CC-1A 11/4/2003 CC-1A-T01N-GRW MR		CC-1A 11/4/2003 CC1A-D01N-GRW MR		CC-1A 12/11/2003 CC1A-T01N-GRW MR		CC-1A 12/11/2003 CC-1A-T01N-GRW MR	
Beryllium	mg/L	T	-		<0.00069	:	-		-		<0.0004	:	-	
Beryllium	mg/L	D	<0.0004	J	-		-		<0.0003	:	-		-	
Boron	mg/L	T	-		0.017	:	-		-		0.0159	:	-	
Boron	mg/L	D	0.0164	:	-		-		0.0139	:	-		-	
Cadmium	mg/L	T	-		<0.0007	:	-		-		<0.0005	:	-	
Cadmium	mg/L	D	<0.0005	:	-		-		<0.0007	:	-		-	
Calcium	mg/L	T	-		84.6	:	-		-		78.3	:	-	
Calcium	mg/L	D	78.6	:	-		-		84.5	:	-		-	
Chromium	mg/L	T	-		<0.0283	:	-		-		<0.0066	:	-	
Chromium	mg/L	D	<0.0011	J	-		-		<0.0013	:	-		-	
Cobalt	mg/L	T	-		0.0041	:	-		-		<0.0029	:	-	
Cobalt	mg/L	D	0.0109	:	-		-		0.0046	:	-		-	
Copper	mg/L	T	-		0.0165	:	-		-		0.0088	:	-	
Copper	mg/L	D	0.0028	:	-		-		<0.002	:	-		-	
Iron	mg/L	T	-		11.3	:	-		-		2.02	:	-	
Iron	mg/L	D	<0.455	:	-		-		<0.455	:	-		-	
Lead	mg/L	T	-		0.012	:	-		-		0.0035	:	-	
Lead	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Magnesium	mg/L	T	-		17.	:	-		-		13.2	:	-	
Magnesium	mg/L	D	12.6	:	-		-		13.1	:	-		-	
Manganese	mg/L	T	-		0.416	J	-		-		0.0941	:	-	
Manganese	mg/L	D	0.19	:	-		-		0.333	:	-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		0.018	:	-		-		0.0085	:	-	
Molybdenum	mg/L	D	0.0188	:	-		-		0.0184	:	-		-	
Nickel	mg/L	T	-		0.011	:	-		-		<0.0024	:	-	
Nickel	mg/L	D	<0.0024	J	-		-		<0.0028	:	-		-	
Potassium	mg/L	T	-		6.46	:	-		-		3.43	:	-	
Potassium	mg/L	D	<4.04	:	-		-		4.27	:	-		-	
Selenium	mg/L	T	-		0.0014	:	-		-		0.0019	:	-	
Selenium	mg/L	D	0.00078	:	-		-		0.00098	:	-		-	
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR	
			CC-1A 10/23/2003 CC1A-D01N-GRW MR		CC-1A 11/4/2003 CC1A-T01N-GRW MR		CC-1A 11/4/2003 CC-1A-T01N-GRW MR		CC-1A 11/4/2003 CC1A-D01N-GRW MR		CC-1A 12/11/2003 CC1A-T01N-GRW MR		CC-1A 12/11/2003 CC-1A-T01N-GRW MR	
Sodium	mg/L	T	-		26.3	:	-		-		24.6	:	-	
Sodium	mg/L	D	24.9	:	-		-		26.3	:	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		0.0109	:	-		-		<0.002	:	-	
Vanadium	mg/L	D	0.00065	:	-		-		0.00032	:	-		-	
Zinc	mg/L	T	-		<0.0615	:	-		-		<0.019	:	-	
Zinc	mg/L	D	<0.019	:	-		-		<0.019	:	-		-	
Isotopes														
Lead	mg/L	T	-		0.012	:	-		-		0.0035	:	-	
Lead	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	CC-1A		CC-1A		CC-1A		CC-1A		CC-1A		CC-1A	
Sample Date			12/11/2003		1/7/2004		1/7/2004		1/7/2004		4/21/2004		4/21/2004	
Sample ID			CC1A-D01N-GRW		CC1A-T01N-GRW		CC-1A-T01N-GRW		CC1A-D01N-GRW		CC1A-T01N-GRW		CC-1A-T01N-GRW	
Exposure Area			MR		MR		MR		MR		MR		MR	
Field Measurements														
DO	mg/L	T	-		-		9.21	:	-		-		10.09	:
Eh	millivolts	T	-		-		101.5	:	-		-		182.2	:
pH	SU	T	-		7.5	J	6.58	:	-		7.7	:	6.77	:
Specific Conductance	uS/cm	T	-		-		261.	:	-		-		435.	:
Temperature	Celsius	T	-		-		4.97	:	-		-		6.06	:
Turbidity	NTU	T	-		-		68.9	:	-		-		227.	:
General Chemistry														
Bicarbonate (as CaCO3)	mg/L	T	-		132.	J	-		-		106.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		7.	:	-		-		6.7	:	-	
Fluoride	mg/L	T	-		0.82	:	-		-		0.82	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.36	J	-		-		0.51	:	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Sulfate	mg/L	T	-		124.	:	-		-		131.	:	-	
Total Alkalinity	mg/L	T	-		132.	J	-		-		106.	:	-	
Total Dissolved Solids	mg/L	T	-		336.	:	-		-		304.	:	-	
Laboratory Parameters														
pH	SU	T	-		7.5	J	6.58	:	-		7.7	:	6.77	:
Specific Conductance	umhos/cm	T	-		499.	J	-		-		385.	:	-	
Physical Properties														
Hardness	mg/L	T	-		225.	:	-		-		199.	:	-	
Hardness	mg/L	D	245.	:	-		-		230.	:	-		-	
Metals														
Aluminum	mg/L	T	-		0.775	:	-		-		19.	:	-	
Aluminum	mg/L	D	<0.217	:	-		-		<0.514	:	-		-	
Antimony	mg/L	T	-		<0.0024	:	-		-		<0.0016	:	-	
Antimony	mg/L	D	<0.0024	:	-		-		<0.0024	:	-		-	
Arsenic	mg/L	T	-		0.00048	:	-		-		0.00095	:	-	
Arsenic	mg/L	D	0.00045	:	-		-		<0.0004	:	-		-	
Barium	mg/L	T	-		0.0472	:	-		-		0.119	:	-	
Barium	mg/L	D	0.038	:	-		-		0.0361	:	-		-	

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R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\appendix a-6e.rpt

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1A 12/11/2003 CC1A-D01N-GRW MR	CC-1A 1/7/2004 CC1A-T01N-GRW MR	CC-1A 1/7/2004 CC-1A-T01N-GRW MR	CC-1A 1/7/2004 CC1A-D01N-GRW MR	CC-1A 4/21/2004 CC1A-T01N-GRW MR	CC-1A 4/21/2004 CC-1A-T01N-GRW MR
Beryllium	mg/L	T	-	<0.0003 :	-	-	0.0016 :	-
Beryllium	mg/L	D	<0.0004 :	-	-	<0.0003 :	-	-
Boron	mg/L	T	-	<0.013 :	-	-	0.0194 :	-
Boron	mg/L	D	0.0154 :	-	-	<0.0127 :	-	-
Cadmium	mg/L	T	-	<0.0007 J	-	-	<0.0003 J	-
Cadmium	mg/L	D	<0.0005 :	-	-	<0.0007 :	-	-
Calcium	mg/L	T	-	71.3 :	-	-	58.6 :	-
Calcium	mg/L	D	77.5 :	-	-	73. :	-	-
Chromium	mg/L	T	-	0.0025 J	-	-	0.033 :	-
Chromium	mg/L	D	<0.0018 :	-	-	<0.0015 J	-	-
Cobalt	mg/L	T	-	<0.0023 :	-	-	0.0037 :	-
Cobalt	mg/L	D	0.007 :	-	-	0.0036 :	-	-
Copper	mg/L	T	-	0.0043 :	-	-	0.0176 :	-
Copper	mg/L	D	0.0024 :	-	-	<0.003 :	-	-
Iron	mg/L	T	-	<0.839 :	-	-	14.1 J	-
Iron	mg/L	D	<0.455 :	-	-	<0.373 :	-	-
Lead	mg/L	T	-	0.0036 :	-	-	0.0153 :	-
Lead	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-
Magnesium	mg/L	T	-	11.4 :	-	-	12.8 :	-
Magnesium	mg/L	D	12.6 :	-	-	11.5 :	-	-
Manganese	mg/L	T	-	0.104 :	-	-	0.183 :	-
Manganese	mg/L	D	0.0935 :	-	-	<0.015 :	-	-
Mercury	mg/L	T	-	<0.0001 J	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 J	-	-
Molybdenum	mg/L	T	-	0.0037 :	-	-	0.0079 :	-
Molybdenum	mg/L	D	0.0089 :	-	-	0.0055 :	-	-
Nickel	mg/L	T	-	<0.0024 :	-	-	0.0124 :	-
Nickel	mg/L	D	<0.0024 :	-	-	<0.0024 :	-	-
Potassium	mg/L	T	-	3.18 :	-	-	5.67 :	-
Potassium	mg/L	D	3.44 :	-	-	3.29 :	-	-
Selenium	mg/L	T	-	0.0022 J	-	-	0.0031 :	-
Selenium	mg/L	D	0.0014 :	-	-	0.0014 :	-	-
Silver	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Silver	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1A 12/11/2003 CC1A-D01N-GRW MR		CC-1A 1/7/2004 CC1A-T01N-GRW MR		CC-1A 1/7/2004 CC-1A-T01N-GRW MR		CC-1A 1/7/2004 CC1A-D01N-GRW MR		CC-1A 4/21/2004 CC1A-T01N-GRW MR		CC-1A 4/21/2004 CC-1A-T01N-GRW MR	
Sodium	mg/L	T	-		27.6	:	-		-		<22.6	:	-	
Sodium	mg/L	D	26.	:	-		-		25.3	:	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		0.00026	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		0.0019	:	-		-		0.0084	:	-	
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Zinc	mg/L	T	-		<0.026	:	-		-		0.088	:	-	
Zinc	mg/L	D	<0.019	:	-		-		<0.026	:	-		-	
Isotopes														
Delta D	per mil	T	-		-		-		-		-		-93.5	:
Delta O-18	per mil	T	-		-		-		-		-		-12.6	:
Lead	mg/L	T	-		0.0036	:	-		-		0.0153	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-1A 4/21/2004 CC1A-D01N-GRW MR		CC-2A 5/6/2003 CC-2A-T01N-GRW MR		CC-2A 5/6/2003 CC-2A-D01N-GRW MR		CC-2A 6/4/2003 CC2A-T01N-GRW MR		CC-2A 6/4/2003 CC-2A-T01N-GRW MR		CC-2A 6/4/2003 CC2A-D01N-GRW MR	
Field Measurements														
DO	mg/L	T	-		1.28	:	-		-		0.85	:	-	
Eh	millivolts	T	-		145.	:	-		-		99.	:	-	
pH	SU	T	-		6.2	J	-		6.3	J	4.43	:	-	
Specific Conductance	uS/cm	T	-		1509.	:	-		-		1463.	:	-	
Temperature	Celsius	T	-		6.05	:	-		-		9.7	:	-	
Turbidity	NTU	T	-		127.2	:	-		-		16.8	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.12	:	-		<0.34	J	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		71.1	:	-		65.4	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		<2.6	:	-		<12.6	:	-		-	
Fluoride	mg/L	T	-		6.7	:	-		11.2	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		<0.4	J	-		<0.4	:	-		-	
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		0.023	J	-		-	
Phosphorus	mg/L	T	-		0.043	:	-		0.051	J	-		-	
Sulfate	mg/L	T	-		559.	J	-		708.	J	-		-	
Total Alkalinity	mg/L	T	-		71.1	:	-		65.4	:	-		-	
Total Dissolved Solids	mg/L	T	-		1010.	:	-		1040.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Total Suspended Solids	mg/L	T	-		25.7	:	-		24.5	:	-		-	
Laboratory Parameters														
pH	SU	T	-		6.2	J	-		6.3	J	4.43	:	-	
Specific Conductance	umhos/cm	T	-		1190.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Physical Properties														
Hardness	mg/L	T	-		608.	:	-		573.	:	-		-	
Hardness	mg/L	D	187.	:	-		563.	:	-		-		561.	:
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / MR											
			CC-1A 4/21/2004 CC1A-D01N-GRW MR		CC-2A 5/6/2003 CC-2A-T01N-GRW MR		CC-2A 5/6/2003 CC-2A-D01N-GRW MR		CC-2A 6/4/2003 CC2A-T01N-GRW MR		CC-2A 6/4/2003 CC-2A-T01N-GRW MR		CC-2A 6/4/2003 CC2A-D01N-GRW MR	
Aluminum	mg/L	T	-		5.18	:	-		4.96	:	-		-	
Aluminum	mg/L	D	<0.238	:	-		2.82	:	-		-		<3.46	:
Antimony	mg/L	T	-		<0.0006	:	-		<0.072	:	-		-	
Antimony	mg/L	D	<0.0017	:	-		<0.0006	:	-		-		<0.072	:
Arsenic	mg/L	T	-		<0.0004	:	-		<0.04	:	-		-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		<0.04	:
Barium	mg/L	T	-		<0.0123	:	-		<0.123	:	-		-	
Barium	mg/L	D	0.0268	:	-		<0.0123	:	-		-		<0.123	:
Beryllium	mg/L	T	-		0.043	:	-		0.0524	:	-		-	
Beryllium	mg/L	D	<0.00025	:	-		0.0313	:	-		-		0.0473	:
Boron	mg/L	T	-		0.0138	:	-		<0.084	:	-		-	
Boron	mg/L	D	<0.0138	:	-		0.0122	:	-		-		<0.084	:
Cadmium	mg/L	T	-		0.0013	:	-		<0.005	:	-		-	
Cadmium	mg/L	D	<0.0003	J	-		0.00098	:	-		-		<0.005	:
Calcium	mg/L	T	-		220.	:	-		208.	:	-		-	
Calcium	mg/L	D	59.8	:	-		203.	:	-		-		204.	:
Chromium	mg/L	T	-		0.0019	:	-		<0.01	:	-		-	
Chromium	mg/L	D	<0.0008	:	-		<0.001	:	-		-		<0.01	:
Cobalt	mg/L	T	-		0.0116	:	-		<0.038	:	-		-	
Cobalt	mg/L	D	<0.0038	:	-		0.0082	:	-		-		<0.038	:
Copper	mg/L	T	-		<0.0033	:	-		<0.015	:	-		-	
Copper	mg/L	D	<0.0011	J	-		0.002	:	-		-		<0.015	:
Iron	mg/L	T	-		12.6	:	-		16.9	:	-		-	
Iron	mg/L	D	<0.192	:	-		9.72	:	-		-		15.3	:
Lead	mg/L	T	-		0.0019	:	-		0.0024	:	-		-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		<0.001	:
Magnesium	mg/L	T	-		14.3	:	-		13.1	:	-		-	
Magnesium	mg/L	D	9.27	:	-		13.6	:	-		-		12.8	:
Manganese	mg/L	T	-		27.	:	-		26.8	:	-		-	
Manganese	mg/L	D	<0.019	:	-		19.6	:	-		-		24.	:
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.0023	:	-		<0.023	:	-		-	
Molybdenum	mg/L	D	<0.0047	:	-		<0.0023	:	-		-		<0.023	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-1A 4/21/2004 CC1A-D01N-GRW MR		CC-2A 5/6/2003 CC-2A-T01N-GRW MR		CC-2A 5/6/2003 CC-2A-D01N-GRW MR		CC-2A 6/4/2003 CC2A-T01N-GRW MR		CC-2A 6/4/2003 CC-2A-T01N-GRW MR		CC-2A 6/4/2003 CC2A-D01N-GRW MR	
Nickel	mg/L	T	-		0.0115	:	-		<0.03	:	-		-	
Nickel	mg/L	D	<0.0014	:	-		0.0084	:	-		-		<0.03	:
Potassium	mg/L	T	-		6.71	:	-		5.06	:	-		-	
Potassium	mg/L	D	2.39	:	-		6.06	:	-		-		5.08	:
Selenium	mg/L	T	-		<0.001	:	-		<0.008	:	-		-	
Selenium	mg/L	D	0.0017	:	-		<0.001	:	-		-		<0.008	:
Silver	mg/L	T	-		<0.0002	:	-		<0.001	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:
Sodium	mg/L	T	-		30.8	:	-		30.8	:	-		-	
Sodium	mg/L	D	<24.4	:	-		28.1	:	-		-		29.4	:
Thallium	mg/L	T	-		<0.0002	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:
Vanadium	mg/L	T	-		0.00078	:	-		<0.002	:	-		-	
Vanadium	mg/L	D	0.00058	:	-		<0.0002	:	-		-		<0.002	:
Zinc	mg/L	T	-		2.06	:	-		2.36	:	-		-	
Zinc	mg/L	D	<0.015	:	-		1.61	:	-		-		2.2	:
Isotopes														
Lead	mg/L	T	-		0.0019	:	-		0.0024	:	-		-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		<0.001	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID	CC-2A 7/21/2003 CC2A-T01N-GRW MR	CC-2A 7/21/2003 CC-2A-T01N-GRW MR	CC-2A 7/21/2003 CC2A-D01N-GRW MR	CC-2A 8/12/2003 CC-2A-T01N-GRW MR	CC-2A 8/12/2003 CC-2A-D01N-GRW MR	CC-2A 9/11/2003 CC2A-T01N-GRW MR
Field Measurements									
DO	mg/L	T		-	4.92 :	-	5.44 :	-	-
Eh	millivolts	T		-	107.6 :	-	25. :	-	-
pH	SU	T		6.1 J	5.84 :	-	6.2 J	-	6.4 J
Specific Conductance	uS/cm	T		-	1607. :	-	1475. :	-	-
Temperature	Celsius	T		-	13.56 :	-	11.55 :	-	-
Turbidity	NTU	T		-	22.1 :	-	9.9 :	-	-
General Chemistry									
Ammonia	mg/L	T		<0.049 J	-	-	0.061 :	-	<0.076 :
Bicarbonate (as CaCO3)	mg/L	T		53.1 :	-	-	64. :	-	41.3 :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T		<2. :	-	-	2. :	-	9.3 :
Fluoride	mg/L	T		18.6 :	-	-	13.5 :	-	9.6 :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		<0.2 J	-	-	<0.2 J	-	0.24 J
Nitrite	mg/L	T		<0.005 J	-	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		0.035 :	-	-	0.023 :	-	<0.01 :
Sulfate	mg/L	T		783. J	-	-	678. J	-	526. J
Total Alkalinity	mg/L	T		53.1 :	-	-	64. :	-	41.3 :
Total Dissolved Solids	mg/L	T		1320. :	-	-	1230. :	-	926. :
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	<0.24 :	-	<0.26 :
Total Organic Carbon	mg/L	T		<1.2 J	-	-	<1. J	-	<1. :
Total Suspended Solids	mg/L	T		49.9 :	-	-	32.4 :	-	12.3 :
Laboratory Parameters									
pH	SU	T		6.1 J	5.84 :	-	6.2 J	-	6.4 J
Specific Conductance	umhos/cm	T		1490. J	-	-	1320. J	-	975. J
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		660. :	-	-	693. :	-	503. :
Hardness	mg/L	D		-	-	685. :	-	636. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR		Site ID / Sample Date / Sample ID / MR	
			CC-2A 7/21/2003 CC2A-T01N-GRW MR		CC-2A 7/21/2003 CC-2A-T01N-GRW MR		CC-2A 7/21/2003 CC2A-D01N-GRW MR		CC-2A 8/12/2003 CC-2A-T01N-GRW MR		CC-2A 8/12/2003 CC-2A-D01N-GRW MR		CC-2A 9/11/2003 CC2A-T01N-GRW MR	
Aluminum	mg/L	T	8.57	:	-		-		8.95	:	-		6.54	:
Aluminum	mg/L	D	-		-		6.73	:	-		3.86	J	-	
Antimony	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	<0.0004	:	-		-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	-		-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	0.0164	:	-		-		0.0169	:	-		<0.0115	:
Barium	mg/L	D	-		-		0.0077	:	-		<0.0115	:	-	
Beryllium	mg/L	T	0.0779	:	-		-		0.0754	:	-		0.0468	:
Beryllium	mg/L	D	-		-		0.0838	:	-		0.0542	:	-	
Boron	mg/L	T	0.0177	:	-		-		<0.0063	:	-		0.0256	:
Boron	mg/L	D	-		-		0.0157	:	-		0.007	:	-	
Cadmium	mg/L	T	<0.00079	:	-		-		0.002	:	-		0.0011	J
Cadmium	mg/L	D	-		-		<0.001	:	-		0.0015	:	-	
Calcium	mg/L	T	255.	:	-		-		252.	:	-		179.	:
Calcium	mg/L	D	-		-		254.	:	-		231.	:	-	
Chromium	mg/L	T	<0.0006	:	-		-		<0.0051	:	-		<0.0043	:
Chromium	mg/L	D	-		-		<0.0006	:	-		<0.0011	:	-	
Cobalt	mg/L	T	0.0201	:	-		-		0.0194	:	-		0.0078	:
Cobalt	mg/L	D	-		-		0.0207	:	-		0.0143	:	-	
Copper	mg/L	T	<0.0014	J	-		-		<0.0104	:	-		<0.0027	:
Copper	mg/L	D	-		-		<0.0014	J	-		<0.0036	:	-	
Iron	mg/L	T	45.4	:	-		-		35.7	:	-		15.6	:
Iron	mg/L	D	-		-		42.9	:	-		17.9	:	-	
Lead	mg/L	T	0.0019	:	-		-		0.007	:	-		<0.0023	:
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	14.8	:	-		-		15.5	:	-		13.5	:
Magnesium	mg/L	D	-		-		14.3	:	-		14.2	:	-	
Manganese	mg/L	T	45.5	:	-		-		41.9	:	-		19.	:
Manganese	mg/L	D	-		-		46.4	:	-		30.8	:	-	
Mercury	mg/L	T	0.00077	:	-		-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	-		-		<0.00024	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	<0.0016	:	-		-		<0.0011	:	-		<0.0011	J
Molybdenum	mg/L	D	-		-		<0.0016	:	-		<0.0011	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 7/21/2003 CC2A-T01N-GRW MR	CC-2A 7/21/2003 CC-2A-T01N-GRW MR	CC-2A 7/21/2003 CC2A-D01N-GRW MR	CC-2A 8/12/2003 CC-2A-T01N-GRW MR	CC-2A 8/12/2003 CC-2A-D01N-GRW MR	CC-2A 9/11/2003 CC2A-T01N-GRW MR
Nickel	mg/L	T	0.0264 :	-	-	0.0352 :	-	<0.0109 :
Nickel	mg/L	D	-	-	0.0279 :	-	0.0146 :	-
Potassium	mg/L	T	9.31 :	-	-	8.26 :	-	7.12 :
Potassium	mg/L	D	-	-	9.13 :	-	7.77 :	-
Selenium	mg/L	T	<0.0016 :	-	-	0.00091 :	-	0.00096 :
Selenium	mg/L	D	-	-	<0.0016 J	-	<0.0006 :	-
Silver	mg/L	T	<0.0002 J	-	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	-	-	<0.0002 J	-	<0.0002 :	-
Sodium	mg/L	T	43.9 :	-	-	36.2 :	-	38.3 :
Sodium	mg/L	D	-	-	40.7 :	-	31.9 :	-
Thallium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	<0.0004 :	-	-	0.0014 J	-	0.00026 :
Vanadium	mg/L	D	-	-	<0.0004 :	-	<0.0002 J	-
Zinc	mg/L	T	4.56 :	-	-	4.16 :	-	2.12 :
Zinc	mg/L	D	-	-	4.75 :	-	2.67 :	-
Isotopes								
Lead	mg/L	T	0.0019 :	-	-	0.007 :	-	<0.0023 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0004 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			CC-2A 9/11/2003 CC-2A-T01N-GRW MR		CC-2A 9/11/2003 CC2A-D01N-GRW MR		CC-2A 10/23/2003 CC2A-T01N-GRW MR		CC-2A 10/23/2003 CC-2A-T01N-GRW MR		CC-2A 10/23/2003 CC2A-D01N-GRW MR		CC-2A 11/4/2003 CC2A-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	5.23	:	-		-		4.46	:	-		-	
Eh	millivolts	T	101.7	:	-		-		-4.5	:	-		-	
pH	SU	T	6.07	:	-		6.5	J	5.97	:	-		6.2	J
Specific Conductance	uS/cm	T	1039.	:	-		-		1434.	:	-		-	
Temperature	Celsius	T	9.96	:	-		-		9.6	:	-		-	
Turbidity	NTU	T	44.7	:	-		-		16.5	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.12	J	-		-		<0.13	:
Bicarbonate (as CaCO3)	mg/L	T	-		-		62.4	:	-		-		51.	:
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	-		-		7.4	:	-		-		4.3	:
Fluoride	mg/L	T	-		-		13.2	:	-		-		3.3	:
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	-		-		<0.2	J	-		-		<0.2	J
Nitrite	mg/L	T	-		-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	J	-		-		<0.01	J
Phosphorus	mg/L	T	-		-		0.018	:	-		-		0.013	:
Sulfate	mg/L	T	-		-		746.	J	-		-		770.	:
Total Alkalinity	mg/L	T	-		-		62.4	:	-		-		51.	:
Total Dissolved Solids	mg/L	T	-		-		1170.	:	-		-		1320.	:
Total Kjeldahl Nitrogen	mg/L	T	-		-		3.5	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	-		-		<1.	J	-		-		2.2	:
Total Suspended Solids	mg/L	T	-		-		18.6	:	-		-		19.6	:
Laboratory Parameters														
pH	SU	T	6.07	:	-		6.5	J	5.97	:	-		6.2	J
Specific Conductance	umhos/cm	T	-		-		1180.	J	-		-		1460.	J
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		-		624.	:	-		-		639.	:
Hardness	mg/L	D	-		443.	:	-		-		622.	:	-	
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 9/11/2003 CC-2A-T01N-GRW MR	CC-2A 9/11/2003 CC2A-D01N-GRW MR	CC-2A 10/23/2003 CC2A-T01N-GRW MR	CC-2A 10/23/2003 CC-2A-T01N-GRW MR	CC-2A 10/23/2003 CC2A-D01N-GRW MR	CC-2A 11/4/2003 CC2A-T01N-GRW MR
Aluminum	mg/L	T	-	-	6.33 :	-	-	6.7 :
Aluminum	mg/L	D	-	4.18 :	-	-	5.5 :	-
Antimony	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Antimony	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Arsenic	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	0.0249 :	-	-	0.0157 :
Barium	mg/L	D	-	<0.0115 :	-	-	<0.0115 :	-
Beryllium	mg/L	T	-	-	0.07 :	-	-	0.0703 :
Beryllium	mg/L	D	-	0.0292 :	-	-	0.0739 :	-
Boron	mg/L	T	-	-	0.0134 :	-	-	0.0117 :
Boron	mg/L	D	-	0.0244 :	-	-	0.0126 :	-
Cadmium	mg/L	T	-	-	0.0021 :	-	-	<0.0007 :
Cadmium	mg/L	D	-	0.00083 J	-	-	0.0024 :	-
Calcium	mg/L	T	-	-	227. :	-	-	233. :
Calcium	mg/L	D	-	156. :	-	-	227. :	-
Chromium	mg/L	T	-	-	0.0058 J	-	-	<0.0013 :
Chromium	mg/L	D	-	<0.0022 :	-	-	0.0049 J	-
Cobalt	mg/L	T	-	-	0.0143 :	-	-	0.0146 :
Cobalt	mg/L	D	-	0.0068 :	-	-	0.0174 :	-
Copper	mg/L	T	-	-	<0.0022 :	-	-	0.0023 :
Copper	mg/L	D	-	<0.0022 :	-	-	<0.0022 :	-
Iron	mg/L	T	-	-	27.4 :	-	-	31.2 :
Iron	mg/L	D	-	5.35 :	-	-	29.2 :	-
Lead	mg/L	T	-	-	0.0015 :	-	-	0.0018 :
Lead	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-
Magnesium	mg/L	T	-	-	13.7 :	-	-	14. :
Magnesium	mg/L	D	-	12.8 :	-	-	13.3 :	-
Manganese	mg/L	T	-	-	36.6 :	-	-	36.9 J
Manganese	mg/L	D	-	10.8 :	-	-	38.4 :	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 J	-	-	<0.0001 :	-
Molybdenum	mg/L	T	-	-	<0.0011 :	-	-	<0.0012 :
Molybdenum	mg/L	D	-	<0.0011 J	-	-	<0.0011 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 9/11/2003 CC-2A-T01N-GRW MR	CC-2A 9/11/2003 CC2A-D01N-GRW MR	CC-2A 10/23/2003 CC2A-T01N-GRW MR	CC-2A 10/23/2003 CC-2A-T01N-GRW MR	CC-2A 10/23/2003 CC2A-D01N-GRW MR	CC-2A 11/4/2003 CC2A-T01N-GRW MR
Nickel	mg/L	T	-	-	0.0134 J	-	-	0.0149 :
Nickel	mg/L	D	-	0.0056 :	-	-	0.013 J	-
Potassium	mg/L	T	-	-	8.11 :	-	-	6.93 :
Potassium	mg/L	D	-	6.35 :	-	-	7.84 :	-
Selenium	mg/L	T	-	-	0.00092 :	-	-	0.001 :
Selenium	mg/L	D	-	0.00061 :	-	-	0.0011 :	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	35.2 :	-	-	37.2 :
Sodium	mg/L	D	-	31.6 :	-	-	33.2 :	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	0.0005 :	-	-	0.00074 :
Vanadium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Zinc	mg/L	T	-	-	3.67 :	-	-	3.77 :
Zinc	mg/L	D	-	1.2 :	-	-	3.91 :	-
Isotopes								
Lead	mg/L	T	-	-	0.0015 :	-	-	0.0018 :
Lead	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			CC-2A 11/4/2003 CC-2A-T01N-GRW MR	CC-2A 11/4/2003 CC2A-D01N-GRW MR	CC-2A 12/11/2003 CC2A-T01N-GRW MR	CC-2A 12/11/2003 CC-2A-T01N-GRW MR	CC-2A 12/11/2003 CC2A-D01N-GRW MR	CC-2A 1/7/2004 CC2A-T01N-GRW MR
Field Measurements								
DO	mg/L	T	6.31 :	-	-	5.85 :	-	-
Eh	millivolts	T	51.5 :	-	-	69.6 :	-	-
pH	SU	T	6.03 :	-	6.4 J	6.02 :	-	6.2 J
Specific Conductance	uS/cm	T	1516. :	-	-	1030. :	-	-
Temperature	Celsius	T	8.04 :	-	-	7.65 :	-	-
Turbidity	NTU	T	59.3 :	-	-	92.9 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	-	0.07 :	-	-	0.065 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	57.8 :	-	-	53.7 J
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Chloride	mg/L	T	-	-	5.3 :	-	-	6.3 :
Fluoride	mg/L	T	-	-	14.8 :	-	-	16.3 :
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	-	-	<0.2 :	-	-	<0.2 J
Nitrite	mg/L	T	-	-	<0.005 :	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 :	-	-	<0.01 J
Phosphorus	mg/L	T	-	-	0.062 :	-	-	<0.03 :
Sulfate	mg/L	T	-	-	783. :	-	-	848. :
Total Alkalinity	mg/L	T	-	-	57.8 :	-	-	53.7 J
Total Dissolved Solids	mg/L	T	-	-	1280. :	-	-	1330. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	1.4 :	-	-	<1. :
Total Suspended Solids	mg/L	T	-	-	40.2 :	-	-	48.6 :
Laboratory Parameters								
pH	SU	T	6.03 :	-	6.4 J	6.02 :	-	6.2 J
Specific Conductance	umhos/cm	T	-	-	1210. J	-	-	1360. J
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 :	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	696. :	-	-	646. :
Hardness	mg/L	D	-	654. :	-	-	662. :	-
Metals								

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-2A	CC-2A	CC-2A	CC-2A	CC-2A	CC-2A
			Sample Date	11/4/2003	11/4/2003	12/11/2003	12/11/2003	12/11/2003	1/7/2004
			Sample ID	CC-2A-T01N-GRW	CC2A-D01N-GRW	CC2A-T01N-GRW	CC-2A-T01N-GRW	CC2A-D01N-GRW	CC2A-T01N-GRW
				MR	MR	MR	MR	MR	MR
Aluminum	mg/L	T		-	-	7.55 :	-	-	6.72 :
Aluminum	mg/L	D		-	5.42 :	-	-	5.54 :	-
Antimony	mg/L	T		-	-	<0.0024 :	-	-	<0.0024 :
Antimony	mg/L	D		-	<0.001 :	-	-	<0.0024 :	-
Arsenic	mg/L	T		-	-	<0.0004 :	-	-	0.00042 :
Arsenic	mg/L	D		-	<0.0004 :	-	-	0.0004 :	-
Barium	mg/L	T		-	-	<0.0115 :	-	-	0.0074 :
Barium	mg/L	D		-	0.0119 :	-	-	<0.0115 :	-
Beryllium	mg/L	T		-	-	0.0838 :	-	-	0.0798 :
Beryllium	mg/L	D		-	0.0747 :	-	-	0.0748 :	-
Boron	mg/L	T		-	-	0.0124 :	-	-	0.0323 :
Boron	mg/L	D		-	0.0105 :	-	-	0.0122 :	-
Cadmium	mg/L	T		-	-	0.0025 :	-	-	0.0029 J
Cadmium	mg/L	D		-	<0.0007 :	-	-	0.002 :	-
Calcium	mg/L	T		-	-	255. :	-	-	236. :
Calcium	mg/L	D		-	238. :	-	-	242. :	-
Chromium	mg/L	T		-	-	0.0124 :	-	-	0.0175 :
Chromium	mg/L	D		-	<0.0013 :	-	-	0.0091 :	-
Cobalt	mg/L	T		-	-	0.0183 :	-	-	0.0166 J
Cobalt	mg/L	D		-	0.0178 :	-	-	0.0186 :	-
Copper	mg/L	T		-	-	0.0037 :	-	-	<0.003 :
Copper	mg/L	D		-	<0.002 :	-	-	<0.0022 :	-
Iron	mg/L	T		-	-	41.4 :	-	-	38.5 :
Iron	mg/L	D		-	30.3 :	-	-	30.9 :	-
Lead	mg/L	T		-	-	0.0033 :	-	-	0.0022 :
Lead	mg/L	D		-	<0.0004 :	-	-	<0.0002 :	-
Magnesium	mg/L	T		-	-	14.7 :	-	-	13.6 :
Magnesium	mg/L	D		-	14.1 :	-	-	14.2 :	-
Manganese	mg/L	T		-	-	44.4 :	-	-	42.8 :
Manganese	mg/L	D		-	38.3 :	-	-	39.2 :	-
Mercury	mg/L	T		-	-	<0.0001 :	-	-	<0.0001 J
Mercury	mg/L	D		-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	<0.0011 :	-	-	<0.0024 :
Molybdenum	mg/L	D		-	<0.0012 :	-	-	<0.0011 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 11/4/2003 CC-2A-T01N-GRW MR	CC-2A 11/4/2003 CC2A-D01N-GRW MR	CC-2A 12/11/2003 CC2A-T01N-GRW MR	CC-2A 12/11/2003 CC-2A-T01N-GRW MR	CC-2A 12/11/2003 CC2A-D01N-GRW MR	CC-2A 1/7/2004 CC2A-T01N-GRW MR
Nickel	mg/L	T	-	-	0.0242 J	-	-	<0.022 :
Nickel	mg/L	D	-	0.0166 :	-	-	0.0179 J	-
Potassium	mg/L	T	-	-	8.38 :	-	-	8.51 :
Potassium	mg/L	D	-	7.36 :	-	-	8.08 :	-
Selenium	mg/L	T	-	-	0.0011 :	-	-	0.0021 J
Selenium	mg/L	D	-	0.0012 :	-	-	0.0014 :	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Sodium	mg/L	T	-	-	39.1 :	-	-	37.1 :
Sodium	mg/L	D	-	38.9 :	-	-	35.5 :	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	<0.0004 :	-	-	<0.0004 :
Vanadium	mg/L	D	-	<0.0002 :	-	-	<0.0004 :	-
Zinc	mg/L	T	-	-	4.68 :	-	-	4.59 :
Zinc	mg/L	D	-	3.92 :	-	-	3.97 :	-
Isotopes								
Lead	mg/L	T	-	-	0.0033 :	-	-	0.0022 :
Lead	mg/L	D	-	<0.0004 :	-	-	<0.0002 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2A 1/7/2004 CC-2A-T01N-GRW MR		CC-2A 1/7/2004 CC2A-D01N-GRW MR		CC-2A 2/25/2004 CC-2A-T01N-GRW MR		CC-2A 2/25/2004 CC-2A-D01N-GRW MR		CC-2A 4/21/2004 CC2A-T01N-GRW MR		CC-2A 4/21/2004 CC-2A-T01N-GRW MR	
Field Measurements														
DO	mg/L	T	6.35	:	-		5.14	:	-		-		8.72	:
Eh	millivolts	T	34.8	:	-		164.5	:	-		-		187.6	:
pH	SU	T	6.1	:	-		5.88	:	-		7.1	J	6.64	:
Specific Conductance	uS/cm	T	1376.	:	-		1675.	:	-		-		500.	:
Temperature	Celsius	T	6.	:	-		5.87	:	-		-		4.32	:
Turbidity	NTU	T	18.3	:	-		3.4	:	-		-		1.4	:
General Chemistry														
Ammonia	mg/L	T	-		-		-		-		<0.078	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		-		-		81.4	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Chloride	mg/L	T	-		-		-		-		6.1	:	-	
Fluoride	mg/L	T	-		-		12.7	:	-		5.5	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Nitrate	mg/L	T	-		-		-		-		0.43	J	-	
Nitrite	mg/L	T	-		-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		-		-		-		0.024	:	-	
Sulfate	mg/L	T	-		-		694.	:	-		367.	:	-	
Total Alkalinity	mg/L	T	-		-		-		-		81.4	:	-	
Total Dissolved Solids	mg/L	T	-		-		1130.	:	-		628.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		-		-		<1.1	J	-	
Total Suspended Solids	mg/L	T	-		-		28.2	:	-		<3.4	J	-	
Laboratory Parameters														
pH	SU	T	6.1	:	-		5.88	:	-		7.1	J	6.64	:
Specific Conductance	umhos/cm	T	-		-		-		-		758.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		-		-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		-		689.	:	-		396.	:	-	
Hardness	mg/L	D	-		642.	:	-		608.	:	-		-	
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CC-2A 1/7/2004 CC-2A-T01N-GRW MR		CC-2A 1/7/2004 CC2A-D01N-GRW MR		CC-2A 2/25/2004 CC-2A-T01N-GRW MR		CC-2A 2/25/2004 CC-2A-D01N-GRW MR		CC-2A 4/21/2004 CC2A-T01N-GRW MR		CC-2A 4/21/2004 CC-2A-T01N-GRW MR	
Aluminum	mg/L	T	-		-		6.58	:	-		3.15	:	-	
Aluminum	mg/L	D	-		5.97	:	-		4.7	:	-		-	
Antimony	mg/L	T	-		-		<0.00098	:	-		<0.0016	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		<0.001	:	-		-	
Arsenic	mg/L	T	-		-		<0.00054	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		0.00042	:	-		<0.0002	:	-		-	
Barium	mg/L	T	-		-		0.0067	J	-		0.0047	:	-	
Barium	mg/L	D	-		0.0055	:	-		0.0054	J	-		-	
Beryllium	mg/L	T	-		-		0.0742	:	-		0.0183	J	-	
Beryllium	mg/L	D	-		0.0809	:	-		0.057	:	-		-	
Boron	mg/L	T	-		-		0.0089	:	-		0.0177	:	-	
Boron	mg/L	D	-		0.032	:	-		0.0089	:	-		-	
Cadmium	mg/L	T	-		-		0.0019	:	-		0.00063	J	-	
Cadmium	mg/L	D	-		0.0029	:	-		0.0014	J	-		-	
Calcium	mg/L	T	-		-		252.	:	-		140.	:	-	
Calcium	mg/L	D	-		235.	:	-		222.	:	-		-	
Chromium	mg/L	T	-		-		0.0021	:	-		<0.0027	:	-	
Chromium	mg/L	D	-		0.017	:	-		<0.0015	:	-		-	
Cobalt	mg/L	T	-		-		0.0154	:	-		0.0026	J	-	
Cobalt	mg/L	D	-		0.0197	:	-		0.013	:	-		-	
Copper	mg/L	T	-		-		<0.003	:	-		<0.00079	J	-	
Copper	mg/L	D	-		<0.003	:	-		<0.003	:	-		-	
Iron	mg/L	T	-		-		41.1	:	-		<4.72	J	-	
Iron	mg/L	D	-		38.5	:	-		24.4	:	-		-	
Lead	mg/L	T	-		-		0.00065	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Magnesium	mg/L	T	-		-		14.3	:	-		11.3	:	-	
Magnesium	mg/L	D	-		13.3	:	-		13.2	:	-		-	
Manganese	mg/L	T	-		-		42.8	:	-		7.08	J	-	
Manganese	mg/L	D	-		43.4	:	-		31.8	:	-		-	
Mercury	mg/L	T	-		-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		-		<0.0024	:	-		<0.001	:	-	
Molybdenum	mg/L	D	-		<0.0024	:	-		<0.0024	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 1/7/2004 CC-2A-T01N-GRW MR	CC-2A 1/7/2004 CC2A-D01N-GRW MR	CC-2A 2/25/2004 CC-2A-T01N-GRW MR	CC-2A 2/25/2004 CC-2A-D01N-GRW MR	CC-2A 4/21/2004 CC2A-T01N-GRW MR	CC-2A 4/21/2004 CC-2A-T01N-GRW MR
Nickel	mg/L	T	-	-	0.0204 :	-	0.005 :	-
Nickel	mg/L	D	-	0.0218 :	-	<0.0141 :	-	-
Potassium	mg/L	T	-	-	8.34 :	-	4.32 :	-
Potassium	mg/L	D	-	8.44 :	-	7.29 :	-	-
Selenium	mg/L	T	-	-	<0.0019 J	-	<0.0014 :	-
Selenium	mg/L	D	-	0.0023 :	-	<0.0004 J	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	43.2 :	-	<30.8 :	-
Sodium	mg/L	D	-	37.4 :	-	34. :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	<0.0002 :	-	0.00046 :	-
Vanadium	mg/L	D	-	<0.0004 :	-	<0.0002 :	-	-
Zinc	mg/L	T	-	-	4.63 :	-	0.838 J	-
Zinc	mg/L	D	-	4.68 :	-	3.33 :	-	-
Isotopes								
204Pb/206Pb	mg/L	T	-	-	0.00005 :	-	-	-
204Pb/206Pb	mg/L	D	-	-	-	0.00005 :	-	-
207Pb/206Pb	mg/L	T	-	-	0.00084 :	-	-	-
207Pb/206Pb	mg/L	D	-	-	-	0.00084 :	-	-
208Pb/206Pb	mg/L	T	-	-	0.00201 :	-	-	-
208Pb/206Pb	mg/L	D	-	-	-	0.00202 :	-	-
Delta 34S	per mil	D	-	-	-	-2.7 :	-	-
Lead	mg/L	T	-	-	0.00065 :	-	<0.0008 :	-
Lead	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-2A	HAN-A	HAN-A	HAN-A	HAN-A	HAN-A
			Sample Date	4/21/2004	10/22/2003	10/22/2003	2/22/2004	2/22/2004	4/20/2004
			Sample ID	CC2A-D01N-GRW	HANSEN-T01N-GRW	HANSEN-D01N-GRW	HANSEN-T01N-GRW	HANSEN-D01N-GRW	HANSEN-T01N-GRW
			Exposure Area	MR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		-	7.2 :	-	7.1 :	-	7.72 :
Eh	millivolts	T		-	361.5 :	-	478.8 :	-	493.5 :
pH	SU	T		-	3.8 J	-	4.3 J	-	3.58 :
Specific Conductance	uS/cm	T		-	2967. :	-	2786. :	-	2811. :
Temperature	Celsius	T		-	9.64 :	-	6.84 :	-	8.34 :
Turbidity	NTU	T		-	16.8 :	-	2. :	-	15.5 :
General Chemistry									
Ammonia	mg/L	T		-	<0.049 J	-	<0.07 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	<1.4 :	-	5.1 :	-	-
Fluoride	mg/L	T		-	<6. :	-	4.5 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.2 J	-	0.23 J	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.017 J	-	0.02 :	-	-
Phosphorus	mg/L	T		-	0.033 :	-	0.041 :	-	-
Sulfate	mg/L	T		-	2100. J	-	2170. :	-	-
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		-	3630. :	-	3030. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	3.5 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. J	-	<1. :	-	-
Total Suspended Solids	mg/L	T		-	2.3 :	-	3.5 :	-	-
Laboratory Parameters									
pH	SU	T		-	3.8 J	-	4.3 J	-	3.58 :
Specific Conductance	umhos/cm	T		-	2720. J	-	2380. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		-	1500. :	-	1680. :	-	-
Hardness	mg/L	D		423. :	-	1510. :	-	1620. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	CC-2A	HAN-A	HAN-A	HAN-A	HAN-A	HAN-A
			Sample Date	4/21/2004	10/22/2003	10/22/2003	2/22/2004	2/22/2004	4/20/2004
			Sample ID	CC2A-D01N-GRW	HANSEN-T01N-GRW	HANSEN-D01N-GRW	HANSEN-T01N-GRW	HANSEN-D01N-GRW	HANSEN-T01N-GRW
				MR	OMR	OMR	OMR	OMR	OMR
Aluminum	mg/L	T		-	79.6 :	-	90.6 :	-	-
Aluminum	mg/L	D		3.36 :	-	80.1 :	-	88. :	-
Antimony	mg/L	T		-	<0.082 :	-	<0.029 :	-	-
Antimony	mg/L	D		<0.0015 :	-	<0.082 :	-	<0.029 :	-
Arsenic	mg/L	T		-	<0.035 :	-	<0.028 :	-	-
Arsenic	mg/L	D		<0.0004 :	-	<0.035 :	-	<0.028 :	-
Barium	mg/L	T		-	<0.117 :	-	<0.053 :	-	-
Barium	mg/L	D		0.0038 :	-	<0.117 :	-	<0.053 :	-
Beryllium	mg/L	T		-	0.02 :	-	0.0135 J	-	-
Beryllium	mg/L	D		0.0257 J	-	0.0219 :	-	0.0138 J	-
Boron	mg/L	T		-	<0.064 :	-	<0.023 :	-	-
Boron	mg/L	D		0.0181 :	-	<0.064 :	-	<0.023 :	-
Cadmium	mg/L	T		-	<0.13 :	-	<0.07 :	-	-
Cadmium	mg/L	D		0.00088 J	-	<0.13 :	-	<0.07 J	-
Calcium	mg/L	T		-	454. :	-	504. :	-	-
Calcium	mg/L	D		150. :	-	456. :	-	486. :	-
Chromium	mg/L	T		-	<0.23 J	-	<0.11 :	-	-
Chromium	mg/L	D		0.0029 :	-	<0.23 J	-	<0.11 :	-
Cobalt	mg/L	T		-	<0.32 :	-	<0.31 :	-	-
Cobalt	mg/L	D		0.0066 J	-	<0.32 :	-	<0.31 :	-
Copper	mg/L	T		-	<0.23 :	-	<0.24 :	-	-
Copper	mg/L	D		0.0013 J	-	<0.23 :	-	<0.24 :	-
Iron	mg/L	T		-	<4.55 :	-	<3.73 :	-	-
Iron	mg/L	D		7.6 J	-	<4.55 :	-	<3.73 :	-
Lead	mg/L	T		-	<0.002 :	-	<0.0014 :	-	-
Lead	mg/L	D		<0.0008 :	-	<0.002 :	-	<0.0026 :	-
Magnesium	mg/L	T		-	89.6 :	-	103. :	-	-
Magnesium	mg/L	D		11.5 :	-	89.8 :	-	99.2 :	-
Manganese	mg/L	T		-	10.3 :	-	12.1 :	-	-
Manganese	mg/L	D		11.5 J	-	10.4 :	-	11.7 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.012 :	-	<0.024 :	-	-
Molybdenum	mg/L	D		<0.001 :	-	<0.012 :	-	<0.024 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CC-2A 4/21/2004 CC2A-D01N-GRW MR		HAN-A 10/22/2003 HANSEN-T01N-GRW OMR		HAN-A 10/22/2003 HANSEN-D01N-GRW OMR		HAN-A 2/22/2004 HANSEN-T01N-GRW OMR		HAN-A 2/22/2004 HANSEN-D01N-GRW OMR		HAN-A 4/20/2004 HANSEN-T01N-GRW OMR	
Nickel	mg/L	T	-		<0.45	:	-		0.643	:	-		-	
Nickel	mg/L	D	0.0067	:	-		<0.45	:	-		0.608	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<24.3	:	-		-	
Potassium	mg/L	D	4.52	:	-		<63.8	:	-		<24.3	:	-	
Selenium	mg/L	T	-		0.0042	:	-		0.0039	J	-		-	
Selenium	mg/L	D	<0.0014	:	-		0.0032	:	-		0.0074	J	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<49.	J	-		-	
Sodium	mg/L	D	<37.4	:	-		<99.1	:	-		<49.	J	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.0017	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.001	:	-		<0.0025	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.0022	:	-		-	
Vanadium	mg/L	D	0.00041	:	-		<0.001	:	-		<0.0031	:	-	
Zinc	mg/L	T	-		2.56	:	-		2.63	:	-		-	
Zinc	mg/L	D	1.26	J	-		2.6	:	-		2.53	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.0014	:	-		-	
Lead	mg/L	D	<0.0008	:	-		<0.002	:	-		<0.0026	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	HAN-A	HAN-A	HTT-A	HTT-A	HTT-A	HTT-A
			Sample Date	4/21/2004	4/21/2004	9/10/2003	10/22/2003	10/22/2003	2/26/2004
			Sample ID	HANSEN-T01N-GRW	HANSEN-D01N-GRW	HOTTENTOT-T01N-GRW	HOTTENTOT-T01N-GRW	HOTTENTOT-D01N-GRW	HAUT-N-TAUT-T01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		-	-	7.88 :	3.07 :	-	0.76 :
Eh	millivolts	T		-	-	503.6 :	389.9 :	-	446.8 :
pH	SU	T		4.3 J	-	2.98 :	3.2 J	-	3.1 J
Specific Conductance	uS/cm	T		-	-	1784. :	1769. :	-	1675. :
Temperature	Celsius	T		-	-	12.93 :	10.22 :	-	6.96 :
Turbidity	NTU	T		-	-	11.8 :	0. :	-	11.6 :
General Chemistry									
Ammonia	mg/L	T		<0.065 :	-	-	<0.04 J	-	<0.07 :
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T		<6.2 :	-	-	1.8 :	-	2.6 :
Fluoride	mg/L	T		4. :	-	-	5. :	-	5.3 :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		0.23 :	-	-	<0.2 :	-	<0.2 J
Nitrite	mg/L	T		<0.005 :	-	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		0.021 :	-	-	<0.017 :	-	0.03 :
Phosphorus	mg/L	T		0.058 :	-	-	0.031 :	-	0.033 :
Sulfate	mg/L	T		2360. :	-	-	920. J	-	971. :
Total Alkalinity	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		3020. :	-	-	1980. :	-	1500. :
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	2.7 :	-	<0.24 :
Total Organic Carbon	mg/L	T		<1. J	-	-	<1. J	-	1.3 :
Total Suspended Solids	mg/L	T		<12.3 J	-	-	<1.1 :	-	3.3 :
Laboratory Parameters									
pH	SU	T		4.3 J	-	2.98 :	3.2 J	-	3.1 J
Specific Conductance	umhos/cm	T		2460. J	-	-	1430. J	-	1410. J
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		1550. :	-	-	320. :	-	358. :
Hardness	mg/L	D		-	1580. :	-	-	324. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	HAN-A 4/21/2004 HANSEN-T01N-GRW OMR		HAN-A 4/21/2004 HANSEN-D01N-GRW OMR		HTT-A 9/10/2003 HOTTENTOT-T01N-GRW OMR		HTT-A 10/22/2003 HOTTENTOT-T01N-GRW OMR		HTT-A 10/22/2003 HOTTENTOT-D01N-GRW OMR		HTT-A 2/26/2004 HAUT-N-TAUT-T01N-GRW OMR	
Aluminum	mg/L	T	81.1	:	-		-		58.2	:	-		65.6	:
Aluminum	mg/L	D	-		83.6	:	-		-		59.9	:	-	
Antimony	mg/L	T	<0.053	:	-		-		<0.082	:	-		<0.029	:
Antimony	mg/L	D	-		<0.053	:	-		-		0.0866	:	-	
Arsenic	mg/L	T	<0.037	:	-		-		<0.035	:	-		<0.028	:
Arsenic	mg/L	D	-		<0.037	:	-		-		<0.035	:	-	
Barium	mg/L	T	<0.049	:	-		-		<0.117	:	-		<0.053	:
Barium	mg/L	D	-		<0.049	:	-		-		<0.117	:	-	
Beryllium	mg/L	T	0.0168	:	-		-		0.0117	:	-		0.0098	:
Beryllium	mg/L	D	-		0.0236	:	-		-		0.0091	:	-	
Boron	mg/L	T	<0.036	:	-		-		<0.064	:	-		<0.023	:
Boron	mg/L	D	-		<0.036	:	-		-		<0.064	:	-	
Cadmium	mg/L	T	<0.1	:	-		-		<0.13	:	-		<0.07	:
Cadmium	mg/L	D	-		<0.1	:	-		-		<0.13	:	-	
Calcium	mg/L	T	466.	:	-		-		73.3	:	-		81.9	:
Calcium	mg/L	D	-		474.	:	-		-		74.2	:	-	
Chromium	mg/L	T	<0.13	:	-		-		<0.23	J	-		<0.15	:
Chromium	mg/L	D	-		<0.13	:	-		-		<0.23	J	-	
Cobalt	mg/L	T	<0.18	:	-		-		<0.32	:	-		<0.23	:
Cobalt	mg/L	D	-		0.206	:	-		-		<0.32	:	-	
Copper	mg/L	T	<0.27	:	-		-		<0.23	J	-		<0.3	:
Copper	mg/L	D	-		<0.27	:	-		-		<0.23	:	-	
Iron	mg/L	T	<2.93	J	-		-		85.3	:	-		98.4	:
Iron	mg/L	D	-		<2.93	:	-		-		87.4	:	-	
Lead	mg/L	T	<0.004	:	-		-		<0.002	:	-		<0.001	:
Lead	mg/L	D	-		<0.004	:	-		-		<0.002	:	-	
Magnesium	mg/L	T	94.7	:	-		-		33.2	:	-		37.2	:
Magnesium	mg/L	D	-		96.1	:	-		-		33.6	:	-	
Manganese	mg/L	T	10.9	:	-		-		6.47	:	-		7.07	:
Manganese	mg/L	D	-		11.1	:	-		-		6.59	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	<0.014	:	-		-		<0.012	:	-		<0.024	:
Molybdenum	mg/L	D	-		<0.014	:	-		-		<0.012	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	HAN-A 4/21/2004 HANSEN-T01N-GRW OMR		HAN-A 4/21/2004 HANSEN-D01N-GRW OMR		HTT-A 9/10/2003 HOTTENTOT-T01N-GRW OMR		HTT-A 10/22/2003 HOTTENTOT-T01N-GRW OMR		HTT-A 10/22/2003 HOTTENTOT-D01N-GRW OMR		HTT-A 2/26/2004 HAUT-N-TAUT-T01N-GRW OMR	
Nickel	mg/L	T	0.538	:	-		-		<0.45	:	-		0.283	:
Nickel	mg/L	D	-		0.642	:	-		-		<0.45	:	-	
Potassium	mg/L	T	<15.5	:	-		-		<63.8	:	-		<39.1	:
Potassium	mg/L	D	-		<15.5	:	-		-		<63.8	:	-	
Selenium	mg/L	T	<0.007	:	-		-		<0.003	:	-		<0.002	J
Selenium	mg/L	D	-		<0.007	:	-		-		0.0033	:	-	
Silver	mg/L	T	<0.001	J	-		-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		<0.001	J	-		-		<0.001	:	-	
Sodium	mg/L	T	<53.9	:	-		-		<99.1	:	-		<51.5	:
Sodium	mg/L	D	-		<32.8	:	-		-		<99.1	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.002	:	-		-		0.0088	:	-		0.0099	:
Vanadium	mg/L	D	-		<0.002	:	-		-		0.0094	:	-	
Zinc	mg/L	T	2.54	:	-		-		3.22	:	-		3.47	:
Zinc	mg/L	D	-		2.42	:	-		-		3.27	:	-	
Isotopes														
Lead	mg/L	T	<0.004	:	-		-		<0.002	:	-		<0.001	:
Lead	mg/L	D	-		<0.004	:	-		-		<0.002	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	HTT-A	HTT-A	HTT-A	HTT-A	MMW-11A	MMW-11A
			Sample Date	2/26/2004	4/20/2004	4/20/2004	4/20/2004	11/4/2002	11/4/2002
			Sample ID	HAUT-N-TAUT-D01N-GRW	HAUTNTAUT-T01N-GRW	HAUT-N-TAUT-T01N-GRW	HAUTNTAUT-D01N-GRW	MMW-11A-T01N-GRWRE	MMW-11A-T01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	GW4	GW4
Field Measurements									
DO	mg/L	T		-	-	0.82 :	-	-	4.87 :
Eh	millivolts	T		-	-	400.3 :	-	-	198.2 :
pH	SU	T		-	3.3 J	2.84 :	-	-	4.17 :
Specific Conductance	uS/cm	T		-	-	1651. :	-	-	2638. :
Temperature	Celsius	T		-	-	8.26 :	-	-	6.46 :
Turbidity	NTU	T		-	-	0.1 :	-	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.17 :	-	-	-	<0.07 :
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Chloride	mg/L	T		-	<8.1 :	-	-	-	27.1 :
Fluoride	mg/L	T		-	4.8 :	-	-	34.5 J	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T		-	0.68 J	-	-	-	5.5 J
Nitrite	mg/L	T		-	<0.005 :	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.023 :	-	-	-	0.044 J
Phosphorus	mg/L	T		-	0.034 :	-	-	-	0.052 :
Sulfate	mg/L	T		-	1030. :	-	-	1430. J	-
Total Alkalinity	mg/L	T		-	<1. :	-	-	-	<1. :
Total Dissolved Solids	mg/L	T		-	1390. :	-	-	-	2390. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.34 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	-	-	<1. :
Total Suspended Solids	mg/L	T		-	<1.7 J	-	-	-	<1.4 :
Laboratory Parameters									
pH	SU	T		-	3.3 J	2.84 :	-	-	4.17 :
Specific Conductance	umhos/cm	T		-	1410. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	350. :	-	-	-	-
Hardness	mg/L	D		356. :	-	-	357. :	-	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	HTT-A	HTT-A	HTT-A	HTT-A	MMW-11A	MMW-11A
			Sample Date	2/26/2004	4/20/2004	4/20/2004	4/20/2004	11/4/2002	11/4/2002
			Sample ID	HAUT-N-TAUT-D01N-GRW	HAUTNTAUT-T01N-GRW	HAUT-N-TAUT-T01N-GRW	HAUTNTAUT-D01N-GRW	MMW-11A-T01N-GRWRE	MMW-11A-T01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	GW4	GW4
Aluminum	mg/L	T		-	66.1 :	-	-	-	-
Aluminum	mg/L	D		66.5 :	-	-	67. :	-	-
Antimony	mg/L	T		-	<0.053 :	-	-	-	-
Antimony	mg/L	D		<0.029 :	-	-	<0.053 :	-	-
Arsenic	mg/L	T		-	<0.037 :	-	-	-	-
Arsenic	mg/L	D		<0.028 :	-	-	<0.052 :	-	-
Barium	mg/L	T		-	<0.049 :	-	-	-	-
Barium	mg/L	D		<0.053 :	-	-	<0.049 :	-	-
Beryllium	mg/L	T		-	<0.0152 J	-	-	-	-
Beryllium	mg/L	D		0.0101 :	-	-	<0.0126 J	-	-
Boron	mg/L	T		-	<0.036 :	-	-	-	-
Boron	mg/L	D		<0.023 :	-	-	<0.036 :	-	-
Cadmium	mg/L	T		-	<0.1 :	-	-	-	-
Cadmium	mg/L	D		<0.07 J	-	-	<0.1 :	-	-
Calcium	mg/L	T		-	79.2 :	-	-	-	-
Calcium	mg/L	D		81.9 :	-	-	80. :	-	-
Chromium	mg/L	T		-	<0.13 :	-	-	-	-
Chromium	mg/L	D		<0.15 :	-	-	<0.13 :	-	-
Chromium, Hexavalent	mg/L	D		-	-	-	-	-	<0.01 :
Cobalt	mg/L	T		-	<0.18 :	-	-	-	-
Cobalt	mg/L	D		<0.23 :	-	-	0.247 :	-	-
Copper	mg/L	T		-	<0.27 :	-	-	-	-
Copper	mg/L	D		<0.3 :	-	-	<0.27 :	-	-
Iron	mg/L	T		-	92.5 J	-	-	-	-
Iron	mg/L	D		97.9 :	-	-	94.7 :	-	-
Lead	mg/L	T		-	<0.004 :	-	-	-	-
Lead	mg/L	D		<0.001 :	-	-	<0.004 :	-	-
Magnesium	mg/L	T		-	37.1 :	-	-	-	-
Magnesium	mg/L	D		36.8 :	-	-	38.2 :	-	-
Manganese	mg/L	T		-	7.14 :	-	-	-	-
Manganese	mg/L	D		7.06 :	-	-	7.19 :	-	-
Mercury	mg/L	T		-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T		-	<0.014 :	-	-	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	HTT-A	HTT-A	HTT-A	HTT-A	MMW-11A	MMW-11A
			Sample Date	2/26/2004	4/20/2004	4/20/2004	4/20/2004	11/4/2002	11/4/2002
			Sample ID	HAUT-N-TAUT-D01N-GRW	HAUTNTAUT-T01N-GRW	HAUT-N-TAUT-T01N-GRW	HAUTNTAUT-D01N-GRW	MMW-11A-T01N-GRWRE	MMW-11A-T01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	GW4	GW4
Molybdenum	mg/L	D		<0.024 :	-	-	<0.014 :	-	-
Nickel	mg/L	T		-	0.472 :	-	-	-	-
Nickel	mg/L	D		<0.24 :	-	-	0.414 :	-	-
Potassium	mg/L	T		-	<15.5 :	-	-	-	-
Potassium	mg/L	D		<39.1 :	-	-	<15.5 :	-	-
Selenium	mg/L	T		-	<0.036 :	-	-	-	-
Selenium	mg/L	D		<0.002 J	-	-	<0.036 :	-	-
Silver	mg/L	T		-	<0.001 :	-	-	-	-
Silver	mg/L	D		<0.001 :	-	-	<0.001 :	-	-
Sodium	mg/L	T		-	<32.8 :	-	-	-	-
Sodium	mg/L	D		<51.5 :	-	-	<38.7 :	-	-
Thallium	mg/L	T		-	<0.001 :	-	-	-	-
Thallium	mg/L	D		<0.001 :	-	-	<0.001 :	-	-
Vanadium	mg/L	T		-	0.01 :	-	-	-	-
Vanadium	mg/L	D		0.0105 :	-	-	0.0106 :	-	-
Zinc	mg/L	T		-	3.35 :	-	-	-	-
Zinc	mg/L	D		3.52 :	-	-	3.41 :	-	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		-	-	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T		-	-	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T		-	-	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T		-	-	-	-	-	<0.01 :
Isotopes									
Lead	mg/L	T		-	<0.004 :	-	-	-	-
Lead	mg/L	D		<0.001 :	-	-	<0.004 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A
			Sample Date	11/4/2002	11/4/2002	1/14/2003	1/14/2003	1/14/2003	4/9/2003
			Sample ID	MMW-11A-D01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GW	MMW-11A-T01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GR
			Exposure Area	WRE GW4	W GW4	GW4	W GW4	W GW4	W GW4
Field Measurements									
DO	mg/L	T		-	-	4.43 :	4.43 :	-	5.49 :
Eh	millivolts	T		-	-	430.2 :	430.2 :	-	321.1 :
pH	SU	T		-	-	4.04 :	4.04 :	-	4.1 J
Specific Conductance	uS/cm	T		-	-	5096. :	5096. :	-	2528. :
Temperature	Celsius	T		-	-	7.69 :	7.69 :	-	9.25 :
Turbidity	NTU	T		-	-	0. :	0. :	-	5.6 :
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.04 :	-	<0.1 :
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Chloride	mg/L	T		-	-	-	20.7 :	-	32.8 :
Fluoride	mg/L	T		-	-	-	36.1 :	-	40.2 :
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	-	-	4.6 :	-	4.4 J
Nitrite	mg/L	T		-	-	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	-	-	<0.051 :	-	<0.044 J
Phosphorus	mg/L	T		-	-	-	0.059 :	-	0.054 :
Sulfate	mg/L	T		-	-	-	1710. J	-	1560. J
Total Alkalinity	mg/L	T		-	-	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	-	-	2520. :	-	2600. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	-	-	1.2 :	-	<1.3 J
Total Suspended Solids	mg/L	T		-	-	-	<1.3 :	-	<1.6 :
Laboratory Parameters									
pH	SU	T		-	-	4.04 :	4.04 :	-	4.1 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	2250. J
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	-	-	1310. :	-	1200. :
Hardness	mg/L	D		1150. :	-	-	-	1250. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A
			Sample Date	11/4/2002	11/4/2002	1/14/2003	1/14/2003	1/14/2003	4/9/2003
			Sample ID	MMW-11A-D01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GW	MMW-11A-T01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GR
				WRE GW4	W GW4	GW4	W GW4	W GW4	W GW4
Aluminum	mg/L	T		-	-	-	82.3 :	-	75.3 :
Aluminum	mg/L	D		70.4 :	-	-	-	78.8 :	-
Antimony	mg/L	T		-	-	-	<0.028 :	-	<0.003 :
Antimony	mg/L	D		<0.028 :	-	-	-	<0.028 :	-
Arsenic	mg/L	T		-	-	-	<0.023 J	-	<0.04 :
Arsenic	mg/L	D		<0.0277 :	-	-	-	<0.023 J	-
Barium	mg/L	T		-	-	-	<0.048 :	-	<0.123 :
Barium	mg/L	D		<0.048 :	-	-	-	<0.048 :	-
Beryllium	mg/L	T		-	-	-	0.0191 :	-	0.0192 J
Beryllium	mg/L	D		0.0177 :	-	-	-	0.019 :	-
Boron	mg/L	T		-	-	-	<0.027 :	-	<0.084 :
Boron	mg/L	D		<0.027 :	-	-	-	<0.027 J	-
Cadmium	mg/L	T		-	-	-	<0.08 :	-	0.0572 :
Cadmium	mg/L	D		<0.08 :	-	-	-	<0.08 :	-
Calcium	mg/L	T		-	-	-	229. :	-	211. :
Calcium	mg/L	D		203. :	-	-	-	219. :	-
Chromium	mg/L	T		-	-	-	<0.16 :	-	<0.01 :
Chromium	mg/L	D		<0.16 J	-	-	-	<0.16 :	-
Cobalt	mg/L	T		-	-	-	0.333 :	-	0.356 :
Cobalt	mg/L	D		0.289 :	-	-	-	0.346 :	-
Copper	mg/L	T		-	-	-	1.19 :	-	1.2 :
Copper	mg/L	D		<1.06 :	-	-	-	1.2 :	-
Iron	mg/L	T		-	-	-	<2.66 :	-	<0.311 :
Iron	mg/L	D		<2.66 :	-	-	-	<2.66 :	-
Lead	mg/L	T		-	-	-	0.0106 :	-	0.0064 J
Lead	mg/L	D		0.0108 :	-	-	-	0.0105 :	-
Magnesium	mg/L	T		-	-	-	179. :	-	164. :
Magnesium	mg/L	D		157. :	-	-	-	171. :	-
Manganese	mg/L	T		-	-	-	42.3 :	-	40.4 :
Manganese	mg/L	D		36.8 :	-	-	-	40.4 :	-
Mercury	mg/L	T		-	-	-	0.00015 :	-	<0.0001 :
Mercury	mg/L	D		-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	-	<0.011 J	-	<0.023 :
Molybdenum	mg/L	D		<0.011 :	-	-	-	<0.011 J	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-11A 11/4/2002 MMW-11A-D01N-GR WRE GW4		MMW-11A 11/4/2002 MMW-11A-D01N-GR W GW4		MMW-11A 1/14/2003 MMW-11A-T01N-GW GW4		MMW-11A 1/14/2003 MMW-11A-T01N-GR W GW4		MMW-11A 1/14/2003 MMW-11A-D01N-GR W GW4		MMW-11A 4/9/2003 MMW-11A-T01N-GR W GW4	
Nickel	mg/L	T	-		-		-		0.816	:	-		0.849	:
Nickel	mg/L	D	0.561	:	-		-		-		0.827	:	-	
Potassium	mg/L	T	-		-		-		<31.4	:	-		<3.26	:
Potassium	mg/L	D	<31.4	J	-		-		-		<31.4	:	-	
Selenium	mg/L	T	-		-		-		<0.008	:	-		0.0073	:
Selenium	mg/L	D	<0.008	:	-		-		-		<0.008	:	-	
Silver	mg/L	T	-		-		-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		-		-		<0.001	:	-	
Sodium	mg/L	T	-		-		-		55.8	:	-		24.	:
Sodium	mg/L	D	<36.6	:	-		-		-		42.	:	-	
Thallium	mg/L	T	-		-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		-		-		<0.001	:	-	
Vanadium	mg/L	T	-		-		-		<0.002	:	-		<0.001	:
Vanadium	mg/L	D	<0.002	:	-		-		-		0.0022	:	-	
Zinc	mg/L	T	-		-		-		8.22	:	-		7.62	:
Zinc	mg/L	D	6.93	:	-		-		-		7.83	:	-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	-		-		-		<0.00025	J	-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	-		-		-		0.0106	:	-		0.0064	J
Lead	mg/L	D	0.0108	:	-		-		-		0.0105	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A
			Sample Date	4/9/2003	7/21/2003	7/21/2003	10/20/2003	10/20/2003	1/14/2004
			Sample ID	MMW-11A-D01N-GR	MMW-11A-T01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GR	MMW-11A-D01N-GR	MMW-11A-T01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		-	6.18 :	-	4.2 :	-	4.29 :
Eh	millivolts	T		-	434.2 :	-	310.9 :	-	231.1 :
pH	SU	T		-	4.3 J	-	4.3 J	-	4.7 J
Specific Conductance	uS/cm	T		-	2258. :	-	2076. :	-	1973. :
Temperature	Celsius	T		-	9.54 :	-	8.21 :	-	6.64 :
Turbidity	NTU	T		-	0. :	-	0.5 :	-	10.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.042 J	-	<0.082 J	-	<0.073 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	25.6 :	-	20.9 :	-	21.9 :
Fluoride	mg/L	T		-	34.9 :	-	32.4 :	-	32.3 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	4.3 J	-	3.7 J	-	3.2 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.043 :	-	<0.035 J	-	<0.035 J
Phosphorus	mg/L	T		-	0.051 :	-	0.048 :	-	0.055 :
Sulfate	mg/L	T		-	1430. J	-	1190. J	-	1340. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	2920. :	-	2600. :	-	2030. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.3 J	-	1.4 J	-	<1. J
Total Suspended Solids	mg/L	T		-	<2.3 :	-	<1.1 :	-	2.6 :
Laboratory Parameters									
pH	SU	T		-	4.3 J	-	4.3 J	-	4.7 J
Specific Conductance	umhos/cm	T		-	2210. J	-	1990. J	-	1780. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1170. :	-	1190. :	-	954. :
Hardness	mg/L	D		1230. :	-	1170. :	-	1110. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11A 4/9/2003 MMW-11A-D01N-GR W GW4		MMW-11A 7/21/2003 MMW-11A-T01N-GR W GW4		MMW-11A 7/21/2003 MMW-11A-D01N-GR W GW4		MMW-11A 10/20/2003 MMW-11A-T01N-GR W GW4		MMW-11A 10/20/2003 MMW-11A-D01N-GR W GW4		MMW-11A 1/14/2004 MMW-11A-T01N-GR W GW4	
Aluminum	mg/L	T	-		74.3	:	-		67.2	:	-		56.	:
Aluminum	mg/L	D	76.8	:	-		74.6	:	-		67.4	:	-	
Antimony	mg/L	T	-		<0.038	:	-		<0.052	:	-		<0.029	:
Antimony	mg/L	D	<0.003	:	-		<0.038	:	-		<0.052	:	-	
Arsenic	mg/L	T	-		0.0346	:	-		<0.002	:	-		<0.028	:
Arsenic	mg/L	D	<0.04	:	-		<0.024	:	-		<0.002	:	-	
Barium	mg/L	T	-		<0.073	:	-		<0.115	:	-		<0.053	:
Barium	mg/L	D	<0.123	:	-		<0.073	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		0.0205	:	-		0.0149	:	-		0.0155	:
Beryllium	mg/L	D	0.0205	J	-		0.0204	:	-		0.016	:	-	
Boron	mg/L	T	-		<0.048	:	-		<0.063	:	-		<0.023	:
Boron	mg/L	D	<0.084	:	-		<0.048	:	-		<0.063	:	-	
Cadmium	mg/L	T	-		<0.12	:	-		<0.13	:	-		<0.07	J
Cadmium	mg/L	D	0.0557	:	-		<0.12	:	-		<0.13	:	-	
Calcium	mg/L	T	-		205.	:	-		224.	:	-		171.	:
Calcium	mg/L	D	214.	:	-		205.	:	-		195.	:	-	
Chromium	mg/L	T	-		<0.19	J	-		<0.23	J	-		<0.57	:
Chromium	mg/L	D	<0.01	:	-		<0.19	:	-		<0.23	J	-	
Cobalt	mg/L	T	-		<0.37	:	-		0.344	:	-		<0.37	:
Cobalt	mg/L	D	0.345	:	-		<0.37	J	-		<0.32	:	-	
Copper	mg/L	T	-		0.864	:	-		1.06	:	-		0.885	:
Copper	mg/L	D	1.18	:	-		0.927	:	-		1.03	:	-	
Iron	mg/L	T	-		<6.67	:	-		<4.55	:	-		<4.23	:
Iron	mg/L	D	<0.311	:	-		<6.67	:	-		<4.55	:	-	
Lead	mg/L	T	-		0.0095	:	-		0.0087	:	-		0.0083	:
Lead	mg/L	D	0.0066	J	-		0.0093	:	-		0.0088	:	-	
Magnesium	mg/L	T	-		160.	:	-		153.	:	-		128.	:
Magnesium	mg/L	D	168.	:	-		160.	:	-		151.	:	-	
Manganese	mg/L	T	-		37.2	:	-		34.5	:	-		29.7	:
Manganese	mg/L	D	41.1	:	-		37.3	:	-		34.3	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.016	:	-		<0.011	:	-		<0.024	:
Molybdenum	mg/L	D	<0.023	:	-		<0.016	:	-		<0.011	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11A 4/9/2003 MMW-11A-D01N-GR W GW4		MMW-11A 7/21/2003 MMW-11A-T01N-GR W GW4		MMW-11A 7/21/2003 MMW-11A-D01N-GR W GW4		MMW-11A 10/20/2003 MMW-11A-T01N-GR W GW4		MMW-11A 10/20/2003 MMW-11A-D01N-GR W GW4		MMW-11A 1/14/2004 MMW-11A-T01N-GR W GW4	
Nickel	mg/L	T	-		0.677	:	-		0.846	:	-		<1.68	:
Nickel	mg/L	D	0.854	:	-		0.817	:	-		0.809	:	-	
Potassium	mg/L	T	-		<37.1	:	-		<63.8	:	-		<110.	J
Potassium	mg/L	D	<3.26	:	-		<37.1	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0103	:	-		0.0074	:	-		0.0119	J
Selenium	mg/L	D	0.0098	:	-		0.0114	J	-		0.0095	:	-	
Silver	mg/L	T	-		<0.001	J	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Sodium	mg/L	T	-		<53.2	:	-		<99.1	:	-		<92.	:
Sodium	mg/L	D	24.2	:	-		75.1	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Zinc	mg/L	T	-		6.45	:	-		6.76	:	-		6.06	:
Zinc	mg/L	D	7.74	:	-		6.51	:	-		6.87	:	-	
Isotopes														
Lead	mg/L	T	-		0.0095	:	-		0.0087	:	-		0.0083	:
Lead	mg/L	D	0.0066	J	-		0.0093	:	-		0.0088	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A	MMW-11A
			Sample Date	1/14/2004	2/22/2004	2/22/2004	3/22/2004	4/21/2004	4/21/2004
			Sample ID	MMW-11A-D01N-GR	MMW-11A-T01N-GR	MMW-11A-D01N-GR	MMW-11-A	MMW-11A-T01N-GR	MMW-11A-D01N-GR
			Exposure Area	WGW4	WGW4	WGW4	GW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		-	3.22 :	-	-	4.28 :	-
Eh	millivolts	T		-	381.7 :	-	-	509.7 :	-
pH	SU	T		-	4.15 :	-	-	4.7 J	-
Specific Conductance	uS/cm	T		-	1952. :	-	-	1952. :	-
Temperature	Celsius	T		-	6.89 :	-	-	8.97 :	-
Turbidity	NTU	T		-	4.7 :	-	-	0.1 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	-	<0.063 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Chloride	mg/L	T		-	-	-	-	22. :	-
Fluoride	mg/L	T		-	30.6 :	-	-	27.9 :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Nitrate	mg/L	T		-	-	-	-	2.8 :	-
Nitrite	mg/L	T		-	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		-	-	-	-	0.039 J	-
Phosphorus	mg/L	T		-	-	-	-	0.046 :	-
Sulfate	mg/L	T		-	1320. :	-	-	1330. :	-
Total Alkalinity	mg/L	T		-	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	1980. :	-	-	1860. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	-	-	-	1.3 J	-
Total Suspended Solids	mg/L	T		-	3.9 :	-	-	<2.7 J	-
Laboratory Parameters									
pH	SU	T		-	4.15 :	-	-	4.7 J	-
Specific Conductance	umhos/cm	T		-	-	-	-	1790. J	-
Inorganics									
Cyanide	mg/L	T		-	-	-	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		-	1030. :	-	-	962. :	-
Hardness	mg/L	D		895. :	-	1050. :	-	-	932. :
Metals									

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11A 1/14/2004 MMW-11A-D01N-GR W GW4		MMW-11A 2/22/2004 MMW-11A-T01N-GR W GW4		MMW-11A 2/22/2004 MMW-11A-D01N-GR W GW4		MMW-11A 3/22/2004 MMW-11-A GW4		MMW-11A 4/21/2004 MMW-11A-T01N-GR W GW4		MMW-11A 4/21/2004 MMW-11A-D01N-GR W GW4	
Aluminum	mg/L	T	-		62.	:	-		-		58.3	:	-	
Aluminum	mg/L	D	51.1	:	-		63.6	:	-		-		56.5	:
Antimony	mg/L	T	-		<0.029	:	-		-		<0.053	:	-	
Antimony	mg/L	D	<0.029	:	-		<0.029	:	-		-		<0.053	:
Arsenic	mg/L	T	-		<0.028	:	-		-		<0.037	:	-	
Arsenic	mg/L	D	<0.028	:	-		<0.028	:	-		-		<0.037	:
Barium	mg/L	T	-		<0.053	:	-		-		<0.049	:	-	
Barium	mg/L	D	<0.053	:	-		<0.053	:	-		-		<0.049	:
Beryllium	mg/L	T	-		0.0105	J	-		-		0.0144	:	-	
Beryllium	mg/L	D	0.0144	:	-		0.0085	J	-		-		0.0162	:
Boron	mg/L	T	-		<0.023	:	-		-		<0.036	:	-	
Boron	mg/L	D	<0.023	:	-		<0.023	:	-		-		<0.036	:
Cadmium	mg/L	T	-		<0.07	:	-		-		<0.1	:	-	
Cadmium	mg/L	D	<0.07	:	-		<0.07	J	-		-		<0.1	:
Calcium	mg/L	T	-		180.	:	-		-		171.	:	-	
Calcium	mg/L	D	160.	:	-		183.	:	-		-		165.	:
Chromium	mg/L	T	-		<0.11	:	-		-		<0.13	:	-	
Chromium	mg/L	D	<0.57	:	-		<0.11	:	-		-		<0.13	:
Cobalt	mg/L	T	-		<0.31	:	-		-		0.268	:	-	
Cobalt	mg/L	D	<0.37	:	-		0.317	:	-		-		0.317	:
Copper	mg/L	T	-		0.855	:	-		-		0.837	:	-	
Copper	mg/L	D	0.909	:	-		0.919	:	-		-		0.981	:
Iron	mg/L	T	-		<3.73	:	-		-		<2.93	J	-	
Iron	mg/L	D	<4.23	:	-		<3.73	:	-		-		<2.93	:
Lead	mg/L	T	-		<0.0104	:	-		-		0.0072	:	-	
Lead	mg/L	D	0.0081	:	-		<0.009	:	-		-		0.0072	:
Magnesium	mg/L	T	-		142.	:	-		-		130.	:	-	
Magnesium	mg/L	D	120.	:	-		145.	:	-		-		126.	:
Manganese	mg/L	T	-		32.2	:	-		-		30.	:	-	
Manganese	mg/L	D	27.9	:	-		33.1	:	-		-		29.1	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.024	:	-		-		<0.014	:	-	
Molybdenum	mg/L	D	<0.024	:	-		<0.024	:	-		-		<0.014	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11A 1/14/2004 MMW-11A-D01N-GR GW4		MMW-11A 2/22/2004 MMW-11A-T01N-GR GW4		MMW-11A 2/22/2004 MMW-11A-D01N-GR GW4		MMW-11A 3/22/2004 MMW-11-A GW4		MMW-11A 4/21/2004 MMW-11A-T01N-GR GW4		MMW-11A 4/21/2004 MMW-11A-D01N-GR GW4	
Nickel	mg/L	T	-		0.729	:	-		-		0.662	:	-	
Nickel	mg/L	D	<1.68	:	-		0.789	:	-		-		0.675	:
Potassium	mg/L	T	-		<24.3	:	-		-		<15.5	:	-	
Potassium	mg/L	D	<110.	J	-		<24.3	:	-		-		<15.5	:
Selenium	mg/L	T	-		0.0023	J	-		-		<0.007	:	-	
Selenium	mg/L	D	0.0079	:	-		0.0041	J	-		-		<0.007	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.001	J	-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	J
Sodium	mg/L	T	-		<49.	J	-		-		<32.8	:	-	
Sodium	mg/L	D	<92.	:	-		<49.	J	-		-		<32.8	:
Thallium	mg/L	T	-		<0.0017	:	-		-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.0017	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.0017	:	-		-		<0.002	:	-	
Vanadium	mg/L	D	<0.002	:	-		<0.0019	:	-		-		<0.002	:
Zinc	mg/L	T	-		6.18	:	-		-		5.89	:	-	
Zinc	mg/L	D	5.67	:	-		6.14	:	-		-		5.32	:
Lanthanides														
Cerium	mg/L	T	-		0.266	:	-		-		-		-	
Cerium	mg/L	D	-		-		0.291	:	-		-		-	
Dysprosium	mg/L	T	-		0.031	:	-		-		-		-	
Dysprosium	mg/L	D	-		-		0.0309	:	-		-		-	
Erbium	mg/L	T	-		0.0123	:	-		-		-		-	
Erbium	mg/L	D	-		-		0.0122	:	-		-		-	
Europium	mg/L	T	-		0.00991	:	-		-		-		-	
Europium	mg/L	D	-		-		0.0103	:	-		-		-	
Gadolinium	mg/L	T	-		0.0464	:	-		-		-		-	
Gadolinium	mg/L	D	-		-		0.0498	:	-		-		-	
Holmium	mg/L	T	-		0.00521	:	-		-		-		-	
Holmium	mg/L	D	-		-		0.00525	:	-		-		-	
Lanthanum	mg/L	T	-		0.096	:	-		-		-		-	
Lanthanum	mg/L	D	-		-		0.107	:	-		-		-	
Lutetium	mg/L	T	-		0.00105	:	-		-		-		-	
Lutetium	mg/L	D	-		-		0.00106	:	-		-		-	
Neodymium	mg/L	T	-		0.193	:	-		-		-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-11A 1/14/2004 MMW-11A-D01N-GR WGW4	MMW-11A 2/22/2004 MMW-11A-T01N-GR WGW4	MMW-11A 2/22/2004 MMW-11A-D01N-GR WGW4	MMW-11A 3/22/2004 MMW-11-A GW4	MMW-11A 4/21/2004 MMW-11A-T01N-GR WGW4	MMW-11A 4/21/2004 MMW-11A-D01N-GR WGW4
Neodymium	mg/L	D	-	-	0.21 :	-	-	-
Praseodymium	mg/L	T	-	0.0424 :	-	-	-	-
Praseodymium	mg/L	D	-	-	0.0467 :	-	-	-
Samarium	mg/L	T	-	0.0443 :	-	-	-	-
Samarium	mg/L	D	-	-	0.0461 :	-	-	-
Terbium	mg/L	T	-	0.0064 :	-	-	-	-
Terbium	mg/L	D	-	-	0.00664 :	-	-	-
Thulium	mg/L	T	-	0.00143 :	-	-	-	-
Thulium	mg/L	D	-	-	0.00143 :	-	-	-
Ytterbium	mg/L	T	-	0.00791 :	-	-	-	-
Ytterbium	mg/L	D	-	-	0.00809 :	-	-	-
Yttrium	mg/L	T	-	0.145 :	-	-	-	-
Yttrium	mg/L	D	-	-	0.162 :	-	-	-
Isotopes								
204Pb/206Pb	mg/L	T	-	0.00006 :	-	-	-	-
204Pb/206Pb	mg/L	D	-	-	0.00006 :	-	-	-
207Pb/206Pb	mg/L	T	-	0.00063 :	-	-	-	-
207Pb/206Pb	mg/L	D	-	-	0.00061 :	-	-	-
208Pb/206Pb	mg/L	T	-	0.0009 :	-	-	-	-
208Pb/206Pb	mg/L	D	-	-	0.00086 :	-	-	-
Delta 34S	per mil	D	-	-	-2.4 :	-	-	-
Delta D	per mil	T	-	-95.1 :	-	-	-	-
Delta O-18	per mil	T	-	-13.1 :	-	-	-	-
Lead	mg/L	T	-	<0.0104 :	-	-	0.0072 :	-
Lead	mg/L	D	0.0081 :	-	<0.009 :	-	-	0.0072 :
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	0.32 :	-	-
DEL He3	%	T	-	-	-	0.5 :	-	-
DEL He4	%	T	-	-	-	4.3 :	-	-
He Corr	1E-8cc/g	T	-	-	-	4.979 :	-	-
Tritium TU	TU	T	-	-	-	6.571 :	-	-
Uncert Age	Years	T	-	-	-	0.71 :	-	-
Uncert TU	TU	T	-	-	-	0.197 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID		Sample Date		Sample ID																	
			MMW-16		6/4/2003		MMW-16-T01N-GRW	GW4	MMW-16		6/4/2003		MMW-16-D01N-GRW	GW4	MMW-19A		11/3/2002		MMW-19A-T01N-GRW	GW4	MMW-19A		11/3/2002		MMW-19A-T01N-GRW	GW4
Field Measurements																										
DO	mg/L	T	1.99	:					-						-						6.32	:				
Eh	millivolts	T	553.6	:					-						-						487.6	:				
pH	SU	T	4.8	J					-						-						4.13	:				
Specific Conductance	uS/cm	T	3260.	:					-						-						2396.	:				
Temperature	Celsius	T	10.35	:					-						-						8.12	:				
Turbidity	NTU	T	1.26	:					-						-						17.1	:				
General Chemistry																										
Ammonia	mg/L	T	<0.28	J					-						-						<0.28	:				
Bicarbonate (as CaCO3)	mg/L	T	<4.2	:					-						-						<1.	:				
Carbonate (as CaCO3)	mg/L	T	<1.	:					-						-						<1.	:				
Chloride	mg/L	T	<37.1	:					-						-						29.8	:				
Fluoride	mg/L	T	37.7	:					-						32.9	J					-					
Hydroxide (as CaCO3)	mg/L	T	<1.	:					-						-						<1.	:				
Nitrate	mg/L	T	11.2	:					-						-						5.2	J				
Nitrite	mg/L	T	0.0068	:					-						-						<0.005	J				
Phosphate, Ortho As P	mg/L	T	0.08	J					-						-						0.051	J				
Phosphorus	mg/L	T	-						-						-						0.052	:				
Sulfate	mg/L	T	1910.	J					-						1740.	J					-					
Total Alkalinity	mg/L	T	<4.2	:					-						-						<1.	:				
Total Dissolved Solids	mg/L	T	3510.	:					-						-						2590.	:				
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:					-						-						<0.24	:				
Total Organic Carbon	mg/L	T	3.9	J					-						-						<1.	:				
Total Suspended Solids	mg/L	T	5.6	:					-						-						<0.9	:				
Laboratory Parameters																										
pH	SU	T	4.8	J					-						-						4.13	:				
Specific Conductance	umhos/cm	T	3070.	J					-						-						-					
Inorganics																										
Cyanide	mg/L	T	<0.01	:					-						-						<0.01	J				
Physical Properties																										
Hardness	mg/L	T	1860.	:					-						-						-					
Hardness	mg/L	D	-						1890.	:					-						-					
Metals																										

Parameter	Units	Exposure Area Fraction	Site ID		Sample Date		Sample ID																	
			MMW-19A		11/3/2002		MMW-19A-D01N-GRW	GW4	MMW-19A		11/3/2002		MMW-19A-D01N-GRW	GW4										
Field Measurements																								
DO	mg/L	T	-						6.32	:														
Eh	millivolts	T	-						487.6	:														
pH	SU	T	-						4.13	:														
Specific Conductance	uS/cm	T	-						2396.	:														
Temperature	Celsius	T	-						8.12	:														
Turbidity	NTU	T	-						17.1	:														
General Chemistry																								
Ammonia	mg/L	T	-						<0.28	:														
Bicarbonate (as CaCO3)	mg/L	T	-						<1.	:														
Carbonate (as CaCO3)	mg/L	T	-						<1.	:														
Chloride	mg/L	T	-						29.8	:														
Fluoride	mg/L	T	-						-															
Hydroxide (as CaCO3)	mg/L	T	-						<1.	:														
Nitrate	mg/L	T	-						5.2	J														
Nitrite	mg/L	T	-						<0.005	J														
Phosphate, Ortho As P	mg/L	T	-						0.051	J														
Phosphorus	mg/L	T	-						0.052	:														
Sulfate	mg/L	T	-						-															
Total Alkalinity	mg/L	T	-						<1.	:														
Total Dissolved Solids	mg/L	T	-						2590.	:														
Total Kjeldahl Nitrogen	mg/L	T	-						<0.24	:														
Total Organic Carbon	mg/L	T	-						<1.	:														
Total Suspended Solids	mg/L	T	-						<0.9	:														
Laboratory Parameters																								
pH	SU	T	-						4.13	:														
Specific Conductance	umhos/cm	T	-						-															
Inorganics																								
Cyanide	mg/L	T	-						<0.01	J														
Physical Properties																								
Hardness	mg/L	T	-						-															
Hardness	mg/L	D	-						1240.	:														
Metals																								

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-16	MMW-16	MMW-19A	MMW-19A	MMW-19A	MMW-19A
Sample Date			6/4/2003	6/4/2003	11/3/2002	11/3/2002	11/3/2002	11/3/2002
Sample ID			MMW-16-T01N-GRW	MMW-16-D01N-GRW	MMW-19A-T01N-GRWRE	MMW-19A-T01N-GRW	MMW-19A-D01N-GRWRE	MMW-19A-D01N-GRW
Exposure Area			GW4	GW4	GW4	GW4	GW4	GW4
Aluminum	mg/L	T	39.2 :	-	-	-	-	-
Aluminum	mg/L	D	-	40.1 :	-	-	76.4 :	-
Antimony	mg/L	T	<0.072 :	-	-	-	-	-
Antimony	mg/L	D	-	<0.072 :	-	-	<0.028 :	-
Arsenic	mg/L	T	<0.04 :	-	-	-	-	-
Arsenic	mg/L	D	-	<0.04 :	-	-	<0.0272 :	-
Barium	mg/L	T	<0.123 :	-	-	-	-	-
Barium	mg/L	D	-	<0.123 :	-	-	<0.048 :	-
Beryllium	mg/L	T	0.0353 :	-	-	-	-	-
Beryllium	mg/L	D	-	0.0353 :	-	-	0.0183 :	-
Boron	mg/L	T	<0.084 :	-	-	-	-	-
Boron	mg/L	D	-	<0.084 :	-	-	<0.027 :	-
Cadmium	mg/L	T	0.0373 :	-	-	-	-	-
Cadmium	mg/L	D	-	0.0354 :	-	-	<0.08 :	-
Calcium	mg/L	T	581. :	-	-	-	-	-
Calcium	mg/L	D	-	591. :	-	-	220. :	-
Chromium	mg/L	T	<0.01 :	-	-	-	-	-
Chromium	mg/L	D	-	<0.01 :	-	-	<0.16 J	-
Cobalt	mg/L	T	0.384 :	-	-	-	-	-
Cobalt	mg/L	D	-	0.383 :	-	-	0.324 :	-
Copper	mg/L	T	1.06 :	-	-	-	-	-
Copper	mg/L	D	-	1.08 :	-	-	<1.14 :	-
Iron	mg/L	T	<0.519 :	-	-	-	-	-
Iron	mg/L	D	-	<0.311 :	-	-	<2.66 :	-
Lead	mg/L	T	0.0051 :	-	-	-	-	-
Lead	mg/L	D	-	0.0043 :	-	-	<0.001 :	-
Magnesium	mg/L	T	99.3 :	-	-	-	-	-
Magnesium	mg/L	D	-	101. :	-	-	168. :	-
Manganese	mg/L	T	13.9 :	-	-	-	-	-
Manganese	mg/L	D	-	14.1 :	-	-	39.2 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T	0.0503 :	-	-	-	-	-
Molybdenum	mg/L	D	-	0.0555 :	-	-	<0.011 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-16	MMW-16	MMW-19A	MMW-19A	MMW-19A	MMW-19A
			Sample Date	6/4/2003	6/4/2003	11/3/2002	11/3/2002	11/3/2002	11/3/2002
			Sample ID	MMW-16-T01N-GRW	MMW-16-D01N-GRW	MMW-19A-T01N-GRW	MMW-19A-T01N-GRW	MMW-19A-D01N-GRW	MMW-19A-D01N-GRW
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Nickel	mg/L	T		0.315 :	-	-	-	-	-
Nickel	mg/L	D		-	0.319 :	-	-	0.719 :	-
Potassium	mg/L	T		12.4 :	-	-	-	-	-
Potassium	mg/L	D		-	12.6 :	-	-	<31.4 J	-
Selenium	mg/L	T		0.0155 :	-	-	-	-	-
Selenium	mg/L	D		-	0.0146 :	-	-	0.0089 :	-
Silver	mg/L	T		<0.001 :	-	-	-	-	-
Silver	mg/L	D		-	<0.001 :	-	-	<0.001 :	-
Sodium	mg/L	T		43. :	-	-	-	-	-
Sodium	mg/L	D		-	42.8 :	-	-	46.5 :	-
Thallium	mg/L	T		<0.001 :	-	-	-	-	-
Thallium	mg/L	D		-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T		<0.002 :	-	-	-	-	-
Vanadium	mg/L	D		-	<0.002 :	-	-	<0.002 :	-
Zinc	mg/L	T		3.99 :	-	-	-	-	-
Zinc	mg/L	D		-	4.03 :	-	-	7.42 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		<0.00025 :	-	-	<0.00025 J	-	-
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T		<0.00025 :	-	-	<0.00025 J	-	-
Cyclotrimethylenetrinitramine	mg/L	T		<0.00025 :	-	-	<0.00025 J	-	-
Pentaerythritol tetranitrate	mg/L	T		<0.01 :	-	-	<0.01 J	-	-
Isotopes									
Lead	mg/L	T		0.0051 :	-	-	-	-	-
Lead	mg/L	D		-	0.0043 :	-	-	<0.001 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-19A	MMW-19A	MMW-19A	MMW-19A	MMW-19A	MMW-19A
			Sample Date	11/4/2002	1/12/2003	1/12/2003	4/8/2003	4/8/2003	7/21/2003
			Sample ID	MMW-19A-T01N-GR	MMW-19A-T01N-GR	MMW-19A-D01N-GR	MMW-19A-T01N-GR	MMW-19A-D01N-GR	MMW-19A-T01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		-	5.46 :	-	4.8 :	-	4.58 :
Eh	millivolts	T		-	500.6 :	-	396.6 :	-	484.8 :
pH	SU	T		-	4.06 :	-	4.6 J	-	4.3 J
Specific Conductance	uS/cm	T		-	5030. :	-	2420. :	-	2239. :
Temperature	Celsius	T		-	7.15 :	-	9.53 :	-	11.11 :
Turbidity	NTU	T		-	0. :	-	84.9 :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.15 :	-	<0.11 :	-	<0.13 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	7.4 :	-	33.6 :	-	25.7 :
Fluoride	mg/L	T		-	34.6 :	-	37.3 :	-	34.9 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	4.6 J	-	4.4 J	-	4.3 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.07 J	-	<0.24 J	-	<0.058 :
Phosphorus	mg/L	T		-	0.061 :	-	0.1 J	-	0.053 :
Sulfate	mg/L	T		-	1590. J	-	1510. J	-	1430. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	2570. J	-	2550. :	-	3130. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 J	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.2 :	-	1. J	-	<1.2 J
Total Suspended Solids	mg/L	T		-	<1.3 :	-	21.7 :	-	<1.4 :
Laboratory Parameters									
pH	SU	T		-	4.06 :	-	4.6 J	-	4.3 J
Specific Conductance	umhos/cm	T		-	-	-	2220. J	-	2190. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1450. :	-	1230. :	-	1220. :
Hardness	mg/L	D		-	-	1470. :	-	1290. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19A 11/4/2002 MMW-19A-T01N-GR W GW4	MMW-19A 1/12/2003 MMW-19A-T01N-GR W GW4	MMW-19A 1/12/2003 MMW-19A-D01N-GR W GW4	MMW-19A 4/8/2003 MMW-19A-T01N-GR W GW4	MMW-19A 4/8/2003 MMW-19A-D01N-GR W GW4	MMW-19A 7/21/2003 MMW-19A-T01N-GR W GW4
Aluminum	mg/L	T	-	89.4 :	-	73. :	-	74. :
Aluminum	mg/L	D	-	-	89.9 :	-	77.6 :	-
Antimony	mg/L	T	-	<0.028 :	-	<0.003 :	-	<0.038 :
Antimony	mg/L	D	-	-	<0.028 :	-	<0.003 :	-
Arsenic	mg/L	T	-	0.0342 :	-	<0.04 :	-	0.047 :
Arsenic	mg/L	D	-	-	<0.023 :	-	<0.04 :	-
Barium	mg/L	T	-	<0.048 :	-	<0.123 :	-	<0.073 :
Barium	mg/L	D	-	-	<0.048 :	-	<0.123 :	-
Beryllium	mg/L	T	-	0.0186 :	-	<0.034 :	-	<0.0179 :
Beryllium	mg/L	D	-	-	0.0187 :	-	<0.0317 :	-
Boron	mg/L	T	-	<0.027 :	-	<0.084 :	-	<0.046 :
Boron	mg/L	D	-	-	<0.027 :	-	<0.084 :	-
Cadmium	mg/L	T	-	0.0732 :	-	0.0531 :	-	<0.12 :
Cadmium	mg/L	D	-	-	0.0667 :	-	0.0487 :	-
Calcium	mg/L	T	-	258. :	-	220. :	-	216. :
Calcium	mg/L	D	-	-	260. :	-	231. :	-
Chromium	mg/L	T	-	<0.37 :	-	<0.01 :	-	<0.19 :
Chromium	mg/L	D	-	-	<0.37 :	-	<0.01 :	-
Chromium, Hexavalent	mg/L	D	0.0023 J	-	-	-	-	-
Cobalt	mg/L	T	-	0.35 :	-	0.313 :	-	<0.37 :
Cobalt	mg/L	D	-	-	0.351 :	-	0.318 :	-
Copper	mg/L	T	-	1.3 :	-	1.13 :	-	0.962 :
Copper	mg/L	D	-	-	1.25 :	-	1.25 :	-
Iron	mg/L	T	-	<4.89 :	-	<3.11 :	-	<6.67 :
Iron	mg/L	D	-	-	<4.89 :	-	<3.11 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Magnesium	mg/L	T	-	196. :	-	164. :	-	164. :
Magnesium	mg/L	D	-	-	198. :	-	173. :	-
Manganese	mg/L	T	-	44.4 :	-	38.6 :	-	37.8 :
Manganese	mg/L	D	-	-	44.9 :	-	40.5 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.011 J	-	<0.023 :	-	<0.016 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19A 11/4/2002 MMW-19A-T01N-GR WGW4	MMW-19A 1/12/2003 MMW-19A-T01N-GR WGW4	MMW-19A 1/12/2003 MMW-19A-D01N-GR WGW4	MMW-19A 4/8/2003 MMW-19A-T01N-GR WGW4	MMW-19A 4/8/2003 MMW-19A-D01N-GR WGW4	MMW-19A 7/21/2003 MMW-19A-T01N-GR WGW4
Molybdenum	mg/L	D	-	-	<0.011 J	-	<0.023 :	-
Nickel	mg/L	T	-	0.866 :	-	0.775 :	-	0.605 :
Nickel	mg/L	D	-	-	0.818 :	-	0.779 :	-
Potassium	mg/L	T	-	<20.2 J	-	<3.26 :	-	<37.1 :
Potassium	mg/L	D	-	-	<20.2 :	-	<3.26 :	-
Selenium	mg/L	T	-	0.0118 :	-	0.0068 J	-	0.0094 :
Selenium	mg/L	D	-	-	0.0097 :	-	0.0064 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 J
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	41.6 :	-	<35.2 :	-	<53.2 :
Sodium	mg/L	D	-	-	36. :	-	39.2 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.002 :
Vanadium	mg/L	D	-	-	<0.002 :	-	<0.001 :	-
Zinc	mg/L	T	-	8.36 :	-	7.56 :	-	6.81 :
Zinc	mg/L	D	-	-	8.42 :	-	7.83 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.001 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19A 7/21/2003 MMW-19A-D01N-GR GW4		MMW-19A 10/20/2003 MMW-19A-T01N-GR GW4		MMW-19A 10/20/2003 MMW-19A-D01N-GR GW4		MMW-19A 1/11/2004 MMW-19A-T01N-GR GW4		MMW-19A 1/11/2004 MMW-19A-D01N-GR GW4		MMW-19A 4/18/2004 MMW-19A-T01N-GR GW4	
Field Measurements														
DO	mg/L	T	-		7.24	:	-		4.76	:	-		4.69	:
Eh	millivolts	T	-		634.1	:	-		438.1	:	-		384.	:
pH	SU	T	-		4.3	J	-		4.3	:	-		4.5	J
Specific Conductance	uS/cm	T	-		2086.	:	-		2075.	:	-		2014.	:
Temperature	Celsius	T	-		12.29	:	-		7.42	:	-		8.59	:
Turbidity	NTU	T	-		0.	:	-		0.	:	-		3.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.22	J	-		<0.15	J	-		<0.054	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		23.2	:	-		21.	:	-		23.8	J
Fluoride	mg/L	T	-		32.4	:	-		29.4	:	-		27.3	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		3.8	:	-		3.7	:	-		2.9	:
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	:	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.038	:	-		0.043	J	-		0.037	:
Phosphorus	mg/L	T	-		0.048	:	-		<0.01	J	-		0.047	:
Sulfate	mg/L	T	-		1180.	J	-		1230.	J	-		1240.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		2160.	:	-		2110.	:	-		1880.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.6	:	-		1.7	J
Total Suspended Solids	mg/L	T	-		<1.3	:	-		<1.2	:	-		<3.8	J
Laboratory Parameters														
pH	SU	T	-		4.3	J	-		4.3	:	-		4.5	J
Specific Conductance	umhos/cm	T	-		1980.	J	-		1910.	J	-		1640.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		1040.	:	-		1010.	:	-		1040.	:
Hardness	mg/L	D	1180.	:	-		1130.	:	-		1040.	:	-	
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19A 7/21/2003 MMW-19A-D01N-GR GW4		MMW-19A 10/20/2003 MMW-19A-T01N-GR GW4		MMW-19A 10/20/2003 MMW-19A-D01N-GR GW4		MMW-19A 1/11/2004 MMW-19A-T01N-GR GW4		MMW-19A 1/11/2004 MMW-19A-D01N-GR GW4		MMW-19A 4/18/2004 MMW-19A-T01N-GR GW4	
Aluminum	mg/L	T	-		62.3	:	-		59.	:	-		61.4	:
Aluminum	mg/L	D	72.4	:	-		67.5	:	-		60.7	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.029	:	-		<0.027	:
Antimony	mg/L	D	<0.038	:	-		<0.052	:	-		<0.029	:	-	
Arsenic	mg/L	T	-		<0.002	:	-		<0.028	:	-		<0.026	:
Arsenic	mg/L	D	0.0383	:	-		<0.002	:	-		<0.028	:	-	
Barium	mg/L	T	-		<0.115	:	-		<0.053	:	-		<0.012	:
Barium	mg/L	D	<0.073	:	-		<0.115	:	-		<0.053	:	-	
Beryllium	mg/L	T	-		0.0168	:	-		0.0145	:	-		0.0139	:
Beryllium	mg/L	D	<0.0175	:	-		0.0166	:	-		0.0142	:	-	
Boron	mg/L	T	-		<0.063	:	-		<0.0286	:	-		<0.0256	:
Boron	mg/L	D	<0.046	:	-		<0.063	:	-		<0.023	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		0.06	:
Cadmium	mg/L	D	<0.12	:	-		<0.13	:	-		0.0755	:	-	
Calcium	mg/L	T	-		185.	:	-		180.	:	-		184.	:
Calcium	mg/L	D	209.	:	-		201.	:	-		184.	:	-	
Chromium	mg/L	T	-		<0.23	J	-		<0.11	:	-		<0.08	:
Chromium	mg/L	D	<0.19	:	-		<0.23	J	-		0.143	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.31	:	-		0.354	:
Cobalt	mg/L	D	<0.37	:	-		<0.32	:	-		0.398	:	-	
Copper	mg/L	T	-		0.942	:	-		0.826	:	-		1.01	:
Copper	mg/L	D	0.899	:	-		1.14	:	-		0.975	:	-	
Iron	mg/L	T	-		<4.55	:	-		<3.73	:	-		<1.92	J
Iron	mg/L	D	<6.67	:	-		<4.55	:	-		<3.73	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		140.	:	-		136.	:	-		141.	:
Magnesium	mg/L	D	160.	:	-		153.	:	-		140.	:	-	
Manganese	mg/L	T	-		31.7	:	-		30.2	:	-		31.1	:
Manganese	mg/L	D	36.8	:	-		34.5	:	-		31.	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.024	:	-		<0.01	:
Molybdenum	mg/L	D	<0.016	:	-		<0.011	:	-		<0.024	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-19A	MMW-19A	MMW-19A	MMW-19A	MMW-19A	MMW-19A
			Sample Date	7/21/2003	10/20/2003	10/20/2003	1/11/2004	1/11/2004	4/18/2004
			Sample ID	MMW-19A-D01N-GR	MMW-19A-T01N-GR	MMW-19A-D01N-GR	MMW-19A-T01N-GR	MMW-19A-D01N-GR	MMW-19A-T01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Nickel	mg/L	T		-	0.786 :	-	0.645 :	-	0.603 :
Nickel	mg/L	D		0.8 :	-	0.862 :	-	0.751 :	-
Potassium	mg/L	T		-	<63.8 :	-	<24.3 :	-	<10.9 J
Potassium	mg/L	D		<37.1 :	-	<63.8 :	-	<24.3 :	-
Selenium	mg/L	T		-	0.0063 :	-	0.0092 J	-	<0.007 :
Selenium	mg/L	D		0.0093 J	-	0.0095 :	-	0.0127 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 J
Silver	mg/L	D		<0.001 J	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T		-	<99.1 :	-	<49. :	-	<39.5 :
Sodium	mg/L	D		<59. :	-	<99.1 :	-	<49. :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	<0.001 :	-	<0.002 :	-	<0.002 :
Vanadium	mg/L	D		<0.002 :	-	<0.001 :	-	<0.002 :	-
Zinc	mg/L	T		-	6.32 :	-	6.14 :	-	6.36 :
Zinc	mg/L	D		6.59 :	-	6.88 :	-	6.28 :	-
Isotopes									
Delta D	per mil	T		-	-	-	-	-	-94.5 :
Delta O-18	per mil	T		-	-	-	-	-	-13.1 :
Lead	mg/L	T		-	<0.002 :	-	<0.001 :	-	<0.004 :
Lead	mg/L	D		<0.001 :	-	<0.002 :	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-19A	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
			Sample Date	4/18/2004	11/6/2002	11/6/2002	11/6/2002	11/6/2002	12/6/2002
			Sample ID	MMW-19A-D01N-GRW	MMW-2-T01N-GRWRE	MMW-2-T01N-GRW	MMW-2-D01N-GRWRE	MMW-2-D01N-GRW	MMW-2-T01N-GRW
			Exposure Area	GW4	GW1	GW1	GW1	GW1	GW1
Field Measurements									
DO	mg/L	T		-	-	0.19 :	-	-	0.88 :
Eh	millivolts	T		-	-	86.3 :	-	-	197.4 :
pH	SU	T		-	-	5.19 :	-	-	6.23 :
Specific Conductance	uS/cm	T		-	-	2533. :	-	-	5249. :
Temperature	Celsius	T		-	-	10.07 :	-	-	8. :
Turbidity	NTU	T		-	-	104. :	-	-	138.7 :
General Chemistry									
Ammonia	mg/L	T		-	-	<0.096 J	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	113. :	-	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Chloride	mg/L	T		-	-	6.4 :	-	-	-
Fluoride	mg/L	T		-	10.6 J	-	-	-	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Nitrate	mg/L	T		-	-	<0.4 J	-	-	-
Nitrite	mg/L	T		-	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T		-	-	<0.01 J	-	-	-
Phosphorus	mg/L	T		-	-	0.018 :	-	-	-
Sulfate	mg/L	T		-	1440. J	-	-	-	-
Total Alkalinity	mg/L	T		-	-	113. :	-	-	-
Total Dissolved Solids	mg/L	T		-	-	2550. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		-	-	3.1 :	-	-	-
Total Suspended Solids	mg/L	T		-	-	86.8 :	-	-	-
Laboratory Parameters									
pH	SU	T		-	-	5.19 :	-	-	6.23 :
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	-	-
Physical Properties									
Hardness	mg/L	D		993. :	-	-	1680. :	-	-
Metals									
Aluminum	mg/L	D		58.2 :	-	-	<3.96 :	-	-
Antimony	mg/L	D		<0.027 :	-	-	<0.028 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-19A 4/18/2004 MMW-19A-D01N-GRW GW4		MMW-2 11/6/2002 MMW-2-T01N-GRWR GW1		MMW-2 11/6/2002 MMW-2-T01N-GRW GW1		MMW-2 11/6/2002 MMW-2-D01N-GRWR GW1		MMW-2 11/6/2002 MMW-2-D01N-GRW GW1		MMW-2 12/6/2002 MMW-2-T01N-GRW GW1	
Arsenic	mg/L	D	<0.026	:	-		-		<0.023	:	-		-	
Barium	mg/L	D	<0.012	:	-		-		<0.048	:	-		-	
Beryllium	mg/L	D	0.0138	:	-		-		0.0103	:	-		-	
Boron	mg/L	D	<0.018	:	-		-		<0.027	:	-		-	
Cadmium	mg/L	D	0.0602	J	-		-		<0.08	:	-		-	
Calcium	mg/L	D	176.	:	-		-		545.	:	-		-	
Chromium	mg/L	D	<0.08	:	-		-		<0.16	J	-		-	
Cobalt	mg/L	D	0.268	:	-		-		<0.23	:	-		-	
Copper	mg/L	D	1.01	:	-		-		<0.17	:	-		-	
Iron	mg/L	D	<2.03	:	-		-		18.6	:	-		-	
Lead	mg/L	D	<0.004	:	-		-		<0.001	:	-		-	
Magnesium	mg/L	D	134.	:	-		-		78.1	:	-		-	
Manganese	mg/L	D	29.8	:	-		-		16.7	:	-		-	
Mercury	mg/L	T	-		-		<0.0001	:	-		-		-	
Mercury	mg/L	D	<0.0001	:	-		-		-		<0.0001	:	-	
Molybdenum	mg/L	D	<0.01	:	-		-		<0.011	:	-		-	
Nickel	mg/L	D	0.667	:	-		-		<0.34	:	-		-	
Potassium	mg/L	D	<10.9	J	-		-		<31.4	J	-		-	
Selenium	mg/L	D	<0.007	:	-		-		<0.008	:	-		-	
Silver	mg/L	D	<0.001	J	-		-		<0.001	:	-		-	
Sodium	mg/L	D	<54.4	:	-		-		75.4	:	-		-	
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Vanadium	mg/L	D	<0.002	:	-		-		<0.002	:	-		-	
Zinc	mg/L	D	6.09	:	-		-		3.23	:	-		-	
Isotopes														
Lead	mg/L	D	<0.004	:	-		-		<0.001	:	-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
			Sample Date	1/7/2003	1/7/2003	1/7/2003	2/6/2003	3/6/2003	4/6/2003
			Sample ID	MMW-2-T01N-GW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-T01N-GRW
			Exposure Area	GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements									
DO	mg/L	T		0.74 :	0.74 :	-	0.31 :	0.37 :	1.2 :
Eh	millivolts	T		128.8 :	128.8 :	-	112.1 :	263.1 :	181.2 :
pH	SU	T		6.19 :	6.19 :	-	6.2 :	6.16 :	6.4 J
Specific Conductance	uS/cm	T		2402. :	2402. :	-	2606. :	2700. :	2543. :
Temperature	Celsius	T		9.03 :	9.03 :	-	7.6 :	6.38 :	8.71 :
Turbidity	NTU	T		1.4 :	1.4 :	-	50.2 :	92.2 :	83.5 :
General Chemistry									
Ammonia	mg/L	T		-	<0.097 :	-	-	-	<0.087 :
Bicarbonate (as CaCO3)	mg/L	T		-	162. :	-	-	-	60.5 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Chloride	mg/L	T		-	6.8 :	-	-	-	7.7 :
Fluoride	mg/L	T		-	7.3 :	-	-	-	12. :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	-	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 :	-	-	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.013 J	-	-	-	<0.01 :
Phosphorus	mg/L	T		-	0.01 :	-	-	-	0.061 :
Sulfate	mg/L	T		-	1760. J	-	-	-	1520. J
Total Alkalinity	mg/L	T		-	162. :	-	-	-	60.5 :
Total Dissolved Solids	mg/L	T		-	2540. :	-	-	-	2450. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.27 J	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	2.4 :	-	-	-	4.1 J
Total Suspended Solids	mg/L	T		-	45.3 :	-	-	-	92.4 :
Laboratory Parameters									
pH	SU	T		6.19 :	6.19 :	-	6.2 :	6.16 :	6.4 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	2520. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1670. :	-	-	-	1590. :
Hardness	mg/L	D		-	-	1560. :	-	-	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 1/7/2003 MMW-2-T01N-GW GW1	MMW-2 1/7/2003 MMW-2-T01N-GRW GW1	MMW-2 1/7/2003 MMW-2-D01N-GRW GW1	MMW-2 2/6/2003 MMW-2-T01N-GRW GW1	MMW-2 3/6/2003 MMW-2-T01N-GRW GW1	MMW-2 4/6/2003 MMW-2-T01N-GRW GW1
Aluminum	mg/L	T	-	9.13 :	-	-	-	23.5 :
Aluminum	mg/L	D	-	-	3.91 :	-	-	-
Antimony	mg/L	T	-	<0.028 :	-	-	-	<0.0006 J
Antimony	mg/L	D	-	-	<0.028 :	-	-	-
Arsenic	mg/L	T	-	<0.023 :	-	-	-	0.00089 J
Arsenic	mg/L	D	-	-	<0.023 :	-	-	-
Barium	mg/L	T	-	<0.048 :	-	-	-	<0.0123 :
Barium	mg/L	D	-	-	<0.048 :	-	-	-
Beryllium	mg/L	T	-	0.0132 :	-	-	-	0.0192 :
Beryllium	mg/L	D	-	-	0.0095 :	-	-	-
Boron	mg/L	T	-	<0.027 :	-	-	-	0.009 :
Boron	mg/L	D	-	-	<0.027 :	-	-	-
Cadmium	mg/L	T	-	<0.04 :	-	-	-	0.0071 :
Cadmium	mg/L	D	-	-	<0.04 :	-	-	-
Calcium	mg/L	T	-	548. :	-	-	-	501. :
Calcium	mg/L	D	-	-	503. :	-	-	-
Chromium	mg/L	T	-	<0.37 :	-	-	-	<0.001 :
Chromium	mg/L	D	-	-	<0.37 :	-	-	-
Cobalt	mg/L	T	-	<0.16 :	-	-	-	0.0736 :
Cobalt	mg/L	D	-	-	<0.16 :	-	-	-
Copper	mg/L	T	-	<0.17 :	-	-	-	0.0459 :
Copper	mg/L	D	-	-	<0.17 J	-	-	-
Iron	mg/L	T	-	18.8 :	-	-	-	21. :
Iron	mg/L	D	-	-	18. :	-	-	-
Lead	mg/L	T	-	0.0019 :	-	-	-	0.0044 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-
Magnesium	mg/L	T	-	74.7 :	-	-	-	81.1 :
Magnesium	mg/L	D	-	-	72.6 :	-	-	-
Manganese	mg/L	T	-	15.4 :	-	-	-	20.7 :
Manganese	mg/L	D	-	-	16.1 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.011 J	-	-	-	<0.0023 :
Molybdenum	mg/L	D	-	-	<0.011 J	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 1/7/2003 MMW-2-T01N-GW GW1	MMW-2 1/7/2003 MMW-2-T01N-GRW GW1	MMW-2 1/7/2003 MMW-2-D01N-GRW GW1	MMW-2 2/6/2003 MMW-2-T01N-GRW GW1	MMW-2 3/6/2003 MMW-2-T01N-GRW GW1	MMW-2 4/6/2003 MMW-2-T01N-GRW GW1
Nickel	mg/L	T	-	<0.15 J	-	-	-	0.161 :
Nickel	mg/L	D	-	-	0.208 J	-	-	-
Potassium	mg/L	T	-	<20.2 :	-	-	-	5.01 J
Potassium	mg/L	D	-	-	20.3 :	-	-	-
Selenium	mg/L	T	-	<0.008 :	-	-	-	0.0085 :
Selenium	mg/L	D	-	-	<0.008 :	-	-	-
Silver	mg/L	T	-	<0.001 :	-	-	-	<0.0002 :
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	-	54. :	-	-	-	73.1 :
Sodium	mg/L	D	-	-	60.1 :	-	-	-
Thallium	mg/L	T	-	<0.001 :	-	-	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	<0.002 :	-	-	-	0.00031 :
Vanadium	mg/L	D	-	-	<0.002 :	-	-	-
Zinc	mg/L	T	-	3.07 :	-	-	-	4.26 :
Zinc	mg/L	D	-	-	3.21 :	-	-	-
Isotopes								
Lead	mg/L	T	-	0.0019 :	-	-	-	0.0044 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
			Sample Date	4/6/2003	5/8/2003	6/5/2003	7/18/2003	7/18/2003	8/12/2003
			Sample ID	MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW
				GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements									
DO	mg/L	T		-	0.39 :	6.05 :	0.13 :	-	0.27 :
Eh	millivolts	T		-	162. :	61.9 :	91.3 :	-	128.8 :
pH	SU	T		-	6.02 :	5.89 :	6.1 J	-	5.98 :
Specific Conductance	uS/cm	T		-	2695. :	2649. :	2565. :	-	2565. :
Temperature	Celsius	T		-	12.43 :	16.34 :	16.32 :	-	16.57 :
Turbidity	NTU	T		-	73.1 :	57.8 :	97.7 :	-	47.8 :
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.075 J	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	87.5 :	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Chloride	mg/L	T		-	-	-	5.9 :	-	-
Fluoride	mg/L	T		-	-	-	8.1 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Nitrate	mg/L	T		-	-	-	<0.4 J	-	-
Nitrite	mg/L	T		-	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	<0.01 J	-	-
Phosphorus	mg/L	T		-	-	-	<0.01 :	-	-
Sulfate	mg/L	T		-	-	-	1570. J	-	-
Total Alkalinity	mg/L	T		-	-	-	87.5 :	-	-
Total Dissolved Solids	mg/L	T		-	-	-	2370. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	-	-	4.6 J	-	-
Total Suspended Solids	mg/L	T		-	-	-	65.8 :	-	-
Laboratory Parameters									
pH	SU	T		-	6.02 :	5.89 :	6.1 J	-	5.98 :
Specific Conductance	umhos/cm	T		-	-	-	2290. J	-	-
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	-	-	1540. :	-	-
Hardness	mg/L	D		1650. :	-	-	-	1460. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/6/2003 MMW-2-D01N-GRW GW1	MMW-2 5/8/2003 MMW-2-T01N-GRW GW1	MMW-2 6/5/2003 MMW-2-T01N-GRW GW1	MMW-2 7/18/2003 MMW-2-T01N-GRW GW1	MMW-2 7/18/2003 MMW-2-D01N-GRW GW1	MMW-2 8/12/2003 MMW-2-T01N-GRW GW1
Aluminum	mg/L	T	-	-	-	13.9 :	-	-
Aluminum	mg/L	D	8.12 :	-	-	-	2.48 :	-
Antimony	mg/L	T	-	-	-	<0.001 :	-	-
Antimony	mg/L	D	<0.0006 J	-	-	-	<0.001 :	-
Arsenic	mg/L	T	-	-	-	0.0023 :	-	-
Arsenic	mg/L	D	0.0028 J	-	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	-	<0.0073 :	-	-
Barium	mg/L	D	<0.0123 :	-	-	-	0.0075 :	-
Beryllium	mg/L	T	-	-	-	0.0148 :	-	-
Beryllium	mg/L	D	0.0132 :	-	-	-	0.0077 :	-
Boron	mg/L	T	-	-	-	0.0108 :	-	-
Boron	mg/L	D	0.0099 :	-	-	-	0.0123 :	-
Cadmium	mg/L	T	-	-	-	0.0065 :	-	-
Cadmium	mg/L	D	0.0079 :	-	-	-	0.0073 :	-
Calcium	mg/L	T	-	-	-	496. :	-	-
Calcium	mg/L	D	522. :	-	-	-	468. :	-
Chromium	mg/L	T	-	-	-	0.0038 J	-	-
Chromium	mg/L	D	<0.001 :	-	-	-	0.0109 J	-
Cobalt	mg/L	T	-	-	-	0.0635 :	-	-
Cobalt	mg/L	D	0.0858 :	-	-	-	0.0701 :	-
Copper	mg/L	T	-	-	-	0.0355 :	-	-
Copper	mg/L	D	0.0405 :	-	-	-	<0.0066 :	-
Iron	mg/L	T	-	-	-	18.9 :	-	-
Iron	mg/L	D	21.3 :	-	-	-	<0.667 :	-
Lead	mg/L	T	-	-	-	0.0018 :	-	-
Lead	mg/L	D	0.0016 :	-	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	-	74.2 :	-	-
Magnesium	mg/L	D	83. :	-	-	-	70.3 :	-
Manganese	mg/L	T	-	-	-	16.5 :	-	-
Manganese	mg/L	D	21.4 :	-	-	-	15.6 :	-
Mercury	mg/L	T	-	-	-	0.00023 :	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	0.00012 J	-
Molybdenum	mg/L	T	-	-	-	<0.0016 :	-	-
Molybdenum	mg/L	D	<0.0023 :	-	-	-	<0.0016 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/6/2003 MMW-2-D01N-GRW GW1	MMW-2 5/8/2003 MMW-2-T01N-GRW GW1	MMW-2 6/5/2003 MMW-2-T01N-GRW GW1	MMW-2 7/18/2003 MMW-2-T01N-GRW GW1	MMW-2 7/18/2003 MMW-2-D01N-GRW GW1	MMW-2 8/12/2003 MMW-2-T01N-GRW GW1
Nickel	mg/L	T	-	-	-	0.142 :	-	-
Nickel	mg/L	D	0.191 :	-	-	-	0.166 :	-
Potassium	mg/L	T	-	-	-	9.19 :	-	-
Potassium	mg/L	D	6.96 J	-	-	-	10.7 :	-
Selenium	mg/L	T	-	-	-	0.0051 :	-	-
Selenium	mg/L	D	0.0038 :	-	-	-	<0.0016 J	-
Silver	mg/L	T	-	-	-	<0.0002 J	-	-
Silver	mg/L	D	<0.0002 :	-	-	-	<0.0002 J	-
Sodium	mg/L	T	-	-	-	74.7 :	-	-
Sodium	mg/L	D	74. :	-	-	-	74.1 :	-
Thallium	mg/L	T	-	-	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	-	<0.0004 :	-	-
Vanadium	mg/L	D	<0.0002 :	-	-	-	<0.0004 :	-
Zinc	mg/L	T	-	-	-	3.34 :	-	-
Zinc	mg/L	D	4.4 :	-	-	-	3.03 :	-
Isotopes								
Lead	mg/L	T	-	-	-	0.0018 :	-	-
Lead	mg/L	D	0.0016 :	-	-	-	<0.0002 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
Site ID			MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
Sample Date			9/11/2003	9/18/2003	9/18/2003	10/17/2003	10/17/2003	11/4/2003
Sample ID			MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW
Exposure Area			GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements								
DO	mg/L	T	2.07 :	0.54 :	-	1.66 :	-	0.4 :
Eh	millivolts	T	70.8 :	125.5 :	-	70.9 :	-	-14.3 :
pH	SU	T	5.85 :	5.9 J	-	6.3 J	-	6.1 J
Specific Conductance	uS/cm	T	2630. :	1629. :	-	2919. :	-	2403. :
Temperature	Celsius	T	12.18 :	9.34 :	-	8.49 :	-	9.4 :
Turbidity	NTU	T	120.6 :	0. :	-	50.5 :	-	197.6 :
General Chemistry								
Ammonia	mg/L	T	-	<0.1 :	-	<0.096 J	-	<0.19 :
Bicarbonate (as CaCO3)	mg/L	T	-	51.7 :	-	116. :	-	94.8 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	6.8 :	-	7.7 :	-	7.9 :
Fluoride	mg/L	T	-	9.1 :	-	6.8 :	-	6.6 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.2 J	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 J
Phosphorus	mg/L	T	-	0.014 :	-	0.015 :	-	0.013 :
Sulfate	mg/L	T	-	1630. J	-	1490. J	-	1490. :
Total Alkalinity	mg/L	T	-	51.7 :	-	116. :	-	94.8 :
Total Dissolved Solids	mg/L	T	-	2530. :	-	2260. :	-	2490. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<2.7 :	-	2.5 J	-	1.4 :
Total Suspended Solids	mg/L	T	-	4. :	-	15.1 :	-	156. :
Laboratory Parameters								
pH	SU	T	5.85 :	5.9 J	-	6.3 J	-	6.1 J
Specific Conductance	umhos/cm	T	-	2220. J	-	2440. J	-	2530. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 J	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	1530. :	-	1590. :	-	1510. :
Hardness	mg/L	D	-	-	1540. :	-	1660. :	-
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
			Sample Date	9/11/2003	9/18/2003	9/18/2003	10/17/2003	10/17/2003	11/4/2003
			Sample ID	MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW
				GW1	GW1	GW1	GW1	GW1	GW1
Aluminum	mg/L	T		-	18.5 :	-	15.1 :	-	26.2 :
Aluminum	mg/L	D		-	-	8.68 :	-	5.37 :	-
Antimony	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T		-	<0.0027 :	-	0.0018 J	-	0.0024 :
Arsenic	mg/L	D		-	-	<0.0035 :	-	0.0034 J	-
Barium	mg/L	T		-	<0.0115 :	-	<0.0115 :	-	<0.0117 :
Barium	mg/L	D		-	-	<0.0115 :	-	<0.0115 :	-
Beryllium	mg/L	T		-	0.016 :	-	0.015 :	-	0.0192 :
Beryllium	mg/L	D		-	-	0.0122 :	-	0.0102 :	-
Boron	mg/L	T		-	0.0102 :	-	0.0113 :	-	<0.0064 :
Boron	mg/L	D		-	-	0.0113 :	-	0.0132 :	-
Cadmium	mg/L	T		-	0.0085 J	-	0.0067 :	-	0.0042 J
Cadmium	mg/L	D		-	-	0.0092 J	-	0.0072 :	-
Calcium	mg/L	T		-	477. :	-	514. :	-	486. :
Calcium	mg/L	D		-	-	480. :	-	538. :	-
Chromium	mg/L	T		-	<0.0039 :	-	0.0024 J	-	<0.0013 :
Chromium	mg/L	D		-	-	<0.0038 :	-	0.0031 J	-
Cobalt	mg/L	T		-	0.0785 :	-	0.0612 :	-	0.0563 :
Cobalt	mg/L	D		-	-	0.0855 :	-	0.0695 :	-
Copper	mg/L	T		-	0.0466 :	-	0.0322 :	-	0.0436 :
Copper	mg/L	D		-	-	0.042 :	-	0.0241 :	-
Iron	mg/L	T		-	20.5 :	-	18.8 :	-	23.8 :
Iron	mg/L	D		-	-	20.4 :	-	19.4 :	-
Lead	mg/L	T		-	0.0035 :	-	0.0023 :	-	0.0043 :
Lead	mg/L	D		-	-	0.0021 :	-	0.00085 :	-
Magnesium	mg/L	T		-	82.3 :	-	73.6 :	-	71.8 :
Magnesium	mg/L	D		-	-	82.7 :	-	77.1 :	-
Manganese	mg/L	T		-	20.5 :	-	16.1 :	-	15. J
Manganese	mg/L	D		-	-	20.7 :	-	17. :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.0011 :	-	<0.0011 J	-	<0.0012 :
Molybdenum	mg/L	D		-	-	<0.0011 :	-	<0.0011 J	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 9/11/2003 MMW-2-T01N-GRW GW1		MMW-2 9/18/2003 MMW-2-T01N-GRW GW1		MMW-2 9/18/2003 MMW-2-D01N-GRW GW1		MMW-2 10/17/2003 MMW-2-T01N-GRW GW1		MMW-2 10/17/2003 MMW-2-D01N-GRW GW1		MMW-2 11/4/2003 MMW-2-T01N-GRW GW1	
Nickel	mg/L	T	-		0.173	:	-		0.136	:	-		0.124	:
Nickel	mg/L	D	-		-		0.189	:	-		0.15	:	-	
Potassium	mg/L	T	-		6.32	:	-		8.26	:	-		6.38	:
Potassium	mg/L	D	-		-		7.5	:	-		9.44	:	-	
Selenium	mg/L	T	-		0.0111	:	-		0.0088	:	-		0.0116	:
Selenium	mg/L	D	-		-		0.0071	:	-		0.0035	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		75.1	:	-		88.9	:	-		77.8	:
Sodium	mg/L	D	-		-		74.3	:	-		85.9	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		0.00023	:	-		0.00096	:
Vanadium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		4.22	:	-		3.21	:	-		3.08	:
Zinc	mg/L	D	-		-		4.26	:	-		3.35	:	-	
Isotopes														
Lead	mg/L	T	-		0.0035	:	-		0.0023	:	-		0.0043	:
Lead	mg/L	D	-		-		0.0021	:	-		0.00085	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
Site ID			MMW-2	MMW-2	MMW-2	MMW-2	MMW-2	MMW-2
Sample Date			11/4/2003	12/10/2003	1/11/2004	1/11/2004	2/25/2004	2/25/2004
Sample ID			MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-2-T01N-GRW	MMW-2-D01N-GRW
Exposure Area			GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements								
DO	mg/L	T	-	1.16 :	0.02 :	-	0.67 :	-
Eh	millivolts	T	-	76.9 :	83.3 :	-	81.8 :	-
pH	SU	T	-	6.07 :	5.9 J	-	6.12 :	-
Specific Conductance	uS/cm	T	-	2393. :	2521. :	-	2579. :	-
Temperature	Celsius	T	-	7.5 :	8.83 :	-	8.67 :	-
Turbidity	NTU	T	-	56.2 :	60.2 :	-	42.6 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.093 J	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	96.6 :	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Chloride	mg/L	T	-	-	6.6 :	-	-	-
Fluoride	mg/L	T	-	-	7.5 :	-	7.3 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Nitrate	mg/L	T	-	-	<0.2 J	-	-	-
Nitrite	mg/L	T	-	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 :	-	-	-
Phosphorus	mg/L	T	-	-	<0.01 :	-	-	-
Sulfate	mg/L	T	-	-	1640. :	-	1610. :	-
Total Alkalinity	mg/L	T	-	-	96.6 :	-	-	-
Total Dissolved Solids	mg/L	T	-	-	2550. :	-	2510. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	-	-	<3.1 :	-	-	-
Total Suspended Solids	mg/L	T	-	-	48.5 :	-	68.2 :	-
Laboratory Parameters								
pH	SU	T	-	6.07 :	5.9 J	-	6.12 :	-
Specific Conductance	umhos/cm	T	-	-	2410. J	-	-	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	-
Physical Properties								
Hardness	mg/L	T	-	-	1590. :	-	1530. :	-
Hardness	mg/L	D	1530. :	-	-	1590. :	-	1540. :
Metals								

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 11/4/2003 MMW-2-D01N-GRW GW1	MMW-2 12/10/2003 MMW-2-T01N-GRW GW1	MMW-2 1/11/2004 MMW-2-T01N-GRW GW1	MMW-2 1/11/2004 MMW-2-D01N-GRW GW1	MMW-2 2/25/2004 MMW-2-T01N-GRW GW1	MMW-2 2/25/2004 MMW-2-D01N-GRW GW1
Aluminum	mg/L	T	-	-	13.7 :	-	14.2 :	-
Aluminum	mg/L	D	5.05 :	-	-	<5.14 :	-	5.48 :
Antimony	mg/L	T	-	-	<0.029 :	-	<0.00096 :	-
Antimony	mg/L	D	<0.001 :	-	-	<0.029 :	-	<0.00096 :
Arsenic	mg/L	T	-	-	<0.028 :	-	0.0029 :	-
Arsenic	mg/L	D	0.003 :	-	-	<0.028 :	-	0.0035 J
Barium	mg/L	T	-	-	<0.053 :	-	0.007 J	-
Barium	mg/L	D	<0.0117 :	-	-	<0.053 :	-	0.0094 J
Beryllium	mg/L	T	-	-	0.0158 :	-	0.0126 :	-
Beryllium	mg/L	D	0.0095 :	-	-	0.0112 :	-	0.0084 :
Boron	mg/L	T	-	-	<0.023 :	-	0.0086 :	-
Boron	mg/L	D	0.0077 :	-	-	<0.023 :	-	0.0097 :
Cadmium	mg/L	T	-	-	<0.07 J	-	0.0055 :	-
Cadmium	mg/L	D	0.005 :	-	-	<0.07 :	-	0.0067 J
Calcium	mg/L	T	-	-	513. :	-	496. :	-
Calcium	mg/L	D	492. :	-	-	512. :	-	496. :
Chromium	mg/L	T	-	-	0.114 :	-	<0.0015 :	-
Chromium	mg/L	D	<0.0013 :	-	-	<0.11 :	-	<0.0015 :
Cobalt	mg/L	T	-	-	<0.31 :	-	0.055 :	-
Cobalt	mg/L	D	0.0682 :	-	-	<0.31 :	-	0.067 :
Copper	mg/L	T	-	-	<0.24 :	-	0.0316 :	-
Copper	mg/L	D	0.018 :	-	-	<0.24 :	-	0.0272 :
Iron	mg/L	T	-	-	20.2 :	-	18. :	-
Iron	mg/L	D	19.8 :	-	-	19.5 :	-	19. :
Lead	mg/L	T	-	-	0.0023 :	-	0.0021 :	-
Lead	mg/L	D	0.00057 :	-	-	0.0012 :	-	0.0007 :
Magnesium	mg/L	T	-	-	76. :	-	70.6 :	-
Magnesium	mg/L	D	72.8 :	-	-	76.4 :	-	73. :
Manganese	mg/L	T	-	-	16.8 :	-	14.8 :	-
Manganese	mg/L	D	15.2 :	-	-	16.9 :	-	16. :
Mercury	mg/L	T	-	-	<0.0001 J	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 J	-	<0.0001 :
Molybdenum	mg/L	T	-	-	<0.024 :	-	<0.0024 :	-
Molybdenum	mg/L	D	<0.0012 :	-	-	<0.024 :	-	<0.0024 :

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 11/4/2003 MMW-2-D01N-GRW GW1		MMW-2 12/10/2003 MMW-2-T01N-GRW GW1		MMW-2 1/11/2004 MMW-2-T01N-GRW GW1		MMW-2 1/11/2004 MMW-2-D01N-GRW GW1		MMW-2 2/25/2004 MMW-2-T01N-GRW GW1		MMW-2 2/25/2004 MMW-2-D01N-GRW GW1	
Nickel	mg/L	T	-		-		<0.27	:	-		0.125	:	-	
Nickel	mg/L	D	0.151	:	-		-		<0.27	:	-		0.151	:
Potassium	mg/L	T	-		-		<24.3	:	-		8.83	:	-	
Potassium	mg/L	D	8.44	:	-		-		<24.3	:	-		9.72	:
Selenium	mg/L	T	-		-		0.0076	J	-		0.0067	:	-	
Selenium	mg/L	D	0.0031	:	-		-		0.0031	:	-		<0.0024	J
Silver	mg/L	T	-		-		<0.001	:	-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Sodium	mg/L	T	-		-		98.	:	-		79.7	:	-	
Sodium	mg/L	D	79.5	:	-		-		96.6	:	-		80.5	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	-		-		<0.002	:	-		<0.0002	:	-	
Vanadium	mg/L	D	<0.0002	:	-		-		<0.002	:	-		<0.0002	:
Zinc	mg/L	T	-		-		3.56	:	-		3.02	:	-	
Zinc	mg/L	D	3.12	:	-		-		3.58	:	-		3.24	:
Isotopes														
204Pb/206Pb	mg/L	T	-		-		-		-		0.00005	:	-	
204Pb/206Pb	mg/L	D	-		-		-		-		-		0.00003	:
207Pb/206Pb	mg/L	T	-		-		-		-		0.00034	:	-	
207Pb/206Pb	mg/L	D	-		-		-		-		-		0.00032	:
208Pb/206Pb	mg/L	T	-		-		-		-		0.0003	:	-	
208Pb/206Pb	mg/L	D	-		-		-		-		-		0.00024	:
Delta 34S	per mil	D	-		-		-		-		-		-4.3	:
Lead	mg/L	T	-		-		0.0023	:	-		0.0021	:	-	
Lead	mg/L	D	0.00057	:	-		-		0.0012	:	-		0.0007	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-2	MMW-2	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	4/18/2004	4/18/2004	11/5/2002	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-D01N-GRW
			Exposure Area	GW1	GW1	GW5 RE	GW5	GW5 RE	GW5
Field Measurements									
DO	mg/L	T		2.5 :	-	-	6.92 :	-	-
Eh	millivolts	T		77.5 :	-	-	519.1 :	-	-
pH	SU	T		6.4 J	-	-	3.32 :	-	-
Specific Conductance	uS/cm	T		1768. :	-	-	4311. :	-	-
Temperature	Celsius	T		9.19 :	-	-	8.42 :	-	-
Turbidity	NTU	T		-	-	-	0. :	-	-
General Chemistry									
Ammonia	mg/L	T		<0.063 :	-	-	<0.2 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		89.5 :	-	-	<1.7 :	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Chloride	mg/L	T		6.8 :	-	-	17.8 :	-	-
Fluoride	mg/L	T		6.2 :	-	32.3 J	-	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Nitrate	mg/L	T		<0.2 J	-	-	1.3 J	-	-
Nitrite	mg/L	T		<0.005 J	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		0.016 J	-	-	0.2 J	-	-
Phosphorus	mg/L	T		<0.01 :	-	-	0.2 :	-	-
Sulfate	mg/L	T		1600. :	-	2510. J	-	-	-
Total Alkalinity	mg/L	T		89.5 :	-	-	<1.7 :	-	-
Total Dissolved Solids	mg/L	T		2610. :	-	-	4300. J	-	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	0.25 :	-	-
Total Organic Carbon	mg/L	T		<3.5 :	-	-	3.9 :	-	-
Total Suspended Solids	mg/L	T		49.3 J	-	-	2.4 :	-	-
Laboratory Parameters									
pH	SU	T		6.4 J	-	-	3.32 :	-	-
Specific Conductance	umhos/cm	T		2380. J	-	-	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		1510. :	-	-	-	-	-
Hardness	mg/L	D		-	1520. :	-	-	1750. :	-
Metals									

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/18/2004 MMW-2-T01N-GRW GW1	MMW-2 4/18/2004 MMW-2-D01N-GRW GW1	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW RE GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW GW5
Aluminum	mg/L	T	12. :	-	-	-	-	-
Aluminum	mg/L	D	-	5.88 :	-	-	174. :	-
Antimony	mg/L	T	<0.0008 :	-	-	-	-	-
Antimony	mg/L	D	-	<0.0008 :	-	-	<0.028 :	-
Arsenic	mg/L	T	0.0018 :	-	-	-	-	-
Arsenic	mg/L	D	-	0.0029 :	-	-	<0.023 :	-
Barium	mg/L	T	0.0069 :	-	-	-	-	-
Barium	mg/L	D	-	0.0073 :	-	-	<0.048 :	-
Beryllium	mg/L	T	0.0148 :	-	-	-	-	-
Beryllium	mg/L	D	-	0.011 :	-	-	0.0314 :	-
Boron	mg/L	T	0.0118 :	-	-	-	-	-
Boron	mg/L	D	-	0.0133 :	-	-	<0.027 :	-
Cadmium	mg/L	T	0.0074 :	-	-	-	-	-
Cadmium	mg/L	D	-	0.0078 J	-	-	<0.08 :	-
Calcium	mg/L	T	484. :	-	-	-	-	-
Calcium	mg/L	D	-	485. :	-	-	369. :	-
Chromium	mg/L	T	<0.0006 :	-	-	-	-	-
Chromium	mg/L	D	-	<0.0006 :	-	-	<0.16 J	-
Cobalt	mg/L	T	0.0687 :	-	-	-	-	-
Cobalt	mg/L	D	-	0.0752 :	-	-	0.557 :	-
Copper	mg/L	T	0.038 :	-	-	-	-	-
Copper	mg/L	D	-	0.0325 :	-	-	<2.15 :	-
Iron	mg/L	T	18.2 J	-	-	-	-	-
Iron	mg/L	D	-	18.6 :	-	-	<12.8 :	-
Lead	mg/L	T	0.002 :	-	-	-	-	-
Lead	mg/L	D	-	0.0012 :	-	-	<0.001 :	-
Magnesium	mg/L	T	73.2 :	-	-	-	-	-
Magnesium	mg/L	D	-	73.9 :	-	-	202. :	-
Manganese	mg/L	T	17.2 :	-	-	-	-	-
Manganese	mg/L	D	-	17.5 :	-	-	19.5 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.0014 :	-	-	-	-	-
Molybdenum	mg/L	D	-	0.002 :	-	-	<0.011 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/18/2004 MMW-2-T01N-GRW GW1	MMW-2 4/18/2004 MMW-2-D01N-GRW GW1	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5 RE	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW GW5 RE	MMW-21 11/5/2002 MMW-21-D01N-GRW GW5
Nickel	mg/L	T	0.157 :	-	-	-	-	-
Nickel	mg/L	D	-	0.164 :	-	-	0.946 :	-
Potassium	mg/L	T	9.28 :	-	-	-	-	-
Potassium	mg/L	D	-	9.88 :	-	-	<31.4 J	-
Selenium	mg/L	T	0.0073 :	-	-	-	-	-
Selenium	mg/L	D	-	0.004 :	-	-	<0.008 :	-
Silver	mg/L	T	<0.0002 J	-	-	-	-	-
Silver	mg/L	D	-	<0.0002 J	-	-	<0.001 :	-
Sodium	mg/L	T	83.5 :	-	-	-	-	-
Sodium	mg/L	D	-	80.5 :	-	-	57. :	-
Thallium	mg/L	T	0.00021 :	-	-	-	-	-
Thallium	mg/L	D	-	0.00022 :	-	-	<0.001 :	-
Vanadium	mg/L	T	0.00056 :	-	-	-	-	-
Vanadium	mg/L	D	-	0.00059 :	-	-	<0.002 :	-
Zinc	mg/L	T	3.49 :	-	-	-	-	-
Zinc	mg/L	D	-	3.53 :	-	-	3.38 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T	-	-	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T	-	-	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T	-	-	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T	-	-	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
2-Butanone	mg/L	T	-	-	-	<0.01 :	-	-
2-Hexanone	mg/L	T	-	-	-	<0.01 :	-	-
4-Methyl-2-pentanone	mg/L	T	-	-	-	<0.01 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/18/2004 MMW-2-T01N-GRW GW1	MMW-2 4/18/2004 MMW-2-D01N-GRW GW1	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW RE GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW GW5
Acetone	mg/L	T	-	-	-	<0.01 :	-	-
Benzene	mg/L	T	-	-	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	-	-	<0.01 :	-	-
Bromoform	mg/L	T	-	-	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	-	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	-	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	-	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	-	-	<0.01 :	-	-
Chloroform	mg/L	T	-	-	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	-	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	-	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	-	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	-	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	-	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	-	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	-	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	-	-	<0.01 :	-	-
Styrene	mg/L	T	-	-	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	-	-	<0.01 :	-	-
Toluene	mg/L	T	-	-	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	-	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	-	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	-	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	-	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	-	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	-	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T	-	-	-	<0.025 :	-	-
2,4,6-Trichlorophenol	mg/L	T	-	-	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T	-	-	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T	-	-	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T	-	-	-	<0.025 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-2	MMW-2	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	4/18/2004	4/18/2004	11/5/2002	11/5/2002	11/5/2002	11/5/2002
			Sample ID	MMW-2-T01N-GRW	MMW-2-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-D01N-GRW
				GW1	GW1	GW5 RE	GW5	GW5 RE	GW5
2,4-Dinitrotoluene	mg/L	T		-	-	-	<0.01 :	-	-
2,6-Dinitrotoluene	mg/L	T		-	-	-	<0.01 :	-	-
2-Chloronaphthalene	mg/L	T		-	-	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T		-	-	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T		-	-	-	<0.01 :	-	-
2-Methylphenol	mg/L	T		-	-	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T		-	-	-	<0.025 :	-	-
2-Nitrophenol	mg/L	T		-	-	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	<0.01 :	-	-
3-Nitroaniline	mg/L	T		-	-	-	<0.025 :	-	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	<0.025 :	-	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T		-	-	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	<0.01 :	-	-
4-Methylphenol	mg/L	T		-	-	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T		-	-	-	<0.025 :	-	-
4-Nitrophenol	mg/L	T		-	-	-	<0.025 :	-	-
Acenaphthene	mg/L	T		-	-	-	<0.01 :	-	-
Acenaphthylene	mg/L	T		-	-	-	<0.01 :	-	-
Anthracene	mg/L	T		-	-	-	<0.01 :	-	-
Benzaldehyde	mg/L	T		-	-	-	<0.01 J	-	-
Benzo(a)anthracene	mg/L	T		-	-	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T		-	-	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T		-	-	-	<0.01 :	-	-
Carbazole	mg/L	T		-	-	-	<0.01 :	-	-
Chrysene	mg/L	T		-	-	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	<0.01 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-2 4/18/2004 MMW-2-T01N-GRW GW1	MMW-2 4/18/2004 MMW-2-D01N-GRW GW1	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-T01N-GRW GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW RE GW5	MMW-21 11/5/2002 MMW-21-D01N-GRW GW5
Dibenzofuran	mg/L	T	-	-	-	<0.01 :	-	-
Dichlorodiisopropyl ether	mg/L	T	-	-	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	-	-	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	-	-	-	<0.01 :	-	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	<0.01 :	-	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	<0.01 :	-	-
Fluoranthene	mg/L	T	-	-	-	<0.01 :	-	-
Fluorene	mg/L	T	-	-	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	-	-	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	-	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	-	-	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	<0.01 :	-	-
Isophorone	mg/L	T	-	-	-	<0.01 :	-	-
Naphthalene	mg/L	T	-	-	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	-	-	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	-	-	-	<0.025 :	-	-
Phenanthrene	mg/L	T	-	-	-	<0.01 :	-	-
Phenol	mg/L	T	-	-	-	<0.01 :	-	-
Pyrene	mg/L	T	-	-	-	<0.01 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	<0.01 :	-	-
Isotopes								
Delta D	per mil	T	-80.3 :	-	-	-	-	-
Delta O-18	per mil	T	-11.1 :	-	-	-	-	-
Lead	mg/L	T	0.002 :	-	-	-	-	-
Lead	mg/L	D	-	0.0012 :	-	-	<0.001 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area																	
			MMW-21 12/3/2002 MMW-21-T01N-GRW GW5		MMW-21 1/11/2003 MMW-21-T01N-GRW GW5		MMW-21 1/11/2003 MMW-21-D01N-GRW GW5		MMW-21 2/6/2003 MMW-21-T01N-GRW GW5		MMW-21 3/6/2003 MMW-21-T01N-GRW GW5		MMW-21 4/8/2003 MMW-21-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	8.51	:	7.71	:	-		9.06	:	8.13	:	9.13	:
Eh	millivolts	T	567.3	:	591.1	:	-		406.6	:	483.2	:	544.9	:
pH	SU	T	2.83	:	2.72	:	-		3.34	:	3.21	:	3.7	J
Specific Conductance	uS/cm	T	4700.	:	4131.	:	-		2451.	:	2507.	:	2522.	:
Temperature	Celsius	T	9.37	:	8.09	:	-		7.39	:	7.6	:	9.51	:
Turbidity	NTU	T	19.9	:	1.4	:	-		10.3	:	8.9	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.15	:	-		-		-		<0.075	:
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Chloride	mg/L	T	-		<0.45	:	-		-		-		21.1	:
Fluoride	mg/L	T	-		38.2	:	-		-		-		26.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		-		-		2.2	J
Nitrite	mg/L	T	-		<0.005	J	-		-		-		0.007	:
Phosphate, Ortho As P	mg/L	T	-		<0.23	J	-		-		-		<0.04	:
Phosphorus	mg/L	T	-		0.25	:	-		-		-		0.04	:
Sulfate	mg/L	T	-		3450.	J	-		-		-		1600.	J
Total Alkalinity	mg/L	T	-		<1.	:	-		-		-		<1.	:
Total Dissolved Solids	mg/L	T	-		4630.	J	-		-		-		2690.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		<0.24	J
Total Organic Carbon	mg/L	T	-		2.4	:	-		-		-		1.5	J
Total Suspended Solids	mg/L	T	-		2.5	:	-		-		-		<1.6	:
Laboratory Parameters														
pH	SU	T	2.83	:	2.72	:	-		3.34	:	3.21	:	3.7	J
Specific Conductance	umhos/cm	T	-		-		-		-		-		2410.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		2010.	:	-		-		-		1300.	:
Hardness	mg/L	D	-		-		1990.	:	-		-		-	
Metals														

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	12/3/2002	1/11/2003	1/11/2003	2/6/2003	3/6/2003	4/8/2003
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		-	201. :	-	-	-	90.4 :
Aluminum	mg/L	D		-	-	199. :	-	-	-
Antimony	mg/L	T		-	<0.028 :	-	-	-	<0.003 :
Antimony	mg/L	D		-	-	<0.028 :	-	-	-
Arsenic	mg/L	T		-	<0.023 :	-	-	-	<0.04 :
Arsenic	mg/L	D		-	-	<0.023 :	-	-	-
Barium	mg/L	T		-	<0.048 :	-	-	-	<0.123 :
Barium	mg/L	D		-	-	<0.048 :	-	-	-
Beryllium	mg/L	T		-	0.032 :	-	-	-	<0.029 :
Beryllium	mg/L	D		-	-	0.0312 :	-	-	-
Boron	mg/L	T		-	<0.027 :	-	-	-	<0.084 :
Boron	mg/L	D		-	-	<0.027 :	-	-	-
Cadmium	mg/L	T		-	0.0484 :	-	-	-	0.0348 :
Cadmium	mg/L	D		-	-	<0.04 :	-	-	-
Calcium	mg/L	T		-	430. :	-	-	-	299. :
Calcium	mg/L	D		-	-	424. :	-	-	-
Chromium	mg/L	T		-	<0.37 :	-	-	-	<0.0147 :
Chromium	mg/L	D		-	-	<0.37 :	-	-	-
Cobalt	mg/L	T		-	0.674 :	-	-	-	0.2 :
Cobalt	mg/L	D		-	-	0.666 :	-	-	-
Copper	mg/L	T		-	2.43 :	-	-	-	0.965 :
Copper	mg/L	D		-	-	2.4 :	-	-	-
Iron	mg/L	T		-	16.4 :	-	-	-	<4.22 :
Iron	mg/L	D		-	-	16.5 :	-	-	-
Lead	mg/L	T		-	<0.001 :	-	-	-	<0.001 :
Lead	mg/L	D		-	-	0.0024 :	-	-	-
Magnesium	mg/L	T		-	227. :	-	-	-	135. :
Magnesium	mg/L	D		-	-	225. :	-	-	-
Manganese	mg/L	T		-	21.7 :	-	-	-	13.2 :
Manganese	mg/L	D		-	-	21.4 :	-	-	-
Mercury	mg/L	T		-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D		-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T		-	<0.011 :	-	-	-	<0.023 :
Molybdenum	mg/L	D		-	-	<0.011 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	12/3/2002	1/11/2003	1/11/2003	2/6/2003	3/6/2003	4/8/2003
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T		-	1.14 :	-	-	-	<0.898 :
Nickel	mg/L	D		-	-	1.09 :	-	-	-
Potassium	mg/L	T		-	<20.2 :	-	-	-	<3.26 :
Potassium	mg/L	D		-	-	<20.2 :	-	-	-
Selenium	mg/L	T		-	<0.008 :	-	-	-	<0.005 :
Selenium	mg/L	D		-	-	<0.008 :	-	-	-
Silver	mg/L	T		-	<0.001 :	-	-	-	<0.001 :
Silver	mg/L	D		-	-	<0.001 :	-	-	-
Sodium	mg/L	T		-	64.6 :	-	-	-	<91.6 :
Sodium	mg/L	D		-	-	73.9 :	-	-	-
Thallium	mg/L	T		-	<0.001 :	-	-	-	<0.001 :
Thallium	mg/L	D		-	-	<0.001 :	-	-	-
Vanadium	mg/L	T		-	0.0035 :	-	-	-	<0.001 :
Vanadium	mg/L	D		-	-	0.0027 :	-	-	-
Zinc	mg/L	T		-	4.36 :	-	-	-	4.68 :
Zinc	mg/L	D		-	-	4.22 :	-	-	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,1,2,2-Tetrachloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,1-Dichloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,1-Dichloroethene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2-Dichloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,2-Dichloropropane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Butanone	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Hexanone	mg/L	T		-	<0.01 :	-	-	-	<0.01 J
4-Methyl-2-pentanone	mg/L	T		-	<0.01 :	-	-	-	<0.01 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	12/3/2002	1/11/2003	1/11/2003	2/6/2003	3/6/2003	4/8/2003
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bromodichloromethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bromoform	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bromomethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Carbon disulfide	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Chlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Chloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Chloroform	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Chloromethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Dibromochloromethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Ethylbenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Methylene chloride	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Styrene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Tetrachloroethene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Toluene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Total Xylene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Trichloroethene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Vinyl chloride	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T		-	<0.025 :	-	-	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2,4-Dichlorophenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2,4-Dimethylphenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 J
2,4-Dinitrophenol	mg/L	T		-	<0.025 :	-	-	-	<0.025 J

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	12/3/2002	1/11/2003	1/11/2003	2/6/2003	3/6/2003	4/8/2003
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
2,4-Dinitrotoluene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2,6-Dinitrotoluene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Chloronaphthalene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Chlorophenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Methylnaphthalene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Methylphenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
2-Nitroaniline	mg/L	T		-	<0.025 :	-	-	-	<0.025 :
2-Nitrophenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
3-Nitroaniline	mg/L	T		-	<0.025 :	-	-	-	<0.025 J
4,6-Dinitro-2-methylphenol	mg/L	T		-	<0.025 :	-	-	-	<0.025 :
4-Bromophenyl phenyl ether	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
4-Chloroaniline	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
4-Methylphenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
4-Nitroaniline	mg/L	T		-	<0.025 :	-	-	-	<0.025 :
4-Nitrophenol	mg/L	T		-	<0.025 :	-	-	-	<0.025 J
Acenaphthene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Acenaphthylene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Anthracene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzaldehyde	mg/L	T		-	<0.01 J	-	-	-	<0.01 :
Benzo(a)anthracene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzo(a)pyrene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T		-	0.0008 J	-	-	-	<0.01 :
Butyl benzyl phthalate	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Carbazole	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Chrysene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	12/3/2002	1/11/2003	1/11/2003	2/6/2003	3/6/2003	4/8/2003
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Dibenzofuran	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Dichlorodiisopropyl ether	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Diethylphthalate	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Dimethylphthalate	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T		-	<0.01 J	-	-	-	<0.01 :
Fluoranthene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Fluorene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Hexachlorobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Hexachloroethane	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Isophorone	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Naphthalene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Nitrobenzene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Pentachlorophenol	mg/L	T		-	<0.025 :	-	-	-	<0.025 :
Phenanthrene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Phenol	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Pyrene	mg/L	T		-	<0.01 :	-	-	-	<0.01 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	<0.00025 J	-	-	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 J	-	-	-	<0.00025 J
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 J	-	-	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T		-	<0.00025 J	-	-	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 J	-	-	-	<0.01 :
Isotopes									
Lead	mg/L	T		-	<0.001 :	-	-	-	<0.001 :
Lead	mg/L	D		-	-	0.0024 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	MMW-21 4/8/2003 MMW-21-D01N-GRW GW5	MMW-21 5/9/2003 MMW-21-T01N-GRW GW5	MMW-21 6/5/2003 MMW-21-T01N-GRW GW5	MMW-21 7/23/2003 MMW-21-T01N-GRW GW5	MMW-21 7/23/2003 MMW-21-D01N-GRW GW5	MMW-21 8/12/2003 MMW-21-T01N-GRW GW5
Field Measurements											
DO	mg/L	T				-	7.42 :	9.2 :	6.73 :	-	3.75 :
Eh	millivolts	T				-	486.8 :	511.4 :	459.2 :	-	702.4 :
pH	SU	T				-	3.04 :	3.08 :	3.4 J	-	2.88 :
Specific Conductance	uS/cm	T				-	2825. :	2749. :	2948. :	-	2990. :
Temperature	Celsius	T				-	11.29 :	17.62 :	16.61 :	-	16.9 :
Turbidity	NTU	T				-	13.7 :	3.3 :	0. :	-	6.5 :
General Chemistry											
Ammonia	mg/L	T				-	-	-	<0.04 J	-	-
Bicarbonate (as CaCO3)	mg/L	T				-	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T				-	-	-	<1. :	-	-
Chloride	mg/L	T				-	-	-	14.4 J	-	-
Fluoride	mg/L	T				-	-	-	30.4 :	-	-
Hydroxide (as CaCO3)	mg/L	T				-	-	-	<1. :	-	-
Nitrate	mg/L	T				-	-	-	1.7 :	-	-
Nitrite	mg/L	T				-	-	-	0.0074 :	-	-
Phosphate, Ortho As P	mg/L	T				-	-	-	<0.035 :	-	-
Phosphorus	mg/L	T				-	-	-	0.06 :	-	-
Sulfate	mg/L	T				-	-	-	1880. J	-	-
Total Alkalinity	mg/L	T				-	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T				-	-	-	3690. :	-	-
Total Kjeldahl Nitrogen	mg/L	T				-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T				-	-	-	<1.9 J	-	-
Total Suspended Solids	mg/L	T				-	-	-	3.7 :	-	-
Laboratory Parameters											
pH	SU	T				-	3.04 :	3.08 :	3.4 J	-	2.88 :
Specific Conductance	umhos/cm	T				-	-	-	2840. J	-	-
Inorganics											
Cyanide	mg/L	T				-	-	-	<0.01 J	-	-
Physical Properties											
Hardness	mg/L	T				-	-	-	1370. :	-	-
Hardness	mg/L	D				1280. :	-	-	-	1450. :	-
Metals											

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	4/8/2003	5/9/2003	6/5/2003	7/23/2003	7/23/2003	8/12/2003
			Sample ID	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		-	-	-	96.6 :	-	-
Aluminum	mg/L	D		89.7 :	-	-	-	105. :	-
Antimony	mg/L	T		-	-	-	<0.038 :	-	-
Antimony	mg/L	D		<0.003 :	-	-	-	<0.038 :	-
Arsenic	mg/L	T		-	-	-	<0.024 :	-	-
Arsenic	mg/L	D		<0.04 :	-	-	-	0.027 :	-
Barium	mg/L	T		-	-	-	<0.073 :	-	-
Barium	mg/L	D		<0.123 :	-	-	-	<0.073 :	-
Beryllium	mg/L	T		-	-	-	0.0213 :	-	-
Beryllium	mg/L	D		<0.0256 :	-	-	-	0.0183 :	-
Boron	mg/L	T		-	-	-	<0.046 :	-	-
Boron	mg/L	D		<0.084 :	-	-	-	<0.046 :	-
Cadmium	mg/L	T		-	-	-	0.0739 :	-	-
Cadmium	mg/L	D		0.0302 :	-	-	-	0.0661 :	-
Calcium	mg/L	T		-	-	-	304. :	-	-
Calcium	mg/L	D		292. :	-	-	-	322. :	-
Chromium	mg/L	T		-	-	-	<0.06 :	-	-
Chromium	mg/L	D		<0.01 :	-	-	-	<0.06 :	-
Cobalt	mg/L	T		-	-	-	0.279 :	-	-
Cobalt	mg/L	D		0.208 :	-	-	-	0.336 :	-
Copper	mg/L	T		-	-	-	1.37 :	-	-
Copper	mg/L	D		0.981 :	-	-	-	1.48 :	-
Iron	mg/L	T		-	-	-	4.63 :	-	-
Iron	mg/L	D		<4.22 :	-	-	-	4.02 :	-
Lead	mg/L	T		-	-	-	0.0252 :	-	-
Lead	mg/L	D		<0.001 :	-	-	-	<0.001 :	-
Magnesium	mg/L	T		-	-	-	148. :	-	-
Magnesium	mg/L	D		133. :	-	-	-	157. :	-
Manganese	mg/L	T		-	-	-	15.8 :	-	-
Manganese	mg/L	D		12.9 :	-	-	-	16.8 :	-
Mercury	mg/L	T		-	-	-	<0.0001 :	-	-
Mercury	mg/L	D		<0.0001 :	-	-	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	-	<0.016 :	-	-
Molybdenum	mg/L	D		<0.023 :	-	-	-	<0.016 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction						
		Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
		Sample Date	4/8/2003	5/9/2003	6/5/2003	7/23/2003	7/23/2003	8/12/2003
		Sample ID	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T	-	-	-	0.986 :	-	-
Nickel	mg/L	D	<0.91 :	-	-	-	1.09 :	-
Potassium	mg/L	T	-	-	-	<25. :	-	-
Potassium	mg/L	D	<3.26 :	-	-	-	<25. :	-
Selenium	mg/L	T	-	-	-	<0.008 :	-	-
Selenium	mg/L	D	<0.005 :	-	-	-	<0.008 J	-
Silver	mg/L	T	-	-	-	0.0027 J	-	-
Silver	mg/L	D	<0.001 :	-	-	-	<0.001 J	-
Sodium	mg/L	T	-	-	-	<21.9 :	-	-
Sodium	mg/L	D	<91.6 :	-	-	-	24.3 :	-
Thallium	mg/L	T	-	-	-	<0.001 :	-	-
Thallium	mg/L	D	<0.001 :	-	-	-	<0.001 :	-
Vanadium	mg/L	T	-	-	-	<0.002 :	-	-
Vanadium	mg/L	D	<0.001 :	-	-	-	<0.002 :	-
Zinc	mg/L	T	-	-	-	4.83 :	-	-
Zinc	mg/L	D	4.57 :	-	-	-	5.12 :	-
Isotopes								
Lead	mg/L	T	-	-	-	0.0252 :	-	-
Lead	mg/L	D	<0.001 :	-	-	-	<0.001 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	9/10/2003	10/19/2003	10/19/2003	11/4/2003	1/12/2004	1/12/2004
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		5.9 :	9.03 :	-	7.92 :	6.84 :	-
Eh	millivolts	T		556.2 :	834.1 :	-	582.9 :	555.2 :	-
pH	SU	T		2.97 :	3.2 J	-	2.73 :	3.1 J	-
Specific Conductance	uS/cm	T		3355. :	3332. :	-	3505. :	3736. :	-
Temperature	Celsius	T		12.62 :	15.75 :	-	11.27 :	10.27 :	-
Turbidity	NTU	T		57. :	1.5 :	-	0. :	1.5 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.24 J	-	-	<0.04 J	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	39.7 :	-	-	37.1 :	-
Fluoride	mg/L	T		-	33.5 :	-	-	31. :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	1.5 J	-	-	0.76 J	-
Nitrite	mg/L	T		-	0.0098 J	-	-	0.024 :	-
Phosphate, Ortho As P	mg/L	T		-	<0.11 :	-	-	0.16 J	-
Phosphorus	mg/L	T		-	0.14 :	-	-	<0.2 :	-
Sulfate	mg/L	T		-	2410. J	-	-	2870. :	-
Total Alkalinity	mg/L	T		-	<1. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	3510. :	-	-	3970. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	2.2 J	-	-	<3. :	-
Total Suspended Solids	mg/L	T		-	2.7 :	-	-	3.5 :	-
Laboratory Parameters									
pH	SU	T		2.97 :	3.2 J	-	2.73 :	3.1 J	-
Specific Conductance	umhos/cm	T		-	3090. J	-	-	3710. J	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	1700. :	-	-	1810. :	-
Hardness	mg/L	D		-	-	1710. :	-	-	1790. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21
			Sample Date	9/10/2003	10/19/2003	10/19/2003	11/4/2003	1/12/2004	1/12/2004
			Sample ID	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21-T01N-GRW	MMW-21-T01N-GRW	MMW-21-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		-	147. :	-	-	176. :	-
Aluminum	mg/L	D		-	-	148. :	-	-	174. :
Antimony	mg/L	T		-	<0.052 :	-	-	<0.029 :	-
Antimony	mg/L	D		-	-	<0.052 :	-	-	<0.029 :
Arsenic	mg/L	T		-	<0.041 :	-	-	<0.028 J	-
Arsenic	mg/L	D		-	-	0.0688 :	-	-	<0.028 J
Barium	mg/L	T		-	<0.115 :	-	-	<0.053 :	-
Barium	mg/L	D		-	-	<0.115 :	-	-	<0.053 :
Beryllium	mg/L	T		-	0.025 J	-	-	0.0315 :	-
Beryllium	mg/L	D		-	-	0.0248 J	-	-	0.0304 :
Boron	mg/L	T		-	<0.121 :	-	-	<0.023 :	-
Boron	mg/L	D		-	-	<0.0637 :	-	-	<0.023 :
Cadmium	mg/L	T		-	<0.13 :	-	-	<0.07 J	-
Cadmium	mg/L	D		-	-	<0.13 :	-	-	<0.07 :
Calcium	mg/L	T		-	363. :	-	-	385. :	-
Calcium	mg/L	D		-	-	364. :	-	-	382. :
Chromium	mg/L	T		-	<0.23 J	-	-	<0.57 :	-
Chromium	mg/L	D		-	-	<0.23 J	-	-	<0.57 :
Cobalt	mg/L	T		-	0.534 :	-	-	0.528 J	-
Cobalt	mg/L	D		-	-	0.515 :	-	-	0.542 :
Copper	mg/L	T		-	1.85 :	-	-	2.29 :	-
Copper	mg/L	D		-	-	1.93 :	-	-	2.25 :
Iron	mg/L	T		-	9.43 :	-	-	<10.7 :	-
Iron	mg/L	D		-	-	9.24 :	-	-	<10.8 :
Lead	mg/L	T		-	0.0061 :	-	-	<0.001 :	-
Lead	mg/L	D		-	-	<0.002 :	-	-	<0.001 :
Magnesium	mg/L	T		-	193. :	-	-	206. :	-
Magnesium	mg/L	D		-	-	194. :	-	-	204. :
Manganese	mg/L	T		-	19.1 :	-	-	20.3 J	-
Manganese	mg/L	D		-	-	19.2 :	-	-	20.1 :
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	<0.011 J	-	-	<0.024 :	-
Molybdenum	mg/L	D		-	-	<0.011 J	-	-	<0.024 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			MMW-21 9/10/2003 MMW-21-T01N-GRW GW5	MMW-21 10/19/2003 MMW-21-T01N-GRW GW5	MMW-21 10/19/2003 MMW-21-D01N-GRW GW5	MMW-21 11/4/2003 MMW-21-T01N-GRW GW5	MMW-21 1/12/2004 MMW-21-T01N-GRW GW5	MMW-21 1/12/2004 MMW-21-D01N-GRW GW5
Nickel	mg/L	T	-	<0.45 J	-	-	<1.68 :	-
Nickel	mg/L	D	-	-	<0.45 J	-	-	<1.68 :
Potassium	mg/L	T	-	<63.8 :	-	-	<110. :	-
Potassium	mg/L	D	-	-	<63.8 :	-	-	<110. :
Selenium	mg/L	T	-	0.0055 :	-	-	0.0107 J	-
Selenium	mg/L	D	-	-	0.006 :	-	-	0.0108 :
Silver	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T	-	<99.1 :	-	-	<92. :	-
Sodium	mg/L	D	-	-	<99.1 :	-	-	<92. :
Thallium	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	<0.001 :	-	-	<0.002 :	-
Vanadium	mg/L	D	-	-	<0.001 :	-	-	<0.002 :
Zinc	mg/L	T	-	<4.75 :	-	-	5.42 :	-
Zinc	mg/L	D	-	-	<4.77 :	-	-	3.89 :
Isotopes								
Lead	mg/L	T	-	0.0061 :	-	-	<0.001 :	-
Lead	mg/L	D	-	-	<0.002 :	-	-	<0.001 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-22
			Sample Date	2/22/2004	2/22/2004	3/22/2004	4/18/2004	4/18/2004	11/5/2002
			Sample ID	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-22-T01N-GRW RE
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		4.7 :	-	-	6.36 :	-	-
Eh	millivolts	T		555.5 :	-	-	584.1 :	-	-
pH	SU	T		2.8 :	-	-	3.2 J	-	-
Specific Conductance	uS/cm	T		3899. :	-	-	3916. :	-	-
Temperature	Celsius	T		9.95 :	-	-	10.98 :	-	-
Turbidity	NTU	T		8. :	-	-	4.7 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.076 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Chloride	mg/L	T		-	-	-	48.3 J	-	-
Fluoride	mg/L	T		34.7 :	-	-	31.6 :	-	32.5 J
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Nitrate	mg/L	T		-	-	-	0.74 :	-	-
Nitrite	mg/L	T		-	-	-	0.0095 :	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	0.2 :	-	-
Phosphorus	mg/L	T		-	-	-	0.22 :	-	-
Sulfate	mg/L	T		3110. :	-	-	2640. :	-	2660. J
Total Alkalinity	mg/L	T		-	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		4230. :	-	-	4130. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	-	-	4. J	-	-
Total Suspended Solids	mg/L	T		3.2 :	-	-	<2.8 J	-	-
Laboratory Parameters									
pH	SU	T		2.8 :	-	-	3.2 J	-	-
Specific Conductance	umhos/cm	T		-	-	-	3310. J	-	-
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		1930. :	-	-	1940. :	-	-
Hardness	mg/L	D		-	1900. :	-	-	1990. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-22
			Sample Date	2/22/2004	2/22/2004	3/22/2004	4/18/2004	4/18/2004	11/5/2002
			Sample ID	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-22-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5 RF
Aluminum	mg/L	T		190. :	-	-	184. :	-	-
Aluminum	mg/L	D		-	188. :	-	-	191. :	-
Antimony	mg/L	T		<0.029 :	-	-	<0.027 :	-	-
Antimony	mg/L	D		-	<0.029 :	-	-	<0.027 :	-
Arsenic	mg/L	T		<0.028 :	-	-	<0.026 :	-	-
Arsenic	mg/L	D		-	<0.028 :	-	-	<0.026 :	-
Barium	mg/L	T		<0.053 :	-	-	<0.012 :	-	-
Barium	mg/L	D		-	<0.053 :	-	-	<0.012 :	-
Beryllium	mg/L	T		0.0261 :	-	-	0.031 :	-	-
Beryllium	mg/L	D		-	0.0265 :	-	-	0.0316 :	-
Boron	mg/L	T		<0.023 :	-	-	<0.0194 :	-	-
Boron	mg/L	D		-	<0.023 :	-	-	<0.0216 :	-
Cadmium	mg/L	T		<0.07 :	-	-	0.0536 :	-	-
Cadmium	mg/L	D		-	<0.07 J	-	-	0.0524 J	-
Calcium	mg/L	T		404. :	-	-	407. :	-	-
Calcium	mg/L	D		-	397. :	-	-	419. :	-
Chromium	mg/L	T		<0.11 :	-	-	<0.08 :	-	-
Chromium	mg/L	D		-	<0.11 :	-	-	<0.08 :	-
Cobalt	mg/L	T		0.545 :	-	-	0.702 :	-	-
Cobalt	mg/L	D		-	0.686 :	-	-	0.699 :	-
Copper	mg/L	T		2.36 :	-	-	2.4 :	-	-
Copper	mg/L	D		-	2.43 :	-	-	2.5 :	-
Iron	mg/L	T		33. :	-	-	15.3 J	-	-
Iron	mg/L	D		-	12.5 :	-	-	16.2 :	-
Lead	mg/L	T		<0.0014 :	-	-	<0.004 :	-	-
Lead	mg/L	D		-	<0.0013 :	-	-	<0.004 :	-
Magnesium	mg/L	T		224. :	-	-	223. :	-	-
Magnesium	mg/L	D		-	221. :	-	-	229. :	-
Manganese	mg/L	T		21.7 :	-	-	21.3 :	-	-
Manganese	mg/L	D		-	21.4 :	-	-	22. :	-
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D		-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T		<0.024 :	-	-	<0.01 :	-	-
Molybdenum	mg/L	D		-	<0.024 :	-	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-22
			Sample Date	2/22/2004	2/22/2004	3/22/2004	4/18/2004	4/18/2004	11/5/2002
			Sample ID	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-22-T01N-GRW
				GW5	GW5	GW5	GW5	GW5	RF GW5
Nickel	mg/L	T		1.21 :	-	-	1.18 :	-	-
Nickel	mg/L	D		-	1.37 :	-	-	1.13 :	-
Potassium	mg/L	T		<24.3 :	-	-	<10.9 J	-	-
Potassium	mg/L	D		-	<24.3 :	-	-	<10.9 J	-
Selenium	mg/L	T		0.0053 J	-	-	<0.007 :	-	-
Selenium	mg/L	D		-	0.0024 J	-	-	<0.007 :	-
Silver	mg/L	T		<0.001 :	-	-	<0.001 J	-	-
Silver	mg/L	D		-	<0.001 :	-	-	<0.001 J	-
Sodium	mg/L	T		<49. J	-	-	<82.8 :	-	-
Sodium	mg/L	D		-	<49. J	-	-	<82.9 :	-
Thallium	mg/L	T		<0.0017 :	-	-	<0.001 :	-	-
Thallium	mg/L	D		-	<0.0017 :	-	-	<0.001 :	-
Vanadium	mg/L	T		<0.0023 :	-	-	<0.002 :	-	-
Vanadium	mg/L	D		-	<0.002 :	-	-	<0.002 :	-
Zinc	mg/L	T		4.08 :	-	-	4.06 :	-	-
Zinc	mg/L	D		-	4. :	-	-	4.16 :	-
Lanthanides									
Cerium	mg/L	T		0.162 :	-	-	-	-	-
Cerium	mg/L	D		-	0.185 :	-	-	-	-
Dysprosium	mg/L	T		0.04 :	-	-	-	-	-
Dysprosium	mg/L	D		-	0.0384 :	-	-	-	-
Erbium	mg/L	T		0.0169 :	-	-	-	-	-
Erbium	mg/L	D		-	0.0162 :	-	-	-	-
Europium	mg/L	T		0.0126 :	-	-	-	-	-
Europium	mg/L	D		-	0.0131 :	-	-	-	-
Gadolinium	mg/L	T		0.0488 :	-	-	-	-	-
Gadolinium	mg/L	D		-	0.0528 :	-	-	-	-
Holmium	mg/L	T		0.00699 :	-	-	-	-	-
Holmium	mg/L	D		-	0.00678 :	-	-	-	-
Lanthanum	mg/L	T		0.0446 :	-	-	-	-	-
Lanthanum	mg/L	D		-	0.0521 :	-	-	-	-
Lutetium	mg/L	T		0.00149 :	-	-	-	-	-
Lutetium	mg/L	D		-	0.00144 :	-	-	-	-
Neodymium	mg/L	T		0.155 :	-	-	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-21	MMW-21	MMW-21	MMW-21	MMW-21	MMW-22
			Sample Date	2/22/2004	2/22/2004	3/22/2004	4/18/2004	4/18/2004	11/5/2002
			Sample ID	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-21	MMW-21-T01N-GRW	MMW-21-D01N-GRW	MMW-22-T01N-GRW RE
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Neodymium	mg/L	D		-	0.168 :	-	-	-	-
Praseodymium	mg/L	T		0.0285 :	-	-	-	-	-
Praseodymium	mg/L	D		-	0.0319 :	-	-	-	-
Samarium	mg/L	T		0.042 :	-	-	-	-	-
Samarium	mg/L	D		-	0.0433 :	-	-	-	-
Terbium	mg/L	T		0.00766 :	-	-	-	-	-
Terbium	mg/L	D		-	0.00773 :	-	-	-	-
Thulium	mg/L	T		0.00197 :	-	-	-	-	-
Thulium	mg/L	D		-	0.00191 :	-	-	-	-
Ytterbium	mg/L	T		0.0112 :	-	-	-	-	-
Ytterbium	mg/L	D		-	0.011 :	-	-	-	-
Yttrium	mg/L	T		0.204 :	-	-	-	-	-
Yttrium	mg/L	D		-	0.224 :	-	-	-	-
Isotopes									
Delta D	per mil	T		-85.9 :	-	-	-	-	-
Delta O-18	per mil	T		-11.8 :	-	-	-	-	-
Lead	mg/L	T		<0.0014 :	-	-	<0.004 :	-	-
Lead	mg/L	D		-	<0.0013 :	-	-	<0.004 :	-
Helium Isotope and Tritium									
3H-3He	Years	T		-	-	3.48 :	-	-	-
DEL He3	%	T		-	-	3. :	-	-	-
DEL He4	%	T		-	-	0.7 :	-	-	-
He Corr	1E-8cc/g	T		-	-	4.735 :	-	-	-
Tritium TU	TU	T		-	-	3.634 :	-	-	-
Uncert Age	Years	T		-	-	1.14 :	-	-	-
Uncert TU	TU	T		-	-	0.109 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
Sample Date			11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
Sample ID			MMW-22-T01N-GRW	MMW-22-D01N-GRW RE	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
Exposure Area			GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements								
DO	mg/L	T	1.44 :	-	-	22.71 :	1.74 :	-
Eh	millivolts	T	365.7 :	-	-	397.3 :	423. :	-
pH	SU	T	3.56 :	-	-	3.24 :	3.34 :	-
Specific Conductance	uS/cm	T	4077. :	-	-	5329. :	4003. :	-
Temperature	Celsius	T	9.84 :	-	-	8.65 :	9.06 :	-
Turbidity	NTU	T	15.5 :	-	-	36.4 :	1.1 :	-
General Chemistry								
Ammonia	mg/L	T	<0.39 :	-	-	-	<0.1 :	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Chloride	mg/L	T	33.8 :	-	-	-	30.2 :	-
Fluoride	mg/L	T	-	-	-	-	38.2 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T	<0.4 J	-	-	-	<0.41 :	-
Nitrite	mg/L	T	<0.005 J	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	-	-	<0.01 J	-
Phosphorus	mg/L	T	0.019 :	-	-	-	0.017 :	-
Sulfate	mg/L	T	-	-	-	-	3020. J	-
Total Alkalinity	mg/L	T	<1. :	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	4690. J	-	-	-	4580. J	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	-	<0.32 :	-
Total Organic Carbon	mg/L	T	2.5 :	-	-	-	2.2 :	-
Total Suspended Solids	mg/L	T	3.3 :	-	-	-	4.8 :	-
Laboratory Parameters								
pH	SU	T	3.56 :	-	-	3.24 :	3.34 :	-
Inorganics								
Cyanide	mg/L	T	<0.01 J	-	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	-	-	1800. :	-
Hardness	mg/L	D	-	1880. :	-	-	-	1790. :
Metals								
Aluminum	mg/L	T	-	-	-	-	204. :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
				GW5	GW5 RE	GW5	GW5	GW5	GW5
Aluminum	mg/L	D		-	213. :	-	-	-	203. :
Antimony	mg/L	T		-	-	-	-	<0.028 :	-
Antimony	mg/L	D		-	<0.038 :	-	-	-	<0.028 :
Arsenic	mg/L	T		-	-	-	-	<0.023 J	-
Arsenic	mg/L	D		-	<0.023 :	-	-	-	<0.023 J
Barium	mg/L	T		-	-	-	-	<0.048 :	-
Barium	mg/L	D		-	<0.048 :	-	-	-	<0.048 :
Beryllium	mg/L	T		-	-	-	-	0.0335 :	-
Beryllium	mg/L	D		-	0.0345 :	-	-	-	0.0336 :
Boron	mg/L	T		-	-	-	-	<0.0745 :	-
Boron	mg/L	D		-	<0.027 :	-	-	-	<0.0684 :
Cadmium	mg/L	T		-	-	-	-	<0.04 :	-
Cadmium	mg/L	D		-	<0.08 :	-	-	-	<0.04 :
Calcium	mg/L	T		-	-	-	-	396. :	-
Calcium	mg/L	D		-	414. :	-	-	-	395. :
Chromium	mg/L	T		-	-	-	-	<0.37 :	-
Chromium	mg/L	D		-	<0.16 J	-	-	-	<0.37 :
Cobalt	mg/L	T		-	-	-	-	0.622 :	-
Cobalt	mg/L	D		-	0.707 :	-	-	-	0.678 :
Copper	mg/L	T		-	-	-	-	1.28 :	-
Copper	mg/L	D		-	<1.31 :	-	-	-	1.25 :
Iron	mg/L	T		-	-	-	-	174. :	-
Iron	mg/L	D		-	179. :	-	-	-	173. :
Lead	mg/L	T		-	-	-	-	<0.001 :	-
Lead	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Magnesium	mg/L	T		-	-	-	-	196. :	-
Magnesium	mg/L	D		-	206. :	-	-	-	196. :
Manganese	mg/L	T		-	-	-	-	17. :	-
Manganese	mg/L	D		-	17.7 :	-	-	-	17. :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	-	-	-	<0.011 :	-
Molybdenum	mg/L	D		-	<0.011 :	-	-	-	<0.011 :
Nickel	mg/L	T		-	-	-	-	1.08 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
				GW5	GW5 RE	GW5	GW5	GW5	GW5
Nickel	mg/L	D		-	1.03 :	-	-	-	1.12 :
Potassium	mg/L	T		-	-	-	-	<20.2 :	-
Potassium	mg/L	D		-	<31.4 J	-	-	-	<20.2 :
Selenium	mg/L	T		-	-	-	-	0.0119 :	-
Selenium	mg/L	D		-	<0.008 :	-	-	-	0.0101 :
Silver	mg/L	T		-	-	-	-	<0.001 :	-
Silver	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Sodium	mg/L	T		-	-	-	-	57. :	-
Sodium	mg/L	D		-	43.2 :	-	-	-	46. :
Thallium	mg/L	T		-	-	-	-	<0.001 :	-
Thallium	mg/L	D		-	<0.001 :	-	-	-	<0.001 :
Vanadium	mg/L	T		-	-	-	-	0.0024 :	-
Vanadium	mg/L	D		-	0.0028 :	-	-	-	0.0022 :
Zinc	mg/L	T		-	-	-	-	3.68 :	-
Zinc	mg/L	D		-	3.68 :	-	-	-	3.45 :
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,1,2,2-Tetrachloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Butanone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Hexanone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Methyl-2-pentanone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Acetone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
				GW5	GW5 RE	GW5	GW5	GW5	GW5
Benzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromoform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Styrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Toluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		<0.026 :	-	-	-	<0.026 :	-
2,4,6-Trichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		<0.026 :	-	-	-	<0.026 :	-
2,4-Dinitrotoluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

		Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
		Sample Date	11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
		Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW RE	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Parameter	Units	Fraction						
2,6-Dinitrotoluene	mg/L	T	<0.01	-	-	-	<0.01	-
2-Chloronaphthalene	mg/L	T	<0.01	-	-	-	<0.01	-
2-Chlorophenol	mg/L	T	<0.01	-	-	-	<0.01	-
2-Methylnaphthalene	mg/L	T	<0.01	-	-	-	<0.01	-
2-Methylphenol	mg/L	T	<0.01	-	-	-	<0.01	-
2-Nitroaniline	mg/L	T	<0.026	-	-	-	<0.026	-
2-Nitrophenol	mg/L	T	<0.01	-	-	-	<0.01	-
3,3-Dichlorobenzidine	mg/L	T	<0.01	-	-	-	<0.01	-
3-Nitroaniline	mg/L	T	<0.026	-	-	-	<0.026	-
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026	-	-	-	<0.026	-
4-Bromophenyl phenyl ether	mg/L	T	<0.01	-	-	-	<0.01	-
4-Chloro-3-methylphenol	mg/L	T	<0.01	-	-	-	<0.01	-
4-Chloroaniline	mg/L	T	<0.01	-	-	-	<0.01	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	-	-	-	<0.01	-
4-Methylphenol	mg/L	T	<0.01	-	-	-	<0.01	-
4-Nitroaniline	mg/L	T	<0.026	-	-	-	<0.026	-
4-Nitrophenol	mg/L	T	<0.026	-	-	-	<0.026	-
Acenaphthene	mg/L	T	<0.01	-	-	-	<0.01	-
Acenaphthylene	mg/L	T	<0.01	-	-	-	<0.01	-
Anthracene	mg/L	T	<0.01	-	-	-	<0.01	-
Benzaldehyde	mg/L	T	<0.01 J	-	-	-	<0.01	-
Benzo(a)anthracene	mg/L	T	<0.01	-	-	-	<0.01	-
Benzo(a)pyrene	mg/L	T	<0.01	-	-	-	<0.01	-
Benzo(b)fluoranthene	mg/L	T	<0.01	-	-	-	<0.01	-
Benzo(g,h,i)perylene	mg/L	T	<0.01	-	-	-	<0.01	-
Benzo(k)fluoranthene	mg/L	T	<0.01	-	-	-	<0.01	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	-	-	-	<0.01	-
Bis(2-chloroethyl)ether	mg/L	T	<0.01	-	-	-	<0.01	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	-	-	-	0.0008 J	-
Butyl benzyl phthalate	mg/L	T	<0.01	-	-	-	<0.01	-
Carbazole	mg/L	T	<0.01	-	-	-	<0.01	-
Chrysene	mg/L	T	<0.01	-	-	-	<0.01	-
Dibenz(a,h)anthracene	mg/L	T	<0.01	-	-	-	<0.01	-
Dibenzofuran	mg/L	T	<0.01	-	-	-	<0.01	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	11/5/2002	11/5/2002	11/5/2002	12/3/2002	1/12/2003	1/12/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW RE	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Dichlorodiisopropyl ether	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Diethylphthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Fluorene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Isophorone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Naphthalene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T		<0.026 :	-	-	-	<0.026 :	-
Phenanthrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Phenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Pyrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		<0.00025 :	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T		<0.00025 :	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T		<0.00025 :	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Isotopes									
Lead	mg/L	T		-	-	-	-	<0.001 :	-
Lead	mg/L	D		-	<0.001 :	-	-	-	<0.001 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
		Sample Date	2/7/2003	3/6/2003	4/9/2003	4/9/2003	5/9/2003	6/5/2003
		Sample ID	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements								
DO	mg/L	T	4.05 :	1.01 :	2.66 :	-	1.15 :	3.26 :
Eh	millivolts	T	498.8 :	448.4 :	462. :	-	357. :	389.4 :
pH	SU	T	3.24 :	3.18 :	3.5 J	-	3.35 :	3.27 :
Specific Conductance	uS/cm	T	3565. :	-	3493. :	-	3730. :	3602. :
Temperature	Celsius	T	7.54 :	8.64 :	11.37 :	-	12.79 :	15.37 :
Turbidity	NTU	T	1.4 :	80.1 :	0. :	-	20.1 :	0. :
General Chemistry								
Ammonia	mg/L	T	-	-	<0.15 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Chloride	mg/L	T	-	-	53.2 :	-	-	-
Fluoride	mg/L	T	-	-	33.7 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Nitrate	mg/L	T	-	-	<0.43 J	-	-	-
Nitrite	mg/L	T	-	-	0.0064 J	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 J	-	-	-
Phosphorus	mg/L	T	-	-	0.02 :	-	-	-
Sulfate	mg/L	T	-	-	2900. J	-	-	-
Total Alkalinity	mg/L	T	-	-	<1. :	-	-	-
Total Dissolved Solids	mg/L	T	-	-	4080. J	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	-	-	<2. J	-	-	-
Total Suspended Solids	mg/L	T	-	-	<2. :	-	-	-
Laboratory Parameters								
pH	SU	T	3.24 :	3.18 :	3.5 J	-	3.35 :	3.27 :
Specific Conductance	umhos/cm	T	-	-	3280. J	-	-	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	-
Physical Properties								
Hardness	mg/L	T	-	-	1590. :	-	-	-
Hardness	mg/L	D	-	-	-	1630. :	-	-
Metals								

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-22 2/7/2003 MMW-22-T01N-GRW GW5	MMW-22 3/6/2003 MMW-22-T01N-GRW GW5	MMW-22 4/9/2003 MMW-22-T01N-GRW GW5	MMW-22 4/9/2003 MMW-22-D01N-GRW GW5	MMW-22 5/9/2003 MMW-22-T01N-GRW GW5	MMW-22 6/5/2003 MMW-22-T01N-GRW GW5
Aluminum	mg/L	T	-	-	175. :	-	-	-
Aluminum	mg/L	D	-	-	-	180. :	-	-
Antimony	mg/L	T	-	-	<0.005 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.003 :	-	-
Arsenic	mg/L	T	-	-	<0.04 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.04 :	-	-
Barium	mg/L	T	-	-	<0.123 :	-	-	-
Barium	mg/L	D	-	-	-	<0.123 :	-	-
Beryllium	mg/L	T	-	-	0.0355 J	-	-	-
Beryllium	mg/L	D	-	-	-	0.0366 J	-	-
Boron	mg/L	T	-	-	<0.084 :	-	-	-
Boron	mg/L	D	-	-	-	<0.084 :	-	-
Cadmium	mg/L	T	-	-	0.025 :	-	-	-
Cadmium	mg/L	D	-	-	-	0.0248 :	-	-
Calcium	mg/L	T	-	-	350. :	-	-	-
Calcium	mg/L	D	-	-	-	358. :	-	-
Chromium	mg/L	T	-	-	<0.01 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.01 :	-	-
Cobalt	mg/L	T	-	-	0.588 :	-	-	-
Cobalt	mg/L	D	-	-	-	0.598 :	-	-
Copper	mg/L	T	-	-	1.16 :	-	-	-
Copper	mg/L	D	-	-	-	1.17 :	-	-
Iron	mg/L	T	-	-	142. :	-	-	-
Iron	mg/L	D	-	-	-	144. :	-	-
Lead	mg/L	T	-	-	<0.001 J	-	-	-
Lead	mg/L	D	-	-	-	<0.001 J	-	-
Magnesium	mg/L	T	-	-	172. :	-	-	-
Magnesium	mg/L	D	-	-	-	178. :	-	-
Manganese	mg/L	T	-	-	15.7 :	-	-	-
Manganese	mg/L	D	-	-	-	16.1 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.023 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.023 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	2/7/2003	3/6/2003	4/9/2003	4/9/2003	5/9/2003	6/5/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T		-	-	1.03 :	-	-	-
Nickel	mg/L	D		-	-	-	1.04 :	-	-
Potassium	mg/L	T		-	-	<3.26 :	-	-	-
Potassium	mg/L	D		-	-	-	<3.26 :	-	-
Selenium	mg/L	T		-	-	0.0056 :	-	-	-
Selenium	mg/L	D		-	-	-	<0.005 :	-	-
Silver	mg/L	T		-	-	<0.001 :	-	-	-
Silver	mg/L	D		-	-	-	<0.001 :	-	-
Sodium	mg/L	T		-	-	43.2 :	-	-	-
Sodium	mg/L	D		-	-	-	44. :	-	-
Thallium	mg/L	T		-	-	<0.001 :	-	-	-
Thallium	mg/L	D		-	-	-	<0.001 :	-	-
Vanadium	mg/L	T		-	-	0.002 :	-	-	-
Vanadium	mg/L	D		-	-	-	0.0018 :	-	-
Zinc	mg/L	T		-	-	3.27 :	-	-	-
Zinc	mg/L	D		-	-	-	4.14 :	-	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
1,2,4-Trichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T		-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T		-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T		-	-	<0.01 J	-	-	-
4-Methyl-2-pentanone	mg/L	T		-	-	<0.01 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			2/7/2003	3/6/2003	4/9/2003	4/9/2003	5/9/2003	6/5/2003
			MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW
			GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T	-	-	<0.01 :	-	-	-
Benzene	mg/L	T	-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Bromoform	mg/L	T	-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T	-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T	-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T	-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T	-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T	-	-	<0.01 :	-	-	-
Chloroform	mg/L	T	-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T	-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T	-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T	-	-	<0.01 :	-	-	-
Methylene chloride	mg/L	T	-	-	<0.01 :	-	-	-
Styrene	mg/L	T	-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Toluene	mg/L	T	-	-	<0.01 :	-	-	-
Total Xylene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T	-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T	-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T	-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T	-	-	<0.01 :	-	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	<0.01 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T	-	-	<0.026 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dichlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2,4-Dimethylphenol	mg/L	T	-	-	<0.01 J	-	-	-
2,4-Dinitrophenol	mg/L	T	-	-	<0.026 J	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			2/7/2003	3/6/2003	4/9/2003	4/9/2003	5/9/2003	6/5/2003
			MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW
			GW5	GW5	GW5	GW5	GW5	GW5
2,4-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-
2,6-Dinitrotoluene	mg/L	T	-	-	<0.01 :	-	-	-
2-Chloronaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Chlorophenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylnaphthalene	mg/L	T	-	-	<0.01 :	-	-	-
2-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
2-Nitroaniline	mg/L	T	-	-	<0.026 :	-	-	-
2-Nitrophenol	mg/L	T	-	-	<0.01 :	-	-	-
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.01 J	-	-	-
3-Nitroaniline	mg/L	T	-	-	<0.026 J	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.026 J	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Chloroaniline	mg/L	T	-	-	<0.01 :	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.01 :	-	-	-
4-Methylphenol	mg/L	T	-	-	<0.01 :	-	-	-
4-Nitroaniline	mg/L	T	-	-	<0.026 J	-	-	-
4-Nitrophenol	mg/L	T	-	-	<0.026 J	-	-	-
Acenaphthene	mg/L	T	-	-	<0.01 :	-	-	-
Acenaphthylene	mg/L	T	-	-	<0.01 :	-	-	-
Anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzaldehyde	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(a)anthracene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(a)pyrene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(b)fluoranthene	mg/L	T	-	-	<0.01 J	-	-	-
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.01 :	-	-	-
Benzo(k)fluoranthene	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.01 :	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Butyl benzyl phthalate	mg/L	T	-	-	<0.01 :	-	-	-
Carbazole	mg/L	T	-	-	<0.01 :	-	-	-
Chrysene	mg/L	T	-	-	<0.01 :	-	-	-
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.01 J	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	2/7/2003	3/6/2003	4/9/2003	4/9/2003	5/9/2003	6/5/2003
			Sample ID	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Dibenzofuran	mg/L	T		-	-	<0.01 :	-	-	-
Dichlorodiisopropyl ether	mg/L	T		-	-	<0.01 :	-	-	-
Diethylphthalate	mg/L	T		-	-	<0.01 :	-	-	-
Dimethylphthalate	mg/L	T		-	-	<0.01 :	-	-	-
Di-n-Butyl phthalate	mg/L	T		-	-	<0.01 :	-	-	-
Di-n-Octyl phthalate	mg/L	T		-	-	<0.01 J	-	-	-
Fluoranthene	mg/L	T		-	-	<0.01 :	-	-	-
Fluorene	mg/L	T		-	-	<0.01 :	-	-	-
Hexachlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T		-	-	<0.01 :	-	-	-
Hexachlorocyclopentadiene	mg/L	T		-	-	<0.01 :	-	-	-
Hexachloroethane	mg/L	T		-	-	<0.01 :	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T		-	-	<0.01 J	-	-	-
Isophorone	mg/L	T		-	-	<0.01 :	-	-	-
Naphthalene	mg/L	T		-	-	<0.01 :	-	-	-
Nitrobenzene	mg/L	T		-	-	<0.01 :	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T		-	-	<0.01 :	-	-	-
N-Nitrosodiphenylamine	mg/L	T		-	-	<0.01 :	-	-	-
Pentachlorophenol	mg/L	T		-	-	<0.026 J	-	-	-
Phenanthrene	mg/L	T		-	-	<0.01 :	-	-	-
Phenol	mg/L	T		-	-	<0.01 :	-	-	-
Pyrene	mg/L	T		-	-	<0.01 :	-	-	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	<0.00025 :	-	-	-
2,6-Pyridinediamine,	mg/L	T		-	-	<0.00025 J	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T		-	-	<0.01 :	-	-	-
Isotopes									
Lead	mg/L	T		-	-	<0.001 J	-	-	-
Lead	mg/L	D		-	-	-	<0.001 J	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-22 7/24/2003 MMW-22-T01N-GRW		MMW-22 7/24/2003 MMW-22-D01N-GRW		MMW-22 8/12/2003 MMW-22-T01N-GRW		MMW-22 9/10/2003 MMW-22-T01N-GRW		MMW-22 10/19/2003 MMW-22-T01N-GRW		MMW-22 10/19/2003 MMW-22-D01N-GRW	
			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	2.49	:	-		1.4	:	1.12	:	3.13	:	-	
Eh	millivolts	T	378.5	:	-		508.8	:	380.1	:	524.9	:	-	
pH	SU	T	3.6	J	-		3.	:	3.24	:	3.6	J	-	
Specific Conductance	uS/cm	T	3589.	:	-		3597.	:	3452.	:	3401.	:	-	
Temperature	Celsius	T	13.76	:	-		20.42	:	12.5	:	12.48	:	-	
Turbidity	NTU	T	0.	:	-		0.	:	53.2	:	5.4	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.08	J	-		-		-		<0.2	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	23.1	:	-		-		-		39.4	:	-	
Fluoride	mg/L	T	34.2	:	-		-		-		32.2	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.4	:	-		-		-		0.23	J	-	
Nitrite	mg/L	T	0.0055	:	-		-		-		0.0073	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		-		-		<0.01	:	-	
Phosphorus	mg/L	T	0.016	:	-		-		-		0.05	:	-	
Sulfate	mg/L	T	2050.	J	-		-		-		2560.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	4620.	J	-		-		-		3930.	J	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.25	:	-	
Total Organic Carbon	mg/L	T	<2.5	J	-		-		-		2.4	J	-	
Total Suspended Solids	mg/L	T	2.6	:	-		-		-		3.2	:	-	
Laboratory Parameters														
pH	SU	T	3.6	J	-		3.	:	3.24	:	3.6	J	-	
Specific Conductance	umhos/cm	T	3460.	J	-		-		-		3040.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1520.	:	-		-		-		1610.	:	-	
Hardness	mg/L	D	-		1530.	:	-		-		-		1650.	:
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

		Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
		Sample Date	7/24/2003	7/24/2003	8/12/2003	9/10/2003	10/19/2003	10/19/2003
		Sample ID	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
		Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Parameter	Units	Fraction						
Aluminum	mg/L	T	163. :	-	-	-	166. :	-
Aluminum	mg/L	D	-	164. :	-	-	-	170. :
Antimony	mg/L	T	<0.038 :	-	-	-	<0.052 :	-
Antimony	mg/L	D	-	<0.038 :	-	-	-	<0.052 :
Arsenic	mg/L	T	<0.024 :	-	-	-	<0.041 :	-
Arsenic	mg/L	D	-	<0.024 :	-	-	-	<0.041 :
Barium	mg/L	T	<0.073 :	-	-	-	<0.115 :	-
Barium	mg/L	D	-	<0.073 :	-	-	-	<0.115 :
Beryllium	mg/L	T	0.035 :	-	-	-	0.0257 J	-
Beryllium	mg/L	D	-	0.0352 :	-	-	-	0.027 J
Boron	mg/L	T	<0.046 :	-	-	-	<0.063 :	-
Boron	mg/L	D	-	<0.046 :	-	-	-	<0.063 :
Cadmium	mg/L	T	0.0502 :	-	-	-	<0.13 :	-
Cadmium	mg/L	D	-	0.0512 :	-	-	-	<0.13 :
Calcium	mg/L	T	342. :	-	-	-	360. :	-
Calcium	mg/L	D	-	342. :	-	-	-	366. :
Chromium	mg/L	T	<0.06 :	-	-	-	<0.23 J	-
Chromium	mg/L	D	-	<0.06 :	-	-	-	<0.23 J
Cobalt	mg/L	T	0.522 :	-	-	-	0.571 :	-
Cobalt	mg/L	D	-	0.504 :	-	-	-	0.64 :
Copper	mg/L	T	1.08 :	-	-	-	1.07 :	-
Copper	mg/L	D	-	1.07 :	-	-	-	1.18 :
Iron	mg/L	T	122. :	-	-	-	126. :	-
Iron	mg/L	D	-	124. :	-	-	-	133. :
Lead	mg/L	T	<0.001 :	-	-	-	<0.002 :	-
Lead	mg/L	D	-	<0.001 :	-	-	-	<0.002 :
Magnesium	mg/L	T	163. :	-	-	-	173. :	-
Magnesium	mg/L	D	-	163. :	-	-	-	178. :
Manganese	mg/L	T	14.6 :	-	-	-	15.8 :	-
Manganese	mg/L	D	-	14.7 :	-	-	-	16.2 :
Mercury	mg/L	T	<0.00015 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.00015 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T	<0.016 :	-	-	-	<0.011 J	-
Molybdenum	mg/L	D	-	<0.016 :	-	-	-	<0.011 J

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-22 7/24/2003 MMW-22-T01N-GRW GW5		MMW-22 7/24/2003 MMW-22-D01N-GRW GW5		MMW-22 8/12/2003 MMW-22-T01N-GRW GW5		MMW-22 9/10/2003 MMW-22-T01N-GRW GW5		MMW-22 10/19/2003 MMW-22-T01N-GRW GW5		MMW-22 10/19/2003 MMW-22-D01N-GRW GW5	
Nickel	mg/L	T	0.972	:	-		-		-		<0.45	J	-	
Nickel	mg/L	D	-		1.02	:	-		-		-		<0.45	J
Potassium	mg/L	T	<25.	:	-		-		-		<63.8	:	-	
Potassium	mg/L	D	-		<25.	:	-		-		-		<63.8	:
Selenium	mg/L	T	<0.008	:	-		-		-		0.0085	:	-	
Selenium	mg/L	D	-		<0.008	J	-		-		-		0.006	:
Silver	mg/L	T	<0.001	J	-		-		-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	J	-		-		-		<0.001	:
Sodium	mg/L	T	55.5	:	-		-		-		<99.1	:	-	
Sodium	mg/L	D	-		36.4	:	-		-		-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		-		-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		-		-		0.0017	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		-		-		0.0012	:
Zinc	mg/L	T	3.07	:	-		-		-		<3.72	:	-	
Zinc	mg/L	D	-		3.08	:	-		-		-		<3.78	J
Isotopes														
Lead	mg/L	T	<0.001	:	-		-		-		<0.002	:	-	
Lead	mg/L	D	-		<0.001	:	-		-		-		<0.002	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-22 11/4/2003 MMW-22-T01N-GRW		MMW-22 12/9/2003 MMW-22-T01N-GRW		MMW-22 1/12/2004 MMW-22-T01N-GRW		MMW-22 1/12/2004 MMW-22-D01N-GRW		MMW-22 2/22/2004 MMW-22-T01N-GRW		MMW-22 2/22/2004 MMW-22-D01N-GRW	
			GW5		GW5		GW5		GW5		GW5		GW5	
Field Measurements														
DO	mg/L	T	0.95	:	1.	:	0.59	:	-		0.73	:	-	
Eh	millivolts	T	384.	:	455.9	:	374.1	:	-		368.9	:	-	
pH	SU	T	3.03	:	3.09	:	3.5	J	-		3.22	:	-	
Specific Conductance	uS/cm	T	3574.	:	3601.	:	3496.	:	-		3625.	:	-	
Temperature	Celsius	T	12.4	:	6.34	:	8.74	:	-		7.73	:	-	
Turbidity	NTU	T	0.	:	3.4	:	0.9	:	-		1.7	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.12	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		37.5	:	-		-		-	
Fluoride	mg/L	T	-		-		29.7	:	-		32.6	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		<0.2	J	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.014	J	-		-		-	
Phosphorus	mg/L	T	-		-		<0.028	:	-		-		-	
Sulfate	mg/L	T	-		-		2790.	:	-		2930.	:	-	
Total Alkalinity	mg/L	T	-		-		<1.	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		4170.	:	-		3850.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		3.7	:	-		-		-	
Total Suspended Solids	mg/L	T	-		-		2.9	:	-		3.1	:	-	
Laboratory Parameters														
pH	SU	T	3.03	:	3.09	:	3.5	J	-		3.22	:	-	
Specific Conductance	umhos/cm	T	-		-		3440.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		1710.	:	-		1720.	:	-	
Hardness	mg/L	D	-		-		-		1680.	:	-		1780.	:
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22	MMW-22
			Sample Date	11/4/2003	12/9/2003	1/12/2004	1/12/2004	2/22/2004	2/22/2004
			Sample ID	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-22-T01N-GRW	MMW-22-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		-	-	176. :	-	183. :	-
Aluminum	mg/L	D		-	-	-	175. :	-	186. :
Antimony	mg/L	T		-	-	<0.029 :	-	<0.029 :	-
Antimony	mg/L	D		-	-	-	<0.029 :	-	<0.029 :
Arsenic	mg/L	T		-	-	<0.028 J	-	<0.028 :	-
Arsenic	mg/L	D		-	-	-	<0.028 J	-	<0.028 :
Barium	mg/L	T		-	-	<0.053 :	-	<0.053 :	-
Barium	mg/L	D		-	-	-	<0.053 :	-	<0.053 :
Beryllium	mg/L	T		-	-	0.0334 :	-	0.0274 :	-
Beryllium	mg/L	D		-	-	-	0.0319 :	-	0.0287 :
Boron	mg/L	T		-	-	<0.023 :	-	<0.023 :	-
Boron	mg/L	D		-	-	-	<0.023 :	-	<0.023 :
Cadmium	mg/L	T		-	-	<0.07 J	-	0.123 :	-
Cadmium	mg/L	D		-	-	-	<0.07 :	-	<0.07 J
Calcium	mg/L	T		-	-	380. :	-	378. :	-
Calcium	mg/L	D		-	-	-	373. :	-	392. :
Chromium	mg/L	T		-	-	<0.57 :	-	0.255 :	-
Chromium	mg/L	D		-	-	-	<0.57 :	-	<0.11 :
Cobalt	mg/L	T		-	-	0.585 J	-	1.27 :	-
Cobalt	mg/L	D		-	-	-	0.616 :	-	0.686 :
Copper	mg/L	T		-	-	1.17 :	-	1.53 :	-
Copper	mg/L	D		-	-	-	1.2 :	-	1.22 :
Iron	mg/L	T		-	-	148. :	-	143. :	-
Iron	mg/L	D		-	-	-	145. :	-	147. :
Lead	mg/L	T		-	-	<0.001 :	-	<0.0013 :	-
Lead	mg/L	D		-	-	-	<0.001 :	-	<0.0017 :
Magnesium	mg/L	T		-	-	185. :	-	187. :	-
Magnesium	mg/L	D		-	-	-	181. :	-	194. :
Manganese	mg/L	T		-	-	16.8 :	-	17.6 :	-
Manganese	mg/L	D		-	-	-	16.6 :	-	17.7 :
Mercury	mg/L	T		-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		-	-	<0.024 :	-	<0.024 :	-
Molybdenum	mg/L	D		-	-	-	<0.024 :	-	<0.024 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-22 11/4/2003 MMW-22-T01N-GRW GW5	MMW-22 12/9/2003 MMW-22-T01N-GRW GW5	MMW-22 1/12/2004 MMW-22-T01N-GRW GW5	MMW-22 1/12/2004 MMW-22-D01N-GRW GW5	MMW-22 2/22/2004 MMW-22-T01N-GRW GW5	MMW-22 2/22/2004 MMW-22-D01N-GRW GW5
Nickel	mg/L	T	-	-	<1.68 :	-	1.85 :	-
Nickel	mg/L	D	-	-	-	<1.68 :	-	1.22 :
Potassium	mg/L	T	-	-	<110. :	-	<24.3 :	-
Potassium	mg/L	D	-	-	-	<110. :	-	<24.3 :
Selenium	mg/L	T	-	-	0.0079 J	-	0.0049 J	-
Selenium	mg/L	D	-	-	-	0.0108 :	-	0.0034 J
Silver	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D	-	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T	-	-	<92. :	-	<49. J	-
Sodium	mg/L	D	-	-	-	<92. :	-	<49. J
Thallium	mg/L	T	-	-	<0.001 :	-	<0.0019 :	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	<0.002 :
Vanadium	mg/L	T	-	-	<0.002 :	-	<0.0029 :	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	<0.0027 :
Zinc	mg/L	T	-	-	3.73 :	-	4.17 :	-
Zinc	mg/L	D	-	-	-	3.68 :	-	3.7 :
Isotopes								
Delta D	per mil	T	-	-	-	-	-86.9 :	-
Delta O-18	per mil	T	-	-	-	-	-11.8 :	-
Lead	mg/L	T	-	-	<0.001 :	-	<0.0013 :	-
Lead	mg/L	D	-	-	-	<0.001 :	-	<0.0017 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-22	MMW-22	MMW-22	MMW-23A	MMW-23A	MMW-23A
			Sample Date	3/22/2004	4/19/2004	4/19/2004	10/30/2002	10/31/2002	10/31/2002
			Sample ID	MMW-22	MMW-22-T01N-GRW	MMW-22-D01N-GRW	MMW-23A-T01N-GR	MMW-23A-T01N-GRWRE	MMW-23A-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW1	GW1	GW1
Field Measurements									
DO	mg/L	T		-	0.85 :	-	-	-	1.2 :
Eh	millivolts	T		-	356.6 :	-	-	-	228.9 :
pH	SU	T		-	3.9 J	-	-	-	5.33 :
Specific Conductance	uS/cm	T		-	3609. :	-	-	-	3074. :
Temperature	Celsius	T		-	13.12 :	-	-	-	7.62 :
Turbidity	NTU	T		-	-	-	-	-	9.4 :
General Chemistry									
Ammonia	mg/L	T		-	<0.17 :	-	-	-	<0.19 :
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	26.9 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Chloride	mg/L	T		-	46.2 J	-	-	-	<1. :
Fluoride	mg/L	T		-	31.6 :	-	-	55.5 J	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	-	-	<1. J
Nitrite	mg/L	T		-	<0.005 J	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	-	<0.01 J
Phosphorus	mg/L	T		-	0.017 :	-	-	-	0.021 :
Sulfate	mg/L	T		-	2760. :	-	-	2240. J	-
Total Alkalinity	mg/L	T		-	<1. :	-	-	-	26.9 :
Total Dissolved Solids	mg/L	T		-	4280. :	-	-	-	3390. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	0.27 :
Total Organic Carbon	mg/L	T		-	3.4 J	-	-	-	3.2 :
Total Suspended Solids	mg/L	T		-	<2.8 J	-	-	-	9.6 :
Laboratory Parameters									
pH	SU	T		-	3.9 J	-	-	-	5.33 :
Specific Conductance	umhos/cm	T		-	3090. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1680. :	-	-	-	519. J
Hardness	mg/L	D		-	-	1680. :	-	-	-
Metals									

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-22 3/22/2004 MMW-22 GW5	MMW-22 4/19/2004 MMW-22-T01N-GRW GW5	MMW-22 4/19/2004 MMW-22-D01N-GRW GW5	MMW-23A 10/30/2002 MMW-23A-T01N-GR GW1	MMW-23A 10/31/2002 MMW-23A-T01N-GR WRF GW1	MMW-23A 10/31/2002 MMW-23A-T01N-GR GW1
Aluminum	mg/L	T	-	177. :	-	-	-	-
Aluminum	mg/L	D	-	-	179. :	-	-	-
Antimony	mg/L	T	-	<0.053 :	-	-	-	-
Antimony	mg/L	D	-	-	<0.053 :	-	-	-
Arsenic	mg/L	T	-	<0.037 :	-	-	-	-
Arsenic	mg/L	D	-	-	<0.037 :	-	-	-
Barium	mg/L	T	-	<0.049 :	-	-	-	-
Barium	mg/L	D	-	-	<0.049 :	-	-	-
Beryllium	mg/L	T	-	0.031 :	-	-	-	-
Beryllium	mg/L	D	-	-	0.03 :	-	-	-
Boron	mg/L	T	-	<0.036 :	-	-	-	-
Boron	mg/L	D	-	-	<0.0463 :	-	-	-
Cadmium	mg/L	T	-	<0.1 :	-	-	-	-
Cadmium	mg/L	D	-	-	<0.1 :	-	-	-
Calcium	mg/L	T	-	376. :	-	-	-	-
Calcium	mg/L	D	-	-	376. :	-	-	-
Chromium	mg/L	T	-	<0.13 :	-	-	-	-
Chromium	mg/L	D	-	-	<0.13 :	-	-	-
Chromium, Hexavalent	mg/L	D	-	-	-	<0.01 :	-	-
Cobalt	mg/L	T	-	0.487 :	-	-	-	-
Cobalt	mg/L	D	-	-	0.511 :	-	-	-
Copper	mg/L	T	-	<1.26 :	-	-	-	-
Copper	mg/L	D	-	-	<1.44 :	-	-	-
Iron	mg/L	T	-	138. J	-	-	-	-
Iron	mg/L	D	-	-	141. :	-	-	-
Lead	mg/L	T	-	<0.004 :	-	-	-	-
Lead	mg/L	D	-	-	<0.004 :	-	-	-
Magnesium	mg/L	T	-	180. :	-	-	-	-
Magnesium	mg/L	D	-	-	180. :	-	-	-
Manganese	mg/L	T	-	16.5 :	-	-	-	-
Manganese	mg/L	D	-	-	16.6 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.014 :	-	-	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-22 3/22/2004 MMW-22 GW5	MMW-22 4/19/2004 MMW-22-T01N-GRW GW5	MMW-22 4/19/2004 MMW-22-D01N-GRW GW5	MMW-23A 10/30/2002 MMW-23A-T01N-GR GW1	MMW-23A 10/31/2002 MMW-23A-T01N-GR WRF GW1	MMW-23A 10/31/2002 MMW-23A-T01N-GR GW1
Molybdenum	mg/L	D	-	-	<0.014 :	-	-	-
Nickel	mg/L	T	-	0.612 J	-	-	-	-
Nickel	mg/L	D	-	-	0.641 J	-	-	-
Potassium	mg/L	T	-	<15.5 :	-	-	-	-
Potassium	mg/L	D	-	-	<15.5 :	-	-	-
Selenium	mg/L	T	-	<0.007 :	-	-	-	-
Selenium	mg/L	D	-	-	<0.007 :	-	-	-
Silver	mg/L	T	-	<0.001 J	-	-	-	-
Silver	mg/L	D	-	-	<0.001 J	-	-	-
Sodium	mg/L	T	-	88.3 :	-	-	-	-
Sodium	mg/L	D	-	-	<116. :	-	-	-
Thallium	mg/L	T	-	<0.001 :	-	-	-	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	0.0027 :	-	-	-	-
Vanadium	mg/L	D	-	-	0.0029 :	-	-	-
Zinc	mg/L	T	-	3.4 :	-	-	-	-
Zinc	mg/L	D	-	-	3.36 :	-	-	-
Isotopes								
Lead	mg/L	T	-	<0.004 :	-	-	-	-
Lead	mg/L	D	-	-	<0.004 :	-	-	-
Helium Isotope and Tritium								
3H-3He	Years	T	0.39 :	-	-	-	-	-
DEL He3	%	T	0.2 :	-	-	-	-	-
DEL He4	%	T	0.5 :	-	-	-	-	-
He Corr	1E-8cc/g	T	4.774 :	-	-	-	-	-
Tritium TU	TU	T	2.682 :	-	-	-	-	-
Uncert Age	Years	T	1.72 :	-	-	-	-	-
Uncert TU	TU	T	0.08 :	-	-	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction						
		Site ID	MMW-23A	MMW-23A	MMW-23A	MMW-23A	MMW-23A	MMW-23A
		Sample Date	10/31/2002	10/31/2002	1/8/2003	1/8/2003	4/10/2003	4/10/2003
		Sample ID	MMW-23A-D01N-GR	MMW-23A-D01N-GR	MMW-23A-T01N-GR	MMW-23A-D01N-GR	MMW-23A-T01N-GR	MMW-23A-D01N-GR
		Exposure Area	WRE GW1	W GW1	W GW1	W GW1	W GW1	W GW1
Field Measurements								
DO	mg/L	T	-	-	0.9 :	-	8.18 :	-
Eh	millivolts	T	-	-	57.8 :	-	450.3 :	-
pH	SU	T	-	-	4.82 :	-	3.8 :	-
Specific Conductance	uS/cm	T	-	-	3128. :	-	2943. :	-
Temperature	Celsius	T	-	-	3.74 :	-	3.35 :	-
Turbidity	NTU	T	-	-	2. :	-	4.7 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.19 :	-	<0.016 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<3.4 :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Chloride	mg/L	T	-	-	7.1 :	-	4.2 :	-
Fluoride	mg/L	T	-	-	74.2 J	-	26.2 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	-	-	<0.4 J	-	<0.56 J	-
Nitrite	mg/L	T	-	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 J	-	<0.22 J	-
Phosphorus	mg/L	T	-	-	0.021 :	-	0.013 J	-
Sulfate	mg/L	T	-	-	2350. J	-	1860. J	-
Total Alkalinity	mg/L	T	-	-	<3.4 :	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	-	3630. :	-	3010. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	0.45 J	-
Total Organic Carbon	mg/L	T	-	-	2.3 :	-	8.3 J	-
Total Suspended Solids	mg/L	T	-	-	5.4 :	-	<3.9 :	-
Laboratory Parameters								
pH	SU	T	-	-	4.82 :	-	3.8 :	-
Specific Conductance	umhos/cm	T	-	-	-	-	2450. :	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	1780. :	-	1170. :	-
Hardness	mg/L	D	1730. J	-	-	1860. :	-	1160. :
Metals								

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T = Total Fraction
R:\Projects\22236252_Database_Management\Task_01\7.0_Project_Working_files\TechMemoAppendix\ZZZ-TechMemoII-\Section 6 Groundwater\appendix a-6e.rpt

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-23A	MMW-23A	MMW-23A	MMW-23A	MMW-23A	MMW-23A
			Sample Date	10/31/2002	10/31/2002	1/8/2003	1/8/2003	4/10/2003	4/10/2003
			Sample ID	MMW-23A-D01N-GR	MMW-23A-D01N-GR	MMW-23A-T01N-GR	MMW-23A-D01N-GR	MMW-23A-T01N-GR	MMW-23A-D01N-GR
				WRE GW1	WW GW1	WW GW1	WW GW1	WW GW1	WW GW1
Aluminum	mg/L	T		-	-	79. :	-	102. :	-
Aluminum	mg/L	D		39.7 :	-	-	79.9 :	-	102. :
Antimony	mg/L	T		-	-	<0.028 :	-	<0.072 :	-
Antimony	mg/L	D		<0.028 :	-	-	<0.028 :	-	<0.072 :
Arsenic	mg/L	T		-	-	0.218 :	-	0.0445 :	-
Arsenic	mg/L	D		<0.023 :	-	-	0.212 :	-	<0.04 :
Barium	mg/L	T		-	-	<0.048 :	-	<0.123 :	-
Barium	mg/L	D		<0.048 :	-	-	<0.048 :	-	<0.123 :
Beryllium	mg/L	T		-	-	0.162 :	-	0.0681 :	-
Beryllium	mg/L	D		0.0204 :	-	-	0.168 :	-	0.0696 :
Boron	mg/L	T		-	-	<0.027 :	-	<0.084 :	-
Boron	mg/L	D		<0.027 :	-	-	<0.027 :	-	<0.084 :
Cadmium	mg/L	T		-	-	<0.08 :	-	0.0402 :	-
Cadmium	mg/L	D		<0.08 :	-	-	<0.08 :	-	0.0412 :
Calcium	mg/L	T		-	-	490. :	-	258. :	-
Calcium	mg/L	D		527. :	-	-	516. :	-	259. :
Chromium	mg/L	T		-	-	<0.16 :	-	<0.01 :	-
Chromium	mg/L	D		<0.16 J	-	-	<0.16 :	-	<0.01 :
Cobalt	mg/L	T		-	-	0.407 :	-	0.355 :	-
Cobalt	mg/L	D		<0.23 :	-	-	0.388 :	-	0.356 :
Copper	mg/L	T		-	-	<0.17 :	-	0.398 :	-
Copper	mg/L	D		<0.17 :	-	-	<0.17 :	-	0.404 :
Iron	mg/L	T		-	-	<2.66 :	-	2.27 :	-
Iron	mg/L	D		<2.83 :	-	-	<2.66 :	-	2.2 :
Lead	mg/L	T		-	-	0.0056 :	-	<0.0038 :	-
Lead	mg/L	D		<0.001 :	-	-	0.0037 :	-	<0.0041 :
Magnesium	mg/L	T		-	-	134. :	-	127. :	-
Magnesium	mg/L	D		101. :	-	-	140. :	-	126. :
Manganese	mg/L	T		-	-	82.1 :	-	68.7 :	-
Manganese	mg/L	D		61.7 :	-	-	85.4 :	-	68.2 :
Mercury	mg/L	T		-	-	0.00011 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		-	-	<0.011 :	-	<0.023 :	-
Molybdenum	mg/L	D		<0.011 :	-	-	<0.011 :	-	<0.023 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-23A 10/31/2002 MMW-23A-D01N-GR WRE GW1		MMW-23A 10/31/2002 MMW-23A-D01N-GR W GW1		MMW-23A 1/8/2003 MMW-23A-T01N-GR W GW1		MMW-23A 1/8/2003 MMW-23A-D01N-GR W GW1		MMW-23A 4/10/2003 MMW-23A-T01N-GR W GW1		MMW-23A 4/10/2003 MMW-23A-D01N-GR W GW1	
Nickel	mg/L	T	-		-		0.983	:	-		0.809	:	-	
Nickel	mg/L	D	0.477	:	-		-		0.937	:	-		0.822	:
Potassium	mg/L	T	-		-		<31.4	:	-		<3.26	:	-	
Potassium	mg/L	D	<31.4	J	-		-		<31.4	:	-		<3.26	:
Selenium	mg/L	T	-		-		0.071	:	-		0.0211	J	-	
Selenium	mg/L	D	0.0552	:	-		-		0.0652	:	-		0.0223	J
Silver	mg/L	T	-		-		<0.001	:	-		<0.0002	:	-	
Silver	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.0002	:
Sodium	mg/L	T	-		-		<36.6	:	-		14.5	:	-	
Sodium	mg/L	D	50.1	:	-		-		<36.6	:	-		14.1	:
Thallium	mg/L	T	-		-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		<0.0002	:
Vanadium	mg/L	T	-		-		<0.002	:	-		0.00047	J	-	
Vanadium	mg/L	D	<0.002	:	-		-		<0.002	:	-		0.00051	J
Zinc	mg/L	T	-		-		15.5	:	-		12.	:	-	
Zinc	mg/L	D	11.	:	-		-		16.6	:	-		12.	:
Isotopes														
Lead	mg/L	T	-		-		0.0056	:	-		<0.0038	:	-	
Lead	mg/L	D	<0.001	:	-		-		0.0037	:	-		<0.0041	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-23A	7/20/2003	MMW-23A-T01N-GR		MMW-23A	7/20/2003	MMW-23A-D01N-GR		MMW-23A	10/21/2003	MMW-23A-T01N-GR		MMW-23A	10/21/2003	MMW-23A-D01N-GR	
			GW1				GW1				GW1				GW1			
Field Measurements																		
DO	mg/L	T	1.75	:			-				0.94	:			-			
Eh	millivolts	T	112.8	:			-				98.7	:			-			
pH	SU	T	6.	J			-				5.4	J			-			
Specific Conductance	uS/cm	T	2243.	:			-				1830.	:			-			
Temperature	Celsius	T	15.9	:			-				10.31	:			-			
Turbidity	NTU	T	0.	:			-				3.1	:			-			
General Chemistry																		
Ammonia	mg/L	T	<0.23	J			-				0.15	J			-			
Bicarbonate (as CaCO3)	mg/L	T	63.8	:			-				18.8	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Chloride	mg/L	T	7.6	:			-				8.6	:			-			
Fluoride	mg/L	T	19.9	:			-				37.8	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	<0.2	J			-				<0.2	J			-			
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.01	J			-			
Phosphorus	mg/L	T	<0.01	:			-				<0.01	:			-			
Sulfate	mg/L	T	1180.	J			-				1910.	J			-			
Total Alkalinity	mg/L	T	63.8	:			-				18.8	J			-			
Total Dissolved Solids	mg/L	T	2160.	:			-				2870.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	<1.9	J			-				2.3	J			-			
Total Suspended Solids	mg/L	T	2.7	:			-				2.7	:			-			
Laboratory Parameters																		
pH	SU	T	6.	J			-				5.4	J			-			
Specific Conductance	umhos/cm	T	2050.	J			-				2660.	J			-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-			
Physical Properties																		
Hardness	mg/L	T	1380.	:			-				1600.	:			-			
Hardness	mg/L	D	-				1260.	:			-				1490.	:		
Metals																		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-23A	2/25/2004	MMW-23A-T01N-GR		MMW-23A	2/25/2004	MMW-23A-D01N-GR							
			GW1				GW1									
Field Measurements																
DO	mg/L	T	2.47	:			-									
Eh	millivolts	T	241.4	:			-									
pH	SU	T	4.72	:			-									
Specific Conductance	uS/cm	T	2374.	:			-									
Temperature	Celsius	T	5.72	:			-									
Turbidity	NTU	T	1.8	:			-									
General Chemistry																
Ammonia	mg/L	T	-				-									
Bicarbonate (as CaCO3)	mg/L	T	-				-									
Carbonate (as CaCO3)	mg/L	T	-				-									
Chloride	mg/L	T	-				-									
Fluoride	mg/L	T	36.2	:			-									
Hydroxide (as CaCO3)	mg/L	T	-				-									
Nitrate	mg/L	T	-				-									
Nitrite	mg/L	T	-				-									
Phosphate, Ortho As P	mg/L	T	-				-									
Phosphorus	mg/L	T	-				-									
Sulfate	mg/L	T	1730.	:			-									
Total Alkalinity	mg/L	T	-				-									
Total Dissolved Solids	mg/L	T	2770.	:			-									
Total Kjeldahl Nitrogen	mg/L	T	-				-									
Total Organic Carbon	mg/L	T	-				-									
Total Suspended Solids	mg/L	T	13.6	:			-									
Laboratory Parameters																
pH	SU	T	4.72	:			-									
Specific Conductance	umhos/cm	T	-				-									
Inorganics																
Cyanide	mg/L	T	-				-									
Physical Properties																
Hardness	mg/L	T	1400.	:			-									
Hardness	mg/L	D	-				1370.	:								
Metals																

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23A 7/20/2003 MMW-23A-T01N-GR GW1		MMW-23A 7/20/2003 MMW-23A-D01N-GR GW1		MMW-23A 10/21/2003 MMW-23A-T01N-GR GW1		MMW-23A 10/21/2003 MMW-23A-D01N-GR GW1		MMW-23A 2/25/2004 MMW-23A-T01N-GR GW1		MMW-23A 2/25/2004 MMW-23A-D01N-GR GW1	
Aluminum	mg/L	T	3.14	J	-		28.7	:	-		46.4	:	-	
Aluminum	mg/L	D	-		<1.83	J	-		26.3	:	-		46.4	:
Antimony	mg/L	T	<0.038	:	-		<0.082	:	-		<0.029	:	-	
Antimony	mg/L	D	-		<0.038	:	-		<0.082	:	-		<0.029	:
Arsenic	mg/L	T	0.0421	:	-		0.113	:	-		0.145	:	-	
Arsenic	mg/L	D	-		0.0374	:	-		0.121	:	-		0.135	J
Barium	mg/L	T	<0.073	:	-		<0.117	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.073	:	-		<0.117	:	-		<0.053	:
Beryllium	mg/L	T	0.0776	:	-		0.139	:	-		0.136	:	-	
Beryllium	mg/L	D	-		0.0742	:	-		0.139	:	-		0.13	:
Boron	mg/L	T	0.0477	:	-		<0.064	:	-		<0.023	:	-	
Boron	mg/L	D	-		<0.046	:	-		<0.064	:	-		<0.023	:
Cadmium	mg/L	T	<0.03	:	-		<0.13	:	-		<0.07	:	-	
Cadmium	mg/L	D	-		<0.03	:	-		<0.13	:	-		<0.07	J
Calcium	mg/L	T	458.	:	-		505.	:	-		413.	:	-	
Calcium	mg/L	D	-		421.	:	-		471.	:	-		408.	:
Chromium	mg/L	T	<0.06	J	-		<0.11	J	-		<0.15	:	-	
Chromium	mg/L	D	-		<0.06	J	-		<0.11	J	-		<0.15	:
Cobalt	mg/L	T	<0.18	:	-		<0.32	:	-		0.25	:	-	
Cobalt	mg/L	D	-		<0.18	:	-		<0.32	:	-		<0.23	:
Copper	mg/L	T	<0.166	:	-		<0.23	:	-		<0.3	:	-	
Copper	mg/L	D	-		<0.146	:	-		<0.23	:	-		<0.3	:
Iron	mg/L	T	3.02	:	-		3.6	:	-		<3.57	:	-	
Iron	mg/L	D	-		1.85	:	-		<4.55	:	-		<3.57	:
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		0.0022	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		0.0023	:
Magnesium	mg/L	T	57.6	:	-		82.	:	-		88.5	:	-	
Magnesium	mg/L	D	-		51.5	:	-		77.	:	-		86.6	:
Manganese	mg/L	T	30.1	:	-		47.2	:	-		48.9	:	-	
Manganese	mg/L	D	-		26.9	:	-		45.	:	-		48.2	:
Mercury	mg/L	T	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.016	:	-		<0.012	J	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.012	:	-		<0.024	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23A 7/20/2003 MMW-23A-T01N-GR GW1		MMW-23A 7/20/2003 MMW-23A-D01N-GR GW1		MMW-23A 10/21/2003 MMW-23A-T01N-GR GW1		MMW-23A 10/21/2003 MMW-23A-D01N-GR GW1		MMW-23A 2/25/2004 MMW-23A-T01N-GR GW1		MMW-23A 2/25/2004 MMW-23A-D01N-GR GW1	
Nickel	mg/L	T	<0.2	J	-		0.505	:	-		0.488	:	-	
Nickel	mg/L	D	-		<0.2	J	-		0.874	:	-		0.461	:
Potassium	mg/L	T	<25.	:	-		<63.8	:	-		<39.1	:	-	
Potassium	mg/L	D	-		<25.	:	-		<63.8	:	-		<39.1	:
Selenium	mg/L	T	0.0109	:	-		<0.03	:	-		<0.038	J	-	
Selenium	mg/L	D	-		0.0101	J	-		<0.03	:	-		<0.038	J
Silver	mg/L	T	<0.0025	J	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.0022	J	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	57.6	:	-		<99.1	:	-		52.8	:	-	
Sodium	mg/L	D	-		68.3	:	-		<99.1	:	-		<51.5	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	2.9	J	-		8.84	J	-		10.3	:	-	
Zinc	mg/L	D	-		2.45	J	-		12.3	J	-		10.1	:
Isotopes														
204Pb/206Pb	mg/L	T	-		-		-		-		0.0001	:	-	
204Pb/206Pb	mg/L	D	-		-		-		-		-		0.00009	:
207Pb/206Pb	mg/L	T	-		-		-		-		0.00036	:	-	
207Pb/206Pb	mg/L	D	-		-		-		-		-		0.00036	:
208Pb/206Pb	mg/L	T	-		-		-		-		0.00026	:	-	
208Pb/206Pb	mg/L	D	-		-		-		-		-		0.00026	:
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		0.0022	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		0.0023	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23A 4/20/2004 MMW-23A-T01N-GR GW1 T		MMW-23A 4/20/2004 MMW-23A-D01N-GR GW1 T		MMW-27A 5/7/2003 MMW-27A-T01N-GR GW4 T		MMW-27A 5/7/2003 MMW-27A-D01N-GR GW4 T		MMW-27A 7/23/2003 MMW-27A-T01N-GR GW4 T		MMW-27A 7/23/2003 MMW-27A-D01N-GR GW4 T	
Field Measurements														
DO	mg/L	T	0.79	:	-		4.76	:	-		4.39	:	-	
Eh	millivolts	T	112.8	:	-		447.4	:	-		361.8	:	-	
pH	SU	T	4.3	J	-		4.5	J	-		4.3	J	-	
Specific Conductance	uS/cm	T	2373.	:	-		2487.	:	-		2327.	:	-	
Temperature	Celsius	T	6.35	:	-		9.69	:	-		12.96	:	-	
Turbidity	NTU	T	10.	:	-		2.1	:	-		10.3	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.09	:	-		<0.15	:	-		<0.084	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<8.1	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	<8.5	J	-		26.8	:	-		22.7	J	-	
Fluoride	mg/L	T	20.5	:	-		38.3	:	-		36.	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.75	J	-		4.5	J	-		3.5	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		0.038	J	-		<0.03	J	-	
Phosphorus	mg/L	T	<0.01	:	-		0.06	:	-		0.075	:	-	
Sulfate	mg/L	T	1520.	:	-		1430.	:	-		1490.	J	-	
Total Alkalinity	mg/L	T	<8.1	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L	T	2040.	:	-		2620.	:	-		3230.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	J	-	
Total Organic Carbon	mg/L	T	<1.	J	-		1.1	:	-		<1.1	J	-	
Total Suspended Solids	mg/L	T	<14.8	J	-		7.9	:	-		16.2	:	-	
Laboratory Parameters														
pH	SU	T	4.3	J	-		4.5	J	-		4.3	J	-	
Specific Conductance	umhos/cm	T	1850.	J	-		2280.	J	-		2280.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1170.	:	-		1260.	:	-		1240.	:	-	
Hardness	mg/L	D	-		1210.	:	-		1250.	:	-		1260.	:
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-23A 4/20/2004 MMW-23A-T01N-GR GW1		MMW-23A 4/20/2004 MMW-23A-D01N-GR GW1		MMW-27A 5/7/2003 MMW-27A-T01N-GR GW4		MMW-27A 5/7/2003 MMW-27A-D01N-GR GW4		MMW-27A 7/23/2003 MMW-27A-T01N-GR GW4		MMW-27A 7/23/2003 MMW-27A-D01N-GR GW4	
Aluminum	mg/L	T	23.4	:	-		72.9	:	-		76.8	:	-	
Aluminum	mg/L	D	-		25.8	:	-		72.4	:	-		78.3	:
Antimony	mg/L	T	<0.053	:	-		<0.048	:	-		<0.047	:	-	
Antimony	mg/L	D	-		<0.053	:	-		<0.048	:	-		<0.047	:
Arsenic	mg/L	T	<0.1	:	-		<0.047	:	-		<0.048	:	-	
Arsenic	mg/L	D	-		<0.093	:	-		<0.047	:	-		<0.048	:
Barium	mg/L	T	<0.049	:	-		<0.135	:	-		<0.059	:	-	
Barium	mg/L	D	-		<0.049	:	-		<0.135	:	-		<0.059	:
Beryllium	mg/L	T	0.115	J	-		0.0182	:	-		0.0188	:	-	
Beryllium	mg/L	D	-		0.114	J	-		0.0175	:	-		0.0188	:
Boron	mg/L	T	<0.036	:	-		<0.075	:	-		<0.048	:	-	
Boron	mg/L	D	-		<0.0545	:	-		<0.075	:	-		<0.048	:
Cadmium	mg/L	T	<0.1	:	-		0.0502	:	-		<0.12	:	-	
Cadmium	mg/L	D	-		0.122	J	-		0.0496	:	-		<0.12	:
Calcium	mg/L	T	372.	:	-		229.	:	-		221.	:	-	
Calcium	mg/L	D	-		385.	:	-		228.	:	-		223.	:
Chromium	mg/L	T	<0.13	:	-		<0.009	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.13	:	-		<0.009	:	-		<0.19	:
Cobalt	mg/L	T	<0.18	:	-		0.322	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		0.186	:	-		0.327	:	-		<0.37	:
Copper	mg/L	T	<0.27	:	-		1.11	:	-		0.704	J	-	
Copper	mg/L	D	-		<0.27	:	-		1.12	:	-		0.735	J
Iron	mg/L	T	<2.93	J	-		<0.299	J	-		<0.333	:	-	
Iron	mg/L	D	-		<2.93	:	-		<0.299	J	-		<0.333	:
Lead	mg/L	T	<0.004	:	-		0.0076	J	-		0.0059	:	-	
Lead	mg/L	D	-		<0.004	:	-		0.0053	J	-		0.0046	:
Magnesium	mg/L	T	57.5	:	-		166.	:	-		168.	:	-	
Magnesium	mg/L	D	-		60.9	:	-		166.	:	-		171.	:
Manganese	mg/L	T	28.2	:	-		38.	:	-		37.5	:	-	
Manganese	mg/L	D	-		29.5	:	-		37.8	:	-		37.8	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.018	:	-		<0.016	:	-		<0.017	:	-	
Molybdenum	mg/L	D	-		<0.0163	:	-		<0.016	:	-		<0.017	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-23A	MMW-23A	MMW-27A	MMW-27A	MMW-27A	MMW-27A
			Sample Date	4/20/2004	4/20/2004	5/7/2003	5/7/2003	7/23/2003	7/23/2003
			Sample ID	MMW-23A-T01N-GR	MMW-23A-D01N-GR	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-27A-T01N-GR	MMW-27A-D01N-GR
				WGW1	WGW1	WGW4	WGW4	WGW4	WGW4
Nickel	mg/L	T		0.386 :	-	0.786 :	-	<0.44 J	-
Nickel	mg/L	D		-	0.454 :	-	0.772 :	-	0.55 J
Potassium	mg/L	T		<15.5 :	-	<3.27 :	-	<37.1 :	-
Potassium	mg/L	D		-	<15.5 :	-	<3.27 :	-	<37.1 :
Selenium	mg/L	T		<0.036 :	-	0.0109 :	-	<0.008 :	-
Selenium	mg/L	D		-	<0.036 :	-	0.0093 :	-	<0.008 J
Silver	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 J	-
Silver	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 J
Sodium	mg/L	T		<32.8 :	-	27.6 :	-	<53.2 :	-
Sodium	mg/L	D		-	<83.6 :	-	29.8 :	-	<53.2 :
Thallium	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T		<0.002 :	-	<0.001 :	-	<0.002 :	-
Vanadium	mg/L	D		-	<0.002 :	-	<0.001 :	-	<0.002 :
Zinc	mg/L	T		6.2 :	-	7.31 :	-	7.16 :	-
Zinc	mg/L	D		-	6.52 :	-	7.3 :	-	7.26 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	<0.00025 :	-	-	-
Pentaerythritol tetranitrate	mg/L	T		-	-	<0.01 :	-	-	-
Isotopes									
Delta 34S	per mil	D		-	-7.1 :	-	-	-	-
Delta D	per mil	T		-91.6 :	-	-	-	-	-
Delta O-18	per mil	T		-12.3 :	-	-	-	-	-
Lead	mg/L	T		<0.004 :	-	0.0076 J	-	0.0059 :	-
Lead	mg/L	D		-	<0.004 :	-	0.0053 J	-	0.0046 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-27A	MMW-27A	MMW-27A	MMW-27A	MMW-27A	MMW-27A
			Sample Date	8/12/2003	8/12/2003	10/19/2003	10/19/2003	1/11/2004	1/11/2004
			Sample ID	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-27A-T01N-GR	MMW-27A-D01N-GR
			Exposure Area	WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		2.59 :	-	5.12 :	-	3.8 :	-
Eh	millivolts	T		705.8 :	-	210. :	-	446.8 :	-
pH	SU	T		4.3 J	-	4.4 J	-	4.4 J	-
Specific Conductance	uS/cm	T		2240. :	-	2304. :	-	2080. :	-
Temperature	Celsius	T		9.97 :	-	11.31 :	-	7.05 :	-
Turbidity	NTU	T		35.9 :	-	26.3 :	-	6.1 :	-
General Chemistry									
Ammonia	mg/L	T		0.061 :	-	<0.082 J	-	<0.098 J	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		28. :	-	21.3 :	-	21.2 :	-
Fluoride	mg/L	T		35. :	-	31.8 :	-	28.8 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		4.6 J	-	3.8 J	-	3.6 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		0.031 :	-	<0.035 :	-	<0.035 J	-
Phosphorus	mg/L	T		0.073 :	-	0.043 :	-	-	-
Sulfate	mg/L	T		1470. J	-	1300. J	-	1280. J	-
Total Alkalinity	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		2600. :	-	2150. :	-	2080. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.6 J	-	<1. J	-	<1. :	-
Total Suspended Solids	mg/L	T		10.5 :	-	2.3 :	-	2.5 :	-
Laboratory Parameters									
pH	SU	T		4.3 J	-	4.4 J	-	4.4 J	-
Specific Conductance	umhos/cm	T		2070. J	-	1860. J	-	1940. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1150. :	-	1090. :	-	1030. :	-
Hardness	mg/L	D		-	1190. :	-	1070. :	-	1060. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-27A 8/12/2003 MMW-27A-T01N-GR WGW4		MMW-27A 8/12/2003 MMW-27A-D01N-GR WGW4		MMW-27A 10/19/2003 MMW-27A-T01N-GR WGW4		MMW-27A 10/19/2003 MMW-27A-D01N-GR WGW4		MMW-27A 1/11/2004 MMW-27A-T01N-GR WGW4		MMW-27A 1/11/2004 MMW-27A-D01N-GR WGW4	
Aluminum	mg/L	T	71.4	:	-		61.6	:	-		57.9	:	-	
Aluminum	mg/L	D	-		74.9	:	-		60.4	:	-		59.9	:
Antimony	mg/L	T	<0.038	:	-		<0.052	:	-		<0.029	:	-	
Antimony	mg/L	D	-		<0.038	:	-		<0.052	:	-		<0.029	:
Arsenic	mg/L	T	<0.0275	:	-		<0.041	:	-		<0.028	:	-	
Arsenic	mg/L	D	-		<0.024	:	-		<0.041	:	-		<0.028	:
Barium	mg/L	T	<0.073	:	-		<0.115	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.073	:	-		<0.115	:	-		<0.053	:
Beryllium	mg/L	T	0.0174	:	-		0.0121	J	-		0.0144	:	-	
Beryllium	mg/L	D	-		0.0174	:	-		0.0126	J	-		0.0149	:
Boron	mg/L	T	<0.046	:	-		<0.063	:	-		<0.023	:	-	
Boron	mg/L	D	-		<0.046	:	-		<0.063	:	-		<0.023	:
Cadmium	mg/L	T	<0.06	:	-		<0.13	:	-		<0.07	J	-	
Cadmium	mg/L	D	-		0.0654	:	-		<0.13	:	-		0.071	J
Calcium	mg/L	T	210.	:	-		200.	:	-		187.	:	-	
Calcium	mg/L	D	-		217.	:	-		195.	:	-		193.	:
Chromium	mg/L	T	<0.14	:	-		<0.23	J	-		<0.11	:	-	
Chromium	mg/L	D	-		<0.14	:	-		<0.23	J	-		<0.11	:
Cobalt	mg/L	T	0.211	:	-		0.372	:	-		<0.31	:	-	
Cobalt	mg/L	D	-		0.237	:	-		0.345	:	-		<0.31	:
Copper	mg/L	T	0.923	:	-		1.02	:	-		0.801	:	-	
Copper	mg/L	D	-		1.02	:	-		1.04	:	-		0.784	:
Iron	mg/L	T	<3.33	:	-		<4.55	:	-		<3.73	:	-	
Iron	mg/L	D	-		<3.33	:	-		<4.55	:	-		<3.73	:
Lead	mg/L	T	0.011	:	-		0.0055	:	-		0.0053	:	-	
Lead	mg/L	D	-		0.0054	:	-		0.0053	:	-		0.0049	:
Magnesium	mg/L	T	152.	:	-		144.	:	-		137.	:	-	
Magnesium	mg/L	D	-		158.	:	-		142.	:	-		141.	:
Manganese	mg/L	T	34.3	:	-		33.4	:	-		30.1	:	-	
Manganese	mg/L	D	-		35.5	:	-		32.7	:	-		31.	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	<0.016	:	-		<0.011	J	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.011	J	-		<0.024	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-27A	8/12/2003	MMW-27A-T01N-GR		MMW-27A	8/12/2003	MMW-27A-D01N-GR		MMW-27A	10/19/2003	MMW-27A-T01N-GR		MMW-27A	10/19/2003	MMW-27A-D01N-GR	
			GW				GW				GW				GW			
			4				4				4				4			
Nickel	mg/L	T	0.674	:			-		0.703	:	0.58	J			-		<0.45	J
Nickel	mg/L	D	-		0.703	:	-				-		<0.45	J	-		1.24	J
Potassium	mg/L	T	<39.3	:			-		<63.8	:	-				<24.3	:		
Potassium	mg/L	D	-		<39.3	:	-				<63.8	:	-		-		<24.3	:
Selenium	mg/L	T	0.0079	:			-		0.0112	:	-				0.0118	J		
Selenium	mg/L	D	-		0.0077	:	-				0.0093	:	-		-		0.0104	:
Silver	mg/L	T	<0.001	:			-		<0.001	:	-				<0.001	:		
Silver	mg/L	D	-		<0.001	:	-				<0.001	:	-		-		0.0012	:
Sodium	mg/L	T	<47.3	:			-		<99.1	:	-				<49.	:		
Sodium	mg/L	D	-		<47.3	:	-				<99.1	:	-		-		<49.	:
Thallium	mg/L	T	<0.001	:			-		<0.001	:	-				<0.001	:		
Thallium	mg/L	D	-		<0.001	:	-				<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	<0.001	:			-		<0.001	:	-				<0.002	:		
Vanadium	mg/L	D	-		<0.001	:	-				<0.001	:	-		-		<0.002	:
Zinc	mg/L	T	6.93	:			-		<7.06	:	-				6.13	:		
Zinc	mg/L	D	-		7.23	:	-				<6.63	J	-		-		6.34	:
Isotopes																		
Lead	mg/L	T	0.011	:			-		0.0055	:	-				0.0053	:		
Lead	mg/L	D	-		0.0054	:	-				0.0053	:	-		-		0.0049	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-27A	MMW-27A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	4/21/2004	4/21/2004	11/12/2002	11/12/2002	11/12/2002	11/12/2002
			Sample ID	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-D01N-GR
			Exposure Area	W GW4	W GW4	WRE GW4	W GW4	WRE GW4	W GW4
Field Measurements									
DO	mg/L	T		3.29 :	-	-	4.29 :	-	-
Eh	millivolts	T		496.7 :	-	-	542.1 :	-	-
pH	SU	T		4.7 J	-	-	2.93 :	-	-
Specific Conductance	uS/cm	T		1981. :	-	-	7561. :	-	-
Temperature	Celsius	T		9.04 :	-	-	13.34 :	-	-
Turbidity	NTU	T		2.2 :	-	-	44.2 :	-	-
General Chemistry									
Ammonia	mg/L	T		<0.062 :	-	-	0.46 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Chloride	mg/L	T		24.8 :	-	-	43.3 :	-	-
Fluoride	mg/L	T		27.4 :	-	82.4 J	-	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Nitrate	mg/L	T		2.9 J	-	-	<0.4 :	-	-
Nitrite	mg/L	T		<0.005 J	-	-	0.013 :	-	-
Phosphate, Ortho As P	mg/L	T		0.03 J	-	-	<0.01 :	-	-
Phosphorus	mg/L	T		0.042 J	-	-	<0.01 :	-	-
Sulfate	mg/L	T		1280. :	-	6400. J	-	-	-
Total Alkalinity	mg/L	T		<1. :	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		1850. :	-	-	9700. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	1.4 :	-	-
Total Organic Carbon	mg/L	T		1. J	-	-	4. :	-	-
Total Suspended Solids	mg/L	T		<1.4 J	-	-	7.6 :	-	-
Laboratory Parameters									
pH	SU	T		4.7 J	-	-	2.93 :	-	-
Specific Conductance	umhos/cm	T		1790. J	-	-	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		966. :	-	-	-	-	-
Hardness	mg/L	D		-	947. :	-	-	5020. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-27A	MMW-27A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	4/21/2004	4/21/2004	11/12/2002	11/12/2002	11/12/2002	11/12/2002
			Sample ID	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-D01N-GR
				W GW4	W GW4	WRE GW4	W GW4	WRE GW4	W GW4
Aluminum	mg/L	T		54.5 :	-	-	-	-	-
Aluminum	mg/L	D		-	53.4 :	-	-	418. :	-
Antimony	mg/L	T		<0.053 :	-	-	-	-	-
Antimony	mg/L	D		-	<0.053 :	-	-	<0.028 :	-
Arsenic	mg/L	T		<0.037 :	-	-	-	-	-
Arsenic	mg/L	D		-	<0.037 :	-	-	<0.023 :	-
Barium	mg/L	T		<0.049 :	-	-	-	-	-
Barium	mg/L	D		-	<0.049 :	-	-	<0.048 :	-
Beryllium	mg/L	T		0.0166 :	-	-	-	-	-
Beryllium	mg/L	D		-	0.0147 :	-	-	0.147 :	-
Boron	mg/L	T		<0.036 :	-	-	-	-	-
Boron	mg/L	D		-	<0.036 :	-	-	<0.027 :	-
Cadmium	mg/L	T		<0.1 :	-	-	-	-	-
Cadmium	mg/L	D		-	<0.1 :	-	-	0.0931 :	-
Calcium	mg/L	T		178. :	-	-	-	-	-
Calcium	mg/L	D		-	175. :	-	-	485. :	-
Chromium	mg/L	T		<0.13 :	-	-	-	-	-
Chromium	mg/L	D		-	<0.13 :	-	-	<0.16 J	-
Cobalt	mg/L	T		0.305 :	-	-	-	-	-
Cobalt	mg/L	D		-	0.22 :	-	-	2.8 :	-
Copper	mg/L	T		0.886 :	-	-	-	-	-
Copper	mg/L	D		-	0.873 :	-	-	4.62 :	-
Iron	mg/L	T		<2.93 J	-	-	-	-	-
Iron	mg/L	D		-	<2.93 :	-	-	<9. :	-
Lead	mg/L	T		0.005 :	-	-	-	-	-
Lead	mg/L	D		-	0.0046 :	-	-	0.0055 :	-
Magnesium	mg/L	T		126. :	-	-	-	-	-
Magnesium	mg/L	D		-	124. :	-	-	925. :	-
Manganese	mg/L	T		28.4 :	-	-	-	-	-
Manganese	mg/L	D		-	28. :	-	-	248. :	-
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T		<0.014 :	-	-	-	-	-
Molybdenum	mg/L	D		-	<0.014 :	-	-	<0.011 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-27A	MMW-27A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	4/21/2004	4/21/2004	11/12/2002	11/12/2002	11/12/2002	11/12/2002
			Sample ID	MMW-27A-T01N-GR	MMW-27A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-D01N-GR
			Exposure Area	W GW4	W GW4	WRE GW4	W GW4	WRE GW4	W GW4
Nickel	mg/L	T		0.748 :	-	-	-	-	-
Nickel	mg/L	D		-	0.682 :	-	-	4.87 :	-
Potassium	mg/L	T		<15.5 :	-	-	-	-	-
Potassium	mg/L	D		-	<15.5 :	-	-	<31.4 J	-
Selenium	mg/L	T		<0.007 :	-	-	-	-	-
Selenium	mg/L	D		-	<0.007 :	-	-	0.0381 :	-
Silver	mg/L	T		<0.001 J	-	-	-	-	-
Silver	mg/L	D		-	<0.001 J	-	-	<0.001 :	-
Sodium	mg/L	T		<32.8 :	-	-	-	-	-
Sodium	mg/L	D		-	<32.8 :	-	-	69.3 :	-
Thallium	mg/L	T		<0.001 :	-	-	-	-	-
Thallium	mg/L	D		-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T		<0.002 :	-	-	-	-	-
Vanadium	mg/L	D		-	<0.002 :	-	-	<0.002 :	-
Zinc	mg/L	T		5.6 :	-	-	-	-	-
Zinc	mg/L	D		-	5.24 :	-	-	30.2 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T		-	-	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T		-	-	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T		-	-	-	<0.01 :	-	-
Isotopes									
Delta D	per mil	T		-93.8 :	-	-	-	-	-
Delta O-18	per mil	T		-12.9 :	-	-	-	-	-
Lead	mg/L	T		0.005 :	-	-	-	-	-
Lead	mg/L	D		-	0.0046 :	-	-	0.0055 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	1/13/2003	1/13/2003	1/13/2003	4/8/2003	4/8/2003	7/24/2003
			Sample ID	MMW-38A-T01N-GW	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-T01N-GR
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		4.72 :	-	-	6.03 :	-	5.78 :
Eh	millivolts	T		566.4 :	-	-	540. :	-	514.2 :
pH	SU	T		-	2.8 :	-	4.5 J	-	3.2 J
Specific Conductance	uS/cm	T		-	7142. :	-	6603. :	-	6666. :
Temperature	Celsius	T		-	20.5 :	-	18.6 :	-	24.58 :
Turbidity	NTU	T		0.2 :	-	-	0. :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	0.51 :	-	<0.44 :	-	<0.32 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	33.1 :	-	32.4 :	-	29.4 :
Fluoride	mg/L	T		-	0.71 :	-	83.2 :	-	88.7 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.5 :	-	<0.49 J	-	0.4 :
Nitrite	mg/L	T		-	0.01 :	-	<0.005 J	-	0.02 :
Phosphate, Ortho As P	mg/L	T		-	<0.014 J	-	<0.01 J	-	<0.011 :
Phosphorus	mg/L	T		-	0.014 :	-	0.076 :	-	0.041 :
Sulfate	mg/L	T		-	6830. J	-	5830. J	-	6100. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	10500. J	-	10300. J	-	12800. J
Total Kjeldahl Nitrogen	mg/L	T		-	<0.69 :	-	0.56 J	-	0.49 :
Total Organic Carbon	mg/L	T		-	3.9 :	-	3.6 J	-	4.7 J
Total Suspended Solids	mg/L	T		-	5. :	-	<5.2 :	-	6.4 :
Laboratory Parameters									
pH	SU	T		-	2.8 :	-	4.5 J	-	3.2 J
Specific Conductance	umhos/cm	T		-	-	-	6290. J	-	6900. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	4600. :	-	4000. :	-	4010. :
Hardness	mg/L	D		-	-	4690. :	-	3840. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID													
			MMW-38A	1/13/2003	MMW-38A-T01N-GW	GW4	MMW-38A	1/13/2003	MMW-38A-T01N-GR	GW4	MMW-38A	1/13/2003	MMW-38A-D01N-GR	GW4	MMW-38A	4/8/2003	MMW-38A-T01N-GR	GW4
Aluminum	mg/L	T	-				373.	:			-				320.	:		
Aluminum	mg/L	D	-				-				380.	:			-			
Antimony	mg/L	T	-				<0.028	:			-				<0.003	:		
Antimony	mg/L	D	-				-				<0.028	:			-			
Arsenic	mg/L	T	-				<0.023	:			-				<0.04	:		
Arsenic	mg/L	D	-				-				<0.023	:			-			
Barium	mg/L	T	-				<0.048	:			-				<0.123	:		
Barium	mg/L	D	-				-				<0.048	:			-			
Beryllium	mg/L	T	-				0.138	:			-				0.166	J		
Beryllium	mg/L	D	-				-				0.137	:			-			
Boron	mg/L	T	-				<0.0472	:			-				<0.084	:		
Boron	mg/L	D	-				-				<0.041	:			-			
Cadmium	mg/L	T	-				0.148	:			-				0.0804	:		
Cadmium	mg/L	D	-				-				0.162	:			-			
Calcium	mg/L	T	-				485.	:			-				455.	:		
Calcium	mg/L	D	-				-				493.	:			-			
Chromium	mg/L	T	-				<0.16	:			-				<0.01	:		
Chromium	mg/L	D	-				-				<0.16	:			-			
Cobalt	mg/L	T	-				2.52	:			-				1.69	:		
Cobalt	mg/L	D	-				-				2.62	:			-			
Copper	mg/L	T	-				3.71	:			-				3.03	:		
Copper	mg/L	D	-				-				3.82	:			-			
Iron	mg/L	T	-				<11.1	:			-				<14.3	:		
Iron	mg/L	D	-				-				<15.3	:			-			
Lead	mg/L	T	-				0.0054	:			-				<0.0045	:		
Lead	mg/L	D	-				-				0.0055	:			-			
Magnesium	mg/L	T	-				822.	:			-				696.	:		
Magnesium	mg/L	D	-				-				841.	:			-			
Manganese	mg/L	T	-				239.	:			-				221.	:		
Manganese	mg/L	D	-				-				243.	:			-			
Mercury	mg/L	T	-				<0.0001	:			-				<0.0001	:		
Mercury	mg/L	D	-				-				<0.0001	:			-			
Molybdenum	mg/L	T	-				<0.011	:			-				<0.023	:		
Molybdenum	mg/L	D	-				-				<0.011	:			-			

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID													
			MMW-38A	4/8/2003	MMW-38A-D01N-GR	GW4	MMW-38A	7/24/2003	MMW-38A-T01N-GR	GW4								
Aluminum	mg/L	T	-				336.	:										
Aluminum	mg/L	D	-				309.	:										
Antimony	mg/L	T	-				<0.038	:										
Antimony	mg/L	D	-				<0.003	:										
Arsenic	mg/L	T	-				0.0288	:										
Arsenic	mg/L	D	-				<0.04	:										
Barium	mg/L	T	-				<0.073	:										
Barium	mg/L	D	-				<0.123	:										
Beryllium	mg/L	T	-				0.148	:										
Beryllium	mg/L	D	-				0.168	:										
Boron	mg/L	T	-				<0.046	:										
Boron	mg/L	D	-				<0.084	:										
Cadmium	mg/L	T	-				0.126	:										
Cadmium	mg/L	D	-				0.0829	:										
Calcium	mg/L	T	-				452.	:										
Calcium	mg/L	D	-				436.	:										
Chromium	mg/L	T	-				<0.06	:										
Chromium	mg/L	D	-				<0.01	:										
Cobalt	mg/L	T	-				2.13	:										
Cobalt	mg/L	D	-				1.72	:										
Copper	mg/L	T	-				2.98	:										
Copper	mg/L	D	-				2.8	:										
Iron	mg/L	T	-				12.	:										
Iron	mg/L	D	-				<11.9	:										
Lead	mg/L	T	-				0.0059	:										
Lead	mg/L	D	-				<0.0044	:										
Magnesium	mg/L	T	-				700.	:										
Magnesium	mg/L	D	-				667.	:										
Manganese	mg/L	T	-				221.	:										
Manganese	mg/L	D	-				204.	:										
Mercury	mg/L	T	-				<0.00011	:										
Mercury	mg/L	D	-				<0.0001	:										
Molybdenum	mg/L	T	-				<0.016	:										
Molybdenum	mg/L	D	-				<0.023	:										

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MMW-38A 1/13/2003 MMW-38A-T01N-GW GW4	MMW-38A 1/13/2003 MMW-38A-T01N-GR GW4	MMW-38A 1/13/2003 MMW-38A-D01N-GR GW4	MMW-38A 4/8/2003 MMW-38A-T01N-GR GW4	MMW-38A 4/8/2003 MMW-38A-D01N-GR GW4	MMW-38A 7/24/2003 MMW-38A-T01N-GR GW4
Nickel	mg/L	T	-	4.61 :	-	3.12 J	-	3.96 :
Nickel	mg/L	D	-	-	4.71 :	-	3.15 :	-
Potassium	mg/L	T	-	<31.4 :	-	<3.26 :	-	<25. :
Potassium	mg/L	D	-	-	<31.4 :	-	<3.26 :	-
Selenium	mg/L	T	-	0.029 :	-	0.0227 J	-	0.0527 :
Selenium	mg/L	D	-	-	0.0233 :	-	0.0321 J	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 J
Silver	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	70.8 :	-	42.6 :	-	41.9 :
Sodium	mg/L	D	-	-	75.3 :	-	43.8 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	0.0029 :	-	0.002 :	-	<0.002 :
Vanadium	mg/L	D	-	-	0.0023 :	-	0.0024 :	-
Zinc	mg/L	T	-	28.8 :	-	26.8 :	-	27. :
Zinc	mg/L	D	-	-	29.3 :	-	24.5 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	0.0054 :	-	<0.0045 :	-	0.0059 :
Lead	mg/L	D	-	-	0.0055 :	-	<0.0044 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	7/24/2003	10/22/2003	10/23/2003	10/23/2003	1/15/2004	1/15/2004
			Sample ID	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR
			Exposure Area	WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		-	-	6.34 :	-	2.69 :	-
Eh	millivolts	T		-	-	541.5 :	-	558.9 :	-
pH	SU	T		-	-	3.1 J	-	3.2 J	-
Specific Conductance	uS/cm	T		-	-	7088. :	-	6948. :	-
Temperature	Celsius	T		-	-	19.18 :	-	19.13 :	-
Turbidity	NTU	T		-	-	1.1 :	-	0.9 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	0.33 J	-	0.35 J	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Chloride	mg/L	T		-	-	31.1 :	-	40.7 :	-
Fluoride	mg/L	T		-	-	104. :	-	89.2 :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		-	-	<0.4 J	-	1.1 J	-
Nitrite	mg/L	T		-	-	0.0083 J	-	0.0092 J	-
Phosphate, Ortho As P	mg/L	T		-	-	<0.015 J	-	<0.022 J	-
Phosphorus	mg/L	T		-	-	0.13 :	-	0.062 :	-
Sulfate	mg/L	T		-	-	7650. J	-	6380. :	-
Total Alkalinity	mg/L	T		-	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	-	11400. J	-	11300. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	4.4 :	-	-	0.45 :	-
Total Organic Carbon	mg/L	T		-	-	4.6 J	-	4.6 :	-
Total Suspended Solids	mg/L	T		-	-	7.3 :	-	<1.8 :	-
Laboratory Parameters									
pH	SU	T		-	-	3.1 J	-	3.2 J	-
Specific Conductance	umhos/cm	T		-	-	6710. J	-	6230. J	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	-	4970. :	-	4580. :	-
Hardness	mg/L	D		3860. :	-	-	4980. :	-	4520. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	7/24/2003	10/22/2003	10/23/2003	10/23/2003	1/15/2004	1/15/2004
			Sample ID	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Aluminum	mg/L	T		-	-	457. :	-	384. :	-
Aluminum	mg/L	D		324. :	-	-	455. :	-	377. :
Antimony	mg/L	T		-	-	<0.052 :	-	<0.029 :	-
Antimony	mg/L	D		<0.038 :	-	-	<0.052 :	-	<0.029 :
Arsenic	mg/L	T		-	-	<0.041 :	-	0.036 :	-
Arsenic	mg/L	D		0.0396 :	-	-	<0.041 :	-	<0.028 :
Barium	mg/L	T		-	-	<0.115 :	-	<0.053 :	-
Barium	mg/L	D		<0.073 :	-	-	<0.115 :	-	<0.053 :
Beryllium	mg/L	T		-	-	0.146 :	-	0.142 :	-
Beryllium	mg/L	D		0.163 :	-	-	0.145 :	-	0.14 :
Boron	mg/L	T		-	-	<0.063 :	-	<0.0524 :	-
Boron	mg/L	D		<0.046 :	-	-	<0.063 :	-	<0.0473 :
Cadmium	mg/L	T		-	-	0.166 :	-	0.125 J	-
Cadmium	mg/L	D		0.123 :	-	-	0.161 :	-	0.118 :
Calcium	mg/L	T		-	-	482. :	-	486. :	-
Calcium	mg/L	D		436. :	-	-	483. :	-	481. :
Chromium	mg/L	T		-	-	<0.23 J	-	<0.57 :	-
Chromium	mg/L	D		<0.06 :	-	-	<0.23 J	-	<0.57 :
Cobalt	mg/L	T		-	-	3.03 :	-	2.5 J	-
Cobalt	mg/L	D		2.04 :	-	-	3.02 :	-	2.48 :
Copper	mg/L	T		-	-	4.83 :	-	3.25 :	-
Copper	mg/L	D		2.9 :	-	-	4.77 :	-	3.22 :
Iron	mg/L	T		-	-	12.2 :	-	<14. :	-
Iron	mg/L	D		11.3 :	-	-	12.9 :	-	<16.8 :
Lead	mg/L	T		-	-	0.0047 :	-	0.0049 :	-
Lead	mg/L	D		0.0058 :	-	-	0.0048 :	-	0.0047 :
Magnesium	mg/L	T		-	-	915. :	-	817. :	-
Magnesium	mg/L	D		674. :	-	-	917. :	-	806. :
Manganese	mg/L	T		-	-	259. :	-	241. :	-
Manganese	mg/L	D		213. :	-	-	259. :	-	238. :
Mercury	mg/L	T		-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		<0.00017 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		-	-	<0.011 :	-	<0.024 :	-
Molybdenum	mg/L	D		<0.016 :	-	-	<0.011 :	-	<0.024 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A
			Sample Date	7/24/2003	10/22/2003	10/23/2003	10/23/2003	1/15/2004	1/15/2004
			Sample ID	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38A-T01N-GR	MMW-38A-D01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Nickel	mg/L	T		-	-	5.21 :	-	4.35 :	-
Nickel	mg/L	D		3.84 :	-	-	5.3 :	-	4.35 :
Potassium	mg/L	T		-	-	<63.8 :	-	<110. :	-
Potassium	mg/L	D		<25. :	-	-	<63.8 :	-	<110. :
Selenium	mg/L	T		-	-	0.0556 :	-	0.0662 J	-
Selenium	mg/L	D		0.049 J	-	-	0.0574 :	-	0.0652 :
Silver	mg/L	T		-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D		<0.001 J	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T		-	-	<99.1 :	-	<92. :	-
Sodium	mg/L	D		47.2 :	-	-	<99.1 :	-	<92. :
Thallium	mg/L	T		-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D		<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T		-	-	<0.001 :	-	<0.002 :	-
Vanadium	mg/L	D		<0.002 :	-	-	<0.001 :	-	<0.002 :
Zinc	mg/L	T		-	-	30.9 :	-	28.2 :	-
Zinc	mg/L	D		26. :	-	-	31.4 :	-	28. :
Isotopes									
Lead	mg/L	T		-	-	0.0047 :	-	0.0049 :	-
Lead	mg/L	D		0.0058 :	-	-	0.0048 :	-	0.0047 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-39A
			Sample Date	2/23/2004	2/23/2004	3/22/2004	4/19/2004	4/19/2004	11/13/2002
			Sample ID	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38-A	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-39A-T01N-GR
			Exposure Area	W GW4	W GW4	GW4	W GW4	W GW4	WRE GW4
Field Measurements									
DO	mg/L	T		5.7 :	-	-	6.34 :	-	-
Eh	millivolts	T		541.2 :	-	-	554. :	-	-
pH	SU	T		3.05 :	-	-	3.9 J	-	-
Specific Conductance	uS/cm	T		6924. :	-	-	6348. :	-	-
Temperature	Celsius	T		21.31 :	-	-	22.34 :	-	-
Turbidity	NTU	T		0.6 :	-	-	0.1 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.32 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Chloride	mg/L	T		-	-	-	58.9 J	-	-
Fluoride	mg/L	T		93.3 :	-	-	88.8 :	-	150. J
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Nitrate	mg/L	T		-	-	-	0.35 J	-	-
Nitrite	mg/L	T		-	-	-	0.0098 J	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	<0.01 J	-	-
Phosphorus	mg/L	T		-	-	-	0.056 :	-	-
Sulfate	mg/L	T		6590. :	-	-	6490. :	-	-
Total Alkalinity	mg/L	T		-	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		9850. :	-	-	9220. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.5 :	-	-
Total Organic Carbon	mg/L	T		-	-	-	4.4 J	-	-
Total Suspended Solids	mg/L	T		5. :	-	-	<4.9 J	-	-
Laboratory Parameters									
pH	SU	T		3.05 :	-	-	3.9 J	-	-
Specific Conductance	umhos/cm	T		-	-	-	6190. J	-	-
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		4360. :	-	-	3940. :	-	-
Hardness	mg/L	D		-	4180. :	-	-	4390. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-38A 2/23/2004 MMW-38A-T01N-GR W GW4		MMW-38A 2/23/2004 MMW-38A-D01N-GR W GW4		MMW-38A 3/22/2004 MMW-38-A GW4		MMW-38A 4/19/2004 MMW-38A-T01N-GR W GW4		MMW-38A 4/19/2004 MMW-38A-D01N-GR W GW4		MMW-39A 11/13/2002 MMW-39A-T01N-GR WRE GW4	
Aluminum	mg/L	T	361.	:	-		-		329.	:	-		-	
Aluminum	mg/L	D	-		347.	:	-		-		366.	:	-	
Antimony	mg/L	T	<0.029	:	-		-		<0.053	:	-		-	
Antimony	mg/L	D	-		<0.029	:	-		-		<0.053	:	-	
Arsenic	mg/L	T	<0.0416	:	-		-		<0.037	:	-		-	
Arsenic	mg/L	D	-		<0.0308	:	-		-		<0.0405	:	-	
Barium	mg/L	T	<0.053	:	-		-		<0.049	:	-		-	
Barium	mg/L	D	-		<0.053	:	-		-		<0.049	:	-	
Beryllium	mg/L	T	0.131	:	-		-		0.149	:	-		-	
Beryllium	mg/L	D	-		0.127	:	-		-		0.15	:	-	
Boron	mg/L	T	0.0328	:	-		-		<0.0839	:	-		-	
Boron	mg/L	D	-		0.0356	:	-		-		<0.0734	:	-	
Cadmium	mg/L	T	0.0836	:	-		-		<0.1	:	-		-	
Cadmium	mg/L	D	-		0.0904	J	-		-		0.125	J	-	
Calcium	mg/L	T	472.	:	-		-		440.	:	-		-	
Calcium	mg/L	D	-		454.	:	-		-		490.	:	-	
Chromium	mg/L	T	0.123	:	-		-		<0.13	:	-		-	
Chromium	mg/L	D	-		0.124	:	-		-		0.155	:	-	
Cobalt	mg/L	T	2.32	:	-		-		2.03	:	-		-	
Cobalt	mg/L	D	-		2.28	:	-		-		2.29	:	-	
Copper	mg/L	T	2.94	:	-		-		2.87	:	-		-	
Copper	mg/L	D	-		2.86	:	-		-		3.15	:	-	
Iron	mg/L	T	10.7	:	-		-		10.2	J	-		-	
Iron	mg/L	D	-		10.5	:	-		-		11.3	J	-	
Lead	mg/L	T	<0.0059	:	-		-		0.0055	:	-		-	
Lead	mg/L	D	-		<0.006	:	-		-		0.0054	:	-	
Magnesium	mg/L	T	773.	:	-		-		691.	:	-		-	
Magnesium	mg/L	D	-		739.	:	-		-		770.	:	-	
Manganese	mg/L	T	233.	:	-		-		212.	:	-		-	
Manganese	mg/L	D	-		224.	:	-		-		236.	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		-	
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	<0.024	:	-		-		<0.014	:	-		-	
Molybdenum	mg/L	D	-		<0.024	:	-		-		<0.014	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-38A 2/23/2004 MMW-38A-T01N-GR W GW4		MMW-38A 2/23/2004 MMW-38A-D01N-GR W GW4		MMW-38A 3/22/2004 MMW-38-A GW4		MMW-38A 4/19/2004 MMW-38A-T01N-GR W GW4		MMW-38A 4/19/2004 MMW-38A-D01N-GR W GW4		MMW-39A 11/13/2002 MMW-39A-T01N-GR WRE GW4	
Nickel	mg/L	T	4.48	:	-		-		3.47	:	-		-	
Nickel	mg/L	D	-		4.18	:	-		-		4.01	:	-	
Potassium	mg/L	T	<24.3	:	-		-		<15.5	:	-		-	
Potassium	mg/L	D	-		<24.3	:	-		-		<15.5	:	-	
Selenium	mg/L	T	0.0375	:	-		-		0.0399	:	-		-	
Selenium	mg/L	D	-		0.0351	:	-		-		0.0419	:	-	
Silver	mg/L	T	<0.001	:	-		-		<0.001	J	-		-	
Silver	mg/L	D	-		<0.001	:	-		-		<0.001	J	-	
Sodium	mg/L	T	84.8	:	-		-		<55.5	:	-		-	
Sodium	mg/L	D	-		<49.	:	-		-		<51.1	:	-	
Thallium	mg/L	T	<0.0019	:	-		-		<0.001	:	-		-	
Thallium	mg/L	D	-		<0.0019	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.0055	:	-		-		<0.002	:	-		-	
Vanadium	mg/L	D	-		<0.0057	:	-		-		<0.002	:	-	
Zinc	mg/L	T	28.1	:	-		-		24.7	:	-		-	
Zinc	mg/L	D	-		27.	:	-		-		27.4	:	-	
Volatile Organics														
Hexachlorobutadiene	mg/L	T	-		-		-		-		-		<0.01	:
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	-		-		-		-		-		<0.01	:
2,4,5-Trichlorophenol	mg/L	T	-		-		-		-		-		<0.026	:
2,4,6-Trichlorophenol	mg/L	T	-		-		-		-		-		<0.01	:
2,4-Dichlorophenol	mg/L	T	-		-		-		-		-		<0.01	:
2,4-Dimethylphenol	mg/L	T	-		-		-		-		-		<0.01	:
2,4-Dinitrophenol	mg/L	T	-		-		-		-		-		<0.026	:
2,4-Dinitrotoluene	mg/L	T	-		-		-		-		-		<0.01	:
2,6-Dinitrotoluene	mg/L	T	-		-		-		-		-		<0.01	:
2-Chloronaphthalene	mg/L	T	-		-		-		-		-		<0.01	:
2-Chlorophenol	mg/L	T	-		-		-		-		-		<0.01	:
2-Methylnaphthalene	mg/L	T	-		-		-		-		-		<0.01	:
2-Methylphenol	mg/L	T	-		-		-		-		-		<0.01	:
2-Nitroaniline	mg/L	T	-		-		-		-		-		<0.026	:
2-Nitrophenol	mg/L	T	-		-		-		-		-		<0.01	:
3,3-Dichlorobenzidine	mg/L	T	-		-		-		-		-		<0.01	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-38A	MMW-39A
			Sample Date	2/23/2004	2/23/2004	3/22/2004	4/19/2004	4/19/2004	11/13/2002
			Sample ID	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-38-A	MMW-38A-T01N-GR	MMW-38A-D01N-GR	MMW-39A-T01N-GR
				WGW4	WGW4	GW4	WGW4	WGW4	WREGW4
3-Nitroaniline	mg/L	T		-	-	-	-	-	<0.026 :
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	-	<0.026 :
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	-	<0.01 :
4-Chloroaniline	mg/L	T		-	-	-	-	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	-	<0.01 :
4-Methylphenol	mg/L	T		-	-	-	-	-	<0.01 :
4-Nitroaniline	mg/L	T		-	-	-	-	-	<0.026 :
4-Nitrophenol	mg/L	T		-	-	-	-	-	<0.026 :
Acenaphthene	mg/L	T		-	-	-	-	-	<0.01 :
Acenaphthylene	mg/L	T		-	-	-	-	-	<0.01 :
Anthracene	mg/L	T		-	-	-	-	-	<0.01 :
Benzaldehyde	mg/L	T		-	-	-	-	-	<0.01 :
Benzo(a)anthracene	mg/L	T		-	-	-	-	-	<0.01 :
Benzo(a)pyrene	mg/L	T		-	-	-	-	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	-	<0.01 :
Butyl benzyl phthalate	mg/L	T		-	-	-	-	-	<0.01 :
Carbazole	mg/L	T		-	-	-	-	-	<0.01 :
Chrysene	mg/L	T		-	-	-	-	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	-	<0.01 :
Dibenzofuran	mg/L	T		-	-	-	-	-	<0.01 :
Dichlorodiisopropyl ether	mg/L	T		-	-	-	-	-	<0.01 :
Diethylphthalate	mg/L	T		-	-	-	-	-	<0.01 :
Dimethylphthalate	mg/L	T		-	-	-	-	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T		-	-	-	-	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T		-	-	-	-	-	<0.01 :
Fluoranthene	mg/L	T		-	-	-	-	-	<0.01 :
Fluorene	mg/L	T		-	-	-	-	-	<0.01 :
Hexachlorobenzene	mg/L	T		-	-	-	-	-	<0.01 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-38A 2/23/2004 MMW-38A-T01N-GR	MMW-38A 2/23/2004 MMW-38A-D01N-GR	MMW-38A 3/22/2004 MMW-38-A	MMW-38A 4/19/2004 MMW-38A-T01N-GR	MMW-38A 4/19/2004 MMW-38A-D01N-GR	MMW-39A 11/13/2002 MMW-39A-T01N-GR
			W GW4	W GW4	GW4	W GW4	W GW4	WRE GW4
Hexachlorobutadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	-	<0.01 :
Hexachloroethane	mg/L	T	-	-	-	-	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Isophorone	mg/L	T	-	-	-	-	-	<0.01 :
Naphthalene	mg/L	T	-	-	-	-	-	<0.01 :
Nitrobenzene	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	-	<0.01 :
Pentachlorophenol	mg/L	T	-	-	-	-	-	<0.026 :
Phenanthrene	mg/L	T	-	-	-	-	-	<0.01 :
Phenol	mg/L	T	-	-	-	-	-	<0.01 :
Pyrene	mg/L	T	-	-	-	-	-	<0.01 :
Lanthanides								
Cerium	mg/L	T	2.05 J	-	-	-	-	-
Cerium	mg/L	D	-	2.26 J	-	-	-	-
Dysprosium	mg/L	T	0.329 :	-	-	-	-	-
Dysprosium	mg/L	D	-	0.318 :	-	-	-	-
Erbium	mg/L	T	0.137 :	-	-	-	-	-
Erbium	mg/L	D	-	0.127 :	-	-	-	-
Europium	mg/L	T	0.084 :	-	-	-	-	-
Europium	mg/L	D	-	0.0838 :	-	-	-	-
Gadolinium	mg/L	T	0.457 :	-	-	-	-	-
Gadolinium	mg/L	D	-	0.481 :	-	-	-	-
Holmium	mg/L	T	0.0574 :	-	-	-	-	-
Holmium	mg/L	D	-	0.0544 :	-	-	-	-
Lanthanum	mg/L	T	0.482 :	-	-	-	-	-
Lanthanum	mg/L	D	-	0.541 :	-	-	-	-
Lutetium	mg/L	T	0.0115 :	-	-	-	-	-
Lutetium	mg/L	D	-	0.011 :	-	-	-	-
Neodymium	mg/L	T	1.66 J	-	-	-	-	-
Neodymium	mg/L	D	-	1.72 J	-	-	-	-
Praseodymium	mg/L	T	0.337 :	-	-	-	-	-
Praseodymium	mg/L	D	-	0.36 :	-	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-38A 2/23/2004 MMW-38A-T01N-GR W GW4		MMW-38A 2/23/2004 MMW-38A-D01N-GR W GW4		MMW-38A 3/22/2004 MMW-38-A GW4		MMW-38A 4/19/2004 MMW-38A-T01N-GR W GW4		MMW-38A 4/19/2004 MMW-38A-D01N-GR W GW4		MMW-39A 11/13/2002 MMW-39A-T01N-GR WRE GW4	
Samarium	mg/L	T	0.409	:	-		-		-		-		-	
Samarium	mg/L	D	-		0.402	:	-		-		-		-	
Terbium	mg/L	T	0.0678	:	-		-		-		-		-	
Terbium	mg/L	D	-		0.0667	:	-		-		-		-	
Thulium	mg/L	T	0.0156	:	-		-		-		-		-	
Thulium	mg/L	D	-		0.015	:	-		-		-		-	
Ytterbium	mg/L	T	0.0892	:	-		-		-		-		-	
Ytterbium	mg/L	D	-		0.0856	:	-		-		-		-	
Yttrium	mg/L	T	1.74	J	-		-		-		-		-	
Yttrium	mg/L	D	-		1.87	J	-		-		-		-	
Isotopes														
204Pb/206Pb	mg/L	T	0.00012	:	-		-		-		-		-	
204Pb/206Pb	mg/L	D	-		0.00012	:	-		-		-		-	
207Pb/206Pb	mg/L	T	0.00051	:	-		-		-		-		-	
207Pb/206Pb	mg/L	D	-		0.00051	:	-		-		-		-	
208Pb/206Pb	mg/L	T	0.00042	:	-		-		-		-		-	
208Pb/206Pb	mg/L	D	-		0.00042	:	-		-		-		-	
Delta 34S	per mil	D	-		-2.9	:	-		-		-		-	
Delta D	per mil	T	-92.3	:	-		-		-		-		-	
Delta O-18	per mil	T	-12.1	:	-		-		-		-		-	
Lead	mg/L	T	<0.0059	:	-		-		0.0055	:	-		-	
Lead	mg/L	D	-		<0.006	:	-		-		0.0054	:	-	
Helium Isotope and Tritium														
3H-3He	Years	T	-		-		60.1	:	-		-		-	
DEL He3	%	T	-		-		568.7	:	-		-		-	
DEL He4	%	T	-		-		750.9	:	-		-		-	
He Corr	1E-8cc/g	T	-		-		38.303	:	-		-		-	
Tritium TU	TU	T	-		-		5.097	:	-		-		-	
Uncert Age	Years	T	-		-		0.55	:	-		-		-	
Uncert TU	TU	T	-		-		0.153	:	-		-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
			Sample Date	11/13/2002	11/13/2002	11/13/2002	1/16/2003	1/16/2003	4/9/2003
			Sample ID	MMW-39A-T01N-GRGW4	MMW-39A-D01N-GRWRE GW4	MMW-39A-D01N-GRGW4	MMW-39A-T01N-GRGW4	MMW-39A-D01N-GRGW4	MMW-39A-T01N-GRGW4
Field Measurements									
DO	mg/L	T		7.16 :	-	-	4.95 :	-	7.98 :
Eh	millivolts	T		319.2 :	-	-	295. :	-	415.2 :
pH	SU	T		4.22 :	-	-	4.25 :	-	4.2 J
Specific Conductance	uS/cm	T		3454. :	-	-	4085. :	-	4254. :
Temperature	Celsius	T		12.19 :	-	-	9.75 :	-	10.28 :
Turbidity	NTU	T		12.2 :	-	-	6.8 :	-	9.1 :
General Chemistry									
Ammonia	mg/L	T		0.12 :	-	-	<0.22 :	-	<0.095 :
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T		62.6 :	-	-	11.2 :	-	106. :
Fluoride	mg/L	T		-	-	-	143. :	-	140. :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		87. :	-	-	23. J	-	21.8 J
Nitrite	mg/L	T		<0.005 :	-	-	0.029 :	-	0.41 J
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		0.018 :	-	-	0.36 :	-	0.14 :
Sulfate	mg/L	T		3770. :	-	-	5830. J	-	3080. J
Total Alkalinity	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		5020. J	-	-	5400. J	-	5470. J
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		4.4 :	-	-	3.1 :	-	<3.1 J
Total Suspended Solids	mg/L	T		4.8 :	-	-	222. :	-	405. :
Laboratory Parameters									
pH	SU	T		4.22 :	-	-	4.25 :	-	4.2 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	4170. J
Inorganics									
Cyanide	mg/L	T		0.0234 J	-	-	<0.01 J	-	0.0106 J
Physical Properties									
Hardness	mg/L	T		-	-	-	2730. :	-	2520. :
Hardness	mg/L	D		-	2760. :	-	-	2750. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
			Sample Date	11/13/2002	11/13/2002	11/13/2002	1/16/2003	1/16/2003	4/9/2003
			Sample ID	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR
				W GW4	WRE GW4	W GW4	W GW4	W GW4	W GW4
Aluminum	mg/L	T		-	-	-	180. :	-	167. :
Aluminum	mg/L	D		-	178. :	-	-	181. :	-
Antimony	mg/L	T		-	-	-	<0.028 :	-	<0.003 :
Antimony	mg/L	D		-	<0.028 :	-	-	<0.028 :	-
Arsenic	mg/L	T		-	-	-	<0.023 :	-	<0.04 :
Arsenic	mg/L	D		-	<0.023 :	-	-	<0.023 :	-
Barium	mg/L	T		-	-	-	<0.048 :	-	<0.123 :
Barium	mg/L	D		-	<0.048 :	-	-	<0.048 :	-
Beryllium	mg/L	T		-	-	-	0.2 :	-	0.224 :
Beryllium	mg/L	D		-	0.2 :	-	-	0.203 :	-
Boron	mg/L	T		-	-	-	<0.027 J	-	<0.084 :
Boron	mg/L	D		-	<0.0467 :	-	-	<0.027 J	-
Cadmium	mg/L	T		-	-	-	0.198 :	-	0.188 :
Cadmium	mg/L	D		-	0.202 :	-	-	0.195 :	-
Calcium	mg/L	T		-	-	-	487. :	-	447. :
Calcium	mg/L	D		-	495. :	-	-	490. :	-
Chromium	mg/L	T		-	-	-	<0.16 :	-	0.0131 :
Chromium	mg/L	D		-	<0.37 :	-	-	<0.16 :	-
Cobalt	mg/L	T		-	-	-	0.45 :	-	0.439 :
Cobalt	mg/L	D		-	0.488 :	-	-	0.47 :	-
Copper	mg/L	T		-	-	-	6.25 :	-	7.49 :
Copper	mg/L	D		-	5.85 :	-	-	5.9 :	-
Iron	mg/L	T		-	-	-	<2.66 :	-	2.83 :
Iron	mg/L	D		-	<4.89 :	-	-	<2.66 :	-
Lead	mg/L	T		-	-	-	0.145 :	-	0.0618 J
Lead	mg/L	D		-	0.0055 :	-	-	0.0071 :	-
Magnesium	mg/L	T		-	-	-	368. :	-	340. :
Magnesium	mg/L	D		-	369. :	-	-	370. :	-
Manganese	mg/L	T		-	-	-	102. :	-	95.6 :
Manganese	mg/L	D		-	100. :	-	-	103. :	-
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	-	0.0172 :	-	0.0411 :
Molybdenum	mg/L	D		-	0.016 :	-	-	<0.011 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
			Sample Date	11/13/2002	11/13/2002	11/13/2002	1/16/2003	1/16/2003	4/9/2003
			Sample ID	MMW-39A-T01N-GRW GW4	MMW-39A-D01N-GRWRE GW4	MMW-39A-D01N-GRW GW4	MMW-39A-T01N-GRW GW4	MMW-39A-D01N-GRW GW4	MMW-39A-T01N-GRW GW4
Nickel	mg/L	T		-	-	-	2.03 :	-	1.91 :
Nickel	mg/L	D		-	2.08 :	-	-	2.04 :	-
Potassium	mg/L	T		-	-	-	<31.4 :	-	7.76 :
Potassium	mg/L	D		-	<25.9 :	-	-	<31.4 :	-
Selenium	mg/L	T		-	-	-	0.0224 :	-	0.0188 :
Selenium	mg/L	D		-	0.025 :	-	-	0.0182 :	-
Silver	mg/L	T		-	-	-	0.0034 :	-	0.0012 :
Silver	mg/L	D		-	<0.001 :	-	-	<0.001 :	-
Sodium	mg/L	T		-	-	-	77.9 :	-	47.2 :
Sodium	mg/L	D		-	101. :	-	-	87.3 :	-
Thallium	mg/L	T		-	-	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T		-	-	-	0.0113 :	-	0.0032 :
Vanadium	mg/L	D		-	<0.002 :	-	-	0.0045 :	-
Zinc	mg/L	T		-	-	-	24.2 :	-	22.9 :
Zinc	mg/L	D		-	23.4 :	-	-	24.4 :	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2-Trichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1-Dichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1-Dichloroethene	mg/L	T		<0.01 :	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloroethene (total)	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloropropane	mg/L	T		<0.01 :	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
2-Butanone	mg/L	T		<0.01 :	-	-	-	-	-
2-Hexanone	mg/L	T		<0.01 :	-	-	-	-	-
4-Methyl-2-pentanone	mg/L	T		<0.01 :	-	-	-	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-39A 11/13/2002 MMW-39A-T01N-GR W GW4		MMW-39A 11/13/2002 MMW-39A-D01N-GR WRE GW4		MMW-39A 11/13/2002 MMW-39A-D01N-GR W GW4		MMW-39A 1/16/2003 MMW-39A-T01N-GR W GW4		MMW-39A 1/16/2003 MMW-39A-D01N-GR W GW4		MMW-39A 4/9/2003 MMW-39A-T01N-GR W GW4	
Acetone	mg/L	T	<0.01	:	-		-		-		-		-	
Benzene	mg/L	T	<0.01	:	-		-		-		-		-	
Bromodichloromethane	mg/L	T	<0.01	:	-		-		-		-		-	
Bromoform	mg/L	T	<0.01	:	-		-		-		-		-	
Bromomethane	mg/L	T	<0.01	:	-		-		-		-		-	
Carbon disulfide	mg/L	T	<0.01	:	-		-		-		-		-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		-		-		-		-	
Chlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
Chloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
Chloroform	mg/L	T	<0.01	:	-		-		-		-		-	
Chloromethane	mg/L	T	<0.01	:	-		-		-		-		-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		-		-		-		-	
Dibromochloromethane	mg/L	T	<0.01	:	-		-		-		-		-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		-		-		-		-	
Ethylbenzene	mg/L	T	<0.01	:	-		-		-		-		-	
Methylene chloride	mg/L	T	<0.01	:	-		-		-		-		-	
Styrene	mg/L	T	<0.01	:	-		-		-		-		-	
Tetrachloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
Toluene	mg/L	T	<0.01	:	-		-		-		-		-	
Total Xylene	mg/L	T	<0.01	:	-		-		-		-		-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		-		-		-		-	
Trichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		-		-		-		-	
Vinyl chloride	mg/L	T	<0.01	:	-		-		-		-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	J	-		-		-		-		-	
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	J	-		-		-		-		-	
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	J	-		-		-		-		-	
Pentaerythritol tetranitrate	mg/L	T	<0.01	J	-		-		-		-		-	
Isotopes														
Lead	mg/L	T	-		-		-		0.145	:	-		0.0618	J

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction						
		Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
		Sample Date	11/13/2002	11/13/2002	11/13/2002	1/16/2003	1/16/2003	4/9/2003
		Sample ID	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR
		Exposure Area	W GW4	WRE GW4	W GW4	W GW4	W GW4	W GW4
Lead	mg/L	D	-	0.0055 :	-	-	0.0071 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
			Sample Date	4/9/2003	7/24/2003	7/24/2003	10/22/2003	10/22/2003	1/14/2004
			Sample ID	MMW-39A-D01N-GR	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39A-T01N-GR
				WGW4	WGW4	WGW4	WGW4	WGW4	WGW4
Field Measurements									
DO	mg/L	T		-	2.58 :	-	3.97 :	-	0.5 :
Eh	millivolts	T		-	331.8 :	-	412.2 :	-	391.1 :
pH	SU	T		-	4.5 J	-	4.5 J	-	4.4 J
Specific Conductance	uS/cm	T		-	4510. :	-	3214. :	-	4243. :
Temperature	Celsius	T		-	11.39 :	-	12.64 :	-	10.5 :
Turbidity	NTU	T		-	13.9 :	-	197.2 :	-	7.6 :
General Chemistry									
Ammonia	mg/L	T		-	<0.16 J	-	<0.054 J	-	<0.16 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	64.6 :	-	81.1 :	-	75.7 :
Fluoride	mg/L	T		-	158. :	-	142. :	-	139. :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	21.6 :	-	19. J	-	15.8 J
Nitrite	mg/L	T		-	0.032 :	-	0.022 J	-	0.41 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		-	0.038 :	-	0.075 :	-	0.031 :
Sulfate	mg/L	T		-	3170. J	-	3280. J	-	3460. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	5730. J	-	5860. J	-	5090. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	2.9 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	4.1 J	-	4.5 J	-	<1.9 J
Total Suspended Solids	mg/L	T		-	21.8 :	-	178. :	-	20.7 :
Laboratory Parameters									
pH	SU	T		-	4.5 J	-	4.5 J	-	4.4 J
Specific Conductance	umhos/cm	T		-	4380. J	-	4390. J	-	3900. J
Inorganics									
Cyanide	mg/L	T		-	0.116 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	2450. :	-	2410. :	-	2560. :
Hardness	mg/L	D		2420. :	-	2390. :	-	2340. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-39A 4/9/2003 MMW-39A-D01N-GR WGW4		MMW-39A 7/24/2003 MMW-39A-T01N-GR WGW4		MMW-39A 7/24/2003 MMW-39A-D01N-GR WGW4		MMW-39A 10/22/2003 MMW-39A-T01N-GR WGW4		MMW-39A 10/22/2003 MMW-39A-D01N-GR WGW4		MMW-39A 1/14/2004 MMW-39A-T01N-GR WGW4	
Aluminum	mg/L	T	-		158.	:	-		168.	:	-		166.	:
Aluminum	mg/L	D	157.	:	-		153.	:	-		152.	:	-	
Antimony	mg/L	T	-		<0.038	:	-		<0.082	:	-		<0.029	:
Antimony	mg/L	D	<0.003	:	-		<0.038	:	-		<0.082	:	-	
Arsenic	mg/L	T	-		<0.024	:	-		<0.035	:	-		0.04	:
Arsenic	mg/L	D	<0.04	:	-		0.0241	:	-		<0.035	:	-	
Barium	mg/L	T	-		<0.073	:	-		<0.117	:	-		<0.053	:
Barium	mg/L	D	<0.123	:	-		<0.073	:	-		<0.117	:	-	
Beryllium	mg/L	T	-		0.219	:	-		0.214	:	-		0.196	:
Beryllium	mg/L	D	0.217	:	-		0.22	:	-		0.204	:	-	
Boron	mg/L	T	-		<0.046	:	-		<0.064	:	-		<0.023	:
Boron	mg/L	D	<0.084	:	-		<0.046	:	-		<0.064	:	-	
Cadmium	mg/L	T	-		0.206	:	-		0.167	:	-		<0.203	J
Cadmium	mg/L	D	0.182	:	-		0.19	:	-		0.138	:	-	
Calcium	mg/L	T	-		437.	:	-		434.	:	-		468.	:
Calcium	mg/L	D	430.	:	-		426.	:	-		423.	:	-	
Chromium	mg/L	T	-		<0.06	:	-		<0.23	J	-		<0.57	:
Chromium	mg/L	D	<0.01	:	-		<0.06	:	-		<0.23	J	-	
Cobalt	mg/L	T	-		0.468	:	-		0.415	:	-		<0.37	:
Cobalt	mg/L	D	0.426	:	-		0.431	:	-		0.446	:	-	
Copper	mg/L	T	-		6.42	:	-		5.69	:	-		6.9	:
Copper	mg/L	D	5.79	:	-		6.19	:	-		5.32	:	-	
Iron	mg/L	T	-		<1.68	:	-		4.97	:	-		<4.23	:
Iron	mg/L	D	0.424	:	-		<1.68	:	-		<4.55	:	-	
Lead	mg/L	T	-		0.218	:	-		0.0642	:	-		0.137	:
Lead	mg/L	D	0.0561	J	-		0.2	:	-		0.0206	:	-	
Magnesium	mg/L	T	-		329.	:	-		321.	:	-		338.	:
Magnesium	mg/L	D	327.	:	-		322.	:	-		313.	:	-	
Manganese	mg/L	T	-		89.6	:	-		89.	:	-		95.8	:
Manganese	mg/L	D	92.4	:	-		87.5	:	-		86.6	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.00012	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.016	:	-		0.0406	:	-		<0.024	:
Molybdenum	mg/L	D	<0.023	:	-		<0.016	:	-		<0.012	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-39A 4/9/2003 MMW-39A-D01N-GR GW4		MMW-39A 7/24/2003 MMW-39A-T01N-GR GW4		MMW-39A 7/24/2003 MMW-39A-D01N-GR GW4		MMW-39A 10/22/2003 MMW-39A-T01N-GR GW4		MMW-39A 10/22/2003 MMW-39A-D01N-GR GW4		MMW-39A 1/14/2004 MMW-39A-T01N-GR GW4	
Nickel	mg/L	T	-		1.92	:	-		1.74	:	-		1.87	:
Nickel	mg/L	D	1.88	:	-		1.89	:	-		1.74	:	-	
Potassium	mg/L	T	-		<25.	:	-		<63.8	:	-		<110.	J
Potassium	mg/L	D	7.72	:	-		<25.	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0272	:	-		0.0242	:	-		0.0368	J
Selenium	mg/L	D	0.0206	:	-		0.0255	J	-		0.0255	:	-	
Silver	mg/L	T	-		<0.001	J	-		0.0019	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		<0.001	:	-	
Sodium	mg/L	T	-		35.5	:	-		<99.1	:	-		<92.	:
Sodium	mg/L	D	45.8	:	-		54.6	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		0.0021	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Zinc	mg/L	T	-		22.4	:	-		20.7	:	-		23.3	:
Zinc	mg/L	D	22.4	:	-		21.8	:	-		20.3	:	-	
Isotopes														
Lead	mg/L	T	-		0.218	:	-		0.0642	:	-		0.137	:
Lead	mg/L	D	0.0561	J	-		0.2	:	-		0.0206	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A	MMW-39A
			Sample Date	1/14/2004	2/23/2004	2/23/2004	3/22/2004	4/21/2004	4/21/2004
			Sample ID	MMW-39A-D01N-GR	MMW-39A-T01N-GR	MMW-39A-D01N-GR	MMW-39-A	MMW-39A-T01N-GR	MMW-39A-D01N-GR
			Exposure Area	GW4	GW4	GW4	GW4	GW4	GW4
Field Measurements									
DO	mg/L	T		-	1.4 :	-	-	4.28 :	-
Eh	millivolts	T		-	209.4 :	-	-	406.4 :	-
pH	SU	T		-	4.36 :	-	-	4.8 J	-
Specific Conductance	uS/cm	T		-	4309. :	-	-	4349. :	-
Temperature	Celsius	T		-	11.87 :	-	-	12.12 :	-
Turbidity	NTU	T		-	6.4 :	-	-	8.6 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	-	<0.066 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Chloride	mg/L	T		-	-	-	-	84.7 :	-
Fluoride	mg/L	T		-	146. :	-	-	129. :	-
Hydroxide (as CaCO3)	mg/L	T		-	-	-	-	<1. :	-
Nitrate	mg/L	T		-	-	-	-	19. J	-
Nitrite	mg/L	T		-	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	-	-	-	0.014 J	-
Phosphorus	mg/L	T		-	-	-	-	0.045 :	-
Sulfate	mg/L	T		-	3510. :	-	-	3470. :	-
Total Alkalinity	mg/L	T		-	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		-	5630. :	-	-	5090. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	-	-	-	3.5 J	-
Total Suspended Solids	mg/L	T		-	18.6 :	-	-	<2.1 J	-
Laboratory Parameters									
pH	SU	T		-	4.36 :	-	-	4.8 J	-
Specific Conductance	umhos/cm	T		-	-	-	-	4160. J	-
Inorganics									
Cyanide	mg/L	T		-	-	-	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		-	2680. :	-	-	2500. :	-
Hardness	mg/L	D		2540. :	-	2730. :	-	-	2500. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-39A 1/14/2004 MMW-39A-D01N-GR W GW4		MMW-39A 2/23/2004 MMW-39A-T01N-GR W GW4		MMW-39A 2/23/2004 MMW-39A-D01N-GR W GW4		MMW-39A 3/22/2004 MMW-39-A GW4		MMW-39A 4/21/2004 MMW-39A-T01N-GR W GW4		MMW-39A 4/21/2004 MMW-39A-D01N-GR W GW4	
Aluminum	mg/L	T	-		175.	:	-		-		163.	:	-	
Aluminum	mg/L	D	166.	:	-		176.	:	-		-		164.	:
Antimony	mg/L	T	-		<0.029	:	-		-		<0.053	:	-	
Antimony	mg/L	D	<0.029	:	-		<0.029	:	-		-		<0.053	:
Arsenic	mg/L	T	-		<0.0369	:	-		-		<0.037	:	-	
Arsenic	mg/L	D	0.0352	:	-		<0.0412	:	-		-		<0.037	:
Barium	mg/L	T	-		<0.053	:	-		-		<0.049	:	-	
Barium	mg/L	D	<0.053	:	-		<0.053	:	-		-		<0.049	:
Beryllium	mg/L	T	-		0.19	:	-		-		0.197	:	-	
Beryllium	mg/L	D	0.194	:	-		0.196	:	-		-		0.198	:
Boron	mg/L	T	-		0.0279	:	-		-		0.0362	:	-	
Boron	mg/L	D	<0.023	:	-		0.0246	:	-		-		<0.036	:
Cadmium	mg/L	T	-		0.172	:	-		-		0.21	:	-	
Cadmium	mg/L	D	0.176	:	-		0.149	J	-		-		0.226	J
Calcium	mg/L	T	-		483.	:	-		-		454.	:	-	
Calcium	mg/L	D	465.	:	-		491.	:	-		-		453.	:
Chromium	mg/L	T	-		0.11	J	-		-		<0.13	:	-	
Chromium	mg/L	D	<0.57	:	-		0.159	J	-		-		<0.13	:
Cobalt	mg/L	T	-		0.455	:	-		-		0.408	:	-	
Cobalt	mg/L	D	<0.37	:	-		0.446	:	-		-		0.496	:
Copper	mg/L	T	-		6.99	:	-		-		5.36	:	-	
Copper	mg/L	D	6.81	:	-		6.5	:	-		-		5.48	:
Iron	mg/L	T	-		<3.73	:	-		-		<2.93	J	-	
Iron	mg/L	D	<4.23	:	-		<3.73	:	-		-		<2.93	:
Lead	mg/L	T	-		0.121	:	-		-		0.0069	:	-	
Lead	mg/L	D	0.135	:	-		0.079	:	-		-		<0.004	:
Magnesium	mg/L	T	-		359.	:	-		-		331.	:	-	
Magnesium	mg/L	D	334.	:	-		365.	:	-		-		332.	:
Manganese	mg/L	T	-		98.2	:	-		-		92.4	:	-	
Manganese	mg/L	D	95.4	:	-		99.8	:	-		-		92.4	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.024	:	-		-		0.0365	:	-	
Molybdenum	mg/L	D	<0.024	:	-		<0.024	:	-		-		0.0463	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-39A 1/14/2004 MMW-39A-D01N-GR GW4		MMW-39A 2/23/2004 MMW-39A-T01N-GR GW4		MMW-39A 2/23/2004 MMW-39A-D01N-GR GW4		MMW-39A 3/22/2004 MMW-39-A GW4		MMW-39A 4/21/2004 MMW-39A-T01N-GR GW4		MMW-39A 4/21/2004 MMW-39A-D01N-GR GW4	
Nickel	mg/L	T	-		2.18	:	-		-		1.94	:	-	
Nickel	mg/L	D	1.8	:	-		2.23	:	-		-		1.96	:
Potassium	mg/L	T	-		<24.3	:	-		-		<15.5	:	-	
Potassium	mg/L	D	<110.	J	-		<24.3	:	-		-		18.5	:
Selenium	mg/L	T	-		0.0212	:	-		-		0.0223	:	-	
Selenium	mg/L	D	0.0401	:	-		0.0239	:	-		-		0.024	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.001	J	-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	J
Sodium	mg/L	T	-		84.	:	-		-		<39.	:	-	
Sodium	mg/L	D	<92.	:	-		99.6	:	-		-		<70.8	:
Thallium	mg/L	T	-		<0.0018	:	-		-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.0018	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.005	:	-		-		<0.002	:	-	
Vanadium	mg/L	D	<0.002	:	-		<0.0052	:	-		-		<0.002	:
Zinc	mg/L	T	-		23.8	:	-		-		20.9	:	-	
Zinc	mg/L	D	22.9	:	-		24.5	:	-		-		21.1	:
Lanthanides														
Cerium	mg/L	T	-		1.29	J	-		-		-		-	
Cerium	mg/L	D	-		-		1.45	J	-		-		-	
Dysprosium	mg/L	T	-		0.146	:	-		-		-		-	
Dysprosium	mg/L	D	-		-		0.139	:	-		-		-	
Erbium	mg/L	T	-		0.0695	:	-		-		-		-	
Erbium	mg/L	D	-		-		0.0656	:	-		-		-	
Europium	mg/L	T	-		0.0353	:	-		-		-		-	
Europium	mg/L	D	-		-		0.0356	:	-		-		-	
Gadolinium	mg/L	T	-		0.178	:	-		-		-		-	
Gadolinium	mg/L	D	-		-		0.19	:	-		-		-	
Holmium	mg/L	T	-		0.0266	:	-		-		-		-	
Holmium	mg/L	D	-		-		0.0255	:	-		-		-	
Lanthanum	mg/L	T	-		0.644	:	-		-		-		-	
Lanthanum	mg/L	D	-		-		0.747	:	-		-		-	
Lutetium	mg/L	T	-		0.00776	:	-		-		-		-	
Lutetium	mg/L	D	-		-		0.0074	:	-		-		-	
Neodymium	mg/L	T	-		0.636	:	-		-		-		-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: MMW-39A Sample Date: 1/14/2004 Sample ID: MMW-39A-D01N-GR MWGW4	Site ID: MMW-39A Sample Date: 2/23/2004 Sample ID: MMW-39A-T01N-GR MWGW4	Site ID: MMW-39A Sample Date: 2/23/2004 Sample ID: MMW-39A-D01N-GR MWGW4	Site ID: MMW-39A Sample Date: 3/22/2004 Sample ID: MMW-39-A GW4	Site ID: MMW-39A Sample Date: 4/21/2004 Sample ID: MMW-39A-T01N-GR MWGW4	Site ID: MMW-39A Sample Date: 4/21/2004 Sample ID: MMW-39A-D01N-GR MWGW4
Neodymium	mg/L	D	-	-	0.682 :	-	-	-
Praseodymium	mg/L	T	-	0.162 :	-	-	-	-
Praseodymium	mg/L	D	-	-	0.177 :	-	-	-
Samarium	mg/L	T	-	0.144 :	-	-	-	-
Samarium	mg/L	D	-	-	0.146 :	-	-	-
Terbium	mg/L	T	-	0.0275 :	-	-	-	-
Terbium	mg/L	D	-	-	0.0272 :	-	-	-
Thulium	mg/L	T	-	0.00886 :	-	-	-	-
Thulium	mg/L	D	-	-	0.00849 :	-	-	-
Ytterbium	mg/L	T	-	0.0532 :	-	-	-	-
Ytterbium	mg/L	D	-	-	0.0516 :	-	-	-
Yttrium	mg/L	T	-	0.817 :	-	-	-	-
Yttrium	mg/L	D	-	-	0.864 :	-	-	-
Isotopes								
204Pb/206Pb	mg/L	T	-	0.00005 :	-	-	-	-
204Pb/206Pb	mg/L	D	-	-	0.00005 :	-	-	-
207Pb/206Pb	mg/L	T	-	0.00072 :	-	-	-	-
207Pb/206Pb	mg/L	D	-	-	0.00069 :	-	-	-
208Pb/206Pb	mg/L	T	-	0.00129 :	-	-	-	-
208Pb/206Pb	mg/L	D	-	-	0.00114 :	-	-	-
Delta 34S	per mil	D	-	-	-2.8 :	-	-	-
Delta D	per mil	T	-	-88.7 :	-	-	-	-
Delta O-18	per mil	T	-	-12. :	-	-	-	-
Lead	mg/L	T	-	0.121 :	-	-	0.0069 :	-
Lead	mg/L	D	0.135 :	-	0.079 :	-	-	<0.004 :
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	4.46 :	-	-
DEL He3	%	T	-	-	-	9.5 :	-	-
DEL He4	%	T	-	-	-	8.7 :	-	-
He Corr	1E-8cc/g	T	-	-	-	5.063 :	-	-
Tritium TU	TU	T	-	-	-	8.552 :	-	-
Uncert Age	Years	T	-	-	-	0.54 :	-	-
Uncert TU	TU	T	-	-	-	0.257 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction						
		Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A
		Sample Date	11/8/2002	11/8/2002	11/8/2002	1/12/2003	1/12/2003	4/6/2003
		Sample ID	MMW-40A-T01N-GR WRE	MMW-40A-T01N-GR W	MMW-40A-D01N-GR W	MMW-40A-T01N-GR W	MMW-40A-D01N-GR W	MMW-40A-T01N-GR W
		Exposure Area	GW3	GW3	GW3	GW3	GW3	GW3
Field Measurements								
DO	mg/L	T	-	6.11 :	-	5.05 :	-	4.85 :
Eh	millivolts	T	-	77.1 :	-	194.1 :	-	329.4 :
pH	SU	T	-	6.5 :	-	6.86 :	-	6.5 J
Specific Conductance	uS/cm	T	-	1019. :	-	1229. :	-	1040. :
Temperature	Celsius	T	-	5.99 :	-	12.73 :	-	14.45 :
Turbidity	NTU	T	-	58. :	-	1.4 :	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	<0.084 :	-	<0.1 :	-	<0.043 :
Bicarbonate (as CaCO3)	mg/L	T	-	44.6 :	-	43.6 :	-	44.6 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	10. :	-	10.1 :	-	10.5 :
Fluoride	mg/L	T	1.9 J	-	-	1.6 :	-	1.7 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	2. J	-	2.1 J	-	2. J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	0.092 J	-	<0.11 J	-	<0.11 J
Phosphorus	mg/L	T	-	0.031 J	-	0.12 :	-	0.12 :
Sulfate	mg/L	T	-	550. :	-	560. J	-	491. J
Total Alkalinity	mg/L	T	-	44.6 :	-	43.6 :	-	44.6 :
Total Dissolved Solids	mg/L	T	-	858. :	-	3640. :	-	478. J
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T	-	13.7 :	-	<0.8 :	-	<1.7 :
Laboratory Parameters								
pH	SU	T	-	6.5 :	-	6.86 :	-	6.5 J
Specific Conductance	umhos/cm	T	-	-	-	-	-	1020. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	553. :	-	552. :	-	571. :
Hardness	mg/L	D	-	-	565. :	-	541. :	-
Metals								

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 11/8/2002 MMW-40A-T01N-GR WRE GW3		MMW-40A 11/8/2002 MMW-40A-T01N-GR W GW3		MMW-40A 11/8/2002 MMW-40A-D01N-GR W GW3		MMW-40A 1/12/2003 MMW-40A-T01N-GR W GW3		MMW-40A 1/12/2003 MMW-40A-D01N-GR W GW3		MMW-40A 4/6/2003 MMW-40A-T01N-GR W GW3	
Aluminum	mg/L	T	-		1.42	:	-		<0.142	:	-		<0.426	:
Aluminum	mg/L	D	-		-		0.0228	:	-		<0.142	:	-	
Antimony	mg/L	T	-		<0.0002	:	-		<0.0006	:	-		<0.00092	:
Antimony	mg/L	D	-		-		<0.0002	:	-		<0.0011	:	-	
Arsenic	mg/L	T	-		0.0012	J	-		0.00047	:	-		0.00066	:
Arsenic	mg/L	D	-		-		0.00062	J	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0454	:	-		0.0321	:	-		0.0309	:
Barium	mg/L	D	-		-		0.0334	:	-		0.0315	:	-	
Beryllium	mg/L	T	-		0.001	:	-		0.00072	:	-		<0.0025	:
Beryllium	mg/L	D	-		-		0.00067	:	-		<0.0007	:	-	
Boron	mg/L	T	-		0.0166	:	-		<0.0174	:	-		0.024	:
Boron	mg/L	D	-		-		0.0162	:	-		<0.0183	:	-	
Cadmium	mg/L	T	-		0.001	J	-		0.00068	:	-		<0.0005	:
Cadmium	mg/L	D	-		-		0.00063	J	-		0.00064	:	-	
Calcium	mg/L	T	-		143.	:	-		143.	:	-		146.	:
Calcium	mg/L	D	-		-		146.	:	-		140.	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		<0.001	:
Chromium	mg/L	D	-		-		<0.0046	:	-		<0.0037	:	-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	-		-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		0.0157	:	-		<0.0017	:	-		<0.0015	J
Copper	mg/L	D	-		-		0.0035	:	-		<0.0031	:	-	
Iron	mg/L	T	-		1.78	:	-		<0.489	:	-		<0.422	:
Iron	mg/L	D	-		-		<0.0226	:	-		<0.489	:	-	
Lead	mg/L	T	-		0.0067	:	-		<0.0002	:	-		<0.0002	:
Lead	mg/L	D	-		-		<0.0001	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		47.6	:	-		47.4	:	-		49.8	:
Magnesium	mg/L	D	-		-		48.4	:	-		46.4	:	-	
Manganese	mg/L	T	-		0.18	:	-		<0.005	:	-		<0.013	:
Manganese	mg/L	D	-		-		0.0061	:	-		<0.005	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0441	J	-		0.069	:	-		0.0713	:
Molybdenum	mg/L	D	-		-		0.0695	J	-		0.0682	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 11/8/2002 MMW-40A-T01N-GR WRE GW3		MMW-40A 11/8/2002 MMW-40A-T01N-GR W GW3		MMW-40A 11/8/2002 MMW-40A-D01N-GR W GW3		MMW-40A 1/12/2003 MMW-40A-T01N-GR W GW3		MMW-40A 1/12/2003 MMW-40A-D01N-GR W GW3		MMW-40A 4/6/2003 MMW-40A-T01N-GR W GW3	
Nickel	mg/L	T	-		0.0199	J	-		0.0111	:	-		0.0093	J
Nickel	mg/L	D	-		-		0.011	J	-		0.0104	:	-	
Potassium	mg/L	T	-		4.08	:	-		3.96	:	-		3.43	:
Potassium	mg/L	D	-		-		3.94	:	-		3.87	:	-	
Selenium	mg/L	T	-		<0.0021	J	-		0.0021	:	-		0.0026	:
Selenium	mg/L	D	-		-		<0.003	J	-		0.0022	:	-	
Silver	mg/L	T	-		0.0018	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		-		<0.0001	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		32.6	:	-		29.1	:	-		31.8	:
Sodium	mg/L	D	-		-		33.4	:	-		28.1	:	-	
Thallium	mg/L	T	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0001	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0023	:	-		<0.0004	:	-		0.00021	:
Vanadium	mg/L	D	-		-		0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.143	:	-		0.0852	:	-		0.136	:
Zinc	mg/L	D	-		-		0.109	:	-		<0.0826	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Butanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
2-Hexanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	J
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A		MMW-40A		MMW-40A		MMW-40A		MMW-40A	
			Sample Date	11/8/2002		11/8/2002		11/8/2002		1/12/2003		1/12/2003		4/6/2003	
			Sample ID	MMW-40A-T01N-GR		MMW-40A-T01N-GR		MMW-40A-D01N-GR		MMW-40A-T01N-GR		MMW-40A-D01N-GR		MMW-40A-T01N-GR	
				WRE GW3		W GW3		W GW3		W GW3		W GW3		W GW3	
Acetone	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Benzene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Bromodichloromethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Bromoform	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Bromomethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Carbon disulfide	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Carbon tetrachloride	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Chlorobenzene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Chloroethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Chloroform	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Chloromethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
cis-1,2-Dichloroethene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
cis-1,3-Dichloropropene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Dibromochloromethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Dichlorodifluoromethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Ethylbenzene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.011	:
Methylene chloride	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Styrene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Tetrachloroethene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Toluene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Total Xylene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
trans-1,2-Dichloroethene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
trans-1,3-Dichloropropene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Trichloroethene	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Trichlorofluoromethane	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Vinyl chloride	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Semi-Volatile Organics															
1,1`-Biphenyl	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.011	:
2,4,5-Trichlorophenol	mg/L	T		-		<0.025	:	-		<0.026	:	-		<0.027	:
2,4,6-Trichlorophenol	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.011	:
2,4-Dichlorophenol	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.011	:
2,4-Dimethylphenol	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.011	J
2,4-Dinitrophenol	mg/L	T		-		<0.025	:	-		<0.026	:	-		<0.027	J

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A
			Sample Date	11/8/2002	11/8/2002	11/8/2002	1/12/2003	1/12/2003	4/6/2003
			Sample ID	MMW-40A-T01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR
				WRE GW3	W GW3	W GW3	W GW3	W GW3	W GW3
2,4-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2,6-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2-Chloronaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2-Chlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2-Methylnaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
2-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 :
2-Nitrophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
3,3-Dichlorobenzidine	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 J
3-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 J
4,6-Dinitro-2-methylphenol	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 :
4-Bromophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
4-Chloro-3-methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
4-Chloroaniline	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
4-Chlorophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
4-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
4-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 :
4-Nitrophenol	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 J
Acenaphthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Acenaphthylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Benzaldehyde	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.011 :
Benzo(a)anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Benzo(a)pyrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Benzo(b)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Benzo(g,h,i)perylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Benzo(k)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Bis(2-chloroethoxy)methane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Bis(2-chloroethyl)ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Bis(2-ethylhexyl)phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Butyl benzyl phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Carbazole	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Chrysene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Dibenz(a,h)anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A
			Sample Date	11/8/2002	11/8/2002	11/8/2002	1/12/2003	1/12/2003	4/6/2003
			Sample ID	MMW-40A-T01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR
				WRE GW3	W GW3	W GW3	W GW3	W GW3	W GW3
Dibenzofuran	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Dichlorodiisopropyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Diethylphthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Dimethylphthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Di-n-Butyl phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Di-n-Octyl phthalate	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.011 :
Fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Fluorene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachlorocyclopentadiene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Hexachloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Indeno(1,2,3-cd)pyrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Isophorone	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Naphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Nitrobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
N-Nitrosodi-n-propylamine	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
N-Nitrosodiphenylamine	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Pentachlorophenol	mg/L	T		-	<0.025 :	-	<0.026 :	-	<0.027 :
Phenanthrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Phenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Pyrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.011 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 J	-	<0.00025 J	-	<0.00025 :
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T		-	<0.00025 :	-	<0.00025 :	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Isotopes									
Lead	mg/L	T		-	0.0067 :	-	<0.0002 :	-	<0.0002 :
Lead	mg/L	D		-	-	<0.0001 :	-	<0.0002 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A
			Sample Date	4/6/2003	7/17/2003	7/17/2003	10/22/2003	10/22/2003	1/14/2004
			Sample ID	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR
				WGW3	WGW3	WGW3	WGW3	WGW3	WGW3
Field Measurements									
DO	mg/L	T		-	7.44 :	-	3.77 :	-	4.8 :
Eh	millivolts	T		-	460.8 :	-	617.7 :	-	235.2 :
pH	SU	T		-	6.5 J	-	6.4 J	-	6.5 J
Specific Conductance	uS/cm	T		-	1002. :	-	1172. :	-	1022. :
Temperature	Celsius	T		-	17.67 :	-	16.94 :	-	13.08 :
Turbidity	NTU	T		-	0.3 :	-	0. :	-	1.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.15 J	-	<0.05 J	-	<0.062 J
Bicarbonate (as CaCO3)	mg/L	T		-	42. :	-	40. :	-	40.1 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	10. :	-	10.6 :	-	11.1 :
Fluoride	mg/L	T		-	1.8 :	-	1.8 :	-	1.8 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	1.9 J	-	2. :	-	2. J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.11 J	-	<0.1 J	-	0.11 :
Phosphorus	mg/L	T		-	0.11 :	-	0.11 :	-	0.11 :
Sulfate	mg/L	T		-	525. J	-	528. J	-	515. :
Total Alkalinity	mg/L	T		-	42. :	-	40. :	-	40.1 :
Total Dissolved Solids	mg/L	T		-	922. :	-	998. :	-	810. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	3.9 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.3 J	-	<1. J	-	<1. J
Total Suspended Solids	mg/L	T		-	<1.1 :	-	<0.7 :	-	<1.1 :
Laboratory Parameters									
pH	SU	T		-	6.5 J	-	6.4 J	-	6.5 J
Specific Conductance	umhos/cm	T		-	933. J	-	1060. J	-	885. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	555. :	-	467. :	-	548. :
Hardness	mg/L	D		585. :	-	563. :	-	422. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A	MMW-40A
			Sample Date	4/6/2003	7/17/2003	7/17/2003	10/22/2003	10/22/2003	1/14/2004
			Sample ID	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-40A-T01N-GR
				WGW3	WGW3	WGW3	WGW3	WGW3	WGW3
Aluminum	mg/L	T		-	<0.631 :	-	<2.17 :	-	<0.621 :
Aluminum	mg/L	D		<0.426 :	-	<0.631 :	-	<2.17 :	-
Antimony	mg/L	T		-	<0.001 :	-	<0.082 :	-	<0.0017 :
Antimony	mg/L	D		<0.0006 :	-	<0.001 :	-	<0.082 :	-
Arsenic	mg/L	T		-	0.00053 :	-	<0.035 :	-	0.00057 :
Arsenic	mg/L	D		0.00062 :	-	0.00041 :	-	<0.035 :	-
Barium	mg/L	T		-	0.0322 :	-	<0.117 :	-	0.0303 :
Barium	mg/L	D		0.0314 :	-	0.0321 :	-	<0.117 :	-
Beryllium	mg/L	T		-	0.00073 :	-	<0.003 :	-	<0.001 :
Beryllium	mg/L	D		<0.0024 :	-	0.00079 :	-	0.003 :	-
Boron	mg/L	T		-	0.0181 :	-	<0.064 :	-	0.0171 :
Boron	mg/L	D		0.023 :	-	0.0173 :	-	<0.064 :	-
Cadmium	mg/L	T		-	<0.0006 :	-	<0.13 :	-	<0.0007 J
Cadmium	mg/L	D		<0.0005 :	-	<0.0006 :	-	<0.13 :	-
Calcium	mg/L	T		-	143. :	-	120. :	-	141. :
Calcium	mg/L	D		151. :	-	145. :	-	108. :	-
Chromium	mg/L	T		-	<0.0014 J	-	<0.23 J	-	<0.0057 :
Chromium	mg/L	D		<0.001 :	-	<0.0014 J	-	<0.23 J	-
Cobalt	mg/L	T		-	<0.002 :	-	<0.32 :	-	<0.0037 :
Cobalt	mg/L	D		<0.0038 :	-	<0.002 :	-	<0.32 :	-
Copper	mg/L	T		-	<0.0024 :	-	<0.23 :	-	0.0043 :
Copper	mg/L	D		<0.0015 J	-	<0.0024 :	-	<0.23 :	-
Iron	mg/L	T		-	<0.667 :	-	<4.55 :	-	<0.423 :
Iron	mg/L	D		<0.422 :	-	<0.667 :	-	<4.55 :	-
Lead	mg/L	T		-	<0.0002 :	-	<0.002 :	-	<0.0002 :
Lead	mg/L	D		<0.0002 :	-	0.00033 :	-	<0.002 :	-
Magnesium	mg/L	T		-	48.2 :	-	40.8 :	-	47.5 :
Magnesium	mg/L	D		50.7 :	-	48.9 :	-	36.8 :	-
Manganese	mg/L	T		-	<0.019 :	-	<0.16 :	-	<0.019 :
Manganese	mg/L	D		<0.013 :	-	<0.019 :	-	<0.16 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.0745 :	-	0.0813 :	-	0.0679 :
Molybdenum	mg/L	D		0.0715 :	-	0.0728 :	-	0.0754 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 4/6/2003 MMW-40A-D01N-GR WGW3		MMW-40A 7/17/2003 MMW-40A-T01N-GR WGW3		MMW-40A 7/17/2003 MMW-40A-D01N-GR WGW3		MMW-40A 10/22/2003 MMW-40A-T01N-GR WGW3		MMW-40A 10/22/2003 MMW-40A-D01N-GR WGW3		MMW-40A 1/14/2004 MMW-40A-T01N-GR WGW3	
Nickel	mg/L	T	-		0.0064	J	-		<0.45	:	-		<0.0168	:
Nickel	mg/L	D	0.0094	J	-		0.0063	J	-		<0.45	:	-	
Potassium	mg/L	T	-		4.09	:	-		<63.8	:	-		4.12	:
Potassium	mg/L	D	3.55	:	-		3.97	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0022	:	-		<0.003	:	-		0.0023	J
Selenium	mg/L	D	0.0019	:	-		0.0022	J	-		<0.003	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.001	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.001	:	-	
Sodium	mg/L	T	-		30.2	:	-		<99.1	:	-		29.4	:
Sodium	mg/L	D	31.5	:	-		33.6	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.001	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.001	:	-		0.00026	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.001	:	-	
Zinc	mg/L	T	-		<0.131	:	-		0.237	:	-		0.137	:
Zinc	mg/L	D	0.137	:	-		<0.128	:	-		0.206	:	-	
Isotopes														
Lead	mg/L	T	-		<0.0002	:	-		<0.002	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		0.00033	:	-		<0.002	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MMW-40A	1/14/2004	MMW-40A-D01N-GR		MMW-40A	4/19/2004	MMW-40A-T01N-GR		MMW-40A	4/19/2004	MMW-40A-D01N-GR		MMW-44A	11/13/2002	MMW-44A-T01N-GR		MMW-44A	11/13/2002	MMW-44A-T01N-GR	
			W GW3				W GW3				W GW3				WRE GW5				W GW5			
Field Measurements																						
DO	mg/L	T	-				4.64	:			-				-				3.81	:		
Eh	millivolts	T	-				317.8	:			-				-				13.	:		
pH	SU	T	-				5.8	J			-				-				3.87	:		
Specific Conductance	uS/cm	T	-				977.	:			-				-				3201.	:		
Temperature	Celsius	T	-				14.94	:			-				-				7.21	:		
Turbidity	NTU	T	-				1.1	:			-				-				27.	:		
General Chemistry																						
Ammonia	mg/L	T	-				<0.059	:			-				-				0.18	:		
Bicarbonate (as CaCO3)	mg/L	T	-				16.2	:			-				-				<1.	:		
Carbonate (as CaCO3)	mg/L	T	-				<1.	:			-				-				<1.	:		
Chloride	mg/L	T	-				41.3	J			-				-				42.2	:		
Fluoride	mg/L	T	-				1.7	:			-				24.5	J			-			
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:			-				-				<1.	:		
Nitrate	mg/L	T	-				3.	J			-				-				<0.4	:		
Nitrite	mg/L	T	-				<0.005	J			-				-				<0.005	:		
Phosphate, Ortho As P	mg/L	T	-				0.04	J			-				-				0.043	:		
Phosphorus	mg/L	T	-				0.039	:			-				-				0.42	:		
Sulfate	mg/L	T	-				1530.	:			-				2660.	J			-			
Total Alkalinity	mg/L	T	-				16.2	:			-				-				<1.	:		
Total Dissolved Solids	mg/L	T	-				2310.	:			-				-				4300.	J		
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:			-				-				0.35	:		
Total Organic Carbon	mg/L	T	-				<1.2	J			-				-				3.	:		
Total Suspended Solids	mg/L	T	-				<2.4	J			-				-				7.7	:		
Laboratory Parameters																						
pH	SU	T	-				5.8	J			-				-				3.87	:		
Specific Conductance	umhos/cm	T	-				2080.	J			-				-				-			
Inorganics																						
Cyanide	mg/L	T	-				<0.01	:			-				-				<0.01	J		
Physical Properties																						
Hardness	mg/L	T	-				1390.	:			-				-				-			
Hardness	mg/L	D	536.	:			-				1400.	:			-				-			
Metals																						

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 1/14/2004 MMW-40A-D01N-GR W GW3		MMW-40A 4/19/2004 MMW-40A-T01N-GR W GW3		MMW-40A 4/19/2004 MMW-40A-D01N-GR W GW3		MMW-44A 11/13/2002 MMW-44A-T01N-GR WRE GW5		MMW-44A 11/13/2002 MMW-44A-T01N-GR W GW5		MMW-44A 11/13/2002 MMW-44A-D01N-GR WRE GW5	
Aluminum	mg/L	T	-		<0.674	:	-		-		-		-	
Aluminum	mg/L	D	<0.621	:	-		<0.573	:	-		-		330.	:
Antimony	mg/L	T	-		<0.0008	:	-		-		-		-	
Antimony	mg/L	D	<0.0017	:	-		<0.0008	:	-		-		<0.028	:
Arsenic	mg/L	T	-		0.00041	:	-		-		-		-	
Arsenic	mg/L	D	0.00048	:	-		<0.0004	:	-		-		<0.023	:
Barium	mg/L	T	-		0.0083	:	-		-		-		-	
Barium	mg/L	D	0.0301	:	-		0.0088	:	-		-		<0.048	:
Beryllium	mg/L	T	-		<0.0002	:	-		-		-		-	
Beryllium	mg/L	D	<0.001	:	-		<0.0002	:	-		-		0.0528	:
Boron	mg/L	T	-		<0.0038	:	-		-		-		-	
Boron	mg/L	D	0.0188	:	-		<0.0046	:	-		-		<0.027	:
Cadmium	mg/L	T	-		0.0045	:	-		-		-		-	
Cadmium	mg/L	D	<0.0007	:	-		0.0052	J	-		-		<0.08	:
Calcium	mg/L	T	-		377.	:	-		-		-		-	
Calcium	mg/L	D	138.	:	-		380.	:	-		-		354.	:
Chromium	mg/L	T	-		<0.0006	:	-		-		-		-	
Chromium	mg/L	D	<0.0057	:	-		<0.0006	:	-		-		<0.16	J
Cobalt	mg/L	T	-		<0.0011	J	-		-		-		-	
Cobalt	mg/L	D	<0.0037	:	-		<0.0044	J	-		-		0.485	:
Copper	mg/L	T	-		<0.00088	:	-		-		-		-	
Copper	mg/L	D	<0.0035	:	-		0.0053	:	-		-		5.9	:
Iron	mg/L	T	-		<0.306	J	-		-		-		-	
Iron	mg/L	D	<0.423	:	-		<0.271	:	-		-		<2.66	:
Lead	mg/L	T	-		<0.0008	:	-		-		-		-	
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		-		<0.001	:
Magnesium	mg/L	T	-		109.	:	-		-		-		-	
Magnesium	mg/L	D	46.4	:	-		110.	:	-		-		101.	:
Manganese	mg/L	T	-		<0.019	:	-		-		-		-	
Manganese	mg/L	D	<0.019	:	-		<0.019	:	-		-		37.6	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		<0.001	:	-		-		-		-	
Molybdenum	mg/L	D	0.0685	:	-		0.0012	:	-		-		<0.011	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 1/14/2004 MMW-40A-D01N-GR W GW3		MMW-40A 4/19/2004 MMW-40A-T01N-GR W GW3		MMW-40A 4/19/2004 MMW-40A-D01N-GR W GW3		MMW-44A 11/13/2002 MMW-44A-T01N-GR WRE GW5		MMW-44A 11/13/2002 MMW-44A-T01N-GR W GW5		MMW-44A 11/13/2002 MMW-44A-D01N-GR WRE GW5	
Nickel	mg/L	T	-		0.099	:	-		-		-		-	
Nickel	mg/L	D	<0.0168	:	-		0.0976	:	-		-		0.939	:
Potassium	mg/L	T	-		4.78	:	-		-		-		-	
Potassium	mg/L	D	4.17	:	-		4.64	:	-		-		<31.4	J
Selenium	mg/L	T	-		0.0059	:	-		-		-		-	
Selenium	mg/L	D	0.0019	:	-		0.006	:	-		-		<0.008	:
Silver	mg/L	T	-		<0.0002	J	-		-		-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		-		<0.001	:
Sodium	mg/L	T	-		89.9	:	-		-		-		-	
Sodium	mg/L	D	29.9	:	-		89.5	:	-		-		39.4	:
Thallium	mg/L	T	-		<0.0002	:	-		-		-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.0004	:	-		-		-		-	
Vanadium	mg/L	D	0.0002	:	-		<0.0004	:	-		-		0.0024	:
Zinc	mg/L	T	-		0.498	:	-		-		-		-	
Zinc	mg/L	D	0.146	:	-		0.5	:	-		-		9.43	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	-		-		-		-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	-		-		-		-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	-		-		-		-		<0.01	:	-	
2-Butanone	mg/L	T	-		-		-		-		<0.01	:	-	
2-Hexanone	mg/L	T	-		-		-		-		<0.01	:	-	
4-Methyl-2-pentanone	mg/L	T	-		-		-		-		<0.01	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	1/14/2004	4/19/2004	4/19/2004	11/13/2002	11/13/2002	11/13/2002
			Sample ID	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR
			Exposure Area	W GW3	W GW3	W GW3	WRE GW5	W GW5	WRE GW5
Acetone	mg/L	T		-	-	-	-	<0.01 :	-
Benzene	mg/L	T		-	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Bromoform	mg/L	T		-	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		-	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		-	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		-	-	-	-	<0.01 :	-
Chloroform	mg/L	T		-	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		-	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		-	-	-	-	<0.01 :	-
Styrene	mg/L	T		-	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	-	-	-	0.001 J	-
Toluene	mg/L	T		-	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		-	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	-	-	-	<0.026 :	-
2,4,6-Trichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	-	-	-	<0.026 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-40A	MMW-40A	MMW-40A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	1/14/2004	4/19/2004	4/19/2004	11/13/2002	11/13/2002	11/13/2002
			Sample ID	MMW-40A-D01N-GR	MMW-40A-T01N-GR	MMW-40A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR
			Exposure Area	W GW3	W GW3	W GW3	WRE GW5	W GW5	WRE GW5
2,4-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
2-Nitrophenol	mg/L	T		-	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	-	-	<0.026 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	-	-	<0.026 :	-
4-Nitrophenol	mg/L	T		-	-	-	-	<0.026 :	-
Acenaphthene	mg/L	T		-	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	-	-	<0.01 :	-
Anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)anthracene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		-	-	-	-	<0.01 :	-
Carbazole	mg/L	T		-	-	-	-	<0.01 :	-
Chrysene	mg/L	T		-	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-40A 1/14/2004 MMW-40A-D01N-GR W GW3	MMW-40A 4/19/2004 MMW-40A-T01N-GR W GW3	MMW-40A 4/19/2004 MMW-40A-D01N-GR W GW3	MMW-44A 11/13/2002 MMW-44A-T01N-GR WRE GW5	MMW-44A 11/13/2002 MMW-44A-T01N-GR W GW5	MMW-44A 11/13/2002 MMW-44A-D01N-GR WRE GW5
Dibenzofuran	mg/L	T	-	-	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T	-	-	-	-	<0.01 :	-
Diethylphthalate	mg/L	T	-	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T	-	-	-	-	0.01 J	-
Di-n-Butyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T	-	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T	-	-	-	-	<0.01 :	-
Fluorene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T	-	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T	-	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Isophorone	mg/L	T	-	-	-	-	<0.01 :	-
Naphthalene	mg/L	T	-	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T	-	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T	-	-	-	-	<0.026 :	-
Phenanthrene	mg/L	T	-	-	-	-	<0.01 :	-
Phenol	mg/L	T	-	-	-	-	<0.01 :	-
Pyrene	mg/L	T	-	-	-	-	<0.01 :	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	-	-	-	0.00046 :	-
2,6-Pyridinediamine,	mg/L	T	-	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T	-	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T	-	-	-	-	<0.01 :	-
Isotopes								
Delta D	per mil	T	-	-100.8 :	-	-	-	-
Delta O-18	per mil	T	-	-13.7 :	-	-	-	-
Lead	mg/L	T	-	<0.0008 :	-	-	-	-
Lead	mg/L	D	<0.0002 :	-	<0.0008 :	-	-	<0.001 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	11/13/2002	12/3/2002	12/3/2002	1/14/2003	1/14/2003	2/6/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Field Measurements									
DO	mg/L	T		-	24.79 :	-	2.17 :	-	-
Eh	millivolts	T		-	291.3 :	-	357.1 :	-	-
pH	SU	T		-	3.32 :	-	3.29 :	-	-
Specific Conductance	uS/cm	T		-	4946. :	-	3430. :	-	-
Temperature	Celsius	T		-	7.32 :	-	9.93 :	-	-
Turbidity	NTU	T		-	19.9 :	-	0. :	-	-
General Chemistry									
Ammonia	mg/L	T		-	0.12 :	-	<0.27 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	59.3 :	-	82.6 :	-	-
Fluoride	mg/L	T		-	0.38 :	-	26.9 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	0.64 J	-	<0.66 :	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.054 J	-	<0.76 J	-	-
Phosphorus	mg/L	T		-	0.07 J	-	0.12 J	-	-
Sulfate	mg/L	T		-	2750. :	-	3120. J	-	-
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		-	4280. J	-	4850. J	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 J	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	3. :	-	1.7 :	-	1.2 :
Total Suspended Solids	mg/L	T		-	<2. J	-	32.8 :	-	-
Laboratory Parameters									
pH	SU	T		-	3.32 :	-	3.29 :	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	974. :	-	1220. :	-	-
Hardness	mg/L	D		-	-	989. :	-	1310. :	-
Metals									
Aluminum	mg/L	T		-	256. :	-	320. :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 11/13/2002 MMW-44A-D01N-GR GW5	MMW-44A 12/3/2002 MMW-44A-T01N-GR GW5	MMW-44A 12/3/2002 MMW-44A-D01N-GR GW5	MMW-44A 1/14/2003 MMW-44A-T01N-GR GW5	MMW-44A 1/14/2003 MMW-44A-D01N-GR GW5	MMW-44A 2/6/2003 MMW-44A-T01N-GR GW5
Aluminum	mg/L	D	-	-	260. :	-	344. :	-
Antimony	mg/L	T	-	<0.003 :	-	<0.028 :	-	-
Antimony	mg/L	D	-	-	<0.003 :	-	<0.028 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.023 J	-	-
Arsenic	mg/L	D	-	-	<0.0004 :	-	<0.023 J	-
Barium	mg/L	T	-	<0.0048 :	-	<0.048 :	-	-
Barium	mg/L	D	-	-	<0.0048 :	-	<0.048 :	-
Beryllium	mg/L	T	-	0.0418 :	-	0.0578 :	-	-
Beryllium	mg/L	D	-	-	0.0424 :	-	0.0564 :	-
Boron	mg/L	T	-	<0.0038 :	-	<0.027 J	-	-
Boron	mg/L	D	-	-	<0.0039 :	-	<0.027 J	-
Cadmium	mg/L	T	-	0.043 :	-	<0.08 :	-	-
Cadmium	mg/L	D	-	-	0.0417 J	-	<0.08 :	-
Calcium	mg/L	T	-	263. :	-	328. :	-	-
Calcium	mg/L	D	-	-	267. :	-	351. :	-
Chromium	mg/L	T	-	0.0478 :	-	<0.16 :	-	-
Chromium	mg/L	D	-	-	0.047 :	-	<0.16 :	-
Cobalt	mg/L	T	-	0.339 :	-	0.445 :	-	-
Cobalt	mg/L	D	-	-	0.344 J	-	0.467 :	-
Copper	mg/L	T	-	4.9 :	-	5.77 :	-	-
Copper	mg/L	D	-	-	4.99 J	-	6.15 :	-
Iron	mg/L	T	-	0.787 :	-	<2.66 :	-	-
Iron	mg/L	D	-	-	0.796 :	-	<2.66 :	-
Lead	mg/L	T	-	<0.0002 :	-	0.0011 :	-	-
Lead	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-
Magnesium	mg/L	T	-	77.3 :	-	98.1 :	-	-
Magnesium	mg/L	D	-	-	78.2 :	-	106. :	-
Manganese	mg/L	T	-	36.2 J	-	37.9 :	-	-
Manganese	mg/L	D	-	-	37.2 J	-	40.6 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.0011 :	-	<0.011 J	-	-
Molybdenum	mg/L	D	-	-	<0.0011 :	-	<0.011 J	-
Nickel	mg/L	T	-	0.712 :	-	0.94 :	-	-

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 11/13/2002 MMW-44A-D01N-GR W GW5	MMW-44A 12/3/2002 MMW-44A-T01N-GR W GW5	MMW-44A 12/3/2002 MMW-44A-D01N-GR W GW5	MMW-44A 1/14/2003 MMW-44A-T01N-GR W GW5	MMW-44A 1/14/2003 MMW-44A-D01N-GR W GW5	MMW-44A 2/6/2003 MMW-44A-T01N-GR W GW5
Nickel	mg/L	D	-	-	0.721 :	-	0.985 :	-
Potassium	mg/L	T	-	2.75 :	-	<31.4 :	-	-
Potassium	mg/L	D	-	-	2.71 :	-	<31.4 :	-
Selenium	mg/L	T	-	0.0128 :	-	<0.008 :	-	-
Selenium	mg/L	D	-	-	0.0108 :	-	0.0118 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.001 :	-	-
Silver	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-
Sodium	mg/L	T	-	33.6 :	-	40. :	-	-
Sodium	mg/L	D	-	-	34.2 :	-	56.8 :	-
Thallium	mg/L	T	-	0.00029 :	-	<0.001 :	-	-
Thallium	mg/L	D	-	-	0.00028 :	-	<0.001 :	-
Vanadium	mg/L	T	-	0.0013 :	-	0.0033 :	-	-
Vanadium	mg/L	D	-	-	0.0014 :	-	0.0026 :	-
Zinc	mg/L	T	-	9. J	-	9.51 :	-	-
Zinc	mg/L	D	-	-	9.25 J	-	10.2 :	-
Volatile Organics								
1,1,1-Trichloroethane	mg/L	T	-	0.002 J	-	0.002 J	-	-
1,1,2,2-Tetrachloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2-Butanone	mg/L	T	-	<0.01 :	-	<0.01 J	-	-
2-Hexanone	mg/L	T	-	<0.01 :	-	<0.01 J	-	-
4-Methyl-2-pentanone	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Acetone	mg/L	T	-	<0.01 J	-	<0.01 J	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	11/13/2002	12/3/2002	12/3/2002	1/14/2003	1/14/2003	2/6/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Benzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T		-	<0.011 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.011 :	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T		-	<0.028 :	-	<0.026 :	-	-
2,4,6-Trichlorophenol	mg/L	T		-	<0.011 :	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T		-	<0.011 :	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T		-	<0.011 :	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T		-	<0.028 :	-	<0.026 :	-	-
2,4-Dinitrotoluene	mg/L	T		-	<0.011 :	-	<0.01 :	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 11/13/2002 MMW-44A-D01N-GR GW5 W		MMW-44A 12/3/2002 MMW-44A-T01N-GR GW5 W		MMW-44A 12/3/2002 MMW-44A-D01N-GR GW5 W		MMW-44A 1/14/2003 MMW-44A-T01N-GR GW5 W		MMW-44A 1/14/2003 MMW-44A-D01N-GR GW5 W		MMW-44A 2/6/2003 MMW-44A-T01N-GR GW5 W	
2,6-Dinitrotoluene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
2-Chloronaphthalene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
2-Chlorophenol	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
2-Methylnaphthalene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
2-Methylphenol	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
2-Nitroaniline	mg/L	T	-		<0.028	:	-		<0.026	:	-		-	
2-Nitrophenol	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
3,3-Dichlorobenzidine	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
3-Nitroaniline	mg/L	T	-		<0.028	:	-		<0.026	:	-		-	
4,6-Dinitro-2-methylphenol	mg/L	T	-		<0.028	:	-		<0.026	:	-		-	
4-Bromophenyl phenyl ether	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
4-Chloro-3-methylphenol	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
4-Chloroaniline	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
4-Chlorophenyl phenyl ether	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
4-Methylphenol	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
4-Nitroaniline	mg/L	T	-		<0.028	:	-		<0.026	:	-		-	
4-Nitrophenol	mg/L	T	-		<0.028	J	-		<0.026	:	-		-	
Acenaphthene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Acenaphthylene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Anthracene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Benzaldehyde	mg/L	T	-		<0.011	J	-		<0.01	J	-		-	
Benzo(a)anthracene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Benzo(a)pyrene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Benzo(b)fluoranthene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Benzo(g,h,i)perylene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Benzo(k)fluoranthene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Bis(2-chloroethoxy)methane	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Bis(2-chloroethyl)ether	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Bis(2-ethylhexyl)phthalate	mg/L	T	-		<0.011	:	-		0.002	J	-		-	
Butyl benzyl phthalate	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Carbazole	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Chrysene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Dibenz(a,h)anthracene	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	
Dibenzofuran	mg/L	T	-		<0.011	:	-		<0.01	:	-		-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 11/13/2002 MMW-44A-D01N-GR W GW5	MMW-44A 12/3/2002 MMW-44A-T01N-GR W GW5	MMW-44A 12/3/2002 MMW-44A-D01N-GR W GW5	MMW-44A 1/14/2003 MMW-44A-T01N-GR W GW5	MMW-44A 1/14/2003 MMW-44A-D01N-GR W GW5	MMW-44A 2/6/2003 MMW-44A-T01N-GR W GW5
Dichlorodiisopropyl ether	mg/L	T	-	<0.011 J	-	<0.01 :	-	-
Diethylphthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Dimethylphthalate	mg/L	T	-	<0.011 :	-	0.0008 J	-	-
Di-n-Butyl phthalate	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Di-n-Octyl phthalate	mg/L	T	-	<0.011 :	-	<0.01 J	-	-
Fluoranthene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Fluorene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorobenzene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachlorocyclopentadiene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Hexachloroethane	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Isophorone	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Naphthalene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Nitrobenzene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
N-Nitrosodi-n-propylamine	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
N-Nitrosodiphenylamine	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Pentachlorophenol	mg/L	T	-	<0.028 :	-	<0.026 J	-	-
Phenanthrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Phenol	mg/L	T	-	<0.011 J	-	<0.01 :	-	-
Pyrene	mg/L	T	-	<0.011 :	-	<0.01 :	-	-
Explosives								
2,4,6-Trinitrotoluene	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
2,6-Pyridinediamine,	mg/L	T	-	<0.00025 J	-	<0.00025 J	-	-
Cyclotetramethylenetetranitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Cyclotrimethylenetrinitramine	mg/L	T	-	<0.00025 :	-	<0.00025 :	-	-
Pentaerythritol tetranitrate	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Isotopes								
Lead	mg/L	T	-	<0.0002 :	-	0.0011 :	-	-
Lead	mg/L	D	-	-	<0.0002 :	-	<0.001 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	2/7/2003	2/7/2003	2/7/2003	3/4/2003	3/4/2003	4/7/2003
			Sample ID	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Field Measurements									
DO	mg/L	T		-	2.19 :	-	3.07 :	-	3.44 :
Eh	millivolts	T		-	377.2 :	-	499.2 :	-	468.5 :
pH	SU	T		-	3.25 :	-	3.26 :	-	4.7 J
Specific Conductance	uS/cm	T		-	3420. :	-	3623. :	-	3376. :
Temperature	Celsius	T		-	8.46 :	-	6.22 :	-	8.29 :
Turbidity	NTU	T		-	16.9 :	-	61.2 :	-	28.2 :
General Chemistry									
Ammonia	mg/L	T		-	<0.13 :	-	<0.062 J	-	<0.12 :
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	88.6 J	-	48.4 :	-	54.4 :
Fluoride	mg/L	T		-	24.4 :	-	25.4 :	-	26.5 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.67 :	-	0.7 J	-	<0.58 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.062 :	-	0.067 :	-	<0.22 J
Phosphorus	mg/L	T		-	0.07 :	-	0.073 J	-	0.082 :
Sulfate	mg/L	T		-	3590. J	-	3040. :	-	2900. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	3660. :	-	4330. J	-	2430. J
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	-	-	<2.4 J	-	<1.7 J
Total Suspended Solids	mg/L	T		-	5.1 J	-	4.5 J	-	<4.7 :
Laboratory Parameters									
pH	SU	T		-	3.25 :	-	3.26 :	-	4.7 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	3190. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1410. :	-	1280. :	-	1180. :
Hardness	mg/L	D		-	-	1330. :	-	1280. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 2/7/2003 MMW-44A-T01N-GR WRE GW5	MMW-44A 2/7/2003 MMW-44A-T01N-GR W GW5	MMW-44A 2/7/2003 MMW-44A-D01N-GR W GW5	MMW-44A 3/4/2003 MMW-44A-T01N-GR W GW5	MMW-44A 3/4/2003 MMW-44A-D01N-GR W GW5	MMW-44A 4/7/2003 MMW-44A-T01N-GR W GW5
Aluminum	mg/L	T	-	356. :	-	330. :	-	300. :
Aluminum	mg/L	D	-	-	346. :	-	331. :	-
Antimony	mg/L	T	-	<0.028 :	-	<0.028 :	-	<0.003 :
Antimony	mg/L	D	-	-	<0.028 :	-	<0.028 :	-
Arsenic	mg/L	T	-	<0.023 J	-	<0.023 :	-	<0.002 :
Arsenic	mg/L	D	-	-	<0.023 J	-	<0.0264 :	-
Barium	mg/L	T	-	<0.048 :	-	<0.048 :	-	<0.125 :
Barium	mg/L	D	-	-	<0.048 :	-	<0.048 :	-
Beryllium	mg/L	T	-	0.0574 :	-	0.0598 :	-	0.0456 :
Beryllium	mg/L	D	-	-	0.0568 :	-	0.0571 :	-
Boron	mg/L	T	-	<0.027 :	-	<0.027 :	-	<0.084 :
Boron	mg/L	D	-	-	<0.027 :	-	<0.027 :	-
Cadmium	mg/L	T	-	0.083 :	-	<0.08 :	-	0.0443 :
Cadmium	mg/L	D	-	-	0.0812 :	-	<0.08 :	-
Calcium	mg/L	T	-	376. :	-	343. J	-	321. :
Calcium	mg/L	D	-	-	355. :	-	343. J	-
Chromium	mg/L	T	-	<0.16 :	-	<0.16 :	-	0.0492 :
Chromium	mg/L	D	-	-	<0.16 :	-	<0.16 :	-
Cobalt	mg/L	T	-	0.502 :	-	0.462 :	-	0.418 :
Cobalt	mg/L	D	-	-	0.471 :	-	0.5 :	-
Copper	mg/L	T	-	6.45 :	-	6.1 :	-	5.37 :
Copper	mg/L	D	-	-	6.32 :	-	6.06 :	-
Iron	mg/L	T	-	<2.66 J	-	<2.66 :	-	0.54 :
Iron	mg/L	D	-	-	<2.66 J	-	<2.66 J	-
Lead	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.001 :	-	<0.001 :	-
Magnesium	mg/L	T	-	114. :	-	102. :	-	92.2 :
Magnesium	mg/L	D	-	-	107. :	-	103. :	-
Manganese	mg/L	T	-	41.8 J	-	39.1 :	-	35.2 :
Manganese	mg/L	D	-	-	39.9 :	-	39.2 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.011 J	-	<0.011 J	-	<0.022 :
Molybdenum	mg/L	D	-	-	<0.011 J	-	<0.011 J	-

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	2/7/2003	2/7/2003	2/7/2003	3/4/2003	3/4/2003	4/7/2003
			Sample ID	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Nickel	mg/L	T		-	1.12 :	-	0.966 :	-	0.864 :
Nickel	mg/L	D		-	-	1.07 :	-	1.04 :	-
Potassium	mg/L	T		-	<31.4 :	-	<31.4 :	-	<4.05 :
Potassium	mg/L	D		-	-	<31.4 :	-	<31.4 :	-
Selenium	mg/L	T		-	<0.008 :	-	0.0127 J	-	0.007 :
Selenium	mg/L	D		-	-	<0.008 :	-	0.019 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T		-	54.7 :	-	46. :	-	35. :
Sodium	mg/L	D		-	-	52. :	-	<36.6 :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	0.0031 :	-	0.0039 :	-	0.0029 J
Vanadium	mg/L	D		-	-	0.0034 :	-	0.0038 :	-
Zinc	mg/L	T		-	10.6 :	-	9.8 J	-	8.44 :
Zinc	mg/L	D		-	-	10.1 :	-	9.79 :	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	0.002 J	-	0.001 J	-	0.001 J
1,1,2,2-Tetrachloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1,2-Trichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,1-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2,4-Trichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dibromo-3-chloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloroethene (total)	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,2-Dichloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,3-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
1,4-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Butanone	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
2-Hexanone	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
4-Methyl-2-pentanone	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	2/7/2003	2/7/2003	2/7/2003	3/4/2003	3/4/2003	4/7/2003
			Sample ID	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Acetone	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Benzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Methylene chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2,4,5-Trichlorophenol	mg/L	T		-	<0.026 :	-	<0.027 :	-	<0.027 :
2,4,6-Trichlorophenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2,4-Dichlorophenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2,4-Dimethylphenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 J
2,4-Dinitrophenol	mg/L	T		-	<0.026 J	-	<0.027 :	-	<0.027 J

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	2/7/2003	2/7/2003	2/7/2003	3/4/2003	3/4/2003	4/7/2003
			Sample ID	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
2,4-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2,6-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2-Chloronaphthalene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2-Chlorophenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2-Methylnaphthalene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2-Methylphenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
2-Nitroaniline	mg/L	T		-	<0.026 :	-	<0.027 :	-	<0.027 :
2-Nitrophenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
3,3-Dichlorobenzidine	mg/L	T		-	<0.01 J	-	<0.011 :	-	<0.011 J
3-Nitroaniline	mg/L	T		-	<0.026 :	-	<0.027 :	-	<0.027 J
4,6-Dinitro-2-methylphenol	mg/L	T		-	<0.026 J	-	<0.027 :	-	<0.027 J
4-Bromophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
4-Chloro-3-methylphenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
4-Chloroaniline	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
4-Chlorophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
4-Methylphenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
4-Nitroaniline	mg/L	T		-	<0.026 :	-	<0.027 :	-	<0.027 :
4-Nitrophenol	mg/L	T		-	<0.026 :	-	<0.027 :	-	<0.027 J
Acenaphthene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Acenaphthylene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Anthracene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Benzaldehyde	mg/L	T		-	<0.01 J	-	<0.011 :	-	<0.011 :
Benzo(a)anthracene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Benzo(a)pyrene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Benzo(b)fluoranthene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Benzo(g,h,i)perylene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Benzo(k)fluoranthene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Bis(2-chloroethoxy)methane	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Bis(2-chloroethyl)ether	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Bis(2-ethylhexyl)phthalate	mg/L	T		-	<0.01 :	-	0.008 J	-	<0.011 :
Butyl benzyl phthalate	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Carbazole	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Chrysene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Dibenz(a,h)anthracene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 J

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	2/7/2003	2/7/2003	2/7/2003	3/4/2003	3/4/2003	4/7/2003
			Sample ID	MMW-44A-T01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
			Exposure Area	WRE GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Dibenzofuran	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Dichlorodiisopropyl ether	mg/L	T		-	<0.01 J	-	<0.011 :	-	<0.011 :
Diethylphthalate	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Dimethylphthalate	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Di-n-Butyl phthalate	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Di-n-Octyl phthalate	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 J
Fluoranthene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Fluorene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Hexachlorobenzene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Hexachlorocyclopentadiene	mg/L	T		-	<0.01 J	-	<0.011 :	-	<0.011 :
Hexachloroethane	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Indeno(1,2,3-cd)pyrene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Isophorone	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Naphthalene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Nitrobenzene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
N-Nitrosodi-n-propylamine	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
N-Nitrosodiphenylamine	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Pentachlorophenol	mg/L	T		-	<0.026 J	-	<0.027 :	-	<0.027 :
Phenanthrene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Phenol	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Pyrene	mg/L	T		-	<0.01 :	-	<0.011 :	-	<0.011 :
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	<0.00025 J	-	<0.00025 :
Cyclotetramethylenetetranitramine	mg/L	T		-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
Cyclotrimethylenetrinitramine	mg/L	T		-	<0.00025 :	-	<0.00025 J	-	<0.00025 :
Pentaerythritol tetranitrate	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 :
Isotopes									
Lead	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D		-	-	<0.001 :	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	4/7/2003	5/5/2003	5/5/2003	6/3/2003	6/3/2003	7/23/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Field Measurements									
DO	mg/L	T		-	3.1 :	-	1.69 :	-	1.35 :
Eh	millivolts	T		-	466.4 :	-	540.6 :	-	538. :
pH	SU	T		-	3.9 J	-	3.7 J	-	4.3 J
Specific Conductance	uS/cm	T		-	3604. :	-	3535. :	-	3268. :
Temperature	Celsius	T		-	11.56 :	-	16.28 :	-	12.15 :
Turbidity	NTU	T		-	37.4 :	-	0. :	-	54.3 :
General Chemistry									
Ammonia	mg/L	T		-	<0.098 :	-	<0.3 J	-	<0.043 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	76.9 :	-	55.6 :	-	47.2 :
Fluoride	mg/L	T		-	28.1 :	-	26.7 :	-	28.6 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.53 J	-	<0.4 J	-	0.44 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	0.046 :	-	0.31 J	-	<0.044 :
Phosphorus	mg/L	T		-	0.074 :	-	0.1 J	-	0.077 :
Sulfate	mg/L	T		-	2980. :	-	2960. J	-	2900. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	4590. J	-	4910. J	-	3830. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.5 :	-	1.6 J	-	<1.9 J
Total Suspended Solids	mg/L	T		-	5.5 :	-	5.2 :	-	19.1 :
Laboratory Parameters									
pH	SU	T		-	3.9 J	-	3.7 J	-	4.3 J
Specific Conductance	umhos/cm	T		-	3230. J	-	3370. J	-	3330. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1280. :	-	1200. :	-	1250. :
Hardness	mg/L	D		1210. :	-	1270. :	-	1210. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	4/7/2003	5/5/2003	5/5/2003	6/3/2003	6/3/2003	7/23/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Aluminum	mg/L	T		-	337. :	-	301. :	-	308. :
Aluminum	mg/L	D		306. :	-	296. :	-	307. :	-
Antimony	mg/L	T		-	<0.072 :	-	<0.072 :	-	<0.047 :
Antimony	mg/L	D		<0.003 :	-	<0.072 :	-	<0.072 :	-
Arsenic	mg/L	T		-	<0.04 :	-	<0.04 :	-	<0.048 :
Arsenic	mg/L	D		<0.002 :	-	<0.04 :	-	<0.04 :	-
Barium	mg/L	T		-	<0.123 :	-	<0.123 :	-	<0.059 :
Barium	mg/L	D		<0.125 :	-	<0.123 :	-	<0.123 :	-
Beryllium	mg/L	T		-	0.0636 :	-	0.0584 :	-	0.0543 :
Beryllium	mg/L	D		0.0469 :	-	0.0544 :	-	0.0566 :	-
Boron	mg/L	T		-	<0.084 :	-	<0.084 :	-	<0.048 :
Boron	mg/L	D		<0.084 :	-	<0.084 :	-	<0.084 :	-
Cadmium	mg/L	T		-	0.0574 :	-	0.051 :	-	<0.12 :
Cadmium	mg/L	D		0.0471 :	-	0.0493 :	-	0.0509 :	-
Calcium	mg/L	T		-	345. :	-	327. :	-	341. :
Calcium	mg/L	D		328. :	-	358. :	-	330. :	-
Chromium	mg/L	T		-	0.0469 :	-	0.0409 :	-	<0.19 :
Chromium	mg/L	D		0.0476 :	-	0.047 :	-	0.0365 :	-
Cobalt	mg/L	T		-	0.485 :	-	0.441 :	-	0.487 :
Cobalt	mg/L	D		0.429 :	-	0.424 :	-	0.442 :	-
Copper	mg/L	T		-	6.25 :	-	5.63 :	-	4.84 :
Copper	mg/L	D		5.48 :	-	5.4 :	-	5.74 :	-
Iron	mg/L	T		-	0.668 :	-	0.386 :	-	0.582 :
Iron	mg/L	D		<0.422 :	-	1.18 :	-	<0.311 :	-
Lead	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Lead	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Magnesium	mg/L	T		-	103. :	-	93.2 :	-	96.7 :
Magnesium	mg/L	D		94. :	-	92.4 :	-	94.2 :	-
Manganese	mg/L	T		-	39.6 :	-	36.1 :	-	33.7 :
Manganese	mg/L	D		35.8 :	-	34.6 :	-	36.7 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	<0.023 :	-	<0.023 J	-	<0.017 :
Molybdenum	mg/L	D		<0.022 :	-	<0.023 :	-	<0.023 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	4/7/2003	5/5/2003	5/5/2003	6/3/2003	6/3/2003	7/23/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Nickel	mg/L	T		-	1.02 :	-	0.925 :	-	0.835 J
Nickel	mg/L	D		0.885 :	-	0.898 :	-	0.932 :	-
Potassium	mg/L	T		-	<40.5 :	-	<3.26 :	-	<37.1 :
Potassium	mg/L	D		<4.05 :	-	<40.5 :	-	<3.26 :	-
Selenium	mg/L	T		-	0.0131 :	-	0.0155 :	-	0.0094 :
Selenium	mg/L	D		0.0053 :	-	0.0139 :	-	0.0158 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 J
Silver	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T		-	<91.6 :	-	29.5 :	-	<53.2 :
Sodium	mg/L	D		35.7 :	-	<91.6 :	-	29.9 :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	<0.001 :	-	<0.002 :	-	<0.002 :
Vanadium	mg/L	D		0.0011 J	-	<0.001 :	-	<0.002 :	-
Zinc	mg/L	T		-	10.1 :	-	8.62 :	-	8.37 :
Zinc	mg/L	D		8.61 :	-	9.33 :	-	8.67 :	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	0.002 J	-	0.001 J	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1,2-Trichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,1-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2,4-Trichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloroethene (total)	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,2-Dichloropropane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,3-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
1,4-Dichlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Butanone	mg/L	T		-	<0.01 :	-	<0.01 J	-	-
2-Hexanone	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
4-Methyl-2-pentanone	mg/L	T		-	<0.01 :	-	<0.01 :	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	4/7/2003	5/5/2003	5/5/2003	6/3/2003	6/3/2003	7/23/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Acetone	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Benzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Hexachlorobutadiene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
2,4,6-Trichlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T		-	<0.025 :	-	<0.025 :	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	4/7/2003	5/5/2003	5/5/2003	6/3/2003	6/3/2003	7/23/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
2,4-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2,6-Dinitrotoluene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Chloronaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
2-Nitrophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
3-Nitroaniline	mg/L	T		-	<0.025 J	-	<0.025 :	-	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
4-Bromophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
4-Nitrophenol	mg/L	T		-	<0.025 J	-	<0.025 :	-	-
Acenaphthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Acenaphthylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzaldehyde	mg/L	T		-	<0.01 :	-	<0.01 J	-	-
Benzo(a)anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbazole	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Chrysene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T		-	<0.01 J	-	<0.01 :	-	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 4/7/2003 MMW-44A-D01N-GR GW5 W		MMW-44A 5/5/2003 MMW-44A-T01N-GR GW5 W		MMW-44A 5/5/2003 MMW-44A-D01N-GR GW5 W		MMW-44A 6/3/2003 MMW-44A-T01N-GR GW5 W		MMW-44A 6/3/2003 MMW-44A-D01N-GR GW5 W		MMW-44A 7/23/2003 MMW-44A-T01N-GR GW5 W	
Dibenzofuran	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dichlorodiisopropyl ether	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Diethylphthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Dimethylphthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Di-n-Butyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Di-n-Octyl phthalate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Fluoranthene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Fluorene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Hexachlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Hexachlorobutadiene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Hexachlorocyclopentadiene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Hexachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Isophorone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Naphthalene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Nitrobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
N-Nitrosodi-n-propylamine	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
N-Nitrosodiphenylamine	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Pentachlorophenol	mg/L	T	-		<0.025	:	-		<0.025	:	-		-	
Phenanthrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Phenol	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Pyrene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		-	
2,6-Pyridinediamine,	mg/L	T	-		-		-		<0.00025	J	-		-	
Cyclotetramethylenetetranitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		-	
Cyclotrimethylenetrinitramine	mg/L	T	-		<0.00025	:	-		<0.00025	:	-		-	
Pentaerythritol tetranitrate	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	7/23/2003	8/12/2003	8/12/2003	9/9/2003	9/9/2003	10/19/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Field Measurements									
DO	mg/L	T		-	1.37 :	-	1.81 :	-	1.78 :
Eh	millivolts	T		-	511.9 :	-	495.8 :	-	380.1 :
pH	SU	T		-	3.5 J	-	3.4 J	-	3.5 J
Specific Conductance	uS/cm	T		-	3609. :	-	3421. :	-	3788. :
Temperature	Celsius	T		-	11.63 :	-	13. :	-	11.3 :
Turbidity	NTU	T		-	24.2 :	-	29.7 :	-	15.4 :
General Chemistry									
Ammonia	mg/L	T		-	0.063 :	-	<0.053 :	-	<0.078 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	72. :	-	36.4 :	-	59.8 :
Fluoride	mg/L	T		-	26.6 :	-	27.6 :	-	26.9 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.35 J	-	<0.2 :	-	0.56 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.046 J	-	<0.056 :	-	<0.054 J
Phosphorus	mg/L	T		-	0.072 :	-	0.15 :	-	0.099 :
Sulfate	mg/L	T		-	2220. J	-	2820. J	-	2830. J
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	3420. :	-	4580. J	-	3950. J
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<2.4 J	-	<1.4 :	-	1.6 J
Total Suspended Solids	mg/L	T		-	7.4 :	-	7.7 :	-	6.3 :
Laboratory Parameters									
pH	SU	T		-	3.5 J	-	3.4 J	-	3.5 J
Specific Conductance	umhos/cm	T		-	3080. J	-	3130. J	-	3100. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1390. :	-	1260. :	-	1240. :
Hardness	mg/L	D		1290. :	-	1270. :	-	1240. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 7/23/2003 MMW-44A-D01N-GR GW5		MMW-44A 8/12/2003 MMW-44A-T01N-GR GW5		MMW-44A 8/12/2003 MMW-44A-D01N-GR GW5		MMW-44A 9/9/2003 MMW-44A-T01N-GR GW5		MMW-44A 9/9/2003 MMW-44A-D01N-GR GW5		MMW-44A 10/19/2003 MMW-44A-T01N-GR GW5	
Aluminum	mg/L	T	-		348.	:	-		337.	:	-		313.	:
Aluminum	mg/L	D	316.	:	-		348.	:	-		333.	:	-	
Antimony	mg/L	T	-		<0.038	:	-		<0.082	:	-		<0.052	:
Antimony	mg/L	D	<0.047	:	-		<0.038	:	-		<0.082	:	-	
Arsenic	mg/L	T	-		<0.0288	:	-		<0.035	:	-		<0.0879	:
Arsenic	mg/L	D	<0.048	:	-		<0.038	:	-		<0.035	:	-	
Barium	mg/L	T	-		<0.073	:	-		<0.117	:	-		<0.115	:
Barium	mg/L	D	<0.059	:	-		<0.073	:	-		<0.117	:	-	
Beryllium	mg/L	T	-		0.0679	:	-		0.0575	:	-		0.0506	:
Beryllium	mg/L	D	0.0557	:	-		0.0682	:	-		0.0562	:	-	
Boron	mg/L	T	-		<0.046	:	-		<0.064	:	-		<0.063	:
Boron	mg/L	D	<0.048	:	-		<0.046	:	-		<0.064	:	-	
Cadmium	mg/L	T	-		<0.06	:	-		<0.13	:	-		<0.13	:
Cadmium	mg/L	D	<0.12	:	-		<0.06	:	-		<0.13	:	-	
Calcium	mg/L	T	-		349.	:	-		334.	:	-		334.	:
Calcium	mg/L	D	353.	:	-		348.	:	-		328.	:	-	
Chromium	mg/L	T	-		<0.14	:	-		<0.23	:	-		<0.23	J
Chromium	mg/L	D	<0.19	:	-		<0.14	:	-		<0.23	:	-	
Cobalt	mg/L	T	-		0.429	:	-		0.393	:	-		0.513	:
Cobalt	mg/L	D	<0.37	:	-		0.386	:	-		0.386	:	-	
Copper	mg/L	T	-		5.83	:	-		5.54	:	-		5.85	:
Copper	mg/L	D	4.82	:	-		5.87	:	-		5.37	:	-	
Iron	mg/L	T	-		<3.33	:	-		<4.55	:	-		<4.55	:
Iron	mg/L	D	0.362	:	-		<3.33	:	-		<4.55	:	-	
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.002	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		99.1	:	-		102.	:	-		97.6	:
Magnesium	mg/L	D	100.	:	-		98.2	:	-		101.	:	-	
Manganese	mg/L	T	-		36.7	:	-		36.4	:	-		37.	:
Manganese	mg/L	D	35.	:	-		36.6	:	-		35.6	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	0.00011	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.016	:	-		<0.012	:	-		<0.011	J
Molybdenum	mg/L	D	<0.017	:	-		<0.016	:	-		<0.012	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	7/23/2003	8/12/2003	8/12/2003	9/9/2003	9/9/2003	10/19/2003
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Nickel	mg/L	T		-	0.95 :	-	0.957 :	-	0.748 J
Nickel	mg/L	D		0.511 J	-	0.99 :	-	0.902 :	-
Potassium	mg/L	T		-	<39.3 :	-	<63.8 :	-	<63.8 :
Potassium	mg/L	D		<37.1 :	-	<39.3 :	-	<63.8 :	-
Selenium	mg/L	T		-	0.009 :	-	0.0148 :	-	0.018 :
Selenium	mg/L	D		0.0083 J	-	0.0087 :	-	0.014 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D		<0.001 J	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T		-	<47.3 :	-	<99.1 :	-	<99.1 :
Sodium	mg/L	D		<53.2 :	-	<47.3 :	-	<99.1 :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	D		<0.002 :	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T		-	9.55 :	-	9.11 :	-	9.92 :
Zinc	mg/L	D		8.67 :	-	9.48 :	-	8.91 :	-
Isotopes									
Lead	mg/L	T		-	<0.002 :	-	<0.002 :	-	<0.002 :
Lead	mg/L	D		<0.001 :	-	<0.002 :	-	<0.002 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A
			Sample Date	10/19/2003	11/3/2003	11/3/2003	12/8/2003	12/8/2003	1/11/2004
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Field Measurements									
DO	mg/L	T		-	-	-	-	-	1.25 :
Eh	millivolts	T		-	-	-	-	-	488.2 :
pH	SU	T		-	4.6 J	-	3.6 J	-	3.4 J
Specific Conductance	uS/cm	T		-	-	-	-	-	3443. :
Temperature	Celsius	T		-	-	-	-	-	9.24 :
Turbidity	NTU	T		-	-	-	-	-	10.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.15 :	-	0.11 :	-	<0.089 J
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	83.6 :	-	68.6 :	-	75.8 :
Fluoride	mg/L	T		-	25.5 :	-	27.4 :	-	24.5 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 :	-	0.75 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.052 J	-	0.071 :	-	0.32 J
Phosphorus	mg/L	T		-	0.072 :	-	0.15 :	-	0.036 J
Sulfate	mg/L	T		-	2790. :	-	2260. :	-	2910. :
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T		-	4040. J	-	4210. :	-	4490. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.6 :	-	1.1 :	-	<1.7 :
Total Suspended Solids	mg/L	T		-	<0.5 :	-	10.5 :	-	5.3 :
Laboratory Parameters									
pH	SU	T		-	4.6 J	-	3.6 J	-	3.4 J
Specific Conductance	umhos/cm	T		-	3320. J	-	2970. J	-	3320. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1340. :	-	1310. :	-	1260. :
Hardness	mg/L	D		1250. :	-	1360. :	-	1330. :	-
Metals									

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 10/19/2003 MMW-44A-D01N-GR GW5	MMW-44A 11/3/2003 MMW-44A-T01N-GR GW5	MMW-44A 11/3/2003 MMW-44A-D01N-GR GW5	MMW-44A 12/8/2003 MMW-44A-T01N-GR GW5	MMW-44A 12/8/2003 MMW-44A-D01N-GR GW5	MMW-44A 1/11/2004 MMW-44A-T01N-GR GW5
Aluminum	mg/L	T	-	344. :	-	329. :	-	321. :
Aluminum	mg/L	D	319. :	-	346. :	-	332. :	-
Antimony	mg/L	T	-	<0.082 J	-	<0.052 :	-	<0.029 :
Antimony	mg/L	D	<0.052 :	-	<0.082 J	-	<0.052 :	-
Arsenic	mg/L	T	-	<0.035 :	-	<0.041 :	-	<0.028 :
Arsenic	mg/L	D	<0.041 :	-	<0.035 :	-	<0.041 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.115 :	-	0.128 :
Barium	mg/L	D	<0.115 :	-	<0.117 :	-	<0.115 :	-
Beryllium	mg/L	T	-	0.0606 :	-	0.054 :	-	0.0534 :
Beryllium	mg/L	D	0.0564 :	-	<0.056 :	-	0.056 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.064 J	-	<0.0402 :
Boron	mg/L	D	<0.063 :	-	<0.064 :	-	<0.064 J	-
Cadmium	mg/L	T	-	<0.13 :	-	0.0588 :	-	<0.07 J
Cadmium	mg/L	D	<0.13 :	-	<0.13 :	-	<0.05 :	-
Calcium	mg/L	T	-	366. :	-	356. :	-	338. :
Calcium	mg/L	D	337. :	-	371. :	-	363. :	-
Chromium	mg/L	T	-	<0.23 :	-	<0.11 :	-	0.156 :
Chromium	mg/L	D	<0.23 J	-	<0.23 :	-	<0.11 :	-
Cobalt	mg/L	T	-	0.399 :	-	0.554 :	-	0.461 J
Cobalt	mg/L	D	0.538 :	-	0.396 :	-	0.46 :	-
Copper	mg/L	T	-	4.8 :	-	5.8 :	-	5.82 :
Copper	mg/L	D	5.91 :	-	6.23 :	-	5.69 :	-
Iron	mg/L	T	-	<4.55 :	-	<2.78 :	-	<3.73 :
Iron	mg/L	D	<4.55 :	-	<4.55 :	-	<2.78 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.001 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	<0.002 :	-
Magnesium	mg/L	T	-	104. :	-	102. :	-	100. :
Magnesium	mg/L	D	99.6 :	-	105. :	-	102. :	-
Manganese	mg/L	T	-	30.6 J	-	38.9 :	-	36.9 :
Manganese	mg/L	D	37.3 :	-	38.2 :	-	39. :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.012 :	-	<0.011 J	-	<0.024 :
Molybdenum	mg/L	D	<0.011 J	-	<0.012 :	-	<0.011 J	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-44A 10/19/2003 MMW-44A-D01N-GR GW5		MMW-44A 11/3/2003 MMW-44A-T01N-GR GW5		MMW-44A 11/3/2003 MMW-44A-D01N-GR GW5		MMW-44A 12/8/2003 MMW-44A-T01N-GR GW5		MMW-44A 12/8/2003 MMW-44A-D01N-GR GW5		MMW-44A 1/11/2004 MMW-44A-T01N-GR GW5	
Nickel	mg/L	T	-		0.855	:	-		1.24	J	-		1.	:
Nickel	mg/L	D	0.758	J	-		0.928	:	-		1.18	J	-	
Potassium	mg/L	T	-		<63.8	:	-		<31.8	:	-		<24.3	:
Potassium	mg/L	D	<63.8	:	-		<63.8	:	-		<31.8	:	-	
Selenium	mg/L	T	-		0.0135	:	-		0.0084	:	-		0.0177	:
Selenium	mg/L	D	0.0164	:	-		0.0149	:	-		0.0131	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<75.4	:	-		<49.	:
Sodium	mg/L	D	<99.1	:	-		<99.1	:	-		<54.8	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Zinc	mg/L	T	-		8.75	:	-		10.2	:	-		9.84	:
Zinc	mg/L	D	10.2	:	-		11.3	:	-		10.3	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.001	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-44A	MMW-48A
			Sample Date	1/11/2004	2/23/2004	2/23/2004	4/21/2004	4/21/2004	11/14/2002
			Sample ID	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-44A-T01N-GR	MMW-44A-D01N-GR	MMW-48A-T01N-GR
			Exposure Area	W GW5	W GW5	W GW5	W GW5	W GW5	WRE GW5
Field Measurements									
DO	mg/L	T		-	1.7 :	-	3.97 :	-	-
Eh	millivolts	T		-	509.8 :	-	498.9 :	-	-
pH	SU	T		-	3.14 :	-	3.9 J	-	-
Specific Conductance	uS/cm	T		-	3465. :	-	3231. :	-	-
Temperature	Celsius	T		-	6.95 :	-	9.88 :	-	-
Turbidity	NTU	T		-	23.1 :	-	33.4 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.062 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Chloride	mg/L	T		-	-	-	67.4 :	-	-
Fluoride	mg/L	T		-	26. :	-	25.4 :	-	32.5 J
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Nitrate	mg/L	T		-	-	-	0.42 J	-	-
Nitrite	mg/L	T		-	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	0.049 J	-	-
Phosphorus	mg/L	T		-	-	-	0.16 :	-	-
Sulfate	mg/L	T		-	3020. :	-	3100. :	-	-
Total Alkalinity	mg/L	T		-	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		-	4520. :	-	4400. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	-	-	<1. J	-	-
Total Suspended Solids	mg/L	T		-	10.9 :	-	<2.6 J	-	-
Laboratory Parameters									
pH	SU	T		-	3.14 :	-	3.9 J	-	-
Specific Conductance	umhos/cm	T		-	-	-	3030. J	-	-
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		-	1270. :	-	1240. :	-	-
Hardness	mg/L	D		1260. :	-	1200. :	-	1180. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 1/11/2004 MMW-44A-D01N-GR W GW5		MMW-44A 2/23/2004 MMW-44A-T01N-GR W GW5		MMW-44A 2/23/2004 MMW-44A-D01N-GR W GW5		MMW-44A 4/21/2004 MMW-44A-T01N-GR W GW5		MMW-44A 4/21/2004 MMW-44A-D01N-GR W GW5		MMW-48A 11/14/2002 MMW-48A-T01N-GR WRE GW5	
Aluminum	mg/L	T	-		322.	:	-		309.	:	-		-	
Aluminum	mg/L	D	322.	:	-		307.	:	-		298.	:	-	
Antimony	mg/L	T	-		<0.029	:	-		<0.053	:	-		-	
Antimony	mg/L	D	<0.029	:	-		<0.029	:	-		<0.053	:	-	
Arsenic	mg/L	T	-		<0.028	:	-		<0.037	:	-		-	
Arsenic	mg/L	D	<0.028	:	-		<0.028	:	-		<0.037	:	-	
Barium	mg/L	T	-		<0.053	:	-		<0.049	:	-		-	
Barium	mg/L	D	<0.053	:	-		<0.053	:	-		<0.049	:	-	
Beryllium	mg/L	T	-		0.0501	:	-		0.055	:	-		-	
Beryllium	mg/L	D	0.0527	:	-		0.0503	:	-		0.0544	:	-	
Boron	mg/L	T	-		<0.023	:	-		<0.036	:	-		-	
Boron	mg/L	D	<0.023	:	-		<0.023	:	-		<0.036	:	-	
Cadmium	mg/L	T	-		<0.07	:	-		<0.1	:	-		-	
Cadmium	mg/L	D	<0.07	:	-		<0.07	J	-		<0.1	:	-	
Calcium	mg/L	T	-		343.	:	-		338.	:	-		-	
Calcium	mg/L	D	341.	:	-		327.	:	-		321.	:	-	
Chromium	mg/L	T	-		<0.11	:	-		<0.13	:	-		-	
Chromium	mg/L	D	0.145	:	-		<0.11	:	-		<0.13	:	-	
Cobalt	mg/L	T	-		0.462	:	-		0.419	:	-		-	
Cobalt	mg/L	D	0.468	:	-		<0.31	:	-		0.477	:	-	
Copper	mg/L	T	-		5.94	:	-		5.62	:	-		-	
Copper	mg/L	D	5.76	:	-		5.49	:	-		5.43	:	-	
Iron	mg/L	T	-		<3.73	:	-		<2.93	J	-		-	
Iron	mg/L	D	<3.73	:	-		<3.73	:	-		<2.93	:	-	
Lead	mg/L	T	-		<0.0017	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.001	:	-		<0.0014	:	-		<0.004	:	-	
Magnesium	mg/L	T	-		101.	:	-		95.	:	-		-	
Magnesium	mg/L	D	100.	:	-		94.1	:	-		92.2	:	-	
Manganese	mg/L	T	-		37.	:	-		35.4	:	-		-	
Manganese	mg/L	D	37.1	:	-		35.5	:	-		34.5	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.024	:	-		<0.014	:	-		-	
Molybdenum	mg/L	D	<0.024	:	-		<0.024	:	-		<0.014	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-44A 1/11/2004 MMW-44A-D01N-GR W GW5		MMW-44A 2/23/2004 MMW-44A-T01N-GR W GW5		MMW-44A 2/23/2004 MMW-44A-D01N-GR W GW5		MMW-44A 4/21/2004 MMW-44A-T01N-GR W GW5		MMW-44A 4/21/2004 MMW-44A-D01N-GR W GW5		MMW-48A 11/14/2002 MMW-48A-T01N-GR WRE GW5	
Nickel	mg/L	T	-		1.11	:	-		1.06	:	-		-	
Nickel	mg/L	D	0.979	:	-		0.762	:	-		1.12	:	-	
Potassium	mg/L	T	-		<24.3	:	-		<15.5	:	-		-	
Potassium	mg/L	D	<24.3	:	-		<24.3	:	-		<15.5	:	-	
Selenium	mg/L	T	-		<0.009	:	-		0.0082	:	-		-	
Selenium	mg/L	D	0.0154	:	-		<0.008	:	-		0.0097	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	J	-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Sodium	mg/L	T	-		52.3	:	-		<32.8	:	-		-	
Sodium	mg/L	D	71.2	:	-		66.4	:	-		<32.8	:	-	
Thallium	mg/L	T	-		<0.0019	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.0019	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.004	:	-		<0.002	:	-		-	
Vanadium	mg/L	D	<0.002	:	-		<0.004	:	-		<0.002	:	-	
Zinc	mg/L	T	-		9.66	:	-		8.7	:	-		-	
Zinc	mg/L	D	9.6	:	-		9.2	:	-		8.42	:	-	
Isotopes														
204Pb/206Pb	mg/L	T	-		0.00005	:	-		-		-		-	
204Pb/206Pb	mg/L	D	-		-		0.00005	:	-		-		-	
207Pb/206Pb	mg/L	T	-		0.00082	:	-		-		-		-	
207Pb/206Pb	mg/L	D	-		-		0.00084	:	-		-		-	
208Pb/206Pb	mg/L	T	-		0.00192	:	-		-		-		-	
208Pb/206Pb	mg/L	D	-		-		0.00204	:	-		-		-	
Delta 34S	per mil	D	-		-		-4.6	:	-		-		-	
Delta D	per mil	T	-		-		-		-81.5	:	-		-	
Delta O-18	per mil	T	-		-		-		-11.4	:	-		-	
Lead	mg/L	T	-		<0.0017	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.001	:	-		<0.0014	:	-		<0.004	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	11/14/2002	11/14/2002	12/5/2002	12/5/2002	12/5/2002	1/16/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
			Exposure Area	W GW5	W GW5	WRE GW5	W GW5	W GW5	W GW5
Field Measurements									
DO	mg/L	T		1.72 :	-	-	0.6 :	-	1.28 :
Eh	millivolts	T		-177.5 :	-	-	-114.5 :	-	130. :
pH	SU	T		6.17 :	-	-	5.52 :	-	5.44 :
Specific Conductance	uS/cm	T		2526. :	-	-	3408. :	-	3753. :
Temperature	Celsius	T		9.88 :	-	-	8.83 :	-	9. :
Turbidity	NTU	T		82.7 :	-	-	103.3 :	-	90. :
General Chemistry									
Ammonia	mg/L	T		<0.14 :	-	-	<0.054 J	-	<0.098 J
Bicarbonate (as CaCO3)	mg/L	T		29.7 :	-	-	<5.5 :	-	18.8 :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T		42.7 :	-	-	63.9 :	-	46.1 :
Fluoride	mg/L	T		-	-	33.1 J	-	-	23.2 :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		<0.4 J	-	-	<0.4 J	-	0.79 J
Nitrite	mg/L	T		<0.005 J	-	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	-	<0.11 J	-	<0.058 J
Phosphorus	mg/L	T		0.18 :	-	-	0.23 J	-	0.35 :
Sulfate	mg/L	T		2650. :	-	-	2490. :	-	2530. J
Total Alkalinity	mg/L	T		29.7 :	-	-	<5.5 :	-	18.8 :
Total Dissolved Solids	mg/L	T		3570. :	-	-	3760. :	-	3750. :
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	<0.24 J	-	<0.24 :
Total Organic Carbon	mg/L	T		2.2 :	-	-	2.6 :	-	2.2 :
Total Suspended Solids	mg/L	T		57.6 :	-	-	39.2 J	-	45.3 :
Laboratory Parameters									
pH	SU	T		6.17 :	-	-	5.52 :	-	5.44 :
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		2240. :	-	-	2350. :	-	2440. :
Hardness	mg/L	D		-	2230. :	-	-	2390. :	-
Metals									
Aluminum	mg/L	T		16.8 :	-	-	21.3 :	-	24.3 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	11/14/2002	MMW-48A-T01N-GR	W GW5
Aluminum	mg/L	D	-			
Antimony	mg/L	T	<0.0004	:		
Antimony	mg/L	D	-			
Arsenic	mg/L	T	0.001	J		
Arsenic	mg/L	D	-			
Barium	mg/L	T	0.0608	:		
Barium	mg/L	D	-			
Beryllium	mg/L	T	0.0024	:		
Beryllium	mg/L	D	-			
Boron	mg/L	T	0.0123	:		
Boron	mg/L	D	-			
Cadmium	mg/L	T	0.0019	J		
Cadmium	mg/L	D	-			
Calcium	mg/L	T	575.	:		
Calcium	mg/L	D	-			
Chromium	mg/L	T	<0.0046	:		
Chromium	mg/L	D	-			
Cobalt	mg/L	T	0.228	:		
Cobalt	mg/L	D	-			
Copper	mg/L	T	0.0214	:		
Copper	mg/L	D	-			
Iron	mg/L	T	31.6	:		
Iron	mg/L	D	-			
Lead	mg/L	T	0.002	:		
Lead	mg/L	D	-			
Magnesium	mg/L	T	196.	:		
Magnesium	mg/L	D	-			
Manganese	mg/L	T	8.14	:		
Manganese	mg/L	D	-			
Mercury	mg/L	T	<0.0001	:		
Mercury	mg/L	D	-			
Molybdenum	mg/L	T	0.012	:		
Molybdenum	mg/L	D	-			
Nickel	mg/L	T	0.579	J		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	11/14/2002	MMW-48A-D01N-GR	W GW5
Aluminum	mg/L	D	14.7	:		
Antimony	mg/L	T	-			
Antimony	mg/L	D	<0.0004	:		
Arsenic	mg/L	T	-			
Arsenic	mg/L	D	0.00089	J		
Barium	mg/L	T	-			
Barium	mg/L	D	0.0474	:		
Beryllium	mg/L	T	-			
Beryllium	mg/L	D	0.0023	:		
Boron	mg/L	T	-			
Boron	mg/L	D	0.0131	:		
Cadmium	mg/L	T	-			
Cadmium	mg/L	D	0.002	J		
Calcium	mg/L	T	-			
Calcium	mg/L	D	572.	:		
Chromium	mg/L	T	-			
Chromium	mg/L	D	<0.0046	:		
Cobalt	mg/L	T	-			
Cobalt	mg/L	D	0.228	:		
Copper	mg/L	T	-			
Copper	mg/L	D	0.018	:		
Iron	mg/L	T	-			
Iron	mg/L	D	30.3	:		
Lead	mg/L	T	-			
Lead	mg/L	D	<0.0002	:		
Magnesium	mg/L	T	-			
Magnesium	mg/L	D	196.	:		
Manganese	mg/L	T	-			
Manganese	mg/L	D	8.08	:		
Mercury	mg/L	T	-			
Mercury	mg/L	D	<0.0001	:		
Molybdenum	mg/L	T	-			
Molybdenum	mg/L	D	0.0125	:		
Nickel	mg/L	T	-			

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	12/5/2002	MMW-48A-T01N-GR	WRE GW5
Aluminum	mg/L	D	-			
Antimony	mg/L	T	-			
Antimony	mg/L	D	-			
Arsenic	mg/L	T	-			
Arsenic	mg/L	D	-			
Barium	mg/L	T	-			
Barium	mg/L	D	-			
Beryllium	mg/L	T	-			
Beryllium	mg/L	D	-			
Boron	mg/L	T	-			
Boron	mg/L	D	-			
Cadmium	mg/L	T	-			
Cadmium	mg/L	D	-			
Calcium	mg/L	T	-			
Calcium	mg/L	D	-			
Chromium	mg/L	T	-			
Chromium	mg/L	D	-			
Cobalt	mg/L	T	-			
Cobalt	mg/L	D	-			
Copper	mg/L	T	-			
Copper	mg/L	D	-			
Iron	mg/L	T	-			
Iron	mg/L	D	-			
Lead	mg/L	T	-			
Lead	mg/L	D	-			
Magnesium	mg/L	T	-			
Magnesium	mg/L	D	-			
Manganese	mg/L	T	-			
Manganese	mg/L	D	-			
Mercury	mg/L	T	-			
Mercury	mg/L	D	-			
Molybdenum	mg/L	T	-			
Molybdenum	mg/L	D	-			
Nickel	mg/L	T	-			

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	12/5/2002	MMW-48A-T01N-GR	W GW5
Aluminum	mg/L	D	-			
Antimony	mg/L	T	<0.0006	:		
Antimony	mg/L	D	-			
Arsenic	mg/L	T	0.00099	:		
Arsenic	mg/L	D	-			
Barium	mg/L	T	0.036	:		
Barium	mg/L	D	-			
Beryllium	mg/L	T	0.0031	:		
Beryllium	mg/L	D	-			
Boron	mg/L	T	<0.0027	:		
Boron	mg/L	D	-			
Cadmium	mg/L	T	0.0045	:		
Cadmium	mg/L	D	-			
Calcium	mg/L	T	574.	:		
Calcium	mg/L	D	-			
Chromium	mg/L	T	<0.0016	J		
Chromium	mg/L	D	-			
Cobalt	mg/L	T	0.281	:		
Cobalt	mg/L	D	-			
Copper	mg/L	T	<0.0251	J		
Copper	mg/L	D	-			
Iron	mg/L	T	34.3	:		
Iron	mg/L	D	-			
Lead	mg/L	T	0.0039	:		
Lead	mg/L	D	-			
Magnesium	mg/L	T	224.	J		
Magnesium	mg/L	D	-			
Manganese	mg/L	T	9.47	J		
Manganese	mg/L	D	-			
Mercury	mg/L	T	<0.0001	:		
Mercury	mg/L	D	-			
Molybdenum	mg/L	T	0.0035	:		
Molybdenum	mg/L	D	-			
Nickel	mg/L	T	0.697	:		

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	12/5/2002	MMW-48A-D01N-GR	W GW5
Aluminum	mg/L	D	21.3	:		
Antimony	mg/L	T	-			
Antimony	mg/L	D	<0.0006	:		
Arsenic	mg/L	T	-			
Arsenic	mg/L	D	0.00066	:		
Barium	mg/L	T	-			
Barium	mg/L	D	0.029	:		
Beryllium	mg/L	T	-			
Beryllium	mg/L	D	0.0033	:		
Boron	mg/L	T	-			
Boron	mg/L	D	<0.0033	:		
Cadmium	mg/L	T	-			
Cadmium	mg/L	D	0.0035	J		
Calcium	mg/L	T	-			
Calcium	mg/L	D	570.	:		
Chromium	mg/L	T	-			
Chromium	mg/L	D	0.0018	J		
Cobalt	mg/L	T	-			
Cobalt	mg/L	D	0.29	J		
Copper	mg/L	T	-			
Copper	mg/L	D	0.0227	J		
Iron	mg/L	T	-			
Iron	mg/L	D	35.7	:		
Lead	mg/L	T	-			
Lead	mg/L	D	<0.0002	:		
Magnesium	mg/L	T	-			
Magnesium	mg/L	D	235.	:		
Manganese	mg/L	T	-			
Manganese	mg/L	D	9.57	J		
Mercury	mg/L	T	-			
Mercury	mg/L	D	<0.0001	:		
Molybdenum	mg/L	T	-			
Molybdenum	mg/L	D	0.0027	:		
Nickel	mg/L	T	-			

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area
			MMW-48A	1/16/2003	MMW-48A-T01N-GR	W GW5
Aluminum	mg/L	D	-			
Antimony	mg/L	T	<0.0006	J		
Antimony	mg/L	D	-			
Arsenic	mg/L	T	0.00083	:		
Arsenic	mg/L	D	-			
Barium	mg/L	T	0.0313	:		
Barium	mg/L	D	-			
Beryllium	mg/L	T	<0.0036	:		
Beryllium	mg/L	D	-			
Boron	mg/L	T	<0.0027	J		
Boron	mg/L	D	-			
Cadmium	mg/L	T	0.0151	:		
Cadmium	mg/L	D	-			
Calcium	mg/L	T	598.	:		
Calcium	mg/L	D	-			
Chromium	mg/L	T	<0.0037	:		
Chromium	mg/L	D	-			
Cobalt	mg/L	T	0.302	:		
Cobalt	mg/L	D	-			
Copper	mg/L	T	0.0038	J		
Copper	mg/L	D	-			
Iron	mg/L	T	39.4	:		
Iron	mg/L	D	-			
Lead	mg/L	T	0.0023	:		
Lead	mg/L	D	-			
Magnesium	mg/L	T	230.	:		
Magnesium	mg/L	D	-			
Manganese	mg/L	T	10.8	:		
Manganese	mg/L	D	-			
Mercury	mg/L	T	<0.0001	:		
Mercury	mg/L	D	-			
Molybdenum	mg/L	T	<0.0011	:		
Molybdenum	mg/L	D	-			
Nickel	mg/L	T	0.737	:		

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 11/14/2002 MMW-48A-T01N-GR W GW5		MMW-48A 11/14/2002 MMW-48A-D01N-GR W GW5		MMW-48A 12/5/2002 MMW-48A-T01N-GR WRE GW5		MMW-48A 12/5/2002 MMW-48A-T01N-GR W GW5		MMW-48A 12/5/2002 MMW-48A-D01N-GR W GW5		MMW-48A 1/16/2003 MMW-48A-T01N-GR W GW5	
Nickel	mg/L	D	-		0.576	J	-		-		0.718	:	-	
Potassium	mg/L	T	6.12	:	-		-		7.7	:	-		7.73	:
Potassium	mg/L	D	-		6.22	:	-		-		8.88	:	-	
Selenium	mg/L	T	0.001	:	-		-		<0.0016	:	-		<0.0016	:
Selenium	mg/L	D	-		0.001	:	-		-		<0.0016	:	-	
Silver	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Sodium	mg/L	T	78.3	:	-		-		73.9	:	-		66.2	:
Sodium	mg/L	D	-		76.9	:	-		-		76.3	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	0.0024	:	-		-		0.0022	:	-		0.0023	:
Vanadium	mg/L	D	-		0.00066	:	-		-		0.00062	:	-	
Zinc	mg/L	T	2.25	:	-		-		2.84	J	-		3.28	:
Zinc	mg/L	D	-		2.2	:	-		-		3.	J	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		-		0.001	J	-		0.001	J
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,2-Dichloropropane	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Butanone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
2-Hexanone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		-		<0.01	:	-		<0.01	:
Acetone	mg/L	T	<0.01	:	-		-		<0.01	J	-		<0.01	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	11/14/2002	11/14/2002	12/5/2002	12/5/2002	12/5/2002	1/16/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				W GW5	W GW5	WRE GW5	W GW5	W GW5	W GW5
Benzene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Hexachlorobutadiene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Methylene chloride	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T		<0.01 :	-	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 :
2,4,6-Trichlorophenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2,4-Dinitrophenol	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 J
2,4-Dinitrotoluene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	11/14/2002	11/14/2002	12/5/2002	12/5/2002	12/5/2002	1/16/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				W GW5	W GW5	WRE GW5	W GW5	W GW5	W GW5
2,6-Dinitrotoluene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2-Chloronaphthalene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2-Chlorophenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2-Methylnaphthalene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2-Methylphenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
2-Nitroaniline	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 :
2-Nitrophenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
3-Nitroaniline	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 :
4,6-Dinitro-2-methylphenol	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 :
4-Bromophenyl phenyl ether	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
4-Chloroaniline	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
4-Methylphenol	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
4-Nitroaniline	mg/L	T		<0.028 :	-	-	<0.027 :	-	<0.025 :
4-Nitrophenol	mg/L	T		<0.028 :	-	-	<0.027 J	-	<0.025 J
Acenaphthene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Acenaphthylene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Anthracene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Benzaldehyde	mg/L	T		<0.011 :	-	-	<0.011 J	-	<0.01 J
Benzo(a)anthracene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Benzo(a)pyrene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Butyl benzyl phthalate	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Carbazole	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Chrysene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :
Dibenzofuran	mg/L	T		<0.011 :	-	-	<0.011 :	-	<0.01 :

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 11/14/2002 MMW-48A-T01N-GR W GW5		MMW-48A 11/14/2002 MMW-48A-D01N-GR W GW5		MMW-48A 12/5/2002 MMW-48A-T01N-GR WRE GW5		MMW-48A 12/5/2002 MMW-48A-T01N-GR W GW5		MMW-48A 12/5/2002 MMW-48A-D01N-GR W GW5		MMW-48A 1/16/2003 MMW-48A-T01N-GR W GW5	
Dichlorodiisopropyl ether	mg/L	T	<0.011	:	-		-		<0.011	J	-		<0.01	:
Diethylphthalate	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Dimethylphthalate	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Di-n-Butyl phthalate	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Di-n-Octyl phthalate	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	J
Fluoranthene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Fluorene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Hexachlorobenzene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Hexachlorobutadiene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Hexachlorocyclopentadiene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Hexachloroethane	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Isophorone	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Naphthalene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Nitrobenzene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
N-Nitrosodi-n-propylamine	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
N-Nitrosodiphenylamine	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Pentachlorophenol	mg/L	T	<0.028	:	-		-		<0.027	:	-		<0.025	:
Phenanthrene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Phenol	mg/L	T	<0.011	:	-		-		<0.011	J	-		<0.01	:
Pyrene	mg/L	T	<0.011	:	-		-		<0.011	:	-		<0.01	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	<0.00025	J	-		-		<0.00025	:	-		<0.00025	:
2,6-Pyridinediamine,	mg/L	T	<0.00025	J	-		-		<0.00025	J	-		<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	<0.00025	J	-		-		<0.00025	:	-		<0.00025	:
Cyclotrimethylenetrinitramine	mg/L	T	<0.00025	J	-		-		<0.00025	:	-		<0.00025	:
Pentaerythritol tetranitrate	mg/L	T	<0.01	J	-		-		<0.01	:	-		<0.01	:
Isotopes														
Lead	mg/L	T	0.002	:	-		-		0.0039	:	-		0.0023	:
Lead	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 1/16/2003 MMW-48A-D01N-GR W GW5	MMW-48A 2/6/2003 MMW-48A-T01N-GR WRE GW5	MMW-48A 2/6/2003 MMW-48A-T01N-GR W GW5	MMW-48A 2/6/2003 MMW-48A-D01N-GR W GW5	MMW-48A 3/3/2003 MMW-48A-T01N-GR W GW5	MMW-48A 3/3/2003 MMW-48A-D01N-GR W GW5
Field Measurements								
DO	mg/L	T	-	-	0.4 :	-	2.15 :	-
Eh	millivolts	T	-	-	194.8 :	-	227.4 :	-
pH	SU	T	-	-	5.32 :	-	5.31 :	-
Specific Conductance	uS/cm	T	-	-	3494. :	-	3360. :	-
Temperature	Celsius	T	-	-	8.48 :	-	9.12 :	-
Turbidity	NTU	T	-	-	116.2 :	-	101.8 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.11 :	-	<0.064 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<12.1 :	-	13.5 :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Chloride	mg/L	T	-	-	44.3 :	-	41.3 :	-
Fluoride	mg/L	T	-	-	33.9 :	-	34.4 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	-	-	<0.4 :	-	<0.4 J	-
Nitrite	mg/L	T	-	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	-	0.15 :	-	0.061 J	-
Phosphorus	mg/L	T	-	-	0.26 :	-	0.24 J	-
Sulfate	mg/L	T	-	-	2490. J	-	2390. :	-
Total Alkalinity	mg/L	T	-	-	<12.1 :	-	13.5 :	-
Total Dissolved Solids	mg/L	T	-	-	3800. :	-	3700. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	-	1.8 :	-	<2.8 J	-
Total Suspended Solids	mg/L	T	-	-	82.3 :	-	36.8 J	-
Laboratory Parameters								
pH	SU	T	-	-	5.32 :	-	5.31 :	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	2500. :	-	2550. :	-
Hardness	mg/L	D	2460. :	-	-	2550. :	-	2680. :
Metals								
Aluminum	mg/L	T	-	-	23.5 :	-	24.4 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	1/16/2003	2/6/2003	2/6/2003	2/6/2003	3/3/2003	3/3/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				W GW5	WRE GW5	W GW5	W GW5	W GW5	W GW5
Aluminum	mg/L	D		23.7 :	-	-	23.4 :	-	25.9 :
Antimony	mg/L	T		-	-	<0.028 :	-	<0.028 :	-
Antimony	mg/L	D		<0.0006 J	-	-	<0.028 :	-	<0.028 :
Arsenic	mg/L	T		-	-	<0.023 J	-	<0.023 J	-
Arsenic	mg/L	D		0.00067 :	-	-	<0.023 J	-	<0.023 J
Barium	mg/L	T		-	-	<0.048 :	-	<0.048 :	-
Barium	mg/L	D		0.0253 :	-	-	<0.048 :	-	<0.048 :
Beryllium	mg/L	T		-	-	0.0046 :	-	0.0049 :	-
Beryllium	mg/L	D		<0.0036 :	-	-	0.0045 :	-	0.0043 :
Boron	mg/L	T		-	-	<0.027 :	-	<0.027 :	-
Boron	mg/L	D		<0.0027 J	-	-	<0.027 :	-	<0.027 :
Cadmium	mg/L	T		-	-	0.082 :	-	<0.08 :	-
Cadmium	mg/L	D		0.005 :	-	-	<0.08 :	-	<0.08 :
Calcium	mg/L	T		-	-	607. :	-	622. J	-
Calcium	mg/L	D		604. :	-	-	622. :	-	651. J
Chromium	mg/L	T		-	-	<0.16 :	-	<0.16 :	-
Chromium	mg/L	D		<0.0037 :	-	-	<0.16 :	-	<0.16 :
Cobalt	mg/L	T		-	-	0.329 :	-	0.346 :	-
Cobalt	mg/L	D		0.301 :	-	-	0.299 :	-	0.362 :
Copper	mg/L	T		-	-	<0.17 :	-	<0.17 :	-
Copper	mg/L	D		0.0038 J	-	-	<0.17 :	-	<0.17 :
Iron	mg/L	T		-	-	39.3 :	-	43.3 :	-
Iron	mg/L	D		39.2 :	-	-	37.4 :	-	44.4 J
Lead	mg/L	T		-	-	0.0024 :	-	0.0056 :	-
Lead	mg/L	D		<0.0002 :	-	-	<0.001 :	-	<0.001 :
Magnesium	mg/L	T		-	-	238. :	-	242. :	-
Magnesium	mg/L	D		231. :	-	-	241. :	-	256. :
Manganese	mg/L	T		-	-	10.8 J	-	11.5 :	-
Manganese	mg/L	D		10.8 :	-	-	11. :	-	12.1 :
Mercury	mg/L	T		-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		-	-	<0.011 J	-	<0.019 :	-
Molybdenum	mg/L	D		<0.0011 :	-	-	<0.011 J	-	<0.0175 :
Nickel	mg/L	T		-	-	0.845 :	-	0.91 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	1/16/2003	2/6/2003	2/6/2003	2/6/2003	3/3/2003	3/3/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				W GW5	WRE GW5	W GW5	W GW5	W GW5	W GW5
Nickel	mg/L	D		0.734 :	-	-	0.739 :	-	0.918 :
Potassium	mg/L	T		-	-	<31.4 :	-	41.6 :	-
Potassium	mg/L	D		7.66 :	-	-	<31.4 :	-	<31.4 :
Selenium	mg/L	T		-	-	<0.008 :	-	<0.008 J	-
Selenium	mg/L	D		<0.0016 :	-	-	<0.008 :	-	<0.008 :
Silver	mg/L	T		-	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D		<0.0002 :	-	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T		-	-	60.6 :	-	<73. :	-
Sodium	mg/L	D		67.4 :	-	-	75.3 :	-	<86. :
Thallium	mg/L	T		-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D		<0.0002 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T		-	-	0.0044 :	-	0.0048 :	-
Vanadium	mg/L	D		0.0013 :	-	-	0.0025 :	-	0.0027 :
Zinc	mg/L	T		-	-	3.33 :	-	3.56 J	-
Zinc	mg/L	D		3.27 :	-	-	3.47 :	-	3.73 :
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	-	0.001 J	-	0.001 J	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
2-Butanone	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Hexanone	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
4-Methyl-2-pentanone	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Acetone	mg/L	T		-	-	<0.01 :	-	<0.01 J	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	1/16/2003	2/6/2003	2/6/2003	2/6/2003	3/3/2003	3/3/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				W GW5	WRE GW5	W GW5	W GW5	W GW5	W GW5
Benzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Bromodichloromethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Bromoform	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
Bromomethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Carbon disulfide	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Chlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Chloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Chloroform	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Chloromethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Dibromochloromethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
Ethylbenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Methylene chloride	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Styrene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Tetrachloroethene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Toluene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Total Xylene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Trichloroethene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Vinyl chloride	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		-	-	<0.025 :	-	<0.026 :	-
2,4,6-Trichlorophenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		-	-	<0.025 J	-	<0.026 :	-
2,4-Dinitrotoluene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	1/16/2003	2/6/2003	2/6/2003	2/6/2003	3/3/2003	3/3/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				W GW5	WRE GW5	W GW5	W GW5	W GW5	W GW5
2,6-Dinitrotoluene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Chlorophenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Methylphenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
2-Nitroaniline	mg/L	T		-	-	<0.025 :	-	<0.026 :	-
2-Nitrophenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		-	-	<0.01 J	-	<0.01 :	-
3-Nitroaniline	mg/L	T		-	-	<0.025 :	-	<0.026 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	-	<0.025 J	-	<0.026 :	-
4-Bromophenyl phenyl ether	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
4-Chloroaniline	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
4-Methylphenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
4-Nitroaniline	mg/L	T		-	-	<0.025 :	-	<0.026 :	-
4-Nitrophenol	mg/L	T		-	-	<0.025 :	-	<0.026 :	-
Acenaphthene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Acenaphthylene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Anthracene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Benzaldehyde	mg/L	T		-	-	<0.01 J	-	<0.01 :	-
Benzo(a)anthracene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	-	<0.01 :	-	0.008 J	-
Butyl benzyl phthalate	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Carbazole	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Chrysene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Dibenzofuran	mg/L	T		-	-	<0.01 :	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	1/16/2003	2/6/2003	2/6/2003	2/6/2003	3/3/2003	3/3/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				W GW5	WRE GW5	W GW5	W GW5	W GW5	W GW5
Dichlorodiisopropyl ether	mg/L	T		-	-	<0.01 J	-	<0.01 :	-
Diethylphthalate	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Dimethylphthalate	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
Fluoranthene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Fluorene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Hexachlorobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T		-	-	<0.01 J	-	<0.01 J	-
Hexachloroethane	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Isophorone	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Naphthalene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Nitrobenzene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Pentachlorophenol	mg/L	T		-	-	<0.025 J	-	<0.026 :	-
Phenanthrene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Phenol	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Pyrene	mg/L	T		-	-	<0.01 :	-	<0.01 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		-	-	<0.00025 :	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T		-	<0.00025 J	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T		-	-	<0.00025 :	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T		-	-	<0.00025 :	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T		-	-	<0.01 :	-	<0.01 J	-
Isotopes									
Lead	mg/L	T		-	-	0.0024 :	-	0.0056 :	-
Lead	mg/L	D		<0.0002 :	-	-	<0.001 :	-	<0.001 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	4/7/2003	4/7/2003	5/7/2003	5/7/2003	6/2/2003	6/2/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
			Exposure Area	W GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Field Measurements									
DO	mg/L	T		0.55 :	-	1.02 :	-	0.39 :	-
Eh	millivolts	T		159.1 :	-	140.3 :	-	136.7 :	-
pH	SU	T		6.2 J	-	5.5 J	-	5.5 J	-
Specific Conductance	uS/cm	T		3622. :	-	3680. :	-	3581. :	-
Temperature	Celsius	T		8.64 :	-	11.1 :	-	12.31 :	-
Turbidity	NTU	T		204.1 :	-	61.1 :	-	18.2 :	-
General Chemistry									
Ammonia	mg/L	T		<0.11 :	-	<0.45 :	-	<0.073 J	-
Bicarbonate (as CaCO3)	mg/L	T		<13.2 J	-	20.4 :	-	<10.9 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		35.7 :	-	29.1 :	-	82.2 :	-
Fluoride	mg/L	T		33.5 :	-	64.2 :	-	3.4 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.41 J	-	<0.4 J	-	<0.4 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.56 J	-	0.11 J	-	0.2 :	-
Phosphorus	mg/L	T		0.26 :	-	0.24 :	-	0.21 J	-
Sulfate	mg/L	T		2430. J	-	2420. :	-	2430. J	-
Total Alkalinity	mg/L	T		<13.2 J	-	20.4 :	-	<10.9 :	-
Total Dissolved Solids	mg/L	T		3930. :	-	3780. :	-	3920. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	0.28 :	-
Total Organic Carbon	mg/L	T		<2.4 J	-	2. :	-	2. J	-
Total Suspended Solids	mg/L	T		37.6 :	-	34.6 :	-	25.8 :	-
Laboratory Parameters									
pH	SU	T		6.2 J	-	5.5 J	-	5.5 J	-
Specific Conductance	umhos/cm	T		3340. J	-	3360. J	-	3500. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		2470. :	-	2440. :	-	2560. :	-
Hardness	mg/L	D		-	2450. :	-	2470. :	-	2420. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 4/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 4/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-T01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-D01N-GR W GW5	
Aluminum	mg/L	T	26.8	:	-		24.1	:	-		25.7	:	-	
Aluminum	mg/L	D	-		23.3	:	-		22.8	:	-		23.2	:
Antimony	mg/L	T	<0.0074	:	-		0.0701	:	-		<0.072	:	-	
Antimony	mg/L	D	-		<0.003	:	-		<0.048	:	-		<0.072	:
Arsenic	mg/L	T	<0.002	:	-		<0.047	:	-		<0.04	:	-	
Arsenic	mg/L	D	-		<0.002	:	-		<0.047	:	-		<0.04	:
Barium	mg/L	T	<0.125	:	-		<0.135	:	-		<0.123	:	-	
Barium	mg/L	D	-		<0.125	:	-		<0.135	:	-		<0.123	:
Beryllium	mg/L	T	0.0046	:	-		0.0046	:	-		<0.0059	:	-	
Beryllium	mg/L	D	-		<0.004	:	-		0.0049	:	-		<0.0034	:
Boron	mg/L	T	<0.084	:	-		<0.075	:	-		<0.084	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.075	:	-		<0.084	:
Cadmium	mg/L	T	0.0183	:	-		<0.0098	:	-		<0.07	:	-	
Cadmium	mg/L	D	-		<0.007	:	-		<0.0072	:	-		<0.07	:
Calcium	mg/L	T	605.	:	-		598.	:	-		623.	:	-	
Calcium	mg/L	D	-		604.	:	-		604.	:	-		588.	:
Chromium	mg/L	T	<0.019	:	-		<0.009	:	-		<0.19	:	-	
Chromium	mg/L	D	-		<0.019	:	-		<0.009	:	-		<0.19	:
Cobalt	mg/L	T	0.321	:	-		0.321	:	-		<0.36	:	-	
Cobalt	mg/L	D	-		0.315	:	-		0.328	:	-		<0.36	:
Copper	mg/L	T	<0.02	:	-		<0.024	:	-		<0.2	:	-	
Copper	mg/L	D	-		<0.02	:	-		<0.024	:	-		<0.2	:
Iron	mg/L	T	42.	:	-		40.9	:	-		42.8	:	-	
Iron	mg/L	D	-		39.5	:	-		40.	:	-		39.3	:
Lead	mg/L	T	0.0029	J	-		0.0039	J	-		<0.001	J	-	
Lead	mg/L	D	-		<0.001	:	-		<0.001	J	-		<0.001	J
Magnesium	mg/L	T	233.	:	-		231.	:	-		245.	:	-	
Magnesium	mg/L	D	-		230.	:	-		233.	:	-		231.	:
Manganese	mg/L	T	10.9	:	-		10.7	:	-		11.2	:	-	
Manganese	mg/L	D	-		10.7	:	-		10.8	:	-		10.5	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		0.00013	:
Molybdenum	mg/L	T	<0.022	:	-		<0.0255	:	-		<0.023	:	-	
Molybdenum	mg/L	D	-		<0.022	:	-		<0.016	:	-		<0.023	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	4/7/2003	4/7/2003	5/7/2003	5/7/2003	6/2/2003	6/2/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Nickel	mg/L	T		0.801 :	-	0.803 :	-	<0.73 :	-
Nickel	mg/L	D		-	0.802 :	-	0.803 :	-	<0.73 :
Potassium	mg/L	T		8.39 :	-	<9.49 :	-	<40.5 :	-
Potassium	mg/L	D		-	7.44 :	-	6.51 :	-	<40.5 :
Selenium	mg/L	T		<0.005 :	-	<0.005 :	-	<0.008 :	-
Selenium	mg/L	D		-	<0.005 :	-	<0.005 :	-	<0.008 :
Silver	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T		69.5 :	-	70. :	-	<91.6 :	-
Sodium	mg/L	D		-	68.9 :	-	71.1 :	-	<91.6 :
Thallium	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T		0.0018 J	-	0.0029 :	-	0.0027 :	-
Vanadium	mg/L	D		-	<0.001 J	-	<0.001 :	-	<0.002 :
Zinc	mg/L	T		3.38 :	-	3.2 :	-	3.35 :	-
Zinc	mg/L	D		-	3.24 :	-	3.2 :	-	3.17 :
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		0.001 J	-	0.001 J	-	0.001 J	-
1,1,2,2-Tetrachloroethane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,1,2-Trichloroethane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,1-Dichloroethene	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2,4-Trichlorobenzene	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2-Dibromo-3-chloropropane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2-Dichlorobenzene	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2-Dichloroethene (total)	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,2-Dichloropropane	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,3-Dichlorobenzene	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
1,4-Dichlorobenzene	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
2-Butanone	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
2-Hexanone	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
4-Methyl-2-pentanone	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 4/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 4/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-T01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-D01N-GR W GW5	
Acetone	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Hexachlorobutadiene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2,4,5-Trichlorophenol	mg/L	T	<0.027	:	-		<0.025	:	-		<0.029	:	-	
2,4,6-Trichlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2,4-Dichlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2,4-Dimethylphenol	mg/L	T	<0.011	J	-		<0.01	:	-		<0.011	:	-	
2,4-Dinitrophenol	mg/L	T	<0.027	J	-		<0.025	:	-		<0.029	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-48A 4/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 4/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-T01N-GR W GW5		MMW-48A 5/7/2003 MMW-48A-D01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-T01N-GR W GW5		MMW-48A 6/2/2003 MMW-48A-D01N-GR W GW5	
2,4-Dinitrotoluene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2,6-Dinitrotoluene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2-Chloronaphthalene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2-Chlorophenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2-Methylnaphthalene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2-Methylphenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
2-Nitroaniline	mg/L	T	<0.027	:	-		<0.025	:	-		<0.029	:	-	
2-Nitrophenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
3,3-Dichlorobenzidine	mg/L	T	<0.011	J	-		<0.01	:	-		<0.011	:	-	
3-Nitroaniline	mg/L	T	<0.027	J	-		<0.025	J	-		<0.029	:	-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.027	J	-		<0.025	:	-		<0.029	:	-	
4-Bromophenyl phenyl ether	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
4-Chloro-3-methylphenol	mg/L	T	<0.011	:	-		<0.01	J	-		<0.011	:	-	
4-Chloroaniline	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
4-Methylphenol	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
4-Nitroaniline	mg/L	T	<0.027	:	-		<0.025	:	-		<0.029	:	-	
4-Nitrophenol	mg/L	T	<0.027	J	-		<0.025	J	-		<0.029	:	-	
Acenaphthene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Acenaphthylene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Anthracene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Benzaldehyde	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	J	-	
Benzo(a)anthracene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Benzo(a)pyrene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Benzo(b)fluoranthene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Benzo(g,h,i)perylene	mg/L	T	<0.011	:	-		<0.01	J	-		<0.011	:	-	
Benzo(k)fluoranthene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Bis(2-chloroethyl)ether	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Butyl benzyl phthalate	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Carbazole	mg/L	T	<0.011	:	-		<0.01	J	-		<0.011	:	-	
Chrysene	mg/L	T	<0.011	:	-		<0.01	:	-		<0.011	:	-	
Dibenz(a,h)anthracene	mg/L	T	<0.011	J	-		<0.01	J	-		<0.011	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	4/7/2003	4/7/2003	5/7/2003	5/7/2003	6/2/2003	6/2/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR
			Exposure Area	WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Dibenzofuran	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Dichlorodiisopropyl ether	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Diethylphthalate	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Dimethylphthalate	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Di-n-Butyl phthalate	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Di-n-Octyl phthalate	mg/L	T		<0.011 J	-	<0.01 :	-	<0.011 :	-
Fluoranthene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Fluorene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Hexachlorobenzene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Hexachlorobutadiene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Hexachlorocyclopentadiene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Hexachloroethane	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T		<0.011 :	-	<0.01 J	-	<0.011 :	-
Isophorone	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Naphthalene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Nitrobenzene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
N-Nitrosodi-n-propylamine	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
N-Nitrosodiphenylamine	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Pentachlorophenol	mg/L	T		<0.027 :	-	<0.025 :	-	<0.029 :	-
Phenanthrene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Phenol	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Pyrene	mg/L	T		<0.011 :	-	<0.01 :	-	<0.011 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		<0.00025 :	-	<0.00025 :	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T		<0.00025 :	-	<0.00025 :	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T		<0.00025 :	-	<0.00025 :	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T		<0.01 :	-	<0.01 :	-	<0.01 :	-
Isotopes									
Lead	mg/L	T		0.0029 J	-	0.0039 J	-	<0.001 J	-
Lead	mg/L	D		-	<0.001 :	-	<0.001 J	-	<0.001 J

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	7/23/2003	7/23/2003	8/11/2003	8/12/2003	8/12/2003	9/8/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
			Exposure Area	W GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Field Measurements									
DO	mg/L	T		0.21 :	-	0.5 :	-	-	0.3 :
Eh	millivolts	T		146.3 :	-	557.3 :	-	-	161.5 :
pH	SU	T		5.2 J	-	4.89 :	5.1 J	-	5.5 J
Specific Conductance	uS/cm	T		3349. :	-	3512. :	-	-	3562. :
Temperature	Celsius	T		10.46 :	-	12.55 :	-	-	11.87 :
Turbidity	NTU	T		71. :	-	32.4 :	-	-	30.5 :
General Chemistry									
Ammonia	mg/L	T		<0.043 J	-	-	0.069 :	-	<0.077 :
Bicarbonate (as CaCO3)	mg/L	T		<7.9 :	-	-	<4.4 :	-	<12.2 :
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T		36.9 :	-	-	40.9 :	-	41.6 :
Fluoride	mg/L	T		29.4 :	-	-	31. :	-	66.8 :
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T		<0.4 J	-	-	<0.2 J	-	<0.2 :
Nitrite	mg/L	T		<0.005 J	-	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		0.13 J	-	-	0.1 J	-	<0.025 :
Phosphorus	mg/L	T		0.26 :	-	-	0.23 :	-	0.17 :
Sulfate	mg/L	T		2260. J	-	-	2060. J	-	2430. J
Total Alkalinity	mg/L	T		<7.9 :	-	-	<4.4 :	-	<12.2 :
Total Dissolved Solids	mg/L	T		4310. J	-	-	3060. :	-	3820. :
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		<2.9 J	-	-	<2.7 J	-	<2. :
Total Suspended Solids	mg/L	T		30. :	-	-	14.8 :	-	20.2 :
Laboratory Parameters									
pH	SU	T		5.2 J	-	4.89 :	5.1 J	-	5.5 J
Specific Conductance	umhos/cm	T		3550. J	-	-	3300. J	-	3210. J
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		2090. :	-	-	1590. J	-	2470. :
Hardness	mg/L	D		-	2090. :	-	-	2410. J	-
Metals									

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	7/23/2003	7/23/2003	8/11/2003	8/12/2003	8/12/2003	9/8/2003
			Sample ID	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Aluminum	mg/L	T		14.2 J	-	-	<16.1 :	-	23.4 :
Aluminum	mg/L	D		-	15. J	-	-	25.1 :	-
Antimony	mg/L	T		<0.038 :	-	-	<0.038 :	-	<0.082 :
Antimony	mg/L	D		-	<0.038 :	-	-	<0.038 :	-
Arsenic	mg/L	T		0.0302 :	-	-	<0.0371 :	-	<0.035 :
Arsenic	mg/L	D		-	<0.024 :	-	-	<0.036 :	-
Barium	mg/L	T		<0.073 :	-	-	<0.073 :	-	<0.117 :
Barium	mg/L	D		-	<0.073 :	-	-	<0.073 :	-
Beryllium	mg/L	T		<0.002 J	-	-	0.0037 :	-	<0.0051 :
Beryllium	mg/L	D		-	0.0042 J	-	-	0.0048 :	-
Boron	mg/L	T		<0.046 :	-	-	<0.046 :	-	<0.064 :
Boron	mg/L	D		-	<0.046 :	-	-	<0.046 :	-
Cadmium	mg/L	T		<0.03 :	-	-	<0.06 :	-	<0.13 :
Cadmium	mg/L	D		-	<0.03 :	-	-	<0.06 :	-
Calcium	mg/L	T		514. :	-	-	392. J	-	601. :
Calcium	mg/L	D		-	513. :	-	-	592. J	-
Chromium	mg/L	T		<0.06 :	-	-	<0.14 :	-	<0.23 :
Chromium	mg/L	D		-	<0.06 :	-	-	<0.14 :	-
Cobalt	mg/L	T		0.219 :	-	-	<0.2 :	-	<0.32 :
Cobalt	mg/L	D		-	0.27 :	-	-	0.233 :	-
Copper	mg/L	T		<0.14 :	-	-	<0.24 :	-	<0.23 :
Copper	mg/L	D		-	<0.14 :	-	-	<0.24 :	-
Iron	mg/L	T		35. :	-	-	25. J	-	39.9 :
Iron	mg/L	D		-	35.2 :	-	-	39.6 J	-
Lead	mg/L	T		0.003 :	-	-	0.0027 :	-	<0.002 :
Lead	mg/L	D		-	<0.001 :	-	-	<0.002 :	-
Magnesium	mg/L	T		196. :	-	-	148. J	-	236. :
Magnesium	mg/L	D		-	196. :	-	-	225. J	-
Manganese	mg/L	T		8.96 :	-	-	<6.63 J	-	10.3 :
Manganese	mg/L	D		-	8.9 :	-	-	9.95 J	-
Mercury	mg/L	T		<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		-	<0.00014 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T		<0.016 :	-	-	0.0166 :	-	<0.012 :
Molybdenum	mg/L	D		-	<0.016 :	-	-	<0.016 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 7/23/2003 MMW-48A-T01N-GR W GW5		MMW-48A 7/23/2003 MMW-48A-D01N-GR W GW5		MMW-48A 8/11/2003 MMW-48A-T01N-GR W GW5		MMW-48A 8/12/2003 MMW-48A-T01N-GR W GW5		MMW-48A 8/12/2003 MMW-48A-D01N-GR W GW5		MMW-48A 9/8/2003 MMW-48A-T01N-GR W GW5	
Nickel	mg/L	T	0.718	:	-		-		0.5	:	-		0.697	:
Nickel	mg/L	D	-		0.673	:	-		-		0.738	:	-	
Potassium	mg/L	T	<25.	:	-		-		<39.3	:	-		<63.8	:
Potassium	mg/L	D	-		<25.	:	-		-		41.8	:	-	
Selenium	mg/L	T	<0.008	:	-		-		<0.003	:	-		<0.003	:
Selenium	mg/L	D	-		<0.008	J	-		-		<0.003	:	-	
Silver	mg/L	T	<0.001	J	-		-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		<0.001	J	-		-		<0.001	:	-	
Sodium	mg/L	T	56.8	:	-		-		<47.3	:	-		<99.1	:
Sodium	mg/L	D	-		47.9	:	-		-		<58.6	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.002	:	-		-		0.0019	:	-		0.0014	:
Vanadium	mg/L	D	-		<0.002	:	-		-		<0.001	:	-	
Zinc	mg/L	T	2.5	:	-		-		2.02	J	-		2.99	:
Zinc	mg/L	D	-		2.47	:	-		-		3.01	J	-	
Volatile Organics														
1,1,1,2-Tetrachloroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,1,1-Trichloroethane	mg/L	T	0.0014	:	-		-		-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,1-Dichloroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,1-Dichloroethene	mg/L	T	<0.001	:	-		-		-		-		-	
1,1-Dichloropropene	mg/L	T	<0.001	:	-		-		-		-		-	
1,2,3-Trichlorobenzene	mg/L	T	<0.001	:	-		-		-		-		-	
1,2,3-Trichloropropane	mg/L	T	<0.001	:	-		-		-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.001	:	-		-		-		-		-	
1,2,4-Trimethylbenzene	mg/L	T	<0.001	:	-		-		-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.001	:	-		-		-		-		-	
1,2-Dibromoethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.001	:	-		-		-		-		-	
1,2-Dichloroethane	mg/L	T	<0.001	:	-		-		-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.001	:	-		-		-		-		-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID						
			MMW-48A 7/23/2003 MMW-48A-T01N-GR GW5		MMW-48A 7/23/2003 MMW-48A-D01N-GR GW5	MMW-48A 8/11/2003 MMW-48A-T01N-GR GW5	MMW-48A 8/12/2003 MMW-48A-T01N-GR GW5	MMW-48A 8/12/2003 MMW-48A-D01N-GR GW5	MMW-48A 9/8/2003 MMW-48A-T01N-GR GW5
1,2-Dichloropropane	mg/L	T	<0.001	:	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/L	T	<0.001	:	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	T	<0.001	:	-	-	-	-	-
1,3-Dichloropropane	mg/L	T	<0.001	:	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	T	<0.001	:	-	-	-	-	-
1,4-Dioxane	mg/L	T	<0.05	:	-	-	-	-	-
2,2-Dichloropropane	mg/L	T	<0.001	:	-	-	-	-	-
2-Butanone	mg/L	T	<0.005	:	-	-	-	-	-
2-Chloroethyl vinyl ether	mg/L	T	<0.001	:	-	-	-	-	-
2-Chlorotoluene	mg/L	T	<0.001	:	-	-	-	-	-
2-Hexanone	mg/L	T	<0.005	:	-	-	-	-	-
4-Chlorotoluene	mg/L	T	<0.001	:	-	-	-	-	-
4-Methyl-2-pentanone	mg/L	T	<0.005	:	-	-	-	-	-
Acetone	mg/L	T	0.0016	J	-	-	-	-	-
Acrolein	mg/L	T	<0.005	J	-	-	-	-	-
Acrylonitrile	mg/L	T	<0.001	:	-	-	-	-	-
Allyl Chloride	mg/L	T	<0.001	:	-	-	-	-	-
Benzene	mg/L	T	<0.001	:	-	-	-	-	-
Bromobenzene	mg/L	T	<0.001	:	-	-	-	-	-
Bromochloromethane	mg/L	T	<0.001	:	-	-	-	-	-
Bromodichloromethane	mg/L	T	<0.001	:	-	-	-	-	-
Bromoform	mg/L	T	<0.001	:	-	-	-	-	-
Bromomethane	mg/L	T	<0.001	:	-	-	-	-	-
Carbon disulfide	mg/L	T	<0.001	:	-	-	-	-	-
Carbon tetrachloride	mg/L	T	<0.001	:	-	-	-	-	-
Chlorobenzene	mg/L	T	<0.001	:	-	-	-	-	-
Chloroethane	mg/L	T	<0.001	:	-	-	-	-	-
Chloroform	mg/L	T	<0.001	:	-	-	-	-	-
Chloromethane	mg/L	T	<0.001	:	-	-	-	-	-
Chloroprene	mg/L	T	<0.001	:	-	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T	<0.001	:	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T	<0.001	:	-	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/L	T	<0.001	:	-	-	-	-	-
Dibromochloromethane	mg/L	T	<0.001	:	-	-	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID		MMW-48A		MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date		7/23/2003		7/23/2003	8/11/2003	8/12/2003	8/12/2003	9/8/2003
			Sample ID		MMW-48A-T01N-GR		MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
					WGW5		WGW5	WGW5	WGW5	WGW5	WGW5
Dibromomethane	mg/L	T		<0.001	:	-	-	-	-	-	
Dichlorodifluoromethane	mg/L	T		<0.001	:	-	-	-	-	-	
Ethyl Methacrylate	mg/L	T		<0.001	:	-	-	-	-	-	
Ethylbenzene	mg/L	T		<0.001	:	-	-	-	-	-	
Hexachlorobutadiene	mg/L	T		<0.001	:	-	-	-	-	-	
Iodomethane	mg/L	T		<0.001	J	-	-	-	-	-	
Isobutanol	mg/L	T		<0.05	:	-	-	-	-	-	
Isopropylbenzene	mg/L	T		<0.001	:	-	-	-	-	-	
m&p-Xylene	mg/L	T		<0.001	:	-	-	-	-	-	
Methacrylonitrile	mg/L	T		<0.001	:	-	-	-	-	-	
Methyl methacrylate	mg/L	T		<0.001	:	-	-	-	-	-	
Methylene chloride	mg/L	T		<0.001	:	-	-	-	-	-	
Methyl-t-butyl ether	mg/L	T		<0.001	:	-	-	-	-	-	
n-Butylbenzene	mg/L	T		<0.001	:	-	-	-	-	-	
n-Propylbenzene	mg/L	T		<0.001	:	-	-	-	-	-	
o-Xylene	mg/L	T		<0.001	:	-	-	-	-	-	
p-Isopropyltoluene	mg/L	T		<0.001	:	-	-	-	-	-	
Propionitrile	mg/L	T		<0.004	:	-	-	-	-	-	
sec-Butylbenzene	mg/L	T		<0.001	:	-	-	-	-	-	
Styrene	mg/L	T		<0.001	:	-	-	-	-	-	
t-Butylbenzene	mg/L	T		<0.001	J	-	-	-	-	-	
Tetrachloroethene	mg/L	T		<0.001	J	-	-	-	-	-	
Tetrahydrofuran	mg/L	T		<0.014	:	-	-	-	-	-	
Toluene	mg/L	T		<0.001	:	-	-	-	-	-	
Total Xylene	mg/L	T		<0.001	:	-	-	-	-	-	
trans-1,2-Dichloroethene	mg/L	T		<0.001	:	-	-	-	-	-	
trans-1,3-Dichloropropene	mg/L	T		<0.001	:	-	-	-	-	-	
trans-1,4-Dichloro-2-butene	mg/L	T		<0.001	:	-	-	-	-	-	
Trichloroethene	mg/L	T		<0.001	:	-	-	-	-	-	
Trichlorofluoromethane	mg/L	T		<0.001	:	-	-	-	-	-	
Vinyl acetate	mg/L	T		<0.001	J	-	-	-	-	-	
Vinyl chloride	mg/L	T		<0.001	:	-	-	-	-	-	
Semi-Volatile Organics											
1,1`-Biphenyl	mg/L	T		<0.00002	J	-	-	-	-	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-48A 7/23/2003 MMW-48A-T01N-GR GW5	MMW-48A 7/23/2003 MMW-48A-D01N-GR GW5	MMW-48A 8/11/2003 MMW-48A-T01N-GR GW5	MMW-48A 8/12/2003 MMW-48A-T01N-GR GW5	MMW-48A 8/12/2003 MMW-48A-D01N-GR GW5	MMW-48A 9/8/2003 MMW-48A-T01N-GR GW5
1-Methylnaphthalene	mg/L	T	<0.00002 J	-	-	-	-	-
1-Methylphenanthrene	mg/L	T	<0.00002 J	-	-	-	-	-
2-Methylnaphthalene	mg/L	T	<0.00002 J	-	-	-	-	-
Acenaphthene	mg/L	T	<0.00002 J	-	-	-	-	-
Acenaphthylene	mg/L	T	<0.00002 J	-	-	-	-	-
Anthracene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(a)anthracene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(a)pyrene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(e)pyrene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.00002 J	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	<0.00002 J	-	-	-	-	-
Chrysene	mg/L	T	<0.00002 J	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.00002 J	-	-	-	-	-
Dibenzothiophene	mg/L	T	<0.00002 J	-	-	-	-	-
Fluoranthene	mg/L	T	<0.00002 J	-	-	-	-	-
Fluorene	mg/L	T	<0.00002 J	-	-	-	-	-
Hexachlorobutadiene	mg/L	T	<0.001 :	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.00002 J	-	-	-	-	-
Naphthalene	mg/L	T	<0.00002 J	-	-	-	-	-
Naphthalene, 2,3,5-trimethyl-	mg/L	T	<0.00002 J	-	-	-	-	-
Naphthalene, 2,6-dimethyl-	mg/L	T	<0.00002 J	-	-	-	-	-
Perylene	mg/L	T	<0.00002 J	-	-	-	-	-
Phenanthrene	mg/L	T	<0.00002 J	-	-	-	-	-
Pyrene	mg/L	T	<0.00002 J	-	-	-	-	-
Petroleum Hydrocarbons								
Diesel Fuel (No. 2)	mg/L	T	<0.1 :	-	-	-	-	-
Motor Oil	mg/L	T	<0.26 :	-	-	-	-	-
Isotopes								
Lead	mg/L	T	0.003 :	-	-	0.0027 :	-	<0.002 :
Lead	mg/L	D	-	<0.001 :	-	-	<0.002 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	9/8/2003	10/16/2003	10/16/2003	11/4/2003	11/4/2003	12/9/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
Field Measurements									
DO	mg/L	T		-	0.49 :	-	0.54 :	-	-
Eh	millivolts	T		-	103.9 :	-	121.8 :	-	-
pH	SU	T		-	5.5 J	-	5.8 J	-	5.4 J
Specific Conductance	uS/cm	T		-	3391. :	-	3199. :	-	-
Temperature	Celsius	T		-	10.86 :	-	10.33 :	-	-
Turbidity	NTU	T		-	26.8 :	-	42.8 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	0.77 J	-	<0.099 :	-	0.12 :
Bicarbonate (as CaCO3)	mg/L	T		-	19.5 :	-	<1. :	-	11.8 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	39.1 :	-	38.4 :	-	42.8 :
Fluoride	mg/L	T		-	30.2 :	-	28.7 :	-	28.7 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 J	-	<0.2 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.086 J	-	0.11 J	-	0.12 :
Phosphorus	mg/L	T		-	0.17 :	-	0.4 :	-	0.21 :
Sulfate	mg/L	T		-	2480. J	-	2320. :	-	2420. :
Total Alkalinity	mg/L	T		-	19.5 :	-	<1. :	-	11.8 :
Total Dissolved Solids	mg/L	T		-	3580. :	-	3310. :	-	3610. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	2.1 J	-	2.1 :	-	1.5 :
Total Suspended Solids	mg/L	T		-	26. :	-	53.8 :	-	23.4 :
Laboratory Parameters									
pH	SU	T		-	5.5 J	-	5.8 J	-	5.4 J
Specific Conductance	umhos/cm	T		-	3110. J	-	3560. J	-	2980. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	2240. :	-	2210. J	-	2060. :
Hardness	mg/L	D		2450. :	-	2270. :	-	2230. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 9/8/2003 MMW-48A-D01N-GR GW5		MMW-48A 10/16/2003 MMW-48A-T01N-GR GW5		MMW-48A 10/16/2003 MMW-48A-D01N-GR GW5		MMW-48A 11/4/2003 MMW-48A-T01N-GR GW5		MMW-48A 11/4/2003 MMW-48A-D01N-GR GW5		MMW-48A 12/9/2003 MMW-48A-T01N-GR GW5	
Aluminum	mg/L	T	-		20.2	:	-		17.5	:	-		18.3	:
Aluminum	mg/L	D	22.4	:	-		19.7	:	-		16.	:	-	
Antimony	mg/L	T	-		<0.052	:	-		<0.052	:	-		<0.082	:
Antimony	mg/L	D	<0.082	:	-		<0.052	:	-		<0.052	:	-	
Arsenic	mg/L	T	-		<0.041	:	-		<0.041	:	-		<0.035	:
Arsenic	mg/L	D	<0.035	:	-		<0.041	:	-		<0.041	:	-	
Barium	mg/L	T	-		<0.115	:	-		<0.115	:	-		<0.117	:
Barium	mg/L	D	<0.117	:	-		<0.115	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		<0.004	:	-		<0.004	:	-		<0.0099	:
Beryllium	mg/L	D	<0.0068	:	-		<0.004	:	-		<0.004	:	-	
Boron	mg/L	T	-		<0.063	:	-		<0.063	:	-		<0.064	:
Boron	mg/L	D	<0.064	:	-		<0.063	:	-		<0.063	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.05	:	-		<0.07	:
Cadmium	mg/L	D	<0.13	:	-		<0.13	:	-		<0.05	:	-	
Calcium	mg/L	T	-		530.	:	-		538.	:	-		504.	:
Calcium	mg/L	D	594.	:	-		544.	:	-		542.	:	-	
Chromium	mg/L	T	-		<0.23	J	-		<0.11	J	-		<0.13	J
Chromium	mg/L	D	<0.23	:	-		<0.23	J	-		<0.11	J	-	
Cobalt	mg/L	T	-		0.415	:	-		<0.29	:	-		<0.31	:
Cobalt	mg/L	D	<0.32	:	-		0.359	:	-		<0.29	:	-	
Copper	mg/L	T	-		<0.23	:	-		<0.22	:	-		<0.2	J
Copper	mg/L	D	<0.23	:	-		<0.23	:	-		<0.22	:	-	
Iron	mg/L	T	-		37.6	:	-		38.8	:	-		32.9	:
Iron	mg/L	D	39.5	:	-		35.2	:	-		35.9	:	-	
Lead	mg/L	T	-		0.0031	:	-		0.0068	:	-		<0.002	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Magnesium	mg/L	T	-		209.	:	-		211.	:	-		193.	:
Magnesium	mg/L	D	234.	:	-		212.	:	-		212.	:	-	
Manganese	mg/L	T	-		9.41	:	-		9.51	J	-		8.88	:
Manganese	mg/L	D	10.2	:	-		9.56	:	-		9.62	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.011	:	-		<0.011	:	-		<0.012	J
Molybdenum	mg/L	D	<0.012	:	-		<0.011	:	-		<0.011	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 9/8/2003 MMW-48A-D01N-GR GW5	MMW-48A 10/16/2003 MMW-48A-T01N-GR GW5	MMW-48A 10/16/2003 MMW-48A-D01N-GR GW5	MMW-48A 11/4/2003 MMW-48A-T01N-GR GW5	MMW-48A 11/4/2003 MMW-48A-D01N-GR GW5	MMW-48A 12/9/2003 MMW-48A-T01N-GR GW5
Nickel	mg/L	T	-	<0.45 J	-	0.748 J	-	0.589 J
Nickel	mg/L	D	0.702 :	-	<0.45 J	-	0.668 J	-
Potassium	mg/L	T	-	<63.8 :	-	<31.8 :	-	<52.2 J
Potassium	mg/L	D	<63.8 :	-	<63.8 :	-	<31.8 :	-
Selenium	mg/L	T	-	<0.003 :	-	<0.003 :	-	<0.003 :
Selenium	mg/L	D	<0.003 :	-	0.0047 :	-	0.0037 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<99.1 :	-	64.9 :	-	<50.2 :
Sodium	mg/L	D	<99.1 :	-	<99.1 :	-	74.3 :	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	0.0014 :	-	0.0033 :	-	0.0015 :
Vanadium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Zinc	mg/L	T	-	2.82 :	-	4.36 :	-	2.54 :
Zinc	mg/L	D	3.04 :	-	2.94 :	-	4.34 :	-
Volatile Organics								
1,1,1,2-Tetrachloroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,1,1-Trichloroethane	mg/L	T	-	-	-	-	-	0.0012 :
1,1,2,2-Tetrachloroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,1,2-Trichloroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,1-Dichloroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,1-Dichloroethene	mg/L	T	-	-	-	-	-	<0.001 :
1,1-Dichloropropene	mg/L	T	-	-	-	-	-	<0.001 :
1,2,3-Trichlorobenzene	mg/L	T	-	-	-	-	-	<0.001 :
1,2,3-Trichloropropane	mg/L	T	-	-	-	-	-	<0.001 :
1,2,4-Trichlorobenzene	mg/L	T	-	-	-	-	-	<0.001 :
1,2,4-Trimethylbenzene	mg/L	T	-	-	-	-	-	<0.001 :
1,2-Dibromo-3-chloropropane	mg/L	T	-	-	-	-	-	<0.001 :
1,2-Dibromoethane	mg/L	T	-	-	-	-	-	<0.001 :
1,2-Dichlorobenzene	mg/L	T	-	-	-	-	-	<0.001 :
1,2-Dichloroethane	mg/L	T	-	-	-	-	-	<0.001 :
1,2-Dichloroethene (total)	mg/L	T	-	-	-	-	-	<0.001 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	9/8/2003	10/16/2003	10/16/2003	11/4/2003	11/4/2003	12/9/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				W GW5	W GW5	W GW5	W GW5	W GW5	W GW5
1,2-Dichloropropane	mg/L	T		-	-	-	-	-	<0.001 :
1,3,5-Trimethylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
1,3-Dichlorobenzene	mg/L	T		-	-	-	-	-	<0.001 :
1,3-Dichloropropane	mg/L	T		-	-	-	-	-	<0.001 :
1,4-Dichlorobenzene	mg/L	T		-	-	-	-	-	<0.001 :
1,4-Dioxane	mg/L	T		-	-	-	-	-	<0.05 :
2,2-Dichloropropane	mg/L	T		-	-	-	-	-	<0.001 :
2-Butanone	mg/L	T		-	-	-	-	-	<0.005 :
2-Chloroethyl vinyl ether	mg/L	T		-	-	-	-	-	<0.001 :
2-Chlorotoluene	mg/L	T		-	-	-	-	-	<0.001 :
2-Hexanone	mg/L	T		-	-	-	-	-	<0.005 :
4-Chlorotoluene	mg/L	T		-	-	-	-	-	<0.001 :
4-Methyl-2-pentanone	mg/L	T		-	-	-	-	-	<0.005 :
Acetone	mg/L	T		-	-	-	-	-	<0.005 :
Acrolein	mg/L	T		-	-	-	-	-	<0.005 :
Acrylonitrile	mg/L	T		-	-	-	-	-	<0.001 :
Allyl Chloride	mg/L	T		-	-	-	-	-	<0.001 :
Benzene	mg/L	T		-	-	-	-	-	<0.001 :
Bromobenzene	mg/L	T		-	-	-	-	-	<0.001 :
Bromochloromethane	mg/L	T		-	-	-	-	-	<0.001 :
Bromodichloromethane	mg/L	T		-	-	-	-	-	<0.001 :
Bromoform	mg/L	T		-	-	-	-	-	<0.001 :
Bromomethane	mg/L	T		-	-	-	-	-	<0.001 :
Carbon disulfide	mg/L	T		-	-	-	-	-	<0.001 :
Carbon tetrachloride	mg/L	T		-	-	-	-	-	<0.001 :
Chlorobenzene	mg/L	T		-	-	-	-	-	<0.001 :
Chloroethane	mg/L	T		-	-	-	-	-	<0.001 :
Chloroform	mg/L	T		-	-	-	-	-	<0.001 :
Chloromethane	mg/L	T		-	-	-	-	-	<0.001 :
Chloroprene	mg/L	T		-	-	-	-	-	<0.001 :
cis-1,2-Dichloroethene	mg/L	T		-	-	-	-	-	<0.001 :
cis-1,3-Dichloropropene	mg/L	T		-	-	-	-	-	<0.001 :
cis-1,4-Dichloro-2-butene	mg/L	T		-	-	-	-	-	<0.001 :
Dibromochloromethane	mg/L	T		-	-	-	-	-	<0.001 :

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	9/8/2003	10/16/2003	10/16/2003	11/4/2003	11/4/2003	12/9/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				W GW5	W GW5	W GW5	W GW5	W GW5	W GW5
Dibromomethane	mg/L	T		-	-	-	-	-	<0.001 :
Dichlorodifluoromethane	mg/L	T		-	-	-	-	-	<0.001 :
Ethyl Methacrylate	mg/L	T		-	-	-	-	-	<0.001 :
Ethylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
Hexachlorobutadiene	mg/L	T		-	-	-	-	-	<0.001 :
Iodomethane	mg/L	T		-	-	-	-	-	<0.001 :
Isobutanol	mg/L	T		-	-	-	-	-	<0.05 :
Isopropylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
m&p-Xylene	mg/L	T		-	-	-	-	-	<0.001 :
Methacrylonitrile	mg/L	T		-	-	-	-	-	<0.001 :
Methyl methacrylate	mg/L	T		-	-	-	-	-	<0.001 :
Methylene chloride	mg/L	T		-	-	-	-	-	<0.001 :
Methyl-t-butyl ether	mg/L	T		-	-	-	-	-	<0.001 :
n-Butylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
n-Propylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
o-Xylene	mg/L	T		-	-	-	-	-	<0.001 :
p-Isopropyltoluene	mg/L	T		-	-	-	-	-	<0.001 :
Propionitrile	mg/L	T		-	-	-	-	-	<0.004 :
sec-Butylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
Styrene	mg/L	T		-	-	-	-	-	<0.001 :
t-Butylbenzene	mg/L	T		-	-	-	-	-	<0.001 :
Tetrachloroethene	mg/L	T		-	-	-	-	-	<0.001 :
Tetrahydrofuran	mg/L	T		-	-	-	-	-	<0.014 :
Toluene	mg/L	T		-	-	-	-	-	<0.001 :
Total Xylene	mg/L	T		-	-	-	-	-	<0.001 :
trans-1,2-Dichloroethene	mg/L	T		-	-	-	-	-	<0.001 :
trans-1,3-Dichloropropene	mg/L	T		-	-	-	-	-	<0.001 :
trans-1,4-Dichloro-2-butene	mg/L	T		-	-	-	-	-	<0.001 :
Trichloroethene	mg/L	T		-	-	-	-	-	<0.001 :
Trichlorofluoromethane	mg/L	T		-	-	-	-	-	<0.001 :
Vinyl acetate	mg/L	T		-	-	-	-	-	<0.001 :
Vinyl chloride	mg/L	T		-	-	-	-	-	<0.001 :
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	-	-	-	<0.00002 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A
			Sample Date	9/8/2003	10/16/2003	10/16/2003	11/4/2003	11/4/2003	12/9/2003
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR
				WGW5	WGW5	WGW5	WGW5	WGW5	WGW5
1-Methylnaphthalene	mg/L	T		-	-	-	-	-	<0.00002 :
1-Methylphenanthrene	mg/L	T		-	-	-	-	-	<0.00002 :
2-Methylnaphthalene	mg/L	T		-	-	-	-	-	<0.00002 :
Acenaphthene	mg/L	T		-	-	-	-	-	<0.00002 :
Acenaphthylene	mg/L	T		-	-	-	-	-	<0.00002 :
Anthracene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(a)anthracene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(a)pyrene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(b)fluoranthene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(e)pyrene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(g,h,i)perylene	mg/L	T		-	-	-	-	-	<0.00002 :
Benzo(k)fluoranthene	mg/L	T		-	-	-	-	-	<0.00002 :
Chrysene	mg/L	T		-	-	-	-	-	<0.00002 :
Dibenz(a,h)anthracene	mg/L	T		-	-	-	-	-	<0.00002 :
Dibenzothiophene	mg/L	T		-	-	-	-	-	<0.00002 :
Fluoranthene	mg/L	T		-	-	-	-	-	<0.00002 :
Fluorene	mg/L	T		-	-	-	-	-	<0.00002 :
Hexachlorobutadiene	mg/L	T		-	-	-	-	-	<0.001 :
Indeno(1,2,3-cd)pyrene	mg/L	T		-	-	-	-	-	<0.00002 :
Naphthalene	mg/L	T		-	-	-	-	-	<0.00002 :
Naphthalene, 2,3,5-trimethyl-	mg/L	T		-	-	-	-	-	<0.00002 :
Naphthalene, 2,6-dimethyl-	mg/L	T		-	-	-	-	-	<0.00002 :
Perylene	mg/L	T		-	-	-	-	-	<0.00002 :
Phenanthrene	mg/L	T		-	-	-	-	-	<0.00002 :
Pyrene	mg/L	T		-	-	-	-	-	<0.00002 :
Petroleum Hydrocarbons									
Diesel Fuel (No. 2)	mg/L	T		-	-	-	-	-	<0.11 :
Motor Oil	mg/L	T		-	-	-	-	-	<0.26 :
Isotopes									
Lead	mg/L	T		-	0.0031 :	-	0.0068 :	-	<0.002 :
Lead	mg/L	D		<0.002 :	-	<0.002 :	-	<0.002 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-8B
			Sample Date	12/9/2003	1/14/2004	1/14/2004	4/18/2004	4/18/2004	11/3/2002
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-8B-T01N-GRW
				W GW5	W GW5	W GW5	W GW5	W GW5	RF GW5
Field Measurements									
DO	mg/L	T		-	0.22 :	-	0.09 :	-	-
Eh	millivolts	T		-	174.5 :	-	155.9 :	-	-
pH	SU	T		-	5.5 J	-	5.4 J	-	-
Specific Conductance	uS/cm	T		-	3388. :	-	3577. :	-	-
Temperature	Celsius	T		-	9.18 :	-	9.22 :	-	-
Turbidity	NTU	T		-	13.8 :	-	31.3 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.069 J	-	<0.075 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	39.4 :	-	43.8 J	-	-
Fluoride	mg/L	T		-	30.7 :	-	35.5 :	-	1.8 J
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 J	-	-
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		-	0.12 J	-	0.077 J	-	-
Phosphorus	mg/L	T		-	0.14 :	-	0.17 :	-	-
Sulfate	mg/L	T		-	2440. :	-	2390. :	-	-
Total Alkalinity	mg/L	T		-	<1. :	-	<1. :	-	-
Total Dissolved Solids	mg/L	T		-	3840. :	-	3870. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1.3 J	-	2.6 J	-	-
Total Suspended Solids	mg/L	T		-	5.6 :	-	16.3 J	-	-
Laboratory Parameters									
pH	SU	T		-	5.5 J	-	5.4 J	-	-
Specific Conductance	umhos/cm	T		-	3030. J	-	3010. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		-	2480. :	-	2460. :	-	-
Hardness	mg/L	D		2240. :	-	2390. :	-	2530. :	-
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-48A 12/9/2003 MMW-48A-D01N-GR W GW5		MMW-48A 1/14/2004 MMW-48A-T01N-GR W GW5		MMW-48A 1/14/2004 MMW-48A-D01N-GR W GW5		MMW-48A 4/18/2004 MMW-48A-T01N-GR W GW5		MMW-48A 4/18/2004 MMW-48A-D01N-GR W GW5		MMW-8B 11/3/2002 MMW-8B-T01N-GRW RF GW5	
Aluminum	mg/L	T	-		19.9	:	-		26.8	:	-		-	
Aluminum	mg/L	D	<17.6	:	-		18.1	:	-		28.5	:	-	
Antimony	mg/L	T	-		<0.097	:	-		<0.027	:	-		-	
Antimony	mg/L	D	<0.082	:	-		<0.097	:	-		<0.027	:	-	
Arsenic	mg/L	T	-		<0.052	:	-		<0.026	:	-		-	
Arsenic	mg/L	D	<0.035	:	-		<0.052	:	-		<0.026	J	-	
Barium	mg/L	T	-		<0.188	:	-		0.0276	:	-		-	
Barium	mg/L	D	<0.117	:	-		<0.188	:	-		0.0207	:	-	
Beryllium	mg/L	T	-		<0.01	J	-		0.0051	:	-		-	
Beryllium	mg/L	D	<0.0115	:	-		<0.01	J	-		0.0045	:	-	
Boron	mg/L	T	-		<0.117	:	-		0.0254	:	-		-	
Boron	mg/L	D	<0.064	:	-		<0.117	:	-		0.0282	:	-	
Cadmium	mg/L	T	-		<0.07	J	-		<0.03	:	-		-	
Cadmium	mg/L	D	<0.07	:	-		<0.07	:	-		<0.03	:	-	
Calcium	mg/L	T	-		607.	:	-		586.	:	-		-	
Calcium	mg/L	D	549.	:	-		588.	:	-		603.	:	-	
Chromium	mg/L	T	-		<0.57	:	-		<0.08	:	-		-	
Chromium	mg/L	D	<0.13	J	-		<0.57	:	-		<0.08	:	-	
Cobalt	mg/L	T	-		<0.37	:	-		0.478	:	-		-	
Cobalt	mg/L	D	<0.31	:	-		<0.37	:	-		<0.395	:	-	
Copper	mg/L	T	-		<0.35	:	-		<0.0737	:	-		-	
Copper	mg/L	D	<0.2	J	-		<0.35	:	-		<0.07	:	-	
Iron	mg/L	T	-		39.8	:	-		44.	J	-		-	
Iron	mg/L	D	33.8	:	-		37.4	:	-		45.2	:	-	
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Magnesium	mg/L	T	-		233.	:	-		243.	:	-		-	
Magnesium	mg/L	D	212.	:	-		225.	:	-		249.	:	-	
Manganese	mg/L	T	-		11.	:	-		11.6	:	-		-	
Manganese	mg/L	D	9.57	:	-		10.6	:	-		11.8	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.03	:	-		<0.01	:	-		-	
Molybdenum	mg/L	D	<0.012	J	-		<0.03	:	-		<0.01	:	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-8B
			Sample Date	12/9/2003	1/14/2004	1/14/2004	4/18/2004	4/18/2004	11/3/2002
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-8B-T01N-GRW
				W GW5	W GW5	W GW5	W GW5	W GW5	RF GW5
Nickel	mg/L	T		-	<1.68 :	-	0.87 :	-	-
Nickel	mg/L	D		0.566 :	-	<1.68 :	-	0.816 :	-
Potassium	mg/L	T		-	<110. :	-	<10.9 J	-	-
Potassium	mg/L	D		<52.2 J	-	<110. :	-	<20.6 J	-
Selenium	mg/L	T		-	<0.003 J	-	<0.007 :	-	-
Selenium	mg/L	D		<0.003 :	-	<0.003 :	-	<0.007 :	-
Silver	mg/L	T		-	<0.001 :	-	<0.001 J	-	-
Silver	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 J	-
Sodium	mg/L	T		-	<92. :	-	<76.3 :	-	-
Sodium	mg/L	D		<50.2 :	-	<92. :	-	<77.9 :	-
Thallium	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Thallium	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T		-	<0.002 :	-	0.0027 :	-	-
Vanadium	mg/L	D		<0.001 :	-	<0.002 :	-	0.0023 :	-
Zinc	mg/L	T		-	3.54 :	-	3.72 :	-	-
Zinc	mg/L	D		2.81 :	-	3.43 :	-	3.74 :	-
Volatile Organics									
1,1,1,2-Tetrachloroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1,1-Trichloroethane	mg/L	T		-	0.00084 J	-	0.0012 :	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1,2-Trichloroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1-Dichloroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1-Dichloroethene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,1-Dichloropropene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,2,3-Trichlorobenzene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
1,2,3-Trichloropropane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,2,4-Trichlorobenzene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
1,2,4-Trimethylbenzene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,2-Dibromoethane	mg/L	T		-	<0.001 :	-	<0.001 J	-	-
1,2-Dichlorobenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,2-Dichloroethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,2-Dichloroethene (total)	mg/L	T		-	<0.001 :	-	<0.001 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-8B
			Sample Date	12/9/2003	1/14/2004	1/14/2004	4/18/2004	4/18/2004	11/3/2002
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-8B-T01N-GRW
				WGW5	WGW5	WGW5	WGW5	WGW5	RFGW5
1,2-Dichloropropane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,3,5-Trimethylbenzene	mg/L	T		-	<0.001 J	-	<0.001 J	-	-
1,3-Dichlorobenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,3-Dichloropropane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,4-Dichlorobenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
1,4-Dioxane	mg/L	T		-	<0.05 :	-	<0.05 J	-	-
2,2-Dichloropropane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
2-Butanone	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
2-Chlorotoluene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
2-Hexanone	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
4-Chlorotoluene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
4-Methyl-2-pentanone	mg/L	T		-	<0.005 :	-	<0.005 :	-	-
Acetone	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
Acrolein	mg/L	T		-	<0.005 :	-	<0.005 J	-	-
Acrylonitrile	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Allyl Chloride	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Benzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Bromobenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Bromochloromethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Bromodichloromethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Bromoform	mg/L	T		-	<0.001 J	-	<0.001 J	-	-
Bromomethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Carbon disulfide	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Carbon tetrachloride	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Chlorobenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Chloroethane	mg/L	T		-	<0.001 :	-	<0.001 J	-	-
Chloroform	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Chloromethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Chloroprene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
cis-1,2-Dichloroethene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
cis-1,3-Dichloropropene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
cis-1,4-Dichloro-2-butene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
Dibromochloromethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Dibromomethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-48A	MMW-8B
			Sample Date	12/9/2003	1/14/2004	1/14/2004	4/18/2004	4/18/2004	11/3/2002
			Sample ID	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-48A-T01N-GR	MMW-48A-D01N-GR	MMW-8B-T01N-GRW
				WGW5	WGW5	WGW5	WGW5	WGW5	RFGW5
Dichlorodifluoromethane	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
Ethyl Methacrylate	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Ethylbenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Hexachlorobutadiene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Iodomethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Isobutanol	mg/L	T		-	<0.05 :	-	<0.05 J	-	-
Isopropylbenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
m&p-Xylene	mg/L	T		-	<0.001 J	-	0.00024 J	-	-
Methacrylonitrile	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Methyl methacrylate	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Methylene chloride	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Methyl-t-butyl ether	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
n-Butylbenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
n-Propylbenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
o-Xylene	mg/L	T		-	<0.001 J	-	<0.001 J	-	-
p-Isopropyltoluene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Propionitrile	mg/L	T		-	<0.004 :	-	<0.004 J	-	-
sec-Butylbenzene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Styrene	mg/L	T		-	<0.001 J	-	<0.001 J	-	-
t-Butylbenzene	mg/L	T		-	<0.001 J	-	<0.001 :	-	-
Tetrachloroethene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Tetrahydrofuran	mg/L	T		-	<0.014 :	-	<0.014 J	-	-
Toluene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Total Xylene	mg/L	T		-	<0.001 J	-	0.00024 J	-	-
trans-1,2-Dichloroethene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
trans-1,3-Dichloropropene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
trans-1,4-Dichloro-2-butene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Trichloroethene	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Trichlorofluoromethane	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Vinyl acetate	mg/L	T		-	<0.001 J	-	<0.001 J	-	-
Vinyl chloride	mg/L	T		-	<0.001 :	-	<0.001 :	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	<0.00002 :	-	<0.00002 :	-	-
1-Methylnaphthalene	mg/L	T		-	<0.00002 :	-	<0.00002 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-48A 12/9/2003 MMW-48A-D01N-GR		MMW-48A 1/14/2004 MMW-48A-T01N-GR		MMW-48A 1/14/2004 MMW-48A-D01N-GR	
			W GW5		W GW5		W GW5	
1-Methylphenanthrene	mg/L	T	-		<0.00002	:	-	
2-Methylnaphthalene	mg/L	T	-		<0.00002	:	-	
Acenaphthene	mg/L	T	-		<0.00002	:	-	
Acenaphthylene	mg/L	T	-		<0.00002	:	-	
Anthracene	mg/L	T	-		<0.00002	:	-	
Benzo(a)anthracene	mg/L	T	-		<0.00002	:	-	
Benzo(a)pyrene	mg/L	T	-		<0.00002	:	-	
Benzo(b)fluoranthene	mg/L	T	-		<0.00002	:	-	
Benzo(e)pyrene	mg/L	T	-		<0.00002	:	-	
Benzo(g,h,i)perylene	mg/L	T	-		<0.00002	:	-	
Benzo(k)fluoranthene	mg/L	T	-		<0.00002	:	-	
Chrysene	mg/L	T	-		<0.00002	:	-	
Dibenz(a,h)anthracene	mg/L	T	-		<0.00002	:	-	
Dibenzothiophene	mg/L	T	-		<0.00002	:	-	
Fluoranthene	mg/L	T	-		<0.00002	:	-	
Fluorene	mg/L	T	-		<0.00002	:	-	
Hexachlorobutadiene	mg/L	T	-		<0.001	:	-	
Indeno(1,2,3-cd)pyrene	mg/L	T	-		<0.00002	:	-	
Naphthalene	mg/L	T	-		<0.00002	:	-	
Naphthalene, 2,3,5-trimethyl-	mg/L	T	-		<0.00002	:	-	
Naphthalene, 2,6-dimethyl-	mg/L	T	-		<0.00002	:	-	
Perylene	mg/L	T	-		<0.00002	:	-	
Phenanthrene	mg/L	T	-		<0.00002	:	-	
Pyrene	mg/L	T	-		<0.00002	:	-	
Petroleum Hydrocarbons								
Diesel Fuel (No. 2)	mg/L	T	-		<0.11	:	-	
Motor Oil	mg/L	T	-		<0.26	:	-	
Isotopes								
Delta D	per mil	T	-		-		-	
Delta O-18	per mil	T	-		-		-	
Lead	mg/L	T	-		<0.001	:	-	
Lead	mg/L	D	<0.002	:	-		<0.001	:

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			MMW-48A 4/18/2004 MMW-48A-T01N-GR		MMW-48A 4/18/2004 MMW-48A-D01N-GR		MMW-8B 11/3/2002 MMW-8B-T01N-GRW	
			W GW5		W GW5		RF GW5	
1-Methylphenanthrene	mg/L	T	<0.00002	:	-		-	
2-Methylnaphthalene	mg/L	T	<0.00002	:	-		-	
Acenaphthene	mg/L	T	<0.00002	:	-		-	
Acenaphthylene	mg/L	T	<0.00002	:	-		-	
Anthracene	mg/L	T	<0.00002	:	-		-	
Benzo(a)anthracene	mg/L	T	<0.00002	:	-		-	
Benzo(a)pyrene	mg/L	T	<0.00002	:	-		-	
Benzo(b)fluoranthene	mg/L	T	<0.00002	:	-		-	
Benzo(e)pyrene	mg/L	T	<0.00002	:	-		-	
Benzo(g,h,i)perylene	mg/L	T	<0.00002	:	-		-	
Benzo(k)fluoranthene	mg/L	T	<0.00002	:	-		-	
Chrysene	mg/L	T	<0.00002	:	-		-	
Dibenz(a,h)anthracene	mg/L	T	<0.00002	:	-		-	
Dibenzothiophene	mg/L	T	<0.00002	:	-		-	
Fluoranthene	mg/L	T	<0.00002	:	-		-	
Fluorene	mg/L	T	<0.00002	:	-		-	
Hexachlorobutadiene	mg/L	T	<0.001	:	-		-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.00002	:	-		-	
Naphthalene	mg/L	T	<0.00002	:	-		-	
Naphthalene, 2,3,5-trimethyl-	mg/L	T	<0.00002	:	-		-	
Naphthalene, 2,6-dimethyl-	mg/L	T	<0.00002	:	-		-	
Perylene	mg/L	T	<0.00002	:	-		-	
Phenanthrene	mg/L	T	<0.00002	:	-		-	
Pyrene	mg/L	T	<0.00002	:	-		-	
Petroleum Hydrocarbons								
Diesel Fuel (No. 2)	mg/L	T	<0.1	:	-		-	
Motor Oil	mg/L	T	<0.25	:	-		-	
Isotopes								
Delta D	per mil	T	-85.8	:	-		-	
Delta O-18	per mil	T	-11.7	:	-		-	
Lead	mg/L	T	<0.004	:	-		-	
Lead	mg/L	D	-		<0.004	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/5/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		6.2 :	-	-	6.65 :	2.81 :	-
Eh	millivolts	T		227.9 :	-	-	299.8 :	376. :	-
pH	SU	T		5.71 :	-	-	5.49 :	5.84 :	-
Specific Conductance	uS/cm	T		2412. :	-	-	3037. :	2482. :	-
Temperature	Celsius	T		10.35 :	-	-	8.45 :	9.88 :	-
Turbidity	NTU	T		9.1 :	-	-	30.6 :	356.8 :	-
General Chemistry									
Ammonia	mg/L	T		<0.35 :	-	-	-	<0.11 :	-
Bicarbonate (as CaCO3)	mg/L	T		23.3 J	-	-	-	<12.9 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		34.4 :	-	-	-	35.1 :	-
Fluoride	mg/L	T		-	-	-	-	1.9 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		3.3 J	-	-	-	3. J	-
Nitrite	mg/L	T		<0.005 J	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		0.045 J	-	-	-	<0.04 J	-
Phosphorus	mg/L	T		0.026 :	-	-	-	0.51 :	-
Sulfate	mg/L	T		1620. :	-	-	-	1600. J	-
Total Alkalinity	mg/L	T		23.3 J	-	-	-	<12.9 :	-
Total Dissolved Solids	mg/L	T		2440. :	-	-	-	2310. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.29 :	-
Total Organic Carbon	mg/L	T		<1. :	-	-	-	<1. :	-
Total Suspended Solids	mg/L	T		1.8 :	-	-	-	220. :	-
Laboratory Parameters									
pH	SU	T		5.71 :	-	-	5.49 :	5.84 :	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1550. :	-	-	-	1510. :	-
Hardness	mg/L	D		-	1560. :	-	-	-	1400. :
Metals									
Aluminum	mg/L	T		0.502 :	-	-	-	13.4 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/5/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	D		-	0.473 :	-	-	-	0.468 :
Antimony	mg/L	T		<0.00032 :	-	-	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.0002 :	-	-	-	<0.0006 :
Arsenic	mg/L	T		<0.0006 :	-	-	-	0.00091 :	-
Arsenic	mg/L	D		-	<0.0007 :	-	-	-	<0.0004 :
Barium	mg/L	T		0.0102 :	-	-	-	0.162 :	-
Barium	mg/L	D		-	0.0096 :	-	-	-	0.0098 :
Beryllium	mg/L	T		<0.0002 :	-	-	-	0.00041 :	-
Beryllium	mg/L	D		-	<0.0002 :	-	-	-	<0.0002 :
Boron	mg/L	T		<0.0048 :	-	-	-	0.0061 J	-
Boron	mg/L	D		-	<0.0048 :	-	-	-	0.0034 J
Cadmium	mg/L	T		0.0045 :	-	-	-	0.0043 :	-
Cadmium	mg/L	D		-	0.0042 :	-	-	-	0.0044 :
Calcium	mg/L	T		420. :	-	-	-	408. :	-
Calcium	mg/L	D		-	423. :	-	-	-	380. :
Chromium	mg/L	T		<0.0046 :	-	-	-	0.0158 :	-
Chromium	mg/L	D		-	<0.0046 :	-	-	-	<0.0037 :
Chromium, Hexavalent	mg/L	D		-	-	<0.01 :	-	-	-
Cobalt	mg/L	T		<0.0022 :	-	-	-	0.0029 :	-
Cobalt	mg/L	D		-	<0.0022 :	-	-	-	<0.0016 :
Copper	mg/L	T		0.0017 J	-	-	-	0.0202 :	-
Copper	mg/L	D		-	0.0024 J	-	-	-	<0.0027 :
Iron	mg/L	T		0.0986 :	-	-	-	17.9 :	-
Iron	mg/L	D		-	0.0234 :	-	-	-	<0.489 :
Lead	mg/L	T		<0.0001 :	-	-	-	0.0132 :	-
Lead	mg/L	D		-	<0.0001 :	-	-	-	<0.0002 :
Magnesium	mg/L	T		122. :	-	-	-	120. :	-
Magnesium	mg/L	D		-	122. :	-	-	-	109. :
Manganese	mg/L	T		<0.0082 :	-	-	-	0.223 :	-
Manganese	mg/L	D		-	<0.0065 :	-	-	-	<0.017 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T		<0.0002 :	-	-	-	0.002 J	-
Molybdenum	mg/L	D		-	<0.0002 :	-	-	-	<0.0011 J

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-8B	11/3/2002	MMW-8B-T01N-GRW	GW5	MMW-8B	11/3/2002	MMW-8B-D01N-GRW	GW5	MMW-8B	11/4/2002	MMW-8B-T01N-GRW	GW5	MMW-8B	12/5/2002	MMW-8B-T01N-GRW	GW5
Nickel	mg/L	T	0.0969	:		-			-			-		-			0.11	:
Nickel	mg/L	D	-			0.0969	:		-			-		-			-	
Potassium	mg/L	T	5.38	:		-			-			-		-			7.26	:
Potassium	mg/L	D	-			5.41	:		-			-		-			-	
Selenium	mg/L	T	0.0066	:		-			-			-		-			0.0055	:
Selenium	mg/L	D	-			0.0074	:		-			-		-			-	
Silver	mg/L	T	<0.0001	:		-			-			-		-			0.00061	:
Silver	mg/L	D	-			<0.0001	:		-			-		-			-	
Sodium	mg/L	T	92.9	J		-			-			-		-			92.5	:
Sodium	mg/L	D	-			94.9	J		-			-		-			-	
Thallium	mg/L	T	<0.0001	:		-			-			-		-			<0.0002	:
Thallium	mg/L	D	-			<0.0001	:		-			-		-			-	
Vanadium	mg/L	T	0.00025	:		-			-			-		-			0.0168	:
Vanadium	mg/L	D	-			0.00011	:		-			-		-			-	
Zinc	mg/L	T	0.538	:		-			-			-		-			0.744	:
Zinc	mg/L	D	-			0.542	:		-			-		-			-	
Volatile Organics																		
1,1,1-Trichloroethane	mg/L	T	<0.024	:		-			-			-		-			0.016	:
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,1,2-Trichloroethane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,1-Dichloroethane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,1-Dichloroethene	mg/L	T	0.005	J		-			-			-		-			0.003	J
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:		-			-			-		-			<0.01	J
1,2-Dichlorobenzene	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,2-Dichloroethane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,2-Dichloroethene (total)	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,2-Dichloropropane	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,3-Dichlorobenzene	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
1,4-Dichlorobenzene	mg/L	T	<0.01	:		-			-			-		-			<0.01	:
2-Butanone	mg/L	T	<0.01	J		-			-			-		-			<0.01	:
2-Hexanone	mg/L	T	<0.01	J		-			-			-		-			<0.01	:
4-Methyl-2-pentanone	mg/L	T	<0.01	J		-			-			-		-			<0.01	:

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MMW-8B	1/7/2003	MMW-8B-T01N-GRW	GW5	MMW-8B	1/7/2003	MMW-8B-D01N-GRW	GW5						
Nickel	mg/L	T			-				0.0921	:						
Nickel	mg/L	D			-				-							
Potassium	mg/L	T			-				4.62	:						
Potassium	mg/L	D			-				-							
Selenium	mg/L	T			-				0.0047	:						
Selenium	mg/L	D			-				-							
Silver	mg/L	T			-				<0.0002	:						
Silver	mg/L	D			-				-							
Sodium	mg/L	T			-				85.5	:						
Sodium	mg/L	D			-				-							
Thallium	mg/L	T			-				<0.0002	:						
Thallium	mg/L	D			-				-							
Vanadium	mg/L	T			-				<0.0004	:						
Vanadium	mg/L	D			-				-							
Zinc	mg/L	T			-				0.581	:						
Zinc	mg/L	D			-				-							
Volatile Organics																
1,1,1-Trichloroethane	mg/L	T			-				-							
1,1,2,2-Tetrachloroethane	mg/L	T			-				-							
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T			-				-							
1,1,2-Trichloroethane	mg/L	T			-				-							
1,1-Dichloroethane	mg/L	T			-				-							
1,1-Dichloroethene	mg/L	T			-				-							
1,2,4-Trichlorobenzene	mg/L	T			-				-							
1,2-Dibromo-3-chloropropane	mg/L	T			-				-							
1,2-Dichlorobenzene	mg/L	T			-				-							
1,2-Dichloroethane	mg/L	T			-				-							
1,2-Dichloroethene (total)	mg/L	T			-				-							
1,2-Dichloropropane	mg/L	T			-				-							
1,3-Dichlorobenzene	mg/L	T			-				-							
1,4-Dichlorobenzene	mg/L	T			-				-							
2-Butanone	mg/L	T			-				-							
2-Hexanone	mg/L	T			-				-							
4-Methyl-2-pentanone	mg/L	T			-				-							

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/5/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Benzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromodichloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromoform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bromomethane	mg/L	T		<0.01 J	-	-	-	<0.01 :	-
Carbon disulfide	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Carbon tetrachloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloroform	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
cis-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dibromochloromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dichlorodifluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Ethylbenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Methylene chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Styrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Tetrachloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Toluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Total Xylene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
trans-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichloroethene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Trichlorofluoromethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Vinyl chloride	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4,5-Trichlorophenol	mg/L	T		<0.026 :	-	-	-	<0.025 :	-
2,4,6-Trichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dichlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dimethylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,4-Dinitrophenol	mg/L	T		<0.026 :	-	-	-	<0.025 J	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/5/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
2,4-Dinitrotoluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2,6-Dinitrotoluene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Chloronaphthalene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Chlorophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Methylnaphthalene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Methylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
2-Nitroaniline	mg/L	T		<0.026 :	-	-	-	<0.025 :	-
2-Nitrophenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
3,3-Dichlorobenzidine	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
3-Nitroaniline	mg/L	T		<0.026 :	-	-	-	<0.025 :	-
4,6-Dinitro-2-methylphenol	mg/L	T		<0.026 J	-	-	-	<0.025 J	-
4-Bromophenyl phenyl ether	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Chloro-3-methylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Chloroaniline	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Chlorophenyl phenyl ether	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Methylphenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
4-Nitroaniline	mg/L	T		<0.026 :	-	-	-	<0.025 :	-
4-Nitrophenol	mg/L	T		<0.026 :	-	-	-	<0.025 :	-
Acenaphthene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Acenaphthylene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Anthracene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Benzaldehyde	mg/L	T		<0.01 J	-	-	-	<0.01 :	-
Benzo(a)anthracene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Benzo(a)pyrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Benzo(b)fluoranthene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Benzo(g,h,i)perylene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Benzo(k)fluoranthene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bis(2-chloroethoxy)methane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bis(2-chloroethyl)ether	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Bis(2-ethylhexyl)phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Butyl benzyl phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Carbazole	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Chrysene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dibenz(a,h)anthracene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	11/3/2002	11/3/2002	11/4/2002	12/5/2002	1/7/2003	1/7/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Dibenzofuran	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dichlorodiisopropyl ether	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Diethylphthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Dimethylphthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Di-n-Butyl phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Di-n-Octyl phthalate	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Fluoranthene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Fluorene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorobutadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachlorocyclopentadiene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Hexachloroethane	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Indeno(1,2,3-cd)pyrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Isophorone	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Naphthalene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Nitrobenzene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
N-Nitrosodi-n-propylamine	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
N-Nitrosodiphenylamine	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Pentachlorophenol	mg/L	T		<0.026 :	-	-	-	<0.025 J	-
Phenanthrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Phenol	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Pyrene	mg/L	T		<0.01 :	-	-	-	<0.01 :	-
Explosives									
2,4,6-Trinitrotoluene	mg/L	T		<0.00025 J	-	-	-	<0.00025 :	-
2,6-Pyridinediamine,	mg/L	T		<0.00025 J	-	-	-	<0.00025 J	-
Cyclotetramethylenetetranitramine	mg/L	T		<0.00025 J	-	-	-	<0.00025 :	-
Cyclotrimethylenetrinitramine	mg/L	T		<0.00025 J	-	-	-	<0.00025 :	-
Pentaerythritol tetranitrate	mg/L	T		<0.01 J	-	-	-	<0.01 :	-
Isotopes									
Lead	mg/L	T		<0.0001 :	-	-	-	0.0132 :	-
Lead	mg/L	D		-	<0.0001 :	-	-	-	<0.0002 :

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-8B 2/7/2003 MMW-8B-T01N-GRW GW5		MMW-8B 3/6/2003 MMW-8B-T01N-GRW GW5		MMW-8B 4/7/2003 MMW-8B-T01N-GRW GW5		MMW-8B 4/7/2003 MMW-8B-D01N-GRW GW5		MMW-8B 5/7/2003 MMW-8B-T01N-GRW GW5		MMW-8B 6/5/2003 MMW-8B-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	2.04	:	4.83	:	7.31	:	-		5.1	:	3.82	:
Eh	millivolts	T	292.3	:	314.	:	235.9	:	-		180.9	:	438.	:
pH	SU	T	5.53	:	5.53	:	5.6	J	-		5.41	:	5.38	:
Specific Conductance	uS/cm	T	2506.	:	2559.	:	2593.	:	-		2585.	:	2517.	:
Temperature	Celsius	T	8.13	:	8.31	:	9.47	:	-		10.81	:	16.41	:
Turbidity	NTU	T	9.	:	53.2	:	0.3	:	-		14.2	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.082	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		18.7	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		33.7	:	-		-		-	
Fluoride	mg/L	T	-		-		1.9	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		2.9	J	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.29	:	-		-		-	
Phosphorus	mg/L	T	-		-		0.046	:	-		-		-	
Sulfate	mg/L	T	-		-		1470.	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		18.7	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		2370.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<2.5	J	-		-		-	
Total Suspended Solids	mg/L	T	-		-		<3.2	:	-		-		-	
Laboratory Parameters														
pH	SU	T	5.53	:	5.53	:	5.6	J	-		5.41	:	5.38	:
Specific Conductance	umhos/cm	T	-		-		2370.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		1480.	:	-		-		-	
Hardness	mg/L	D	-		-		-		1490.	:	-		-	
Metals														

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		-	-	<0.525 :	-	-	-
Aluminum	mg/L	D		-	-	-	<0.447 :	-	-
Antimony	mg/L	T		-	-	<0.003 :	-	-	-
Antimony	mg/L	D		-	-	-	<0.003 :	-	-
Arsenic	mg/L	T		-	-	<0.002 :	-	-	-
Arsenic	mg/L	D		-	-	-	<0.002 :	-	-
Barium	mg/L	T		-	-	<0.125 :	-	-	-
Barium	mg/L	D		-	-	-	<0.125 :	-	-
Beryllium	mg/L	T		-	-	<0.004 :	-	-	-
Beryllium	mg/L	D		-	-	-	<0.004 :	-	-
Boron	mg/L	T		-	-	<0.084 :	-	-	-
Boron	mg/L	D		-	-	-	<0.084 :	-	-
Cadmium	mg/L	T		-	-	0.0071 :	-	-	-
Cadmium	mg/L	D		-	-	-	<0.007 :	-	-
Calcium	mg/L	T		-	-	405. :	-	-	-
Calcium	mg/L	D		-	-	-	408. :	-	-
Chromium	mg/L	T		-	-	<0.019 :	-	-	-
Chromium	mg/L	D		-	-	-	<0.019 :	-	-
Cobalt	mg/L	T		-	-	<0.036 :	-	-	-
Cobalt	mg/L	D		-	-	-	<0.036 :	-	-
Copper	mg/L	T		-	-	<0.02 :	-	-	-
Copper	mg/L	D		-	-	-	<0.02 :	-	-
Iron	mg/L	T		-	-	<0.422 :	-	-	-
Iron	mg/L	D		-	-	-	<0.422 :	-	-
Lead	mg/L	T		-	-	<0.001 :	-	-	-
Lead	mg/L	D		-	-	-	<0.001 :	-	-
Magnesium	mg/L	T		-	-	115. :	-	-	-
Magnesium	mg/L	D		-	-	-	114. :	-	-
Manganese	mg/L	T		-	-	<0.013 :	-	-	-
Manganese	mg/L	D		-	-	-	<0.013 :	-	-
Mercury	mg/L	T		-	-	<0.0001 :	-	-	-
Mercury	mg/L	D		-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T		-	-	<0.022 :	-	-	-
Molybdenum	mg/L	D		-	-	-	<0.022 :	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Nickel	mg/L	T		-	-	0.0986 :	-	-	-
Nickel	mg/L	D		-	-	-	0.102 :	-	-
Potassium	mg/L	T		-	-	4.7 :	-	-	-
Potassium	mg/L	D		-	-	-	4.76 :	-	-
Selenium	mg/L	T		-	-	0.0063 :	-	-	-
Selenium	mg/L	D		-	-	-	<0.005 :	-	-
Silver	mg/L	T		-	-	<0.001 :	-	-	-
Silver	mg/L	D		-	-	-	<0.001 :	-	-
Sodium	mg/L	T		-	-	90.5 :	-	-	-
Sodium	mg/L	D		-	-	-	90.4 :	-	-
Thallium	mg/L	T		-	-	<0.001 :	-	-	-
Thallium	mg/L	D		-	-	-	<0.001 :	-	-
Vanadium	mg/L	T		-	-	<0.001 J	-	-	-
Vanadium	mg/L	D		-	-	-	<0.001 J	-	-
Zinc	mg/L	T		-	-	0.55 :	-	-	-
Zinc	mg/L	D		-	-	-	0.624 :	-	-
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		-	-	0.021 :	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1,2-Trichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1-Dichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,1-Dichloroethene	mg/L	T		-	-	0.004 J	-	-	-
1,2,4-Trichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloroethane	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloroethene (total)	mg/L	T		-	-	<0.01 :	-	-	-
1,2-Dichloropropane	mg/L	T		-	-	<0.01 :	-	-	-
1,3-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
1,4-Dichlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
2-Butanone	mg/L	T		-	-	<0.01 :	-	-	-
2-Hexanone	mg/L	T		-	-	<0.01 J	-	-	-
4-Methyl-2-pentanone	mg/L	T		-	-	<0.01 :	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Acetone	mg/L	T		-	-	<0.01 :	-	-	-
Benzene	mg/L	T		-	-	<0.01 :	-	-	-
Bromodichloromethane	mg/L	T		-	-	<0.01 :	-	-	-
Bromoform	mg/L	T		-	-	<0.01 :	-	-	-
Bromomethane	mg/L	T		-	-	<0.01 :	-	-	-
Carbon disulfide	mg/L	T		-	-	<0.01 :	-	-	-
Carbon tetrachloride	mg/L	T		-	-	<0.01 :	-	-	-
Chlorobenzene	mg/L	T		-	-	<0.01 :	-	-	-
Chloroethane	mg/L	T		-	-	<0.01 :	-	-	-
Chloroform	mg/L	T		-	-	<0.01 :	-	-	-
Chloromethane	mg/L	T		-	-	<0.01 :	-	-	-
cis-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
cis-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	-	-
Dibromochloromethane	mg/L	T		-	-	<0.01 :	-	-	-
Dichlorodifluoromethane	mg/L	T		-	-	<0.01 :	-	-	-
Ethylbenzene	mg/L	T		-	-	<0.01 :	-	-	-
Hexachlorobutadiene	mg/L	T		-	-	<0.011 :	-	-	-
Methylene chloride	mg/L	T		-	-	<0.01 :	-	-	-
Styrene	mg/L	T		-	-	<0.01 :	-	-	-
Tetrachloroethene	mg/L	T		-	-	<0.01 :	-	-	-
Toluene	mg/L	T		-	-	<0.01 :	-	-	-
Total Xylene	mg/L	T		-	-	<0.01 :	-	-	-
trans-1,2-Dichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
trans-1,3-Dichloropropene	mg/L	T		-	-	<0.01 :	-	-	-
Trichloroethene	mg/L	T		-	-	<0.01 :	-	-	-
Trichlorofluoromethane	mg/L	T		-	-	<0.01 :	-	-	-
Vinyl chloride	mg/L	T		-	-	<0.01 :	-	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		-	-	<0.011 :	-	-	-
2,4,5-Trichlorophenol	mg/L	T		-	-	<0.027 :	-	-	-
2,4,6-Trichlorophenol	mg/L	T		-	-	<0.011 :	-	-	-
2,4-Dichlorophenol	mg/L	T		-	-	<0.011 :	-	-	-
2,4-Dimethylphenol	mg/L	T		-	-	<0.011 J	-	-	-
2,4-Dinitrophenol	mg/L	T		-	-	<0.027 J	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B		
			2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003		
			MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW		
			GW5	GW5	GW5	GW5	GW5	GW5		
2,4-Dinitrotoluene	mg/L	T	-	-	<0.011	:	-	-	-	
2,6-Dinitrotoluene	mg/L	T	-	-	<0.011	:	-	-	-	
2-Chloronaphthalene	mg/L	T	-	-	<0.011	:	-	-	-	
2-Chlorophenol	mg/L	T	-	-	<0.011	:	-	-	-	
2-Methylnaphthalene	mg/L	T	-	-	<0.011	:	-	-	-	
2-Methylphenol	mg/L	T	-	-	<0.011	:	-	-	-	
2-Nitroaniline	mg/L	T	-	-	<0.027	:	-	-	-	
2-Nitrophenol	mg/L	T	-	-	<0.011	:	-	-	-	
3,3-Dichlorobenzidine	mg/L	T	-	-	<0.011	J	-	-	-	
3-Nitroaniline	mg/L	T	-	-	<0.027	J	-	-	-	
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	<0.027	J	-	-	-	
4-Bromophenyl phenyl ether	mg/L	T	-	-	<0.011	:	-	-	-	
4-Chloro-3-methylphenol	mg/L	T	-	-	<0.011	:	-	-	-	
4-Chloroaniline	mg/L	T	-	-	<0.011	:	-	-	-	
4-Chlorophenyl phenyl ether	mg/L	T	-	-	<0.011	:	-	-	-	
4-Methylphenol	mg/L	T	-	-	<0.011	:	-	-	-	
4-Nitroaniline	mg/L	T	-	-	<0.027	:	-	-	-	
4-Nitrophenol	mg/L	T	-	-	<0.027	J	-	-	-	
Acenaphthene	mg/L	T	-	-	<0.011	:	-	-	-	
Acenaphthylene	mg/L	T	-	-	<0.011	:	-	-	-	
Anthracene	mg/L	T	-	-	<0.011	:	-	-	-	
Benzaldehyde	mg/L	T	-	-	<0.011	:	-	-	-	
Benzo(a)anthracene	mg/L	T	-	-	<0.011	:	-	-	-	
Benzo(a)pyrene	mg/L	T	-	-	<0.011	:	-	-	-	
Benzo(b)fluoranthene	mg/L	T	-	-	<0.011	:	-	-	-	
Benzo(g,h,i)perylene	mg/L	T	-	-	<0.011	:	-	-	-	
Benzo(k)fluoranthene	mg/L	T	-	-	<0.011	:	-	-	-	
Bis(2-chloroethoxy)methane	mg/L	T	-	-	<0.011	:	-	-	-	
Bis(2-chloroethyl)ether	mg/L	T	-	-	<0.011	:	-	-	-	
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	<0.011	:	-	-	-	
Butyl benzyl phthalate	mg/L	T	-	-	<0.011	:	-	-	-	
Carbazole	mg/L	T	-	-	<0.011	:	-	-	-	
Chrysene	mg/L	T	-	-	<0.011	:	-	-	-	
Dibenz(a,h)anthracene	mg/L	T	-	-	<0.011	J	-	-	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area					
			MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B			
			2/7/2003	3/6/2003	4/7/2003	4/7/2003	5/7/2003	6/5/2003			
			MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW			
			GW5	GW5	GW5	GW5	GW5	GW5			
Dibenzofuran	mg/L	T	-	-	<0.011	:	-	-	-		
Dichlorodiisopropyl ether	mg/L	T	-	-	<0.011	:	-	-	-		
Diethylphthalate	mg/L	T	-	-	<0.011	:	-	-	-		
Dimethylphthalate	mg/L	T	-	-	<0.011	:	-	-	-		
Di-n-Butyl phthalate	mg/L	T	-	-	<0.011	:	-	-	-		
Di-n-Octyl phthalate	mg/L	T	-	-	<0.011	J	-	-	-		
Fluoranthene	mg/L	T	-	-	<0.011	:	-	-	-		
Fluorene	mg/L	T	-	-	<0.011	:	-	-	-		
Hexachlorobenzene	mg/L	T	-	-	<0.011	:	-	-	-		
Hexachlorobutadiene	mg/L	T	-	-	<0.011	:	-	-	-		
Hexachlorocyclopentadiene	mg/L	T	-	-	<0.011	:	-	-	-		
Hexachloroethane	mg/L	T	-	-	<0.011	:	-	-	-		
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	<0.011	:	-	-	-		
Isophorone	mg/L	T	-	-	<0.011	:	-	-	-		
Naphthalene	mg/L	T	-	-	<0.011	:	-	-	-		
Nitrobenzene	mg/L	T	-	-	<0.011	:	-	-	-		
N-Nitrosodi-n-propylamine	mg/L	T	-	-	<0.011	:	-	-	-		
N-Nitrosodiphenylamine	mg/L	T	-	-	<0.011	:	-	-	-		
Pentachlorophenol	mg/L	T	-	-	<0.027	:	-	-	-		
Phenanthrene	mg/L	T	-	-	<0.011	:	-	-	-		
Phenol	mg/L	T	-	-	<0.011	:	-	-	-		
Pyrene	mg/L	T	-	-	<0.011	:	-	-	-		
Explosives											
2,4,6-Trinitrotoluene	mg/L	T	-	-	<0.00025	:	-	-	-		
2,6-Pyridinediamine,	mg/L	T	-	-	<0.00025	:	-	-	-		
Cyclotetramethylenetetranitramine	mg/L	T	-	-	<0.00025	:	-	-	-		
Cyclotrimethylenetrinitramine	mg/L	T	-	-	<0.00025	:	-	-	-		
Pentaerythritol tetranitrate	mg/L	T	-	-	<0.01	:	-	-	-		
Isotopes											
Lead	mg/L	T	-	-	<0.001	:	-	-	-		
Lead	mg/L	D	-	-	-		<0.001	:	-	-	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	7/21/2003	7/21/2003	8/12/2003	9/10/2003	10/19/2003	10/19/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
			Exposure Area	GW5	GW5	GW5	GW5	GW5	GW5
Field Measurements									
DO	mg/L	T		3.45 :	-	4.11 :	5.47 :	5.47 :	-
Eh	millivolts	T		325.8 :	-	223.1 :	340.3 :	141.2 :	-
pH	SU	T		5.6 J	-	5.54 :	5.38 :	5.5 J	-
Specific Conductance	uS/cm	T		2459. :	-	2665. :	2498. :	2719. :	-
Temperature	Celsius	T		13.81 :	-	14.69 :	12.39 :	9.27 :	-
Turbidity	NTU	T		0. :	-	1.3 :	7.7 :	1. :	-
General Chemistry									
Ammonia	mg/L	T		<0.11 J	-	-	-	<0.047 J	-
Bicarbonate (as CaCO3)	mg/L	T		25.9 :	-	-	-	17.8 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		35.3 :	-	-	-	32.9 :	-
Fluoride	mg/L	T		1.7 :	-	-	-	1.7 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		3. J	-	-	-	2.9 J	-
Nitrite	mg/L	T		<0.005 J	-	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.04 J	-	-	-	<0.037 J	-
Phosphorus	mg/L	T		0.049 :	-	-	-	0.044 :	-
Sulfate	mg/L	T		1530. J	-	-	-	1610. J	-
Total Alkalinity	mg/L	T		25.9 :	-	-	-	17.8 :	-
Total Dissolved Solids	mg/L	T		2620. :	-	-	-	2330. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.2 J	-	-	-	1.8 J	-
Total Suspended Solids	mg/L	T		4.7 :	-	-	-	<1.7 :	-
Laboratory Parameters									
pH	SU	T		5.6 J	-	5.54 :	5.38 :	5.5 J	-
Specific Conductance	umhos/cm	T		2380. J	-	-	-	2310. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1440. :	-	-	-	1450. :	-
Hardness	mg/L	D		-	1450. :	-	-	-	1410. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B	MMW-8B
			Sample Date	7/21/2003	7/21/2003	8/12/2003	9/10/2003	10/19/2003	10/19/2003
			Sample ID	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-T01N-GRW	MMW-8B-D01N-GRW
				GW5	GW5	GW5	GW5	GW5	GW5
Aluminum	mg/L	T		<6.31 :	-	-	-	<2.17 :	-
Aluminum	mg/L	D		-	<6.31 :	-	-	-	<2.17 :
Antimony	mg/L	T		<0.038 :	-	-	-	<0.052 :	-
Antimony	mg/L	D		-	<0.038 :	-	-	-	<0.052 :
Arsenic	mg/L	T		<0.024 :	-	-	-	<0.041 :	-
Arsenic	mg/L	D		-	<0.024 :	-	-	-	<0.041 :
Barium	mg/L	T		<0.073 :	-	-	-	<0.115 :	-
Barium	mg/L	D		-	<0.073 :	-	-	-	<0.115 :
Beryllium	mg/L	T		<0.002 J	-	-	-	<0.004 J	-
Beryllium	mg/L	D		-	<0.002 J	-	-	-	<0.004 J
Boron	mg/L	T		<0.046 :	-	-	-	<0.063 :	-
Boron	mg/L	D		-	<0.046 :	-	-	-	<0.063 :
Cadmium	mg/L	T		<0.12 :	-	-	-	<0.13 :	-
Cadmium	mg/L	D		-	<0.12 :	-	-	-	<0.13 :
Calcium	mg/L	T		388. :	-	-	-	388. :	-
Calcium	mg/L	D		-	391. :	-	-	-	380. :
Chromium	mg/L	T		<0.19 :	-	-	-	<0.23 J	-
Chromium	mg/L	D		-	<0.19 :	-	-	-	<0.23 J
Cobalt	mg/L	T		<0.37 :	-	-	-	<0.32 :	-
Cobalt	mg/L	D		-	<0.37 :	-	-	-	<0.32 :
Copper	mg/L	T		<0.33 :	-	-	-	<0.23 :	-
Copper	mg/L	D		-	<0.33 :	-	-	-	<0.23 :
Iron	mg/L	T		<6.67 :	-	-	-	<4.55 :	-
Iron	mg/L	D		-	<6.67 :	-	-	-	<4.55 :
Lead	mg/L	T		<0.001 :	-	-	-	<0.002 :	-
Lead	mg/L	D		-	<0.001 :	-	-	-	<0.002 :
Magnesium	mg/L	T		114. :	-	-	-	116. :	-
Magnesium	mg/L	D		-	115. :	-	-	-	111. :
Manganese	mg/L	T		<0.19 :	-	-	-	<0.16 J	-
Manganese	mg/L	D		-	<0.19 :	-	-	-	<0.627 J
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	-	-	<0.0001 :
Molybdenum	mg/L	T		<0.016 :	-	-	-	<0.011 J	-
Molybdenum	mg/L	D		-	<0.016 :	-	-	-	<0.011 J

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			MMW-8B 7/21/2003 MMW-8B-T01N-GRW GW5		MMW-8B 7/21/2003 MMW-8B-D01N-GRW GW5		MMW-8B 8/12/2003 MMW-8B-T01N-GRW GW5		MMW-8B 9/10/2003 MMW-8B-T01N-GRW GW5		MMW-8B 10/19/2003 MMW-8B-T01N-GRW GW5		MMW-8B 10/19/2003 MMW-8B-D01N-GRW GW5	
Nickel	mg/L	T	<0.44	:	-		-		-		<0.45	J	-	
Nickel	mg/L	D	-		<0.44	:	-		-		-		<0.45	J
Potassium	mg/L	T	<37.1	:	-		-		-		<63.8	:	-	
Potassium	mg/L	D	-		<37.1	:	-		-		-		<63.8	:
Selenium	mg/L	T	<0.008	:	-		-		-		0.0055	:	-	
Selenium	mg/L	D	-		<0.008	J	-		-		-		0.0077	:
Silver	mg/L	T	<0.001	J	-		-		-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	J	-		-		-		<0.001	:
Sodium	mg/L	T	<58.1	:	-		-		-		<99.1	:	-	
Sodium	mg/L	D	-		<101.	:	-		-		-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		-		-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		-		-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		-		-		<0.001	:
Zinc	mg/L	T	<0.16	J	-		-		-		<0.553	:	-	
Zinc	mg/L	D	-		<0.16	J	-		-		-		<0.582	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		-		-		<0.002	:	-	
Lead	mg/L	D	-		<0.001	:	-		-		-		<0.002	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Fraction	MMW-8B		MMW-8B		MMW-8B		MMW-8B		MMW-8B		SC-1A	
Sample Date			11/4/2003		1/9/2004		1/9/2004		4/19/2004		4/19/2004		6/2/2003	
Sample ID			MMW-8B-T01N-GRW		MMW-8B-T01N-GRW		MMW-8B-D01N-GRW		MMW-8B-T01N-GRW		MMW-8B-D01N-GRW		SC-1A-T01N-GRW	
Exposure Area			GW5		GW5		GW5		GW5		GW5		OMR	
Field Measurements														
DO	mg/L	T	5.36	:	5.15	:	-		4.6	:	-		0.37	:
Eh	millivolts	T	324.4	:	187.6	:	-		208.1	:	-		369.	:
pH	SU	T	5.45	:	6.	J	-		6.9	J	-		4.1	J
Specific Conductance	uS/cm	T	2269.	:	2326.	:	-		2467.	:	-		2830.	:
Temperature	Celsius	T	10.33	:	8.55	:	-		10.74	:	-		12.5	:
Turbidity	NTU	T	5.4	:	4.5	:	-		-		-		1.33	:
General Chemistry														
Ammonia	mg/L	T	-		<0.061	J	-		<0.044	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		21.1	:	-		39.4	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		35.4	:	-		10.7	:	-		<10.5	:
Fluoride	mg/L	T	-		1.7	:	-		1.9	:	-		13.2	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		2.4	:	-		2.	:	-		<0.4	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	:	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.033	:	-		0.11	:	-		0.28	:
Phosphorus	mg/L	T	-		0.043	:	-		0.12	:	-		-	
Sulfate	mg/L	T	-		1310.	:	-		528.	:	-		2000.	J
Total Alkalinity	mg/L	T	-		21.1	:	-		39.4	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		2190.	:	-		864.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.4	:	-		<1.	J	-		-	
Total Suspended Solids	mg/L	T	-		7.7	:	-		<1.4	J	-		-	
Laboratory Parameters														
pH	SU	T	5.45	:	6.	J	-		6.9	J	-		4.1	J
Specific Conductance	umhos/cm	T	-		2110.	J	-		929.	J	-		2660.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		-	
Physical Properties														
Hardness	mg/L	T	-		1260.	:	-		548.	:	-		1400.	:
Hardness	mg/L	D	-		-		1310.	:	-		544.	:	-	
Metals														

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8B 11/4/2003 MMW-8B-T01N-GRW GW5	MMW-8B 1/9/2004 MMW-8B-T01N-GRW GW5	MMW-8B 1/9/2004 MMW-8B-D01N-GRW GW5	MMW-8B 4/19/2004 MMW-8B-T01N-GRW GW5	MMW-8B 4/19/2004 MMW-8B-D01N-GRW GW5	SC-1A 6/2/2003 SC-1A-T01N-GRW OMR
Aluminum	mg/L	T	-	0.562 :	-	<0.176 :	-	93.4 :
Aluminum	mg/L	D	-	-	<0.514 :	-	<0.176 :	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.0008 :	-	<0.072 :
Antimony	mg/L	D	-	-	<0.0024 :	-	<0.0008 :	-
Arsenic	mg/L	T	-	0.00055 :	-	0.00043 :	-	<0.04 :
Arsenic	mg/L	D	-	-	0.00073 :	-	0.00044 :	-
Barium	mg/L	T	-	<0.0188 :	-	0.0294 :	-	<0.123 :
Barium	mg/L	D	-	-	<0.0188 :	-	0.0304 :	-
Beryllium	mg/L	T	-	<0.001 J	-	0.0012 :	-	0.0301 :
Beryllium	mg/L	D	-	-	<0.001 J	-	0.0011 :	-
Boron	mg/L	T	-	<0.0117 :	-	0.0168 :	-	<0.084 :
Boron	mg/L	D	-	-	<0.0117 :	-	0.0173 :	-
Cadmium	mg/L	T	-	0.004 J	-	0.00038 :	-	0.035 :
Cadmium	mg/L	D	-	-	0.0039 :	-	0.0007 J	-
Calcium	mg/L	T	-	341. :	-	140. :	-	372. :
Calcium	mg/L	D	-	-	354. :	-	139. :	-
Chromium	mg/L	T	-	<0.0057 :	-	<0.0006 :	-	0.0168 :
Chromium	mg/L	D	-	-	<0.0057 :	-	<0.0006 :	-
Cobalt	mg/L	T	-	<0.0037 :	-	<0.0011 J	-	0.292 :
Cobalt	mg/L	D	-	-	<0.0037 :	-	<0.0041 J	-
Copper	mg/L	T	-	0.0076 :	-	<0.0007 J	-	0.895 :
Copper	mg/L	D	-	-	0.0049 :	-	0.00097 J	-
Iron	mg/L	T	-	<0.373 :	-	<0.194 J	-	27.4 :
Iron	mg/L	D	-	-	<0.373 :	-	<0.444 :	-
Lead	mg/L	T	-	0.0002 :	-	<0.0008 :	-	0.0015 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0008 :	-
Magnesium	mg/L	T	-	98.5 :	-	48.2 :	-	115. :
Magnesium	mg/L	D	-	-	102. :	-	47.9 :	-
Manganese	mg/L	T	-	<0.015 :	-	<0.019 :	-	19. :
Manganese	mg/L	D	-	-	<0.015 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.003 :	-	0.067 :	-	<0.023 :
Molybdenum	mg/L	D	-	-	<0.003 :	-	0.069 :	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MMW-8B 11/4/2003 MMW-8B-T01N-GRW GW5		MMW-8B 1/9/2004 MMW-8B-T01N-GRW GW5		MMW-8B 1/9/2004 MMW-8B-D01N-GRW GW5		MMW-8B 4/19/2004 MMW-8B-T01N-GRW GW5		MMW-8B 4/19/2004 MMW-8B-D01N-GRW GW5		SC-1A 6/2/2003 SC-1A-T01N-GRW OMR	
Nickel	mg/L	T	-		0.0907	:	-		0.012	:	-		0.671	:
Nickel	mg/L	D	-		-		0.0926	:	-		0.0134	:	-	
Potassium	mg/L	T	-		7.35	:	-		3.57	:	-		<3.26	:
Potassium	mg/L	D	-		-		7.27	:	-		3.72	:	-	
Selenium	mg/L	T	-		0.0067	J	-		0.0022	:	-		<0.008	:
Selenium	mg/L	D	-		-		0.0072	:	-		0.0022	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.001	:
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		79.8	:	-		32.4	:	-		8.17	:
Sodium	mg/L	D	-		-		84.7	:	-		30.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.001	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00041	:	-		<0.0004	:	-		<0.002	:
Vanadium	mg/L	D	-		-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.4	:	-		0.131	:	-		6.51	:
Zinc	mg/L	D	-		-		0.408	:	-		0.136	:	-	
Isotopes														
Delta D	per mil	T	-		-		-		-80.9	:	-		-	
Delta O-18	per mil	T	-		-		-		-11.	:	-		-	
Lead	mg/L	T	-		0.0002	:	-		<0.0008	:	-		0.0015	:
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0008	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SC-1A 6/2/2003 SC-1A-D01N-GRW		SC-1A 10/21/2003 SC-1A-T01N-GRW		SC-1A 10/21/2003 SC-1A-D01N-GRW		SC-1A 1/15/2004 SC-1A-T01N-GRW		SC-1A 1/15/2004 SC-1A-D01N-GRW		SC-1A 2/25/2004 SC-1A-T01N-GRW	
			OMR		OMR		OMR		OMR		OMR		OMR	
Field Measurements														
DO	mg/L	T	-		9.56	:	-		0.39	:	-		1.28	:
Eh	millivolts	T	-		416.1	:	-		313.9	:	-		339.	:
pH	SU	T	-		3.7	J	-		3.9	J	-		3.39	:
Specific Conductance	uS/cm	T	-		2494.	:	-		2699.	:	-		2785.	:
Temperature	Celsius	T	-		13.12	:	-		6.44	:	-		6.17	:
Turbidity	NTU	T	-		8.	:	-		0.7	:	-		24.2	:
General Chemistry														
Ammonia	mg/L	T	-		0.075	J	-		<0.044	J	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		1.9	:	-		2.	:	-		-	
Fluoride	mg/L	T	-		11.7	:	-		11.4	:	-		13.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		<0.2	J	-		<0.2	J	-		-	
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	-		0.026	J	-		0.042	J	-		-	
Phosphorus	mg/L	T	-		0.052	:	-		0.059	:	-		-	
Sulfate	mg/L	T	-		1930.	J	-		2070.	:	-		2090.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Total Dissolved Solids	mg/L	T	-		3970.	:	-		3100.	:	-		3090.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.6	:	-		-	
Total Suspended Solids	mg/L	T	-		3.4	:	-		<1.8	:	-		37.5	:
Laboratory Parameters														
pH	SU	T	-		3.7	J	-		3.9	J	-		3.39	:
Specific Conductance	umhos/cm	T	-		2720.	J	-		2240.	J	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	-		1470.	:	-		1480.	:	-		1590.	:
Hardness	mg/L	D	1440.	:	-		1460.	:	-		1480.	:	-	
Metals														

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SC-1A 6/2/2003 SC-1A-D01N-GRW		SC-1A 10/21/2003 SC-1A-T01N-GRW		SC-1A 10/21/2003 SC-1A-D01N-GRW		SC-1A 1/15/2004 SC-1A-T01N-GRW		SC-1A 1/15/2004 SC-1A-D01N-GRW		SC-1A 2/25/2004 SC-1A-T01N-GRW	
			OMR		OMR		OMR		OMR		OMR		OMR	
Aluminum	mg/L	T	-		99.8	:	-		100.	:	-		107.	:
Aluminum	mg/L	D	96.3	:	-		98.7	:	-		101.	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.029	:	-		<0.029	:
Antimony	mg/L	D	<0.072	:	-		<0.082	:	-		<0.029	:	-	
Arsenic	mg/L	T	-		0.0353	:	-		<0.028	:	-		<0.028	:
Arsenic	mg/L	D	<0.04	:	-		0.0454	:	-		<0.028	:	-	
Barium	mg/L	T	-		<0.117	:	-		<0.053	:	-		<0.053	:
Barium	mg/L	D	<0.123	:	-		<0.117	:	-		<0.053	:	-	
Beryllium	mg/L	T	-		0.0234	J	-		0.0271	:	-		0.0267	:
Beryllium	mg/L	D	0.0281	:	-		0.027	J	-		0.0268	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.023	:	-		<0.023	:
Boron	mg/L	D	<0.084	:	-		<0.064	:	-		<0.023	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		<0.07	:
Cadmium	mg/L	D	0.0354	:	-		<0.13	:	-		<0.07	:	-	
Calcium	mg/L	T	-		389.	:	-		392.	:	-		419.	:
Calcium	mg/L	D	384.	:	-		384.	:	-		394.	:	-	
Chromium	mg/L	T	-		<0.11	J	-		<0.57	:	-		<0.15	:
Chromium	mg/L	D	0.0194	:	-		<0.11	J	-		<0.57	:	-	
Cobalt	mg/L	T	-		0.345	:	-		<0.37	:	-		0.292	:
Cobalt	mg/L	D	0.3	:	-		0.359	:	-		<0.37	:	-	
Copper	mg/L	T	-		1.04	:	-		0.768	:	-		0.958	:
Copper	mg/L	D	0.929	:	-		1.03	:	-		0.804	:	-	
Iron	mg/L	T	-		31.8	:	-		30.2	:	-		33.3	:
Iron	mg/L	D	28.2	:	-		31.6	:	-		30.5	:	-	
Lead	mg/L	T	-		<0.002	:	-		0.0017	:	-		0.0219	:
Lead	mg/L	D	0.0012	:	-		<0.002	:	-		0.0013	:	-	
Magnesium	mg/L	T	-		122.	:	-		121.	:	-		132.	:
Magnesium	mg/L	D	118.	:	-		121.	:	-		121.	:	-	
Manganese	mg/L	T	-		20.	:	-		19.2	:	-		20.2	:
Manganese	mg/L	D	19.6	:	-		19.8	:	-		19.3	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.024	:	-		<0.024	:
Molybdenum	mg/L	D	<0.023	:	-		<0.012	:	-		<0.024	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-1A 6/2/2003 SC-1A-D01N-GRW OMR		SC-1A 10/21/2003 SC-1A-T01N-GRW OMR		SC-1A 10/21/2003 SC-1A-D01N-GRW OMR		SC-1A 1/15/2004 SC-1A-T01N-GRW OMR		SC-1A 1/15/2004 SC-1A-D01N-GRW OMR		SC-1A 2/25/2004 SC-1A-T01N-GRW OMR	
Nickel	mg/L	T	-		1.07	:	-		<1.68	:	-		0.75	:
Nickel	mg/L	D	0.697	:	-		1.16	:	-		<1.68	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<110.	:	-		<39.1	:
Potassium	mg/L	D	<3.26	:	-		<63.8	:	-		<110.	:	-	
Selenium	mg/L	T	-		<0.03	:	-		0.0125	J	-		0.0053	J
Selenium	mg/L	D	<0.008	:	-		<0.03	:	-		0.0113	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<92.	:	-		<51.5	:
Sodium	mg/L	D	8.88	:	-		<99.1	:	-		<92.	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		0.0019	:	-		<0.002	:	-		0.0029	:
Vanadium	mg/L	D	<0.002	:	-		0.0023	:	-		<0.002	:	-	
Zinc	mg/L	T	-		11.8	:	-		7.08	:	-		7.43	:
Zinc	mg/L	D	6.68	:	-		11.6	:	-		7.19	:	-	
Isotopes														
204Pb/206Pb	mg/L	T	-		-		-		-		-		0.00006	:
207Pb/206Pb	mg/L	T	-		-		-		-		-		0.00059	:
208Pb/206Pb	mg/L	T	-		-		-		-		-		0.00097	:
Delta D	per mil	T	-		-		-		-		-		-95.5	:
Delta O-18	per mil	T	-		-		-		-		-		-13.	:
Lead	mg/L	T	-		<0.002	:	-		0.0017	:	-		0.0219	:
Lead	mg/L	D	0.0012	:	-		<0.002	:	-		0.0013	:	-	

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			SC-1A 2/25/2004 SC-1A-D01N-GRW OMR	SC-1A 3/22/2004 SC-1A OMR	SC-1A 4/19/2004 SC-1A-T01N-GRW OMR	SC-1A 4/19/2004 SC-1A-D01N-GRW OMR	SC-3A 6/9/2003 SC-3A-T01N-GRW OMR	SC-3A 6/9/2003 SC-3A-D01N-GRW OMR
Field Measurements								
DO	mg/L	T	-	-	1.68 :	-	6.99 :	-
Eh	millivolts	T	-	-	302.2 :	-	568.9 :	-
pH	SU	T	-	-	4.1 J	-	3.6 :	-
Specific Conductance	uS/cm	T	-	-	2791. :	-	2386. :	-
Temperature	Celsius	T	-	-	7.54 :	-	15.54 :	-
Turbidity	NTU	T	-	-	1.7 :	-	53.4 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.07 :	-	<0.082 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Chloride	mg/L	T	-	-	15.9 :	-	<4.2 :	-
Fluoride	mg/L	T	-	-	11.7 :	-	9.2 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	-	-	<0.2 J	-	<0.4 J	-
Nitrite	mg/L	T	-	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	-	0.045 J	-	<0.01 J	-
Phosphorus	mg/L	T	-	-	0.06 :	-	0.03 J	-
Sulfate	mg/L	T	-	-	1670. :	-	1300. J	-
Total Alkalinity	mg/L	T	-	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	-	3070. :	-	2310. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	-	1.9 J	-	1.7 J	-
Total Suspended Solids	mg/L	T	-	-	<2.9 J	-	5.5 :	-
Laboratory Parameters								
pH	SU	T	-	-	4.1 J	-	3.6 :	-
Specific Conductance	umhos/cm	T	-	-	2430. J	-	2070. :	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 :	-	<0.01 :	-
Physical Properties								
Hardness	mg/L	T	-	-	1530. :	-	1040. :	-
Hardness	mg/L	D	1500. :	-	-	1550. :	-	1030. :
Metals								

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-1A 2/25/2004 SC-1A-D01N-GRW OMR		SC-1A 3/22/2004 SC-1A OMR		SC-1A 4/19/2004 SC-1A-T01N-GRW OMR		SC-1A 4/19/2004 SC-1A-D01N-GRW OMR		SC-3A 6/9/2003 SC-3A-T01N-GRW OMR		SC-3A 6/9/2003 SC-3A-D01N-GRW OMR	
Aluminum	mg/L	T	-		-		107.	:	-		75.5	:	-	
Aluminum	mg/L	D	100.	:	-		-		108.	:	-		74.	:
Antimony	mg/L	T	-		-		<0.0705	:	-		<0.072	:	-	
Antimony	mg/L	D	<0.029	:	-		-		<0.053	:	-		<0.072	:
Arsenic	mg/L	T	-		-		<0.037	:	-		<0.04	:	-	
Arsenic	mg/L	D	<0.028	:	-		-		<0.037	:	-		<0.04	:
Barium	mg/L	T	-		-		<0.049	:	-		<0.123	:	-	
Barium	mg/L	D	<0.053	:	-		-		<0.049	:	-		<0.123	:
Beryllium	mg/L	T	-		-		0.0248	J	-		0.0211	:	-	
Beryllium	mg/L	D	0.0248	:	-		-		0.0176	J	-		<0.0193	:
Boron	mg/L	T	-		-		<0.036	:	-		<0.084	:	-	
Boron	mg/L	D	<0.023	:	-		-		<0.0422	:	-		<0.084	:
Cadmium	mg/L	T	-		-		<0.1	:	-		0.0247	:	-	
Cadmium	mg/L	D	<0.07	J	-		-		<0.1	:	-		0.0226	:
Calcium	mg/L	T	-		-		407.	:	-		284.	:	-	
Calcium	mg/L	D	397.	:	-		-		412.	:	-		280.	:
Chromium	mg/L	T	-		-		<0.13	:	-		<0.0131	:	-	
Chromium	mg/L	D	<0.15	:	-		-		<0.13	:	-		<0.01	:
Cobalt	mg/L	T	-		-		<0.18	:	-		0.218	:	-	
Cobalt	mg/L	D	0.338	:	-		-		0.308	:	-		0.211	:
Copper	mg/L	T	-		-		<1.2	:	-		0.8	:	-	
Copper	mg/L	D	0.933	:	-		-		<1.4	:	-		0.782	:
Iron	mg/L	T	-		-		28.5	J	-		0.716	:	-	
Iron	mg/L	D	30.6	:	-		-		31.4	:	-		<0.311	:
Lead	mg/L	T	-		-		<0.004	:	-		<0.001	:	-	
Lead	mg/L	D	0.0025	:	-		-		<0.004	:	-		<0.001	:
Magnesium	mg/L	T	-		-		126.	:	-		81.2	:	-	
Magnesium	mg/L	D	124.	:	-		-		127.	:	-		79.5	:
Manganese	mg/L	T	-		-		20.2	:	-		13.9	:	-	
Manganese	mg/L	D	19.2	:	-		-		20.5	:	-		13.7	:
Mercury	mg/L	T	-		-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	-		-		<0.014	:	-		<0.023	:	-	
Molybdenum	mg/L	D	<0.024	:	-		-		<0.014	:	-		<0.023	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	SC-1A 2/25/2004 SC-1A-D01N-GRW OMR	SC-1A 3/22/2004 SC-1A OMR	SC-1A 4/19/2004 SC-1A-T01N-GRW OMR	SC-1A 4/19/2004 SC-1A-D01N-GRW OMR	SC-3A 6/9/2003 SC-3A-T01N-GRW OMR	SC-3A 6/9/2003 SC-3A-D01N-GRW OMR
Nickel	mg/L		T	-	-	0.429 J	-	0.472 :	-
Nickel	mg/L		D	0.714 :	-	-	0.555 J	-	0.465 :
Potassium	mg/L		T	-	-	<15.5 :	-	<3.26 :	-
Potassium	mg/L		D	<39.1 :	-	-	<15.5 :	-	<3.26 :
Selenium	mg/L		T	-	-	<0.007 :	-	<0.008 :	-
Selenium	mg/L		D	0.0034 J	-	-	<0.007 :	-	<0.008 :
Silver	mg/L		T	-	-	<0.001 J	-	<0.001 :	-
Silver	mg/L		D	<0.001 :	-	-	<0.001 J	-	<0.001 :
Sodium	mg/L		T	-	-	<40.2 :	-	9.1 :	-
Sodium	mg/L		D	<51.5 :	-	-	<32.8 :	-	8.39 :
Thallium	mg/L		T	-	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L		D	<0.001 :	-	-	<0.001 :	-	<0.001 :
Vanadium	mg/L		T	-	-	0.0037 :	-	<0.002 :	-
Vanadium	mg/L		D	0.002 :	-	-	0.0034 :	-	<0.002 :
Zinc	mg/L		T	-	-	7.22 :	-	4.82 :	-
Zinc	mg/L		D	7.02 :	-	-	7.32 :	-	4.73 :
Isotopes									
204Pb/206Pb	mg/L		D	0.00006 :	-	-	-	-	-
207Pb/206Pb	mg/L		D	0.00044 :	-	-	-	-	-
208Pb/206Pb	mg/L		D	0.00041 :	-	-	-	-	-
Delta 34S	per mil		D	-3.9 :	-	-	-	-	-
Lead	mg/L		T	-	-	<0.004 :	-	<0.001 :	-
Lead	mg/L		D	0.0025 :	-	-	<0.004 :	-	<0.001 :
Helium Isotope and Tritium									
3H-3He	Years		T	-	0.87 :	-	-	-	-
DEL He3	%		T	-	1. :	-	-	-	-
DEL He4	%		T	-	4.8 :	-	-	-	-
He Corr	1E-8cc/g		T	-	5.021 :	-	-	-	-
Tritium TU	TU		T	-	5.129 :	-	-	-	-
Uncert Age	Years		T	-	0.9 :	-	-	-	-
Uncert TU	TU		T	-	0.154 :	-	-	-	-

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-3A	SC-3A	SC-3A	SC-3A	SC-3A	SC-3A
			Sample Date	10/22/2003	10/22/2003	1/15/2004	1/15/2004	4/19/2004	4/19/2004
			Sample ID	SC-3A-T01N-GRW	SC-3A-D01N-GRW	SC-3A-T01N-GRW	SC-3A-D01N-GRW	SC-3A-T01N-GRW	SC-3A-D01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		8.38 :	-	5.41 :	-	-	-
Eh	millivolts	T		560.1 :	-	553.6 :	-	-	-
pH	SU	T		4. J	-	3.5 J	-	3.8 J	-
Specific Conductance	uS/cm	T		2520. :	-	2298. :	-	-	-
Temperature	Celsius	T		8.76 :	-	7.02 :	-	-	-
Turbidity	NTU	T		0. :	-	6.4 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.045 J	-	<0.047 J	-	<0.069 :	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		3.2 :	-	2.2 :	-	9.2 :	-
Fluoride	mg/L	T		8.9 :	-	8.9 :	-	9.3 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 :	-	0.21 J	-	0.28 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.023 :	-	<0.02 :	-	0.014 :	-
Sulfate	mg/L	T		1640. J	-	1560. :	-	2050. :	-
Total Alkalinity	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		3060. :	-	2390. :	-	2410. :	-
Total Kjeldahl Nitrogen	mg/L	T		<2.4 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		1.4 J	-	<1.7 :	-	2.5 J	-
Total Suspended Solids	mg/L	T		<1.7 :	-	4.3 :	-	<2.1 J	-
Laboratory Parameters									
pH	SU	T		4. J	-	3.5 J	-	3.8 J	-
Specific Conductance	umhos/cm	T		2320. J	-	1990. J	-	2010. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		1010. :	-	1220. :	-	1190. :	-
Hardness	mg/L	D		-	1090. :	-	1080. :	-	1110. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SC-3A 10/22/2003 SC-3A-T01N-GRW OMR		SC-3A 10/22/2003 SC-3A-D01N-GRW OMR		SC-3A 1/15/2004 SC-3A-T01N-GRW OMR		SC-3A 1/15/2004 SC-3A-D01N-GRW OMR		SC-3A 4/19/2004 SC-3A-T01N-GRW OMR		SC-3A 4/19/2004 SC-3A-D01N-GRW OMR	
Aluminum	mg/L	T	74.9	:	-		91.3	:	-		90.9	:	-	
Aluminum	mg/L	D	-		80.5	:	-		78.2	:	-		86.	:
Antimony	mg/L	T	<0.082	:	-		<0.029	:	-		<0.053	:	-	
Antimony	mg/L	D	-		<0.082	:	-		<0.029	:	-		<0.053	:
Arsenic	mg/L	T	<0.035	:	-		<0.028	:	-		<0.037	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		<0.028	:	-		<0.0554	:
Barium	mg/L	T	<0.117	:	-		<0.053	:	-		<0.049	:	-	
Barium	mg/L	D	-		<0.117	:	-		<0.053	:	-		<0.049	:
Beryllium	mg/L	T	0.0184	:	-		0.021	:	-		0.0172	J	-	
Beryllium	mg/L	D	-		0.0198	:	-		0.0202	:	-		0.017	J
Boron	mg/L	T	<0.064	:	-		<0.023	:	-		<0.0365	:	-	
Boron	mg/L	D	-		<0.064	:	-		<0.023	:	-		<0.0407	:
Cadmium	mg/L	T	<0.13	:	-		<0.07	J	-		<0.1	:	-	
Cadmium	mg/L	D	-		<0.13	:	-		<0.07	:	-		<0.1	:
Calcium	mg/L	T	273.	:	-		328.	:	-		321.	:	-	
Calcium	mg/L	D	-		292.	:	-		292.	:	-		301.	:
Chromium	mg/L	T	<0.23	J	-		<0.57	:	-		<0.13	:	-	
Chromium	mg/L	D	-		<0.23	J	-		<0.57	:	-		<0.13	:
Cobalt	mg/L	T	<0.32	:	-		<0.37	:	-		0.362	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		<0.37	:	-		0.237	:
Copper	mg/L	T	0.784	:	-		0.854	:	-		<1.38	:	-	
Copper	mg/L	D	-		0.88	:	-		0.658	:	-		<1.08	:
Iron	mg/L	T	<4.55	:	-		<3.57	:	-		<2.93	J	-	
Iron	mg/L	D	-		<4.55	:	-		<3.57	:	-		<2.93	J
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:
Magnesium	mg/L	T	81.	:	-		96.7	:	-		93.7	:	-	
Magnesium	mg/L	D	-		86.8	:	-		84.6	:	-		87.5	:
Manganese	mg/L	T	13.4	:	-		15.9	:	-		15.9	:	-	
Manganese	mg/L	D	-		14.3	:	-		14.1	:	-		14.9	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.012	:	-		<0.024	:	-		<0.014	:	-	
Molybdenum	mg/L	D	-		<0.012	:	-		<0.024	:	-		<0.014	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-3A 10/22/2003 SC-3A-T01N-GRW OMR		SC-3A 10/22/2003 SC-3A-D01N-GRW OMR		SC-3A 1/15/2004 SC-3A-T01N-GRW OMR		SC-3A 1/15/2004 SC-3A-D01N-GRW OMR		SC-3A 4/19/2004 SC-3A-T01N-GRW OMR		SC-3A 4/19/2004 SC-3A-D01N-GRW OMR	
Nickel	mg/L	T	0.473	:	-		<1.68	:	-		0.437	J	-	
Nickel	mg/L	D	-		0.556	:	-		<1.68	:	-		<0.33	J
Potassium	mg/L	T	<63.8	:	-		<110.	:	-		<15.5	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<110.	:	-		<15.5	:
Selenium	mg/L	T	0.005	:	-		0.0095	J	-		<0.007	:	-	
Selenium	mg/L	D	-		<0.003	:	-		0.0066	:	-		<0.007	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	J
Sodium	mg/L	T	<99.1	:	-		<92.	:	-		<32.8	:	-	
Sodium	mg/L	D	-		<99.1	:	-		<92.	:	-		<32.8	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	4.82	:	-		5.5	:	-		5.65	:	-	
Zinc	mg/L	D	-		5.16	:	-		5.74	:	-		5.26	:
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-4A	SC-4A	SC-4A	SC-4A	SC-4A	SC-4A
			Sample Date	6/5/2003	6/5/2003	10/22/2003	10/22/2003	1/14/2004	1/14/2004
			Sample ID	SC-4A-T01N-GRW	SC-4A-D01N-GRW	SC-4A-T01N-GRW	SC-4A-D01N-GRW	SC-4A-T01N-GRW	SC-4A-D01N-GRW
			Exposure Area	OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		1.99 :	-	0.37 :	-	0.26 :	-
Eh	millivolts	T		371. :	-	312.8 :	-	375.1 :	-
pH	SU	T		3.6 :	-	4.1 J	-	3.9 J	-
Specific Conductance	uS/cm	T		2420. :	-	2330. :	-	2338. :	-
Temperature	Celsius	T		9.8 :	-	7.7 :	-	7.66 :	-
Turbidity	NTU	T		8.95 :	-	9.5 :	-	1.6 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	<0.11 J	-	<0.066 J	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<3.9 :	-	4.7 :	-	6.3 :	-
Fluoride	mg/L	T		9.4 :	-	9.7 :	-	9.5 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.4 J	-	<0.2 J	-	<0.27 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		0.32 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		-	-	0.021 :	-	<0.017 :	-
Sulfate	mg/L	T		1460. J	-	1800. J	-	1750. :	-
Total Alkalinity	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		2950. :	-	2800. :	-	2530. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	2.8 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	-	2. J	-	<1. J	-
Total Suspended Solids	mg/L	T		-	-	<1.1 :	-	<2.1 :	-
Laboratory Parameters									
pH	SU	T		3.6 :	-	4.1 J	-	3.9 J	-
Specific Conductance	umhos/cm	T		2220. :	-	2070. J	-	2140. J	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1180. :	-	1350. :	-	1220. :	-
Hardness	mg/L	D		-	1140. :	-	1240. :	-	1210. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-4A 6/5/2003 SC-4A-T01N-GRW OMR		SC-4A 6/5/2003 SC-4A-D01N-GRW OMR		SC-4A 10/22/2003 SC-4A-T01N-GRW OMR		SC-4A 10/22/2003 SC-4A-D01N-GRW OMR		SC-4A 1/14/2004 SC-4A-T01N-GRW OMR		SC-4A 1/14/2004 SC-4A-D01N-GRW OMR	
Aluminum	mg/L	T	64.4	:	-		64.4	:	-		65.6	:	-	
Aluminum	mg/L	D	-		62.3	:	-		58.8	:	-		64.6	:
Antimony	mg/L	T	<0.072	:	-		<0.052	:	-		0.0367	:	-	
Antimony	mg/L	D	-		<0.072	:	-		<0.052	:	-		<0.029	:
Arsenic	mg/L	T	<0.04	:	-		<0.041	:	-		<0.028	:	-	
Arsenic	mg/L	D	-		<0.04	:	-		<0.041	:	-		<0.028	:
Barium	mg/L	T	<0.123	:	-		<0.115	:	-		<0.053	:	-	
Barium	mg/L	D	-		<0.123	:	-		<0.115	:	-		<0.053	:
Beryllium	mg/L	T	<0.0188	:	-		0.0151	:	-		0.018	:	-	
Beryllium	mg/L	D	-		<0.0179	:	-		0.0174	J	-		0.0186	:
Boron	mg/L	T	<0.084	:	-		<0.063	:	-		<0.023	:	-	
Boron	mg/L	D	-		<0.084	:	-		<0.063	:	-		<0.023	:
Cadmium	mg/L	T	0.0188	:	-		<0.13	:	-		<0.07	J	-	
Cadmium	mg/L	D	-		0.0179	:	-		<0.13	:	-		<0.07	:
Calcium	mg/L	T	292.	:	-		311.	:	-		300.	:	-	
Calcium	mg/L	D	-		283.	:	-		286.	:	-		297.	:
Chromium	mg/L	T	<0.01	:	-		<0.23	J	-		<0.57	:	-	
Chromium	mg/L	D	-		<0.01	:	-		<0.23	J	-		<0.57	:
Cobalt	mg/L	T	0.232	:	-		<0.32	:	-		<0.37	:	-	
Cobalt	mg/L	D	-		0.225	:	-		<0.32	:	-		<0.37	:
Copper	mg/L	T	0.348	:	-		<0.23	:	-		<0.35	:	-	
Copper	mg/L	D	-		0.336	:	-		<0.23	:	-		<0.35	:
Iron	mg/L	T	24.6	:	-		49.4	:	-		<26.4	:	-	
Iron	mg/L	D	-		24.	:	-		44.9	:	-		<26.8	:
Lead	mg/L	T	0.001	:	-		<0.002	:	-		<0.001	:	-	
Lead	mg/L	D	-		0.0011	:	-		<0.002	:	-		<0.001	:
Magnesium	mg/L	T	109.	:	-		139.	:	-		114.	:	-	
Magnesium	mg/L	D	-		106.	:	-		128.	:	-		113.	:
Manganese	mg/L	T	16.7	:	-		19.6	:	-		17.1	:	-	
Manganese	mg/L	D	-		16.1	:	-		18.	:	-		17.1	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.023	:	-		<0.011	:	-		<0.024	:	-	
Molybdenum	mg/L	D	-		<0.023	:	-		<0.011	:	-		<0.024	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-4A 6/5/2003 SC-4A-T01N-GRW OMR		SC-4A 6/5/2003 SC-4A-D01N-GRW OMR		SC-4A 10/22/2003 SC-4A-T01N-GRW OMR		SC-4A 10/22/2003 SC-4A-D01N-GRW OMR		SC-4A 1/14/2004 SC-4A-T01N-GRW OMR		SC-4A 1/14/2004 SC-4A-D01N-GRW OMR	
Nickel	mg/L	T	0.504	:	-		0.702	:	-		<1.68	:	-	
Nickel	mg/L	D	-		0.491	:	-		0.551	:	-		<1.68	:
Potassium	mg/L	T	<3.26	:	-		<63.8	:	-		<110.	J	-	
Potassium	mg/L	D	-		<3.26	:	-		<63.8	:	-		<110.	J
Selenium	mg/L	T	<0.008	:	-		0.0057	:	-		0.0083	J	-	
Selenium	mg/L	D	-		<0.008	:	-		0.0033	:	-		0.0077	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	13.8	:	-		<99.1	:	-		<92.	:	-	
Sodium	mg/L	D	-		13.2	:	-		<99.1	:	-		<92.	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		0.0011	:	-		<0.002	:
Zinc	mg/L	T	4.98	:	-		5.62	:	-		5.3	:	-	
Zinc	mg/L	D	-		4.81	:	-		5.19	:	-		5.3	:
Isotopes														
Lead	mg/L	T	0.001	:	-		<0.002	:	-		<0.001	:	-	
Lead	mg/L	D	-		0.0011	:	-		<0.002	:	-		<0.001	:

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-4A	SC-4A	SC-5A	SC-5A	SC-5A	SC-5A
			Sample Date	4/19/2004	4/19/2004	6/5/2003	6/5/2003	10/22/2003	10/22/2003
			Sample ID	SC-4A-T01N-GRW	SC-4A-D01N-GRW	SC-5A-T01N-GRW	SC-5A-D01N-GRW	SC-5A-T01N-GRW	SC-5A-D01N-GRW
				OMR	OMR	OMR	OMR	OMR	OMR
Field Measurements									
DO	mg/L	T		6.79 :	-	1.77 :	-	1.86 :	-
Eh	millivolts	T		521.4 :	-	486. :	-	649.8 :	-
pH	SU	T		3.7 J	-	3.5 :	-	3.4 J	-
Specific Conductance	uS/cm	T		2410. :	-	1167. :	-	1669. :	-
Temperature	Celsius	T		8.05 :	-	11.3 :	-	9.51 :	-
Turbidity	NTU	T		8.8 :	-	3.81 :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		<0.066 :	-	-	-	<0.04 J	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		10.2 :	-	<4.6 :	-	5. :	-
Fluoride	mg/L	T		9.1 :	-	3.2 :	-	3.8 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.27 J	-	<0.4 J	-	<0.2 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	0.32 J	-	<0.01 :	-
Phosphorus	mg/L	T		0.15 :	-	-	-	0.018 :	-
Sulfate	mg/L	T		1690. :	-	667. J	-	855. J	-
Total Alkalinity	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T		2460. :	-	1160. :	-	1480. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	3.2 :	-
Total Organic Carbon	mg/L	T		2.3 J	-	-	-	1.2 J	-
Total Suspended Solids	mg/L	T		<2. J	-	-	-	<1.1 :	-
Laboratory Parameters									
pH	SU	T		3.7 J	-	3.5 :	-	3.4 J	-
Specific Conductance	umhos/cm	T		2050. J	-	1070. :	-	1380. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1150. :	-	393. :	-	515. :	-
Hardness	mg/L	D		-	1130. :	-	377. :	-	457. :
Metals									

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Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-4A 4/19/2004 SC-4A-T01N-GRW OMR		SC-4A 4/19/2004 SC-4A-D01N-GRW OMR		SC-5A 6/5/2003 SC-5A-T01N-GRW OMR		SC-5A 6/5/2003 SC-5A-D01N-GRW OMR		SC-5A 10/22/2003 SC-5A-T01N-GRW OMR		SC-5A 10/22/2003 SC-5A-D01N-GRW OMR	
Aluminum	mg/L	T	85.5	:	-		40.8	:	-		47.6	:	-	
Aluminum	mg/L	D	-		85.2	:	-		39.2	:	-		42.1	:
Antimony	mg/L	T	<0.053	:	-		<0.072	:	-		<0.082	:	-	
Antimony	mg/L	D	-		<0.053	:	-		<0.072	:	-		<0.082	:
Arsenic	mg/L	T	<0.0559	:	-		<0.04	:	-		<0.035	:	-	
Arsenic	mg/L	D	-		<0.037	:	-		<0.04	:	-		<0.035	:
Barium	mg/L	T	<0.049	:	-		<0.123	:	-		<0.117	:	-	
Barium	mg/L	D	-		<0.049	:	-		<0.123	:	-		<0.117	:
Beryllium	mg/L	T	0.015	J	-		<0.0076	:	-		0.0059	:	-	
Beryllium	mg/L	D	-		0.0176	J	-		<0.0075	:	-		0.009	:
Boron	mg/L	T	<0.0434	:	-		<0.084	:	-		<0.064	:	-	
Boron	mg/L	D	-		<0.0487	:	-		<0.084	:	-		<0.064	:
Cadmium	mg/L	T	<0.1	:	-		0.0053	:	-		<0.13	:	-	
Cadmium	mg/L	D	-		<0.1	:	-		0.006	:	-		<0.13	:
Calcium	mg/L	T	313.	:	-		97.6	:	-		126.	:	-	
Calcium	mg/L	D	-		306.	:	-		93.7	:	-		112.	:
Chromium	mg/L	T	<0.13	:	-		<0.01	:	-		<0.23	J	-	
Chromium	mg/L	D	-		<0.13	:	-		<0.01	:	-		<0.23	J
Cobalt	mg/L	T	<0.18	:	-		0.0808	:	-		<0.32	:	-	
Cobalt	mg/L	D	-		<0.18	:	-		0.0772	:	-		<0.32	:
Copper	mg/L	T	<1.14	:	-		0.116	:	-		0.245	:	-	
Copper	mg/L	D	-		<1.13	:	-		0.115	:	-		<0.23	J
Iron	mg/L	T	<2.93	J	-		<0.446	:	-		<4.55	:	-	
Iron	mg/L	D	-		<2.93	J	-		<0.409	:	-		<4.55	:
Lead	mg/L	T	<0.004	:	-		<0.001	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.004	:	-		<0.001	:	-		<0.002	:
Magnesium	mg/L	T	89.7	:	-		36.2	:	-		48.4	:	-	
Magnesium	mg/L	D	-		87.8	:	-		34.7	:	-		42.8	:
Manganese	mg/L	T	15.2	:	-		4.03	:	-		5.53	:	-	
Manganese	mg/L	D	-		15.1	:	-		3.87	:	-		4.9	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.014	:	-		<0.023	:	-		<0.012	:	-	
Molybdenum	mg/L	D	-		<0.014	:	-		<0.023	:	-		<0.012	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		SC-4A / 4/19/2004 / SC-4A-T01N-GRW / OMR / T		SC-4A / 4/19/2004 / SC-4A-D01N-GRW / OMR / D		SC-5A / 6/5/2003 / SC-5A-T01N-GRW / OMR / T		SC-5A / 6/5/2003 / SC-5A-D01N-GRW / OMR / D		SC-5A / 10/22/2003 / SC-5A-T01N-GRW / OMR / T		SC-5A / 10/22/2003 / SC-5A-D01N-GRW / OMR / D	
Nickel	mg/L	<0.33	J	-		0.188	:	-		<0.45	:	-	
Nickel	mg/L	-		<0.33	J	-		0.175	:	-		<0.45	:
Potassium	mg/L	<15.5	:	-		<3.26	:	-		<63.8	:	-	
Potassium	mg/L	-		<15.5	:	-		<3.26	:	-		<63.8	:
Selenium	mg/L	<0.007	:	-		<0.008	:	-		<0.003	:	-	
Selenium	mg/L	-		<0.007	:	-		<0.008	:	-		<0.003	:
Silver	mg/L	<0.001	J	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	-		<0.001	J	-		<0.001	:	-		<0.001	:
Sodium	mg/L	<32.8	:	-		10.4	:	-		<99.1	:	-	
Sodium	mg/L	-		<32.8	:	-		10.6	:	-		<99.1	:
Thallium	mg/L	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	<0.002	:	-		<0.002	:	-		<0.001	:	-	
Vanadium	mg/L	-		<0.002	:	-		<0.002	:	-		<0.001	:
Zinc	mg/L	5.41	:	-		1.66	:	-		2.23	:	-	
Zinc	mg/L	-		5.27	:	-		1.6	:	-		1.96	:
Isotopes													
Lead	mg/L	<0.004	:	-		<0.001	:	-		<0.002	:	-	
Lead	mg/L	-		<0.004	:	-		<0.001	:	-		<0.002	:

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SC-5A 1/15/2004 SC-5A-T01N-GRW OMR		SC-5A 1/15/2004 SC-5A-D01N-GRW OMR		SC-5A 4/20/2004 SC-5A-T01N-GRW OMR		SC-5A 4/20/2004 SC-5A-D01N-GRW OMR		SC-6A 6/9/2003 SC-6A-T01N-GRW OMR		SC-6A 6/9/2003 SC-6A-D01N-GRW OMR	
Field Measurements														
DO	mg/L	T	6.86	:	-		1.71	:	-		1.21	:	-	
Eh	millivolts	T	460.9	:	-		550.5	:	-		541.9	:	-	
pH	SU	T	3.6	J	-		3.7	J	-		5.9	:	-	
Specific Conductance	uS/cm	T	1092.	:	-		1563.	:	-		2781.	:	-	
Temperature	Celsius	T	6.86	:	-		7.53	:	-		17.2	:	-	
Turbidity	NTU	T	8.5	:	-		0.4	:	-		44.2	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.041	J	-		<0.13	:	-		<0.14	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	5.5	:	-		<7.7	:	-		<4.3	:	-	
Fluoride	mg/L	T	2.7	:	-		4.8	:	-		11.5	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		0.21	J	-		<0.4	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	:	-		0.015	J	-	
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		0.039	J	-	
Sulfate	mg/L	T	617.	:	-		1030.	:	-		1690.	J	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L	T	946.	:	-		1370.	:	-		2900.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.1	:	-		<1.	J	-		1.4	J	-	
Total Suspended Solids	mg/L	T	7.	:	-		<2.	J	-		<1.8	:	-	
Laboratory Parameters														
pH	SU	T	3.6	J	-		3.7	J	-		5.9	:	-	
Specific Conductance	umhos/cm	T	929.	J	-		1380.	J	-		2470.	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	391.	:	-		644.	:	-		1310.	:	-	
Hardness	mg/L	D	-		391.	:	-		651.	:	-		1360.	:
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SC-5A	SC-5A	SC-5A	SC-5A	SC-6A	SC-6A
			Sample Date	1/15/2004	1/15/2004	4/20/2004	4/20/2004	6/9/2003	6/9/2003
			Sample ID	SC-5A-T01N-GRW	SC-5A-D01N-GRW	SC-5A-T01N-GRW	SC-5A-D01N-GRW	SC-6A-T01N-GRW	SC-6A-D01N-GRW
				OMR	OMR	OMR	OMR	OMR	OMR
Aluminum	mg/L	T		41.6 :	-	53.5 :	-	79.7 :	-
Aluminum	mg/L	D		-	41.4 :	-	54.1 :	-	83.2 :
Antimony	mg/L	T		<0.029 :	-	<0.053 :	-	<0.072 :	-
Antimony	mg/L	D		-	<0.029 :	-	<0.053 :	-	<0.072 :
Arsenic	mg/L	T		<0.028 :	-	<0.037 :	-	<0.04 :	-
Arsenic	mg/L	D		-	0.029 :	-	<0.037 :	-	<0.04 :
Barium	mg/L	T		<0.053 :	-	<0.049 :	-	<0.123 :	-
Barium	mg/L	D		-	<0.053 :	-	<0.049 :	-	<0.123 :
Beryllium	mg/L	T		<0.0081 :	-	<0.0108 J	-	<0.0226 :	-
Beryllium	mg/L	D		-	<0.0086 :	-	<0.0094 J	-	<0.0222 :
Boron	mg/L	T		<0.023 :	-	<0.036 :	-	<0.084 :	-
Boron	mg/L	D		-	<0.023 :	-	<0.036 :	-	<0.084 :
Cadmium	mg/L	T		<0.07 J	-	<0.1 :	-	0.0287 :	-
Cadmium	mg/L	D		-	<0.07 :	-	<0.1 :	-	0.0298 :
Calcium	mg/L	T		97.4 :	-	159. :	-	348. :	-
Calcium	mg/L	D		-	97.1 :	-	161. :	-	363. :
Chromium	mg/L	T		<0.57 :	-	<0.13 :	-	0.221 :	-
Chromium	mg/L	D		-	<0.57 :	-	<0.13 :	-	<0.01 :
Cobalt	mg/L	T		<0.37 :	-	<0.23 :	-	0.254 :	-
Cobalt	mg/L	D		-	<0.37 :	-	<0.18 :	-	0.26 :
Copper	mg/L	T		<0.35 :	-	<0.27 :	-	0.632 :	-
Copper	mg/L	D		-	0.692 :	-	0.272 :	-	0.652 :
Iron	mg/L	T		<3.57 :	-	<2.93 J	-	8.52 :	-
Iron	mg/L	D		-	<3.57 :	-	<2.93 :	-	7.84 :
Lead	mg/L	T		<0.001 :	-	<0.004 :	-	<0.001 :	-
Lead	mg/L	D		-	<0.001 :	-	<0.004 :	-	<0.001 :
Magnesium	mg/L	T		<48.5 :	-	60.2 :	-	106. :	-
Magnesium	mg/L	D		-	<48.5 :	-	60.3 :	-	111. :
Manganese	mg/L	T		3.92 :	-	7.09 :	-	17. :	-
Manganese	mg/L	D		-	3.95 :	-	7.26 :	-	17.6 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		<0.024 :	-	<0.014 :	-	<0.023 :	-
Molybdenum	mg/L	D		-	<0.024 :	-	<0.014 :	-	<0.023 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		SC-5A 1/15/2004 SC-5A-T01N-GRW OMR		SC-5A 1/15/2004 SC-5A-D01N-GRW OMR		SC-5A 4/20/2004 SC-5A-T01N-GRW OMR		SC-5A 4/20/2004 SC-5A-D01N-GRW OMR		SC-6A 6/9/2003 SC-6A-T01N-GRW OMR		SC-6A 6/9/2003 SC-6A-D01N-GRW OMR	
Nickel	mg/L	T	<1.68	-		<0.33		-		0.667		-	
Nickel	mg/L	D	-		<1.68	-		<0.6		-		0.586	
Potassium	mg/L	T	<110.	-		<15.5		-		<3.26		-	
Potassium	mg/L	D	-		<110.	-		<15.5		-		<3.26	
Selenium	mg/L	T	<0.003 J	-		<0.036		-		<0.008		-	
Selenium	mg/L	D	-		0.005	-		<0.036		-		<0.008	
Silver	mg/L	T	<0.001	-		<0.001		-		<0.001		-	
Silver	mg/L	D	-		<0.001	-		<0.001		-		<0.001	
Sodium	mg/L	T	<92.	-		<32.8		-		9.4		-	
Sodium	mg/L	D	-		<92.	-		<39.2		-		9.61	
Thallium	mg/L	T	<0.001	-		<0.001		-		<0.001		-	
Thallium	mg/L	D	-		<0.001	-		<0.001		-		<0.001	
Vanadium	mg/L	T	<0.002	-		<0.002		-		<0.002		-	
Vanadium	mg/L	D	-		<0.002	-		<0.002		-		<0.002	
Zinc	mg/L	T	1.87	-		2.54		-		5.77		-	
Zinc	mg/L	D	-		1.71	-		2.56		-		5.92	
Isotopes													
Lead	mg/L	T	<0.001	-		<0.004		-		<0.001		-	
Lead	mg/L	D	-		<0.001	-		<0.004		-		<0.001	

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SC-6A 10/22/2003 SC-6A-T01N-GRW OMR		SC-6A 10/22/2003 SC-6A-D01N-GRW OMR		SC-6A 1/14/2004 SC-6A-T01N-GRW OMR		SC-6A 1/14/2004 SC-6A-D01N-GRW OMR		SC-6A 4/20/2004 SC-6A-T01N-GRW OMR		SC-6A 4/20/2004 SC-6A-D01N-GRW OMR	
Field Measurements														
DO	mg/L	T	0.23	:	-		0.54	:	-		1.13	:	-	
Eh	millivolts	T	419.5	:	-		431.4	:	-		417.8	:	-	
pH	SU	T	3.6	J	-		3.7	J	-		3.9	J	-	
Specific Conductance	uS/cm	T	2495.	:	-		2567.	:	-		2648.	:	-	
Temperature	Celsius	T	8.75	:	-		7.85	:	-		9.61	:	-	
Turbidity	NTU	T	9.7	:	-		2.3	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.15	J	-		<0.074	J	-		<0.34	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	2.9	:	-		3.	:	-		8.4	:	-	
Fluoride	mg/L	T	11.1	:	-		9.9	:	-		9.9	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	:	-		<0.2	J	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.036	:	-		0.04	J	-		0.026	:	-	
Phosphorus	mg/L	T	0.051	:	-		0.053	:	-		0.035	:	-	
Sulfate	mg/L	T	1970.	J	-		1940.	:	-		2040.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L	T	3120.	:	-		2740.	:	-		2770.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	3.2	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	1.6	J	-		<1.	J	-		1.3	J	-	
Total Suspended Solids	mg/L	T	<1.6	:	-		2.5	:	-		<17.5	J	-	
Laboratory Parameters														
pH	SU	T	3.6	J	-		3.7	J	-		3.9	J	-	
Specific Conductance	umhos/cm	T	2180.	J	-		2380.	J	-		2300.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	1400.	:	-		1360.	:	-		1450.	:	-	
Hardness	mg/L	D	-		1530.	:	-		1360.	:	-		1430.	:
Metals														

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T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID	SC-6A 10/22/2003 SC-6A-T01N-GRW OMR	SC-6A 10/22/2003 SC-6A-D01N-GRW OMR	SC-6A 1/14/2004 SC-6A-T01N-GRW OMR	SC-6A 1/14/2004 SC-6A-D01N-GRW OMR	SC-6A 4/20/2004 SC-6A-T01N-GRW OMR	SC-6A 4/20/2004 SC-6A-D01N-GRW OMR
Aluminum	mg/L	T		86.5 :	-	80.3 :	-	88.1 :	-
Aluminum	mg/L	D		-	93.6 :	-	81. :	-	86.3 :
Antimony	mg/L	T		<0.052 :	-	<0.029 :	-	<0.053 :	-
Antimony	mg/L	D		-	<0.052 :	-	<0.029 :	-	<0.053 :
Arsenic	mg/L	T		<0.041 :	-	0.0393 :	-	<0.037 :	-
Arsenic	mg/L	D		-	<0.041 :	-	<0.028 :	-	<0.037 :
Barium	mg/L	T		<0.115 :	-	<0.053 :	-	<0.049 :	-
Barium	mg/L	D		-	<0.115 :	-	<0.053 :	-	<0.049 :
Beryllium	mg/L	T		0.0175 :	-	0.0208 :	-	<0.0269 J	-
Beryllium	mg/L	D		-	0.0177 :	-	0.0206 :	-	<0.0267 J
Boron	mg/L	T		<0.063 :	-	<0.023 :	-	<0.036 :	-
Boron	mg/L	D		-	<0.063 :	-	<0.023 :	-	<0.036 :
Cadmium	mg/L	T		<0.13 :	-	<0.07 J	-	<0.109 :	-
Cadmium	mg/L	D		-	<0.13 :	-	<0.07 :	-	<0.161 :
Calcium	mg/L	T		370. :	-	363. :	-	382. :	-
Calcium	mg/L	D		-	404. :	-	364. :	-	376. :
Chromium	mg/L	T		<0.23 J	-	<0.57 :	-	<0.13 :	-
Chromium	mg/L	D		-	<0.23 J	-	<0.57 :	-	<0.13 :
Cobalt	mg/L	T		<0.32 :	-	<0.37 :	-	<0.357 :	-
Cobalt	mg/L	D		-	<0.32 :	-	<0.37 :	-	<0.46 :
Copper	mg/L	T		0.653 :	-	0.624 :	-	0.599 :	-
Copper	mg/L	D		-	0.757 :	-	0.634 :	-	0.648 :
Iron	mg/L	T		12.6 :	-	<11.1 :	-	13.5 J	-
Iron	mg/L	D		-	11.9 :	-	<8.99 :	-	14.1 :
Lead	mg/L	T		<0.002 :	-	<0.001 :	-	<0.004 :	-
Lead	mg/L	D		-	<0.002 :	-	<0.001 :	-	<0.004 :
Magnesium	mg/L	T		116. :	-	110. :	-	121. :	-
Magnesium	mg/L	D		-	127. :	-	110. :	-	120. :
Manganese	mg/L	T		18. :	-	17.4 :	-	18.3 :	-
Manganese	mg/L	D		-	19.7 :	-	17.5 :	-	18. :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.0155 :	-	<0.024 :	-	<0.014 :	-
Molybdenum	mg/L	D		-	<0.011 :	-	<0.024 :	-	<0.014 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6e
Groundwater - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SC-6A 10/22/2003 SC-6A-T01N-GRW OMR		SC-6A 10/22/2003 SC-6A-D01N-GRW OMR		SC-6A 1/14/2004 SC-6A-T01N-GRW OMR		SC-6A 1/14/2004 SC-6A-D01N-GRW OMR		SC-6A 4/20/2004 SC-6A-T01N-GRW OMR		SC-6A 4/20/2004 SC-6A-D01N-GRW OMR	
Nickel	mg/L	T	0.756	:	-		<1.68	:	-		<0.787	:	-	
Nickel	mg/L	D	-		0.738	:	-		<1.68	:	-		<0.813	:
Potassium	mg/L	T	<63.8	:	-		<110.	J	-		<15.5	:	-	
Potassium	mg/L	D	-		<63.8	:	-		<110.	J	-		<15.5	:
Selenium	mg/L	T	0.0111	:	-		0.0068	J	-		<0.036	:	-	
Selenium	mg/L	D	-		0.0107	:	-		0.0084	:	-		<0.036	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		<92.	:	-		<32.8	:	-	
Sodium	mg/L	D	-		<99.1	:	-		<92.	:	-		<45.8	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L	T	6.27	:	-		6.05	:	-		6.25	:	-	
Zinc	mg/L	D	-		6.83	:	-		6.13	:	-		6.15	:
Isotopes														
Lead	mg/L	T	<0.002	:	-		<0.001	:	-		<0.004	:	-	
Lead	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.004	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: 002 Pumpback Sample Date: 4/14/2004 Sample ID: 002PUMPBACK-T01N-GRW GW13		Site ID: 002 Pumpback Sample Date: 4/14/2004 Sample ID: 002PUMPBACK-D01N-GRW GW13		Site ID: 002 Pumpback Discharge Sample Date: 4/22/2004 Sample ID: 002PUMPBACKDISCHARGE-T01N-GRW GW13		Site ID: 002 Pumpback Discharge Sample Date: 4/22/2004 Sample ID: 002PUMPBACKDISCHARGE-D01N-GRW GW13		Site ID: 002 Pumpback Discharge Sample Date: 4/23/2004 Sample ID: 002PUMPBACKDISCHARGE-T01N-GRW GW13		Site ID: DP-1 Sample Date: 11/5/2003 Sample ID: DP-1-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	7.77	:	-		-		-		7.42	:	9.19	:
Eh	millivolts	T	273.2	:	-		-		-		261.8	:	69.6	:
Flow	gpm	T	85.	:	-		-		-		-		-	
pH	SU	T	7.5	J	-		7.8	J	-		6.85	:	6.9	J
Specific Conductance	uS/cm	T	1682.	:	-		-		-		1711.	:	240.	:
Temperature	Celsius	T	11.67	:	-		-		-		12.17	:	7.65	:
Turbidity	NTU	T	0.	:	-		-		-		0.	:	23.7	:
General Chemistry														
Ammonia	mg/L	T	<0.11	:	-		<0.089	:	-		-		<0.13	:
Bicarbonate (as CaCO3)	mg/L	T	176.	:	-		176.	:	-		-		197.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	13.6	:	-		13.6	:	-		-		12.7	:
Fluoride	mg/L	T	1.3	:	-		1.2	:	-		-		0.59	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	<0.2	J	-		0.24	:	-		-		<0.2	J
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	0.1	J	-		0.1	:	-		-		<0.01	J
Phosphorus	mg/L	T	0.11	:	-		0.049	:	-		-		0.046	:
Sulfate	mg/L	T	881.	:	-		881.	:	-		-		423.	:
Total Alkalinity	mg/L	T	176.	:	-		176.	:	-		-		197.	:
Total Dissolved Solids	mg/L	T	1420.	:	-		1480.	:	-		-		1080.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.49	:
Total Organic Carbon	mg/L	T	<2.4	:	-		<2.6	J	-		-		5.6	:
Total Suspended Solids	mg/L	T	<1.	:	-		<1.	J	-		-		27.8	:
Laboratory Parameters														
pH	SU	T	7.5	J	-		7.8	J	-		6.85	:	6.9	J
Specific Conductance	umhos/cm	T	1500.	J	-		1510.	J	-		-		1200.	J
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		-		<0.01	:
Physical Properties														
Hardness	mg/L	T	942.	:	-		890.	:	-		-		632.	:
Hardness	mg/L	D	-		921.	:	-		897.	:	-		-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	002 Pumpback 4/14/2004 002PUMPBACK-T01N-GRW GW13		002 Pumpback 4/14/2004 002PUMPBACK-D01N-GRW GW13		002 Pumpback Discharge 4/22/2004 002PUMPBACKDISCHARGE-T01N-GRW GW13		002 Pumpback Discharge 4/22/2004 002PUMPBACKDISCHARGE-D01N-GRW GW13		002 Pumpback Discharge 4/23/2004 002PUMPBACKDISCHARGE-T01N-GRW GW13		DP-1 11/5/2003 DP-1-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	<0.176	J	-		<0.201	:	-		-		0.514	:
Aluminum	mg/L	D	-		<0.176	J	-		<0.176	:	-		-	
Antimony	mg/L	T	<0.0008	:	-		<0.0015	:	-		-		<0.001	:
Antimony	mg/L	D	-		<0.0008	:	-		<0.0013	:	-		-	
Arsenic	mg/L	T	0.00053	:	-		<0.0004	:	-		-		0.00063	:
Arsenic	mg/L	D	-		0.00058	:	-		<0.0004	:	-		-	
Barium	mg/L	T	0.0196	:	-		0.0195	:	-		-		0.108	:
Barium	mg/L	D	-		0.0189	:	-		0.0198	:	-		-	
Beryllium	mg/L	T	<0.00025	:	-		<0.0003	:	-		-		<0.0003	:
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	:	-		-	
Boron	mg/L	T	0.0352	:	-		0.0316	:	-		-		0.0122	:
Boron	mg/L	D	-		0.0328	:	-		0.0314	:	-		-	
Cadmium	mg/L	T	<0.0003	:	-		<0.0003	:	-		-		<0.0007	:
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0003	:	-		-	
Calcium	mg/L	T	294.	:	-		278.	:	-		-		200.	:
Calcium	mg/L	D	-		287.	:	-		282.	:	-		-	
Chromium	mg/L	T	<0.0016	:	-		<0.0006	:	-		-		<0.0013	:
Chromium	mg/L	D	-		<0.0014	:	-		<0.0006	:	-		-	
Cobalt	mg/L	T	<0.0011	:	-		<0.0016	:	-		-		<0.0031	:
Cobalt	mg/L	D	-		<0.0026	:	-		<0.0037	:	-		-	
Copper	mg/L	T	<0.0007	J	-		<0.0014	:	-		-		<0.002	:
Copper	mg/L	D	-		<0.0007	J	-		0.0015	:	-		-	
Iron	mg/L	T	<0.192	J	-		<0.293	J	-		-		0.698	:
Iron	mg/L	D	-		<0.192	J	-		<0.192	:	-		-	
Lead	mg/L	T	<0.0008	:	-		<0.0008	:	-		-		<0.00081	:
Lead	mg/L	D	-		<0.0008	:	-		<0.0008	:	-		-	
Magnesium	mg/L	T	50.3	:	-		47.5	:	-		-		32.1	:
Magnesium	mg/L	D	-		49.6	:	-		47.	:	-		-	
Manganese	mg/L	T	1.54	:	-		1.47	:	-		-		0.142	J
Manganese	mg/L	D	-		1.49	:	-		1.48	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		-	
Molybdenum	mg/L	T	1.99	:	-		1.78	:	-		-		0.271	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	002 Pumpback 4/14/2004 002PUMPBACK-T01N-GRW GW13		002 Pumpback 4/14/2004 002PUMPBACK-D01N-GRW GW13		002 Pumpback Discharge 4/22/2004 002PUMPBACKDISCHARGE-T01N-GRW GW13		002 Pumpback Discharge 4/22/2004 002PUMPBACKDISCHARGE-D01N-GRW GW13		002 Pumpback Discharge 4/23/2004 002PUMPBACKDISCHARGE-T01N-GRW GW13		DP-1 11/5/2003 DP-1-T01N-GRW GW13	
Molybdenum	mg/L	D	-		1.92	:	-		1.77	:	-		-	
Nickel	mg/L	T	0.0042	:	-		<0.0015	J	-		-		<0.0028	:
Nickel	mg/L	D	-		0.0048	:	-		0.0021	J	-		-	
Potassium	mg/L	T	3.03	J	-		4.17	:	-		-		4.69	:
Potassium	mg/L	D	-		2.95	J	-		4.13	:	-		-	
Selenium	mg/L	T	<0.0014	:	-		<0.0014	:	-		-		<0.0006	:
Selenium	mg/L	D	-		<0.0014	:	-		<0.0014	:	-		-	
Silver	mg/L	T	<0.0002	J	-		<0.0002	J	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	J	-		-	
Sodium	mg/L	T	81.2	:	-		85.1	:	-		-		37.5	:
Sodium	mg/L	D	-		71.7	:	-		82.3	:	-		-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		-	
Vanadium	mg/L	T	0.0016	J	-		0.0016	:	-		-		0.0014	:
Vanadium	mg/L	D	-		0.0016	J	-		0.0013	:	-		-	
Zinc	mg/L	T	<0.028	:	-		<0.024	:	-		-		<0.106	:
Zinc	mg/L	D	-		<0.015	:	-		<0.015	:	-		-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	DP-1	DP-10	DP-10	DP-11	DP-11	DP-12
			Sample Date	11/5/2003	5/5/2004	5/5/2004	5/5/2004	5/5/2004	5/5/2004
			Sample ID	DP-1-D01N-GRW	DP-10-T01N-GRW	DP-10-D01N-GRW	DP-11-T01N-GRW	DP-11-D01N-GRW	DP-12-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	5.71 :	-	6. :	-	5.01 :
Eh	millivolts	T		-	11.9 :	-	-24.4 :	-	225.2 :
pH	SU	T		-	7.4 J	-	7.3 J	-	7.2 J
Specific Conductance	uS/cm	T		-	1484. :	-	661. :	-	394. :
Temperature	Celsius	T		-	12.94 :	-	14.72 :	-	12.86 :
Turbidity	NTU	T		-	222.9 :	-	677.1 :	-	103.1 :
General Chemistry									
Ammonia	mg/L	T		-	0.17 :	-	0.067 :	-	0.081 :
Bicarbonate (as CaCO3)	mg/L	T		-	255. :	-	205. :	-	89.7 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.6 :	-	5.6 :	-	6.6 :
Fluoride	mg/L	T		-	0.98 :	-	0.96 :	-	0.53 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 :	-	<0.2 :	-	1.2 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 :	-	0.016 :
Phosphorus	mg/L	T		-	0.35 :	-	0.12 :	-	0.49 :
Sulfate	mg/L	T		-	618. :	-	138. :	-	108. :
Total Alkalinity	mg/L	T		-	255. :	-	205. :	-	89.7 :
Total Dissolved Solids	mg/L	T		-	1230. :	-	454. :	-	294. :
Total Kjeldahl Nitrogen	mg/L	T		-	1.7 :	-	0.4 :	-	0.72 :
Total Organic Carbon	mg/L	T		-	13.3 :	-	<6.5 :	-	<4. :
Total Suspended Solids	mg/L	T		-	375. :	-	422. :	-	301. :
Laboratory Parameters									
pH	SU	T		-	7.4 J	-	7.3 J	-	7.2 J
Specific Conductance	umhos/cm	T		-	1340. J	-	595. J	-	370. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	752. :	-	244. :	-	189. :
Hardness	mg/L	D		618. :	-	765. :	-	245. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-1 11/5/2003 DP-1-D01N-GRW GW13		DP-10 5/5/2004 DP-10-T01N-GRW GW13		DP-10 5/5/2004 DP-10-D01N-GRW GW13		DP-11 5/5/2004 DP-11-T01N-GRW GW13		DP-11 5/5/2004 DP-11-D01N-GRW GW13		DP-12 5/5/2004 DP-12-T01N-GRW GW13	
Aluminum	mg/L	T	-		0.907	:	-		0.515	:	-		12.9	:
Aluminum	mg/L	D	<0.217	:	-		<0.201	:	-		<0.201	:	-	
Antimony	mg/L	T	-		<0.0008	J	-		<0.0008	J	-		<0.0008	J
Antimony	mg/L	D	<0.001	:	-		<0.0008	J	-		<0.0008	J	-	
Arsenic	mg/L	T	-		0.0017	:	-		0.00065	:	-		0.0011	:
Arsenic	mg/L	D	0.00054	:	-		0.0014	:	-		0.0005	:	-	
Barium	mg/L	T	-		0.188	:	-		0.0628	:	-		0.204	:
Barium	mg/L	D	0.102	:	-		0.198	:	-		0.0553	:	-	
Beryllium	mg/L	T	-		<0.00035	:	-		<0.00043	:	-		<0.00095	:
Beryllium	mg/L	D	<0.0003	:	-		<0.00037	:	-		<0.00057	:	-	
Boron	mg/L	T	-		0.0268	:	-		0.0431	:	-		0.0231	:
Boron	mg/L	D	0.0154	:	-		0.0257	:	-		0.043	:	-	
Cadmium	mg/L	T	-		<0.00066	:	-		<0.00053	:	-		<0.00048	:
Cadmium	mg/L	D	<0.0007	:	-		<0.00079	:	-		<0.00059	:	-	
Calcium	mg/L	T	-		232.	:	-		74.8	:	-		56.	:
Calcium	mg/L	D	196.	:	-		236.	:	-		75.4	:	-	
Chromium	mg/L	T	-		<0.0037	J	-		<0.0018	J	-		0.0121	:
Chromium	mg/L	D	<0.0013	:	-		<0.0035	J	-		<0.002	J	-	
Cobalt	mg/L	T	-		<0.0018	:	-		<0.0014	:	-		<0.0039	:
Cobalt	mg/L	D	0.0039	:	-		<0.0055	:	-		<0.0059	:	-	
Copper	mg/L	T	-		<0.0069	J	-		<0.0087	J	-		<0.0162	:
Copper	mg/L	D	<0.002	:	-		<0.0029	J	-		<0.0037	J	-	
Iron	mg/L	T	-		4.86	:	-		4.72	:	-		9.16	:
Iron	mg/L	D	<0.455	:	-		2.89	:	-		4.5	:	-	
Lead	mg/L	T	-		0.003	:	-		0.00081	:	-		0.0079	:
Lead	mg/L	D	<0.0004	:	-		<0.0008	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		42.	:	-		13.8	:	-		11.9	:
Magnesium	mg/L	D	31.4	:	-		42.9	:	-		13.8	:	-	
Manganese	mg/L	T	-		6.15	:	-		1.6	:	-		0.253	:
Manganese	mg/L	D	0.128	:	-		6.52	:	-		1.58	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	J	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.501	:	-		0.052	:	-		0.0377	:
Molybdenum	mg/L	D	0.265	:	-		0.548	:	-		0.0522	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-1 11/5/2003 DP-1-D01N-GRW GW13		DP-10 5/5/2004 DP-10-T01N-GRW GW13		DP-10 5/5/2004 DP-10-D01N-GRW GW13		DP-11 5/5/2004 DP-11-T01N-GRW GW13		DP-11 5/5/2004 DP-11-D01N-GRW GW13		DP-12 5/5/2004 DP-12-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0014	J	-		<0.0014	J	-		0.0083	:
Nickel	mg/L	D	<0.0028	:	-		<0.0014	J	-		<0.0014	J	-	
Potassium	mg/L	T	-		10.9	:	-		<1.72	J	-		6.65	:
Potassium	mg/L	D	<3.78	:	-		11.4	:	-		<1.51	J	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0014	:	-		<0.0014	:
Selenium	mg/L	D	0.00061	:	-		<0.0014	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		65.9	:	-		41.6	:	-		13.1	:
Sodium	mg/L	D	38.2	:	-		66.	:	-		38.5	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0035	:	-		0.00071	:	-		0.0176	:
Vanadium	mg/L	D	0.00086	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0258	:	-		<0.024	:	-		0.0419	:
Zinc	mg/L	D	0.0958	:	-		<0.024	:	-		<0.024	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	DP-12		DP-13		DP-13		DP-14		DP-14		DP-2	
			Sample Date	5/5/2004		5/5/2004		5/5/2004		5/5/2004		5/5/2004		11/5/2003	
			Sample ID	DP-12-D01N-GRW		DP-13-T01N-GRW		DP-13-D01N-GRW		DP-14-T01N-GRW		DP-14-D01N-GRW		DP-2-T01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements															
DO	mg/L	T		-		8.54	:	-		3.71	:	-		3.69	:
Eh	millivolts	T		-		118.7	:	-		118.8	:	-		53.8	:
pH	SU	T		-		7.7	J	-		7.1	J	-		7.	J
Specific Conductance	uS/cm	T		-		800.	:	-		490.	:	-		985.	:
Temperature	Celsius	T		-		11.84	:	-		11.38	:	-		10.65	:
Turbidity	NTU	T		-		281.7	:	-		2.5	:	-		26.8	:
General Chemistry															
Ammonia	mg/L	T		-		0.15	:	-		0.069	:	-		<0.095	:
Bicarbonate (as CaCO3)	mg/L	T		-		283.	:	-		134.	:	-		154.	:
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T		-		7.4	:	-		5.1	:	-		10.	:
Fluoride	mg/L	T		-		1.4	:	-		0.76	:	-		0.56	:
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T		-		2.7	:	-		0.22	:	-		<0.2	J
Nitrite	mg/L	T		-		0.013	:	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T		-		0.023	:	-		<0.01	:	-		0.023	J
Phosphorus	mg/L	T		-		0.16	:	-		0.019	:	-		0.037	:
Sulfate	mg/L	T		-		152.	:	-		121.	:	-		399.	:
Total Alkalinity	mg/L	T		-		283.	:	-		134.	:	-		154.	:
Total Dissolved Solids	mg/L	T		-		546.	:	-		358.	:	-		828.	:
Total Kjeldahl Nitrogen	mg/L	T		-		0.97	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T		-		21.9	:	-		<1.	:	-		3.	:
Total Suspended Solids	mg/L	T		-		265.	:	-		3.5	:	-		48.6	:
Laboratory Parameters															
pH	SU	T		-		7.7	J	-		7.1	J	-		7.	J
Specific Conductance	umhos/cm	T		-		874.	J	-		448.	J	-		1080.	J
Inorganics															
Cyanide	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Physical Properties															
Hardness	mg/L	T		-		455.	:	-		216.	:	-		535.	:
Hardness	mg/L	D		172.	:	-		396.	:	-		213.	:	-	
Metals															

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-12 5/5/2004 DP-12-D01N-GRW GW13	DP-13 5/5/2004 DP-13-T01N-GRW GW13	DP-13 5/5/2004 DP-13-D01N-GRW GW13	DP-14 5/5/2004 DP-14-T01N-GRW GW13	DP-14 5/5/2004 DP-14-D01N-GRW GW13	DP-2 11/5/2003 DP-2-T01N-GRW GW13
Aluminum	mg/L	T	-	46.2 :	-	<0.201 :	-	0.438 :
Aluminum	mg/L	D	<0.201 :	-	<0.201 :	-	<0.201 :	-
Antimony	mg/L	T	-	<0.003 :	-	<0.0008 J	-	<0.001 :
Antimony	mg/L	D	<0.0008 J	-	<0.0033 :	-	<0.0008 J	-
Arsenic	mg/L	T	-	0.0076 :	-	<0.0004 :	-	0.00042 :
Arsenic	mg/L	D	<0.0004 :	-	0.0015 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.586 :	-	0.0407 :	-	0.05 :
Barium	mg/L	D	0.0775 :	-	0.13 :	-	0.04 :	-
Beryllium	mg/L	T	-	0.002 J	-	<0.00026 :	-	<0.0003 :
Beryllium	mg/L	D	<0.00033 :	-	<0.0003 J	-	<0.00031 :	-
Boron	mg/L	T	-	0.0747 :	-	0.0288 :	-	0.0247 :
Boron	mg/L	D	0.017 :	-	0.0621 :	-	0.0297 :	-
Cadmium	mg/L	T	-	0.001 :	-	<0.00067 :	-	<0.0007 :
Cadmium	mg/L	D	<0.00043 :	-	<0.0003 :	-	<0.00082 :	-
Calcium	mg/L	T	-	127. :	-	67.4 :	-	167. :
Calcium	mg/L	D	53.8 :	-	121. :	-	66.4 :	-
Chromium	mg/L	T	-	0.0494 :	-	<0.002 :	-	<0.0013 :
Chromium	mg/L	D	<0.00091 J	-	0.00078 :	-	<0.002 :	-
Cobalt	mg/L	T	-	0.0171 :	-	<0.0014 :	-	<0.0031 :
Cobalt	mg/L	D	<0.0011 :	-	0.0129 :	-	<0.0011 :	-
Copper	mg/L	T	-	0.0687 :	-	<0.0048 :	-	<0.002 :
Copper	mg/L	D	<0.0035 :	-	0.0042 :	-	<0.0054 J	-
Iron	mg/L	T	-	45.1 :	-	<0.293 :	-	0.798 :
Iron	mg/L	D	<0.293 :	-	<0.293 :	-	<0.293 :	-
Lead	mg/L	T	-	0.0507 :	-	<0.0008 :	-	<0.00045 :
Lead	mg/L	D	<0.0008 :	-	<0.0008 :	-	<0.0008 :	-
Magnesium	mg/L	T	-	33.2 :	-	11.6 :	-	28.9 :
Magnesium	mg/L	D	9.22 :	-	23. :	-	11.4 :	-
Manganese	mg/L	T	-	1.08 :	-	0.134 :	-	0.483 J
Manganese	mg/L	D	0.0278 :	-	0.272 :	-	0.12 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	<0.0001 J	-
Molybdenum	mg/L	T	-	0.156 :	-	0.0202 :	-	0.326 :
Molybdenum	mg/L	D	0.0339 :	-	0.186 :	-	0.0218 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-12 5/5/2004 DP-12-D01N-GRW GW13		DP-13 5/5/2004 DP-13-T01N-GRW GW13		DP-13 5/5/2004 DP-13-D01N-GRW GW13		DP-14 5/5/2004 DP-14-T01N-GRW GW13		DP-14 5/5/2004 DP-14-D01N-GRW GW13		DP-2 11/5/2003 DP-2-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0401	:	-		<0.0014	:	-		<0.0028	:
Nickel	mg/L	D	<0.0014	J	-		<0.0015	J	-		<0.0014	:	-	
Potassium	mg/L	T	-		17.3	:	-		<2.71	:	-		<3.56	:
Potassium	mg/L	D	4.49	:	-		11.4	:	-		<1.93	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0014	:	-		<0.0006	:
Selenium	mg/L	D	<0.0014	:	-		<0.0014	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		31.4	:	-		21.6	:	-		34.5	:
Sodium	mg/L	D	12.2	:	-		24.6	:	-		22.2	:	-	
Thallium	mg/L	T	-		0.00033	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0562	:	-		<0.0004	:	-		0.00088	:
Vanadium	mg/L	D	0.0006	:	-		0.0038	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.124	J	-		<0.024	:	-		<0.101	:
Zinc	mg/L	D	<0.024	:	-		<0.024	J	-		<0.024	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	DP-2		DP-3		DP-3		DP-4		DP-4		DP-5	
			Sample Date	11/5/2003		11/5/2003		11/5/2003		5/5/2004		5/5/2004		5/5/2004	
			Sample ID	DP-2-D01N-GRW		DP-3-T01N-GRW		DP-3-D01N-GRW		DP-4-T01N-GRW		DP-4-D01N-GRW		DP-5-T01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements															
DO	mg/L	T		-		9.16	:	-		7.73	:	-		4.31	:
Eh	millivolts	T		-		17.7	:	-		230.3	:	-		278.8	:
pH	SU	T		-		7.	J	-		7.4	J	-		7.	J
Specific Conductance	uS/cm	T		-		1470.	:	-		1570.	:	-		1152.	:
Temperature	Celsius	T		-		11.06	:	-		11.48	:	-		10.6	:
Turbidity	NTU	T		-		239.	:	-		1316.7	:	-		76.	:
General Chemistry															
Ammonia	mg/L	T		-		<0.61	:	-		0.06	:	-		0.075	:
Bicarbonate (as CaCO3)	mg/L	T		-		164.	:	-		215.	:	-		141.	:
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T		-		14.3	:	-		16.3	:	-		14.4	:
Fluoride	mg/L	T		-		0.79	:	-		0.49	:	-		0.82	:
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T		-		0.22	J	-		2.2	:	-		<0.2	:
Nitrite	mg/L	T		-		<0.005	J	-		0.0057	:	-		<0.005	:
Phosphate, Ortho As P	mg/L	T		-		<0.01	J	-		0.14	:	-		<0.01	:
Phosphorus	mg/L	T		-		0.83	:	-		1.5	:	-		0.031	:
Sulfate	mg/L	T		-		608.	:	-		641.	:	-		974.	J
Total Alkalinity	mg/L	T		-		164.	:	-		215.	:	-		141.	:
Total Dissolved Solids	mg/L	T		-		1140.	:	-		1200.	:	-		972.	:
Total Kjeldahl Nitrogen	mg/L	T		-		<1.6	:	-		0.79	:	-		0.29	:
Total Organic Carbon	mg/L	T		-		7.7	:	-		<6.5	:	-		<4.6	:
Total Suspended Solids	mg/L	T		-		63.	:	-		4000.	:	-		9.4	:
Laboratory Parameters															
pH	SU	T		-		7.	J	-		7.4	J	-		7.	J
Specific Conductance	umhos/cm	T		-		1530.	J	-		1480.	J	-		1130.	J
Inorganics															
Cyanide	mg/L	T		-		<0.01	:	-		<0.01	:	-		<0.01	:
Physical Properties															
Hardness	mg/L	T		-		985.	:	-		919.	:	-		598.	:
Hardness	mg/L	D		541.	:	-		746.	:	-		810.	:	-	
Metals															

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-2 11/5/2003 DP-2-D01N-GRW GW13		DP-3 11/5/2003 DP-3-T01N-GRW GW13		DP-3 11/5/2003 DP-3-D01N-GRW GW13		DP-4 5/5/2004 DP-4-T01N-GRW GW13		DP-4 5/5/2004 DP-4-D01N-GRW GW13		DP-5 5/5/2004 DP-5-T01N-GRW GW13	
Aluminum	mg/L	T	-		128.	:	-		29.8	:	-		0.222	:
Aluminum	mg/L	D	<0.217	:	-		<0.217	:	-		<0.201	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0027	:	-		<0.0008	J
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0025	:	-	
Arsenic	mg/L	T	-		0.0211	:	-		0.0037	:	-		<0.0004	:
Arsenic	mg/L	D	0.0006	:	-		0.0016	:	-		<0.0004	:	-	
Barium	mg/L	T	-		1.36	:	-		0.463	:	-		0.0359	:
Barium	mg/L	D	0.0392	:	-		0.0798	:	-		0.0838	:	-	
Beryllium	mg/L	T	-		0.0084	:	-		0.00065	J	-		<0.00053	:
Beryllium	mg/L	D	<0.0009	:	-		<0.00037	:	-		<0.0003	J	-	
Boron	mg/L	T	-		0.0533	:	-		0.057	:	-		0.0203	:
Boron	mg/L	D	0.02	:	-		0.0287	:	-		0.0349	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		0.00062	:	-		<0.0011	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		263.	:	-		279.	:	-		182.	:
Calcium	mg/L	D	168.	:	-		231.	:	-		252.	:	-	
Chromium	mg/L	T	-		0.136	:	-		0.0245	:	-		0.0011	:
Chromium	mg/L	D	<0.0013	:	-		<0.0013	:	-		<0.0006	:	-	
Cobalt	mg/L	T	-		0.0544	:	-		0.0123	:	-		<0.0011	:
Cobalt	mg/L	D	0.004	:	-		0.0066	:	-		0.0022	:	-	
Copper	mg/L	T	-		0.373	:	-		0.0668	:	-		<0.0092	J
Copper	mg/L	D	<0.002	:	-		<0.002	:	-		<0.0014	:	-	
Iron	mg/L	T	-		155.	:	-		31.4	:	-		<0.293	:
Iron	mg/L	D	0.496	:	-		7.8	:	-		<0.293	:	-	
Lead	mg/L	T	-		0.296	:	-		0.0384	:	-		0.0012	:
Lead	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		79.7	:	-		54.	:	-		35.2	:
Magnesium	mg/L	D	29.2	:	-		41.4	:	-		44.2	:	-	
Manganese	mg/L	T	-		2.79	J	-		0.681	:	-		0.0868	:
Manganese	mg/L	D	0.48	:	-		1.2	:	-		<0.014	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.627	:	-		0.124	:	-		0.128	:
Molybdenum	mg/L	D	0.282	:	-		0.545	:	-		0.109	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-2 11/5/2003 DP-2-D01N-GRW GW13		DP-3 11/5/2003 DP-3-T01N-GRW GW13		DP-3 11/5/2003 DP-3-D01N-GRW GW13		DP-4 5/5/2004 DP-4-T01N-GRW GW13		DP-4 5/5/2004 DP-4-D01N-GRW GW13		DP-5 5/5/2004 DP-5-T01N-GRW GW13	
Nickel	mg/L	T	-		0.117	:	-		0.0263	:	-		0.0052	J
Nickel	mg/L	D	<0.0028	:	-		<0.0028	:	-		<0.0015	J	-	
Potassium	mg/L	T	-		25.2	:	-		37.5	:	-		8.56	:
Potassium	mg/L	D	<2.37	:	-		5.72	:	-		22.7	:	-	
Selenium	mg/L	T	-		0.0059	:	-		0.003	:	-		<0.0014	:
Selenium	mg/L	D	0.00089	:	-		0.00089	:	-		0.0019	:	-	
Silver	mg/L	T	-		0.0023	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		75.1	:	-		48.8	:	-		60.4	:
Sodium	mg/L	D	36.4	:	-		71.4	:	-		50.2	:	-	
Thallium	mg/L	T	-		0.0013	:	-		0.00029	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.152	:	-		0.0359	:	-		<0.0004	:
Vanadium	mg/L	D	0.00038	:	-		0.00074	:	-		0.002	:	-	
Zinc	mg/L	T	-		0.971	:	-		0.0942	J	-		0.0453	:
Zinc	mg/L	D	0.105	:	-		0.0949	:	-		<0.024	J	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: DP-5 Sample Date: 5/5/2004 Sample ID: DP-5-D01N-GRW GW13	Site ID: DP-6 Sample Date: 5/5/2004 Sample ID: DP-6-T01N-GRW GW13	Site ID: DP-6 Sample Date: 5/5/2004 Sample ID: DP-6-D01N-GRW GW13	Site ID: DP-7 Sample Date: 5/5/2004 Sample ID: DP-7-T01N-GRW GW13	Site ID: DP-7 Sample Date: 5/5/2004 Sample ID: DP-7-D01N-GRW GW13	Site ID: DP-8 Sample Date: 5/5/2004 Sample ID: DP-8-T01N-GRW GW13
Field Measurements								
DO	mg/L	T	-	7.92 :	-	6.92 :	-	5.49 :
Eh	millivolts	T	-	270.2 :	-	307.4 :	-	294.1 :
pH	SU	T	-	7.7 J	-	7.5 J	-	7.4 J
Specific Conductance	uS/cm	T	-	830. :	-	1802. :	-	1321. :
Temperature	Celsius	T	-	11.75 :	-	9.71 :	-	9.44 :
Turbidity	NTU	T	-	189.9 :	-	96.3 :	-	71.2 :
General Chemistry								
Ammonia	mg/L	T	-	<0.04 :	-	0.11 :	-	0.087 :
Bicarbonate (as CaCO3)	mg/L	T	-	142. :	-	358. :	-	184. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	6.6 :	-	26.3 :	-	12.4 :
Fluoride	mg/L	T	-	0.38 :	-	1. :	-	0.62 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	0.6 :	-	11.6 :	-	<0.2 :
Nitrite	mg/L	T	-	<0.005 :	-	0.02 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	0.1 :	-	0.017 :	-	0.019 :
Phosphorus	mg/L	T	-	0.27 :	-	0.66 :	-	0.32 :
Sulfate	mg/L	T	-	332. :	-	655. :	-	921. J
Total Alkalinity	mg/L	T	-	142. :	-	358. :	-	184. :
Total Dissolved Solids	mg/L	T	-	660. :	-	1380. :	-	1080. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	1.5 :	-	0.75 :
Total Organic Carbon	mg/L	T	-	<2.6 :	-	<11.4 :	-	<4.3 :
Total Suspended Solids	mg/L	T	-	249. :	-	161. :	-	109. :
Laboratory Parameters								
pH	SU	T	-	7.7 J	-	7.5 J	-	7.4 J
Specific Conductance	umhos/cm	T	-	744. J	-	1700. J	-	1220. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	401. :	-	961. :	-	729. :
Hardness	mg/L	D	614. :	-	378. :	-	922. :	-
Metals								

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: DP-5 Sample Date: 5/5/2004 Sample ID: DP-5-D01N-GRW GW13		Site ID: DP-6 Sample Date: 5/5/2004 Sample ID: DP-6-T01N-GRW GW13		Site ID: DP-6 Sample Date: 5/5/2004 Sample ID: DP-6-D01N-GRW GW13		Site ID: DP-7 Sample Date: 5/5/2004 Sample ID: DP-7-T01N-GRW GW13		Site ID: DP-7 Sample Date: 5/5/2004 Sample ID: DP-7-D01N-GRW GW13		Site ID: DP-8 Sample Date: 5/5/2004 Sample ID: DP-8-T01N-GRW GW13	
Aluminum	mg/L	T	-		5.82	:	-		7.39	:	-		7.15	:
Aluminum	mg/L	D	<0.201	:	-		<0.201	:	-		<0.201	:	-	
Antimony	mg/L	T	-		<0.0008	J	-		<0.0026	:	-		<0.0008	J
Antimony	mg/L	D	<0.0008	J	-		<0.0008	J	-		<0.0027	:	-	
Arsenic	mg/L	T	-		0.0011	:	-		0.0012	:	-		0.0011	:
Arsenic	mg/L	D	<0.0004	:	-		0.00068	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.155	:	-		0.165	:	-		0.156	:
Barium	mg/L	D	0.0323	:	-		0.0892	:	-		0.0788	:	-	
Beryllium	mg/L	T	-		<0.00077	:	-		<0.0003	J	-		<0.001	:
Beryllium	mg/L	D	<0.0006	:	-		<0.00048	:	-		<0.0003	J	-	
Boron	mg/L	T	-		0.0242	:	-		0.0375	:	-		0.0269	:
Boron	mg/L	D	0.0201	:	-		0.0215	:	-		0.0334	:	-	
Cadmium	mg/L	T	-		<0.00038	:	-		<0.0003	:	-		<0.00069	:
Cadmium	mg/L	D	<0.00092	:	-		<0.0003	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		125.	:	-		272.	:	-		232.	:
Calcium	mg/L	D	186.	:	-		118.	:	-		264.	:	-	
Chromium	mg/L	T	-		<0.005	J	-		0.007	:	-		0.0098	:
Chromium	mg/L	D	<0.0023	J	-		<0.0013	J	-		0.00088	:	-	
Cobalt	mg/L	T	-		<0.0023	:	-		0.0026	:	-		<0.0048	:
Cobalt	mg/L	D	<0.0018	:	-		<0.0011	:	-		<0.0016	:	-	
Copper	mg/L	T	-		<0.0057	J	-		0.0244	:	-		0.0346	:
Copper	mg/L	D	<0.0079	J	-		<0.0022	J	-		0.005	:	-	
Iron	mg/L	T	-		3.77	:	-		6.63	:	-		7.48	:
Iron	mg/L	D	<0.293	:	-		<0.293	:	-		<0.293	:	-	
Lead	mg/L	T	-		0.0034	:	-		0.0103	:	-		0.0176	:
Lead	mg/L	D	<0.0008	:	-		<0.0008	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		21.6	:	-		68.6	:	-		36.5	:
Magnesium	mg/L	D	36.2	:	-		19.9	:	-		64.	:	-	
Manganese	mg/L	T	-		0.156	:	-		0.0764	:	-		0.18	:
Manganese	mg/L	D	0.0252	:	-		<0.014	:	-		<0.014	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0706	:	-		0.722	:	-		0.2	:
Molybdenum	mg/L	D	0.13	:	-		0.0701	:	-		0.684	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-5 5/5/2004 DP-5-D01N-GRW GW13	DP-6 5/5/2004 DP-6-T01N-GRW GW13	DP-6 5/5/2004 DP-6-D01N-GRW GW13	DP-7 5/5/2004 DP-7-T01N-GRW GW13	DP-7 5/5/2004 DP-7-D01N-GRW GW13	DP-8 5/5/2004 DP-8-T01N-GRW GW13
Nickel	mg/L	T	-	0.0029 J	-	0.009 J	-	0.0103 :
Nickel	mg/L	D	0.0058 J	-	<0.0014 J	-	<0.0015 J	-
Potassium	mg/L	T	-	<2.45 J	-	30.1 :	-	6.74 :
Potassium	mg/L	D	8.29 :	-	<1.35 J	-	26.2 :	-
Selenium	mg/L	T	-	<0.0014 :	-	0.0053 :	-	<0.0014 :
Selenium	mg/L	D	<0.0014 :	-	<0.0014 :	-	0.005 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 J	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 J	-
Sodium	mg/L	T	-	34.6 :	-	81.4 :	-	45.2 :
Sodium	mg/L	D	59.2 :	-	32.9 :	-	75.8 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.009 :	-	0.0074 :	-	0.0083 :
Vanadium	mg/L	D	<0.0004 :	-	0.0032 :	-	0.00098 :	-
Zinc	mg/L	T	-	0.0325 :	-	<0.024 J	-	0.0486 :
Zinc	mg/L	D	0.039 :	-	<0.024 :	-	<0.024 J	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	DP-8	DP-9	DP-9	EW-3	EW-3	EW-3
			Sample Date	5/5/2004	5/5/2004	5/5/2004	11/7/2002	11/7/2002	1/8/2003
			Sample ID	DP-8-D01N-GRW	DP-9-T01N-GRW	DP-9-D01N-GRW	EW-3-T01N-GRW	EW-3-D01N-GRW	EW-3-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.83 :	-	5.93 :	-	7.25 :
Eh	millivolts	T		-	132.8 :	-	81.2 :	-	278.2 :
pH	SU	T		-	7. J	-	7.22 :	-	7.06 :
Specific Conductance	uS/cm	T		-	2068. :	-	1328. :	-	2609. :
Temperature	Celsius	T		-	11.61 :	-	11.54 :	-	11.68 :
Turbidity	NTU	T		-	312.4 :	-	4.1 :	-	30.1 :
General Chemistry									
Ammonia	mg/L	T		-	0.13 :	-	<0.063 :	-	<0.12 :
Bicarbonate (as CaCO3)	mg/L	T		-	214. :	-	143. :	-	145. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	23.9 :	-	16. :	-	15.1 :
Fluoride	mg/L	T		-	0.53 :	-	0.17 :	-	0.19 J
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.21 :	-	<0.4 J	-	<0.57 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.014 :	-	<0.01 J	-	<0.017 J
Phosphorus	mg/L	T		-	0.28 :	-	0.017 :	-	0.017 :
Sulfate	mg/L	T		-	1080. :	-	757. :	-	604. J
Total Alkalinity	mg/L	T		-	214. :	-	143. :	-	145. :
Total Dissolved Solids	mg/L	T		-	1690. :	-	1110. :	-	1080. :
Total Kjeldahl Nitrogen	mg/L	T		-	0.73 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<7.5 :	-	<1. :	-	1.3 :
Total Suspended Solids	mg/L	T		-	218. :	-	<1.1 :	-	<1.1 :
Laboratory Parameters									
pH	SU	T		-	7. J	-	7.22 :	-	7.06 :
Specific Conductance	umhos/cm	T		-	1850. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	979. :	-	681. :	-	697. :
Hardness	mg/L	D		710. :	-	1000. :	-	690. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-8 5/5/2004 DP-8-D01N-GRW GW13	DP-9 5/5/2004 DP-9-T01N-GRW GW13	DP-9 5/5/2004 DP-9-D01N-GRW GW13	EW-3 11/7/2002 EW-3-T01N-GRW GW13	EW-3 11/7/2002 EW-3-D01N-GRW GW13	EW-3 1/8/2003 EW-3-T01N-GRW GW13
Aluminum	mg/L	T	-	2.3 :	-	<0.0164 :	-	<0.142 J
Aluminum	mg/L	D	<0.201 :	-	<0.201 :	-	<0.0039 :	-
Antimony	mg/L	T	-	<0.0008 J	-	<0.0002 :	-	<0.0006 :
Antimony	mg/L	D	<0.0008 J	-	<0.0008 J	-	<0.0002 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	0.00044 J	-	<0.0004 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	0.00051 J	-
Barium	mg/L	T	-	0.0832 :	-	0.027 :	-	0.0274 :
Barium	mg/L	D	0.0698 :	-	0.0585 :	-	0.027 :	-
Beryllium	mg/L	T	-	<0.00057 :	-	<0.0002 :	-	<0.0002 :
Beryllium	mg/L	D	<0.00056 :	-	<0.0005 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0329 :	-	0.0215 :	-	0.0224 :
Boron	mg/L	D	0.0217 :	-	0.0321 :	-	0.0211 :	-
Cadmium	mg/L	T	-	<0.00073 :	-	<0.0001 :	-	<0.0004 :
Cadmium	mg/L	D	<0.00045 :	-	<0.0012 :	-	<0.0001 :	-
Calcium	mg/L	T	-	304. :	-	212. :	-	216. :
Calcium	mg/L	D	228. :	-	311. :	-	215. :	-
Chromium	mg/L	T	-	<0.0025 J	-	<0.0046 :	-	<0.0037 :
Chromium	mg/L	D	<0.0008 J	-	<0.0014 J	-	<0.0046 :	-
Chromium, Hexavalent	mg/L	D	-	-	-	<0.01 :	-	-
Cobalt	mg/L	T	-	<0.0014 :	-	<0.0022 :	-	<0.0016 :
Cobalt	mg/L	D	<0.0032 :	-	<0.0047 :	-	<0.0022 :	-
Copper	mg/L	T	-	<0.0122 :	-	0.0059 :	-	<0.0017 :
Copper	mg/L	D	<0.0045 J	-	<0.0114 :	-	<0.0011 :	-
Iron	mg/L	T	-	1.5 :	-	<0.0692 :	-	<0.489 :
Iron	mg/L	D	<0.293 :	-	<0.293 :	-	<0.035 :	-
Lead	mg/L	T	-	0.0025 :	-	0.0008 :	-	<0.0002 :
Lead	mg/L	D	<0.0008 :	-	<0.0008 :	-	0.00057 :	-
Magnesium	mg/L	T	-	53.6 :	-	36.9 :	-	38. :
Magnesium	mg/L	D	34.3 :	-	54.4 :	-	37.3 :	-
Manganese	mg/L	T	-	0.131 :	-	<0.0025 :	-	<0.005 :
Manganese	mg/L	D	0.0308 :	-	0.106 :	-	<0.0025 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.234 :	-	0.0971 :	-	0.0908 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	DP-8 5/5/2004 DP-8-D01N-GRW GW13		DP-9 5/5/2004 DP-9-T01N-GRW GW13		DP-9 5/5/2004 DP-9-D01N-GRW GW13		EW-3 11/7/2002 EW-3-T01N-GRW GW13		EW-3 11/7/2002 EW-3-D01N-GRW GW13		EW-3 1/8/2003 EW-3-T01N-GRW GW13	
Molybdenum	mg/L	D	0.186	:	-		0.222	:	-		0.0978	:	-	
Nickel	mg/L	T	-		0.0064	J	-		<0.0002	J	-		<0.0015	:
Nickel	mg/L	D	<0.0014	J	-		0.0054	J	-		<0.0002	J	-	
Potassium	mg/L	T	-		13.1	:	-		2.75	:	-		2.83	:
Potassium	mg/L	D	4.81	:	-		13.4	:	-		2.78	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		0.0014	:	-		<0.0016	:
Selenium	mg/L	D	<0.0014	:	-		<0.0014	:	-		0.0015	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Sodium	mg/L	T	-		104.	:	-		43.2	:	-		39.2	:
Sodium	mg/L	D	43.6	:	-		106.	:	-		43.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Vanadium	mg/L	T	-		0.0029	:	-		0.00066	:	-		0.00053	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0004	:	-		0.00064	:	-	
Zinc	mg/L	T	-		<0.024	:	-		<0.0069	:	-		<0.039	:
Zinc	mg/L	D	<0.024	:	-		<0.024	:	-		<0.0069	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-3	EW-3	EW-3	EW-3	EW-3	EW-3
			Sample Date	1/8/2003	4/1/2003	4/1/2003	7/10/2003	7/10/2003	10/16/2003
			Sample ID	EW-3-D01N-GRW	EW-3-T01N-GRW	EW-3-D01N-GRW	EW-3-T01N-GRW	EW-3-D01N-GRW	EW-3-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.86 :	-	6.83 :	-	6.42 :
Eh	millivolts	T		-	271.3 :	-	335.5 :	-	366.1 :
pH	SU	T		-	7.5 J	-	6.9 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1316. :	-	1553. :	-	1478. :
Temperature	Celsius	T		-	12.42 :	-	15.73 :	-	15.72 :
Turbidity	NTU	T		-	3.4 :	-	0. :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.059 :	-	<0.13 J	-	<0.04 J
Bicarbonate (as CaCO3)	mg/L	T		-	146. :	-	142. :	-	143. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	<0.52 :	-	16.1 :	-	14.9 :
Fluoride	mg/L	T		-	0.2 :	-	0.16 :	-	0.2 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.52 :	-	0.46 J	-	0.31 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.015 J	-	<0.012 :	-	<0.014 J
Phosphorus	mg/L	T		-	0.018 :	-	0.021 :	-	0.017 :
Sulfate	mg/L	T		-	567. J	-	688. J	-	748. J
Total Alkalinity	mg/L	T		-	146. :	-	142. :	-	143. :
Total Dissolved Solids	mg/L	T		-	1070. :	-	1230. :	-	1240. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.1 J	-	<1. J	-	2.9 J
Total Suspended Solids	mg/L	T		-	<1.2 :	-	<1.5 :	-	2. :
Laboratory Parameters									
pH	SU	T		-	7.5 J	-	6.9 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1230. J	-	1400. J	-	1320. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	693. :	-	796. :	-	843. :
Hardness	mg/L	D		669. :	-	689. :	-	746. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-3 1/8/2003 EW-3-D01N-GRW GW13		EW-3 4/1/2003 EW-3-T01N-GRW GW13		EW-3 4/1/2003 EW-3-D01N-GRW GW13		EW-3 7/10/2003 EW-3-T01N-GRW GW13		EW-3 7/10/2003 EW-3-D01N-GRW GW13		EW-3 10/16/2003 EW-3-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.426	:	-		<0.631	:	-		<0.221	:
Aluminum	mg/L	D	<0.142	J	-		<0.426	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		0.00055	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0275	:	-		0.0318	:	-		0.0303	:
Barium	mg/L	D	0.0262	:	-		0.0274	:	-		0.031	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.00027	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0002	:	-		<0.00055	:	-		<0.0002	:	-	
Boron	mg/L	T	-		<0.0207	:	-		0.0216	:	-		0.0218	:
Boron	mg/L	D	0.0208	:	-		<0.0191	:	-		0.0228	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0003	:	-		<0.0007	:
Cadmium	mg/L	D	<0.0004	:	-		<0.0005	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		214.	:	-		246.	:	-		262.	:
Calcium	mg/L	D	208.	:	-		213.	:	-		231.	:	-	
Chromium	mg/L	T	-		<0.0021	:	-		<0.0006	J	-		0.0018	J
Chromium	mg/L	D	<0.0037	:	-		<0.0022	:	-		<0.0006	J	-	
Cobalt	mg/L	T	-		<0.0038	:	-		<0.0018	:	-		<0.0031	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0038	:	-		<0.0018	:	-	
Copper	mg/L	T	-		0.0052	:	-		0.0204	:	-		0.0023	:
Copper	mg/L	D	<0.0017	:	-		<0.0015	:	-		0.0015	J	-	
Iron	mg/L	T	-		<0.422	:	-		<0.667	:	-		<0.296	:
Iron	mg/L	D	<0.489	:	-		<0.422	:	-		<0.667	:	-	
Lead	mg/L	T	-		0.00033	:	-		<0.0059	:	-		0.0013	:
Lead	mg/L	D	0.00022	:	-		<0.0002	:	-		<0.00093	:	-	
Magnesium	mg/L	T	-		38.4	:	-		43.8	:	-		45.5	:
Magnesium	mg/L	D	36.6	:	-		38.2	:	-		41.	:	-	
Manganese	mg/L	T	-		<0.013	:	-		<0.019	:	-		<0.012	:
Manganese	mg/L	D	<0.005	:	-		<0.013	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0837	:	-		0.12	:	-		0.133	:
Molybdenum	mg/L	D	0.0839	:	-		0.0817	:	-		0.126	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-3 1/8/2003 EW-3-D01N-GRW GW13		EW-3 4/1/2003 EW-3-T01N-GRW GW13		EW-3 4/1/2003 EW-3-D01N-GRW GW13		EW-3 7/10/2003 EW-3-T01N-GRW GW13		EW-3 7/10/2003 EW-3-D01N-GRW GW13		EW-3 10/16/2003 EW-3-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.003	:	-		<0.002	J	-		<0.0028	:
Nickel	mg/L	D	<0.0015	:	-		<0.003	:	-		<0.002	J	-	
Potassium	mg/L	T	-		2.34	:	-		2.99	:	-		2.84	:
Potassium	mg/L	D	2.78	:	-		2.31	:	-		2.96	:	-	
Selenium	mg/L	T	-		<0.001	J	-		<0.0016	:	-		0.0013	:
Selenium	mg/L	D	<0.0016	:	-		0.0022	J	-		<0.0016	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		42.9	:	-		45.7	:	-		49.2	:
Sodium	mg/L	D	43.	:	-		39.5	:	-		42.5	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00072	:	-		0.00082	:	-		0.00077	:
Vanadium	mg/L	D	0.00063	:	-		0.00075	:	-		0.00074	:	-	
Zinc	mg/L	T	-		<0.039	:	-		<0.0189	:	-		<0.023	:
Zinc	mg/L	D	<0.039	:	-		<0.039	:	-		<0.016	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-3	EW-3	EW-3	EW-3	EW-3	EW-4
			Sample Date	10/16/2003	1/8/2004	1/8/2004	4/14/2004	4/14/2004	11/7/2002
			Sample ID	EW-3-D01N-GRW	EW-3-T01N-GRW	EW-3-D01N-GRW	EW-3-T01N-GRW	EW-3-D01N-GRW	EW-4-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.14 :	-	5.15 :	-	7.07 :
Eh	millivolts	T		-	209.2 :	-	359.2 :	-	73. :
pH	SU	T		-	7.2 J	-	7.3 J	-	6.6 :
Specific Conductance	uS/cm	T		-	1475. :	-	1485. :	-	1239. :
Temperature	Celsius	T		-	11.11 :	-	13.76 :	-	11.79 :
Turbidity	NTU	T		-	9.1 :	-	3.6 :	-	1.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.064 J	-	<0.12 :	-	<0.061 :
Bicarbonate (as CaCO3)	mg/L	T		-	141. :	-	138. :	-	163. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.9 :	-	15.7 :	-	17.7 :
Fluoride	mg/L	T		-	0.19 :	-	0.21 :	-	0.45 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.35 J	-	0.46 J	-	<0.4 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.013 J	-	0.014 :	-	0.037 J
Phosphorus	mg/L	T		-	<0.024 :	-	0.018 :	-	0.051 :
Sulfate	mg/L	T		-	712. :	-	730. :	-	631. :
Total Alkalinity	mg/L	T		-	141. :	-	138. :	-	163. :
Total Dissolved Solids	mg/L	T		-	1210. :	-	1250. :	-	959. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.2 :	-	<2. J	-	<1. :
Total Suspended Solids	mg/L	T		-	20.8 :	-	<0.7 J	-	<0.89 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.3 J	-	6.6 :
Specific Conductance	umhos/cm	T		-	1360. J	-	1350. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	819. :	-	907. :	-	632. :
Hardness	mg/L	D		821. :	-	789. :	-	914. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-3 10/16/2003 EW-3-D01N-GRW GW13		EW-3 1/8/2004 EW-3-T01N-GRW GW13		EW-3 1/8/2004 EW-3-D01N-GRW GW13		EW-3 4/14/2004 EW-3-T01N-GRW GW13		EW-3 4/14/2004 EW-3-D01N-GRW GW13		EW-4 11/7/2002 EW-4-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.621	:	-		<0.176	:	-		<0.009	:
Aluminum	mg/L	D	<0.221	:	-		<0.621	:	-		<0.176	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0008	J	-		<0.0002	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.0008	J	-	
Arsenic	mg/L	T	-		0.00078	:	-		<0.0004	:	-		0.00071	J
Arsenic	mg/L	D	<0.0004	:	-		0.00042	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0305	:	-		0.0296	:	-		0.035	:
Barium	mg/L	D	0.0295	:	-		0.0269	:	-		0.0294	:	-	
Beryllium	mg/L	T	-		<0.001	J	-		<0.0002	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	:	-		<0.001	J	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0188	:	-		0.0203	:	-		0.0255	:
Boron	mg/L	D	0.0211	:	-		0.0179	:	-		0.0202	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	:	-		0.00013	J
Cadmium	mg/L	D	<0.0007	:	-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		254.	:	-		282.	:	-		197.	:
Calcium	mg/L	D	256.	:	-		245.	:	-		284.	:	-	
Chromium	mg/L	T	-		<0.0057	:	-		<0.0016	:	-		<0.0046	:
Chromium	mg/L	D	<0.0013	J	-		<0.0057	:	-		<0.0017	:	-	
Chromium, Hexavalent	mg/L	D	-		-		-		-		-		<0.01	:
Cobalt	mg/L	T	-		<0.0037	:	-		<0.0011	:	-		<0.0022	:
Cobalt	mg/L	D	<0.0031	:	-		<0.0037	:	-		<0.0046	:	-	
Copper	mg/L	T	-		0.0436	:	-		0.0047	:	-		0.0068	:
Copper	mg/L	D	<0.002	:	-		0.0051	:	-		<0.0018	:	-	
Iron	mg/L	T	-		1.81	:	-		<0.286	J	-		0.238	:
Iron	mg/L	D	<0.278	:	-		<0.423	:	-		<0.207	:	-	
Lead	mg/L	T	-		0.0219	:	-		<0.0008	:	-		0.0039	:
Lead	mg/L	D	<0.0004	:	-		<0.00028	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		44.7	:	-		49.1	:	-		34.	:
Magnesium	mg/L	D	44.2	:	-		42.8	:	-		49.4	:	-	
Manganese	mg/L	T	-		<0.019	:	-		<0.019	:	-		<0.0025	:
Manganese	mg/L	D	<0.012	:	-		<0.019	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0949	:	-		0.144	:	-		0.724	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-3 10/16/2003 EW-3-D01N-GRW GW13		EW-3 1/8/2004 EW-3-T01N-GRW GW13		EW-3 1/8/2004 EW-3-D01N-GRW GW13		EW-3 4/14/2004 EW-3-T01N-GRW GW13		EW-3 4/14/2004 EW-3-D01N-GRW GW13		EW-4 11/7/2002 EW-4-T01N-GRW GW13	
Molybdenum	mg/L	D	0.13	:	-		0.101	:	-		0.148	:	-	
Nickel	mg/L	T	-		<0.0168	:	-		0.0061	J	-		0.00069	J
Nickel	mg/L	D	<0.0028	:	-		<0.0168	:	-		0.0111	J	-	
Potassium	mg/L	T	-		2.69	:	-		2.88	:	-		2.77	:
Potassium	mg/L	D	2.79	:	-		2.59	:	-		2.93	:	-	
Selenium	mg/L	T	-		<0.0023	J	-		0.0018	:	-		0.0015	:
Selenium	mg/L	D	<0.0006	:	-		<0.0018	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		46.6	:	-		51.1	:	-		49.5	:
Sodium	mg/L	D	50.8	:	-		42.3	:	-		52.8	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00086	:	-		0.0011	:	-		0.0012	:
Vanadium	mg/L	D	0.00052	:	-		0.00053	:	-		0.001	:	-	
Zinc	mg/L	T	-		<0.091	:	-		<0.015	:	-		0.0416	:
Zinc	mg/L	D	<0.023	:	-		<0.091	:	-		0.0185	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-4	EW-4	EW-4	EW-4	EW-4	EW-4
			Sample Date	11/7/2002	1/8/2003	1/8/2003	4/1/2003	4/1/2003	7/10/2003
			Sample ID	EW-4-D01N-GRW	EW-4-T01N-GRW	EW-4-D01N-GRW	EW-4-T01N-GRW	EW-4-D01N-GRW	EW-4-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.82 :	-	6.23 :	-	8.1 :
Eh	millivolts	T		-	179.8 :	-	308.2 :	-	254.9 :
pH	SU	T		-	7.15 :	-	7.4 J	-	7.4 J
Specific Conductance	uS/cm	T		-	2483. :	-	1248. :	-	1399. :
Temperature	Celsius	T		-	12.03 :	-	14.64 :	-	13.61 :
Turbidity	NTU	T		-	39.7 :	-	1. :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.074 :	-	<0.16 :	-	<0.24 J
Bicarbonate (as CaCO3)	mg/L	T		-	156. :	-	161. :	-	169. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	16.3 :	-	<0.44 :	-	15.5 :
Fluoride	mg/L	T		-	0.4 :	-	0.44 :	-	0.51 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.51 J	-	<0.44 J	-	0.4 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.034 J	-	<0.036 J	-	<0.037 J
Phosphorus	mg/L	T		-	0.037 :	-	0.04 :	-	0.041 :
Sulfate	mg/L	T		-	525. J	-	526. J	-	528. J
Total Alkalinity	mg/L	T		-	156. :	-	161. :	-	169. :
Total Dissolved Solids	mg/L	T		-	980. :	-	970. J	-	996. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.58 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.1 :	-	<1. J	-	<1.4 J
Total Suspended Solids	mg/L	T		-	3.4 :	-	<0.8 :	-	<0.9 :
Laboratory Parameters									
pH	SU	T		-	7.15 :	-	7.4 J	-	7.4 J
Specific Conductance	umhos/cm	T		-	-	-	1140. J	-	1200. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	607. :	-	651. :	-	889. :
Hardness	mg/L	D		626. :	-	633. :	-	661. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-4 11/7/2002 EW-4-D01N-GRW GW13	EW-4 1/8/2003 EW-4-T01N-GRW GW13	EW-4 1/8/2003 EW-4-D01N-GRW GW13	EW-4 4/1/2003 EW-4-T01N-GRW GW13	EW-4 4/1/2003 EW-4-D01N-GRW GW13	EW-4 7/10/2003 EW-4-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.142 J	-	<0.426 :	-	<0.183 J
Aluminum	mg/L	D	<0.0081 :	-	<0.142 J	-	<0.426 :	-
Antimony	mg/L	T	-	<0.0006 :	-	<0.0006 :	-	<0.001 :
Antimony	mg/L	D	<0.0002 :	-	<0.0006 :	-	<0.0006 :	-
Arsenic	mg/L	T	-	0.00065 :	-	<0.0004 :	-	0.00044 :
Arsenic	mg/L	D	0.00061 J	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0348 :	-	0.037 :	-	0.0345 :
Barium	mg/L	D	0.0335 :	-	0.0351 :	-	0.0375 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0003 :	-	<0.0002 :
Beryllium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0003 :	-
Boron	mg/L	T	-	<0.0242 :	-	<0.0254 :	-	0.025 :
Boron	mg/L	D	0.0263 :	-	<0.0246 :	-	<0.0244 :	-
Cadmium	mg/L	T	-	<0.0004 :	-	<0.0005 :	-	<0.0006 :
Cadmium	mg/L	D	0.00019 J	-	<0.0004 :	-	<0.0005 :	-
Calcium	mg/L	T	-	189. :	-	201. :	-	276. :
Calcium	mg/L	D	195. :	-	197. :	-	204. :	-
Chromium	mg/L	T	-	0.0043 :	-	<0.0028 :	-	<0.0014 :
Chromium	mg/L	D	<0.0046 :	-	<0.0037 :	-	<0.0015 :	-
Cobalt	mg/L	T	-	<0.0016 :	-	<0.0038 :	-	<0.002 :
Cobalt	mg/L	D	<0.0022 :	-	<0.0016 :	-	<0.0038 :	-
Copper	mg/L	T	-	0.0112 :	-	0.0029 :	-	0.0489 :
Copper	mg/L	D	<0.0021 :	-	<0.0017 :	-	0.0016 :	-
Iron	mg/L	T	-	1.3 :	-	<0.422 :	-	<0.168 J
Iron	mg/L	D	<0.0318 :	-	<0.489 :	-	<0.422 :	-
Lead	mg/L	T	-	0.0166 :	-	0.00071 :	-	<0.0048 :
Lead	mg/L	D	0.00048 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	32.7 :	-	35.8 :	-	48.3 :
Magnesium	mg/L	D	33.6 :	-	34.2 :	-	36.5 :	-
Manganese	mg/L	T	-	<0.005 :	-	<0.013 :	-	<0.007 :
Manganese	mg/L	D	<0.0025 :	-	<0.005 :	-	<0.013 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.639 :	-	0.686 :	-	0.758 :
Molybdenum	mg/L	D	0.752 :	-	0.663 :	-	0.67 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	EW-4 11/7/2002 EW-4-D01N-GRW GW13		EW-4 1/8/2003 EW-4-T01N-GRW GW13		EW-4 1/8/2003 EW-4-D01N-GRW GW13		EW-4 4/1/2003 EW-4-T01N-GRW GW13		EW-4 4/1/2003 EW-4-D01N-GRW GW13		EW-4 7/10/2003 EW-4-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0019	:	-		<0.003	:	-		<0.0021	:
Nickel	mg/L	D	<0.0002	J	-		<0.0015	:	-		<0.003	:	-	
Potassium	mg/L	T	-		2.69	:	-		2.5	:	-		2.71	:
Potassium	mg/L	D	2.76	:	-		2.82	:	-		2.58	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.001	J	-		<0.0016	:
Selenium	mg/L	D	0.0014	:	-		<0.0016	:	-		0.0012	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		45.	:	-		48.	:	-		63.8	:
Sodium	mg/L	D	49.8	:	-		45.4	:	-		47.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0016	:	-		0.0011	:	-		0.0011	:
Vanadium	mg/L	D	0.0011	:	-		0.0018	:	-		0.001	:	-	
Zinc	mg/L	T	-		0.143	:	-		<0.039	:	-		<0.057	:
Zinc	mg/L	D	0.0131	:	-		<0.039	:	-		<0.039	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-4	EW-4	EW-4	EW-4	EW-4	EW-4
			Sample Date	7/10/2003	10/16/2003	10/16/2003	1/11/2004	1/11/2004	4/12/2004
			Sample ID	EW-4-D01N-GRW	EW-4-T01N-GRW	EW-4-D01N-GRW	EW-4-T01N-GRW	EW-4-D01N-GRW	EW-4-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	7.16 :	-	6.52 :	-	7.03 :
Eh	millivolts	T		-	325.4 :	-	205.8 :	-	216.4 :
pH	SU	T		-	7.1 J	-	7.2 J	-	7.2 J
Specific Conductance	uS/cm	T		-	645. :	-	1238. :	-	1238. :
Temperature	Celsius	T		-	13.66 :	-	9.07 :	-	11.93 :
Turbidity	NTU	T		-	0. :	-	0.4 :	-	0.2 :
General Chemistry									
Ammonia	mg/L	T		-	<0.04 J	-	<0.04 J	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	169. :	-	161. :	-	161. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	15.6 :	-	15.6 :	-	15.2 :
Fluoride	mg/L	T		-	0.45 :	-	0.42 :	-	0.49 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.27 J	-	<0.26 J	-	0.32 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.041 J	-	0.033 J	-	0.041 :
Phosphorus	mg/L	T		-	0.037 :	-	0.04 :	-	0.041 :
Sulfate	mg/L	T		-	558. J	-	625. :	-	523. :
Total Alkalinity	mg/L	T		-	169. :	-	161. :	-	161. :
Total Dissolved Solids	mg/L	T		-	974. :	-	1030. :	-	958. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.1 J	-	<1.3 :	-	<2.8 J
Total Suspended Solids	mg/L	T		-	<0.8 :	-	9.4 :	-	<0.8 J
Laboratory Parameters									
pH	SU	T		-	7.1 J	-	7.2 J	-	7.2 J
Specific Conductance	umhos/cm	T		-	1120. J	-	1200. J	-	1140. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	686. :	-	675. :	-	682. :
Hardness	mg/L	D		784. :	-	655. :	-	750. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-4 7/10/2003 EW-4-D01N-GRW GW13		EW-4 10/16/2003 EW-4-T01N-GRW GW13		EW-4 10/16/2003 EW-4-D01N-GRW GW13		EW-4 1/11/2004 EW-4-T01N-GRW GW13		EW-4 1/11/2004 EW-4-D01N-GRW GW13		EW-4 4/12/2004 EW-4-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.221	:	-		<0.329	:	-		<0.176	:
Aluminum	mg/L	D	<0.183	J	-		<0.221	:	-		<0.329	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		0.00048	:	-		0.00066	:	-		0.00043	:
Arsenic	mg/L	D	<0.0004	:	-		0.00047	:	-		0.00055	:	-	
Barium	mg/L	T	-		0.0333	:	-		0.0342	:	-		0.0326	:
Barium	mg/L	D	0.0334	:	-		0.0338	:	-		0.0341	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0279	:	-		0.0224	:	-		0.0246	:
Boron	mg/L	D	0.0236	:	-		0.026	:	-		0.0249	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0006	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		214.	:	-		210.	:	-		212.	:
Calcium	mg/L	D	244.	:	-		204.	:	-		234.	:	-	
Chromium	mg/L	T	-		<0.0013	J	-		<0.0015	J	-		<0.0018	:
Chromium	mg/L	D	<0.0014	:	-		<0.0013	J	-		<0.0015	J	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0023	:	-		<0.0016	:
Cobalt	mg/L	D	<0.002	:	-		<0.0031	:	-		0.0036	:	-	
Copper	mg/L	T	-		0.0032	:	-		0.0049	:	-		<0.0016	:
Copper	mg/L	D	0.003	:	-		<0.002	:	-		<0.003	:	-	
Iron	mg/L	T	-		<0.278	:	-		1.25	:	-		<0.192	J
Iron	mg/L	D	<0.168	J	-		<0.278	:	-		0.468	:	-	
Lead	mg/L	T	-		0.00053	:	-		0.0019	:	-		<0.0008	:
Lead	mg/L	D	<0.0012	:	-		<0.0004	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		37.	:	-		36.8	:	-		37.3	:
Magnesium	mg/L	D	42.4	:	-		35.4	:	-		40.6	:	-	
Manganese	mg/L	T	-		<0.012	:	-		<0.011	:	-		<0.019	:
Manganese	mg/L	D	<0.007	:	-		<0.012	:	-		0.0119	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.744	:	-		0.668	J	-		0.769	:
Molybdenum	mg/L	D	0.734	:	-		0.733	:	-		0.91	J	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	EW-4 7/10/2003 EW-4-D01N-GRW GW13		EW-4 10/16/2003 EW-4-T01N-GRW GW13		EW-4 10/16/2003 EW-4-D01N-GRW GW13		EW-4 1/11/2004 EW-4-T01N-GRW GW13		EW-4 1/11/2004 EW-4-D01N-GRW GW13		EW-4 4/12/2004 EW-4-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0024	:	-		<0.0015	J
Nickel	mg/L	D	<0.0021	:	-		<0.0028	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		2.56	:	-		2.69	:	-		2.86	:
Potassium	mg/L	D	2.6	:	-		2.74	:	-		2.97	:	-	
Selenium	mg/L	T	-		0.0012	:	-		0.0019	J	-		<0.0014	:
Selenium	mg/L	D	<0.0016	J	-		0.0013	:	-		0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		52.	:	-		47.	:	-		49.8	:
Sodium	mg/L	D	56.	:	-		47.7	:	-		57.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0011	:	-		0.0013	:	-		0.0012	:
Vanadium	mg/L	D	0.0011	:	-		0.0012	:	-		0.0012	:	-	
Zinc	mg/L	T	-		<0.023	:	-		<0.04	:	-		<0.015	J
Zinc	mg/L	D	<0.057	:	-		<0.023	:	-		<0.04	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-4	EW-5A	EW-5A	EW-5A	EW-5A	EW-5A
			Sample Date	4/12/2004	11/7/2002	11/7/2002	1/8/2003	1/8/2003	4/1/2003
			Sample ID	EW-4-D01N-GRW	EW-5A-T01N-GRW	EW-5A-D01N-GRW	EW-5A-T01N-GRW	EW-5A-D01N-GRW	EW-5A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	4.06 :	-	5.14 :	-	4.57 :
Eh	millivolts	T		-	130.2 :	-	259.9 :	-	321.6 :
pH	SU	T		-	7.28 :	-	7.04 :	-	7.6 J
Specific Conductance	uS/cm	T		-	1919. :	-	3801. :	-	1911. :
Temperature	Celsius	T		-	10.75 :	-	11.64 :	-	12.36 :
Turbidity	NTU	T		-	2.4 :	-	30.5 :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.12 :	-	<0.07 :	-	<0.071 :
Bicarbonate (as CaCO3)	mg/L	T		-	180. :	-	170. :	-	178. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.9 :	-	13.6 :	-	<0.4 :
Fluoride	mg/L	T		-	1.5 :	-	1.7 :	-	1.6 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.4 J	-	<0.4 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.15 J	-	<0.11 J	-	<0.12 J
Phosphorus	mg/L	T		-	0.12 :	-	0.12 :	-	0.11 :
Sulfate	mg/L	T		-	1160. :	-	980. J	-	968. J
Total Alkalinity	mg/L	T		-	180. :	-	170. :	-	178. :
Total Dissolved Solids	mg/L	T		-	1630. :	-	1650. :	-	1690. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.48 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.8 :	-	1.8 :	-	<3. J
Total Suspended Solids	mg/L	T		-	<0.89 :	-	12.7 :	-	<1.7 :
Laboratory Parameters									
pH	SU	T		-	7.28 :	-	7.04 :	-	7.6 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	1790. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	961. :	-	1030. :	-	1020. :
Hardness	mg/L	D		678. :	-	960. :	-	1010. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-4 4/12/2004 EW-4-D01N-GRW GW13	EW-5A 11/7/2002 EW-5A-T01N-GRW GW13	EW-5A 11/7/2002 EW-5A-D01N-GRW GW13	EW-5A 1/8/2003 EW-5A-T01N-GRW GW13	EW-5A 1/8/2003 EW-5A-D01N-GRW GW13	EW-5A 4/1/2003 EW-5A-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.0037 :	-	<0.142 J	-	<0.426 :
Aluminum	mg/L	D	<0.176 :	-	<0.0032 :	-	<0.142 J	-
Antimony	mg/L	T	-	<0.0002 :	-	<0.0006 :	-	<0.0006 :
Antimony	mg/L	D	<0.0008 :	-	<0.00038 :	-	<0.0006 :	-
Arsenic	mg/L	T	-	0.00079 J	-	0.00062 :	-	0.00077 :
Arsenic	mg/L	D	0.00042 :	-	0.00078 J	-	0.00058 :	-
Barium	mg/L	T	-	0.026 :	-	0.0278 :	-	0.0282 :
Barium	mg/L	D	0.0318 :	-	0.0259 :	-	0.0272 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0003 :
Beryllium	mg/L	D	<0.0003 J	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0349 :	-	0.0352 :	-	<0.0382 :
Boron	mg/L	D	0.0258 :	-	0.0348 :	-	0.0344 :	-
Cadmium	mg/L	T	-	0.00062 J	-	<0.0004 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0003 :	-	0.00066 J	-	<0.0004 :	-
Calcium	mg/L	T	-	304. :	-	324. :	-	321. :
Calcium	mg/L	D	211. :	-	304. :	-	318. :	-
Chromium	mg/L	T	-	<0.0046 :	-	<0.0037 :	-	<0.001 :
Chromium	mg/L	D	<0.0016 :	-	<0.0046 :	-	<0.0037 :	-
Chromium, Hexavalent	mg/L	D	-	<0.01 :	-	-	-	-
Cobalt	mg/L	T	-	<0.0022 :	-	<0.0016 :	-	0.0068 :
Cobalt	mg/L	D	<0.0023 :	-	<0.0022 :	-	<0.0016 :	-
Copper	mg/L	T	-	0.0021 :	-	<0.0033 :	-	0.0207 :
Copper	mg/L	D	<0.0015 :	-	<0.0016 :	-	<0.0017 :	-
Iron	mg/L	T	-	<0.0423 :	-	<0.489 :	-	<0.422 :
Iron	mg/L	D	<0.192 :	-	<0.0322 :	-	<0.489 :	-
Lead	mg/L	T	-	0.0004 :	-	0.00093 :	-	0.0034 :
Lead	mg/L	D	<0.0008 :	-	0.00023 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	49. :	-	52.6 :	-	53.5 :
Magnesium	mg/L	D	37. :	-	48.9 :	-	51.5 :	-
Manganese	mg/L	T	-	1.77 :	-	2.07 :	-	1.9 :
Manganese	mg/L	D	<0.019 :	-	1.77 :	-	2.03 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	2.92 :	-	3.24 :	-	3.15 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-4 4/12/2004 EW-4-D01N-GRW GW13		EW-5A 11/7/2002 EW-5A-T01N-GRW GW13		EW-5A 11/7/2002 EW-5A-D01N-GRW GW13		EW-5A 1/8/2003 EW-5A-T01N-GRW GW13		EW-5A 1/8/2003 EW-5A-D01N-GRW GW13		EW-5A 4/1/2003 EW-5A-T01N-GRW GW13	
Molybdenum	mg/L	D	0.759	:	-		2.92	:	-		3.15	:	-	
Nickel	mg/L	T	-		0.0057	J	-		0.0067	:	-		0.0056	:
Nickel	mg/L	D	<0.0015	J	-		0.0059	J	-		0.0067	:	-	
Potassium	mg/L	T	-		4.03	:	-		4.25	:	-		3.76	:
Potassium	mg/L	D	2.86	:	-		4.02	:	-		4.14	:	-	
Selenium	mg/L	T	-		0.00096	:	-		<0.0016	:	-		0.0011	J
Selenium	mg/L	D	<0.0014	:	-		0.0011	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		99.8	:	-		103.	:	-		104.	:
Sodium	mg/L	D	49.9	:	-		98.	:	-		101.	:	-	
Thallium	mg/L	T	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0015	:	-		0.0016	:	-		0.0017	:
Vanadium	mg/L	D	0.0011	:	-		0.0015	:	-		0.0016	:	-	
Zinc	mg/L	T	-		<0.0069	:	-		<0.039	:	-		<0.039	:
Zinc	mg/L	D	<0.015	J	-		<0.0069	:	-		<0.039	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5A	EW-5A	EW-5A	EW-5A	EW-5A	EW-5A
			Sample Date	4/1/2003	7/9/2003	7/9/2003	10/22/2003	10/22/2003	1/8/2004
			Sample ID	EW-5A-D01N-GRW	EW-5A-T01N-GRW	EW-5A-D01N-GRW	EW-5A-T01N-GRW	EW-5A-D01N-GRW	EW-5A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.07 :	-	4.17 :	-	0.44 :
Eh	millivolts	T		-	362.4 :	-	165.5 :	-	208.1 :
pH	SU	T		-	7.4 J	-	7.3 J	-	7.4 J
Specific Conductance	uS/cm	T		-	2002. :	-	2011. :	-	1858. :
Temperature	Celsius	T		-	17.54 :	-	10.7 :	-	11.25 :
Turbidity	NTU	T		-	8.8 :	-	1.9 :	-	0.7 :
General Chemistry									
Ammonia	mg/L	T		-	<0.085 J	-	<0.081 J	-	<0.076 J
Bicarbonate (as CaCO3)	mg/L	T		-	177. :	-	180. :	-	176. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	11.5 :	-	13.2 :	-	13.1 :
Fluoride	mg/L	T		-	1.6 :	-	1.5 :	-	1.4 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.15 J	-	<0.11 J	-	0.11 J
Phosphorus	mg/L	T		-	0.13 J	-	0.12 :	-	0.12 :
Sulfate	mg/L	T		-	841. J	-	967. J	-	935. :
Total Alkalinity	mg/L	T		-	177. :	-	180. :	-	176. :
Total Dissolved Solids	mg/L	T		-	1670. :	-	1590. :	-	1590. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	3.4 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.8 J	-	1.8 J	-	<1. :
Total Suspended Solids	mg/L	T		-	<1. :	-	<1.3 :	-	2.8 J
Laboratory Parameters									
pH	SU	T		-	7.4 J	-	7.3 J	-	7.4 J
Specific Conductance	umhos/cm	T		-	1730. J	-	1570. J	-	1720. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1020. :	-	919. :	-	980. :
Hardness	mg/L	D		1030. :	-	1000. :	-	1040. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5A 4/1/2003 EW-5A-D01N-GRW GW13		EW-5A 7/9/2003 EW-5A-T01N-GRW GW13		EW-5A 7/9/2003 EW-5A-D01N-GRW GW13		EW-5A 10/22/2003 EW-5A-T01N-GRW GW13		EW-5A 10/22/2003 EW-5A-D01N-GRW GW13		EW-5A 1/8/2004 EW-5A-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.631	:	-		<0.217	:	-		<0.621	:
Aluminum	mg/L	D	<0.426	:	-		<0.631	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.0013	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.00059	:	-		0.00066	:	-		0.00088	:
Arsenic	mg/L	D	0.0004	:	-		0.00071	:	-		0.00058	:	-	
Barium	mg/L	T	-		0.0268	:	-		0.0254	:	-		0.0235	:
Barium	mg/L	D	0.0284	:	-		0.0266	:	-		0.0273	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.001	J
Beryllium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0355	:	-		<0.0351	:	-		0.0344	:
Boron	mg/L	D	<0.0375	:	-		0.0352	:	-		<0.0357	:	-	
Cadmium	mg/L	T	-		<0.0006	:	-		<0.0013	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0006	:	-		<0.0013	:	-	
Calcium	mg/L	T	-		322.	:	-		289.	:	-		309.	:
Calcium	mg/L	D	322.	:	-		316.	:	-		328.	:	-	
Chromium	mg/L	T	-		<0.0014	:	-		<0.0023	J	-		<0.0057	:
Chromium	mg/L	D	<0.001	:	-		<0.0014	:	-		<0.0023	J	-	
Cobalt	mg/L	T	-		<0.002	:	-		<0.0032	:	-		<0.0037	:
Cobalt	mg/L	D	0.0068	:	-		<0.002	:	-		<0.0032	:	-	
Copper	mg/L	T	-		0.0085	:	-		0.0028	:	-		0.0069	:
Copper	mg/L	D	<0.0015	:	-		0.0042	:	-		0.0068	:	-	
Iron	mg/L	T	-		<0.667	:	-		<0.455	:	-		<0.423	:
Iron	mg/L	D	<0.422	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		<0.0025	:	-		0.00071	:	-		0.00094	:
Lead	mg/L	D	0.00037	:	-		<0.0017	:	-		0.00094	:	-	
Magnesium	mg/L	T	-		52.8	:	-		48.	:	-		50.3	:
Magnesium	mg/L	D	53.7	:	-		51.8	:	-		54.2	:	-	
Manganese	mg/L	T	-		1.82	:	-		1.68	:	-		1.7	:
Manganese	mg/L	D	1.92	:	-		1.79	:	-		1.92	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		2.97	:	-		2.89	:	-		2.6	:
Molybdenum	mg/L	D	3.16	:	-		2.94	:	-		2.92	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5A 4/1/2003 EW-5A-D01N-GRW GW13	EW-5A 7/9/2003 EW-5A-T01N-GRW GW13	EW-5A 7/9/2003 EW-5A-D01N-GRW GW13	EW-5A 10/22/2003 EW-5A-T01N-GRW GW13	EW-5A 10/22/2003 EW-5A-D01N-GRW GW13	EW-5A 1/8/2004 EW-5A-T01N-GRW GW13
Nickel	mg/L	T	-	0.0051 :	-	0.0073 J	-	<0.0168 :
Nickel	mg/L	D	0.0043 :	-	0.0049 :	-	0.0286 J	-
Potassium	mg/L	T	-	4.18 :	-	3.63 :	-	3.58 :
Potassium	mg/L	D	3.76 :	-	4.15 :	-	3.68 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.0006 :	-	<0.0019 J
Selenium	mg/L	D	<0.001 J	-	<0.0016 J	-	<0.0006 :	-
Silver	mg/L	T	-	<0.0002 J	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 J	-	<0.0002 :	-
Sodium	mg/L	T	-	102. :	-	91.3 :	-	95.1 :
Sodium	mg/L	D	103. :	-	99.5 :	-	105. :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.0017 :	-	0.0013 :	-	0.0015 :
Vanadium	mg/L	D	0.0017 :	-	0.0022 :	-	0.0014 :	-
Zinc	mg/L	T	-	<0.0266 :	-	<0.019 :	-	<0.091 :
Zinc	mg/L	D	<0.039 :	-	<0.0246 :	-	<0.019 :	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5A	EW-5A	EW-5A	EW-5B	EW-5B	EW-5B
			Sample Date	1/8/2004	4/13/2004	4/13/2004	11/7/2002	11/7/2002	11/7/2002
			Sample ID	EW-5A-D01N-GRW	EW-5A-T01N-GRW	EW-5A-D01N-GRW	EW-5B-T01N-GRWRE	EW-5B-T01N-GRW	EW-5B-D01N-GRWRE
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.52 :	-	-	5.82 :	-
Eh	millivolts	T		-	212.2 :	-	-	76.2 :	-
pH	SU	T		-	7.2 J	-	-	7.21 :	-
Specific Conductance	uS/cm	T		-	1756. :	-	-	1700. :	-
Temperature	Celsius	T		-	12.86 :	-	-	11.23 :	-
Turbidity	NTU	T		-	0. :	-	-	2.8 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.089 :	-	-	<0.095 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	175. :	-	-	184. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	14. :	-	-	12.4 :	-
Fluoride	mg/L	T		-	1.4 :	-	-	1.2 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	<0.2 J	-	-	<0.4 J	-
Nitrite	mg/L	T		-	<0.005 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	0.12 :	-	-	0.11 J	-
Phosphorus	mg/L	T		-	0.14 :	-	-	0.12 :	-
Sulfate	mg/L	T		-	942. :	-	808. J	-	-
Total Alkalinity	mg/L	T		-	175. :	-	-	184. :	-
Total Dissolved Solids	mg/L	T		-	1610. :	-	-	1420. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<2.7 J	-	-	1.5 :	-
Total Suspended Solids	mg/L	T		-	<0.9 J	-	-	<1.4 :	-
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	-	7.21 :	-
Specific Conductance	umhos/cm	T		-	1670. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	975. :	-	-	-	-
Hardness	mg/L	D		969. :	-	993. :	-	-	868. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5A 1/8/2004 EW-5A-D01N-GRW GW13	EW-5A 4/13/2004 EW-5A-T01N-GRW GW13	EW-5A 4/13/2004 EW-5A-D01N-GRW GW13	EW-5B 11/7/2002 EW-5B-T01N-GRWRE GW13	EW-5B 11/7/2002 EW-5B-T01N-GRW GW13	EW-5B 11/7/2002 EW-5B-D01N-GRWRE GW13
Aluminum	mg/L	T	-	<0.176 :	-	-	-	-
Aluminum	mg/L	D	<0.621 :	-	<0.176 :	-	-	<0.142 :
Antimony	mg/L	T	-	<0.0008 :	-	-	-	-
Antimony	mg/L	D	<0.0024 :	-	<0.0008 :	-	-	<0.0006 :
Arsenic	mg/L	T	-	0.00058 :	-	-	-	-
Arsenic	mg/L	D	0.00066 :	-	0.00051 :	-	-	0.00056 :
Barium	mg/L	T	-	0.0239 :	-	-	-	-
Barium	mg/L	D	0.0245 :	-	0.0248 :	-	-	0.0202 :
Beryllium	mg/L	T	-	<0.0003 J	-	-	-	-
Beryllium	mg/L	D	<0.001 J	-	<0.0003 J	-	-	<0.0002 :
Boron	mg/L	T	-	0.0328 :	-	-	-	-
Boron	mg/L	D	0.0338 :	-	0.0339 :	-	-	<0.0367 :
Cadmium	mg/L	T	-	<0.0003 :	-	-	-	-
Cadmium	mg/L	D	<0.0007 :	-	<0.0003 :	-	-	<0.0004 :
Calcium	mg/L	T	-	306. :	-	-	-	-
Calcium	mg/L	D	306. :	-	312. :	-	-	274. :
Chromium	mg/L	T	-	<0.001 :	-	-	-	-
Chromium	mg/L	D	<0.0057 :	-	<0.0019 :	-	-	<0.0037 :
Chromium, Hexavalent	mg/L	D	-	-	-	-	<0.01 :	-
Cobalt	mg/L	T	-	0.0017 :	-	-	-	-
Cobalt	mg/L	D	0.0061 :	-	<0.0021 :	-	-	<0.0016 :
Copper	mg/L	T	-	<0.0046 :	-	-	-	-
Copper	mg/L	D	0.005 :	-	<0.0014 :	-	-	<0.0017 :
Iron	mg/L	T	-	<0.192 J	-	-	-	-
Iron	mg/L	D	<0.423 :	-	<0.192 :	-	-	<0.489 :
Lead	mg/L	T	-	<0.0008 :	-	-	-	-
Lead	mg/L	D	<0.00022 :	-	<0.0008 :	-	-	0.0003 :
Magnesium	mg/L	T	-	50.9 :	-	-	-	-
Magnesium	mg/L	D	49.8 :	-	51.7 :	-	-	45. :
Manganese	mg/L	T	-	1.87 :	-	-	-	-
Manganese	mg/L	D	1.69 :	-	1.91 :	-	-	1.83 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	2.56 :	-	-	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5A 1/8/2004 EW-5A-D01N-GRW GW13		EW-5A 4/13/2004 EW-5A-T01N-GRW GW13		EW-5A 4/13/2004 EW-5A-D01N-GRW GW13		EW-5B 11/7/2002 EW-5B-T01N-GRWRE GW13		EW-5B 11/7/2002 EW-5B-T01N-GRW GW13		EW-5B 11/7/2002 EW-5B-D01N-GRWRE GW13	
Molybdenum	mg/L	D	2.73	:	-		2.72	:	-		-		1.77	:
Nickel	mg/L	T	-		<0.0042	J	-		-		-		-	
Nickel	mg/L	D	<0.0168	:	-		<0.0051	J	-		-		0.0024	:
Potassium	mg/L	T	-		3.85	:	-		-		-		-	
Potassium	mg/L	D	3.67	:	-		4.11	:	-		-		4.52	:
Selenium	mg/L	T	-		<0.0014	:	-		-		-		-	
Selenium	mg/L	D	<0.0011	:	-		<0.0014	:	-		-		<0.0016	:
Silver	mg/L	T	-		<0.0002	:	-		-		-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Sodium	mg/L	T	-		95.1	:	-		-		-		-	
Sodium	mg/L	D	91.5	:	-		95.	:	-		-		80.1	:
Thallium	mg/L	T	-		<0.0002	:	-		-		-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0016	:	-		-		-		-	
Vanadium	mg/L	D	0.0015	:	-		0.0017	:	-		-		0.00086	:
Zinc	mg/L	T	-		<0.015	J	-		-		-		-	
Zinc	mg/L	D	<0.091	:	-		<0.015	J	-		-		<0.039	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5B	EW-5B	EW-5B	EW-5B	EW-5B	EW-5B
			Sample Date	11/7/2002	1/8/2003	1/8/2003	4/1/2003	4/1/2003	7/9/2003
			Sample ID	EW-5B-D01N-GRW	EW-5B-T01N-GRW	EW-5B-D01N-GRW	EW-5B-T01N-GRW	EW-5B-D01N-GRW	EW-5B-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	5.06 :	-	3.42 :	-	3.16 :
Eh	millivolts	T		-	283.5 :	-	300.2 :	-	400. :
pH	SU	T		-	6.92 :	-	7.5 J	-	7.3 J
Specific Conductance	uS/cm	T		-	3356. :	-	1716. :	-	1783. :
Temperature	Celsius	T		-	11.33 :	-	12.7 :	-	18.01 :
Turbidity	NTU	T		-	29.9 :	-	0. :	-	1.2 :
General Chemistry									
Ammonia	mg/L	T		-	<0.09 :	-	<0.044 :	-	<0.1 J
Bicarbonate (as CaCO3)	mg/L	T		-	182. :	-	185. :	-	183. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	11.3 :	-	<0.4 :	-	11.7 :
Fluoride	mg/L	T		-	1.1 :	-	1.3 :	-	1.3 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.4 :	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.093 J	-	<0.1 J	-	12.8 J
Phosphorus	mg/L	T		-	0.12 :	-	0.14 :	-	0.1 J
Sulfate	mg/L	T		-	859. J	-	782. J	-	731. J
Total Alkalinity	mg/L	T		-	182. :	-	185. :	-	183. :
Total Dissolved Solids	mg/L	T		-	1460. :	-	1420. :	-	1490. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.25 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.2 :	-	<1.5 J	-	<2.2 J
Total Suspended Solids	mg/L	T		-	<1. :	-	<1.1 :	-	<1.7 :
Laboratory Parameters									
pH	SU	T		-	6.92 :	-	7.5 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	-	-	1630. J	-	1580. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	892. :	-	902. :	-	902. :
Hardness	mg/L	D		-	-	872. :	-	908. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 11/7/2002 EW-5B-D01N-GRW GW13		EW-5B 1/8/2003 EW-5B-T01N-GRW GW13		EW-5B 1/8/2003 EW-5B-D01N-GRW GW13		EW-5B 4/1/2003 EW-5B-T01N-GRW GW13		EW-5B 4/1/2003 EW-5B-D01N-GRW GW13		EW-5B 7/9/2003 EW-5B-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.142	J	-		<0.426	:	-		<0.631	:
Aluminum	mg/L	D	-		-		<0.142	J	-		<0.426	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.001	:
Antimony	mg/L	D	-		-		<0.0006	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		0.00053	:	-		0.00062	:	-		0.00046	:
Arsenic	mg/L	D	-		-		0.00046	:	-		0.00095	:	-	
Barium	mg/L	T	-		0.0218	:	-		0.0213	:	-		0.0208	:
Barium	mg/L	D	-		-		0.0211	:	-		0.0216	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.00073	:	-		<0.0002	:
Beryllium	mg/L	D	-		-		<0.0002	:	-		<0.00033	:	-	
Boron	mg/L	T	-		0.0399	:	-		<0.037	:	-		0.0364	:
Boron	mg/L	D	-		-		0.0382	:	-		<0.0356	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0005	:	-		<0.0006	:
Cadmium	mg/L	D	-		-		<0.0004	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		281.	:	-		283.	:	-		284.	:
Calcium	mg/L	D	-		-		275.	:	-		285.	:	-	
Chromium	mg/L	T	-		<0.0037	:	-		<0.0012	:	-		<0.0014	:
Chromium	mg/L	D	-		-		<0.0037	:	-		<0.0013	:	-	
Cobalt	mg/L	T	-		<0.0016	:	-		0.0041	:	-		<0.002	:
Cobalt	mg/L	D	-		-		<0.0016	:	-		0.0044	:	-	
Copper	mg/L	T	-		0.0052	:	-		0.0053	:	-		<0.0047	:
Copper	mg/L	D	-		-		<0.003	:	-		0.0023	:	-	
Iron	mg/L	T	-		<0.489	:	-		<0.422	:	-		<0.667	:
Iron	mg/L	D	-		-		<0.489	:	-		<0.422	:	-	
Lead	mg/L	T	-		0.001	:	-		0.0011	:	-		<0.002	:
Lead	mg/L	D	-		-		0.00066	:	-		0.00059	:	-	
Magnesium	mg/L	T	-		46.3	:	-		47.5	:	-		46.9	:
Magnesium	mg/L	D	-		-		45.2	:	-		47.8	:	-	
Manganese	mg/L	T	-		1.82	:	-		1.87	:	-		1.94	:
Manganese	mg/L	D	-		-		1.77	:	-		1.88	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		1.87	:	-		1.84	:	-		1.82	:
Molybdenum	mg/L	D	-		-		1.82	:	-		1.86	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 11/7/2002 EW-5B-D01N-GRW GW13		EW-5B 1/8/2003 EW-5B-T01N-GRW GW13		EW-5B 1/8/2003 EW-5B-D01N-GRW GW13		EW-5B 4/1/2003 EW-5B-T01N-GRW GW13		EW-5B 4/1/2003 EW-5B-D01N-GRW GW13		EW-5B 7/9/2003 EW-5B-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0026	:	-		<0.003	:	-		<0.0021	:
Nickel	mg/L	D	-		-		<0.0022	:	-		<0.003	:	-	
Potassium	mg/L	T	-		5.08	:	-		4.34	:	-		4.86	:
Potassium	mg/L	D	-		-		4.96	:	-		4.41	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.001	J	-		<0.0016	:
Selenium	mg/L	D	-		-		<0.0016	:	-		0.0019	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		81.4	:	-		85.5	:	-		83.4	:
Sodium	mg/L	D	-		-		83.2	:	-		81.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00077	:	-		0.001	:	-		0.0011	:
Vanadium	mg/L	D	-		-		0.00076	:	-		0.0011	:	-	
Zinc	mg/L	T	-		<0.039	:	-		<0.039	:	-		<0.016	:
Zinc	mg/L	D	-		-		<0.039	:	-		<0.039	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5B	EW-5B	EW-5B	EW-5B	EW-5B	EW-5B
			Sample Date	7/9/2003	10/16/2003	10/16/2003	1/8/2004	1/8/2004	4/13/2004
			Sample ID	EW-5B-D01N-GRW	EW-5B-T01N-GRW	EW-5B-D01N-GRW	EW-5B-T01N-GRW	EW-5B-D01N-GRW	EW-5B-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	3.45 :	-	4.64 :	-	4.05 :
Eh	millivolts	T		-	309.4 :	-	192.8 :	-	216.8 :
pH	SU	T		-	7.3 J	-	7.4 J	-	7.4 J
Specific Conductance	uS/cm	T		-	1646. :	-	1687. :	-	1594. :
Temperature	Celsius	T		-	12.37 :	-	10.86 :	-	11.87 :
Turbidity	NTU	T		-	0. :	-	0.4 :	-	0.3 :
General Chemistry									
Ammonia	mg/L	T		-	<0.055 J	-	<0.1 J	-	<0.054 :
Bicarbonate (as CaCO3)	mg/L	T		-	184. :	-	181. :	-	181. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	11.8 :	-	11.8 :	-	12.6 :
Fluoride	mg/L	T		-	2. :	-	1.3 :	-	1.3 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.1 J	-	0.097 J	-	0.1 :
Phosphorus	mg/L	T		-	0.11 :	-	0.11 :	-	0.12 :
Sulfate	mg/L	T		-	816. J	-	733. :	-	812. :
Total Alkalinity	mg/L	T		-	184. :	-	181. :	-	181. :
Total Dissolved Solids	mg/L	T		-	1260. :	-	1340. :	-	1400. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.6 J	-	<2.6 :	-	<2.9 J
Total Suspended Solids	mg/L	T		-	<0.9 :	-	2.9 :	-	<1. J
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.4 J	-	7.4 J
Specific Conductance	umhos/cm	T		-	1520. J	-	1640. J	-	1460. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	869. :	-	823. :	-	852. :
Hardness	mg/L	D		907. :	-	899. :	-	866. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 7/9/2003 EW-5B-D01N-GRW GW13		EW-5B 10/16/2003 EW-5B-T01N-GRW GW13		EW-5B 10/16/2003 EW-5B-D01N-GRW GW13		EW-5B 1/8/2004 EW-5B-T01N-GRW GW13		EW-5B 1/8/2004 EW-5B-D01N-GRW GW13		EW-5B 4/13/2004 EW-5B-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.221	:	-		<0.514	:	-		<0.176	:
Aluminum	mg/L	D	<0.631	:	-		<0.221	:	-		<0.514	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		0.00054	:	-		0.00068	:	-		0.00056	:
Arsenic	mg/L	D	0.0005	:	-		0.00054	:	-		0.00068	:	-	
Barium	mg/L	T	-		0.0202	:	-		0.0216	:	-		0.0181	:
Barium	mg/L	D	0.0216	:	-		0.0218	:	-		0.0222	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0003	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0336	:	-		0.0413	:	-		0.0339	:
Boron	mg/L	D	0.0377	:	-		0.0388	:	-		0.0413	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0006	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		274.	:	-		258.	:	-		268.	:
Calcium	mg/L	D	286.	:	-		284.	:	-		272.	:	-	
Chromium	mg/L	T	-		<0.0013	J	-		<0.0057	:	-		<0.0013	:
Chromium	mg/L	D	<0.0014	:	-		<0.0013	J	-		<0.0057	:	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0023	:	-		<0.0016	:
Cobalt	mg/L	D	<0.002	:	-		<0.0031	:	-		<0.0023	:	-	
Copper	mg/L	T	-		0.0143	:	-		0.0054	:	-		<0.0127	:
Copper	mg/L	D	0.0053	:	-		<0.002	:	-		<0.003	:	-	
Iron	mg/L	T	-		0.519	:	-		<0.373	:	-		<0.192	J
Iron	mg/L	D	<0.667	:	-		<0.278	:	-		<0.373	:	-	
Lead	mg/L	T	-		0.0017	:	-		0.001	:	-		0.0019	:
Lead	mg/L	D	<0.0014	:	-		<0.0004	:	-		<0.00021	:	-	
Magnesium	mg/L	T	-		44.8	:	-		43.2	:	-		44.5	:
Magnesium	mg/L	D	47.2	:	-		46.3	:	-		45.4	:	-	
Manganese	mg/L	T	-		1.82	:	-		1.58	:	-		1.61	:
Manganese	mg/L	D	1.95	:	-		1.89	:	-		1.65	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		1.78	:	-		1.84	:	-		1.75	:
Molybdenum	mg/L	D	1.87	:	-		1.84	:	-		1.91	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 7/9/2003 EW-5B-D01N-GRW GW13		EW-5B 10/16/2003 EW-5B-T01N-GRW GW13		EW-5B 10/16/2003 EW-5B-D01N-GRW GW13		EW-5B 1/8/2004 EW-5B-T01N-GRW GW13		EW-5B 1/8/2004 EW-5B-D01N-GRW GW13		EW-5B 4/13/2004 EW-5B-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0028	J	-		<0.0024	:	-		<0.0017	J
Nickel	mg/L	D	0.0021	:	-		0.0028	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		4.49	:	-		4.76	:	-		4.62	:
Potassium	mg/L	D	5.	:	-		4.64	:	-		4.94	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		0.00096	J	-		<0.0014	:
Selenium	mg/L	D	<0.0016	J	-		<0.0006	:	-		0.00093	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		79.	:	-		73.6	:	-		79.1	:
Sodium	mg/L	D	81.8	:	-		82.3	:	-		78.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0011	:	-		0.00091	:	-		0.0012	:
Vanadium	mg/L	D	0.0011	:	-		0.00097	:	-		0.00095	:	-	
Zinc	mg/L	T	-		<0.023	:	-		<0.026	:	-		<0.015	J
Zinc	mg/L	D	<0.0265	:	-		<0.023	:	-		<0.026	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5B	EW-5C	EW-5C	EW-5C	EW-5C	EW-5C
			Sample Date	4/13/2004	12/3/2002	12/3/2002	1/17/2003	1/17/2003	4/1/2003
			Sample ID	EW-5B-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5C-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.4 :	-	7.51 :	-	6.68 :
Eh	millivolts	T		-	327.5 :	-	159. :	-	268.9 :
pH	SU	T		-	6.17 :	-	6.9 :	-	7.5 J
Specific Conductance	uS/cm	T		-	1802. :	-	1899. :	-	1799. :
Temperature	Celsius	T		-	11.86 :	-	11.71 :	-	14.05 :
Turbidity	NTU	T		-	48.6 :	-	55.5 :	-	3.1 :
General Chemistry									
Ammonia	mg/L	T		-	0.48 :	-	0.041 :	-	<0.15 :
Bicarbonate (as CaCO3)	mg/L	T		-	111. :	-	109. :	-	111. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	13.4 :	-	13.4 :	-	<0.4 :
Fluoride	mg/L	T		-	0.19 :	-	0.19 :	-	0.2 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.45 J	-	<0.4 J	-	<0.4 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.024 J	-	<0.059 J	-	<0.023 J
Phosphorus	mg/L	T		-	<0.035 J	-	0.034 J	-	0.04 :
Sulfate	mg/L	T		-	1010. :	-	961. J	-	970. J
Total Alkalinity	mg/L	T		-	111. :	-	109. :	-	111. :
Total Dissolved Solids	mg/L	T		-	1560. :	-	1540. :	-	1480. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 J	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1. :	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T		-	10.2 J	-	6.1 :	-	<3.4 :
Laboratory Parameters									
pH	SU	T		-	6.17 :	-	6.9 :	-	7.5 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	1720. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1010. :	-	1060. :	-	1060. :
Hardness	mg/L	D		883. :	-	1010. :	-	1050. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 4/13/2004 EW-5B-D01N-GRW GW13		EW-5C 12/3/2002 EW-5C-T01N-GRW GW13		EW-5C 12/3/2002 EW-5C-D01N-GRW GW13		EW-5C 1/17/2003 EW-5C-T01N-GRW GW13		EW-5C 1/17/2003 EW-5C-D01N-GRW GW13		EW-5C 4/1/2003 EW-5C-T01N-GRW GW13	
Aluminum	mg/L	T	-		0.051	:	-		<0.226	:	-		<0.426	:
Aluminum	mg/L	D	<0.176	:	-		<0.006	:	-		<0.226	:	-	
Antimony	mg/L	T	-		<0.00055	:	-		<0.0006	:	-		<0.0006	:
Antimony	mg/L	D	<0.0008	:	-		<0.00051	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		0.00055	:
Arsenic	mg/L	D	0.00055	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0186	:	-		0.018	:	-		0.0207	:
Barium	mg/L	D	0.0192	:	-		0.0176	:	-		0.0171	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0251	:	-		0.0178	:	-		<0.0228	:
Boron	mg/L	D	0.0356	:	-		0.0238	:	-		0.0176	:	-	
Cadmium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		315.	:	-		327.	:	-		326.	:
Calcium	mg/L	D	278.	:	-		313.	:	-		324.	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		<0.0031	:
Chromium	mg/L	D	<0.00082	:	-		<0.0046	:	-		<0.0037	:	-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	<0.0024	:	-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		<0.0066	:	-		<0.0017	:	-		0.0026	:
Copper	mg/L	D	<0.0016	:	-		<0.0027	:	-		<0.0017	:	-	
Iron	mg/L	T	-		0.122	:	-		<0.266	:	-		<0.422	:
Iron	mg/L	D	<0.192	:	-		0.0497	:	-		<0.266	:	-	
Lead	mg/L	T	-		0.0015	:	-		0.00089	:	-		0.00022	:
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		55.2	:	-		58.9	:	-		59.2	:
Magnesium	mg/L	D	46.1	:	-		54.7	:	-		58.4	:	-	
Manganese	mg/L	T	-		<0.0025	J	-		<0.028	:	-		<0.013	:
Manganese	mg/L	D	1.66	:	-		<0.0025	J	-		<0.028	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0076	:	-		0.0082	:	-		0.0162	:
Molybdenum	mg/L	D	1.86	:	-		0.007	:	-		0.0081	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5B 4/13/2004 EW-5B-D01N-GRW GW13	EW-5C 12/3/2002 EW-5C-T01N-GRW GW13	EW-5C 12/3/2002 EW-5C-D01N-GRW GW13	EW-5C 1/17/2003 EW-5C-T01N-GRW GW13	EW-5C 1/17/2003 EW-5C-D01N-GRW GW13	EW-5C 4/1/2003 EW-5C-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0004 :	-	<0.0015 :	-	<0.003 :
Nickel	mg/L	D	<0.0015 J	-	<0.0004 :	-	<0.0015 :	-
Potassium	mg/L	T	-	3.26 :	-	3.14 :	-	3.26 :
Potassium	mg/L	D	4.93 :	-	3.33 :	-	3.14 :	-
Selenium	mg/L	T	-	0.0013 :	-	<0.0016 :	-	<0.0024 :
Selenium	mg/L	D	<0.0014 :	-	0.0015 :	-	<0.0016 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	61.5 :	-	65.2 :	-	59.3 :
Sodium	mg/L	D	80.4 :	-	61.2 :	-	63.3 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00056 :	-	0.00089 :	-	0.00071 :
Vanadium	mg/L	D	0.0011 :	-	0.00062 :	-	0.00061 :	-
Zinc	mg/L	T	-	<0.0408 J	-	0.0474 :	-	0.0625 :
Zinc	mg/L	D	<0.015 J	-	0.0362 J	-	<0.0281 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5C	EW-5C	EW-5C	EW-5C	EW-5C	EW-5C
			Sample Date	4/1/2003	7/10/2003	7/10/2003	10/15/2003	10/15/2003	1/8/2004
			Sample ID	EW-5C-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5C-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	5.4 :	-	4.94 :	-	4.24 :
Eh	millivolts	T		-	366.6 :	-	279.2 :	-	94.6 :
pH	SU	T		-	7.2 J	-	7.2 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1835. :	-	1828. :	-	1830. :
Temperature	Celsius	T		-	14.28 :	-	13.09 :	-	12.18 :
Turbidity	NTU	T		-	0. :	-	10.8 :	-	0.7 :
General Chemistry									
Ammonia	mg/L	T		-	<0.13 J	-	<0.04 J	-	<0.09 J
Bicarbonate (as CaCO3)	mg/L	T		-	121. :	-	116. :	-	134. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.6 :	-	13.9 :	-	16.9 :
Fluoride	mg/L	T		-	0.22 :	-	0.19 :	-	0.25 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	0.21 :	-	<0.2 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.026 J	-	<0.021 :	-	<0.019 J
Phosphorus	mg/L	T		-	0.021 :	-	0.027 :	-	0.03 :
Sulfate	mg/L	T		-	917. J	-	933. J	-	862. :
Total Alkalinity	mg/L	T		-	121. :	-	116. :	-	134. :
Total Dissolved Solids	mg/L	T		-	1680. :	-	1560. :	-	1640. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	1.4 J	-	<1.6 :
Total Suspended Solids	mg/L	T		-	<1.8 :	-	3.8 :	-	<1.6 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.2 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1680. J	-	1690. J	-	1800. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	946. :	-	1070. :	-	952. :
Hardness	mg/L	D		1050. :	-	957. :	-	1060. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5C 4/1/2003 EW-5C-D01N-GRW GW13	EW-5C 7/10/2003 EW-5C-T01N-GRW GW13	EW-5C 7/10/2003 EW-5C-D01N-GRW GW13	EW-5C 10/15/2003 EW-5C-T01N-GRW GW13	EW-5C 10/15/2003 EW-5C-D01N-GRW GW13	EW-5C 1/8/2004 EW-5C-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.631 :	-	<0.307 :	-	<0.514 :
Aluminum	mg/L	D	<0.426 :	-	<0.631 :	-	<0.307 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.0024 :
Antimony	mg/L	D	<0.0006 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	0.00052 :
Arsenic	mg/L	D	0.0006 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0179 :	-	0.0148 :	-	0.0191 :
Barium	mg/L	D	0.0234 :	-	0.0181 :	-	0.0153 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.00042 :	-	<0.0003 :
Beryllium	mg/L	D	<0.00089 :	-	<0.0003 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0216 :	-	0.0204 :	-	0.0238 :
Boron	mg/L	D	<0.0239 :	-	0.0234 :	-	0.0202 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0007 :	-	<0.0007 J
Cadmium	mg/L	D	<0.0005 :	-	<0.0003 :	-	<0.0007 :	-
Calcium	mg/L	T	-	292. :	-	331. :	-	293. :
Calcium	mg/L	D	324. :	-	295. :	-	327. :	-
Chromium	mg/L	T	-	<0.0006 J	-	<0.0013 J	-	<0.0057 :
Chromium	mg/L	D	<0.0035 :	-	<0.0006 J	-	0.0017 J	-
Cobalt	mg/L	T	-	<0.0018 :	-	<0.0031 :	-	<0.0023 :
Cobalt	mg/L	D	<0.0038 :	-	<0.0018 :	-	<0.0031 :	-
Copper	mg/L	T	-	<0.0014 J	-	<0.002 :	-	0.0038 :
Copper	mg/L	D	0.0034 :	-	0.0032 J	-	<0.002 :	-
Iron	mg/L	T	-	<0.667 :	-	<0.3 :	-	0.507 :
Iron	mg/L	D	<0.422 :	-	<0.667 :	-	<0.3 :	-
Lead	mg/L	T	-	<0.0012 :	-	0.0009 :	-	0.0019 :
Lead	mg/L	D	<0.0002 :	-	<0.00095 :	-	<0.0004 :	-
Magnesium	mg/L	T	-	52.5 :	-	59.4 :	-	53.2 :
Magnesium	mg/L	D	58.6 :	-	53.5 :	-	58.7 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.01 :	-	<0.015 :
Manganese	mg/L	D	<0.013 :	-	<0.019 :	-	<0.01 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0068 J	-	0.008 :	-	0.0118 :
Molybdenum	mg/L	D	0.0221 :	-	0.0119 J	-	0.0063 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5C 4/1/2003 EW-5C-D01N-GRW GW13		EW-5C 7/10/2003 EW-5C-T01N-GRW GW13		EW-5C 7/10/2003 EW-5C-D01N-GRW GW13		EW-5C 10/15/2003 EW-5C-T01N-GRW GW13		EW-5C 10/15/2003 EW-5C-D01N-GRW GW13		EW-5C 1/8/2004 EW-5C-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.002	J	-		<0.0028	:	-		<0.0024	:
Nickel	mg/L	D	<0.003	:	-		0.0122	J	-		<0.0028	:	-	
Potassium	mg/L	T	-		3.34	:	-		2.87	:	-		2.97	:
Potassium	mg/L	D	3.11	:	-		3.09	:	-		3.01	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.0013	:	-		0.0033	J
Selenium	mg/L	D	<0.0026	:	-		<0.0016	J	-		0.0013	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		49.9	:	-		60.	:	-		58.6	:
Sodium	mg/L	D	60.6	:	-		57.5	:	-		60.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00075	:	-		0.00065	:	-		0.0006	:
Vanadium	mg/L	D	0.00069	:	-		0.00082	:	-		0.00058	:	-	
Zinc	mg/L	T	-		<0.016	:	-		<0.02	:	-		0.0657	:
Zinc	mg/L	D	<0.039	:	-		0.0213	:	-		<0.02	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5C	EW-5C	EW-5C	EW-5D	EW-5D	EW-5D
			Sample Date	1/8/2004	4/14/2004	4/14/2004	11/7/2002	11/7/2002	1/8/2003
			Sample ID	EW-5C-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-5D-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	3.04 :	-	3.9 :	-	5.94 :
Eh	millivolts	T		-	330.4 :	-	72.3 :	-	285. :
pH	SU	T		-	7.3 J	-	6.74 :	-	7.13 :
Specific Conductance	uS/cm	T		-	1740. :	-	2036. :	-	3955. :
Temperature	Celsius	T		-	15.27 :	-	14.33 :	-	12.17 :
Turbidity	NTU	T		-	0.1 :	-	2.5 :	-	30. :
General Chemistry									
Ammonia	mg/L	T		-	<0.18 :	-	<0.082 :	-	<0.1 :
Bicarbonate (as CaCO3)	mg/L	T		-	122. :	-	125. :	-	121. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	13.1 :	-	12.5 :	-	11.6 :
Fluoride	mg/L	T		-	0.29 :	-	0.2 :	-	0.23 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.29 J	-	<0.4 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.032 :	-	<0.01 J	-	<0.021 J
Phosphorus	mg/L	T		-	0.038 :	-	0.024 :	-	0.031 :
Sulfate	mg/L	T		-	972. :	-	1480. :	-	1090. J
Total Alkalinity	mg/L	T		-	122. :	-	125. :	-	121. :
Total Dissolved Solids	mg/L	T		-	1530. :	-	1850. :	-	1810. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.27 :
Total Organic Carbon	mg/L	T		-	<2.4 J	-	1.5 :	-	1.4 :
Total Suspended Solids	mg/L	T		-	<0.8 J	-	4. :	-	<1.4 :
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	6.74 :	-	7.13 :
Specific Conductance	umhos/cm	T		-	1510. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1070. :	-	1140. :	-	1150. :
Hardness	mg/L	D		949. :	-	1040. :	-	1120. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5C 1/8/2004 EW-5C-D01N-GRW GW13	EW-5C 4/14/2004 EW-5C-T01N-GRW GW13	EW-5C 4/14/2004 EW-5C-D01N-GRW GW13	EW-5D 11/7/2002 EW-5D-T01N-GRW GW13	EW-5D 11/7/2002 EW-5D-D01N-GRW GW13	EW-5D 1/8/2003 EW-5D-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.176 :	-	0.0719 :	-	<0.142 J
Aluminum	mg/L	D	<0.514 :	-	<0.176 :	-	<0.003 :	-
Antimony	mg/L	T	-	<0.0008 J	-	<0.0002 :	-	<0.0006 :
Antimony	mg/L	D	<0.0024 :	-	<0.0008 J	-	<0.0002 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	0.00022 J	-	<0.0004 :
Arsenic	mg/L	D	0.00047 :	-	<0.0004 :	-	0.00046 J	-
Barium	mg/L	T	-	0.016 :	-	0.0157 :	-	0.0171 :
Barium	mg/L	D	<0.0188 :	-	0.0156 :	-	0.0153 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Beryllium	mg/L	D	<0.0003 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0238 :	-	0.025 :	-	<0.0285 :
Boron	mg/L	D	0.0257 :	-	0.0239 :	-	0.0252 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0001 :	-	<0.0004 :
Cadmium	mg/L	D	<0.0007 :	-	<0.0003 :	-	<0.0001 :	-
Calcium	mg/L	T	-	330. :	-	347. :	-	351. :
Calcium	mg/L	D	292. :	-	322. :	-	342. :	-
Chromium	mg/L	T	-	<0.0015 :	-	<0.0046 :	-	<0.0037 :
Chromium	mg/L	D	<0.0057 :	-	<0.0013 :	-	<0.0046 :	-
Chromium, Hexavalent	mg/L	D	-	-	-	<0.01 :	-	-
Cobalt	mg/L	T	-	<0.0011 :	-	<0.0022 :	-	<0.0016 :
Cobalt	mg/L	D	<0.0023 :	-	<0.0043 :	-	<0.0022 :	-
Copper	mg/L	T	-	0.0095 :	-	0.0099 :	-	0.0212 :
Copper	mg/L	D	<0.003 :	-	<0.0018 :	-	<0.0021 :	-
Iron	mg/L	T	-	<0.192 J	-	0.0368 :	-	<0.489 :
Iron	mg/L	D	<0.373 :	-	<0.192 :	-	<0.0226 :	-
Lead	mg/L	T	-	0.0013 :	-	0.00089 :	-	0.0025 :
Lead	mg/L	D	<0.0002 :	-	<0.0008 :	-	<0.00034 :	-
Magnesium	mg/L	T	-	59.1 :	-	65.2 :	-	66.1 :
Magnesium	mg/L	D	53.2 :	-	57.9 :	-	64.2 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.0025 :	-	<0.005 :
Manganese	mg/L	D	<0.015 :	-	<0.019 :	-	<0.0025 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.204 :	-	0.003 :	-	0.0056 J

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5C	EW-5C	EW-5C	EW-5D	EW-5D	EW-5D
			Sample Date	1/8/2004	4/14/2004	4/14/2004	11/7/2002	11/7/2002	1/8/2003
			Sample ID	EW-5C-D01N-GRW	EW-5C-T01N-GRW	EW-5C-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-5D-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Molybdenum	mg/L	D		0.0088 :	-	0.196 :	-	0.003 :	-
Nickel	mg/L	T		-	<0.0014 :	-	<0.0002 J	-	<0.0015 :
Nickel	mg/L	D		<0.0024 :	-	<0.0014 :	-	<0.0002 J	-
Potassium	mg/L	T		-	3.09 :	-	3.04 :	-	3.02 :
Potassium	mg/L	D		2.87 :	-	3.13 :	-	2.98 :	-
Selenium	mg/L	T		-	<0.0014 :	-	<0.00079 :	-	<0.0016 :
Selenium	mg/L	D		0.0024 :	-	<0.0014 :	-	<0.0019 :	-
Silver	mg/L	T		-	<0.0002 :	-	<0.0001 :	-	<0.0002 :
Silver	mg/L	D		<0.0002 :	-	<0.0002 :	-	<0.0001 :	-
Sodium	mg/L	T		-	70.5 :	-	93.1 :	-	88.9 :
Sodium	mg/L	D		56.9 :	-	68.3 :	-	92.8 :	-
Thallium	mg/L	T		-	<0.0002 :	-	<0.0001 :	-	<0.0002 :
Thallium	mg/L	D		<0.0002 :	-	<0.0002 :	-	<0.0001 :	-
Vanadium	mg/L	T		-	0.0011 :	-	0.00057 :	-	0.0008 :
Vanadium	mg/L	D		0.00053 :	-	0.0011 :	-	0.0006 :	-
Zinc	mg/L	T		-	0.0263 :	-	0.0147 :	-	0.0531 :
Zinc	mg/L	D		0.0658 :	-	<0.015 :	-	0.0093 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5D	EW-5D	EW-5D	EW-5D	EW-5D	EW-5D
			Sample Date	1/8/2003	4/1/2003	4/1/2003	7/9/2003	7/9/2003	10/16/2003
			Sample ID	EW-5D-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-5D-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	4.98 :	-	3.71 :	-	3.74 :
Eh	millivolts	T		-	250.3 :	-	423.7 :	-	280.7 :
pH	SU	T		-	7.6 J	-	7.2 J	-	7.3 J
Specific Conductance	uS/cm	T		-	2010. :	-	2096. :	-	-
Temperature	Celsius	T		-	13.17 :	-	14.81 :	-	13.21 :
Turbidity	NTU	T		-	0. :	-	1.4 :	-	0.4 :
General Chemistry									
Ammonia	mg/L	T		-	<0.15 :	-	<0.1 J	-	<0.051 J
Bicarbonate (as CaCO3)	mg/L	T		-	123. :	-	124. :	-	130. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	<0.4 :	-	11.3 :	-	11.9 :
Fluoride	mg/L	T		-	0.21 :	-	0.21 :	-	0.2 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 :	-	<0.4 J	-	<0.2 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.39 J	-	<0.044 :	-	<0.013 :
Phosphorus	mg/L	T		-	0.031 J	-	0.03 :	-	0.021 :
Sulfate	mg/L	T		-	1110. J	-	968. J	-	<1100. J
Total Alkalinity	mg/L	T		-	123. :	-	124. :	-	130. :
Total Dissolved Solids	mg/L	T		-	1960. :	-	1800. :	-	1750. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.9 J	-	<1.1 J	-	1.1 J
Total Suspended Solids	mg/L	T		-	<3. :	-	3.4 :	-	<1.9 :
Laboratory Parameters									
pH	SU	T		-	7.6 J	-	7.2 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1920. J	-	1890. J	-	1760. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1130. :	-	1120. :	-	1110. :
Hardness	mg/L	D		1150. :	-	1140. :	-	1120. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	EW-5D 1/8/2003 EW-5D-D01N-GRW GW13		EW-5D 4/1/2003 EW-5D-T01N-GRW GW13		EW-5D 4/1/2003 EW-5D-D01N-GRW GW13		EW-5D 7/9/2003 EW-5D-T01N-GRW GW13		EW-5D 7/9/2003 EW-5D-D01N-GRW GW13		EW-5D 10/16/2003 EW-5D-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.426	:	-		0.499	:	-		<0.221	:
Aluminum	mg/L	D	<0.142	J	-		<0.426	:	-		<0.236	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.016	:	-		0.0181	:	-		0.0147	:
Barium	mg/L	D	0.0152	:	-		0.0155	:	-		0.0154	:	-	
Beryllium	mg/L	T	-		<0.00035	:	-		<0.0002	:	-		<0.0004	:
Beryllium	mg/L	D	<0.0002	:	-		<0.00035	:	-		<0.0002	:	-	
Boron	mg/L	T	-		<0.0264	:	-		0.029	:	-		0.0303	:
Boron	mg/L	D	<0.0281	:	-		<0.0263	:	-		0.0288	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0006	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0004	:	-		<0.0005	:	-		<0.0006	:	-	
Calcium	mg/L	T	-		342.	:	-		343.	:	-		338.	:
Calcium	mg/L	D	350.	:	-		346.	:	-		342.	:	-	
Chromium	mg/L	T	-		<0.0025	:	-		<0.0015	:	-		0.0015	J
Chromium	mg/L	D	<0.0037	:	-		<0.0013	:	-		<0.0014	:	-	
Cobalt	mg/L	T	-		<0.0038	:	-		<0.002	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0038	:	-		<0.002	:	-	
Copper	mg/L	T	-		0.0105	:	-		0.0192	:	-		0.011	:
Copper	mg/L	D	<0.0031	:	-		0.0017	:	-		<0.0024	:	-	
Iron	mg/L	T	-		<0.422	:	-		0.75	:	-		0.56	:
Iron	mg/L	D	<0.489	:	-		<0.422	:	-		<0.333	:	-	
Lead	mg/L	T	-		0.00069	:	-		<0.0023	:	-		0.00097	:
Lead	mg/L	D	0.00064	:	-		0.00023	:	-		<0.00045	:	-	
Magnesium	mg/L	T	-		66.1	:	-		65.2	:	-		63.9	:
Magnesium	mg/L	D	65.9	:	-		66.4	:	-		65.	:	-	
Manganese	mg/L	T	-		<0.013	:	-		<0.007	:	-		<0.012	:
Manganese	mg/L	D	<0.005	:	-		<0.013	:	-		<0.007	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.014	J	-		<0.0017	:	-		<0.0033	:
Molybdenum	mg/L	D	0.0014	J	-		0.0309	J	-		0.0031	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	EW-5D 1/8/2003 EW-5D-D01N-GRW GW13	EW-5D 4/1/2003 EW-5D-T01N-GRW GW13	EW-5D 4/1/2003 EW-5D-D01N-GRW GW13	EW-5D 7/9/2003 EW-5D-T01N-GRW GW13	EW-5D 7/9/2003 EW-5D-D01N-GRW GW13	EW-5D 10/16/2003 EW-5D-T01N-GRW GW13
Nickel	mg/L	T	-	<0.003 :	-	<0.0021 :	-	<0.0024 :
Nickel	mg/L	D	<0.0015 :	-	<0.003 :	-	<0.0021 :	-
Potassium	mg/L	T	-	2.56 :	-	0.86 J	-	2.44 :
Potassium	mg/L	D	2.95 :	-	2.56 :	-	0.7 J	-
Selenium	mg/L	T	-	<0.0011 :	-	<0.0016 :	-	0.0007 :
Selenium	mg/L	D	<0.0016 :	-	<0.0011 :	-	<0.0016 J	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 J	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 J	-
Sodium	mg/L	T	-	87.2 :	-	83.2 :	-	87.9 :
Sodium	mg/L	D	88.6 :	-	85.4 :	-	90.1 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00075 :	-	0.001 :	-	0.00063 :
Vanadium	mg/L	D	0.00062 :	-	0.00062 :	-	0.0005 :	-
Zinc	mg/L	T	-	<0.039 :	-	<0.0467 :	-	0.0305 :
Zinc	mg/L	D	<0.039 :	-	<0.039 :	-	<0.0251 :	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-5D	EW-5D	EW-5D	EW-5D	EW-5D	EW-6(MW-3)
			Sample Date	10/16/2003	1/8/2004	1/8/2004	4/14/2004	4/14/2004	11/7/2002
			Sample ID	EW-5D-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-5D-T01N-GRW	EW-5D-D01N-GRW	EW-6-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	0.91 :	-	4.92 :	-	-
Eh	millivolts	T		-	160.2 :	-	220.1 :	-	-
pH	SU	T		-	7.3 J	-	7.4 J	-	-
Specific Conductance	uS/cm	T		-	1954. :	-	1919. :	-	-
Temperature	Celsius	T		-	11.31 :	-	14.12 :	-	-
Turbidity	NTU	T		-	0.6 :	-	0. :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.049 J	-	<0.04 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	123. :	-	122. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	12.3 :	-	13. :	-	-
Fluoride	mg/L	T		-	0.2 :	-	0.25 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.23 J	-	0.27 J	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	0.017 J	-	-
Phosphorus	mg/L	T		-	<0.016 :	-	0.023 :	-	-
Sulfate	mg/L	T		-	1010. :	-	962. :	-	-
Total Alkalinity	mg/L	T		-	123. :	-	122. :	-	-
Total Dissolved Solids	mg/L	T		-	1740. :	-	1700. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1.9 :	-	<2.2 J	-	-
Total Suspended Solids	mg/L	T		-	<1.6 :	-	<1.4 J	-	-
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.4 J	-	-
Specific Conductance	umhos/cm	T		-	1920. J	-	1640. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		-	1140. :	-	1160. :	-	-
Hardness	mg/L	D		1110. :	-	1060. :	-	1140. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5D 10/16/2003 EW-5D-D01N-GRW GW13	EW-5D 1/8/2004 EW-5D-T01N-GRW GW13	EW-5D 1/8/2004 EW-5D-D01N-GRW GW13	EW-5D 4/14/2004 EW-5D-T01N-GRW GW13	EW-5D 4/14/2004 EW-5D-D01N-GRW GW13	EW-6(MW-3) 11/7/2002 EW-6-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.514 :	-	<0.201 :	-	-
Aluminum	mg/L	D	<0.221 :	-	<0.514 :	-	<0.201 :	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.0008 :	-	-
Antimony	mg/L	D	<0.001 :	-	<0.0024 :	-	0.00081 :	-
Arsenic	mg/L	T	-	0.0005 :	-	<0.0004 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	0.00057 :	-	<0.0004 :	-
Barium	mg/L	T	-	<0.0188 :	-	0.0148 :	-	-
Barium	mg/L	D	0.0147 :	-	<0.0188 :	-	0.0141 :	-
Beryllium	mg/L	T	-	<0.0003 :	-	<0.0005 :	-	-
Beryllium	mg/L	D	<0.0004 :	-	<0.0003 :	-	<0.0005 :	-
Boron	mg/L	T	-	0.0347 :	-	0.0263 :	-	-
Boron	mg/L	D	0.0295 :	-	0.0321 :	-	0.0265 :	-
Cadmium	mg/L	T	-	<0.0007 J	-	<0.001 :	-	-
Cadmium	mg/L	D	<0.0005 :	-	<0.0007 :	-	<0.001 J	-
Calcium	mg/L	T	-	348. :	-	352. :	-	-
Calcium	mg/L	D	340. :	-	324. :	-	345. :	-
Chromium	mg/L	T	-	<0.0057 :	-	<0.00095 J	-	-
Chromium	mg/L	D	<0.0011 J	-	<0.0057 :	-	0.00081 J	-
Chromium, Hexavalent	mg/L	D	-	-	-	-	-	<0.01 :
Cobalt	mg/L	T	-	<0.0023 :	-	<0.0011 J	-	-
Cobalt	mg/L	D	<0.0029 :	-	<0.0023 :	-	<0.004 J	-
Copper	mg/L	T	-	0.0052 :	-	<0.0027 J	-	-
Copper	mg/L	D	<0.0022 :	-	<0.003 :	-	<0.0027 J	-
Iron	mg/L	T	-	0.382 :	-	<0.293 J	-	-
Iron	mg/L	D	0.464 :	-	<0.373 :	-	<0.293 :	-
Lead	mg/L	T	-	0.0013 :	-	<0.0008 :	-	-
Lead	mg/L	D	0.00078 :	-	0.00025 :	-	<0.0008 :	-
Magnesium	mg/L	T	-	66.6 :	-	69. :	-	-
Magnesium	mg/L	D	64. :	-	62.1 :	-	67.6 :	-
Manganese	mg/L	T	-	<0.015 :	-	<0.014 :	-	-
Manganese	mg/L	D	<0.012 :	-	<0.015 :	-	<0.014 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0033 :	-	<0.0039 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-5D 10/16/2003 EW-5D-D01N-GRW GW13		EW-5D 1/8/2004 EW-5D-T01N-GRW GW13		EW-5D 1/8/2004 EW-5D-D01N-GRW GW13		EW-5D 4/14/2004 EW-5D-T01N-GRW GW13		EW-5D 4/14/2004 EW-5D-D01N-GRW GW13		EW-6(MW-3) 11/7/2002 EW-6-T01N-GRW GW13	
Molybdenum	mg/L	D	<0.0019	:	-		0.0035	:	-		<0.0046	:	-	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0033	:	-		-	
Nickel	mg/L	D	<0.0024	:	-		<0.0024	:	-		<0.0033	:	-	
Potassium	mg/L	T	-		2.72	:	-		<2.88	:	-		-	
Potassium	mg/L	D	2.44	:	-		2.58	:	-		<3.06	:	-	
Selenium	mg/L	T	-		0.0015	J	-		<0.0014	:	-		-	
Selenium	mg/L	D	0.00077	:	-		0.0015	:	-		<0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		89.6	:	-		92.8	:	-		-	
Sodium	mg/L	D	86.2	:	-		81.1	:	-		85.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00056	:	-		0.00082	:	-		-	
Vanadium	mg/L	D	0.00047	:	-		0.00061	:	-		0.00085	:	-	
Zinc	mg/L	T	-		<0.026	:	-		<0.024	:	-		-	
Zinc	mg/L	D	0.0289	:	-		<0.026	:	-		<0.024	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: EW-6(MW-3)		Site ID: EW-6(MW-3)		Site ID: EW-6(MW-3)		Site ID: EW-6(MW-3)		Site ID: EW-6(MW-3)	
		Sample Date	11/7/2002		11/7/2002		12/2/2002		1/8/2003		1/8/2003		2/5/2003	
		Sample ID	EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-D01N-GRW		EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-D01N-GRW		EW-6(MW-3)-T01N-GRW	
			GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements														
DO	mg/L	T	8.6	:	-		8.23	:	7.47	:	-		3.63	:
Eh	millivolts	T	71.3	:	-		256.3	:	301.1	:	-		259.6	:
pH	SU	T	6.78	:	-		7.3	:	7.09	:	-		7.12	:
Specific Conductance	uS/cm	T	1667.	:	-		1693.	:	3132.	:	-		1581.	:
Temperature	Celsius	T	13.19	:	-		12.15	:	12.87	:	-		12.55	:
Turbidity	NTU	T	13.9	:	-		25.6	:	30.6	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	<0.11	:	-		-		<0.1	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	182.	:	-		-		176.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	16.7	:	-		-		15.4	:	-		-	
Fluoride	mg/L	T	0.43	:	-		-		0.43	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.4	J	-		-		<0.59	J	-		-	
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	0.016	J	-		-		<0.027	J	-		-	
Phosphorus	mg/L	T	0.074	:	-		-		0.027	:	-		-	
Sulfate	mg/L	T	948.	:	-		-		738.	J	-		-	
Total Alkalinity	mg/L	T	182.	:	-		-		176.	:	-		-	
Total Dissolved Solids	mg/L	T	1400.	:	-		-		1300.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.27	:	-		-	
Total Organic Carbon	mg/L	T	1.9	:	-		-		1.5	:	-		-	
Total Suspended Solids	mg/L	T	2.1	:	-		-		<3.5	J	-		-	
Laboratory Parameters														
pH	SU	T	6.78	:	-		7.3	:	7.09	:	-		7.12	:
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	879.	:	-		-		846.	:	-		-	
Hardness	mg/L	D	-		874.	:	-		-		820.	:	-	
Metals														
Aluminum	mg/L	T	<0.0044	:	-		-		<0.142	J	-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-6(MW-3) 11/7/2002 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 11/7/2002 EW-6(MW-3)-D01N-GRW GW13	EW-6(MW-3) 12/2/2002 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 1/8/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 1/8/2003 EW-6(MW-3)-D01N-GRW GW13	EW-6(MW-3) 2/5/2003 EW-6(MW-3)-T01N-GRW GW13
Aluminum	mg/L	D	-	<0.003 :	-	-	<0.142 J	-
Antimony	mg/L	T	<0.0002 :	-	-	<0.0006 :	-	-
Antimony	mg/L	D	-	<0.0002 :	-	-	<0.0006 :	-
Arsenic	mg/L	T	0.00065 J	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	-	0.00039 J	-	-	0.00044 :	-
Barium	mg/L	T	0.029 :	-	-	0.0269 :	-	-
Barium	mg/L	D	-	0.0283 :	-	-	0.0273 :	-
Beryllium	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Beryllium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Boron	mg/L	T	0.0541 :	-	-	0.057 :	-	-
Boron	mg/L	D	-	0.0527 :	-	-	0.057 :	-
Cadmium	mg/L	T	<0.0001 :	-	-	<0.0004 :	-	-
Cadmium	mg/L	D	-	0.00013 J	-	-	<0.0004 :	-
Calcium	mg/L	T	269. :	-	-	259. :	-	-
Calcium	mg/L	D	-	268. :	-	-	251. :	-
Chromium	mg/L	T	<0.0046 :	-	-	<0.0037 :	-	-
Chromium	mg/L	D	-	<0.0046 :	-	-	<0.0037 :	-
Cobalt	mg/L	T	<0.0022 :	-	-	<0.0016 :	-	-
Cobalt	mg/L	D	-	<0.0022 :	-	-	<0.0016 :	-
Copper	mg/L	T	0.0057 :	-	-	<0.0038 :	-	-
Copper	mg/L	D	-	0.0058 :	-	-	<0.0017 :	-
Iron	mg/L	T	0.35 :	-	-	<0.489 :	-	-
Iron	mg/L	D	-	0.038 :	-	-	<0.489 :	-
Lead	mg/L	T	0.00079 :	-	-	0.00072 :	-	-
Lead	mg/L	D	-	0.00018 :	-	-	0.00033 :	-
Magnesium	mg/L	T	50.3 :	-	-	48.8 :	-	-
Magnesium	mg/L	D	-	49.9 :	-	-	46.9 :	-
Manganese	mg/L	T	<0.0025 :	-	-	<0.005 :	-	-
Manganese	mg/L	D	-	<0.0025 :	-	-	<0.005 J	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T	0.0063 :	-	-	0.0053 J	-	-
Molybdenum	mg/L	D	-	0.006 :	-	-	0.0051 :	-
Nickel	mg/L	T	<0.0002 J	-	-	<0.0015 :	-	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)
		Sample Date:	11/7/2002	11/7/2002	12/2/2002	1/8/2003	1/8/2003	2/5/2003
		Sample ID:	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW
			GW13	GW13	GW13	GW13	GW13	GW13
Nickel	mg/L	D	-	<0.0002 J	-	-	<0.0015 :	-
Potassium	mg/L	T	1.96 :	-	-	1.89 :	-	-
Potassium	mg/L	D	-	1.94 :	-	-	1.84 :	-
Selenium	mg/L	T	<0.0024 J	-	-	<0.0016 :	-	-
Selenium	mg/L	D	-	<0.0018 :	-	-	0.002 :	-
Silver	mg/L	T	<0.0001 :	-	-	<0.0002 :	-	-
Silver	mg/L	D	-	<0.0001 :	-	-	<0.0002 :	-
Sodium	mg/L	T	77.9 :	-	-	73.1 :	-	-
Sodium	mg/L	D	-	76.8 :	-	-	74.4 :	-
Thallium	mg/L	T	<0.0001 :	-	-	<0.0002 :	-	-
Thallium	mg/L	D	-	<0.0001 :	-	-	<0.0002 :	-
Vanadium	mg/L	T	0.0013 :	-	-	0.001 :	-	-
Vanadium	mg/L	D	-	0.00078 :	-	-	0.001 :	-
Zinc	mg/L	T	0.0124 :	-	-	<0.039 :	-	-
Zinc	mg/L	D	-	0.0123 :	-	-	<0.039 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)
			Sample Date	3/4/2003	4/1/2003	4/1/2003	5/8/2003	6/4/2003	7/9/2003
			Sample ID	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		9.03 :	7.27 :	-	7.92 :	9.02 :	8.55 :
Eh	millivolts	T		295.2 :	299.4 :	-	230.5 :	419.2 :	264.3 :
pH	SU	T		6.83 :	7.6 :	-	7.14 :	6.4 :	7.4 J
Specific Conductance	uS/cm	T		1546. :	1624. :	-	1650. :	1616. :	1617. :
Temperature	Celsius	T		11.01 :	13.4 :	-	13.2 :	14.26 :	17.86 :
Turbidity	NTU	T		0. :	0.4 :	-	12.9 :	0.4 :	2.5 :
General Chemistry									
Ammonia	mg/L	T		-	<0.047 :	-	-	-	<0.12 J
Bicarbonate (as CaCO3)	mg/L	T		-	182. :	-	-	-	182. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Chloride	mg/L	T		-	15.3 :	-	-	-	14.3 :
Fluoride	mg/L	T		-	0.45 :	-	-	-	0.46 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T		-	<0.57 J	-	-	-	0.58 J
Nitrite	mg/L	T		-	<0.005 J	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.02 J	-	-	-	<0.023 J
Phosphorus	mg/L	T		-	0.058 :	-	-	-	0.021 :
Sulfate	mg/L	T		-	848. J	-	-	-	607. J
Total Alkalinity	mg/L	T		-	182. :	-	-	-	182. :
Total Dissolved Solids	mg/L	T		-	1270. :	-	-	-	1300. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.6 J	-	-	-	<2.3 J
Total Suspended Solids	mg/L	T		-	<8.1 :	-	-	-	4. :
Laboratory Parameters									
pH	SU	T		6.83 :	7.6 :	-	7.14 :	6.4 :	7.4 J
Specific Conductance	umhos/cm	T		-	1500. :	-	-	-	1420. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	916. :	-	-	-	812. :
Hardness	mg/L	D		-	-	884. :	-	-	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-6(MW-3) 3/4/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 4/1/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 4/1/2003 EW-6(MW-3)-D01N-GRW GW13	EW-6(MW-3) 5/8/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 6/4/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 7/9/2003 EW-6(MW-3)-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.503 :	-	-	-	<0.631 :
Aluminum	mg/L	D	-	-	<0.503 :	-	-	-
Antimony	mg/L	T	-	<0.0006 J	-	-	-	<0.001 :
Antimony	mg/L	D	-	-	<0.0006 J	-	-	-
Arsenic	mg/L	T	-	0.0025 :	-	-	-	<0.0004 :
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	-
Barium	mg/L	T	-	0.0341 :	-	-	-	0.0249 :
Barium	mg/L	D	-	-	0.0278 :	-	-	-
Beryllium	mg/L	T	-	<0.0003 J	-	-	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0003 J	-	-	-
Boron	mg/L	T	-	0.0545 :	-	-	-	0.0563 :
Boron	mg/L	D	-	-	0.0612 :	-	-	-
Cadmium	mg/L	T	-	<0.0005 J	-	-	-	<0.0006 :
Cadmium	mg/L	D	-	-	<0.0005 J	-	-	-
Calcium	mg/L	T	-	279. :	-	-	-	248. :
Calcium	mg/L	D	-	-	270. :	-	-	-
Chromium	mg/L	T	-	0.0125 :	-	-	-	0.0023 :
Chromium	mg/L	D	-	-	<0.0021 :	-	-	-
Cobalt	mg/L	T	-	<0.0038 :	-	-	-	<0.002 :
Cobalt	mg/L	D	-	-	<0.0038 :	-	-	-
Copper	mg/L	T	-	0.0162 :	-	-	-	<0.0024 J
Copper	mg/L	D	-	-	<0.0015 :	-	-	-
Iron	mg/L	T	-	4.93 :	-	-	-	<0.667 :
Iron	mg/L	D	-	-	<0.311 :	-	-	-
Lead	mg/L	T	-	0.0028 :	-	-	-	<0.0016 :
Lead	mg/L	D	-	-	0.00031 :	-	-	-
Magnesium	mg/L	T	-	53.1 :	-	-	-	46.8 :
Magnesium	mg/L	D	-	-	51.3 :	-	-	-
Manganese	mg/L	T	-	<0.01 :	-	-	-	<0.019 :
Manganese	mg/L	D	-	-	<0.01 :	-	-	-
Mercury	mg/L	T	-	<0.0001 :	-	-	-	<0.0001 J
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	-	<0.0049 :	-	-	-	0.0061 :
Molybdenum	mg/L	D	-	-	0.007 :	-	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)		EW-6(MW-3)		EW-6(MW-3)		EW-6(MW-3)		EW-6(MW-3)		EW-6(MW-3)	
			Sample Date	3/4/2003		4/1/2003		4/1/2003		5/8/2003		6/4/2003		7/9/2003	
			Sample ID	EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-D01N-GRW		EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-T01N-GRW		EW-6(MW-3)-T01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Nickel	mg/L	T		-		<0.003	:	-		-		-		<0.0021	:
Nickel	mg/L	D		-		-		<0.003	:	-		-		-	
Potassium	mg/L	T		-		1.8	:	-		-		-		1.72	:
Potassium	mg/L	D		-		-		1.89	:	-		-		-	
Selenium	mg/L	T		-		0.0017	:	-		-		-		<0.0016	:
Selenium	mg/L	D		-		-		0.0018	:	-		-		-	
Silver	mg/L	T		-		0.001	:	-		-		-		<0.0002	J
Silver	mg/L	D		-		-		<0.0002	:	-		-		-	
Sodium	mg/L	T		-		76.7	:	-		-		-		77.5	:
Sodium	mg/L	D		-		-		76.	:	-		-		-	
Thallium	mg/L	T		-		<0.0002	:	-		-		-		<0.0002	:
Thallium	mg/L	D		-		-		<0.0002	:	-		-		-	
Vanadium	mg/L	T		-		0.0057	:	-		-		-		0.00084	:
Vanadium	mg/L	D		-		-		0.00088	:	-		-		-	
Zinc	mg/L	T		-		<0.0772	:	-		-		-		<0.0357	:
Zinc	mg/L	D		-		-		<0.0633	:	-		-		-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)
			Sample Date	7/9/2003	8/9/2003	9/6/2003	10/16/2003	10/16/2003	10/16/2003
			Sample ID	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6-T01N-GRW	EW-6-D01N-GRW	EW-6(MW-3)-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	8.15 :	9.13 :	-	-	9.01 :
Eh	millivolts	T		-	225.7 :	252. :	-	-	349.1 :
pH	SU	T		-	6.73 :	6.84 :	7.3 J	-	7.1 :
Specific Conductance	uS/cm	T		-	1204. :	1407. :	-	-	1594. :
Temperature	Celsius	T		-	13.81 :	13.46 :	-	-	13.58 :
Turbidity	NTU	T		-	0. :	0.1 :	-	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	-	-	<0.045 J	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	-	181. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Chloride	mg/L	T		-	-	-	14.9 :	-	-
Fluoride	mg/L	T		-	-	-	0.43 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	-	-	<1. :	-	-
Nitrate	mg/L	T		-	-	-	0.37 :	-	-
Nitrite	mg/L	T		-	-	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	-	-	<0.022 :	-	-
Phosphorus	mg/L	T		-	-	-	0.02 :	-	-
Sulfate	mg/L	T		-	-	-	<774. J	-	-
Total Alkalinity	mg/L	T		-	-	-	181. :	-	-
Total Dissolved Solids	mg/L	T		-	-	-	1420. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	-	-	1.5 J	-	-
Total Suspended Solids	mg/L	T		-	-	-	2.4 :	-	-
Laboratory Parameters									
pH	SU	T		-	6.73 :	6.84 :	7.3 J	-	7.1 :
Specific Conductance	umhos/cm	T		-	-	-	1370. J	-	-
Inorganics									
Cyanide	mg/L	T		-	-	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	-	-	820. :	-	-
Hardness	mg/L	D		772. :	-	-	-	825. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)
			Sample Date	7/9/2003	8/9/2003	9/6/2003	10/16/2003	10/16/2003	10/16/2003
			Sample ID	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6-T01N-GRW	EW-6-D01N-GRW	EW-6(MW-3)-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T		-	-	-	<0.221 :	-	-
Aluminum	mg/L	D		<0.631 :	-	-	-	<0.221 :	-
Antimony	mg/L	T		-	-	-	<0.001 :	-	-
Antimony	mg/L	D		<0.001 :	-	-	-	<0.001 :	-
Arsenic	mg/L	T		-	-	-	<0.0004 :	-	-
Arsenic	mg/L	D		<0.0004 :	-	-	-	<0.0004 :	-
Barium	mg/L	T		-	-	-	0.0259 :	-	-
Barium	mg/L	D		0.0244 :	-	-	-	0.0255 :	-
Beryllium	mg/L	T		-	-	-	<0.0004 :	-	-
Beryllium	mg/L	D		<0.0002 :	-	-	-	<0.0004 :	-
Boron	mg/L	T		-	-	-	0.0551 :	-	-
Boron	mg/L	D		0.0526 :	-	-	-	0.0545 :	-
Cadmium	mg/L	T		-	-	-	<0.0005 :	-	-
Cadmium	mg/L	D		<0.0006 :	-	-	-	<0.0005 :	-
Calcium	mg/L	T		-	-	-	251. :	-	-
Calcium	mg/L	D		236. :	-	-	-	252. :	-
Chromium	mg/L	T		-	-	-	0.0024 J	-	-
Chromium	mg/L	D		0.0025 :	-	-	-	0.0025 J	-
Cobalt	mg/L	T		-	-	-	<0.0029 :	-	-
Cobalt	mg/L	D		<0.002 :	-	-	-	<0.0029 :	-
Copper	mg/L	T		-	-	-	0.0051 :	-	-
Copper	mg/L	D		0.0139 J	-	-	-	0.0023 :	-
Iron	mg/L	T		-	-	-	0.389 :	-	-
Iron	mg/L	D		<0.667 :	-	-	-	0.555 :	-
Lead	mg/L	T		-	-	-	0.00069 :	-	-
Lead	mg/L	D		<0.0019 :	-	-	-	0.00043 :	-
Magnesium	mg/L	T		-	-	-	47.1 :	-	-
Magnesium	mg/L	D		44.6 :	-	-	-	47.4 :	-
Manganese	mg/L	T		-	-	-	<0.012 :	-	-
Manganese	mg/L	D		<0.019 :	-	-	-	<0.012 :	-
Mercury	mg/L	T		-	-	-	<0.0001 :	-	-
Mercury	mg/L	D		<0.0001 J	-	-	-	<0.0001 :	-
Molybdenum	mg/L	T		-	-	-	<0.0079 :	-	-
Molybdenum	mg/L	D		0.0065 :	-	-	-	<0.0081 :	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)
			Sample Date	7/9/2003	8/9/2003	9/6/2003	10/16/2003	10/16/2003	10/16/2003
			Sample ID	EW-6(MW-3)-D01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6(MW-3)-T01N-GRW	EW-6-T01N-GRW	EW-6-D01N-GRW	EW-6(MW-3)-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Nickel	mg/L	T		-	-	-	<0.0024 :	-	-
Nickel	mg/L	D		<0.0021 :	-	-	-	<0.0024 :	-
Potassium	mg/L	T		-	-	-	1.66 :	-	-
Potassium	mg/L	D		1.64 :	-	-	-	1.58 :	-
Selenium	mg/L	T		-	-	-	0.0013 :	-	-
Selenium	mg/L	D		<0.0016 J	-	-	-	0.00093 :	-
Silver	mg/L	T		-	-	-	<0.0002 :	-	-
Silver	mg/L	D		<0.0002 J	-	-	-	<0.0002 :	-
Sodium	mg/L	T		-	-	-	75.7 :	-	-
Sodium	mg/L	D		72.7 :	-	-	-	75.7 :	-
Thallium	mg/L	T		-	-	-	<0.0002 :	-	-
Thallium	mg/L	D		<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T		-	-	-	0.00089 :	-	-
Vanadium	mg/L	D		0.00072 :	-	-	-	0.0009 :	-
Zinc	mg/L	T		-	-	-	<0.023 :	-	-
Zinc	mg/L	D		<0.0371 :	-	-	-	<0.023 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	EW-6(MW-3)	Hunts Pond Well
			Sample Date	11/1/2003	12/6/2003	1/8/2004	1/8/2004	1/8/2004	5/12/2004
			Sample ID	EW-6(MW-3)-T01N-GRW	EW-6-T01N-GRW	EW-6-T01N-GRW	EW-6-D01N-GRW	EW-6(MW-3)-T01N-GRW	HUNT-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		7.3 :	7.83 :	-	-	6.69 :	-
Eh	millivolts	T		250.8 :	235.6 :	-	-	191.4 :	-
pH	SU	T		6.61 :	7.03 :	7.5 J	-	7.33 :	6.9 J
Specific Conductance	uS/cm	T		1500. :	1413. :	-	-	988. :	-
Temperature	Celsius	T		12.66 :	12.06 :	-	-	10.74 :	-
Turbidity	NTU	T		0. :	0.2 :	-	-	1.1 :	-
General Chemistry									
Ammonia	mg/L	T		-	-	<0.066 J	-	-	<0.077 :
Bicarbonate (as CaCO3)	mg/L	T		-	-	181. :	-	-	66.2 :
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	-	<1. :
Chloride	mg/L	T		-	-	14.8 :	-	-	7. :
Fluoride	mg/L	T		-	-	0.44 :	-	-	1.4 :
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T		-	-	<0.45 J	-	-	0.27 J
Nitrite	mg/L	T		-	-	<0.005 J	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	-	<0.026 J	-	-	0.011 J
Phosphorus	mg/L	T		-	-	<0.022 :	-	-	0.018 :
Sulfate	mg/L	T		-	-	649. :	-	-	217. :
Total Alkalinity	mg/L	T		-	-	181. :	-	-	66.2 :
Total Dissolved Solids	mg/L	T		-	-	1240. :	-	-	346. :
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T		-	-	<1.5 :	-	-	1.8 :
Total Suspended Solids	mg/L	T		-	-	5.5 :	-	-	0.6 :
Laboratory Parameters									
pH	SU	T		6.61 :	7.03 :	7.5 J	-	7.33 :	6.9 J
Specific Conductance	umhos/cm	T		-	-	1470. J	-	-	482. J
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	-	773. :	-	-	253. :
Hardness	mg/L	D		-	-	-	735. :	-	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-6(MW-3) 11/1/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 12/6/2003 EW-6-T01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6-T01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6-D01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6(MW-3)-T01N-GRW GW13	Hunts Pond Well 5/12/2004 HUNT-T01N-GRW GW13
Aluminum	mg/L	T	-	-	<0.514 :	-	-	<0.201 :
Aluminum	mg/L	D	-	-	-	<0.514 :	-	-
Antimony	mg/L	T	-	-	<0.0024 :	-	-	<0.0008 :
Antimony	mg/L	D	-	-	-	<0.0024 :	-	-
Arsenic	mg/L	T	-	-	0.00049 :	-	-	<0.0004 :
Arsenic	mg/L	D	-	-	-	0.00048 :	-	-
Barium	mg/L	T	-	-	0.0271 :	-	-	0.0329 :
Barium	mg/L	D	-	-	-	0.0275 :	-	-
Beryllium	mg/L	T	-	-	<0.0003 :	-	-	<0.00085 :
Beryllium	mg/L	D	-	-	-	<0.0003 :	-	-
Boron	mg/L	T	-	-	0.0595 :	-	-	0.0088 J
Boron	mg/L	D	-	-	-	0.0627 :	-	-
Cadmium	mg/L	T	-	-	<0.0007 J	-	-	<0.0003 :
Cadmium	mg/L	D	-	-	-	<0.0007 :	-	-
Calcium	mg/L	T	-	-	235. :	-	-	78. :
Calcium	mg/L	D	-	-	-	224. :	-	-
Chromium	mg/L	T	-	-	<0.0057 :	-	-	<0.0006 :
Chromium	mg/L	D	-	-	-	<0.0057 :	-	-
Cobalt	mg/L	T	-	-	<0.0023 :	-	-	<0.0016 :
Cobalt	mg/L	D	-	-	-	0.005 :	-	-
Copper	mg/L	T	-	-	0.0048 :	-	-	<0.0014 :
Copper	mg/L	D	-	-	-	<0.003 :	-	-
Iron	mg/L	T	-	-	<0.373 :	-	-	<0.293 :
Iron	mg/L	D	-	-	-	<0.373 :	-	-
Lead	mg/L	T	-	-	0.002 :	-	-	<0.0008 :
Lead	mg/L	D	-	-	-	<0.00048 :	-	-
Magnesium	mg/L	T	-	-	45.2 :	-	-	14. :
Magnesium	mg/L	D	-	-	-	42.8 :	-	-
Manganese	mg/L	T	-	-	<0.015 :	-	-	<0.014 :
Manganese	mg/L	D	-	-	-	<0.015 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	0.0078 :	-	-	0.0362 :
Molybdenum	mg/L	D	-	-	-	0.0084 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EW-6(MW-3) 11/1/2003 EW-6(MW-3)-T01N-GRW GW13	EW-6(MW-3) 12/6/2003 EW-6-T01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6-T01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6-D01N-GRW GW13	EW-6(MW-3) 1/8/2004 EW-6(MW-3)-T01N-GRW GW13	Hunts Pond Well 5/12/2004 HUNT-T01N-GRW GW13
Nickel	mg/L	T	-	-	<0.0024 :	-	-	<0.0015 J
Nickel	mg/L	D	-	-	-	<0.0024 :	-	-
Potassium	mg/L	T	-	-	1.79 :	-	-	3.02 :
Potassium	mg/L	D	-	-	-	1.76 :	-	-
Selenium	mg/L	T	-	-	<0.0025 J	-	-	<0.0014 :
Selenium	mg/L	D	-	-	-	0.0025 :	-	-
Silver	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Silver	mg/L	D	-	-	-	<0.0002 :	-	-
Sodium	mg/L	T	-	-	71.2 :	-	-	13. :
Sodium	mg/L	D	-	-	-	68.5 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	<0.0002 :
Thallium	mg/L	D	-	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	0.00079 :	-	-	<0.0004 :
Vanadium	mg/L	D	-	-	-	0.00062 :	-	-
Zinc	mg/L	T	-	-	<0.026 :	-	-	<0.024 :
Zinc	mg/L	D	-	-	-	<0.026 :	-	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Hunts Pond Well Sample Date: 5/12/2004 Sample ID: HUNT-D01N-GRW GW13		Site ID: LS-1 Sample Date: 11/6/2002 Sample ID: LS1-T01N-GRW GW13		Site ID: LS-1 Sample Date: 11/6/2002 Sample ID: LS1-D01N-GRW GW13		Site ID: LS-1 Sample Date: 1/12/2003 Sample ID: LS-1-T01N-GRW GW13		Site ID: LS-1 Sample Date: 1/12/2003 Sample ID: LS-1-D01N-GRW GW13		Site ID: LS-1 Sample Date: 4/2/2003 Sample ID: LS-1-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		15.6	:	-		7.67	:	-		7.7	:
Eh	millivolts	T	-		178.	:	-		284.	:	-		180.7	:
pH	SU	T	-		6.51	:	-		6.43	:	-		6.7	J
Specific Conductance	uS/cm	T	-		441.	:	-		482.	:	-		476.	:
Temperature	Celsius	T	-		11.18	:	-		7.91	:	-		11.36	:
Turbidity	NTU	T	-		0.	:	-		36.6	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.042	J	-		<0.068	:	-		<0.074	:
Bicarbonate (as CaCO3)	mg/L	T	-		50.	:	-		49.6	:	-		47.8	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		4.3	:	-		<4.3	:	-		4.3	:
Fluoride	mg/L	T	-		1.5	:	-		1.4	:	-		1.4	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.4	J	-		<0.41	:	-		<0.4	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.84	J	-		<0.017	J	-		<0.23	J
Phosphorus	mg/L	T	-		0.028	J	-		0.014	:	-		0.018	J
Sulfate	mg/L	T	-		239.	:	-		169.	J	-		171.	J
Total Alkalinity	mg/L	T	-		50.	:	-		49.6	:	-		47.8	:
Total Dissolved Solids	mg/L	T	-		297.	:	-		343.	J	-		382.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.53	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	J
Total Suspended Solids	mg/L	T	-		<0.5	:	-		<0.5	:	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		6.51	:	-		6.43	:	-		6.7	J
Specific Conductance	umhos/cm	T	-		-		-		-		-		443.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		221.	:	-		226.	:	-		230.	:
Hardness	mg/L	D	258.	:	-		227.	:	-		222.	:	-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Hunts Pond Well 5/12/2004 HUNT-D01N-GRW GW13	LS-1 11/6/2002 LS1-T01N-GRW GW13	LS-1 11/6/2002 LS1-D01N-GRW GW13	LS-1 1/12/2003 LS-1-T01N-GRW GW13	LS-1 1/12/2003 LS-1-D01N-GRW GW13	LS-1 4/2/2003 LS-1-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.0069 J	-	<0.142 :	-	<0.0503 :
Aluminum	mg/L	D	<0.201 :	-	0.0086 J	-	<0.142 :	-
Antimony	mg/L	T	-	<0.0004 :	-	<0.0006 :	-	<0.0006 :
Antimony	mg/L	D	<0.0008 :	-	<0.0004 :	-	<0.0006 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0002 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0308 :	-	0.0314 :	-	0.0329 :
Barium	mg/L	D	0.0322 :	-	0.0322 :	-	0.0314 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0003 J
Beryllium	mg/L	D	<0.00081 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	<0.0076 :	-	<0.0084 :	-	<0.0084 :
Boron	mg/L	D	0.0093 J	-	<0.0081 :	-	<0.0073 :	-
Cadmium	mg/L	T	-	0.00021 J	-	<0.0004 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0003 :	-	<0.0002 :	-	<0.0004 :	-
Calcium	mg/L	T	-	67.7 :	-	69. :	-	69.6 :
Calcium	mg/L	D	79.7 :	-	69.4 :	-	67.5 :	-
Chromium	mg/L	T	-	<0.0046 :	-	<0.0037 :	-	<0.001 :
Chromium	mg/L	D	<0.0006 :	-	<0.0046 :	-	<0.0037 :	-
Cobalt	mg/L	T	-	<0.0022 :	-	<0.0016 :	-	<0.0038 :
Cobalt	mg/L	D	<0.0016 :	-	<0.0022 :	-	<0.0016 :	-
Copper	mg/L	T	-	0.0015 :	-	<0.0017 :	-	<0.0015 :
Copper	mg/L	D	0.0016 :	-	0.0025 :	-	<0.0017 :	-
Iron	mg/L	T	-	<0.0226 :	-	<0.489 :	-	<0.0311 :
Iron	mg/L	D	<0.293 :	-	<0.0226 :	-	<0.489 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Lead	mg/L	D	<0.0008 :	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	12.7 :	-	13.2 :	-	13.6 :
Magnesium	mg/L	D	14.2 :	-	13.1 :	-	13. :	-
Manganese	mg/L	T	-	<0.0025 :	-	<0.005 :	-	<0.001 :
Manganese	mg/L	D	<0.014 :	-	<0.0025 :	-	<0.005 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.034 :	-	0.029 :	-	0.0267 :
Molybdenum	mg/L	D	0.0358 :	-	0.0335 :	-	0.0297 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Hunts Pond Well Sample Date: 5/12/2004 Sample ID: HUNT-D01N-GRW GW13		Site ID: LS-1 Sample Date: 11/6/2002 Sample ID: LS1-T01N-GRW GW13		Site ID: LS-1 Sample Date: 11/6/2002 Sample ID: LS1-D01N-GRW GW13		Site ID: LS-1 Sample Date: 1/12/2003 Sample ID: LS-1-T01N-GRW GW13		Site ID: LS-1 Sample Date: 1/12/2003 Sample ID: LS-1-D01N-GRW GW13		Site ID: LS-1 Sample Date: 4/2/2003 Sample ID: LS-1-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0037	J	-		0.0038	:	-		<0.003	:
Nickel	mg/L	D	<0.0015	J	-		0.0035	J	-		0.0041	:	-	
Potassium	mg/L	T	-		1.79	:	-		1.74	:	-		1.76	:
Potassium	mg/L	D	3.01	:	-		1.82	:	-		1.8	:	-	
Selenium	mg/L	T	-		<0.0004	J	-		<0.0016	:	-		<0.001	:
Selenium	mg/L	D	<0.0014	:	-		<0.0004	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		7.04	:	-		8.74	:	-		6.84	:
Sodium	mg/L	D	11.4	:	-		7.7	:	-		7.23	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0288	:	-		<0.039	:	-		0.0218	:
Zinc	mg/L	D	0.0374	:	-		0.0213	:	-		<0.039	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-1	LS-1	LS-1	LS-1	LS-1	LS-1
			Sample Date	4/2/2003	7/8/2003	7/8/2003	10/13/2003	10/13/2003	1/8/2004
			Sample ID	LS-1-D01N-GRW	LS-1-T01N-GRW	LS-1-D01N-GRW	LS-1-T01N-GRW	LS-1-D01N-GRW	LS-1-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.07 :	-	6.22 :	-	6.05 :
Eh	millivolts	T		-	211.8 :	-	568.6 :	-	383.1 :
pH	SU	T		-	6.7 J	-	6.3 J	-	6.8 J
Specific Conductance	uS/cm	T		-	446. :	-	478. :	-	422. :
Temperature	Celsius	T		-	13.3 :	-	12.18 :	-	8.11 :
Turbidity	NTU	T		-	0. :	-	0. :	-	0.3 :
General Chemistry									
Ammonia	mg/L	T		-	<0.086 J	-	<0.04 J	-	<0.068 J
Bicarbonate (as CaCO3)	mg/L	T		-	61.6 :	-	52.3 :	-	49. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	4.3 :	-	4.6 :	-	4.7 :
Fluoride	mg/L	T		-	1.6 :	-	1.4 :	-	1.4 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.65 J	-	0.24 :	-	<0.23 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.015 :	-	<0.014 :	-	<0.018 :
Phosphorus	mg/L	T		-	0.022 :	-	0.021 :	-	<0.01 :
Sulfate	mg/L	T		-	163. J	-	167. J	-	172. :
Total Alkalinity	mg/L	T		-	61.6 :	-	52.3 :	-	49. :
Total Dissolved Solids	mg/L	T		-	336. :	-	376. :	-	376. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	<1. J	-	<1. :
Total Suspended Solids	mg/L	T		-	<0.5 :	-	<0.5 :	-	<0.5 :
Laboratory Parameters									
pH	SU	T		-	6.7 J	-	6.3 J	-	6.8 J
Specific Conductance	umhos/cm	T		-	433. J	-	459. J	-	462. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	232. :	-	232. :	-	225. :
Hardness	mg/L	D		232. :	-	231. :	-	253. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-1 4/2/2003 LS-1-D01N-GRW GW13	LS-1 7/8/2003 LS-1-T01N-GRW GW13	LS-1 7/8/2003 LS-1-D01N-GRW GW13	LS-1 10/13/2003 LS-1-T01N-GRW GW13	LS-1 10/13/2003 LS-1-D01N-GRW GW13	LS-1 1/8/2004 LS-1-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.631 :	-	<0.307 :	-	<0.514 :
Aluminum	mg/L	D	<0.0503 :	-	<0.631 :	-	<0.307 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.0014 :	-	<0.0024 :
Antimony	mg/L	D	<0.0006 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	<0.0002 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0313 :	-	0.0333 :	-	0.0326 :
Barium	mg/L	D	0.0332 :	-	0.0318 :	-	0.033 :	-
Beryllium	mg/L	T	-	<0.0002 J	-	<0.0003 J	-	<0.001 :
Beryllium	mg/L	D	<0.0003 J	-	<0.0002 J	-	<0.0003 J	-
Boron	mg/L	T	-	<0.0082 :	-	0.0085 :	-	<0.0117 :
Boron	mg/L	D	0.0097 :	-	<0.0087 :	-	0.0078 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0007 :	-	<0.0007 J
Cadmium	mg/L	D	<0.0005 :	-	<0.0003 :	-	<0.0007 :	-
Calcium	mg/L	T	-	70.5 :	-	70.6 :	-	68.2 :
Calcium	mg/L	D	70.1 :	-	70.8 :	-	76.9 :	-
Chromium	mg/L	T	-	<0.0006 J	-	0.0016 J	-	<0.0057 :
Chromium	mg/L	D	<0.001 :	-	<0.0006 J	-	<0.0013 J	-
Cobalt	mg/L	T	-	<0.0018 :	-	<0.0031 :	-	<0.0037 :
Cobalt	mg/L	D	<0.0038 :	-	<0.0018 :	-	<0.0031 :	-
Copper	mg/L	T	-	<0.0014 :	-	<0.002 :	-	<0.0035 :
Copper	mg/L	D	<0.0015 :	-	<0.0023 :	-	<0.002 :	-
Iron	mg/L	T	-	<0.667 :	-	<0.3 :	-	<0.373 :
Iron	mg/L	D	<0.0311 :	-	<0.667 :	-	<0.3 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0004 :	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0004 :	-
Magnesium	mg/L	T	-	13.6 :	-	13.6 :	-	13.2 :
Magnesium	mg/L	D	13.7 :	-	13.2 :	-	14.9 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.01 :	-	<0.015 :
Manganese	mg/L	D	<0.001 :	-	<0.019 :	-	<0.01 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.00014 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0319 :	-	0.0293 :	-	0.0288 :
Molybdenum	mg/L	D	0.0269 :	-	0.0314 :	-	0.0281 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LS-1 4/2/2003 LS-1-D01N-GRW GW13		LS-1 7/8/2003 LS-1-T01N-GRW GW13		LS-1 7/8/2003 LS-1-D01N-GRW GW13		LS-1 10/13/2003 LS-1-T01N-GRW GW13		LS-1 10/13/2003 LS-1-D01N-GRW GW13		LS-1 1/8/2004 LS-1-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.002	:	-		0.0034	:	-		<0.0168	:
Nickel	mg/L	D	<0.003	:	-		0.0033	:	-		0.0033	:	-	
Potassium	mg/L	T	-		1.73	:	-		1.97	:	-		<1.1	:
Potassium	mg/L	D	1.76	:	-		1.76	:	-		<1.94	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0006	:	-		<0.0011	J
Selenium	mg/L	D	<0.001	J	-		<0.0016	J	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		8.27	:	-		<5.02	:	-		5.12	:
Sodium	mg/L	D	7.04	:	-		6.39	:	-		<5.02	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		<0.0572	J	-		0.0211	:	-		<0.026	:
Zinc	mg/L	D	0.022	:	-		0.177	J	-		0.027	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-1	LS-1	LS-1	LS-1	LS-1	LS-1
			Sample Date	1/8/2004	4/14/2004	4/14/2004	4/14/2004	5/13/2004	5/13/2004
			Sample ID	LS-1-D01N-GRW	LS1-T01N-GRW	LS-1-T01N-GRW	LS1-D01N-GRW	LS1-T01N-GRW	LS-1-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	-	7.56 :	-	-	6.38 :
Eh	millivolts	T		-	-	328.9 :	-	-	209.8 :
pH	SU	T		-	7. J	6.31 :	-	6.9 J	6.44 :
Specific Conductance	uS/cm	T		-	-	459. :	-	-	442. :
Temperature	Celsius	T		-	-	10.37 :	-	-	9.96 :
Turbidity	NTU	T		-	-	0. :	-	-	0.2 :
General Chemistry									
Ammonia	mg/L	T		-	<0.057 :	-	-	<0.088 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	50.7 :	-	-	49.7 :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	4.5 :	-	-	4.3 :	-
Fluoride	mg/L	T		-	1.5 :	-	-	1.3 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.29 J	-	-	0.31 J	-
Nitrite	mg/L	T		-	<0.005 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	0.014 J	-	-	0.014 :	-
Phosphorus	mg/L	T		-	0.016 :	-	-	0.021 J	-
Sulfate	mg/L	T		-	186. :	-	-	171. :	-
Total Alkalinity	mg/L	T		-	50.7 :	-	-	49.7 :	-
Total Dissolved Solids	mg/L	T		-	314. :	-	-	300. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<1. J	-	-	1.3 :	-
Total Suspended Solids	mg/L	T		-	<0.7 J	-	-	0.6 :	-
Laboratory Parameters									
pH	SU	T		-	7. J	6.31 :	-	6.9 J	6.44 :
Specific Conductance	umhos/cm	T		-	378. J	-	-	380. J	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	226. :	-	-	210. :	-
Hardness	mg/L	D		218. :	-	-	220. :	-	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-1 1/8/2004 LS-1-D01N-GRW GW13		LS-1 4/14/2004 LS1-T01N-GRW GW13		LS-1 4/14/2004 LS-1-T01N-GRW GW13		LS-1 4/14/2004 LS1-D01N-GRW GW13		LS-1 5/13/2004 LS1-T01N-GRW GW13		LS-1 5/13/2004 LS-1-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.201	:	-		-		<0.201	:	-	
Aluminum	mg/L	D	<0.514	:	-		-		<0.201	:	-		-	
Antimony	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Antimony	mg/L	D	<0.0024	:	-		-		<0.0008	:	-		-	
Arsenic	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Barium	mg/L	T	-		0.032	:	-		-		0.0283	:	-	
Barium	mg/L	D	0.032	:	-		-		0.0321	:	-		-	
Beryllium	mg/L	T	-		<0.0002	:	-		-		<0.00047	:	-	
Beryllium	mg/L	D	<0.001	:	-		-		<0.0002	:	-		-	
Boron	mg/L	T	-		0.0044	:	-		-		0.0048	:	-	
Boron	mg/L	D	<0.0117	:	-		-		0.0044	:	-		-	
Cadmium	mg/L	T	-		<0.0003	:	-		-		<0.0003	:	-	
Cadmium	mg/L	D	<0.0007	:	-		-		<0.0003	:	-		-	
Calcium	mg/L	T	-		68.4	:	-		-		63.5	:	-	
Calcium	mg/L	D	66.2	:	-		-		66.5	:	-		-	
Chromium	mg/L	T	-		<0.0008	:	-		-		<0.0006	J	-	
Chromium	mg/L	D	<0.0057	:	-		-		0.00084	:	-		-	
Cobalt	mg/L	T	-		<0.0011	:	-		-		<0.0016	:	-	
Cobalt	mg/L	D	<0.0037	:	-		-		<0.0017	:	-		-	
Copper	mg/L	T	-		<0.00089	:	-		-		<0.0014	:	-	
Copper	mg/L	D	0.0038	:	-		-		<0.0007	:	-		-	
Iron	mg/L	T	-		<0.293	J	-		-		<0.293	:	-	
Iron	mg/L	D	<0.373	:	-		-		<0.293	:	-		-	
Lead	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0008	:	-		-	
Magnesium	mg/L	T	-		13.4	:	-		-		12.4	:	-	
Magnesium	mg/L	D	12.8	:	-		-		13.1	:	-		-	
Manganese	mg/L	T	-		<0.014	:	-		-		<0.014	:	-	
Manganese	mg/L	D	<0.015	:	-		-		<0.014	:	-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		0.0297	:	-		-		0.0236	:	-	
Molybdenum	mg/L	D	0.0292	:	-		-		0.0307	:	-		-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-1 1/8/2004 LS-1-D01N-GRW GW13	LS-1 4/14/2004 LS1-T01N-GRW GW13	LS-1 4/14/2004 LS-1-T01N-GRW GW13	LS-1 4/14/2004 LS1-D01N-GRW GW13	LS-1 5/13/2004 LS1-T01N-GRW GW13	LS-1 5/13/2004 LS-1-T01N-GRW GW13
Nickel	mg/L	T	-	0.0036 :	-	-	0.0016 J	-
Nickel	mg/L	D	<0.0168 :	-	-	0.0048 :	-	-
Potassium	mg/L	T	-	1.95 :	-	-	1.72 :	-
Potassium	mg/L	D	<1.1 :	-	-	1.86 :	-	-
Selenium	mg/L	T	-	<0.0014 :	-	-	<0.0014 :	-
Selenium	mg/L	D	<0.0006 :	-	-	<0.0014 :	-	-
Silver	mg/L	T	-	<0.0002 J	-	-	<0.0002 :	-
Silver	mg/L	D	<0.0002 :	-	-	<0.0002 J	-	-
Sodium	mg/L	T	-	<5.7 J	-	-	10.3 :	-
Sodium	mg/L	D	<4.9 :	-	-	<3.28 J	-	-
Thallium	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Thallium	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	<0.0004 :	-	-	<0.0004 :	-
Vanadium	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	-
Zinc	mg/L	T	-	0.0454 :	-	-	0.0435 :	-
Zinc	mg/L	D	<0.026 :	-	-	0.0359 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-1	LS-2	LS-2	LS-2	LS-2	LS-2
			Sample Date	5/13/2004	11/6/2002	11/6/2002	1/11/2003	1/11/2003	4/2/2003
			Sample ID	LS1-D01N-GRW	LS2-T01N-GRW	LS2-D01N-GRW	LS2-T01N-GRW	LS2-D01N-GRW	LS-2-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	10.36 :	-	8.17 :	-	7.9 :
Eh	millivolts	T		-	196.4 :	-	225.3 :	-	193.8 :
pH	SU	T		-	6.56 :	-	6.61 :	-	6.7 J
Specific Conductance	uS/cm	T		-	423. :	-	491. :	-	462. :
Temperature	Celsius	T		-	10.06 :	-	9.21 :	-	9.29 :
Turbidity	NTU	T		-	11.7 :	-	15.2 :	-	5.6 :
General Chemistry									
Ammonia	mg/L	T		-	<0.068 J	-	0.068 :	-	<0.059 :
Bicarbonate (as CaCO3)	mg/L	T		-	48.8 :	-	44.8 :	-	46.9 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	4.5 :	-	4.4 :	-	4.4 :
Fluoride	mg/L	T		-	1.1 :	-	1. :	-	1.1 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	0.43 J	-	<0.43 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	2.1 J	-	<0.01 J
Phosphorus	mg/L	T		-	0.016 :	-	0.011 J	-	<0.01 :
Sulfate	mg/L	T		-	171. :	-	168. J	-	172. J
Total Alkalinity	mg/L	T		-	48.8 :	-	44.8 :	-	46.9 :
Total Dissolved Solids	mg/L	T		-	289. :	-	334. :	-	370. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T		-	<0.5 :	-	0.6 :	-	<0.9 :
Laboratory Parameters									
pH	SU	T		-	6.56 :	-	6.61 :	-	6.7 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	435. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	211. :	-	223. :	-	225. :
Hardness	mg/L	D		206. :	-	210. :	-	220. :	-
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-1 5/13/2004 LS1-D01N-GRW GW13		LS-2 11/6/2002 LS2-T01N-GRW GW13		LS-2 11/6/2002 LS2-D01N-GRW GW13		LS-2 1/11/2003 LS2-T01N-GRW GW13		LS-2 1/11/2003 LS2-D01N-GRW GW13		LS-2 4/2/2003 LS-2-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.006	J	-		0.205	J	-		<0.0503	:
Aluminum	mg/L	D	<0.201	:	-		<0.006	J	-		<0.142	J	-	
Antimony	mg/L	T	-		<0.0004	:	-		<0.0006	:	-		<0.0006	:
Antimony	mg/L	D	<0.0008	:	-		<0.0004	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0002	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0318	:	-		0.0351	:	-		0.0338	:
Barium	mg/L	D	0.0294	:	-		0.0314	:	-		0.0322	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0003	J
Beryllium	mg/L	D	<0.0008	:	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		<0.007	:	-		<0.008	:	-		<0.0084	:
Boron	mg/L	D	0.0038	:	-		<0.0068	:	-		<0.0072	:	-	
Cadmium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		65.	:	-		68.2	:	-		68.6	:
Calcium	mg/L	D	62.4	:	-		64.5	:	-		67.2	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		<0.001	:
Chromium	mg/L	D	<0.0006	J	-		<0.0046	:	-		<0.0037	:	-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		0.0035	:	-		<0.003	:	-		0.0019	:
Copper	mg/L	D	<0.0014	:	-		<0.0006	:	-		<0.0017	:	-	
Iron	mg/L	T	-		<0.0226	:	-		0.868	:	-		<0.0311	:
Iron	mg/L	D	<0.293	:	-		<0.0226	:	-		<0.489	:	-	
Lead	mg/L	T	-		<0.0002	:	-		0.0024	:	-		<0.0002	:
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		12.	:	-		12.8	:	-		13.	:
Magnesium	mg/L	D	12.1	:	-		11.9	:	-		12.6	:	-	
Manganese	mg/L	T	-		<0.0025	:	-		<0.009	:	-		<0.001	:
Manganese	mg/L	D	<0.014	:	-		<0.0025	:	-		<0.005	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0251	:	-		0.0241	:	-		0.0224	:
Molybdenum	mg/L	D	0.0232	:	-		0.0249	:	-		0.0233	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-1 5/13/2004 LS1-D01N-GRW GW13		LS-2 11/6/2002 LS2-T01N-GRW GW13		LS-2 11/6/2002 LS2-D01N-GRW GW13		LS-2 1/11/2003 LS2-T01N-GRW GW13		LS-2 1/11/2003 LS2-D01N-GRW GW13		LS-2 4/2/2003 LS-2-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0032	J	-		0.0073	:	-		<0.003	:
Nickel	mg/L	D	<0.0015	J	-		0.003	J	-		0.0043	:	-	
Potassium	mg/L	T	-		1.69	:	-		1.72	:	-		1.64	:
Potassium	mg/L	D	1.74	:	-		1.66	:	-		1.57	:	-	
Selenium	mg/L	T	-		<0.0004	J	-		<0.0016	:	-		<0.001	J
Selenium	mg/L	D	<0.0014	:	-		0.00079	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		6.53	:	-		6.42	:	-		6.5	:
Sodium	mg/L	D	10.	:	-		6.53	:	-		4.42	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		0.00066	:	-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0171	:	-		0.0565	:	-		0.0285	:
Zinc	mg/L	D	0.0358	:	-		0.0162	:	-		<0.039	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-2		LS-2		LS-2		LS-2		LS-2	
			Sample Date	4/2/2003		7/8/2003		7/8/2003		10/14/2003		10/14/2003		1/8/2004	
			Sample ID	LS-2-D01N-GRW		LS-2-T01N-GRW		LS-2-D01N-GRW		LS-2-T01N-GRW		LS-2-D01N-GRW		LS-2-T01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements															
DO	mg/L	T		-		7.15	:	-		5.81	:	-		8.3	:
Eh	millivolts	T		-		250.2	:	-		340.1	:	-		320.6	:
pH	SU	T		-		6.6	J	-		6.3	J	-		7.	J
Specific Conductance	uS/cm	T		-		448.	:	-		454.	:	-		387.	:
Temperature	Celsius	T		-		14.19	:	-		10.51	:	-		9.85	:
Turbidity	NTU	T		-		0.	:	-		0.4	:	-		0.3	:
General Chemistry															
Ammonia	mg/L	T		-		<0.13	J	-		<0.051	J	-		<0.061	J
Bicarbonate (as CaCO3)	mg/L	T		-		48.8	:	-		46.5	:	-		45.2	:
Carbonate (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T		-		4.7	:	-		4.9	:	-		4.7	:
Fluoride	mg/L	T		-		1.1	:	-		0.98	:	-		1.	:
Hydroxide (as CaCO3)	mg/L	T		-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T		-		<0.4	J	-		<0.2	J	-		<0.2	J
Nitrite	mg/L	T		-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T		-		<0.01	:	-		<0.01	J	-		<0.011	J
Phosphorus	mg/L	T		-		0.33	:	-		<0.01	:	-		<0.01	:
Sulfate	mg/L	T		-		176.	J	-		163.	J	-		160.	:
Total Alkalinity	mg/L	T		-		48.8	:	-		46.5	:	-		45.2	:
Total Dissolved Solids	mg/L	T		-		350.	:	-		348.	:	-		296.	:
Total Kjeldahl Nitrogen	mg/L	T		-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T		-		<1.	J	-		<1.	J	-		<1.	:
Total Suspended Solids	mg/L	T		-		150.	:	-		<0.5	:	-		<0.5	:
Laboratory Parameters															
pH	SU	T		-		6.6	J	-		6.3	J	-		7.	J
Specific Conductance	umhos/cm	T		-		441.	J	-		409.	J	-		425.	J
Inorganics															
Cyanide	mg/L	T		-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties															
Hardness	mg/L	T		-		238.	:	-		212.	:	-		196.	:
Hardness	mg/L	D		222.	:	-		238.	:	-		213.	:	-	
Metals															

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-2 4/2/2003 LS-2-D01N-GRW GW13		LS-2 7/8/2003 LS-2-T01N-GRW GW13		LS-2 7/8/2003 LS-2-D01N-GRW GW13		LS-2 10/14/2003 LS-2-T01N-GRW GW13		LS-2 10/14/2003 LS-2-D01N-GRW GW13		LS-2 1/8/2004 LS-2-T01N-GRW GW13	
Aluminum	mg/L	T	-		1.44	:	-		<0.217	:	-		<0.514	:
Aluminum	mg/L	D	<0.0503	:	-		<0.631	:	-		<0.217	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.001	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0535	:	-		0.0309	:	-		0.0285	:
Barium	mg/L	D	0.0329	:	-		0.0339	:	-		0.0291	:	-	
Beryllium	mg/L	T	-		<0.0002	J	-		<0.0003	:	-		<0.001	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0002	J	-		<0.0003	:	-	
Boron	mg/L	T	-		<0.0108	:	-		0.0078	:	-		<0.0117	:
Boron	mg/L	D	<0.0084	:	-		<0.0092	:	-		0.0086	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0007	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0003	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		72.4	:	-		64.4	:	-		59.9	:
Calcium	mg/L	D	67.6	:	-		72.7	:	-		64.6	:	-	
Chromium	mg/L	T	-		0.0036	J	-		<0.0013	J	-		<0.0057	:
Chromium	mg/L	D	<0.001	:	-		<0.0006	J	-		<0.0013	J	-	
Cobalt	mg/L	T	-		0.0054	:	-		<0.0031	:	-		<0.0037	:
Cobalt	mg/L	D	<0.0038	:	-		<0.0018	:	-		<0.0031	:	-	
Copper	mg/L	T	-		0.0358	:	-		<0.0022	:	-		<0.0035	:
Copper	mg/L	D	0.0015	:	-		<0.0019	:	-		<0.002	:	-	
Iron	mg/L	T	-		10.1	:	-		<0.455	:	-		<0.373	:
Iron	mg/L	D	<0.0311	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		0.0412	:	-		<0.0004	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		14.	:	-		12.5	:	-		11.3	:
Magnesium	mg/L	D	12.8	:	-		13.8	:	-		12.5	:	-	
Manganese	mg/L	T	-		0.312	:	-		<0.016	:	-		<0.015	:
Manganese	mg/L	D	<0.001	:	-		<0.019	:	-		<0.016	J	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0234	:	-		0.02	:	-		0.0216	:
Molybdenum	mg/L	D	0.0212	:	-		0.0202	:	-		0.0205	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LS-2 4/2/2003 LS-2-D01N-GRW GW13		LS-2 7/8/2003 LS-2-T01N-GRW GW13		LS-2 7/8/2003 LS-2-D01N-GRW GW13		LS-2 10/14/2003 LS-2-T01N-GRW GW13		LS-2 10/14/2003 LS-2-D01N-GRW GW13		LS-2 1/8/2004 LS-2-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0124	:	-		<0.0028	:	-		<0.0168	:
Nickel	mg/L	D	<0.003	:	-		0.0022	:	-		<0.0028	:	-	
Potassium	mg/L	T	-		1.6	:	-		1.54	:	-		<1.1	:
Potassium	mg/L	D	1.68	:	-		1.61	:	-		1.28	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.00086	:	-		<0.0006	J
Selenium	mg/L	D	0.0019	J	-		<0.0016	J	-		0.00075	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		5.35	:	-		<9.91	:	-		<4.9	:
Sodium	mg/L	D	6.55	:	-		7.96	:	-		<9.91	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0059	:	-		<0.0002	:	-		<0.0004	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		0.18	:	-		0.0213	:	-		<0.026	:
Zinc	mg/L	D	0.0206	:	-		<0.0267	:	-		<0.019	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-2	LS-2	LS-2	LS-2	LS-2	LS-2
			Sample Date	1/8/2004	4/14/2004	4/14/2004	4/14/2004	5/12/2004	5/12/2004
			Sample ID	LS-2-D01N-GRW	LS2-T01N-GRW	LS-2-T01N-GRW	LS2-D01N-GRW	LS2-T01N-GRW	LS-2-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	-	7.76 :	-	-	8.77 :
Eh	millivolts	T		-	-	315.1 :	-	-	384.7 :
pH	SU	T		-	6.9 J	6.28 :	-	6.9 J	6.02 :
Specific Conductance	uS/cm	T		-	-	414. :	-	-	414. :
Temperature	Celsius	T		-	-	10.63 :	-	-	10.2 :
Turbidity	NTU	T		-	-	3.1 :	-	-	28.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.04 :	-	-	<0.043 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	48.2 :	-	-	46.3 :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	4.4 :	-	-	4.3 :	-
Fluoride	mg/L	T		-	1.1 :	-	-	1. :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.3 J	-	-	0.44 J	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Phosphorus	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Sulfate	mg/L	T		-	155. :	-	-	169. :	-
Total Alkalinity	mg/L	T		-	48.2 :	-	-	46.3 :	-
Total Dissolved Solids	mg/L	T		-	264. :	-	-	<82. J	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<1.2 J	-	-	1.9 :	-
Total Suspended Solids	mg/L	T		-	<1.3 J	-	-	<0.5 :	-
Laboratory Parameters									
pH	SU	T		-	6.9 J	6.28 :	-	6.9 J	6.02 :
Specific Conductance	umhos/cm	T		-	346. J	-	-	355. J	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	202. :	-	-	191. :	-
Hardness	mg/L	D		197. :	-	-	200. :	-	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-2 1/8/2004 LS-2-D01N-GRW GW13		LS-2 4/14/2004 LS2-T01N-GRW GW13		LS-2 4/14/2004 LS-2-T01N-GRW GW13		LS-2 4/14/2004 LS2-D01N-GRW GW13		LS-2 5/12/2004 LS2-T01N-GRW GW13		LS-2 5/12/2004 LS-2-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.201	:	-		-		<0.201	:	-	
Aluminum	mg/L	D	<0.514	:	-		-		<0.201	:	-		-	
Antimony	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Antimony	mg/L	D	<0.0024	:	-		-		<0.0008	:	-		-	
Arsenic	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Barium	mg/L	T	-		0.0292	:	-		-		0.0259	:	-	
Barium	mg/L	D	0.0296	:	-		-		0.0286	:	-		-	
Beryllium	mg/L	T	-		<0.0002	:	-		-		<0.00057	:	-	
Beryllium	mg/L	D	<0.001	:	-		-		<0.0002	:	-		-	
Boron	mg/L	T	-		0.0036	J	-		-		0.005	J	-	
Boron	mg/L	D	<0.0117	:	-		-		0.0033	J	-		-	
Cadmium	mg/L	T	-		<0.0003	J	-		-		<0.0003	:	-	
Cadmium	mg/L	D	<0.0007	:	-		-		<0.0003	J	-		-	
Calcium	mg/L	T	-		61.4	:	-		-		58.3	:	-	
Calcium	mg/L	D	60.3	:	-		-		60.7	:	-		-	
Chromium	mg/L	T	-		<0.00087	J	-		-		<0.0006	:	-	
Chromium	mg/L	D	<0.0057	:	-		-		<0.0008	J	-		-	
Cobalt	mg/L	T	-		<0.0011	J	-		-		<0.0016	:	-	
Cobalt	mg/L	D	<0.0037	:	-		-		<0.0026	J	-		-	
Copper	mg/L	T	-		<0.0007	J	-		-		<0.0014	:	-	
Copper	mg/L	D	0.0051	:	-		-		<0.0007	J	-		-	
Iron	mg/L	T	-		0.362	J	-		-		<0.293	:	-	
Iron	mg/L	D	<0.373	:	-		-		<0.293	:	-		-	
Lead	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0008	:	-		-	
Magnesium	mg/L	T	-		11.8	:	-		-		11.	:	-	
Magnesium	mg/L	D	11.4	:	-		-		11.8	:	-		-	
Manganese	mg/L	T	-		<0.014	:	-		-		<0.014	:	-	
Manganese	mg/L	D	<0.015	:	-		-		<0.014	:	-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		0.0244	:	-		-		0.0191	:	-	
Molybdenum	mg/L	D	0.0199	:	-		-		0.023	:	-		-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-2 1/8/2004 LS-2-D01N-GRW GW13		LS-2 4/14/2004 LS2-T01N-GRW GW13		LS-2 4/14/2004 LS-2-T01N-GRW GW13		LS-2 4/14/2004 LS2-D01N-GRW GW13		LS-2 5/12/2004 LS2-T01N-GRW GW13		LS-2 5/12/2004 LS-2-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0032	:	-		-		<0.0015	J	-	
Nickel	mg/L	D	<0.0168	:	-		-		0.0036	:	-		-	
Potassium	mg/L	T	-		1.67	:	-		-		1.6	:	-	
Potassium	mg/L	D	<1.1	:	-		-		1.68	:	-		-	
Selenium	mg/L	T	-		<0.0014	:	-		-		<0.0014	:	-	
Selenium	mg/L	D	<0.0006	:	-		-		<0.0014	:	-		-	
Silver	mg/L	T	-		<0.0002	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	J	-		-	
Sodium	mg/L	T	-		<3.28	J	-		-		11.1	:	-	
Sodium	mg/L	D	<4.9	:	-		-		6.01	J	-		-	
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		-	
Vanadium	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		-	
Zinc	mg/L	T	-		0.0318	:	-		-		0.0276	:	-	
Zinc	mg/L	D	<0.026	:	-		-		0.0297	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-2	LS-3	LS-3	LS-3	LS-3	LS-3
			Sample Date	5/12/2004	11/6/2002	11/6/2002	1/11/2003	1/11/2003	4/2/2003
			Sample ID	LS2-D01N-GRW	LS-3-T01N-GRW	LS-3-D01N-GRW	LS3-T01N-GRW	LS3-D01N-GRW	LS-3-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	3.19 :	-	7.73 :	-	7.25 :
Eh	millivolts	T		-	54.4 :	-	277.4 :	-	198.6 :
pH	SU	T		-	6.13 :	-	6.42 :	-	6.8 J
Specific Conductance	uS/cm	T		-	408. :	-	492. :	-	452. :
Temperature	Celsius	T		-	9.82 :	-	7.02 :	-	6.55 :
Turbidity	NTU	T		-	0. :	-	14.2 :	-	2.6 :
General Chemistry									
Ammonia	mg/L	T		-	<0.13 :	-	<0.08 :	-	<0.047 :
Bicarbonate (as CaCO3)	mg/L	T		-	36.5 :	-	39.3 :	-	42.1 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	4.6 :	-	<4.3 :	-	4.9 :
Fluoride	mg/L	T		-	0.78 :	-	0.72 :	-	0.76 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 :	-	<0.48 J	-	<0.53 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Sulfate	mg/L	T		-	156. :	-	171. J	-	162. J
Total Alkalinity	mg/L	T		-	36.5 :	-	39.3 :	-	42.1 :
Total Dissolved Solids	mg/L	T		-	256. :	-	<323. :	-	352. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T		-	<0.5 :	-	<0.6 :	-	<0.5 :
Laboratory Parameters									
pH	SU	T		-	6.13 :	-	6.42 :	-	6.8 J
Specific Conductance	umhos/cm	T		-	-	-	-	-	422. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	196. :	-	210. :	-	216. :
Hardness	mg/L	D		188. :	-	195. :	-	215. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-2 5/12/2004 LS2-D01N-GRW GW13		LS-3 11/6/2002 LS-3-T01N-GRW GW13		LS-3 11/6/2002 LS-3-D01N-GRW GW13		LS-3 1/11/2003 LS3-T01N-GRW GW13		LS-3 1/11/2003 LS3-D01N-GRW GW13		LS-3 4/2/2003 LS-3-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.0064	:	-		<0.142	:	-		<0.0503	:
Aluminum	mg/L	D	<0.201	:	-		<0.006	:	-		<0.142	:	-	
Antimony	mg/L	T	-		<0.0004	:	-		<0.00075	:	-		<0.0006	:
Antimony	mg/L	D	<0.0008	:	-		<0.0004	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0002	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0322	:	-		0.0336	:	-		0.0316	:
Barium	mg/L	D	0.0252	:	-		0.0322	:	-		0.0333	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0003	J
Beryllium	mg/L	D	<0.00043	:	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0061	:	-		<0.0052	:	-		<0.0084	:
Boron	mg/L	D	<0.0045	J	-		0.0056	:	-		<0.005	:	-	
Cadmium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0004	:	-	
Calcium	mg/L	T	-		60.	:	-		64.1	:	-		65.4	:
Calcium	mg/L	D	57.4	:	-		59.8	:	-		65.6	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		<0.001	:
Chromium	mg/L	D	<0.0006	:	-		<0.0046	:	-		<0.0037	:	-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		<0.0021	:	-		<0.0017	:	-		0.0017	:
Copper	mg/L	D	<0.0014	:	-		<0.0006	:	-		<0.0017	:	-	
Iron	mg/L	T	-		<0.0226	:	-		<0.489	:	-		<0.0311	:
Iron	mg/L	D	<0.293	:	-		<0.0226	:	-		<0.489	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		11.2	:	-		12.1	:	-		12.7	:
Magnesium	mg/L	D	10.8	:	-		11.2	:	-		12.4	:	-	
Manganese	mg/L	T	-		<0.0025	:	-		<0.005	:	-		<0.001	:
Manganese	mg/L	D	<0.014	:	-		<0.0025	:	-		<0.005	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0153	:	-		0.0123	:	-		0.0108	:
Molybdenum	mg/L	D	0.0195	:	-		0.0132	:	-		0.0116	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-2 5/12/2004 LS2-D01N-GRW GW13		LS-3 11/6/2002 LS-3-T01N-GRW GW13		LS-3 11/6/2002 LS-3-D01N-GRW GW13		LS-3 1/11/2003 LS3-T01N-GRW GW13		LS-3 1/11/2003 LS3-D01N-GRW GW13		LS-3 4/2/2003 LS-3-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0023	J	-		<0.002	:	-		<0.003	:
Nickel	mg/L	D	<0.0015	J	-		0.0023	J	-		0.002	:	-	
Potassium	mg/L	T	-		<1.63	:	-		1.48	:	-		1.33	:
Potassium	mg/L	D	1.59	:	-		<1.57	:	-		1.42	:	-	
Selenium	mg/L	T	-		0.00094	:	-		<0.0016	:	-		0.0021	J
Selenium	mg/L	D	<0.0014	:	-		0.0007	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		6.2	:	-		6.92	:	-		6.72	:
Sodium	mg/L	D	9.4	:	-		6.28	:	-		5.94	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Vanadium	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		0.0078	:	-		<0.039	:	-		<0.01	:
Zinc	mg/L	D	0.0286	:	-		0.0159	:	-		<0.039	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-3	LS-3	LS-3	LS-3	LS-3	LS-3
			Sample Date	4/2/2003	7/8/2003	7/8/2003	10/14/2003	10/14/2003	1/8/2004
			Sample ID	LS-3-D01N-GRW	LS-3-T01N-GRW	LS-3-D01N-GRW	LS-3-T01N-GRW	LS-3-D01N-GRW	LS-3-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	1.48 :	-	2.03 :	-	6.1 :
Eh	millivolts	T		-	163.5 :	-	299.8 :	-	283. :
pH	SU	T		-	6.6 J	-	6.4 J	-	7.2 J
Specific Conductance	uS/cm	T		-	443. :	-	412. :	-	352. :
Temperature	Celsius	T		-	13.59 :	-	11.58 :	-	7.27 :
Turbidity	NTU	T		-	0. :	-	4.4 :	-	2.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.093 J	-	<0.055 J	-	<0.069 J
Bicarbonate (as CaCO3)	mg/L	T		-	45.1 :	-	48.4 :	-	41.2 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	5.3 :	-	4.7 :	-	4.1 :
Fluoride	mg/L	T		-	0.82 :	-	0.82 :	-	0.72 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.2 J	-	<0.22 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	0.1 J
Phosphorus	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Sulfate	mg/L	T		-	164. J	-	131. J	-	142. :
Total Alkalinity	mg/L	T		-	45.1 :	-	48.4 :	-	41.2 :
Total Dissolved Solids	mg/L	T		-	340. :	-	320. :	-	302. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.3 J	-	1.1 J	-	1.2 :
Total Suspended Solids	mg/L	T		-	<2.3 :	-	<0.5 :	-	<0.5 :
Laboratory Parameters									
pH	SU	T		-	6.6 J	-	6.4 J	-	7.2 J
Specific Conductance	umhos/cm	T		-	431. J	-	375. J	-	379. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	238. :	-	188. :	-	175. :
Hardness	mg/L	D		219. :	-	237. :	-	194. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LS-3 4/2/2003 LS-3-D01N-GRW GW13		LS-3 7/8/2003 LS-3-T01N-GRW GW13		LS-3 7/8/2003 LS-3-D01N-GRW GW13		LS-3 10/14/2003 LS-3-T01N-GRW GW13		LS-3 10/14/2003 LS-3-D01N-GRW GW13		LS-3 1/8/2004 LS-3-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.631	:	-		<0.375	:	-		<0.514	:
Aluminum	mg/L	D	<0.0503	:	-		<0.631	:	-		<0.236	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0339	:	-		0.0324	:	-		0.027	:
Barium	mg/L	D	0.0318	:	-		0.0346	:	-		0.0318	:	-	
Beryllium	mg/L	T	-		<0.0002	J	-		<0.0003	:	-		<0.001	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0002	J	-		<0.0003	:	-	
Boron	mg/L	T	-		<0.0069	:	-		0.0088	:	-		<0.0117	:
Boron	mg/L	D	<0.0084	:	-		<0.0057	:	-		0.0077	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0007	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0003	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		72.3	:	-		56.3	:	-		53.2	:
Calcium	mg/L	D	66.3	:	-		72.2	:	-		58.5	:	-	
Chromium	mg/L	T	-		<0.0006	J	-		<0.0013	J	-		<0.0057	:
Chromium	mg/L	D	<0.001	:	-		<0.0006	J	-		<0.0015	J	-	
Cobalt	mg/L	T	-		<0.0018	:	-		<0.0031	:	-		<0.0037	:
Cobalt	mg/L	D	<0.0038	:	-		<0.0018	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.0019	:	-		<0.0026	J	-		0.0037	:
Copper	mg/L	D	<0.0015	:	-		<0.0064	:	-		0.0218	J	-	
Iron	mg/L	T	-		<0.667	:	-		0.546	:	-		<0.373	:
Iron	mg/L	D	<0.0311	:	-		<0.667	:	-		<0.455	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		0.00089	:	-	
Magnesium	mg/L	T	-		13.9	:	-		11.4	:	-		10.2	:
Magnesium	mg/L	D	12.9	:	-		13.8	:	-		11.7	:	-	
Manganese	mg/L	T	-		<0.019	:	-		0.0254	:	-		<0.015	:
Manganese	mg/L	D	<0.001	:	-		<0.019	:	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0132	:	-		0.0131	:	-		0.0122	:
Molybdenum	mg/L	D	0.0106	:	-		0.0123	:	-		0.0127	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LS-3 4/2/2003 LS-3-D01N-GRW GW13		LS-3 7/8/2003 LS-3-T01N-GRW GW13		LS-3 7/8/2003 LS-3-D01N-GRW GW13		LS-3 10/14/2003 LS-3-T01N-GRW GW13		LS-3 10/14/2003 LS-3-D01N-GRW GW13		LS-3 1/8/2004 LS-3-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.002	:	-		<0.0028	:	-		<0.0168	:
Nickel	mg/L	D	<0.003	:	-		<0.002	:	-		0.0033	:	-	
Potassium	mg/L	T	-		0.378	:	-		1.15	:	-		<1.1	:
Potassium	mg/L	D	1.38	:	-		0.379	:	-		1.1	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.00061	:	-		<0.00091	J
Selenium	mg/L	D	0.0014	J	-		<0.0016	J	-		0.0008	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		6.73	:	-		10.8	:	-		<4.9	:
Sodium	mg/L	D	6.67	:	-		5.73	:	-		<9.91	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Vanadium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Zinc	mg/L	T	-		<0.0577	:	-		0.0294	J	-		<0.026	:
Zinc	mg/L	D	<0.0084	:	-		<0.0508	:	-		0.031	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	LS-3	LS-3	LS-3	LS-3	LS-3	LS-3
			Sample Date	1/8/2004	4/14/2004	4/14/2004	4/14/2004	5/12/2004	5/12/2004
			Sample ID	LS-3-D01N-GRW	LS3-T01N-GRW	LS-3-T01N-GRW	LS3-D01N-GRW	LS3-T01N-GRW	LS3-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	-	6.75 :	-	5.93 :	-
Eh	millivolts	T		-	-	268.9 :	-	275.2 :	-
pH	SU	T		-	6.8 J	6.33 :	-	6.9 J	-
Specific Conductance	uS/cm	T		-	-	372. :	-	380. :	-
Temperature	Celsius	T		-	-	6.07 :	-	7.25 :	-
Turbidity	NTU	T		-	-	8.4 :	-	26.7 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.04 :	-	-	<0.049 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	48.1 :	-	-	48.2 :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	4.5 :	-	-	4.8 :	-
Fluoride	mg/L	T		-	0.59 :	-	-	0.81 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.34 J	-	-	0.34 J	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Phosphorus	mg/L	T		-	<0.01 :	-	-	<0.01 :	-
Sulfate	mg/L	T		-	129. :	-	-	141. :	-
Total Alkalinity	mg/L	T		-	48.1 :	-	-	48.2 :	-
Total Dissolved Solids	mg/L	T		-	234. :	-	-	246. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<1.7 J	-	-	1.6 :	-
Total Suspended Solids	mg/L	T		-	6.9 J	-	-	<0.5 :	-
Laboratory Parameters									
pH	SU	T		-	6.8 J	6.33 :	-	6.9 J	-
Specific Conductance	umhos/cm	T		-	312. J	-	-	333. J	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	182. :	-	-	179. :	-
Hardness	mg/L	D		186. :	-	-	183. :	-	172. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	LS-3 1/8/2004 LS-3-D01N-GRW GW13		LS-3 4/14/2004 LS3-T01N-GRW GW13		LS-3 4/14/2004 LS-3-T01N-GRW GW13		LS-3 4/14/2004 LS3-D01N-GRW GW13		LS-3 5/12/2004 LS3-T01N-GRW GW13		LS-3 5/12/2004 LS3-D01N-GRW GW13	
Aluminum	mg/L	T	-		<0.201	:	-		-		<0.201	:	-	
Aluminum	mg/L	D	<0.514	:	-		-		<0.201	:	-		<0.201	:
Antimony	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Antimony	mg/L	D	<0.0024	:	-		-		<0.0008	:	-		<0.0008	:
Arsenic	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	-		0.0269	:	-		-		0.0221	:	-	
Barium	mg/L	D	0.0275	:	-		-		0.026	:	-		0.0218	:
Beryllium	mg/L	T	-		<0.0002	:	-		-		<0.00063	:	-	
Beryllium	mg/L	D	<0.001	:	-		-		<0.00032	:	-		<0.00048	:
Boron	mg/L	T	-		0.0018	J	-		-		<0.0036	J	-	
Boron	mg/L	D	<0.0117	:	-		-		0.0018	J	-		<0.0036	J
Cadmium	mg/L	T	-		<0.0003	J	-		-		<0.0003	:	-	
Cadmium	mg/L	D	<0.0007	:	-		-		<0.0003	J	-		<0.0003	:
Calcium	mg/L	T	-		54.9	:	-		-		54.1	:	-	
Calcium	mg/L	D	56.3	:	-		-		55.2	:	-		52.2	:
Chromium	mg/L	T	-		<0.0008	J	-		-		<0.0006	:	-	
Chromium	mg/L	D	<0.0057	:	-		-		<0.0008	J	-		<0.0006	:
Cobalt	mg/L	T	-		<0.0011	J	-		-		<0.0016	:	-	
Cobalt	mg/L	D	<0.0037	:	-		-		<0.0014	J	-		<0.0016	:
Copper	mg/L	T	-		<0.0007	J	-		-		<0.0014	J	-	
Copper	mg/L	D	0.0039	:	-		-		<0.0007	J	-		0.0054	J
Iron	mg/L	T	-		<0.293	J	-		-		<0.293	:	-	
Iron	mg/L	D	<0.373	:	-		-		<0.293	:	-		<0.293	:
Lead	mg/L	T	-		<0.0008	:	-		-		<0.0008	:	-	
Lead	mg/L	D	<0.0002	:	-		-		<0.0008	:	-		<0.0008	:
Magnesium	mg/L	T	-		10.8	:	-		-		10.6	:	-	
Magnesium	mg/L	D	10.9	:	-		-		11.	:	-		10.2	:
Manganese	mg/L	T	-		<0.014	:	-		-		<0.014	:	-	
Manganese	mg/L	D	<0.015	:	-		-		<0.014	:	-		<0.014	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	-		0.0135	:	-		-		0.012	:	-	
Molybdenum	mg/L	D	0.012	:	-		-		0.013	:	-		0.0119	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	LS-3 1/8/2004 LS-3-D01N-GRW GW13		LS-3 4/14/2004 LS3-T01N-GRW GW13		LS-3 4/14/2004 LS-3-T01N-GRW GW13		LS-3 4/14/2004 LS3-D01N-GRW GW13		LS-3 5/12/2004 LS3-T01N-GRW GW13		LS-3 5/12/2004 LS3-D01N-GRW GW13	
Nickel	mg/L	T	-		0.0014	:	-		-		<0.0015	J	-	
Nickel	mg/L	D	<0.0168	:	-		-		0.0019	:	-		0.0042	J
Potassium	mg/L	T	-		1.31	:	-		-		0.876	:	-	
Potassium	mg/L	D	<1.1	:	-		-		0.936	:	-		0.869	:
Selenium	mg/L	T	-		<0.0014	:	-		-		<0.0014	:	-	
Selenium	mg/L	D	<0.0006	:	-		-		<0.0014	:	-		<0.0014	:
Silver	mg/L	T	-		<0.0002	J	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	-		<4.04	J	-		-		6.06	:	-	
Sodium	mg/L	D	<4.9	:	-		-		<3.28	J	-		7.54	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	-		<0.0004	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	<0.0004	:	-		-		<0.0004	:	-		<0.0004	:
Zinc	mg/L	T	-		<0.024	:	-		-		<0.024	:	-	
Zinc	mg/L	D	<0.026	:	-		-		<0.024	:	-		0.0367	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-14	10/28/2002	MW-14-T01N-GRW		MW-14	10/28/2002	MW-14-D01N-GRW	MW-14	10/29/2002	MW-14-T01N-GRW	MW-14	12/5/2002	MW-14-T01N-GRW	MW-14	1/10/2003	MW-14-T01N-GRW	MW-14	1/10/2003	MW-14-D01N-GRW
			GW13				GW13			GW13			GW13			GW13			GW13		
Field Measurements																					
DO	mg/L	T	6.19	:			-			-			6.99	:		7.59	:		-		
Eh	millivolts	T	343.	:			-			-			172.7	:		274.8	:		-		
pH	SU	T	7.18	:			-			-			7.18	:		7.16	:		-		
Specific Conductance	uS/cm	T	998.	:			-			-			978.	:		967.	:		-		
Temperature	Celsius	T	12.78	:			-			-			11.18	:		11.55	:		-		
Turbidity	NTU	T	-				-			-			28.2	:		32.3	:		-		
General Chemistry																					
Ammonia	mg/L	T	<0.054	:			-			-			-			<0.06	:		-		
Bicarbonate (as CaCO3)	mg/L	T	139.	:			-			-			-			133.	:		-		
Carbonate (as CaCO3)	mg/L	T	<1.	:			-			-			-			<1.	:		-		
Chloride	mg/L	T	20.7	:			-			-			-			18.8	:		-		
Fluoride	mg/L	T	0.32	:			-			-			-			0.29	:		-		
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-			-			-			<1.	:		-		
Nitrate	mg/L	T	<1.	J			-			-			-			<0.75	:		-		
Nitrite	mg/L	T	<0.005	J			-			-			-			<0.005	:		-		
Phosphate, Ortho As P	mg/L	T	0.015	J			-			-			-			<0.074	J		-		
Phosphorus	mg/L	T	0.02	:			-			-			-			0.022	J		-		
Sulfate	mg/L	T	404.	:			-			-			-			362.	J		-		
Total Alkalinity	mg/L	T	139.	:			-			-			-			133.	:		-		
Total Dissolved Solids	mg/L	T	708.	:			-			-			-			<696.	:		-		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-			-			-			<0.24	:		-		
Total Organic Carbon	mg/L	T	1.4	:			-			-			-			<1.	:		-		
Total Suspended Solids	mg/L	T	<0.59	:			-			-			-			<1.5	:		-		
Laboratory Parameters																					
pH	SU	T	7.18	:			-			-			7.18	:		7.16	:		-		
Inorganics																					
Cyanide	mg/L	T	<0.01	J			-			-			-			<0.01	J		-		
Physical Properties																					
Hardness	mg/L	T	434.	:			-			-			-			418.	:		-		
Hardness	mg/L	D	-				442.	:		-			-			-			423.	:	
Metals																					
Aluminum	mg/L	T	<0.003	:			-			-			-			<0.142	:		-		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-14	10/28/2002	MW-14-T01N-GRW	GW13	MW-14	10/28/2002	MW-14-D01N-GRW	GW13	MW-14	10/29/2002	MW-14-T01N-GRW	GW13	MW-14	12/5/2002	MW-14-T01N-GRW	GW13
Aluminum	mg/L	D	-				<0.003	:			-				-			
Antimony	mg/L	T	<0.0002	:			-				-				<0.00094	:		
Antimony	mg/L	D	-				<0.0002	:			-				-			
Arsenic	mg/L	T	0.00035	J			-				-				<0.0004	:		
Arsenic	mg/L	D	-				<0.0002	:			-				-			
Barium	mg/L	T	0.0468	:			-				-				0.0453	:		
Barium	mg/L	D	-				0.0472	:			-				-			
Beryllium	mg/L	T	<0.0002	:			-				-				<0.0002	:		
Beryllium	mg/L	D	-				<0.0002	:			-				-			
Boron	mg/L	T	0.0288	:			-				-				<0.0316	:		
Boron	mg/L	D	-				0.0288	:			-				-			
Cadmium	mg/L	T	<0.0001	:			-				-				<0.0004	:		
Cadmium	mg/L	D	-				<0.0001	:			-				-			
Calcium	mg/L	T	133.	:			-				-				127.	:		
Calcium	mg/L	D	-				135.	:			-				-			
Chromium	mg/L	T	<0.0046	:			-				-				<0.0037	:		
Chromium	mg/L	D	-				<0.0046	:			-				-			
Chromium, Hexavalent	mg/L	D	-				-				<0.01	:			-			
Cobalt	mg/L	T	<0.0022	:			-				-				<0.0016	:		
Cobalt	mg/L	D	-				<0.0022	:			-				-			
Copper	mg/L	T	<0.00051	:			-				-				<0.0017	:		
Copper	mg/L	D	-				<0.0003	:			-				-			
Iron	mg/L	T	<0.0252	:			-				-				<0.489	:		
Iron	mg/L	D	-				<0.0226	:			-				-			
Lead	mg/L	T	<0.0001	:			-				-				<0.0002	:		
Lead	mg/L	D	-				<0.0001	:			-				-			
Magnesium	mg/L	T	24.8	:			-				-				24.2	:		
Magnesium	mg/L	D	-				25.2	:			-				-			
Manganese	mg/L	T	<0.0025	:			-				-				<0.005	:		
Manganese	mg/L	D	-				<0.0025	:			-				-			
Mercury	mg/L	T	<0.0001	:			-				-				<0.0001	:		
Mercury	mg/L	D	-				<0.0001	:			-				-			
Molybdenum	mg/L	T	0.0023	:			-				-				<0.0029	:		
Molybdenum	mg/L	D	-				0.0023	:			-				-			

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-14	1/10/2003	MW-14-T01N-GRW	GW13	MW-14	1/10/2003	MW-14-D01N-GRW	GW13						
Aluminum	mg/L	D	-				<0.142	:								
Antimony	mg/L	T	<0.00094	:			-									
Antimony	mg/L	D	-				<0.0006	:								
Arsenic	mg/L	T	<0.0004	:			-									
Arsenic	mg/L	D	-				<0.0004	:								
Barium	mg/L	T	0.0453	:			-									
Barium	mg/L	D	-				0.0448	:								
Beryllium	mg/L	T	<0.0002	:			-									
Beryllium	mg/L	D	-				<0.0002	:								
Boron	mg/L	T	<0.0316	:			-									
Boron	mg/L	D	-				<0.0304	:								
Cadmium	mg/L	T	<0.0004	:			-									
Cadmium	mg/L	D	-				<0.0004	:								
Calcium	mg/L	T	127.	:			-									
Calcium	mg/L	D	-				129.	:								
Chromium	mg/L	T	<0.0037	:			-									
Chromium	mg/L	D	-				<0.0037	:								
Chromium, Hexavalent	mg/L	D	-				-									
Cobalt	mg/L	T	<0.0016	:			-									
Cobalt	mg/L	D	-				<0.0016	:								
Copper	mg/L	T	<0.0017	:			-									
Copper	mg/L	D	-				<0.0017	:								
Iron	mg/L	T	<0.489	:			-									
Iron	mg/L	D	-				<0.489	:								
Lead	mg/L	T	<0.0002	:			-									
Lead	mg/L	D	-				<0.0002	:								
Magnesium	mg/L	T	24.2	:			-									
Magnesium	mg/L	D	-				24.5	:								
Manganese	mg/L	T	<0.005	:			-									
Manganese	mg/L	D	-				<0.005	:								
Mercury	mg/L	T	<0.0001	:			-									
Mercury	mg/L	D	-				<0.0001	:								
Molybdenum	mg/L	T	<0.0029	:			-									
Molybdenum	mg/L	D	-				<0.0029	:								

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-14		10/28/2002	MW-14-T01N-GRW		MW-14	10/28/2002	MW-14-D01N-GRW		MW-14	10/29/2002	MW-14-T01N-GRW		MW-14	12/5/2002	MW-14-T01N-GRW		MW-14	1/10/2003	MW-14-T01N-GRW		MW-14	1/10/2003	MW-14-D01N-GRW	
			GW13					GW13				GW13				GW13				GW13				GW13			
Nickel	mg/L	T	<0.0002	J				-				-				-				<0.0015	:			-			
Nickel	mg/L	D	-					<0.0002	J			-				-				-				<0.0015	:		
Potassium	mg/L	T	1.79	:				-				-				-				1.64	:			-			
Potassium	mg/L	D	-					1.85	:			-				-				-				1.64	:		
Selenium	mg/L	T	0.0024	:				-				-				-				0.0031	:			-			
Selenium	mg/L	D	-					<0.0018	:			-				-				-				0.0021	:		
Silver	mg/L	T	<0.0001	:				-				-				-				<0.0002	:			-			
Silver	mg/L	D	-					<0.0001	:			-				-				-				<0.0002	:		
Sodium	mg/L	T	47.4	:				-				-				-				42.1	:			-			
Sodium	mg/L	D	-					48.	:			-				-				-				42.7	:		
Thallium	mg/L	T	<0.0001	:				-				-				-				<0.0002	:			-			
Thallium	mg/L	D	-					<0.0001	:			-				-				-				<0.0002	:		
Vanadium	mg/L	T	0.00085	:				-				-				-				0.001	:			-			
Vanadium	mg/L	D	-					0.0008	:			-				-				-				0.001	:		
Zinc	mg/L	T	<0.0069	:				-				-				-				<0.039	:			-			
Zinc	mg/L	D	-					<0.0069	:			-				-				-				<0.039	:		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
			Sample Date	2/6/2003	3/6/2003	4/3/2003	4/3/2003	5/8/2003	6/5/2003
			Sample ID	MW-14-T01N-GRW	MW-14-T01N-GRW	MW-14-T01N-GRW	MW-14-D01N-GRW	MW-14-T01N-GRW	MW-14-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		6.46 :	8.19 :	7.6 :	-	7.7 :	6.73 :
Eh	millivolts	T		206. :	264.5 :	208.7 :	-	253.2 :	183.7 :
pH	SU	T		7.12 :	7.16 :	7.5 J	-	7.16 :	6.71 :
Specific Conductance	uS/cm	T		955. :	940. :	939. :	-	963. :	969. :
Temperature	Celsius	T		11.84 :	10.34 :	13.07 :	-	13.91 :	15.45 :
Turbidity	NTU	T		1.6 :	0. :	4.4 :	-	0. :	2. :
General Chemistry									
Ammonia	mg/L	T		-	-	<0.12 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	-	141. :	-	-	-
Carbonate (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Chloride	mg/L	T		-	-	10.4 :	-	-	-
Fluoride	mg/L	T		-	-	0.31 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T		-	-	<1. :	-	-	-
Nitrate	mg/L	T		-	-	<0.4 J	-	-	-
Nitrite	mg/L	T		-	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T		-	-	<0.08 J	-	-	-
Phosphorus	mg/L	T		-	-	<0.01 J	-	-	-
Sulfate	mg/L	T		-	-	382. J	-	-	-
Total Alkalinity	mg/L	T		-	-	141. :	-	-	-
Total Dissolved Solids	mg/L	T		-	-	702. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T		-	-	1.3 J	-	-	-
Total Suspended Solids	mg/L	T		-	-	<1.9 :	-	-	-
Laboratory Parameters									
pH	SU	T		7.12 :	7.16 :	7.5 J	-	7.16 :	6.71 :
Specific Conductance	umhos/cm	T		-	-	935. J	-	-	-
Inorganics									
Cyanide	mg/L	T		-	-	<0.01 J	-	-	-
Physical Properties									
Hardness	mg/L	T		-	-	451. :	-	-	-
Hardness	mg/L	D		-	-	-	454. :	-	-
Metals									

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Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-14 2/6/2003 MW-14-T01N-GRW GW13	MW-14 3/6/2003 MW-14-T01N-GRW GW13	MW-14 4/3/2003 MW-14-T01N-GRW GW13	MW-14 4/3/2003 MW-14-D01N-GRW GW13	MW-14 5/8/2003 MW-14-T01N-GRW GW13	MW-14 6/5/2003 MW-14-T01N-GRW GW13
Aluminum	mg/L	T	-	-	<0.503 :	-	-	-
Aluminum	mg/L	D	-	-	-	<0.503 :	-	-
Antimony	mg/L	T	-	-	<0.0006 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.00072 :	-	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.0004 :	-	-
Barium	mg/L	T	-	-	0.0461 :	-	-	-
Barium	mg/L	D	-	-	-	0.0454 :	-	-
Beryllium	mg/L	T	-	-	<0.0003 J	-	-	-
Beryllium	mg/L	D	-	-	-	<0.0003 J	-	-
Boron	mg/L	T	-	-	0.0293 :	-	-	-
Boron	mg/L	D	-	-	-	0.0293 :	-	-
Cadmium	mg/L	T	-	-	<0.0005 :	-	-	-
Cadmium	mg/L	D	-	-	-	<0.0005 :	-	-
Calcium	mg/L	T	-	-	138. :	-	-	-
Calcium	mg/L	D	-	-	-	139. :	-	-
Chromium	mg/L	T	-	-	<0.0028 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.0028 :	-	-
Cobalt	mg/L	T	-	-	<0.0038 :	-	-	-
Cobalt	mg/L	D	-	-	-	<0.0038 :	-	-
Copper	mg/L	T	-	-	<0.0056 :	-	-	-
Copper	mg/L	D	-	-	-	<0.0048 :	-	-
Iron	mg/L	T	-	-	<0.311 :	-	-	-
Iron	mg/L	D	-	-	-	<0.311 :	-	-
Lead	mg/L	T	-	-	<0.0002 :	-	-	-
Lead	mg/L	D	-	-	-	<0.0002 :	-	-
Magnesium	mg/L	T	-	-	25.9 :	-	-	-
Magnesium	mg/L	D	-	-	-	26.1 :	-	-
Manganese	mg/L	T	-	-	<0.01 :	-	-	-
Manganese	mg/L	D	-	-	-	<0.01 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.0028 :	-	-	-
Molybdenum	mg/L	D	-	-	-	0.0055 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-14 2/6/2003 MW-14-T01N-GRW GW13	MW-14 3/6/2003 MW-14-T01N-GRW GW13	MW-14 4/3/2003 MW-14-T01N-GRW GW13	MW-14 4/3/2003 MW-14-D01N-GRW GW13	MW-14 5/8/2003 MW-14-T01N-GRW GW13	MW-14 6/5/2003 MW-14-T01N-GRW GW13
Nickel	mg/L	T	-	-	<0.003 :	-	-	-
Nickel	mg/L	D	-	-	-	<0.003 :	-	-
Potassium	mg/L	T	-	-	1.43 :	-	-	-
Potassium	mg/L	D	-	-	-	1.4 :	-	-
Selenium	mg/L	T	-	-	0.0027 :	-	-	-
Selenium	mg/L	D	-	-	-	0.0018 :	-	-
Silver	mg/L	T	-	-	<0.0002 J	-	-	-
Silver	mg/L	D	-	-	-	<0.0002 J	-	-
Sodium	mg/L	T	-	-	45.7 :	-	-	-
Sodium	mg/L	D	-	-	-	47.1 :	-	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.0002 :	-	-
Vanadium	mg/L	T	-	-	0.00084 :	-	-	-
Vanadium	mg/L	D	-	-	-	0.00087 :	-	-
Zinc	mg/L	T	-	-	<0.014 :	-	-	-
Zinc	mg/L	D	-	-	-	<0.014 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-14	7/10/2003	MW-14-T01N-GRW		MW-14	7/10/2003	MW-14-D01N-GRW		MW-14	8/9/2003	MW-14-T01N-GRW		MW-14	9/6/2003	MW-14-T01N-GRW		MW-14	10/15/2003	MW-14-T01N-GRW		MW-14	10/15/2003	MW-14-D01N-GRW	
			GW13				GW13				GW13				GW13				GW13				GW13			
Field Measurements																						
DO	mg/L	T	8.3	:			-				-				5.93	:			3.35	:			-			
Eh	millivolts	T	322.	:			-				100.2	:			175.	:			436.2	:			-			
pH	SU	T	7.3	J			-				7.07	:			7.06	:			7.4	J			-			
Specific Conductance	uS/cm	T	886.	:			-				967.	:			960.	:			966.	:			-			
Temperature	Celsius	T	15.06	:			-				15.22	:			14.02	:			13.79	:			-			
Turbidity	NTU	T	34.	:			-				0.	:			0.8	:			0.8	:			-			
General Chemistry																						
Ammonia	mg/L	T	<0.068	J			-				-				-				<0.071	J			-			
Bicarbonate (as CaCO3)	mg/L	T	138.	:			-				-				-				141.	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				-				-				<1.	:			-			
Chloride	mg/L	T	18.4	:			-				-				-				18.7	:			-			
Fluoride	mg/L	T	0.38	:			-				-				-				0.32	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				-				-				<1.	:			-			
Nitrate	mg/L	T	0.7	J			-				-				-				0.55	J			-			
Nitrite	mg/L	T	<0.005	J			-				-				-				<0.005	:			-			
Phosphate, Ortho As P	mg/L	T	<0.016	J			-				-				-				<0.018	:			-			
Phosphorus	mg/L	T	0.014	:			-				-				-				0.022	:			-			
Sulfate	mg/L	T	403.	J			-				-				-				337.	J			-			
Total Alkalinity	mg/L	T	138.	:			-				-				-				141.	:			-			
Total Dissolved Solids	mg/L	T	700.	:			-				-				-				756.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				-				-				<0.24	:			-			
Total Organic Carbon	mg/L	T	<1.1	J			-				-				-				1.4	J			-			
Total Suspended Solids	mg/L	T	<0.8	:			-				-				-				<0.8	:			-			
Laboratory Parameters																						
pH	SU	T	7.3	J			-				7.07	:			7.06	:			7.4	J			-			
Specific Conductance	umhos/cm	T	899.	J			-				-				-				823.	J			-			
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				-				-				<0.01	J			-			
Physical Properties																						
Hardness	mg/L	T	531.	:			-				-				-				454.	:			-			
Hardness	mg/L	D	-				510.	:			-				-				-				440.	:		
Metals																						

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-14	7/10/2003	MW-14-T01N-GRW	GW13	MW-14	7/10/2003	MW-14-D01N-GRW	GW13	MW-14	8/9/2003	MW-14-T01N-GRW	GW13	MW-14	9/6/2003	MW-14-T01N-GRW	GW13	MW-14	10/15/2003	MW-14-T01N-GRW	GW13	MW-14	10/15/2003	MW-14-D01N-GRW	GW13
Aluminum	mg/L	T	<0.183	J	-		-				-				<0.221	:	-					
Aluminum	mg/L	D	-		<0.183	J	-				-				-		<0.221	:				
Antimony	mg/L	T	<0.001	:	-		-				-				<0.0019	:	-					
Antimony	mg/L	D	-		<0.001	:	-				-				-		<0.001	:				
Arsenic	mg/L	T	<0.0004	:	-		-				-				<0.0004	:	-					
Arsenic	mg/L	D	-		<0.0004	:	-				-				-		<0.0004	:				
Barium	mg/L	T	0.0436	:	-		-				-				0.0449	:	-					
Barium	mg/L	D	-		0.0435	:	-				-				-		0.0434	:				
Beryllium	mg/L	T	<0.0002	:	-		-				-				<0.0004	:	-					
Beryllium	mg/L	D	-		<0.0002	:	-				-				-		<0.0004	:				
Boron	mg/L	T	0.031	:	-		-				-				0.0338	:	-					
Boron	mg/L	D	-		0.0309	:	-				-				-		0.0313	:				
Cadmium	mg/L	T	<0.0006	:	-		-				-				<0.0005	:	-					
Cadmium	mg/L	D	-		<0.0006	:	-				-				-		<0.0005	:				
Calcium	mg/L	T	162.	:	-		-				-				139.	:	-					
Calcium	mg/L	D	-		156.	:	-				-				-		134.	:				
Chromium	mg/L	T	0.0024	:	-		-				-				<0.0024	J	-					
Chromium	mg/L	D	-		0.0029	:	-				-				-		<0.0031	J				
Cobalt	mg/L	T	<0.002	:	-		-				-				<0.0029	:	-					
Cobalt	mg/L	D	-		<0.002	:	-				-				-		0.0053	:				
Copper	mg/L	T	<0.0024	:	-		-				-				<0.0022	:	-					
Copper	mg/L	D	-		<0.0024	:	-				-				-		<0.0022	:				
Iron	mg/L	T	<0.168	J	-		-				-				<0.278	:	-					
Iron	mg/L	D	-		<0.168	J	-				-				-		<0.278	:				
Lead	mg/L	T	<0.00071	:	-		-				-				<0.0004	:	-					
Lead	mg/L	D	-		<0.00085	:	-				-				-		<0.0004	:				
Magnesium	mg/L	T	30.6	:	-		-				-				26.2	:	-					
Magnesium	mg/L	D	-		29.4	:	-				-				-		25.4	:				
Manganese	mg/L	T	<0.007	:	-		-				-				<0.012	:	-					
Manganese	mg/L	D	-		<0.007	:	-				-				-		<0.012	:				
Mercury	mg/L	T	<0.0001	:	-		-				-				<0.0001	:	-					
Mercury	mg/L	D	-		<0.0001	:	-				-				-		<0.0001	:				
Molybdenum	mg/L	T	0.002	:	-		-				-				0.0025	:	-					
Molybdenum	mg/L	D	-		0.0023	:	-				-				-		0.0017	:				

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area	
			MW-14	7/10/2003	MW-14-T01N-GRW	GW13		MW-14	7/10/2003	MW-14-D01N-GRW	GW13		MW-14	8/9/2003	MW-14-T01N-GRW	GW13		MW-14	9/6/2003	MW-14-T01N-GRW	GW13		MW-14	10/15/2003	MW-14-T01N-GRW	GW13	
Nickel	mg/L	T	<0.0021	:		-		-		-			-		-			<0.0024	:		-					
Nickel	mg/L	D	-			<0.0021	:	-		-			-		-			-			<0.0024	:					
Potassium	mg/L	T	1.55	:		-		-		-			1.6	:		-											
Potassium	mg/L	D	-			1.59	:	-		-			-			1.61	:										
Selenium	mg/L	T	0.0025	:		-		-		-			0.0026	:		-											
Selenium	mg/L	D	-			0.002	J	-		-			-			0.0026	:										
Silver	mg/L	T	<0.0002	J		-		-		-			<0.0002	:		-											
Silver	mg/L	D	-			<0.0002	J	-		-			-			<0.0002	:										
Sodium	mg/L	T	54.9	:		-		-		-			44.9	:		-											
Sodium	mg/L	D	-			52.	:	-		-			-			43.6	:										
Thallium	mg/L	T	<0.0002	:		-		-		-			<0.0002	:		-											
Thallium	mg/L	D	-			<0.0002	:	-		-			-			<0.0002	:										
Vanadium	mg/L	T	0.00083	:		-		-		-			0.00063	:		-											
Vanadium	mg/L	D	-			0.00081	:	-		-			-			0.00093	:										
Zinc	mg/L	T	<0.057	:		-		-		-			<0.023	:		-											
Zinc	mg/L	D	-			<0.057	:	-		-			-			<0.023	:										

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-14	MW-14	MW-14	MW-14	MW-14	MW-15
			Sample Date	11/1/2003	1/6/2004	1/6/2004	4/14/2004	4/14/2004	10/30/2002
			Sample ID	MW-14-T01N-GRW	MW-14-T01N-GRW	MW-14-D01N-GRW	MW-14-T01N-GRW	MW-14-D01N-GRW	MW-15-T01N-GRWRE
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		7.88 :	7.03 :	-	7.72 :	-	-
Eh	millivolts	T		323.6 :	176.1 :	-	142.8 :	-	-
pH	SU	T		7.16 :	7.4 J	-	7.5 J	-	-
Specific Conductance	uS/cm	T		910. :	975. :	-	1003. :	-	-
Temperature	Celsius	T		13.11 :	11.48 :	-	13.71 :	-	-
Turbidity	NTU	T		0. :	0. :	-	0.1 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.15 J	-	<0.11 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	142. :	-	141. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	18.8 :	-	18.7 :	-	-
Fluoride	mg/L	T		-	0.31 :	-	0.36 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.6 :	-	0.67 J	-	-
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.03 J	-	0.018 J	-	-
Phosphorus	mg/L	T		-	<0.02 :	-	0.021 :	-	-
Sulfate	mg/L	T		-	355. :	-	369. :	-	1030. J
Total Alkalinity	mg/L	T		-	142. :	-	141. :	-	-
Total Dissolved Solids	mg/L	T		-	712. :	-	730. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	<1.6 J	-	-
Total Suspended Solids	mg/L	T		-	<0.5 :	-	<0.5 J	-	-
Laboratory Parameters									
pH	SU	T		7.16 :	7.4 J	-	7.5 J	-	-
Specific Conductance	umhos/cm	T		-	877. J	-	852. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	-
Physical Properties									
Hardness	mg/L	T		-	481. :	-	492. :	-	-
Hardness	mg/L	D		-	-	433. :	-	492. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-14 11/1/2003 MW-14-T01N-GRW GW13		MW-14 1/6/2004 MW-14-T01N-GRW GW13		MW-14 1/6/2004 MW-14-D01N-GRW GW13		MW-14 4/14/2004 MW-14-T01N-GRW GW13		MW-14 4/14/2004 MW-14-D01N-GRW GW13		MW-15 10/30/2002 MW-15-T01N-GRWRE GW13	
Aluminum	mg/L	T	-		<0.621	:	-		<0.28	:	-		-	
Aluminum	mg/L	D	-		-		<0.621	:	-		<0.226	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0008	J	-		-	
Antimony	mg/L	D	-		-		<0.0024	:	-		<0.0008	J	-	
Arsenic	mg/L	T	-		0.00073	:	-		0.0004	:	-		-	
Arsenic	mg/L	D	-		-		0.00079	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.045	:	-		0.0445	:	-		-	
Barium	mg/L	D	-		-		0.0414	:	-		0.0442	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0002	:	-		-	
Beryllium	mg/L	D	-		-		<0.0003	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0299	:	-		0.0318	:	-		-	
Boron	mg/L	D	-		-		0.0296	:	-		0.0316	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	:	-		-	
Cadmium	mg/L	D	-		-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		146.	:	-		150.	:	-		-	
Calcium	mg/L	D	-		-		132.	:	-		150.	:	-	
Chromium	mg/L	T	-		<0.0015	:	-		0.0031	:	-		-	
Chromium	mg/L	D	-		-		<0.0015	:	-		0.0031	:	-	
Cobalt	mg/L	T	-		<0.0023	:	-		<0.0011	:	-		-	
Cobalt	mg/L	D	-		-		<0.0023	:	-		<0.0011	:	-	
Copper	mg/L	T	-		<0.003	:	-		<0.0011	:	-		-	
Copper	mg/L	D	-		-		<0.003	:	-		0.0012	:	-	
Iron	mg/L	T	-		<0.485	:	-		<0.192	J	-		-	
Iron	mg/L	D	-		-		<0.423	:	-		<0.192	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		-	
Lead	mg/L	D	-		-		<0.0002	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		28.2	:	-		28.4	:	-		-	
Magnesium	mg/L	D	-		-		25.1	:	-		28.4	:	-	
Manganese	mg/L	T	-		<0.019	:	-		<0.019	:	-		-	
Manganese	mg/L	D	-		-		<0.019	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		-	
Mercury	mg/L	D	-		-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0028	:	-		<0.0026	:	-		-	
Molybdenum	mg/L	D	-		-		0.0027	:	-		0.0023	:	-	

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Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-14 11/1/2003 MW-14-T01N-GRW GW13 T	MW-14 1/6/2004 MW-14-T01N-GRW GW13 T	MW-14 1/6/2004 MW-14-D01N-GRW GW13 D	MW-14 4/14/2004 MW-14-T01N-GRW GW13 T	MW-14 4/14/2004 MW-14-D01N-GRW GW13 D	MW-15 10/30/2002 MW-15-T01N-GRWRE GW13 T
Nickel	mg/L	T	-	<0.0024 J	-	<0.0014 :	-	-
Nickel	mg/L	D	-	-	<0.0024 J	-	<0.0014 :	-
Potassium	mg/L	T	-	1.48 :	-	1.41 :	-	-
Potassium	mg/L	D	-	-	1.55 :	-	1.41 :	-
Selenium	mg/L	T	-	0.0046 J	-	0.0034 :	-	-
Selenium	mg/L	D	-	-	0.0039 :	-	0.0031 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Silver	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	42.3 :	-	47.7 :	-	-
Sodium	mg/L	D	-	-	46.5 :	-	45.8 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Thallium	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.001 :	-	0.0011 :	-	-
Vanadium	mg/L	D	-	-	0.00095 :	-	0.0011 :	-
Zinc	mg/L	T	-	<0.091 :	-	0.0211 :	-	-
Zinc	mg/L	D	-	-	<0.091 :	-	<0.015 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-15	10/30/2002	MW-15-T01N-GRW	GW13	MW-15	10/30/2002	MW-15-D01N-GRW RE	GW13	MW-15	10/30/2002	MW-15-D01N-GRW	GW13	MW-15	1/17/2003	MW-15-T01N-GRW	GW13
Field Measurements																		
DO	mg/L	T	6.34	:			-				-				6.76	:		
Eh	millivolts	T	296.3	:			-				-				196.9	:		
pH	SU	T	7.09	:			-				-				6.96	:		
Specific Conductance	uS/cm	T	1710.	:			-				-				1727.	:		
Temperature	Celsius	T	10.64	:			-				-				9.97	:		
Turbidity	NTU	T	23.7	:			-				-				117.3	:		
General Chemistry																		
Ammonia	mg/L	T	<0.053	:			-				-				<0.19	:		
Bicarbonate (as CaCO3)	mg/L	T	125.	:			-				-				118.	:		
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				-				<1.	:		
Chloride	mg/L	T	13.3	:			-				-				12.9	:		
Fluoride	mg/L	T	0.24	:			-				-				0.11	:		
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				-				<1.	:		
Nitrate	mg/L	T	<0.4	J			-				-				<0.4	J		
Nitrite	mg/L	T	<0.005	J			-				-				<0.005	J		
Phosphate, Ortho As P	mg/L	T	0.017	J			-				-				<0.13	J		
Phosphorus	mg/L	T	0.019	:			-				-				0.032	J		
Sulfate	mg/L	T	-				-				-				1070.	J		
Total Alkalinity	mg/L	T	125.	:			-				-				118.	:		
Total Dissolved Solids	mg/L	T	1760.	:			-				-				1720.	:		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				-				<0.24	:		
Total Organic Carbon	mg/L	T	1.7	:			-				-				2.3	:		
Total Suspended Solids	mg/L	T	2.6	:			-				-				70.4	:		
Laboratory Parameters																		
pH	SU	T	7.09	:			-				-				6.96	:		
Specific Conductance	umhos/cm	T	-				-				-				-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				-				<0.01	J		
Physical Properties																		
Hardness	mg/L	T	-				-				-				1050.	:		
Hardness	mg/L	D	-				1070.	:			-				-		1050.	:
Metals																		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-15	1/17/2003	MW-15-D01N-GRW	GW13	MW-15	4/3/2003	MW-15-T01N-GRW	GW13						
Field Measurements																
DO	mg/L	T	-				2.44	:								
Eh	millivolts	T	-				267.1	:								
pH	SU	T	-				7.2	J								
Specific Conductance	uS/cm	T	-				1898.	:								
Temperature	Celsius	T	-				12.16	:								
Turbidity	NTU	T	-				61.4	:								
General Chemistry																
Ammonia	mg/L	T	-				<0.07	:								
Bicarbonate (as CaCO3)	mg/L	T	-				121.	:								
Carbonate (as CaCO3)	mg/L	T	-				<1.	:								
Chloride	mg/L	T	-				13.2	:								
Fluoride	mg/L	T	-				0.11	:								
Hydroxide (as CaCO3)	mg/L	T	-				<1.	:								
Nitrate	mg/L	T	-				<0.41	J								
Nitrite	mg/L	T	-				<0.005	J								
Phosphate, Ortho As P	mg/L	T	-				<0.019	J								
Phosphorus	mg/L	T	-				0.04	:								
Sulfate	mg/L	T	-				950.	J								
Total Alkalinity	mg/L	T	-				121.	:								
Total Dissolved Solids	mg/L	T	-				1770.	:								
Total Kjeldahl Nitrogen	mg/L	T	-				<0.24	:								
Total Organic Carbon	mg/L	T	-				<1.	J								
Total Suspended Solids	mg/L	T	-				<9.2	:								
Laboratory Parameters																
pH	SU	T	-				7.2	J								
Specific Conductance	umhos/cm	T	-				1890.	J								
Inorganics																
Cyanide	mg/L	T	-				<0.01	J								
Physical Properties																
Hardness	mg/L	T	-				1090.	:								
Hardness	mg/L	D	1050.	:			-									
Metals																

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 10/30/2002 MW-15-T01N-GRW GW13	MW-15 10/30/2002 MW-15-D01N-GRW RE GW13	MW-15 10/30/2002 MW-15-D01N-GRW GW13	MW-15 1/17/2003 MW-15-T01N-GRW GW13	MW-15 1/17/2003 MW-15-D01N-GRW GW13	MW-15 4/3/2003 MW-15-T01N-GRW GW13
Aluminum	mg/L	T	-	-	-	<0.226 :	-	<0.503 :
Aluminum	mg/L	D	-	<0.142 :	-	-	<0.226 :	-
Antimony	mg/L	T	-	-	-	<0.0006 :	-	<0.0006 :
Antimony	mg/L	D	-	<0.0006 :	-	-	<0.0006 :	-
Arsenic	mg/L	T	-	-	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	-	0.00043 :	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	-	0.0195 :	-	0.0226 :
Barium	mg/L	D	-	0.0195 :	-	-	0.0184 :	-
Beryllium	mg/L	T	-	-	-	<0.0002 :	-	<0.0003 J
Beryllium	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Boron	mg/L	T	-	-	-	0.0217 :	-	0.0243 :
Boron	mg/L	D	-	<0.0252 :	-	-	0.0212 :	-
Cadmium	mg/L	T	-	-	-	<0.0004 :	-	<0.0005 :
Cadmium	mg/L	D	-	<0.0004 :	-	-	<0.0004 :	-
Calcium	mg/L	T	-	-	-	318. :	-	331. :
Calcium	mg/L	D	-	327. :	-	-	319. :	-
Chromium	mg/L	T	-	-	-	<0.0037 :	-	0.0037 :
Chromium	mg/L	D	-	<0.0037 :	-	-	<0.0037 :	-
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	-	-	-	<0.0016 :	-	<0.0038 :
Cobalt	mg/L	D	-	<0.0016 :	-	-	<0.0016 :	-
Copper	mg/L	T	-	-	-	<0.0017 :	-	<0.0043 :
Copper	mg/L	D	-	<0.0017 :	-	-	<0.0017 :	-
Iron	mg/L	T	-	-	-	<0.266 :	-	<0.311 :
Iron	mg/L	D	-	<0.489 :	-	-	<0.266 :	-
Lead	mg/L	T	-	-	-	0.00044 :	-	0.0012 :
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	-	61.4 :	-	63.2 :
Magnesium	mg/L	D	-	62. :	-	-	61.5 :	-
Manganese	mg/L	T	-	-	-	<0.028 :	-	0.0407 :
Manganese	mg/L	D	-	<0.005 :	-	-	<0.028 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	-	-	<0.0011 :	-	<0.0023 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 10/30/2002 MW-15-T01N-GRW GW13		MW-15 10/30/2002 MW-15-D01N-GRW RE GW13		MW-15 10/30/2002 MW-15-D01N-GRW GW13		MW-15 1/17/2003 MW-15-T01N-GRW GW13		MW-15 1/17/2003 MW-15-D01N-GRW GW13		MW-15 4/3/2003 MW-15-T01N-GRW GW13	
Molybdenum	mg/L	D	-		<0.0011	:	-		-		<0.0015	:	-	
Nickel	mg/L	T	-		-		-		<0.0015	:	-		<0.003	:
Nickel	mg/L	D	-		<0.0015	:	-		-		<0.0015	:	-	
Potassium	mg/L	T	-		-		-		2.63	:	-		2.54	:
Potassium	mg/L	D	-		2.66	:	-		-		2.62	:	-	
Selenium	mg/L	T	-		-		-		<0.0016	:	-		<0.001	:
Selenium	mg/L	D	-		0.0018	:	-		-		<0.0016	:	-	
Silver	mg/L	T	-		-		-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Sodium	mg/L	T	-		-		-		93.	:	-		89.5	:
Sodium	mg/L	D	-		89.	:	-		-		90.5	:	-	
Thallium	mg/L	T	-		-		-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	-		-		-		0.00076	:	-		0.00069	J
Vanadium	mg/L	D	-		0.00047	:	-		-		0.00054	:	-	
Zinc	mg/L	T	-		-		-		<0.028	:	-		<0.014	J
Zinc	mg/L	D	-		<0.039	:	-		-		<0.028	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15
			Sample Date	4/3/2003	7/10/2003	7/10/2003	10/14/2003	10/14/2003	1/6/2004
			Sample ID	MW-15-D01N-GRW	MW-15-T01N-GRW	MW-15-D01N-GRW	MW-15-T01N-GRW	MW-15-D01N-GRW	MW-15-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.63 :	-	4.42 :	-	3.15 :
Eh	millivolts	T		-	234.5 :	-	-27.4 :	-	70.5 :
pH	SU	T		-	7.3 J	-	7.3 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1809. :	-	1981. :	-	1908. :
Temperature	Celsius	T		-	23.64 :	-	12.79 :	-	6.92 :
Turbidity	NTU	T		-	96.4 :	-	20.2 :	-	49.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.35 J	-	<0.12 J	-	<0.11 J
Bicarbonate (as CaCO3)	mg/L	T		-	121. :	-	123. :	-	122. J
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	13.7 :	-	14.4 :	-	14.8 :
Fluoride	mg/L	T		-	<0.1 :	-	0.1 :	-	<0.1 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	0.28 :	-	<0.34 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.016 J	-	<0.017 :	-	<0.017 :
Phosphorus	mg/L	T		-	0.018 :	-	0.024 :	-	<0.027 :
Sulfate	mg/L	T		-	1060. J	-	939. J	-	1030. :
Total Alkalinity	mg/L	T		-	121. :	-	123. :	-	122. J
Total Dissolved Solids	mg/L	T		-	1630. :	-	1690. :	-	1720. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.2 J	-	1.2 J	-	<1. :
Total Suspended Solids	mg/L	T		-	20.8 :	-	6.4 :	-	12.1 :
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.3 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1790. J	-	1760. J	-	1720. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1140. :	-	1030. :	-	1100. :
Hardness	mg/L	D		1150. :	-	1210. :	-	1030. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 4/3/2003 MW-15-D01N-GRW GW13		MW-15 7/10/2003 MW-15-T01N-GRW GW13		MW-15 7/10/2003 MW-15-D01N-GRW GW13		MW-15 10/14/2003 MW-15-T01N-GRW GW13		MW-15 10/14/2003 MW-15-D01N-GRW GW13		MW-15 1/6/2004 MW-15-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.183	J	-		<0.217	:	-		<0.329	:
Aluminum	mg/L	D	<0.503	:	-		<0.183	J	-		0.218	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		0.00054	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0197	:	-		0.0194	:	-		0.0186	:
Barium	mg/L	D	0.0205	:	-		0.0186	:	-		0.02	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0003	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	J	-		<0.0002	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0222	:	-		0.0252	:	-		0.0227	:
Boron	mg/L	D	0.0227	:	-		0.0219	:	-		0.0278	:	-	
Cadmium	mg/L	T	-		<0.0006	:	-		<0.0007	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0005	:	-		<0.0006	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		346.	:	-		308.	:	-		336.	:
Calcium	mg/L	D	350.	:	-		369.	:	-		309.	:	-	
Chromium	mg/L	T	-		0.0031	:	-		<0.0027	J	-		<0.0015	:
Chromium	mg/L	D	<0.0023	:	-		0.0023	:	-		<0.0023	J	-	
Cobalt	mg/L	T	-		<0.002	:	-		<0.0031	:	-		<0.0023	:
Cobalt	mg/L	D	<0.0038	:	-		<0.002	:	-		<0.0031	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.002	:	-		<0.003	:
Copper	mg/L	D	<0.0034	:	-		<0.0024	:	-		<0.0021	:	-	
Iron	mg/L	T	-		<0.168	J	-		<0.455	:	-		<0.357	:
Iron	mg/L	D	<0.311	:	-		<0.168	J	-		<0.455	:	-	
Lead	mg/L	T	-		<0.0012	:	-		<0.0004	:	-		0.00025	:
Lead	mg/L	D	<0.0002	:	-		<0.00067	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		65.7	:	-		62.5	:	-		64.3	:
Magnesium	mg/L	D	66.6	:	-		70.	:	-		62.8	:	-	
Manganese	mg/L	T	-		<0.0176	:	-		<0.016	:	-		<0.011	:
Manganese	mg/L	D	<0.01	:	-		<0.007	:	-		<0.016	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.00016	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0017	:	-		<0.0012	:	-		<0.0024	:
Molybdenum	mg/L	D	<0.0023	:	-		<0.0017	:	-		<0.0012	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-15 4/3/2003 MW-15-D01N-GRW GW13		MW-15 7/10/2003 MW-15-T01N-GRW GW13		MW-15 7/10/2003 MW-15-D01N-GRW GW13		MW-15 10/14/2003 MW-15-T01N-GRW GW13		MW-15 10/14/2003 MW-15-D01N-GRW GW13		MW-15 1/6/2004 MW-15-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0021	:	-		<0.0028	:	-		<0.0024	J
Nickel	mg/L	D	<0.003	:	-		<0.0021	:	-		<0.0028	:	-	
Potassium	mg/L	T	-		2.55	:	-		2.37	:	-		2.57	:
Potassium	mg/L	D	2.53	:	-		2.47	:	-		2.66	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		0.0013	:	-		0.0028	J
Selenium	mg/L	D	<0.001	:	-		<0.0016	J	-		0.0013	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	J	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		96.7	:	-		106.	:	-		93.5	:
Sodium	mg/L	D	94.	:	-		102.	:	-		93.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00072	:	-		0.00067	:	-		0.00076	:
Vanadium	mg/L	D	0.00071	J	-		0.0006	:	-		0.00059	:	-	
Zinc	mg/L	T	-		<0.057	:	-		<0.019	:	-		<0.04	:
Zinc	mg/L	D	0.544	J	-		<0.057	:	-		<0.019	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-15	MW-15	MW-15	MW-17	MW-17	MW-17
			Sample Date	1/6/2004	4/14/2004	4/14/2004	11/7/2002	11/7/2002	12/4/2002
			Sample ID	MW-15-D01N-GRW	MW-15-T01N-GRW	MW-15-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW
				GW13	GW13	GW13	GW11	GW11	GW11
Field Measurements									
DO	mg/L	T		-	2.89 :	-	9.16 :	-	5.09 :
Eh	millivolts	T		-	135.1 :	-	-245.1 :	-	265.3 :
pH	SU	T		-	7.2 J	-	7.58 :	-	7.45 :
Specific Conductance	uS/cm	T		-	1906. :	-	722. :	-	736. :
Temperature	Celsius	T		-	13.15 :	-	13.02 :	-	7.2 :
Turbidity	NTU	T		-	22.6 :	-	31.6 :	-	47.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.043 :	-	<0.14 :	-	<0.074 :
Bicarbonate (as CaCO3)	mg/L	T		-	111. :	-	236. :	-	244. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	16.6 :	-	2.4 :	-	2.2 :
Fluoride	mg/L	T		-	0.12 :	-	1. :	-	1. :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.43 J	-	<0.4 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.014 :	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		-	0.029 :	-	<0.01 :	-	<0.031 J
Sulfate	mg/L	T		-	977. :	-	172. :	-	158. :
Total Alkalinity	mg/L	T		-	111. :	-	236. :	-	244. :
Total Dissolved Solids	mg/L	T		-	1690. :	-	506. :	-	510. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 J
Total Organic Carbon	mg/L	T		-	<2.5 J	-	<1. :	-	1.1 :
Total Suspended Solids	mg/L	T		-	6. J	-	2.6 :	-	12.5 J
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.58 :	-	7.45 :
Specific Conductance	umhos/cm	T		-	1680. J	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1060. :	-	310. :	-	318. :
Hardness	mg/L	D		1150. :	-	1070. :	-	318. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 1/6/2004 MW-15-D01N-GRW GW13		MW-15 4/14/2004 MW-15-T01N-GRW GW13		MW-15 4/14/2004 MW-15-D01N-GRW GW13		MW-17 11/7/2002 MW-17-T01N-GRW GW11		MW-17 11/7/2002 MW-17-D01N-GRW GW11		MW-17 12/4/2002 MW-17-T01N-GRW GW11	
Aluminum	mg/L	T	-		<0.201	:	-		0.249	:	-		1.24	:
Aluminum	mg/L	D	<0.329	:	-		<0.201	:	-		<0.006	:	-	
Antimony	mg/L	T	-		<0.0008	:	-		<0.0004	:	-		<0.0006	:
Antimony	mg/L	D	<0.0024	:	-		0.00082	:	-		<0.0004	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		0.00041	:
Arsenic	mg/L	D	0.00046	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0198	:	-		0.0223	:	-		0.0304	:
Barium	mg/L	D	0.0186	:	-		0.0191	:	-		0.0204	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	:	-		<0.00034	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0199	:	-		0.0932	:	-		0.102	:
Boron	mg/L	D	0.0224	:	-		0.0193	:	-		0.0933	:	-	
Cadmium	mg/L	T	-		<0.0003	J	-		0.00039	J	-		<0.0002	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0003	J	-		<0.0002	:	-	
Calcium	mg/L	T	-		320.	:	-		92.1	:	-		94.3	:
Calcium	mg/L	D	350.	:	-		323.	:	-		95.	:	-	
Chromium	mg/L	T	-		<0.0021	J	-		<0.0046	:	-		<0.0055	:
Chromium	mg/L	D	<0.0015	:	-		0.0019	J	-		<0.0046	:	-	
Chromium, Hexavalent	mg/L	D	-		-		-		<0.01	:	-		-	
Cobalt	mg/L	T	-		<0.0011	J	-		<0.0022	:	-		<0.0016	:
Cobalt	mg/L	D	<0.0023	:	-		<0.0039	J	-		<0.0022	:	-	
Copper	mg/L	T	-		<0.0007	J	-		<0.0034	:	-		<0.0032	:
Copper	mg/L	D	<0.003	:	-		<0.0007	J	-		<0.0017	:	-	
Iron	mg/L	T	-		<0.293	J	-		0.202	:	-		1.05	:
Iron	mg/L	D	<0.357	:	-		<0.293	:	-		<0.0226	:	-	
Lead	mg/L	T	-		<0.0008	:	-		0.00062	:	-		0.0011	:
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		62.8	:	-		19.3	:	-		20.2	:
Magnesium	mg/L	D	66.6	:	-		63.2	:	-		19.7	:	-	
Manganese	mg/L	T	-		<0.014	:	-		0.522	:	-		0.153	J
Manganese	mg/L	D	<0.011	:	-		<0.014	:	-		0.422	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.001	:	-		1.15	:	-		1.27	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 1/6/2004 MW-15-D01N-GRW GW13		MW-15 4/14/2004 MW-15-T01N-GRW GW13		MW-15 4/14/2004 MW-15-D01N-GRW GW13		MW-17 11/7/2002 MW-17-T01N-GRW GW11		MW-17 11/7/2002 MW-17-D01N-GRW GW11		MW-17 12/4/2002 MW-17-T01N-GRW GW11	
Molybdenum	mg/L	D	<0.0024	:	-		<0.0013	:	-		1.12	:	-	
Nickel	mg/L	T	-		<0.0014	:	-		0.0033	J	-		0.0048	:
Nickel	mg/L	D	<0.0024	J	-		<0.0014	:	-		0.0019	J	-	
Potassium	mg/L	T	-		2.51	:	-		<1.98	:	-		1.86	:
Potassium	mg/L	D	2.6	:	-		2.25	:	-		<1.93	:	-	
Selenium	mg/L	T	-		0.0017	:	-		<0.0004	:	-		0.00091	J
Selenium	mg/L	D	0.0025	:	-		0.0018	:	-		<0.0004	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		89.1	:	-		52.9	:	-		57.5	:
Sodium	mg/L	D	99.1	:	-		92.8	:	-		53.	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.001	:	-		0.0017	:	-		0.0021	:
Vanadium	mg/L	D	0.00072	:	-		0.00084	:	-		0.00097	:	-	
Zinc	mg/L	T	-		0.0256	:	-		0.265	:	-		0.15	J
Zinc	mg/L	D	0.0641	:	-		<0.024	:	-		0.183	:	-	
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,1,2,2-Tetrachloroethane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,1,2-Trichloroethane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,1-Dichloroethene	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2,4-Trichlorobenzene	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2-Dibromo-3-chloropropane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2-Dichlorobenzene	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2-Dichloroethene (total)	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,2-Dichloropropane	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,3-Dichlorobenzene	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
1,4-Dichlorobenzene	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
2-Butanone	mg/L	T	-		-		-		<0.01	:	-		<0.01	:
2-Hexanone	mg/L	T	-		-		-		<0.01	:	-		<0.01	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 1/6/2004 MW-15-D01N-GRW GW13	MW-15 4/14/2004 MW-15-T01N-GRW GW13	MW-15 4/14/2004 MW-15-D01N-GRW GW13	MW-17 11/7/2002 MW-17-T01N-GRW GW11	MW-17 11/7/2002 MW-17-D01N-GRW GW11	MW-17 12/4/2002 MW-17-T01N-GRW GW11
4-Methyl-2-pentanone	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Acetone	mg/L	T	-	-	-	0.004 J	-	<0.01 J
Benzene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Bromodichloromethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Bromoform	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Bromomethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Carbon disulfide	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Carbon tetrachloride	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Chlorobenzene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Chloroethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Chloroform	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Chloromethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
cis-1,2-Dichloroethene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
cis-1,3-Dichloropropene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Dibromochloromethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Dichlorodifluoromethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Ethylbenzene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Methylene chloride	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Styrene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Tetrachloroethene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Toluene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Total Xylene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
trans-1,2-Dichloroethene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
trans-1,3-Dichloropropene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Trichloroethene	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Trichlorofluoromethane	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Vinyl chloride	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2,4,5-Trichlorophenol	mg/L	T	-	-	-	<0.029 :	-	<0.026 :
2,4,6-Trichlorophenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2,4-Dichlorophenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2,4-Dimethylphenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2,4-Dinitrophenol	mg/L	T	-	-	-	<0.029 J	-	<0.026 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 1/6/2004 MW-15-D01N-GRW GW13	MW-15 4/14/2004 MW-15-T01N-GRW GW13	MW-15 4/14/2004 MW-15-D01N-GRW GW13	MW-17 11/7/2002 MW-17-T01N-GRW GW11	MW-17 11/7/2002 MW-17-D01N-GRW GW11	MW-17 12/4/2002 MW-17-T01N-GRW GW11
2,4-Dinitrotoluene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2,6-Dinitrotoluene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2-Chloronaphthalene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2-Chlorophenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2-Methylnaphthalene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2-Methylphenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
2-Nitroaniline	mg/L	T	-	-	-	<0.029 :	-	<0.026 :
2-Nitrophenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
3,3-Dichlorobenzidine	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
3-Nitroaniline	mg/L	T	-	-	-	<0.029 :	-	<0.026 :
4,6-Dinitro-2-methylphenol	mg/L	T	-	-	-	<0.029 :	-	<0.026 :
4-Bromophenyl phenyl ether	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
4-Chloro-3-methylphenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
4-Chloroaniline	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
4-Chlorophenyl phenyl ether	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
4-Methylphenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
4-Nitroaniline	mg/L	T	-	-	-	<0.029 J	-	<0.026 :
4-Nitrophenol	mg/L	T	-	-	-	<0.029 J	-	<0.026 J
Acenaphthene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Acenaphthylene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Anthracene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Benzaldehyde	mg/L	T	-	-	-	<0.011 J	-	<0.01 J
Benzo(a)anthracene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Benzo(a)pyrene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Benzo(b)fluoranthene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Benzo(g,h,i)perylene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Benzo(k)fluoranthene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Bis(2-chloroethoxy)methane	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Bis(2-chloroethyl)ether	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Bis(2-ethylhexyl)phthalate	mg/L	T	-	-	-	<0.011 :	-	0.0008 J
Butyl benzyl phthalate	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Carbazole	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Chrysene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Dibenz(a,h)anthracene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-15 1/6/2004 MW-15-D01N-GRW GW13	MW-15 4/14/2004 MW-15-T01N-GRW GW13	MW-15 4/14/2004 MW-15-D01N-GRW GW13	MW-17 11/7/2002 MW-17-T01N-GRW GW11	MW-17 11/7/2002 MW-17-D01N-GRW GW11	MW-17 12/4/2002 MW-17-T01N-GRW GW11
Dibenzofuran	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Dichlorodiisopropyl ether	mg/L	T	-	-	-	<0.011 :	-	<0.01 J
Diethylphthalate	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Dimethylphthalate	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Di-n-Butyl phthalate	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Di-n-Octyl phthalate	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Fluoranthene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Fluorene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Hexachlorobenzene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Hexachlorobutadiene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Hexachlorocyclopentadiene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Hexachloroethane	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Indeno(1,2,3-cd)pyrene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Isophorone	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Naphthalene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Nitrobenzene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
N-Nitrosodi-n-propylamine	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
N-Nitrosodiphenylamine	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Pentachlorophenol	mg/L	T	-	-	-	<0.029 :	-	<0.026 :
Phenanthrene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :
Phenol	mg/L	T	-	-	-	<0.011 :	-	<0.01 J
Pyrene	mg/L	T	-	-	-	<0.011 :	-	<0.01 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	12/4/2002	1/10/2003	1/10/2003	2/4/2003	2/5/2003	2/5/2003
			Sample ID	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
Field Measurements									
DO	mg/L	T		-	7.23 :	-	1.8 :	-	-
Eh	millivolts	T		-	259.4 :	-	240.1 :	-	-
pH	SU	T		-	7.51 :	-	7.55 :	-	-
Specific Conductance	uS/cm	T		-	768. :	-	87. :	-	-
Temperature	Celsius	T		-	9.66 :	-	8.86 :	-	-
Turbidity	NTU	T		-	39. :	-	58.4 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.15 :	-	<0.092 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	231. :	-	224. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	<2.1 :	-	2.7 :	-	-
Fluoride	mg/L	T		-	1.1 :	-	0.98 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.41 J	-	0.4 :	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	0.072 J	-	<0.01 :	-	-
Phosphorus	mg/L	T		-	0.017 J	-	<0.037 :	-	-
Sulfate	mg/L	T		-	165. J	-	181. J	-	-
Total Alkalinity	mg/L	T		-	231. :	-	224. :	-	-
Total Dissolved Solids	mg/L	T		-	<494. J	-	494. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.43 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	1. :	-	-
Total Suspended Solids	mg/L	T		-	3.5 :	-	5.4 :	-	-
Laboratory Parameters									
pH	SU	T		-	7.51 :	-	7.55 :	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	305. :	-	343. :	-	-
Hardness	mg/L	D		325. :	-	299. :	-	-	336. :
Metals									
Aluminum	mg/L	T		-	<0.142 :	-	1.67 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 12/4/2002 MW-17-D01N-GRW GW11		MW-17 1/10/2003 MW-17-T01N-GRW GW11		MW-17 1/10/2003 MW-17-D01N-GRW GW11		MW-17 2/4/2003 MW-17-T01N-GRW GW11		MW-17 2/5/2003 MW-17-T01N-GRW GW11		MW-17 2/5/2003 MW-17-D01N-GRW GW11	
Aluminum	mg/L	D	<0.0106	:	-		<0.142	:	-		-		<0.142	:
Antimony	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		-	
Antimony	mg/L	D	<0.0006	:	-		<0.0006	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Barium	mg/L	T	-		0.0194	:	-		0.0315	:	-		-	
Barium	mg/L	D	0.0188	:	-		0.0186	:	-		-		0.0183	:
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Beryllium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Boron	mg/L	T	-		0.0966	:	-		0.0969	J	-		-	
Boron	mg/L	D	0.0939	:	-		0.0934	:	-		-		0.0896	J
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		-	
Cadmium	mg/L	D	0.0003	J	-		<0.0004	:	-		-		<0.0004	:
Calcium	mg/L	T	-		90.4	:	-		102.	:	-		-	
Calcium	mg/L	D	97.1	:	-		88.8	:	-		-		99.9	:
Chromium	mg/L	T	-		<0.0037	:	-		0.0047	:	-		-	
Chromium	mg/L	D	<0.0037	:	-		<0.0037	:	-		-		<0.0037	:
Cobalt	mg/L	T	-		<0.0016	:	-		<0.0016	:	-		-	
Cobalt	mg/L	D	<0.0016	:	-		<0.0016	:	-		-		<0.0016	:
Copper	mg/L	T	-		<0.0021	:	-		0.004	:	-		-	
Copper	mg/L	D	0.0016	J	-		<0.0017	:	-		-		<0.0017	:
Iron	mg/L	T	-		<0.489	:	-		1.59	:	-		-	
Iron	mg/L	D	<0.0489	:	-		<0.489	:	-		-		<0.489	:
Lead	mg/L	T	-		<0.0002	:	-		0.00093	:	-		-	
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Magnesium	mg/L	T	-		19.2	:	-		21.8	:	-		-	
Magnesium	mg/L	D	20.2	:	-		18.8	:	-		-		21.	:
Manganese	mg/L	T	-		0.191	:	-		0.164	J	-		-	
Manganese	mg/L	D	0.174	J	-		0.204	:	-		-		0.151	:
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		1.17	:	-		1.09	:	-		-	
Molybdenum	mg/L	D	1.11	:	-		1.14	:	-		-		1.04	:
Nickel	mg/L	T	-		<0.0015	:	-		0.0038	:	-		-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 12/4/2002 MW-17-D01N-GRW GW11		MW-17 1/10/2003 MW-17-T01N-GRW GW11		MW-17 1/10/2003 MW-17-D01N-GRW GW11		MW-17 2/4/2003 MW-17-T01N-GRW GW11		MW-17 2/5/2003 MW-17-T01N-GRW GW11		MW-17 2/5/2003 MW-17-D01N-GRW GW11	
Nickel	mg/L	D	0.0018	:	-		<0.0015	:	-		-		<0.0015	:
Potassium	mg/L	T	-		1.45	:	-		1.96	:	-		-	
Potassium	mg/L	D	1.61	J	-		1.41	:	-		-		1.46	:
Selenium	mg/L	T	-		<0.0016	:	-		<0.0016	:	-		-	
Selenium	mg/L	D	<0.0004	J	-		<0.0016	:	-		-		<0.0016	:
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Sodium	mg/L	T	-		49.2	:	-		54.7	J	-		-	
Sodium	mg/L	D	54.6	:	-		47.6	:	-		-		49.9	J
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0012	:	-		0.0022	:	-		-	
Vanadium	mg/L	D	0.0011	:	-		0.001	:	-		-		0.0012	:
Zinc	mg/L	T	-		<0.039	:	-		0.0597	:	-		-	
Zinc	mg/L	D	0.0736	J	-		<0.039	:	-		-		<0.039	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1,2-Trichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,1-Dichloroethene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2,4-Trichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloroethene (total)	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,2-Dichloropropane	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,3-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
1,4-Dichlorobenzene	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
2-Butanone	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
2-Hexanone	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
4-Methyl-2-pentanone	mg/L	T	-		<0.01	:	-		<0.01	:	-		-	
Acetone	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 12/4/2002 MW-17-D01N-GRW GW11	MW-17 1/10/2003 MW-17-T01N-GRW GW11	MW-17 1/10/2003 MW-17-D01N-GRW GW11	MW-17 2/4/2003 MW-17-T01N-GRW GW11	MW-17 2/5/2003 MW-17-T01N-GRW GW11	MW-17 2/5/2003 MW-17-D01N-GRW GW11
Benzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromodichloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromoform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Bromomethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon disulfide	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Carbon tetrachloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chlorobenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloroform	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Chloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
cis-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dibromochloromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Dichlorodifluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Ethylbenzene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Methylene chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Styrene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Tetrachloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Toluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Total Xylene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,2-Dichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
trans-1,3-Dichloropropene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichloroethene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Trichlorofluoromethane	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Vinyl chloride	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Semi-Volatile Organics								
1,1`-Biphenyl	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4,5-Trichlorophenol	mg/L	T	-	<0.025 :	-	<0.025 :	-	-
2,4,6-Trichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dichlorophenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dimethylphenol	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,4-Dinitrophenol	mg/L	T	-	<0.025 :	-	<0.025 :	-	-
2,4-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
2,6-Dinitrotoluene	mg/L	T	-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	12/4/2002	1/10/2003	1/10/2003	2/4/2003	2/5/2003	2/5/2003
			Sample ID	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
2-Chloronaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Chlorophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Methylnaphthalene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
2-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
2-Nitrophenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
3,3-Dichlorobenzidine	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
3-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
4,6-Dinitro-2-methylphenol	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
4-Bromophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Chloro-3-methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Chloroaniline	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Chlorophenyl phenyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Methylphenol	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
4-Nitroaniline	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
4-Nitrophenol	mg/L	T		-	<0.025 :	-	<0.025 :	-	-
Acenaphthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Acenaphthylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzaldehyde	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(a)anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(a)pyrene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(b)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(g,h,i)perylene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Benzo(k)fluoranthene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethoxy)methane	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-chloroethyl)ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T		-	0.002 J	-	<0.01 :	-	-
Butyl benzyl phthalate	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Carbazole	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Chrysene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dibenz(a,h)anthracene	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dibenzofuran	mg/L	T		-	<0.01 :	-	<0.01 :	-	-
Dichlorodiisopropyl ether	mg/L	T		-	<0.01 :	-	<0.01 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MW-17	12/4/2002	MW-17-D01N-GRW	GW11	MW-17	1/10/2003	MW-17-T01N-GRW	GW11	MW-17	1/10/2003	MW-17-D01N-GRW	GW11	MW-17	2/4/2003	MW-17-T01N-GRW	GW11
Diethylphthalate	mg/L	T	-				0.0007	J			-				0.002	J		
Dimethylphthalate	mg/L	T	-				<0.01	:			-				<0.01	:		
Di-n-Butyl phthalate	mg/L	T	-				0.0009	J			-				0.0006	J		
Di-n-Octyl phthalate	mg/L	T	-				<0.01	:			-				<0.01	:		
Fluoranthene	mg/L	T	-				<0.01	:			-				<0.01	:		
Fluorene	mg/L	T	-				<0.01	:			-				<0.01	:		
Hexachlorobenzene	mg/L	T	-				<0.01	:			-				<0.01	:		
Hexachlorobutadiene	mg/L	T	-				<0.01	:			-				<0.01	:		
Hexachlorocyclopentadiene	mg/L	T	-				<0.01	:			-				<0.01	:		
Hexachloroethane	mg/L	T	-				<0.01	:			-				<0.01	:		
Indeno(1,2,3-cd)pyrene	mg/L	T	-				<0.01	:			-				<0.01	:		
Isophorone	mg/L	T	-				<0.01	:			-				<0.01	:		
Naphthalene	mg/L	T	-				<0.01	:			-				<0.01	:		
Nitrobenzene	mg/L	T	-				<0.01	:			-				<0.01	:		
N-Nitrosodi-n-propylamine	mg/L	T	-				<0.01	:			-				<0.01	:		
N-Nitrosodiphenylamine	mg/L	T	-				<0.01	:			-				<0.01	:		
Pentachlorophenol	mg/L	T	-				<0.025	:			-				<0.025	:		
Phenanthrene	mg/L	T	-				<0.01	:			-				<0.01	:		
Phenol	mg/L	T	-				<0.01	:			-				<0.01	:		
Pyrene	mg/L	T	-				<0.01	:			-				<0.01	:		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area											
			MW-17	2/5/2003	MW-17-T01N-GRW	GW11	MW-17	2/5/2003	MW-17-D01N-GRW	GW11							
Diethylphthalate	mg/L	T	-				-										
Dimethylphthalate	mg/L	T	-				-										
Di-n-Butyl phthalate	mg/L	T	-				-										
Di-n-Octyl phthalate	mg/L	T	-				-										
Fluoranthene	mg/L	T	-				-										
Fluorene	mg/L	T	-				-										
Hexachlorobenzene	mg/L	T	-				-										
Hexachlorobutadiene	mg/L	T	-				-										
Hexachlorocyclopentadiene	mg/L	T	-				-										
Hexachloroethane	mg/L	T	-				-										
Indeno(1,2,3-cd)pyrene	mg/L	T	-				-										
Isophorone	mg/L	T	-				-										
Naphthalene	mg/L	T	-				-										
Nitrobenzene	mg/L	T	-				-										
N-Nitrosodi-n-propylamine	mg/L	T	-				-										
N-Nitrosodiphenylamine	mg/L	T	-				-										
Pentachlorophenol	mg/L	T	-				-										
Phenanthrene	mg/L	T	-				-										
Phenol	mg/L	T	-				-										
Pyrene	mg/L	T	-				-										

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-17	3/2/2003	MW-17-T01N-GRW		MW-17	3/2/2003	MW-17-D01N-GRW		MW-17	4/3/2003	MW-17-T01N-GRW		MW-17	4/3/2003	MW-17-D01N-GRW	
			GW11				GW11				GW11				GW11			
Field Measurements																		
DO	mg/L	T	3.75		:		-				4.		:		-			
Eh	millivolts	T	344.1		:		-				273.8		:		-			
pH	SU	T	7.52		:		-				7.5	J			-			
Specific Conductance	uS/cm	T	690.		:		-				694.		:		-			
Temperature	Celsius	T	8.55		:		-				12.31		:		-			
Turbidity	NTU	T	33.		:		-				24.8		:		-			
General Chemistry																		
Ammonia	mg/L	T	<0.057	J			-				<0.049		:		-			
Bicarbonate (as CaCO3)	mg/L	T	219.		:		-				211.		:		-			
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Chloride	mg/L	T	<2.5		:		-				<0.52		:		-			
Fluoride	mg/L	T	1.1		:		-				1.		:		-			
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Nitrate	mg/L	T	<0.4	J			-				<0.89	J			-			
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.4	J			-			
Phosphorus	mg/L	T	<0.014	J			-				0.012	J			-			
Sulfate	mg/L	T	168.		:		-				270.	J			-			
Total Alkalinity	mg/L	T	219.		:		-				211.		:		-			
Total Dissolved Solids	mg/L	T	482.		:		-				508.		:		-			
Total Kjeldahl Nitrogen	mg/L	T	0.31		:		-				<0.24		:		-			
Total Organic Carbon	mg/L	T	<1.6	J			-				<1.7	J			-			
Total Suspended Solids	mg/L	T	14.	J			-				<4.8		:		-			
Laboratory Parameters																		
pH	SU	T	7.52		:		-				7.5	J			-			
Specific Conductance	umhos/cm	T	-				-				680.	J			-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-			
Physical Properties																		
Hardness	mg/L	T	279.		:		-				308.		:		-			
Hardness	mg/L	D	-				324.		:		-				305.		:	
Metals																		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-17	5/6/2003	MW-17-T01N-GRW		MW-17	5/6/2003	MW-17-D01N-GRW							
			GW11				GW11									
Field Measurements																
DO	mg/L	T	3.52		:		-									
Eh	millivolts	T	145.		:		-									
pH	SU	T	7.6	J			-									
Specific Conductance	uS/cm	T	731.		:		-									
Temperature	Celsius	T	11.24		:		-									
Turbidity	NTU	T	19.9		:		-									
General Chemistry																
Ammonia	mg/L	T	<0.076		:		-									
Bicarbonate (as CaCO3)	mg/L	T	206.		:		-									
Carbonate (as CaCO3)	mg/L	T	<1.		:		-									
Chloride	mg/L	T	<2.6		:		-									
Fluoride	mg/L	T	1.1		:		-									
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-									
Nitrate	mg/L	T	0.4	J			-									
Nitrite	mg/L	T	<0.005	J			-									
Phosphate, Ortho As P	mg/L	T	<0.01	J			-									
Phosphorus	mg/L	T	<0.039		:		-									
Sulfate	mg/L	T	159.		:		-									
Total Alkalinity	mg/L	T	206.		:		-									
Total Dissolved Solids	mg/L	T	472.		:		-									
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-									
Total Organic Carbon	mg/L	T	<1.		:		-									
Total Suspended Solids	mg/L	T	16.5		:		-									
Laboratory Parameters																
pH	SU	T	7.6	J			-									
Specific Conductance	umhos/cm	T	676.	J			-									
Inorganics																
Cyanide	mg/L	T	<0.01	J			-									
Physical Properties																
Hardness	mg/L	T	302.		:		-									
Hardness	mg/L	D	-				297.		:							
Metals																

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-17	3/2/2003	MW-17-T01N-GRW		MW-17	3/2/2003	MW-17-D01N-GRW		MW-17	4/3/2003	MW-17-T01N-GRW		MW-17	4/3/2003	MW-17-D01N-GRW	
			GW11				GW11				GW11				GW11			
Aluminum	mg/L	T	<0.142	:			-				<0.503	:			-			
Aluminum	mg/L	D	-				<0.142	:			-				<0.503	:		
Antimony	mg/L	T	<0.0006	:			-				<0.0006	:			-			
Antimony	mg/L	D	-				<0.0006	:			-				<0.0006	:		
Arsenic	mg/L	T	<0.0004	:			-				<0.0004	:			-			
Arsenic	mg/L	D	-				<0.0004	:			-				<0.0004	:		
Barium	mg/L	T	0.0182	:			-				0.0184	:			-			
Barium	mg/L	D	-				0.0185	:			-				0.0187	:		
Beryllium	mg/L	T	<0.0002	:			-				<0.0003	J			-			
Beryllium	mg/L	D	-				<0.0002	:			-				<0.0003	J		
Boron	mg/L	T	0.0807	:			-				0.0717	:			-			
Boron	mg/L	D	-				0.0842	:			-				0.0759	:		
Cadmium	mg/L	T	<0.0004	:			-				<0.0005	:			-			
Cadmium	mg/L	D	-				<0.0004	:			-				<0.0005	:		
Calcium	mg/L	T	82.3	J			-				92.5	:			-			
Calcium	mg/L	D	-				95.5	J			-				91.6	:		
Chromium	mg/L	T	<0.0037	:			-				<0.001	:			-			
Chromium	mg/L	D	-				<0.0037	:			-				<0.0027	:		
Cobalt	mg/L	T	<0.0016	:			-				<0.0038	:			-			
Cobalt	mg/L	D	-				<0.0016	:			-				<0.0038	:		
Copper	mg/L	T	<0.0017	J			-				<0.0043	:			-			
Copper	mg/L	D	-				<0.0017	J			-				<0.0126	:		
Iron	mg/L	T	<0.489	J			-				<0.311	:			-			
Iron	mg/L	D	-				<0.489	J			-				<0.311	:		
Lead	mg/L	T	<0.0002	:			-				<0.0002	:			-			
Lead	mg/L	D	-				<0.0002	:			-				<0.0002	:		
Magnesium	mg/L	T	18.	:			-				18.7	:			-			
Magnesium	mg/L	D	-				20.8	:			-				18.6	:		
Manganese	mg/L	T	<0.0961	:			-				0.0913	:			-			
Manganese	mg/L	D	-				<0.109	:			-				0.0854	:		
Mercury	mg/L	T	<0.0001	:			-				<0.0001	:			-			
Mercury	mg/L	D	-				<0.0001	:			-				<0.0001	:		
Molybdenum	mg/L	T	0.922	:			-				0.745	:			-			
Molybdenum	mg/L	D	-				0.953	:			-				0.752	:		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 3/2/2003 MW-17-T01N-GRW GW11		MW-17 3/2/2003 MW-17-D01N-GRW GW11		MW-17 4/3/2003 MW-17-T01N-GRW GW11		MW-17 4/3/2003 MW-17-D01N-GRW GW11		MW-17 5/6/2003 MW-17-T01N-GRW GW11		MW-17 5/6/2003 MW-17-D01N-GRW GW11	
Nickel	mg/L	T	<0.0015	:	-		<0.003	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0015	:	-		<0.003	:	-		<0.003	:
Potassium	mg/L	T	<1.96	:	-		1.16	:	-		1.24	:	-	
Potassium	mg/L	D	-		<2.08	:	-		1.12	:	-		1.21	:
Selenium	mg/L	T	<0.0016	J	-		<0.001	:	-		<0.001	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	41.8	:	-		45.3	:	-		44.7	:	-	
Sodium	mg/L	D	-		53.4	:	-		43.6	:	-		44.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0012	:	-		0.0013	:	-		0.0017	:	-	
Vanadium	mg/L	D	-		0.0014	:	-		0.0013	:	-		0.0013	:
Zinc	mg/L	T	<0.039	J	-		<0.014	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.014	:	-		<0.039	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
2-Butanone	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
2-Hexanone	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 3/2/2003 MW-17-T01N-GRW GW11		MW-17 3/2/2003 MW-17-D01N-GRW GW11		MW-17 4/3/2003 MW-17-T01N-GRW GW11		MW-17 4/3/2003 MW-17-D01N-GRW GW11		MW-17 5/6/2003 MW-17-T01N-GRW GW11		MW-17 5/6/2003 MW-17-D01N-GRW GW11	
Acetone	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Benzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromodichloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromoform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Bromomethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon disulfide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Carbon tetrachloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chlorobenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloroform	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Chloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dibromochloromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Dichlorodifluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	J	-	
Ethylbenzene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Methylene chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Styrene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Tetrachloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Toluene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Total Xylene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichloroethene	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Trichlorofluoromethane	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Vinyl chloride	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Semi-Volatile Organics														
1,1`-Biphenyl	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2,4,5-Trichlorophenol	mg/L	T	<0.026	:	-		<0.027	:	-		<0.025	:	-	
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2,4-Dichlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2,4-Dimethylphenol	mg/L	T	<0.01	:	-		<0.011	J	-		<0.01	:	-	
2,4-Dinitrophenol	mg/L	T	<0.026	:	-		<0.027	J	-		<0.025	:	-	
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 3/2/2003 MW-17-T01N-GRW GW11		MW-17 3/2/2003 MW-17-D01N-GRW GW11		MW-17 4/3/2003 MW-17-T01N-GRW GW11		MW-17 4/3/2003 MW-17-D01N-GRW GW11		MW-17 5/6/2003 MW-17-T01N-GRW GW11		MW-17 5/6/2003 MW-17-D01N-GRW GW11	
2,6-Dinitrotoluene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2-Chloronaphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2-Chlorophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2-Methylnaphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2-Methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
2-Nitroaniline	mg/L	T	<0.026	:	-		<0.027	:	-		<0.025	:	-	
2-Nitrophenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
3,3-Dichlorobenzidine	mg/L	T	<0.01	:	-		<0.011	J	-		<0.01	:	-	
3-Nitroaniline	mg/L	T	<0.026	:	-		<0.027	J	-		<0.025	J	-	
4,6-Dinitro-2-methylphenol	mg/L	T	<0.026	:	-		<0.027	:	-		<0.025	:	-	
4-Bromophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
4-Chloro-3-methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	J	-	
4-Chloroaniline	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
4-Chlorophenyl phenyl ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
4-Methylphenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
4-Nitroaniline	mg/L	T	<0.026	:	-		<0.027	:	-		<0.025	:	-	
4-Nitrophenol	mg/L	T	<0.026	:	-		<0.027	J	-		<0.025	J	-	
Acenaphthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Acenaphthylene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Benzaldehyde	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Benzo(a)anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Benzo(a)pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Benzo(b)fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Benzo(g,h,i)perylene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	J	-	
Benzo(k)fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Bis(2-chloroethoxy)methane	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Bis(2-chloroethyl)ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Butyl benzyl phthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Carbazole	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	J	-	
Chrysene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Dibenz(a,h)anthracene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	J	-	
Dibenzofuran	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 3/2/2003 MW-17-T01N-GRW GW11		MW-17 3/2/2003 MW-17-D01N-GRW GW11		MW-17 4/3/2003 MW-17-T01N-GRW GW11		MW-17 4/3/2003 MW-17-D01N-GRW GW11		MW-17 5/6/2003 MW-17-T01N-GRW GW11		MW-17 5/6/2003 MW-17-D01N-GRW GW11	
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Diethylphthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Dimethylphthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Di-n-Octyl phthalate	mg/L	T	<0.01	J	-		<0.011	:	-		<0.01	:	-	
Fluoranthene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Fluorene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Hexachlorobenzene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Hexachlorobutadiene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Hexachlorocyclopentadiene	mg/L	T	<0.01	J	-		<0.011	:	-		<0.01	:	-	
Hexachloroethane	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	J	-	
Isophorone	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Naphthalene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Nitrobenzene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Pentachlorophenol	mg/L	T	<0.026	:	-		<0.027	:	-		<0.025	:	-	
Phenanthrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Phenol	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	
Pyrene	mg/L	T	<0.01	:	-		<0.011	:	-		<0.01	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-17	6/1/2003	MW-17-T01N-GRW		MW-17	6/1/2003	MW-17-D01N-GRW		MW-17	7/9/2003	MW-17-T01N-GRW		MW-17	7/9/2003	MW-17-D01N-GRW		MW-17	8/11/2003	MW-17-T01N-GRW		MW-17	8/11/2003	MW-17-D01N-GRW	
			GW11				GW11				GW11				GW11				GW11				GW11			
Field Measurements																						
DO	mg/L	T	3.18	:			-				3.74	:			-				4.84	:			-			
Eh	millivolts	T	328.4	:			-				310.8	:			-				200.	:			-			
pH	SU	T	7.5	J			-				7.6	J			-				7.4	J			-			
Specific Conductance	uS/cm	T	670.	:			-				673.	:			-				751.	:			-			
Temperature	Celsius	T	14.03	:			-				22.73	:			-				15.86	:			-			
Turbidity	NTU	T	35.3	:			-				52.	:			-				17.	:			-			
General Chemistry																						
Ammonia	mg/L	T	0.056	J			-				<0.071	J			-				<0.04	:			-			
Bicarbonate (as CaCO3)	mg/L	T	204.	:			-				200.	:			-				200.	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Chloride	mg/L	T	<10.9	:			-				2.9	:			-				2.8	:			-			
Fluoride	mg/L	T	1.1	:			-				1.	:			-				1.	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	<0.4	:			-				0.43	J			-				0.33	J			-			
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	0.068	J			-				0.15	J			-				<0.01	J			-			
Phosphorus	mg/L	T	0.049	J			-				0.017	J			-				0.017	:			-			
Sulfate	mg/L	T	164.	J			-				163.	J			-				164.	J			-			
Total Alkalinity	mg/L	T	204.	:			-				200.	:			-				200.	:			-			
Total Dissolved Solids	mg/L	T	576.	:			-				506.	:			-				528.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	<1.	:			-				<1.	J			-				<1.6	J			-			
Total Suspended Solids	mg/L	T	56.6	:			-				9.3	:			-				10.3	:			-			
Laboratory Parameters																						
pH	SU	T	7.5	J			-				7.6	J			-				7.4	J			-			
Specific Conductance	umhos/cm	T	679.	J			-				652.	J			-				694.	J			-			
Inorganics																						
Cyanide	mg/L	T	<0.01	:			-				<0.01	J			-				<0.01	:			-			
Physical Properties																						
Hardness	mg/L	T	272.	:			-				312.	:			-				310.	:			-			
Hardness	mg/L	D	-				310.	:			-				307.	:			-				314.	:		
Metals																						

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 6/1/2003 MW-17-T01N-GRW GW11		MW-17 6/1/2003 MW-17-D01N-GRW GW11		MW-17 7/9/2003 MW-17-T01N-GRW GW11		MW-17 7/9/2003 MW-17-D01N-GRW GW11		MW-17 8/11/2003 MW-17-T01N-GRW GW11		MW-17 8/11/2003 MW-17-D01N-GRW GW11	
Aluminum	mg/L	T	<0.426	:	-		<0.631	:	-		<0.631	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.631	:	-		<0.631	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.023	:	-		0.0182	:	-		0.018	:	-	
Barium	mg/L	D	-		0.017	:	-		0.0169	:	-		0.0169	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0777	:	-		0.0692	:	-		0.0664	:	-	
Boron	mg/L	D	-		0.0742	:	-		0.069	:	-		0.0657	:
Cadmium	mg/L	T	<0.00089	:	-		<0.0006	:	-		<0.0003	:	-	
Cadmium	mg/L	D	-		<0.00064	:	-		<0.0006	:	-		<0.0003	:
Calcium	mg/L	T	81.2	:	-		93.3	:	-		91.9	:	-	
Calcium	mg/L	D	-		93.	:	-		91.9	:	-		93.2	:
Chromium	mg/L	T	<0.002	:	-		<0.0014	:	-		<0.00061	:	-	
Chromium	mg/L	D	-		0.0013	:	-		<0.0014	:	-		<0.0006	:
Cobalt	mg/L	T	<0.0038	:	-		<0.002	:	-		<0.0018	:	-	
Cobalt	mg/L	D	-		<0.0038	:	-		<0.002	:	-		<0.0018	:
Copper	mg/L	T	0.0017	:	-		<0.0024	:	-		<0.0017	:	-	
Copper	mg/L	D	-		0.0015	:	-		<0.0024	:	-		<0.0014	:
Iron	mg/L	T	<0.422	:	-		<0.667	:	-		<0.667	:	-	
Iron	mg/L	D	-		<0.422	:	-		<0.667	:	-		<0.667	:
Lead	mg/L	T	<0.0005	:	-		<0.0011	:	-		<0.0002	:	-	
Lead	mg/L	D	-		0.00032	:	-		<0.00091	:	-		<0.0002	:
Magnesium	mg/L	T	16.8	:	-		19.1	:	-		19.6	:	-	
Magnesium	mg/L	D	-		18.9	:	-		18.8	:	-		19.8	:
Manganese	mg/L	T	0.0681	:	-		0.0503	:	-		<0.0248	J	-	
Manganese	mg/L	D	-		0.0602	:	-		0.0414	:	-		<0.019	J
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	0.678	:	-		0.592	:	-		0.571	:	-	
Molybdenum	mg/L	D	-		0.658	:	-		0.595	:	-		0.578	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	6/1/2003	6/1/2003	7/9/2003	7/9/2003	8/11/2003	8/11/2003
			Sample ID	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
Nickel	mg/L	T		0.0034 :	-	<0.0021 :	-	<0.0031 :	-
Nickel	mg/L	D		-	<0.003 :	-	<0.0021 :	-	<0.002 :
Potassium	mg/L	T		1.56 :	-	1.14 :	-	1.18 :	-
Potassium	mg/L	D		-	1.42 :	-	1.17 :	-	1.27 :
Selenium	mg/L	T		<0.0016 :	-	<0.0016 :	-	<0.0016 :	-
Selenium	mg/L	D		-	<0.0016 :	-	<0.0016 J	-	<0.0016 :
Silver	mg/L	T		<0.0002 :	-	<0.0002 J	-	<0.0009 :	-
Silver	mg/L	D		-	<0.0002 :	-	<0.0002 J	-	<0.0009 :
Sodium	mg/L	T		40.5 :	-	44.5 :	-	49.6 :	-
Sodium	mg/L	D		-	45.6 :	-	43.3 :	-	49.6 :
Thallium	mg/L	T		<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D		-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Vanadium	mg/L	T		<0.0039 :	-	0.002 :	-	0.0013 :	-
Vanadium	mg/L	D		-	<0.0039 :	-	0.0014 :	-	0.0011 :
Zinc	mg/L	T		<0.039 :	-	<0.016 :	-	<0.016 :	-
Zinc	mg/L	D		-	<0.039 :	-	<0.016 :	-	<0.016 :
Volatile Organics									
1,1,1-Trichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2-Trichloro-1,2,2-trifluoroethan	mg/L	T		<0.01 :	-	-	-	-	-
1,1,2-Trichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1-Dichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,1-Dichloroethene	mg/L	T		<0.01 :	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dibromo-3-chloropropane	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloroethane	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloroethene (total)	mg/L	T		<0.01 :	-	-	-	-	-
1,2-Dichloropropane	mg/L	T		<0.01 :	-	-	-	-	-
1,3-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
1,4-Dichlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
2-Butanone	mg/L	T		<0.01 :	-	-	-	-	-
2-Hexanone	mg/L	T		<0.01 :	-	-	-	-	-
4-Methyl-2-pentanone	mg/L	T		<0.01 :	-	-	-	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	6/1/2003	6/1/2003	7/9/2003	7/9/2003	8/11/2003	8/11/2003
			Sample ID	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
Acetone	mg/L	T		<0.01 :	-	-	-	-	-
Benzene	mg/L	T		<0.01 :	-	-	-	-	-
Bromodichloromethane	mg/L	T		<0.01 :	-	-	-	-	-
Bromoform	mg/L	T		<0.01 :	-	-	-	-	-
Bromomethane	mg/L	T		<0.01 :	-	-	-	-	-
Carbon disulfide	mg/L	T		<0.01 :	-	-	-	-	-
Carbon tetrachloride	mg/L	T		<0.01 :	-	-	-	-	-
Chlorobenzene	mg/L	T		<0.01 :	-	-	-	-	-
Chloroethane	mg/L	T		<0.01 :	-	-	-	-	-
Chloroform	mg/L	T		<0.01 :	-	-	-	-	-
Chloromethane	mg/L	T		<0.01 :	-	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	-	-
Dibromochloromethane	mg/L	T		<0.01 :	-	-	-	-	-
Dichlorodifluoromethane	mg/L	T		<0.01 :	-	-	-	-	-
Ethylbenzene	mg/L	T		<0.01 :	-	-	-	-	-
Methylene chloride	mg/L	T		<0.01 :	-	-	-	-	-
Styrene	mg/L	T		<0.01 :	-	-	-	-	-
Tetrachloroethene	mg/L	T		<0.01 :	-	-	-	-	-
Toluene	mg/L	T		<0.01 :	-	-	-	-	-
Total Xylene	mg/L	T		<0.01 :	-	-	-	-	-
trans-1,2-Dichloroethene	mg/L	T		<0.01 :	-	-	-	-	-
trans-1,3-Dichloropropene	mg/L	T		<0.01 :	-	-	-	-	-
Trichloroethene	mg/L	T		<0.01 :	-	-	-	-	-
Trichlorofluoromethane	mg/L	T		<0.01 :	-	-	-	-	-
Vinyl chloride	mg/L	T		<0.01 :	-	-	-	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T		<0.011 :	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	T		<0.028 :	-	-	-	-	-
2,4,6-Trichlorophenol	mg/L	T		<0.011 :	-	-	-	-	-
2,4-Dichlorophenol	mg/L	T		<0.011 :	-	-	-	-	-
2,4-Dimethylphenol	mg/L	T		<0.011 :	-	-	-	-	-
2,4-Dinitrophenol	mg/L	T		<0.028 :	-	-	-	-	-
2,4-Dinitrotoluene	mg/L	T		<0.011 :	-	-	-	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			6/1/2003	6/1/2003	7/9/2003	7/9/2003	8/11/2003	8/11/2003
			MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
			GW11	GW11	GW11	GW11	GW11	GW11
2,6-Dinitrotoluene	mg/L	T	<0.011 :	-	-	-	-	-
2-Chloronaphthalene	mg/L	T	<0.011 :	-	-	-	-	-
2-Chlorophenol	mg/L	T	<0.011 :	-	-	-	-	-
2-Methylnaphthalene	mg/L	T	<0.011 :	-	-	-	-	-
2-Methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
2-Nitroaniline	mg/L	T	<0.028 :	-	-	-	-	-
2-Nitrophenol	mg/L	T	<0.011 :	-	-	-	-	-
3,3-Dichlorobenzidine	mg/L	T	<0.011 :	-	-	-	-	-
3-Nitroaniline	mg/L	T	<0.028 :	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/L	T	<0.028 :	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/L	T	<0.011 :	-	-	-	-	-
4-Chloro-3-methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
4-Chloroaniline	mg/L	T	<0.011 :	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L	T	<0.011 :	-	-	-	-	-
4-Methylphenol	mg/L	T	<0.011 :	-	-	-	-	-
4-Nitroaniline	mg/L	T	<0.028 J	-	-	-	-	-
4-Nitrophenol	mg/L	T	<0.028 :	-	-	-	-	-
Acenaphthene	mg/L	T	<0.011 :	-	-	-	-	-
Acenaphthylene	mg/L	T	<0.011 :	-	-	-	-	-
Anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Benzaldehyde	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(a)anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(a)pyrene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(b)fluoranthene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L	T	<0.011 :	-	-	-	-	-
Benzo(k)fluoranthene	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/L	T	<0.011 :	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L	T	<0.011 :	-	-	-	-	-
Butyl benzyl phthalate	mg/L	T	<0.011 :	-	-	-	-	-
Carbazole	mg/L	T	<0.011 :	-	-	-	-	-
Chrysene	mg/L	T	<0.011 :	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L	T	<0.011 :	-	-	-	-	-
Dibenzofuran	mg/L	T	<0.011 :	-	-	-	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID					
			MW-17	6/1/2003	MW-17-T01N-GRW	MW-17	6/1/2003	MW-17-D01N-GRW	MW-17	7/9/2003	MW-17-T01N-GRW	MW-17	7/9/2003	MW-17-D01N-GRW	MW-17	8/11/2003	MW-17-T01N-GRW	MW-17	8/11/2003	MW-17-D01N-GRW
			GW11			GW11			GW11			GW11			GW11			GW11		
Dichlorodiisopropyl ether	mg/L	T	<0.011	:		-			-			-			-			-		
Diethylphthalate	mg/L	T	<0.011	:		-			-			-			-			-		
Dimethylphthalate	mg/L	T	<0.011	:		-			-			-			-			-		
Di-n-Butyl phthalate	mg/L	T	<0.011	:		-			-			-			-			-		
Di-n-Octyl phthalate	mg/L	T	<0.011	:		-			-			-			-			-		
Fluoranthene	mg/L	T	<0.011	:		-			-			-			-			-		
Fluorene	mg/L	T	<0.011	:		-			-			-			-			-		
Hexachlorobenzene	mg/L	T	<0.011	:		-			-			-			-			-		
Hexachlorobutadiene	mg/L	T	<0.011	:		-			-			-			-			-		
Hexachlorocyclopentadiene	mg/L	T	<0.011	:		-			-			-			-			-		
Hexachloroethane	mg/L	T	<0.011	:		-			-			-			-			-		
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.011	:		-			-			-			-			-		
Isophorone	mg/L	T	<0.011	:		-			-			-			-			-		
Naphthalene	mg/L	T	<0.011	:		-			-			-			-			-		
Nitrobenzene	mg/L	T	<0.011	:		-			-			-			-			-		
N-Nitrosodi-n-propylamine	mg/L	T	<0.011	:		-			-			-			-			-		
N-Nitrosodiphenylamine	mg/L	T	<0.011	:		-			-			-			-			-		
Pentachlorophenol	mg/L	T	<0.028	:		-			-			-			-			-		
Phenanthrene	mg/L	T	<0.011	:		-			-			-			-			-		
Phenol	mg/L	T	<0.011	:		-			-			-			-			-		
Pyrene	mg/L	T	<0.011	:		-			-			-			-			-		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	9/7/2003	9/7/2003	10/16/2003	10/16/2003	11/2/2003	11/2/2003
			Sample ID	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
Field Measurements									
DO	mg/L	T		4.15 :	-	5.52 :	-	3.68 :	-
Eh	millivolts	T		137. :	-	220.5 :	-	248.6 :	-
pH	SU	T		7.6 J	-	7.4 J	-	7.6 J	-
Specific Conductance	uS/cm	T		716. :	-	666. :	-	660. :	-
Temperature	Celsius	T		14.8 :	-	10.74 :	-	12.57 :	-
Turbidity	NTU	T		12. :	-	9.4 :	-	6.4 :	-
General Chemistry									
Ammonia	mg/L	T		<0.04 :	-	<0.04 J	-	<0.083 :	-
Bicarbonate (as CaCO3)	mg/L	T		202. :	-	208. :	-	191. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		3. :	-	2.7 :	-	2.7 :	-
Fluoride	mg/L	T		1. :	-	1.1 :	-	1.1 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.32 J	-	0.29 J	-	0.33 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.011 :	-	<0.01 J	-	0.011 J	-
Phosphorus	mg/L	T		0.011 :	-	<0.01 :	-	<0.01 :	-
Sulfate	mg/L	T		164. J	-	161. J	-	165. :	-
Total Alkalinity	mg/L	T		202. :	-	208. :	-	191. :	-
Total Dissolved Solids	mg/L	T		548. :	-	490. :	-	538. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.48 :	-	<0.24 :	-	0.4 :	-
Total Organic Carbon	mg/L	T		<1. :	-	<1. J	-	<1. :	-
Total Suspended Solids	mg/L	T		5.4 :	-	7.9 :	-	4.1 :	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	7.4 J	-	7.6 J	-
Specific Conductance	umhos/cm	T		619. J	-	600. J	-	695. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		323. :	-	292. :	-	289. :	-
Hardness	mg/L	D		-	316. :	-	317. :	-	292. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-17	9/7/2003	MW-17-T01N-GRW	GW11	MW-17	9/7/2003	MW-17-D01N-GRW	GW11	MW-17	10/16/2003	MW-17-T01N-GRW	GW11	MW-17	10/16/2003	MW-17-D01N-GRW	GW11	MW-17	11/2/2003	MW-17-T01N-GRW	GW11	MW-17	11/2/2003	MW-17-D01N-GRW	GW11
Aluminum	mg/L	T	<0.217	:	-		<0.221	:	-		<0.217	:	-	
Aluminum	mg/L	D	-		<0.217	:	-		<0.221	:	-		<0.217	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0011	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0177	:	-		0.0163	:	-		0.0188	:	-	
Barium	mg/L	D	-		0.0178	:	-		0.0169	:	-		0.0164	:
Beryllium	mg/L	T	<0.0004	:	-		<0.0003	:	-		<0.0003	J	-	
Beryllium	mg/L	D	-		<0.0004	:	-		<0.0003	:	-		<0.00041	J
Boron	mg/L	T	0.0685	:	-		0.0629	:	-		0.0657	:	-	
Boron	mg/L	D	-		0.0698	:	-		0.0696	:	-		0.0642	:
Cadmium	mg/L	T	<0.0005	:	-		<0.0007	:	-		<0.0007	:	-	
Cadmium	mg/L	D	-		<0.0005	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	96.2	:	-		87.7	:	-		86.2	:	-	
Calcium	mg/L	D	-		93.9	:	-		95.2	:	-		87.1	:
Chromium	mg/L	T	<0.0011	:	-		<0.0013	J	-		<0.0016	:	-	
Chromium	mg/L	D	-		<0.0011	:	-		<0.0013	J	-		<0.0013	:
Cobalt	mg/L	T	<0.0029	:	-		<0.0031	:	-		<0.0031	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0031	:	-		<0.0031	:
Copper	mg/L	T	<0.0022	:	-		0.0035	:	-		<0.002	J	-	
Copper	mg/L	D	-		<0.0024	:	-		<0.002	:	-		<0.002	J
Iron	mg/L	T	<0.455	:	-		<0.278	:	-		<0.455	:	-	
Iron	mg/L	D	-		<0.455	:	-		<0.278	:	-		<0.455	:
Lead	mg/L	T	<0.00075	:	-		<0.0004	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.00062	:	-		<0.0004	:	-		<0.0004	:
Magnesium	mg/L	T	20.2	:	-		17.6	:	-		18.	:	-	
Magnesium	mg/L	D	-		19.8	:	-		19.2	:	-		18.1	:
Manganese	mg/L	T	<0.016	:	-		<0.012	:	-		<0.016	J	-	
Manganese	mg/L	D	-		<0.016	:	-		<0.012	:	-		<0.016	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.559	:	-		0.511	:	-		0.557	:	-	
Molybdenum	mg/L	D	-		0.576	:	-		0.567	:	-		0.556	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area	
			MW-17	9/7/2003	MW-17-T01N-GRW	GW11		MW-17	9/7/2003	MW-17-D01N-GRW	GW11		MW-17	10/16/2003	MW-17-T01N-GRW	GW11		MW-17	10/16/2003	MW-17-D01N-GRW	GW11		MW-17	11/2/2003	MW-17-T01N-GRW	GW11	
			MW-17	11/2/2003	MW-17-D01N-GRW	GW11																					
Nickel	mg/L	T	<0.0024	:	-			<0.0028	:	-			<0.0028	:	-												
Nickel	mg/L	D	-		<0.0024	:		-		<0.0028	:		-		<0.0028	:											
Potassium	mg/L	T	<1.52	:	-			1.04	:	-			<0.611	J	-												
Potassium	mg/L	D	-		<1.78	:		-		1.24	:		-		<0.522	J											
Selenium	mg/L	T	0.0008	:	-			<0.0006	:	-			0.00063	:	-												
Selenium	mg/L	D	-		<0.0006	:		-		<0.0006	:		-		<0.0006	:											
Silver	mg/L	T	<0.0002	:	-			<0.0002	:	-			<0.0002	:	-												
Silver	mg/L	D	-		<0.0002	:		-		<0.0002	:		-		<0.0002	:											
Sodium	mg/L	T	45.4	:	-			41.2	:	-			41.6	:	-												
Sodium	mg/L	D	-		45.2	:		-		43.7	:		-		41.8	:											
Thallium	mg/L	T	<0.0002	:	-			<0.0002	:	-			<0.0002	:	-												
Thallium	mg/L	D	-		<0.0002	:		-		<0.0002	:		-		<0.0002	:											
Vanadium	mg/L	T	0.0013	:	-			0.0013	:	-			0.0018	:	-												
Vanadium	mg/L	D	-		0.0012	:		-		0.00098	:		-		0.0013	:											
Zinc	mg/L	T	<0.0218	:	-			<0.023	:	-			<0.0966	:	-												
Zinc	mg/L	D	-		<0.019	:		-		<0.023	:		-		<0.019	:											

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
			Sample Date	12/7/2003	12/7/2003	1/7/2004	1/7/2004	4/15/2004	4/15/2004
			Sample ID	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW	MW-17-T01N-GRW	MW-17-D01N-GRW
				GW11	GW11	GW11	GW11	GW11	GW11
Field Measurements									
DO	mg/L	T		3.84 :	-	4.85 :	-	4.07 :	-
Eh	millivolts	T		268.5 :	-	417.8 :	-	197.2 :	-
pH	SU	T		7.6 J	-	7.6 J	-	7.8 J	-
Specific Conductance	uS/cm	T		698. :	-	714. :	-	698. :	-
Temperature	Celsius	T		12.25 :	-	10.96 :	-	15.28 :	-
Turbidity	NTU	T		20.7 :	-	14.2 :	-	10.9 :	-
General Chemistry									
Ammonia	mg/L	T		0.072 :	-	<0.04 :	-	0.25 :	-
Bicarbonate (as CaCO3)	mg/L	T		200. :	-	206. :	-	203. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		2.8 :	-	2.6 :	-	2.6 :	-
Fluoride	mg/L	T		1. :	-	1. :	-	1.1 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.34 J	-	<0.28 J	-	0.47 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.01 J	-	<0.01 J	-	0.011 :	-
Phosphorus	mg/L	T		0.025 :	-	<0.016 :	-	0.01 :	-
Sulfate	mg/L	T		165. :	-	162. :	-	153. :	-
Total Alkalinity	mg/L	T		200. J	-	206. :	-	203. :	-
Total Dissolved Solids	mg/L	T		504. :	-	444. :	-	466. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 J	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	<1. :	-	<2.1 J	-
Total Suspended Solids	mg/L	T		11.8 :	-	6.7 :	-	<1.8 :	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	7.6 J	-	7.8 J	-
Specific Conductance	umhos/cm	T		555. J	-	657. J	-	602. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		297. :	-	283. :	-	313. :	-
Hardness	mg/L	D		-	299. :	-	286. :	-	310. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-17 12/7/2003 MW-17-T01N-GRW GW11		MW-17 12/7/2003 MW-17-D01N-GRW GW11		MW-17 1/7/2004 MW-17-T01N-GRW GW11		MW-17 1/7/2004 MW-17-D01N-GRW GW11		MW-17 4/15/2004 MW-17-T01N-GRW GW11		MW-17 4/15/2004 MW-17-D01N-GRW GW11	
Aluminum	mg/L	T	<0.307	J	-		<0.514	:	-		<0.176	J	-	
Aluminum	mg/L	D	-		<0.307	J	-		<0.514	:	-		<0.176	J
Antimony	mg/L	T	<0.001	:	-		<0.0024	:	-		<0.0008	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0206	:	-		0.0167	:	-		0.0154	:	-	
Barium	mg/L	D	-		0.0162	:	-		0.0159	:	-		0.0144	:
Beryllium	mg/L	T	<0.00072	:	-		<0.0003	:	-		<0.00022	:	-	
Beryllium	mg/L	D	-		<0.0004	:	-		<0.0003	:	-		<0.0002	:
Boron	mg/L	T	0.0658	:	-		0.0677	:	-		0.0693	:	-	
Boron	mg/L	D	-		0.0678	:	-		0.0693	:	-		0.0672	:
Cadmium	mg/L	T	<0.0007	:	-		<0.0007	J	-		<0.0003	J	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0007	:	-		<0.0003	J
Calcium	mg/L	T	89.2	:	-		84.5	:	-		92.5	:	-	
Calcium	mg/L	D	-		89.6	:	-		85.5	:	-		91.4	:
Chromium	mg/L	T	<0.0013	J	-		<0.0015	J	-		<0.0019	:	-	
Chromium	mg/L	D	-		<0.0013	J	-		<0.0015	J	-		<0.0016	:
Cobalt	mg/L	T	<0.0031	:	-		<0.0023	:	-		<0.0011	:	-	
Cobalt	mg/L	D	-		<0.0031	:	-		<0.0023	:	-		<0.0022	:
Copper	mg/L	T	<0.002	:	-		<0.003	:	-		<0.0007	J	-	
Copper	mg/L	D	-		<0.002	:	-		<0.003	:	-		<0.0007	J
Iron	mg/L	T	0.452	:	-		<0.373	:	-		<0.192	J	-	
Iron	mg/L	D	-		<0.3	:	-		<0.373	:	-		<0.192	:
Lead	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Magnesium	mg/L	T	18.1	:	-		17.5	:	-		19.8	:	-	
Magnesium	mg/L	D	-		18.3	:	-		17.7	:	-		19.8	:
Manganese	mg/L	T	0.0115	:	-		<0.015	:	-		<0.019	:	-	
Manganese	mg/L	D	-		<0.01	:	-		<0.015	:	-		<0.019	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	0.554	:	-		0.615	:	-		0.7	:	-	
Molybdenum	mg/L	D	-		0.561	:	-		0.637	:	-		0.691	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-17	12/7/2003	MW-17-T01N-GRW	GW11	MW-17	12/7/2003	MW-17-D01N-GRW	GW11	MW-17	1/7/2004	MW-17-T01N-GRW	GW11	MW-17	1/7/2004	MW-17-D01N-GRW	GW11
Nickel	mg/L	T	<0.0028	:			-				<0.0024	:			-			
Nickel	mg/L	D	-				<0.0028	:			-				<0.0024	:		
Potassium	mg/L	T	<0.522	J			-				1.18	:			-			
Potassium	mg/L	D	-				<0.522	J			-				1.19	:		
Selenium	mg/L	T	<0.0006	:			-				0.00076	J			-			
Selenium	mg/L	D	-				<0.0006	:			-				0.00075	:		
Silver	mg/L	T	<0.0002	:			-				<0.0002	:			-			
Silver	mg/L	D	-				<0.0002	:			-				<0.0002	:		
Sodium	mg/L	T	39.5	:			-				42.7	:			-			
Sodium	mg/L	D	-				42.3	:			-				42.	:		
Thallium	mg/L	T	<0.0002	:			-				<0.0002	:			-			
Thallium	mg/L	D	-				<0.0002	:			-				<0.0002	:		
Vanadium	mg/L	T	0.0017	:			-				0.0013	:			-			
Vanadium	mg/L	D	-				0.0012	:			-				0.0011	:		
Zinc	mg/L	T	<0.02	:			-				<0.026	:			-			
Zinc	mg/L	D	-				<0.02	:			-				<0.026	:		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-17	4/15/2004	MW-17-T01N-GRW	GW11	MW-17	4/15/2004	MW-17-D01N-GRW	GW11						
Nickel	mg/L	T	0.0022	:			-									
Nickel	mg/L	D	-				<0.0014	:								
Potassium	mg/L	T	<1.62	J			-									
Potassium	mg/L	D	-				<1.53	J								
Selenium	mg/L	T	<0.0014	:			-									
Selenium	mg/L	D	-				<0.0014	:								
Silver	mg/L	T	<0.0002	J			-									
Silver	mg/L	D	-				<0.0002	J								
Sodium	mg/L	T	50.6	:			-									
Sodium	mg/L	D	-				59.7	:								
Thallium	mg/L	T	<0.0002	:			-									
Thallium	mg/L	D	-				<0.0002	:								
Vanadium	mg/L	T	0.0019	J			-									
Vanadium	mg/L	D	-				0.0016	J								
Zinc	mg/L	T	<0.0282	:			-									
Zinc	mg/L	D	-				<0.0154	:								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-2		MW-2		MW-2		MW-2		MW-2	
			Sample Date	11/9/2002		11/9/2002		1/19/2003		1/19/2003		4/3/2003		4/3/2003	
			Sample ID	MW-2-T01N-GRW		MW-2-D01N-GRW		MW-2-T01N-GRW		MW-2-D01N-GRW		MW-2-T01N-GRW		MW-2-D01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements															
DO	mg/L	T		8.58	:	-		3.91	:	-		5.96	:	-	
Eh	millivolts	T		76.	:	-		280.7	:	-		30.5	:	-	
pH	SU	T		8.22	:	-		6.73	:	-		7.6	J	-	
Specific Conductance	uS/cm	T		769.	:	-		801.	:	-		762.	:	-	
Temperature	Celsius	T		11.58	:	-		9.2	:	-		11.72	:	-	
Turbidity	NTU	T		13.	:	-		34.4	:	-		33.6	:	-	
General Chemistry															
Ammonia	mg/L	T		<0.46	:	-		<0.2	:	-		<0.094	:	-	
Bicarbonate (as CaCO3)	mg/L	T		24.1	:	-		29.5	:	-		21.4	:	-	
Carbonate (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T		11.	:	-		11.1	:	-		<2.7	:	-	
Fluoride	mg/L	T		0.6	:	-		0.59	:	-		0.61	:	-	
Hydroxide (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T		<0.4	J	-		<0.4	J	-		<1.1	J	-	
Nitrite	mg/L	T		<0.005	J	-		<0.005	J	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T		0.036	J	-		<0.01	J	-		<0.01	:	-	
Phosphorus	mg/L	T		0.011	J	-		0.027	:	-		<0.01	:	-	
Sulfate	mg/L	T		342.	:	-		433.	J	-		305.	J	-	
Total Alkalinity	mg/L	T		24.1	:	-		29.5	:	-		21.4	:	-	
Total Dissolved Solids	mg/L	T		518.	:	-		<563.	:	-		564.	:	-	
Total Kjeldahl Nitrogen	mg/L	T		0.7	:	-		<0.28	:	-		0.25	:	-	
Total Organic Carbon	mg/L	T		2.	:	-		<1.	:	-		<1.5	:	-	
Total Suspended Solids	mg/L	T		66.3	:	-		29.2	:	-		16.	:	-	
Laboratory Parameters															
pH	SU	T		8.22	:	-		6.73	:	-		7.6	J	-	
Specific Conductance	umhos/cm	T		-		-		-		-		737.	J	-	
Inorganics															
Cyanide	mg/L	T		<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties															
Hardness	mg/L	T		261.	:	-		319.	:	-		275.	:	-	
Hardness	mg/L	D		-		250.	:	-		298.	:	-		276.	:
Metals															

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
			Sample Date	11/9/2002	11/9/2002	1/19/2003	1/19/2003	4/3/2003	4/3/2003
			Sample ID	MW-2-T01N-GRW	MW-2-D01N-GRW	MW-2-T01N-GRW	MW-2-D01N-GRW	MW-2-T01N-GRW	MW-2-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T		0.287 :	-	<0.226 :	-	<0.503 :	-
Aluminum	mg/L	D		-	<0.0054 :	-	<0.226 :	-	<0.503 :
Antimony	mg/L	T		<0.0002 :	-	<0.0006 :	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.00054 :	-	<0.0006 :	-	<0.0006 :
Arsenic	mg/L	T		0.00059 J	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D		-	0.00025 J	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T		0.0185 :	-	0.0207 :	-	0.0156 :	-
Barium	mg/L	D		-	0.0114 :	-	0.0173 :	-	0.0197 :
Beryllium	mg/L	T		<0.0002 :	-	<0.0002 :	-	<0.0003 J	-
Beryllium	mg/L	D		-	<0.0002 :	-	<0.0002 :	-	<0.0003 J
Boron	mg/L	T		0.0208 :	-	<0.0212 :	-	0.0301 :	-
Boron	mg/L	D		-	0.0232 :	-	<0.0254 :	-	0.0271 :
Cadmium	mg/L	T		<0.0001 :	-	<0.0004 :	-	<0.0005 :	-
Cadmium	mg/L	D		-	<0.0001 :	-	<0.0004 :	-	<0.0005 :
Calcium	mg/L	T		76.8 :	-	90.6 :	-	79.3 :	-
Calcium	mg/L	D		-	74. :	-	84.2 :	-	79.3 :
Chromium	mg/L	T		<0.0046 :	-	<0.0037 :	-	<0.0012 :	-
Chromium	mg/L	D		-	<0.0046 :	-	<0.0037 :	-	<0.001 :
Cobalt	mg/L	T		<0.0022 :	-	<0.0016 :	-	<0.0038 :	-
Cobalt	mg/L	D		-	<0.0022 :	-	<0.0016 :	-	<0.0038 :
Copper	mg/L	T		0.003 :	-	<0.003 :	-	<0.0052 :	-
Copper	mg/L	D		-	<0.0012 :	-	<0.0017 :	-	<0.0047 :
Iron	mg/L	T		17.8 :	-	17.7 :	-	6.27 :	-
Iron	mg/L	D		-	<0.0226 :	-	<0.364 :	-	3.46 :
Lead	mg/L	T		0.0005 :	-	<0.0002 :	-	<0.0002 :	-
Lead	mg/L	D		-	<0.00027 :	-	<0.0002 :	-	<0.0002 :
Magnesium	mg/L	T		16.7 :	-	22.6 :	-	18.7 :	-
Magnesium	mg/L	D		-	15.7 :	-	21.3 :	-	18.9 :
Manganese	mg/L	T		0.543 :	-	0.713 :	-	0.526 :	-
Manganese	mg/L	D		-	0.103 :	-	0.438 :	-	0.73 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.42 :	-	0.346 :	-	0.23 :	-
Molybdenum	mg/L	D		-	0.448 :	-	0.271 :	-	0.171 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-2 11/9/2002 MW-2-T01N-GRW GW13		MW-2 11/9/2002 MW-2-D01N-GRW GW13		MW-2 1/19/2003 MW-2-T01N-GRW GW13		MW-2 1/19/2003 MW-2-D01N-GRW GW13		MW-2 4/3/2003 MW-2-T01N-GRW GW13		MW-2 4/3/2003 MW-2-D01N-GRW GW13	
Nickel	mg/L	T	0.0076	J	-		0.0047	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0002	J	-		<0.0015	:	-		<0.003	:
Potassium	mg/L	T	3.36	:	-		2.77	:	-		2.8	:	-	
Potassium	mg/L	D	-		3.32	:	-		2.72	:	-		2.73	:
Selenium	mg/L	T	<0.0012	:	-		<0.0016	:	-		<0.001	:	-	
Selenium	mg/L	D	-		<0.00068	:	-		<0.0016	:	-		<0.001	:
Silver	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	57.2	:	-		58.5	:	-		58.	:	-	
Sodium	mg/L	D	-		55.9	:	-		57.8	:	-		57.2	:
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0008	:	-		<0.0004	:	-		<0.0002	:	-	
Vanadium	mg/L	D	-		<0.0001	:	-		<0.0004	:	-		<0.0002	:
Zinc	mg/L	T	0.0431	:	-		<0.028	:	-		<0.014	:	-	
Zinc	mg/L	D	-		<0.0069	:	-		<0.028	:	-		<0.014	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID	Sample Date	Sample ID											
			MW-2	7/9/2003	MW-2-T01N-GRW		MW-2	7/9/2003	MW-2-D01N-GRW		MW-2	10/15/2003	MW-2-T01N-GRW		MW-2	10/15/2003	MW-2-D01N-GRW	
			GW13				GW13				GW13				GW13			
Field Measurements																		
DO	mg/L	T	3.43				-				26.8				-	2.38		
Eh	millivolts	T	253.3				-				42.				-	239.6		
pH	SU	T	9.1	J			-				9.	J			-	8.4	J	
Specific Conductance	uS/cm	T	750.				-				849.				-	860.		
Temperature	Celsius	T	11.29				-				13.21				-	11.55		
Turbidity	NTU	T	14.				-				15.4				-	10.5		
General Chemistry																		
Ammonia	mg/L	T	<0.13	J			-				<0.15	J			-	<0.091	J	
Bicarbonate (as CaCO3)	mg/L	T	28.1				-				22.6	J			-	28.1		
Carbonate (as CaCO3)	mg/L	T	<1.				-				2.2	J			-	<1.		
Chloride	mg/L	T	10.6				-				10.9				-	10.9		
Fluoride	mg/L	T	0.62				-				0.59				-	0.57		
Hydroxide (as CaCO3)	mg/L	T	<1.				-				<1.	J			-	<1.		
Nitrate	mg/L	T	<0.4	J			-				<0.2				-	<0.2	J	
Nitrite	mg/L	T	<0.005	J			-				<0.005				-	<0.005	J	
Phosphate, Ortho As P	mg/L	T	<0.047	J			-				<0.01				-	<0.01	J	
Phosphorus	mg/L	T	0.011	J			-				0.031				-	<0.019		
Sulfate	mg/L	T	330.	J			-				294.	J			-	364.		
Total Alkalinity	mg/L	T	28.1				-				24.8	J			-	28.1		
Total Dissolved Solids	mg/L	T	550.				-				568.				-	626.		
Total Kjeldahl Nitrogen	mg/L	T	<0.24				-				<0.24				-	1.1		
Total Organic Carbon	mg/L	T	<1.8	J			-				2.	J			-	9.6		
Total Suspended Solids	mg/L	T	13.8				-				19.3				-	18.8		
Laboratory Parameters																		
pH	SU	T	9.1	J			-				9.	J			-	8.4	J	
Specific Conductance	umhos/cm	T	681.	J			-				777.	J			-	803.	J	
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-	<0.01	J	
Physical Properties																		
Hardness	mg/L	T	272.				-				315.				-	311.		
Hardness	mg/L	D	-				259.				-				310.	-		
Metals																		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-2 7/9/2003 MW-2-T01N-GRW GW13		MW-2 7/9/2003 MW-2-D01N-GRW GW13		MW-2 10/15/2003 MW-2-T01N-GRW GW13		MW-2 10/15/2003 MW-2-D01N-GRW GW13		MW-2 1/8/2004 MW-2-T01N-GRW GW13		MW-2 1/8/2004 MW-2-D01N-GRW GW13	
Aluminum	mg/L	T	<0.631	:	-		<0.307	:	-		<0.621	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.307	:	-		<0.621	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		0.00043	:	-		0.00043	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0156	:	-		0.0165	:	-		<0.0188	:	-	
Barium	mg/L	D	-		0.0161	:	-		0.0142	:	-		<0.0188	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	:	-		<0.001	J	-	
Beryllium	mg/L	D	-		<0.0012	:	-		<0.0003	:	-		<0.001	J
Boron	mg/L	T	0.0318	J	-		0.0292	:	-		0.0259	:	-	
Boron	mg/L	D	-		0.047	J	-		0.0284	:	-		0.0249	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0007	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		0.004	:	-		<0.0007	:	-		<0.0007	:
Calcium	mg/L	T	77.	:	-		89.	:	-		88.2	:	-	
Calcium	mg/L	D	-		73.1	:	-		87.5	:	-		83.4	:
Chromium	mg/L	T	<0.0014	J	-		0.0021	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		0.0097	:	-		<0.0013	J	-		<0.0057	:
Cobalt	mg/L	T	<0.0018	:	-		<0.0031	:	-		<0.0037	:	-	
Cobalt	mg/L	D	-		0.0131	:	-		<0.0031	:	-		<0.0037	:
Copper	mg/L	T	<0.0025	:	-		<0.002	J	-		<0.0035	:	-	
Copper	mg/L	D	-		0.0116	:	-		<0.002	J	-		<0.0035	:
Iron	mg/L	T	5.77	:	-		5.64	:	-		5.23	:	-	
Iron	mg/L	D	-		1.37	:	-		<0.3	:	-		<0.423	:
Lead	mg/L	T	<0.00024	:	-		<0.0004	:	-		0.00025	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Magnesium	mg/L	T	19.5	:	-		22.5	:	-		22.1	:	-	
Magnesium	mg/L	D	-		18.6	:	-		22.3	:	-		20.9	:
Manganese	mg/L	T	0.475	:	-		0.467	:	-		0.561	:	-	
Manganese	mg/L	D	-		0.388	:	-		0.367	:	-		0.39	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.267	:	-		0.263	:	-		0.241	:	-	
Molybdenum	mg/L	D	-		0.255	:	-		0.25	:	-		0.24	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-2	7/9/2003	MW-2-T01N-GRW	GW13	MW-2	7/9/2003	MW-2-D01N-GRW	GW13	MW-2	10/15/2003	MW-2-T01N-GRW	GW13	MW-2	10/15/2003	MW-2-D01N-GRW	GW13
Nickel	mg/L	T	0.0021	J		-		<0.0028	:		-		<0.0168	:		-		
Nickel	mg/L	D	-			0.0132	:	-			<0.0028	:	-			<0.0168	:	
Potassium	mg/L	T	3.28	:		-		3.15	:		-		2.98	:		-		
Potassium	mg/L	D	-			3.01	:	-			2.92	:	-			2.79	:	
Selenium	mg/L	T	<0.0016	:		-		0.0014	:		-		<0.0011	J		-		
Selenium	mg/L	D	-			<0.0016	J	-			0.001	:	-			<0.00088	:	
Silver	mg/L	T	<0.0002	J		-		<0.0002	:		-		<0.0002	:		-		
Silver	mg/L	D	-			<0.0002	J	-			<0.0002	:	-			<0.0002	:	
Sodium	mg/L	T	56.4	:		-		61.2	:		-		59.6	:		-		
Sodium	mg/L	D	-			57.1	:	-			57.3	:	-			55.4	:	
Thallium	mg/L	T	<0.0002	:		-		<0.0002	:		-		<0.0002	:		-		
Thallium	mg/L	D	-			<0.0002	:	-			<0.0002	:	-			<0.0002	:	
Vanadium	mg/L	T	<0.0004	:		-		0.00037	:		-		<0.0004	:		-		
Vanadium	mg/L	D	-			<0.0004	:	-			<0.0002	:	-			<0.0004	:	
Zinc	mg/L	T	<0.016	:		-		0.0555	:		-		<0.091	:		-		
Zinc	mg/L	D	-			<0.016	:	-			<0.02	:	-			<0.091	:	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-2 4/16/2004 MW-2-T01N-GRW GW13		MW-2 4/16/2004 MW-2-D01N-GRW GW13		MW-21 5/7/2003 MW-21-T01N-GRW TLR		MW-21 5/7/2003 MW-21-D01N-GRW TLR		MW-21 6/1/2003 MW-21-T01N-GRW TLR		MW-21 6/1/2003 MW-21-D01N-GRW TLR	
Field Measurements														
DO	mg/L	T	3.3	:	-		8.35	:	-		8.2	:	-	
Eh	millivolts	T	151.2	:	-		133.7	:	-		322.3	:	-	
pH	SU	T	9.2	J	-		7.1	:	-		7.5	J	-	
Specific Conductance	uS/cm	T	858.	:	-		1185.	:	-		1167.	:	-	
Temperature	Celsius	T	12.47	:	-		11.8	:	-		11.58	:	-	
Turbidity	NTU	T	18.6	:	-		36.4	:	-		59.9	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.054	:	-		<0.052	:	-		<0.04	J	-	
Bicarbonate (as CaCO3)	mg/L	T	36.2	:	-		132.	:	-		134.	:	-	
Carbonate (as CaCO3)	mg/L	T	2.6	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	10.7	:	-		89.7	:	-		163.	:	-	
Fluoride	mg/L	T	0.61	:	-		0.39	:	-		0.38	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	:	-		9.	J	-		8.7	:	-	
Nitrite	mg/L	T	<0.005	:	-		0.016	J	-		0.014	J	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		0.068	J	-	
Phosphorus	mg/L	T	0.013	:	-		<0.04	:	-		0.077	J	-	
Sulfate	mg/L	T	441.	:	-		292.	:	-		324.	J	-	
Total Alkalinity	mg/L	T	38.8	:	-		132.	:	-		134.	:	-	
Total Dissolved Solids	mg/L	T	636.	:	-		718.	:	-		870.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.41	:	-		<0.24	:	-		0.26	:	-	
Total Organic Carbon	mg/L	T	<4.	J	-		2.4	:	-		2.	J	-	
Total Suspended Solids	mg/L	T	6.3	J	-		40.2	:	-		68.	:	-	
Laboratory Parameters														
pH	SU	T	9.2	J	-		7.1	:	-		7.5	J	-	
Specific Conductance	umhos/cm	T	805.	J	-		1100.	:	-		1150.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	330.	:	-		479.	:	-		433.	:	-	
Hardness	mg/L	D	-		329.	:	-		471.	:	-		440.	:
Metals														

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-2 4/16/2004 MW-2-T01N-GRW GW13		MW-2 4/16/2004 MW-2-D01N-GRW GW13		MW-21 5/7/2003 MW-21-T01N-GRW TLR		MW-21 5/7/2003 MW-21-D01N-GRW TLR		MW-21 6/1/2003 MW-21-T01N-GRW TLR		MW-21 6/1/2003 MW-21-D01N-GRW TLR	
Aluminum	mg/L	T	<0.201	:	-		0.978	:	-		2.63	:	-	
Aluminum	mg/L	D	-		<0.201	:	-		<0.426	:	-		<0.426	:
Antimony	mg/L	T	<0.00099	:	-		<0.0007	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0006	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		0.00069	:	-		0.0011	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.00045	:	-		0.00055	:
Barium	mg/L	T	0.012	:	-		0.0729	:	-		0.0888	:	-	
Barium	mg/L	D	-		0.012	:	-		0.0659	:	-		0.0603	:
Beryllium	mg/L	T	<0.0003	J	-		<0.0003	J	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0003	J	-		<0.0003	J	-		<0.0003	:
Boron	mg/L	T	0.0294	:	-		0.0216	:	-		0.0264	:	-	
Boron	mg/L	D	-		0.0282	:	-		0.0207	:	-		0.0267	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0005	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0005	:	-		<0.0011	:
Calcium	mg/L	T	92.2	:	-		148.	:	-		133.	:	-	
Calcium	mg/L	D	-		92.	:	-		145.	:	-		136.	:
Chromium	mg/L	T	<0.0006	:	-		0.0031	:	-		<0.0078	:	-	
Chromium	mg/L	D	-		<0.0006	:	-		<0.001	:	-		0.0024	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0038	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0038	:	-		<0.0038	:
Copper	mg/L	T	<0.0014	:	-		<0.0025	:	-		0.0051	:	-	
Copper	mg/L	D	-		<0.0014	:	-		0.0016	:	-		0.0026	:
Iron	mg/L	T	<3.19	J	-		<0.838	:	-		1.88	:	-	
Iron	mg/L	D	-		<0.293	:	-		<0.422	:	-		<0.422	:
Lead	mg/L	T	<0.0008	:	-		0.0011	:	-		<0.0029	:	-	
Lead	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		<0.00035	:
Magnesium	mg/L	T	24.2	:	-		26.7	:	-		24.3	:	-	
Magnesium	mg/L	D	-		24.1	:	-		26.2	:	-		24.4	:
Manganese	mg/L	T	0.364	:	-		0.149	:	-		0.0981	:	-	
Manganese	mg/L	D	-		0.309	:	-		0.11	:	-		0.0415	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.265	:	-		<0.0023	:	-		<0.0039	:	-	
Molybdenum	mg/L	D	-		0.261	:	-		<0.0023	:	-		<0.0041	:

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-2 4/16/2004 MW-2-T01N-GRW GW13		MW-2 4/16/2004 MW-2-D01N-GRW GW13		MW-21 5/7/2003 MW-21-T01N-GRW TLR		MW-21 5/7/2003 MW-21-D01N-GRW TLR		MW-21 6/1/2003 MW-21-T01N-GRW TLR		MW-21 6/1/2003 MW-21-D01N-GRW TLR	
Nickel	mg/L	T	<0.0015	J	-		<0.003	:	-		0.0043	:	-	
Nickel	mg/L	D	-		<0.0015	J	-		<0.003	:	-		<0.003	:
Potassium	mg/L	T	3.22	:	-		2.99	:	-		3.79	:	-	
Potassium	mg/L	D	-		3.13	:	-		2.76	:	-		2.94	:
Selenium	mg/L	T	<0.0014	:	-		0.0106	:	-		0.0105	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		0.0096	:	-		0.0089	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	<61.4	J	-		59.2	:	-		58.4	:	-	
Sodium	mg/L	D	-		<64.4	J	-		60.2	:	-		61.4	:
Thallium	mg/L	T	<0.00022	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.00022	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00064	:	-		0.0014	:	-		0.0045	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.00023	:	-		<0.0039	:
Zinc	mg/L	T	<0.024	:	-		<0.039	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.024	:	-		<0.039	:	-		<0.039	:

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
			Sample Date	7/10/2003	7/10/2003	8/10/2003	8/10/2003	9/7/2003	9/7/2003
			Sample ID	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-21-T01N-GRW	MW-21-D01N-GRW
				TLR	TLR	TLR	TLR	TLR	TLR
Field Measurements									
DO	mg/L	T		7.46 :	-	7.72 :	-	8.31 :	-
Eh	millivolts	T		143.6 :	-	488.8 :	-	176.4 :	-
pH	SU	T		7.6 J	-	7.5 J	-	7.6 J	-
Specific Conductance	uS/cm	T		1051. :	-	1115. :	-	1033. :	-
Temperature	Celsius	T		15.21 :	-	13.71 :	-	11.79 :	-
Turbidity	NTU	T		16.4 :	-	0. :	-	59.1 :	-
General Chemistry									
Ammonia	mg/L	T		<0.12 J	-	0.059 :	-	<0.051 :	-
Bicarbonate (as CaCO3)	mg/L	T		130. :	-	128. :	-	130. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		84.8 :	-	80.1 :	-	88.4 :	-
Fluoride	mg/L	T		0.51 :	-	0.33 :	-	0.33 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		8.5 J	-	8.8 :	-	8.6 J	-
Nitrite	mg/L	T		0.052 :	-	0.034 :	-	0.0086 :	-
Phosphate, Ortho As P	mg/L	T		<0.015 J	-	0.013 :	-	<0.024 :	-
Phosphorus	mg/L	T		0.02 :	-	0.025 :	-	0.033 :	-
Sulfate	mg/L	T		343. J	-	326. J	-	334. J	-
Total Alkalinity	mg/L	T		130. :	-	128. :	-	130. :	-
Total Dissolved Solids	mg/L	T		878. :	-	872. :	-	904. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.51 :	-
Total Organic Carbon	mg/L	T		<2.3 J	-	<2.4 J	-	<1.1 :	-
Total Suspended Solids	mg/L	T		16.6 :	-	4.2 :	-	8.5 :	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	7.5 J	-	7.6 J	-
Specific Conductance	umhos/cm	T		1090. J	-	1080. :	-	1040. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		465. :	-	529. :	-	523. :	-
Hardness	mg/L	D		-	446. :	-	524. :	-	517. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-21 7/10/2003 MW-21-T01N-GRW TLR	MW-21 7/10/2003 MW-21-D01N-GRW TLR	MW-21 8/10/2003 MW-21-T01N-GRW TLR	MW-21 8/10/2003 MW-21-D01N-GRW TLR	MW-21 9/7/2003 MW-21-T01N-GRW TLR	MW-21 9/7/2003 MW-21-D01N-GRW TLR
Aluminum	mg/L	T	0.664 :	-	<0.631 :	-	<0.217 :	-
Aluminum	mg/L	D	-	<0.631 :	-	<0.631 :	-	<0.217 :
Antimony	mg/L	T	<0.001 :	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T	0.001 :	-	0.00064 :	-	0.00084 :	-
Arsenic	mg/L	D	-	0.00059 :	-	0.00048 :	-	0.00077 :
Barium	mg/L	T	0.0662 :	-	0.058 :	-	0.0611 :	-
Barium	mg/L	D	-	0.0638 :	-	0.0579 :	-	0.0565 :
Beryllium	mg/L	T	<0.00037 :	-	<0.0002 :	-	<0.0004 :	-
Beryllium	mg/L	D	-	<0.00026 :	-	<0.0002 :	-	<0.0004 :
Boron	mg/L	T	0.0216 :	-	<0.0213 :	-	0.0212 :	-
Boron	mg/L	D	-	0.0229 :	-	<0.0207 :	-	0.0194 :
Cadmium	mg/L	T	<0.0003 :	-	<0.0006 :	-	<0.0005 :	-
Cadmium	mg/L	D	-	<0.0003 :	-	<0.0006 :	-	<0.0005 :
Calcium	mg/L	T	140. :	-	159. :	-	159. :	-
Calcium	mg/L	D	-	135. :	-	157. :	-	157. :
Chromium	mg/L	T	<0.0006 J	-	<0.0018 :	-	<0.0039 :	-
Chromium	mg/L	D	-	<0.0006 J	-	0.0014 :	-	<0.0011 :
Cobalt	mg/L	T	<0.0018 :	-	<0.002 :	-	<0.0029 :	-
Cobalt	mg/L	D	-	<0.0018 :	-	<0.002 :	-	<0.0029 :
Copper	mg/L	T	<0.0014 J	-	<0.0025 :	-	<0.0028 :	-
Copper	mg/L	D	-	0.0159 J	-	<0.0024 :	-	<0.0046 :
Iron	mg/L	T	<0.667 :	-	<0.667 :	-	<0.455 :	-
Iron	mg/L	D	-	<0.667 :	-	<0.667 :	-	<0.455 :
Lead	mg/L	T	<0.0018 :	-	<0.0002 :	-	<0.00085 :	-
Lead	mg/L	D	-	<0.00079 :	-	<0.0002 :	-	<0.00074 :
Magnesium	mg/L	T	27.7 :	-	32.2 :	-	30.6 :	-
Magnesium	mg/L	D	-	26.4 :	-	31.8 :	-	30.3 :
Manganese	mg/L	T	0.132 :	-	0.077 :	-	0.0362 :	-
Manganese	mg/L	D	-	0.0958 :	-	0.0636 :	-	<0.0301 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	0.0029 :	-	<0.0034 :	-	0.0013 J	-
Molybdenum	mg/L	D	-	0.0029 :	-	0.0033 :	-	<0.0011 J

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-21	7/10/2003	MW-21-T01N-GRW		MW-21	7/10/2003	MW-21-D01N-GRW		MW-21	8/10/2003	MW-21-T01N-GRW		MW-21	8/10/2003	MW-21-D01N-GRW		MW-21	9/7/2003	MW-21-T01N-GRW		MW-21	9/7/2003	MW-21-D01N-GRW	
			TLR				TLR				TLR				TLR				TLR				TLR			
Nickel	mg/L	T	<0.002	J	-		-		<0.0021	J	-		<0.0024	:	-							
Nickel	mg/L	D	-		<0.002	J	-				<0.0021	J	-		<0.0024	:						
Potassium	mg/L	T	2.56	:	-		2.26	:	-		<2.69	:	-									
Potassium	mg/L	D	-		2.45	:	-		2.21	:	-		<2.38	:								
Selenium	mg/L	T	0.0098	:	-		0.0089	:	-		0.0107	:	-									
Selenium	mg/L	D	-		0.0098	J	-		0.0097	:	-		0.0101	:								
Silver	mg/L	T	<0.0002	J	-		<0.0009	J	-		<0.0002	:	-									
Silver	mg/L	D	-		<0.0002	J	-		<0.0009	J	-		<0.0002	:								
Sodium	mg/L	T	55.8	:	-		58.	J	-		56.4	:	-									
Sodium	mg/L	D	-		51.6	:	-		55.2	J	-		56.4	:								
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-									
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:								
Vanadium	mg/L	T	0.0016	:	-		0.00043	:	-		0.00073	:	-									
Vanadium	mg/L	D	-		0.00053	:	-		0.00045	:	-		0.00039	:								
Zinc	mg/L	T	<0.016	:	-		<0.0489	:	-		<0.019	:	-									
Zinc	mg/L	D	-		<0.016	:	-		<0.0488	:	-		<0.019	:								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
			Sample Date	10/15/2003	10/15/2003	11/2/2003	11/2/2003	12/8/2003	12/8/2003
			Sample ID	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-21-T01N-GRW	MW-21-D01N-GRW
				TLR	TLR	TLR	TLR	TLR	TLR
Field Measurements									
DO	mg/L	T		9.87 :	-	9.12 :	-	9.77 :	-
Eh	millivolts	T		549.6 :	-	184. :	-	229. :	-
pH	SU	T		7.6 J	-	7.5 J	-	7.4 J	-
Specific Conductance	uS/cm	T		1073. :	-	1078. :	-	1154. :	-
Temperature	Celsius	T		12.38 :	-	10.58 :	-	8.42 :	-
Turbidity	NTU	T		8.7 :	-	12.6 :	-	10.6 :	-
General Chemistry									
Ammonia	mg/L	T		<0.079 J	-	<0.04 :	-	0.044 :	-
Bicarbonate (as CaCO3)	mg/L	T		136. :	-	119. :	-	130. J	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		82.5 :	-	12. :	-	86.3 :	-
Fluoride	mg/L	T		0.32 :	-	<0.44 :	-	0.4 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		9.1 J	-	2.1 J	-	8.9 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.028 :	-	0.024 J	-	0.032 :	-
Phosphorus	mg/L	T		0.029 :	-	0.033 :	-	0.034 :	-
Sulfate	mg/L	T		<251. J	-	87.7 :	-	314. :	-
Total Alkalinity	mg/L	T		136. :	-	119. :	-	130. J	-
Total Dissolved Solids	mg/L	T		924. :	-	370. :	-	682. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.25 :	-	2.1 :	-	0.26 :	-
Total Organic Carbon	mg/L	T		1.5 J	-	<1. :	-	<1. :	-
Total Suspended Solids	mg/L	T		5.8 :	-	8.5 :	-	25. :	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	7.5 J	-	7.4 J	-
Specific Conductance	umhos/cm	T		1030. J	-	447. J	-	1010. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		515. :	-	191. :	-	503. :	-
Hardness	mg/L	D		-	520. :	-	187. :	-	505. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-21	10/15/2003	MW-21-T01N-GRW	TLR	MW-21	10/15/2003	MW-21-D01N-GRW	TLR	MW-21	11/2/2003	MW-21-T01N-GRW	TLR	MW-21	11/2/2003	MW-21-D01N-GRW	TLR
Aluminum	mg/L	T	<0.255	:			-				0.263	:			-			
Aluminum	mg/L	D	-				<0.221	:			-				<0.217	:		
Antimony	mg/L	T	<0.001	:			-				<0.001	:			-			
Antimony	mg/L	D	-				<0.001	:			-				<0.001	:		
Arsenic	mg/L	T	0.00093	:			-				0.00049	:			-			
Arsenic	mg/L	D	-				0.001	:			-				0.00051	:		
Barium	mg/L	T	0.0538	:			-				0.0656	:			-			
Barium	mg/L	D	-				0.0522	:			-				0.0638	:		
Beryllium	mg/L	T	<0.0004	:			-				<0.0003	J			-			
Beryllium	mg/L	D	-				<0.0004	:			-				<0.0003	J		
Boron	mg/L	T	0.0193	:			-				0.015	:			-			
Boron	mg/L	D	-				0.0184	:			-				0.0151	:		
Cadmium	mg/L	T	<0.0005	:			-				<0.0007	:			-			
Cadmium	mg/L	D	-				<0.0005	:			-				<0.0007	:		
Calcium	mg/L	T	159.	:			-				57.3	:			-			
Calcium	mg/L	D	-				161.	:			-				56.2	:		
Chromium	mg/L	T	0.0015	J			-				<0.0026	:			-			
Chromium	mg/L	D	-				<0.0011	J			-				<0.0028	:		
Cobalt	mg/L	T	<0.0029	:			-				<0.0031	:			-			
Cobalt	mg/L	D	-				<0.0029	:			-				<0.0031	:		
Copper	mg/L	T	<0.0022	:			-				<0.002	:			-			
Copper	mg/L	D	-				<0.0022	:			-				<0.002	:		
Iron	mg/L	T	<0.3	:			-				<0.455	:			-			
Iron	mg/L	D	-				<0.278	:			-				<0.455	:		
Lead	mg/L	T	<0.0004	:			-				<0.00047	:			-			
Lead	mg/L	D	-				<0.0004	:			-				<0.0004	:		
Magnesium	mg/L	T	28.4	:			-				11.7	:			-			
Magnesium	mg/L	D	-				28.6	:			-				11.5	:		
Manganese	mg/L	T	0.0244	:			-				<0.016	J			-			
Manganese	mg/L	D	-				<0.0226	:			-				<0.016	:		
Mercury	mg/L	T	<0.0001	:			-				<0.0001	:			-			
Mercury	mg/L	D	-				<0.0001	:			-				<0.0001	:		
Molybdenum	mg/L	T	<0.0011	:			-				0.0028	:			-			
Molybdenum	mg/L	D	-				<0.0011	:			-				0.0037	:		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-21	12/8/2003	MW-21-T01N-GRW	TLR	MW-21	12/8/2003	MW-21-D01N-GRW	TLR						
Aluminum	mg/L	T	<0.221	:			-									
Aluminum	mg/L	D	-				<0.221	:								
Antimony	mg/L	T	<0.0024	:			-									
Antimony	mg/L	D	-				<0.0024	:								
Arsenic	mg/L	T	0.0011	:			-									
Arsenic	mg/L	D	-				0.0012	:								
Barium	mg/L	T	0.0491	:			-									
Barium	mg/L	D	-				0.0481	:								
Beryllium	mg/L	T	<0.0004	:			-									
Beryllium	mg/L	D	-				<0.0004	:								
Boron	mg/L	T	<0.0227	:			-									
Boron	mg/L	D	-				<0.0195	:								
Cadmium	mg/L	T	<0.0005	:			-									
Cadmium	mg/L	D	-				<0.0005	:								
Calcium	mg/L	T	156.	:			-									
Calcium	mg/L	D	-				156.	:								
Chromium	mg/L	T	0.0024	:			-									
Chromium	mg/L	D	-				0.002	:								
Cobalt	mg/L	T	<0.0029	:			-									
Cobalt	mg/L	D	-				<0.0029	:								
Copper	mg/L	T	<0.0022	:			-									
Copper	mg/L	D	-				<0.0022	:								
Iron	mg/L	T	<0.278	:			-									
Iron	mg/L	D	-				<0.278	:								
Lead	mg/L	T	<0.0002	J			-									
Lead	mg/L	D	-				<0.0002	J								
Magnesium	mg/L	T	27.7	:			-									
Magnesium	mg/L	D	-				27.8	:								
Manganese	mg/L	T	<0.012	:			-									
Manganese	mg/L	D	-				<0.012	:								
Mercury	mg/L	T	<0.0001	:			-									
Mercury	mg/L	D	-				<0.0001	:								
Molybdenum	mg/L	T	<0.0042	:			-									
Molybdenum	mg/L	D	-				<0.0026	:								

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area Fraction
			MW-21	10/15/2003	MW-21-T01N-GRW	TLR	MW-21	10/15/2003	MW-21-D01N-GRW	TLR	MW-21	11/2/2003	MW-21-T01N-GRW	TLR	MW-21	11/2/2003	MW-21-D01N-GRW	TLR	MW-21	12/8/2003	MW-21-T01N-GRW	TLR	MW-21	12/8/2003	MW-21-D01N-GRW	TLR
Nickel	mg/L	T	<0.0024	:	-		<0.0028	:	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.0028	:	-		<0.0024	:
Potassium	mg/L	T	2.05	:	-		<2.44	:	-		<2.2	:	-	
Potassium	mg/L	D	-		1.96	:	-		<2.73	:	-		<2.07	:
Selenium	mg/L	T	0.0098	:	-		0.0034	:	-		0.0102	:	-	
Selenium	mg/L	D	-		0.0102	:	-		0.0037	:	-		0.0121	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	57.3	:	-		22.6	:	-		63.6	:	-	
Sodium	mg/L	D	-		60.3	:	-		22.9	:	-		65.6	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0008	:	-		0.0013	:	-		0.0012	:	-	
Vanadium	mg/L	D	-		0.00035	:	-		0.00084	:	-		<0.0004	:
Zinc	mg/L	T	<0.023	:	-		<0.019	:	-		<0.023	:	-	
Zinc	mg/L	D	-		<0.023	:	-		<0.019	:	-		<0.023	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-21	MW-21	MW-21	MW-21	MW-26	MW-26
			Sample Date	1/8/2004	1/8/2004	4/14/2004	4/14/2004	7/9/2003	7/9/2003
			Sample ID	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-21-T01N-GRW	MW-21-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW
				TLR	TLR	TLR	TLR	GW13	GW13
Field Measurements									
DO	mg/L	T		10.9 :	-	8.89 :	-	3.97 :	-
Eh	millivolts	T		63.8 :	-	194.5 :	-	249.7 :	-
pH	SU	T		7.6 J	-	7.7 J	-	7.2 J	-
Specific Conductance	uS/cm	T		1124. :	-	1153. :	-	555. :	-
Temperature	Celsius	T		8.14 :	-	13.82 :	-	13.01 :	-
Turbidity	NTU	T		15.6 :	-	8.1 :	-	0.3 :	-
General Chemistry									
Ammonia	mg/L	T		<0.055 J	-	<0.05 :	-	<0.17 J	-
Bicarbonate (as CaCO3)	mg/L	T		133. :	-	131. :	-	115. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		88.4 :	-	88.5 :	-	4.4 :	-
Fluoride	mg/L	T		0.33 :	-	0.43 :	-	0.41 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		9. J	-	9.9 :	-	1.2 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.027 :	-	0.028 :	-	0.17 :	-
Phosphorus	mg/L	T		0.037 :	-	0.045 :	-	0.17 :	-
Sulfate	mg/L	T		420. :	-	308. :	-	174. J	-
Total Alkalinity	mg/L	T		133. :	-	131. :	-	115. :	-
Total Dissolved Solids	mg/L	T		796. :	-	788. :	-	420. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1.6 :	-	<2.1 J	-	<1.9 J	-
Total Suspended Solids	mg/L	T		11.9 :	-	10.5 J	-	<1.1 :	-
Laboratory Parameters									
pH	SU	T		7.6 J	-	7.7 J	-	7.2 J	-
Specific Conductance	umhos/cm	T		1100. J	-	1010. J	-	520. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		486. :	-	524. :	-	223. :	-
Hardness	mg/L	D		-	475. :	-	525. :	-	223. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-21 1/8/2004 MW-21-T01N-GRW TLR	MW-21 1/8/2004 MW-21-D01N-GRW TLR	MW-21 4/14/2004 MW-21-T01N-GRW TLR	MW-21 4/14/2004 MW-21-D01N-GRW TLR	MW-26 7/9/2003 MW-26-T01N-GRW GW13	MW-26 7/9/2003 MW-26-D01N-GRW GW13
Aluminum	mg/L	T	<0.514 :	-	<0.724 :	-	<0.631 :	-
Aluminum	mg/L	D	-	<0.514 :	-	<0.253 :	-	<0.631 :
Antimony	mg/L	T	<0.0024 :	-	<0.0008 J	-	<0.001 :	-
Antimony	mg/L	D	-	<0.0024 :	-	<0.0008 J	-	<0.001 :
Arsenic	mg/L	T	0.0022 :	-	0.0011 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	0.0017 :	-	0.00095 :	-	<0.0004 :
Barium	mg/L	T	0.0549 :	-	0.0506 :	-	0.032 :	-
Barium	mg/L	D	-	0.0504 :	-	0.0483 :	-	0.0248 :
Beryllium	mg/L	T	<0.0003 :	-	<0.0002 :	-	<0.00035 :	-
Beryllium	mg/L	D	-	<0.0003 :	-	<0.0002 :	-	<0.00043 :
Boron	mg/L	T	0.023 :	-	0.0181 :	-	0.0338 :	-
Boron	mg/L	D	-	0.0174 :	-	0.0176 :	-	0.0297 :
Cadmium	mg/L	T	<0.0007 J	-	<0.0003 :	-	<0.0003 :	-
Cadmium	mg/L	D	-	<0.0007 :	-	<0.0003 :	-	<0.0003 :
Calcium	mg/L	T	151. :	-	162. :	-	68.7 :	-
Calcium	mg/L	D	-	147. :	-	163. :	-	68.5 :
Chromium	mg/L	T	<0.0057 :	-	<0.0028 :	-	<0.0006 J	-
Chromium	mg/L	D	-	<0.0057 :	-	0.0022 :	-	<0.0006 J
Cobalt	mg/L	T	<0.0023 :	-	<0.0011 :	-	<0.0018 :	-
Cobalt	mg/L	D	-	0.0028 :	-	<0.0017 :	-	<0.0018 :
Copper	mg/L	T	0.0049 :	-	<0.0017 :	-	<0.0014 :	-
Copper	mg/L	D	-	<0.003 :	-	0.00098 :	-	<0.0014 :
Iron	mg/L	T	<0.373 :	-	<0.251 J	-	<0.667 :	-
Iron	mg/L	D	-	<0.373 :	-	<0.192 :	-	<0.667 :
Lead	mg/L	T	0.00028 :	-	<0.0008 :	-	<0.00078 :	-
Lead	mg/L	D	-	<0.0002 :	-	<0.0008 :	-	<0.0024 :
Magnesium	mg/L	T	26.8 :	-	28.8 :	-	12.5 :	-
Magnesium	mg/L	D	-	26.2 :	-	28.6 :	-	12.5 :
Manganese	mg/L	T	<0.015 :	-	<0.019 :	-	<0.019 :	-
Manganese	mg/L	D	-	<0.015 :	-	<0.019 :	-	<0.019 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	<0.0024 :	-	0.0039 :	-	0.0595 :	-
Molybdenum	mg/L	D	-	<0.0024 :	-	0.0018 :	-	0.0578 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-21 1/8/2004 MW-21-T01N-GRW TLR		MW-21 1/8/2004 MW-21-D01N-GRW TLR		MW-21 4/14/2004 MW-21-T01N-GRW TLR		MW-21 4/14/2004 MW-21-D01N-GRW TLR		MW-26 7/9/2003 MW-26-T01N-GRW GW13		MW-26 7/9/2003 MW-26-D01N-GRW GW13	
Nickel	mg/L	T	<0.0024	:	-		<0.0014	:	-		<0.002	J	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.0014	:	-		<0.002	J
Potassium	mg/L	T	2.32	:	-		2.04	:	-		2.14	:	-	
Potassium	mg/L	D	-		2.17	:	-		1.94	:	-		2.04	:
Selenium	mg/L	T	0.0149	J	-		0.0106	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		0.0138	:	-		0.0107	:	-		<0.0016	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	60.5	:	-		66.7	:	-		28.4	:	-	
Sodium	mg/L	D	-		58.	:	-		64.1	:	-		26.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00075	:	-		0.0014	:	-		0.0018	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.0008	:	-		0.0016	:
Zinc	mg/L	T	<0.026	:	-		<0.032	:	-		<0.017	:	-	
Zinc	mg/L	D	-		<0.026	:	-		<0.032	:	-		<0.016	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26
			Sample Date	8/12/2003	8/13/2003	8/13/2003	9/7/2003	9/7/2003	10/15/2003
			Sample ID	MW-26-T01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		6.5 :	-	-	6.12 :	-	7.03 :
Eh	millivolts	T		185.8 :	-	-	223.7 :	-	31.2 :
pH	SU	T		7.27 :	7.2 J	-	7.2 J	-	7.2 J
Specific Conductance	uS/cm	T		700. :	-	-	735. :	-	606. :
Temperature	Celsius	T		12.76 :	-	-	12.92 :	-	13.64 :
Turbidity	NTU	T		46.4 :	-	-	8.1 :	-	40.1 :
General Chemistry									
Ammonia	mg/L	T		-	<0.04 :	-	<0.085 J	-	<0.064 J
Bicarbonate (as CaCO3)	mg/L	T		-	122. :	-	128. :	-	130. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	5.9 :	-	5.7 :	-	4.2 :
Fluoride	mg/L	T		-	0.39 :	-	0.38 :	-	0.37 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	1.4 J	-	1.1 J	-	1.7 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	0.16 J	-	<0.16 J	-	<0.16 :
Phosphorus	mg/L	T		-	0.17 :	-	0.17 :	-	0.18 :
Sulfate	mg/L	T		-	232. J	-	261. J	-	<135. J
Total Alkalinity	mg/L	T		-	122. :	-	128. :	-	130. :
Total Dissolved Solids	mg/L	T		-	500. :	-	570. :	-	538. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.3 J	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.5 J	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T		-	9.4 :	-	3.8 :	-	14.9 :
Laboratory Parameters									
pH	SU	T		7.27 :	7.2 J	-	7.2 J	-	7.2 J
Specific Conductance	umhos/cm	T		-	669. J	-	644. J	-	538. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	310. :	-	335. :	-	256. :
Hardness	mg/L	D		-	-	317. :	-	332. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26
			Sample Date	8/12/2003	8/13/2003	8/13/2003	9/7/2003	9/7/2003	10/15/2003
			Sample ID	MW-26-T01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T		-	<0.183 :	-	<0.217 :	-	<0.715 :
Aluminum	mg/L	D		-	-	<0.183 :	-	<0.217 :	-
Antimony	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D		-	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T		-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D		-	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T		-	0.049 :	-	0.0249 :	-	0.0924 :
Barium	mg/L	D		-	-	0.0261 :	-	0.0344 :	-
Beryllium	mg/L	T		-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Beryllium	mg/L	D		-	-	<0.0004 :	-	<0.0004 :	-
Boron	mg/L	T		-	0.0332 :	-	0.035 :	-	0.0318 :
Boron	mg/L	D		-	-	0.0337 :	-	0.0365 :	-
Cadmium	mg/L	T		-	<0.0005 :	-	<0.0005 :	-	<0.0005 :
Cadmium	mg/L	D		-	-	<0.0005 :	-	<0.0005 :	-
Calcium	mg/L	T		-	95.6 :	-	103. :	-	79.2 :
Calcium	mg/L	D		-	-	97.7 :	-	102. :	-
Chromium	mg/L	T		-	<0.0013 :	-	<0.0011 :	-	<0.0011 J
Chromium	mg/L	D		-	-	<0.0016 :	-	<0.0011 :	-
Cobalt	mg/L	T		-	<0.0029 :	-	<0.0029 :	-	<0.0029 :
Cobalt	mg/L	D		-	-	0.0039 :	-	<0.0029 :	-
Copper	mg/L	T		-	<0.004 :	-	<0.0022 :	-	0.0024 :
Copper	mg/L	D		-	-	<0.0025 :	-	<0.0034 :	-
Iron	mg/L	T		-	<0.326 :	-	<0.455 :	-	0.45 :
Iron	mg/L	D		-	-	<0.243 :	-	<0.455 :	-
Lead	mg/L	T		-	<0.0004 :	-	<0.00062 :	-	0.00063 :
Lead	mg/L	D		-	-	<0.0004 :	-	<0.00075 :	-
Magnesium	mg/L	T		-	17.3 :	-	19. :	-	14.2 :
Magnesium	mg/L	D		-	-	17.7 :	-	18.9 :	-
Manganese	mg/L	T		-	<0.0167 :	-	<0.016 :	-	0.0371 :
Manganese	mg/L	D		-	-	<0.007 :	-	<0.016 :	-
Mercury	mg/L	T		-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D		-	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.052 :	-	0.0517 :	-	0.0506 :
Molybdenum	mg/L	D		-	-	0.0534 :	-	0.0501 :	-

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-26 8/12/2003 MW-26-T01N-GRW GW13		MW-26 8/13/2003 MW-26-T01N-GRW GW13		MW-26 8/13/2003 MW-26-D01N-GRW GW13		MW-26 9/7/2003 MW-26-T01N-GRW GW13		MW-26 9/7/2003 MW-26-D01N-GRW GW13		MW-26 10/15/2003 MW-26-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0024	:	-		<0.0024	:
Nickel	mg/L	D	-		-		<0.0024	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		1.94	:	-		<2.83	:	-		2.01	:
Potassium	mg/L	D	-		-		1.91	:	-		<2.7	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Selenium	mg/L	D	-		-		<0.0006	:	-		<0.0006	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		34.7	:	-		33.8	:	-		27.3	:
Sodium	mg/L	D	-		-		32.4	:	-		33.6	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0018	:	-		0.0019	:	-		0.0029	:
Vanadium	mg/L	D	-		-		<0.0016	:	-		0.0021	:	-	
Zinc	mg/L	T	-		<0.057	:	-		<0.019	:	-		<0.023	:
Zinc	mg/L	D	-		-		<0.057	:	-		<0.019	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26
			Sample Date	10/15/2003	11/2/2003	11/2/2003	12/7/2003	12/7/2003	1/6/2004
			Sample ID	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	5.62 :	-	6.33 :	-	5.86 :
Eh	millivolts	T		-	25.7 :	-	92.4 :	-	405.4 :
pH	SU	T		-	7.2 J	-	7.2 J	-	8. J
Specific Conductance	uS/cm	T		-	686. :	-	1238. :	-	1535. :
Temperature	Celsius	T		-	13.4 :	-	12.39 :	-	10.28 :
Turbidity	NTU	T		-	26. :	-	7.9 :	-	7.6 :
General Chemistry									
Ammonia	mg/L	T		-	<0.057 :	-	0.071 :	-	<0.13 J
Bicarbonate (as CaCO3)	mg/L	T		-	118. :	-	123. :	-	131. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	5.1 :	-	11. :	-	13. :
Fluoride	mg/L	T		-	<0.39 :	-	0.3 :	-	0.3 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	1.8 J	-	1.1 :	-	1.4 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	0.16 J	-	0.14 J	-	0.16 J
Phosphorus	mg/L	T		-	0.18 :	-	0.15 :	-	0.15 :
Sulfate	mg/L	T		-	234. :	-	612. :	-	667. :
Total Alkalinity	mg/L	T		-	118. :	-	123. J	-	131. :
Total Dissolved Solids	mg/L	T		-	578. :	-	1100. :	-	1250. :
Total Kjeldahl Nitrogen	mg/L	T		-	2.1 :	-	<0.24 J	-	<0.27 J
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. :	-	<1.3 :
Total Suspended Solids	mg/L	T		-	15.5 :	-	7.5 :	-	16. :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.2 J	-	8. J
Specific Conductance	umhos/cm	T		-	735. J	-	1060. J	-	1370. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	311. :	-	688. :	-	748. :
Hardness	mg/L	D		265. :	-	325. :	-	668. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26
			Sample Date	10/15/2003	11/2/2003	11/2/2003	12/7/2003	12/7/2003	1/6/2004
			Sample ID	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-26-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T		-	0.537 :	-	<0.307 J	-	<0.621 :
Aluminum	mg/L	D		<0.221 :	-	<0.217 :	-	<0.307 J	-
Antimony	mg/L	T		-	<0.001 :	-	<0.001 :	-	<0.0024 :
Antimony	mg/L	D		<0.001 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T		-	0.00046 :	-	0.00043 :	-	0.00073 :
Arsenic	mg/L	D		<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T		-	0.0851 :	-	0.1 :	-	0.0632 :
Barium	mg/L	D		0.024 :	-	0.0286 :	-	0.0581 :	-
Beryllium	mg/L	T		-	<0.0016 J	-	<0.0012 :	-	<0.0003 :
Beryllium	mg/L	D		<0.0004 :	-	<0.0012 J	-	<0.0011 :	-
Boron	mg/L	T		-	<0.0325 :	-	<0.0334 :	-	0.0302 :
Boron	mg/L	D		0.0325 :	-	0.0345 :	-	<0.0335 :	-
Cadmium	mg/L	T		-	<0.0007 :	-	<0.0007 :	-	<0.0007 J
Cadmium	mg/L	D		<0.0005 :	-	<0.0007 :	-	<0.0007 :	-
Calcium	mg/L	T		-	95.6 :	-	213. :	-	232. :
Calcium	mg/L	D		82.1 :	-	100. :	-	207. :	-
Chromium	mg/L	T		-	<0.0013 :	-	<0.0013 J	-	<0.0015 :
Chromium	mg/L	D		<0.0011 J	-	<0.0013 :	-	<0.0013 J	-
Cobalt	mg/L	T		-	<0.0031 :	-	<0.0031 :	-	<0.0023 :
Cobalt	mg/L	D		<0.0029 :	-	0.0042 :	-	<0.0031 :	-
Copper	mg/L	T		-	<0.0036 :	-	<0.002 :	-	<0.003 :
Copper	mg/L	D		<0.0022 :	-	<0.002 :	-	<0.002 :	-
Iron	mg/L	T		-	<0.455 :	-	<0.3 :	-	<0.53 :
Iron	mg/L	D		<0.278 :	-	<0.455 :	-	<0.3 :	-
Lead	mg/L	T		-	<0.00095 :	-	<0.0004 :	-	0.00031 :
Lead	mg/L	D		<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Magnesium	mg/L	T		-	17.5 :	-	37.8 :	-	41.1 :
Magnesium	mg/L	D		14.6 :	-	18.3 :	-	36.8 :	-
Manganese	mg/L	T		-	0.038 J	-	0.0171 :	-	<0.019 :
Manganese	mg/L	D		<0.012 :	-	<0.016 :	-	<0.01 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.0468 :	-	0.0356 :	-	0.0362 :
Molybdenum	mg/L	D		0.0514 :	-	0.051 :	-	0.035 :	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-26	10/15/2003	MW-26-D01N-GRW		MW-26	11/2/2003	MW-26-T01N-GRW		MW-26	11/2/2003	MW-26-D01N-GRW		MW-26	12/7/2003	MW-26-T01N-GRW		MW-26	12/7/2003	MW-26-D01N-GRW		MW-26	1/6/2004	MW-26-T01N-GRW	
			GW13				GW13				GW13				GW13				GW13				GW13			
Nickel	mg/L	T	-				<0.0028	:			-				<0.0028	:			-				<0.0024	J		
Nickel	mg/L	D	<0.0024	:			-				<0.0028	:			-				<0.0028	:			-			
Potassium	mg/L	T	-				<2.28	:			-				<0.522	J			-				3.43	:		
Potassium	mg/L	D	1.95	:			-				<2.23	:			-				<0.522	J			-			
Selenium	mg/L	T	-				0.00086	:			-				0.0011	:			-				<0.0021	J		
Selenium	mg/L	D	<0.0006	:			-				0.00062	:			-				0.0011	:			-			
Silver	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Silver	mg/L	D	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Sodium	mg/L	T	-				34.2	:			-				43.5	:			-				39.7	:		
Sodium	mg/L	D	27.2	:			-				35.7	:			-				41.9	:			-			
Thallium	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Thallium	mg/L	D	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Vanadium	mg/L	T	-				0.003	:			-				0.0021	:			-				0.002	:		
Vanadium	mg/L	D	0.0018	:			-				0.002	:			-				0.0015	:			-			
Zinc	mg/L	T	-				<0.019	:			-				<0.02	:			-				<0.091	:		
Zinc	mg/L	D	<0.023	:			-				<0.035	:			-				<0.02	:			-			

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-26	MW-26	MW-26	MW-28	MW-28	MW-28
			Sample Date	1/6/2004	4/15/2004	4/15/2004	7/10/2003	7/10/2003	8/10/2003
			Sample ID	MW-26-D01N-GRW	MW-26-T01N-GRW	MW-26-D01N-GRW	MW-28-T01N-GRW	MW-28-D01N-GRW	MW-28-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.98 :	-	1.58 :	-	2.1 :
Eh	millivolts	T		-	233.8 :	-	449.2 :	-	227. :
pH	SU	T		-	7.3 J	-	7.4 J	-	7.2 J
Specific Conductance	uS/cm	T		-	1731. :	-	1367. :	-	1425. :
Temperature	Celsius	T		-	14.62 :	-	17.92 :	-	15.65 :
Turbidity	NTU	T		-	17.9 :	-	1.5 :	-	0. :
General Chemistry									
Ammonia	mg/L	T		-	<0.041 :	-	<0.28 J	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	137. :	-	146. :	-	145. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	15. :	-	17.7 :	-	17. :
Fluoride	mg/L	T		-	0.38 :	-	0.33 :	-	0.3 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	1.6 J	-	0.44 J	-	0.28 J
Nitrite	mg/L	T		-	<0.005 :	-	0.0054 :	-	0.083 J
Phosphate, Ortho As P	mg/L	T		-	0.14 J	-	<0.01 :	-	<0.01 J
Phosphorus	mg/L	T		-	0.15 :	-	<0.01 :	-	0.018 :
Sulfate	mg/L	T		-	779. :	-	594. J	-	564. J
Total Alkalinity	mg/L	T		-	137. :	-	146. :	-	145. :
Total Dissolved Solids	mg/L	T		-	1410. :	-	1010. :	-	1230. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<2. :	-	<1.6 J	-	1.5 J
Total Suspended Solids	mg/L	T		-	<0.5 J	-	3. :	-	<2.3 J
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.4 J	-	7.2 J
Specific Conductance	umhos/cm	T		-	1540. J	-	1230. J	-	1330. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	988. :	-	665. :	-	787. :
Hardness	mg/L	D		794. :	-	1010. :	-	661. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-26 1/6/2004 MW-26-D01N-GRW GW13		MW-26 4/15/2004 MW-26-T01N-GRW GW13		MW-26 4/15/2004 MW-26-D01N-GRW GW13		MW-28 7/10/2003 MW-28-T01N-GRW GW13		MW-28 7/10/2003 MW-28-D01N-GRW GW13		MW-28 8/10/2003 MW-28-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.201	:	-		<0.631	:	-		<0.631	:
Aluminum	mg/L	D	<0.621	:	-		<0.201	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.0008	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0024	:	-		<0.0008	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	0.00043	:	-		0.00041	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0515	:	-		0.0934	:	-		0.0862	:
Barium	mg/L	D	0.0588	:	-		0.0538	:	-		0.0923	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.00027	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.00026	:	-	
Boron	mg/L	T	-		0.0345	:	-		0.0208	:	-		0.0179	:
Boron	mg/L	D	0.03	:	-		0.0348	:	-		0.0223	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0003	:	-		<0.0003	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0003	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		305.	:	-		202.	:	-		239.	:
Calcium	mg/L	D	246.	:	-		312.	:	-		201.	:	-	
Chromium	mg/L	T	-		<0.00082	:	-		<0.0006	J	-		<0.0006	:
Chromium	mg/L	D	<0.0015	:	-		<0.0008	:	-		<0.0006	J	-	
Cobalt	mg/L	T	-		<0.0011	J	-		0.0027	:	-		0.0021	:
Cobalt	mg/L	D	<0.0023	:	-		<0.0011	J	-		0.0027	:	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.0014	J	-		<0.0014	:
Copper	mg/L	D	<0.003	:	-		<0.0021	:	-		<0.0014	J	-	
Iron	mg/L	T	-		<0.293	J	-		<0.667	:	-		<0.667	:
Iron	mg/L	D	<0.423	:	-		<0.293	:	-		<0.667	:	-	
Lead	mg/L	T	-		<0.0008	:	-		<0.00085	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		<0.00085	:	-	
Magnesium	mg/L	T	-		54.7	:	-		38.8	:	-		45.9	:
Magnesium	mg/L	D	43.6	:	-		55.7	:	-		38.6	:	-	
Manganese	mg/L	T	-		<0.014	:	-		1.04	:	-		1.85	:
Manganese	mg/L	D	<0.019	:	-		<0.014	:	-		0.952	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0424	:	-		0.0247	:	-		0.0315	:
Molybdenum	mg/L	D	0.0358	:	-		0.0419	:	-		0.0264	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-26 1/6/2004 MW-26-D01N-GRW GW13		MW-26 4/15/2004 MW-26-T01N-GRW GW13		MW-26 4/15/2004 MW-26-D01N-GRW GW13		MW-28 7/10/2003 MW-28-T01N-GRW GW13		MW-28 7/10/2003 MW-28-D01N-GRW GW13		MW-28 8/10/2003 MW-28-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0014	J	-		0.0021	J	-		<0.0043	:
Nickel	mg/L	D	<0.0024	J	-		<0.0014	J	-		<0.002	J	-	
Potassium	mg/L	T	-		3.68	:	-		2.85	:	-		3.27	:
Potassium	mg/L	D	3.28	:	-		3.6	:	-		2.76	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0016	:	-		<0.0016	:
Selenium	mg/L	D	<0.0016	:	-		0.0015	:	-		<0.0016	J	-	
Silver	mg/L	T	-		<0.00035	:	-		<0.0002	J	-		<0.0009	:
Silver	mg/L	D	<0.0002	:	-		<0.00034	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		48.4	J	-		36.7	:	-		<44.	:
Sodium	mg/L	D	51.2	:	-		47.6	J	-		36.2	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0019	:	-		<0.0004	:	-		<0.0004	:
Vanadium	mg/L	D	0.0017	:	-		0.0017	:	-		0.00052	:	-	
Zinc	mg/L	T	-		<0.024	:	-		<0.016	:	-		<0.016	:
Zinc	mg/L	D	<0.091	:	-		<0.024	:	-		<0.016	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-28	MW-28	MW-28	MW-28	MW-28	MW-28
			Sample Date	8/10/2003	9/7/2003	9/7/2003	10/15/2003	10/15/2003	11/2/2003
			Sample ID	MW-28-D01N-GRW	MW-28-T01N-GRW	MW-28-D01N-GRW	MW-28-T01N-GRW	MW-28-D01N-GRW	MW-28-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.75 :	-	0.6 :	-	2.88 :
Eh	millivolts	T		-	83.8 :	-	113.1 :	-	109.3 :
pH	SU	T		-	7.1 J	-	7.3 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1404. :	-	1377. :	-	1324. :
Temperature	Celsius	T		-	12.17 :	-	13.12 :	-	12.56 :
Turbidity	NTU	T		-	9.4 :	-	1.5 :	-	1.3 :
General Chemistry									
Ammonia	mg/L	T		-	<0.12 :	-	<0.086 J	-	<0.2 :
Bicarbonate (as CaCO3)	mg/L	T		-	146. :	-	147. :	-	136. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	17.4 :	-	17.1 :	-	18.2 :
Fluoride	mg/L	T		-	0.32 :	-	0.29 :	-	<0.34 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.33 J	-	0.25 J	-	0.34 J
Nitrite	mg/L	T		-	0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T		-	0.012 :	-	0.014 :	-	0.011 :
Sulfate	mg/L	T		-	609. J	-	776. J	-	722. :
Total Alkalinity	mg/L	T		-	146. :	-	147. :	-	136. :
Total Dissolved Solids	mg/L	T		-	1240. :	-	1080. :	-	1200. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	3. :
Total Organic Carbon	mg/L	T		-	<1. :	-	1.1 J	-	1.6 :
Total Suspended Solids	mg/L	T		-	1.3 :	-	2.5 :	-	2.6 :
Laboratory Parameters									
pH	SU	T		-	7.1 J	-	7.3 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1240. J	-	1300. J	-	1400. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	832. :	-	850. :	-	776. :
Hardness	mg/L	D		773. :	-	824. :	-	835. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-28 8/10/2003 MW-28-D01N-GRW GW13	MW-28 9/7/2003 MW-28-T01N-GRW GW13	MW-28 9/7/2003 MW-28-D01N-GRW GW13	MW-28 10/15/2003 MW-28-T01N-GRW GW13	MW-28 10/15/2003 MW-28-D01N-GRW GW13	MW-28 11/2/2003 MW-28-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.217 :	-	<0.307 :	-	<0.217 :
Aluminum	mg/L	D	<0.631 :	-	<0.217 :	-	<0.307 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	0.00057 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0765 :	-	0.0587 :	-	0.0593 :
Barium	mg/L	D	0.0862 :	-	0.0732 :	-	0.0618 :	-
Beryllium	mg/L	T	-	<0.0004 :	-	<0.00033 :	-	<0.00049 J
Beryllium	mg/L	D	<0.0002 :	-	<0.0004 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0196 :	-	0.0183 :	-	0.0208 :
Boron	mg/L	D	0.019 :	-	0.0195 :	-	0.0207 :	-
Cadmium	mg/L	T	-	<0.0005 :	-	<0.0007 :	-	<0.0007 :
Cadmium	mg/L	D	<0.0003 :	-	<0.0005 :	-	<0.0007 :	-
Calcium	mg/L	T	-	254. :	-	261. :	-	238. :
Calcium	mg/L	D	236. :	-	252. :	-	257. :	-
Chromium	mg/L	T	-	<0.0011 :	-	<0.0013 J	-	<0.0013 :
Chromium	mg/L	D	<0.0006 :	-	<0.0011 :	-	<0.0013 J	-
Cobalt	mg/L	T	-	<0.0029 :	-	<0.0031 :	-	0.0033 :
Cobalt	mg/L	D	0.0026 :	-	0.0039 :	-	<0.0031 :	-
Copper	mg/L	T	-	<0.0022 :	-	<0.002 :	-	<0.002 J
Copper	mg/L	D	0.0015 :	-	<0.0022 :	-	<0.002 :	-
Iron	mg/L	T	-	<0.455 :	-	<0.3 :	-	<0.455 :
Iron	mg/L	D	<0.667 :	-	<0.455 :	-	<0.3 :	-
Lead	mg/L	T	-	<0.0013 :	-	<0.0004 :	-	<0.0004 :
Lead	mg/L	D	<0.0002 :	-	<0.00067 :	-	<0.0004 :	-
Magnesium	mg/L	T	-	48. :	-	48. :	-	44.3 :
Magnesium	mg/L	D	44.7 :	-	47.5 :	-	47.1 :	-
Manganese	mg/L	T	-	0.678 :	-	1.02 :	-	0.386 J
Manganese	mg/L	D	1.52 :	-	0.58 :	-	0.967 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.039 :	-	0.036 :	-	0.0432 :
Molybdenum	mg/L	D	0.0327 :	-	0.0378 :	-	0.0398 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area																		
			MW-28	8/10/2003	MW-28-D01N-GRW	GW13		MW-28	9/7/2003	MW-28-T01N-GRW	GW13		MW-28	9/7/2003	MW-28-D01N-GRW	GW13		MW-28	10/15/2003	MW-28-T01N-GRW	GW13		MW-28	10/15/2003	MW-28-D01N-GRW	GW13		MW-28	11/2/2003	MW-28-T01N-GRW	GW13	
Nickel	mg/L	T	-					<0.0054					-					<0.0028					-					0.0092				
Nickel	mg/L	D	0.0039					-					0.0048					-					0.0028					-				
Potassium	mg/L	T	-					<3.44					-					2.92					-					<1.94	J			
Potassium	mg/L	D	3.09					-					<3.27					-					3.14					-				
Selenium	mg/L	T	-					0.0015					-					0.0014					-					0.0018				
Selenium	mg/L	D	<0.0016					-					0.0017					-					0.0015					-				
Silver	mg/L	T	-					<0.0002					-					<0.0002					-					<0.0002				
Silver	mg/L	D	<0.0009					-					<0.0002					-					<0.0002					-				
Sodium	mg/L	T	-					38.1					-					38.8					-					39.7				
Sodium	mg/L	D	50.5					-					37.2					-					39.9					-				
Thallium	mg/L	T	-					<0.0002					-					<0.0002					-					<0.0002				
Thallium	mg/L	D	<0.0002					-					<0.0002					-					<0.0002					-				
Vanadium	mg/L	T	-					0.00026					-					<0.0002					-					0.0003				
Vanadium	mg/L	D	<0.0004					-					0.00024					-					<0.0002					-				
Zinc	mg/L	T	-					<0.019					-					<0.02					-					<0.0473				
Zinc	mg/L	D	<0.016					-					<0.019					-					<0.02					-				

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-28	MW-28	MW-28	MW-28	MW-28	MW-28
			Sample Date	11/2/2003	12/10/2003	12/10/2003	1/6/2004	1/6/2004	4/15/2004
			Sample ID	MW-28-D01N-GRW	MW-28-T01N-GRW	MW-28-D01N-GRW	MW-28-T01N-GRW	MW-28-D01N-GRW	MW-28-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	3.67 :	-	1.88 :	-	3.02 :
Eh	millivolts	T		-	222.2 :	-	360.4 :	-	140.1 :
pH	SU	T		-	7.1 J	-	7.3 J	-	7.4 J
Specific Conductance	uS/cm	T		-	1345. :	-	1394. :	-	1395. :
Temperature	Celsius	T		-	10.49 :	-	9.84 :	-	12.43 :
Turbidity	NTU	T		-	0.5 :	-	0. :	-	0.8 :
General Chemistry									
Ammonia	mg/L	T		-	0.051 :	-	<0.25 J	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	143. :	-	137. J	-	139. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	17.5 :	-	16.7 :	-	17.5 :
Fluoride	mg/L	T		-	0.35 :	-	0.3 :	-	0.39 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.3 :	-	<0.27 J	-	0.5 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 :
Phosphorus	mg/L	T		-	<0.01 :	-	<0.01 :	-	<0.01 :
Sulfate	mg/L	T		-	640. :	-	612. :	-	606. :
Total Alkalinity	mg/L	T		-	143. :	-	137. J	-	139. :
Total Dissolved Solids	mg/L	T		-	1390. :	-	1110. :	-	1140. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.3 :	-	1.6 :	-	<2.1 :
Total Suspended Solids	mg/L	T		-	1.7 :	-	1.8 :	-	<1. :
Laboratory Parameters									
pH	SU	T		-	7.1 J	-	7.3 J	-	7.4 J
Specific Conductance	umhos/cm	T		-	1200. J	-	1210. J	-	1250. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 :	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	889. :	-	769. :	-	807. :
Hardness	mg/L	D		807. :	-	828. :	-	773. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-28 11/2/2003 MW-28-D01N-GRW GW13	MW-28 12/10/2003 MW-28-T01N-GRW GW13	MW-28 12/10/2003 MW-28-D01N-GRW GW13	MW-28 1/6/2004 MW-28-T01N-GRW GW13	MW-28 1/6/2004 MW-28-D01N-GRW GW13	MW-28 4/15/2004 MW-28-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.221 :	-	<0.329 :	-	<0.201 :
Aluminum	mg/L	D	<0.217 :	-	<0.221 :	-	<0.329 :	-
Antimony	mg/L	T	-	<0.0024 :	-	<0.0024 :	-	<0.0008 :
Antimony	mg/L	D	<0.001 :	-	<0.0024 :	-	<0.0024 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	0.00045 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0545 :	-	0.0474 :	-	0.0422 :
Barium	mg/L	D	0.0625 :	-	0.0519 :	-	0.0459 :	-
Beryllium	mg/L	T	-	<0.0004 :	-	<0.0003 :	-	<0.0002 :
Beryllium	mg/L	D	<0.00038 J	-	<0.0004 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0201 :	-	0.0185 :	-	0.0192 :
Boron	mg/L	D	0.019 :	-	0.0193 :	-	<0.018 :	-
Cadmium	mg/L	T	-	<0.0005 :	-	<0.0007 J	-	<0.0003 :
Cadmium	mg/L	D	<0.0007 :	-	<0.0005 :	-	<0.0007 :	-
Calcium	mg/L	T	-	273. :	-	236. :	-	248. :
Calcium	mg/L	D	247. :	-	254. :	-	238. :	-
Chromium	mg/L	T	-	<0.0011 :	-	<0.0015 J	-	<0.001 :
Chromium	mg/L	D	<0.0013 :	-	<0.0011 :	-	<0.0015 J	-
Cobalt	mg/L	T	-	0.0036 :	-	0.0024 J	-	0.0017 J
Cobalt	mg/L	D	0.0036 :	-	0.006 :	-	0.0028 :	-
Copper	mg/L	T	-	<0.0022 :	-	<0.003 :	-	<0.0022 :
Copper	mg/L	D	<0.002 J	-	<0.0022 :	-	<0.003 :	-
Iron	mg/L	T	-	<0.278 :	-	<0.357 :	-	<0.293 J
Iron	mg/L	D	<0.455 :	-	<0.278 :	-	<0.357 :	-
Lead	mg/L	T	-	<0.0002 J	-	<0.0002 :	-	<0.0008 :
Lead	mg/L	D	<0.0004 :	-	<0.0002 J	-	<0.0002 :	-
Magnesium	mg/L	T	-	50.5 :	-	43.3 :	-	45.7 :
Magnesium	mg/L	D	46.1 :	-	47. :	-	43.5 :	-
Manganese	mg/L	T	-	0.27 :	-	0.396 :	-	0.0828 :
Manganese	mg/L	D	0.35 :	-	0.223 :	-	0.372 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0446 :	-	0.0312 :	-	0.0401 :
Molybdenum	mg/L	D	0.0429 :	-	0.0444 :	-	0.0314 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-28 11/2/2003 MW-28-D01N-GRW GW13		MW-28 12/10/2003 MW-28-T01N-GRW GW13		MW-28 12/10/2003 MW-28-D01N-GRW GW13		MW-28 1/6/2004 MW-28-T01N-GRW GW13		MW-28 1/6/2004 MW-28-D01N-GRW GW13		MW-28 4/15/2004 MW-28-T01N-GRW GW13	
Nickel	mg/L	T	-		0.0104	J	-		<0.0024	J	-		0.0053	J
Nickel	mg/L	D	0.009	:	-		0.0103	J	-		<0.0024	J	-	
Potassium	mg/L	T	-		<3.4	:	-		3.	:	-		2.96	:
Potassium	mg/L	D	<1.8	J	-		<3.2	:	-		2.99	:	-	
Selenium	mg/L	T	-		0.0014	:	-		0.0013	J	-		0.0015	:
Selenium	mg/L	D	0.0017	:	-		0.002	:	-		0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.00034	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		42.1	:	-		39.1	:	-		23.9	J
Sodium	mg/L	D	39.8	:	-		39.6	:	-		38.9	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0004	:	-		0.0004	:	-		<0.0004	:
Vanadium	mg/L	D	0.00025	:	-		<0.0004	:	-		<0.0004	:	-	
Zinc	mg/L	T	-		<0.023	:	-		<0.04	:	-		<0.024	:
Zinc	mg/L	D	<0.019	:	-		0.0282	:	-		<0.04	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-28	MW-29	MW-29	MW-29	MW-29	MW-29
			Sample Date	4/15/2004	7/10/2003	7/10/2003	8/10/2003	8/10/2003	9/8/2003
			Sample ID	MW-28-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.18 :	-	4.89 :	-	4.57 :
Eh	millivolts	T		-	325. :	-	21.2 :	-	687.9 :
pH	SU	T		-	7.3 J	-	7.3 J	-	7.7 J
Specific Conductance	uS/cm	T		-	1718. :	-	1596. :	-	1735. :
Temperature	Celsius	T		-	12.35 :	-	15.12 :	-	15.66 :
Turbidity	NTU	T		-	7.1 :	-	0.4 :	-	14.8 :
General Chemistry									
Ammonia	mg/L	T		-	<0.35 J	-	<0.04 :	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	143. :	-	147. :	-	161. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	<0.4 :	-	16.4 :	-	12.4 :
Fluoride	mg/L	T		-	0.26 :	-	0.23 :	-	0.42 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	0.22 J	-	0.63 :
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.016 :	-	0.013 J	-	<0.017 :
Phosphorus	mg/L	T		-	0.01 :	-	0.02 :	-	0.025 :
Sulfate	mg/L	T		-	872. J	-	747. J	-	36.4 J
Total Alkalinity	mg/L	T		-	143. :	-	147. :	-	161. :
Total Dissolved Solids	mg/L	T		-	1380. :	-	1430. :	-	344. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.31 :
Total Organic Carbon	mg/L	T		-	<1.8 J	-	<1.9 J	-	<1.4 :
Total Suspended Solids	mg/L	T		-	3.6 :	-	<1.2 :	-	4.6 :
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.3 J	-	7.7 J
Specific Conductance	umhos/cm	T		-	1600. J	-	1660. J	-	347. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	1130. :	-	991. :	-	179. :
Hardness	mg/L	D		786. :	-	947. :	-	921. :	-
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-28 4/15/2004 MW-28-D01N-GRW GW13	MW-29 7/10/2003 MW-29-T01N-GRW GW13	MW-29 7/10/2003 MW-29-D01N-GRW GW13	MW-29 8/10/2003 MW-29-T01N-GRW GW13	MW-29 8/10/2003 MW-29-D01N-GRW GW13	MW-29 9/8/2003 MW-29-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.183 J	-	<0.631 :	-	<0.368 :
Aluminum	mg/L	D	<0.201 :	-	<0.183 J	-	<0.631 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Antimony	mg/L	D	<0.0008 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	0.00046 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0275 :	-	0.0279 :	-	0.0876 :
Barium	mg/L	D	0.0403 :	-	0.0278 :	-	0.0268 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0004 :
Beryllium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0251 :	-	0.0279 :	-	0.0104 :
Boron	mg/L	D	0.0186 :	-	0.0257 :	-	0.0254 :	-
Cadmium	mg/L	T	-	<0.0006 :	-	<0.0003 :	-	<0.0005 :
Cadmium	mg/L	D	<0.0003 :	-	<0.0006 :	-	<0.0003 :	-
Calcium	mg/L	T	-	351. :	-	305. :	-	53.8 :
Calcium	mg/L	D	241. :	-	293. :	-	284. :	-
Chromium	mg/L	T	-	<0.0014 :	-	<0.00078 :	-	<0.0011 :
Chromium	mg/L	D	<0.00097 :	-	<0.0014 :	-	0.0008 :	-
Cobalt	mg/L	T	-	<0.002 :	-	<0.0018 :	-	<0.0029 :
Cobalt	mg/L	D	<0.0037 J	-	<0.002 :	-	<0.0018 :	-
Copper	mg/L	T	-	<0.0024 :	-	<0.0014 :	-	<0.0022 :
Copper	mg/L	D	<0.0012 :	-	<0.0024 :	-	0.0019 :	-
Iron	mg/L	T	-	<0.168 J	-	<0.667 :	-	<0.626 :
Iron	mg/L	D	0.409 :	-	<0.168 J	-	<0.667 :	-
Lead	mg/L	T	-	<0.00084 :	-	<0.0002 :	-	<0.00073 :
Lead	mg/L	D	<0.0008 :	-	<0.0019 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	62.3 :	-	55.7 :	-	11. :
Magnesium	mg/L	D	44.6 :	-	52. :	-	51.7 :	-
Manganese	mg/L	T	-	<0.0148 :	-	<0.019 :	-	0.0341 :
Manganese	mg/L	D	0.0818 :	-	0.0113 :	-	<0.019 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.12 :	-	0.154 :	-	0.0039 :
Molybdenum	mg/L	D	0.038 :	-	0.122 :	-	0.148 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-28 4/15/2004 MW-28-D01N-GRW GW13		MW-29 7/10/2003 MW-29-T01N-GRW GW13		MW-29 7/10/2003 MW-29-D01N-GRW GW13		MW-29 8/10/2003 MW-29-T01N-GRW GW13		MW-29 8/10/2003 MW-29-D01N-GRW GW13		MW-29 9/8/2003 MW-29-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0021	:	-		<0.0095	:	-		<0.0024	:
Nickel	mg/L	D	0.005	J	-		<0.0021	:	-		<0.002	:	-	
Potassium	mg/L	T	-		2.6	:	-		2.97	:	-		1.59	J
Potassium	mg/L	D	2.83	:	-		2.64	:	-		2.86	:	-	
Selenium	mg/L	T	-		0.0018	:	-		<0.0016	:	-		<0.0006	:
Selenium	mg/L	D	0.0015	:	-		<0.0016	J	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0009	:	-		<0.0002	:
Silver	mg/L	D	<0.00034	:	-		<0.0002	J	-		<0.0009	:	-	
Sodium	mg/L	T	-		68.4	:	-		69.2	:	-		<11.7	:
Sodium	mg/L	D	24.7	J	-		58.7	:	-		58.9	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00066	:	-		0.00072	:	-		0.0017	:
Vanadium	mg/L	D	0.00043	:	-		0.00068	:	-		0.00074	:	-	
Zinc	mg/L	T	-		<0.057	:	-		<0.0301	:	-		<0.0432	:
Zinc	mg/L	D	<0.101	:	-		<0.057	:	-		<0.0263	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-29	MW-29	MW-29	MW-29	MW-29	MW-29
			Sample Date	9/8/2003	10/15/2003	10/15/2003	11/2/2003	11/2/2003	12/10/2003
			Sample ID	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	4.96 :	-	3.82 :	-	-
Eh	millivolts	T		-	279.8 :	-	238.1 :	-	-
pH	SU	T		-	7.3 J	-	<7.3 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1690. :	-	1588. :	-	-
Temperature	Celsius	T		-	10.61 :	-	11.82 :	-	-
Turbidity	NTU	T		-	2. :	-	0.9 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.057 J	-	<0.095 :	-	0.047 :
Bicarbonate (as CaCO3)	mg/L	T		-	149. :	-	135. :	-	145. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	17.1 :	-	17.3 :	-	17.9 :
Fluoride	mg/L	T		-	0.22 :	-	<0.23 :	-	0.24 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.21 J	-	0.25 J	-	0.23 :
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T		-	<0.022 J	-	0.02 J	-	0.02 :
Phosphorus	mg/L	T		-	0.017 :	-	0.02 :	-	0.019 :
Sulfate	mg/L	T		-	<884. J	-	841. :	-	788. :
Total Alkalinity	mg/L	T		-	149. :	-	135. :	-	145. :
Total Dissolved Solids	mg/L	T		-	1500. :	-	1530. :	-	1470. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	2.3 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.5 J	-	1.5 :	-	2.6 :
Total Suspended Solids	mg/L	T		-	<1.6 :	-	<0.9 :	-	1.5 :
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	<7.3 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1450. J	-	1690. J	-	1420. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	922. :	-	972. :	-	1000. :
Hardness	mg/L	D		165. :	-	943. :	-	976. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-29 9/8/2003 MW-29-D01N-GRW GW13		MW-29 10/15/2003 MW-29-T01N-GRW GW13		MW-29 10/15/2003 MW-29-D01N-GRW GW13		MW-29 11/2/2003 MW-29-T01N-GRW GW13		MW-29 11/2/2003 MW-29-D01N-GRW GW13		MW-29 12/10/2003 MW-29-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.221	:	-		<0.408	:	-		<0.221	:
Aluminum	mg/L	D	<0.257	:	-		<0.221	:	-		<0.453	:	-	
Antimony	mg/L	T	-		<0.0015	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		0.00052	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		0.00041	:	-	
Barium	mg/L	T	-		0.0256	:	-		0.0268	:	-		0.0268	:
Barium	mg/L	D	0.0852	:	-		0.0267	:	-		0.026	:	-	
Beryllium	mg/L	T	-		<0.0004	:	-		<0.00064	J	-		<0.0004	:
Beryllium	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.00069	J	-	
Boron	mg/L	T	-		0.0295	:	-		0.0242	:	-		0.0238	:
Boron	mg/L	D	0.0101	:	-		0.0276	:	-		0.0253	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0007	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0005	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		286.	:	-		299.	:	-		308.	:
Calcium	mg/L	D	49.5	:	-		292.	:	-		300.	:	-	
Chromium	mg/L	T	-		0.0011	J	-		<0.0013	:	-		<0.0011	:
Chromium	mg/L	D	<0.0011	:	-		<0.0011	J	-		<0.0013	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0032	J	-		<0.0029	:
Cobalt	mg/L	D	<0.0029	:	-		0.0032	:	-		0.0056	J	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.002	J	-		<0.0022	:
Copper	mg/L	D	<0.0022	:	-		<0.0022	:	-		<0.002	J	-	
Iron	mg/L	T	-		0.506	:	-		<0.3	J	-		<0.278	:
Iron	mg/L	D	<0.455	:	-		0.286	:	-		<0.3	J	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0002	J
Lead	mg/L	D	<0.00057	:	-		<0.0004	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		50.8	:	-		54.8	:	-		56.4	:
Magnesium	mg/L	D	10.1	:	-		51.9	:	-		54.9	:	-	
Manganese	mg/L	T	-		<0.012	:	-		<0.01	:	-		<0.012	:
Manganese	mg/L	D	<0.04	:	-		<0.012	:	-		<0.01	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.143	:	-		0.13	:	-		0.0843	:
Molybdenum	mg/L	D	0.0044	:	-		0.146	:	-		0.128	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-29	9/8/2003	MW-29-D01N-GRW	GW13	MW-29	10/15/2003	MW-29-T01N-GRW	GW13	MW-29	10/15/2003	MW-29-D01N-GRW	GW13	MW-29	11/2/2003	MW-29-T01N-GRW	GW13	MW-29	11/2/2003	MW-29-D01N-GRW	GW13	MW-29	12/10/2003	MW-29-T01N-GRW	GW13
Nickel	mg/L	T	-				<0.0024	:			-				<0.0028	:			-				<0.0024	:		
Nickel	mg/L	D			<0.0024	:			-				<0.0024	:			-				<0.0028	:			-	
Potassium	mg/L	T	-				2.49	:			-				2.32	:			-				<3.02	:		
Potassium	mg/L	D			1.46	J			-				2.58	:			-				2.52	:			-	
Selenium	mg/L	T	-				0.001	:			-				0.0019	:			-				0.0015	:		
Selenium	mg/L	D			<0.0006	:			-				0.0011	:			-				0.002	:			-	
Silver	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Silver	mg/L	D			<0.0002	:			-				<0.0002	:			-				<0.0002	:			-	
Sodium	mg/L	T	-				50.4	:			-				60.3	:			-				54.3	:		
Sodium	mg/L	D			<13.	:			-				57.8	:			-				61.9	:			-	
Thallium	mg/L	T	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Thallium	mg/L	D			<0.0002	:			-				<0.0002	:			-				<0.0002	:			-	
Vanadium	mg/L	T	-				0.00064	:			-				0.00083	:			-				<0.0004	:		
Vanadium	mg/L	D			0.0016	:			-				0.0007	:			-				0.00074	:			-	
Zinc	mg/L	T	-				<0.023	:			-				<0.019	:			-				<0.023	:		
Zinc	mg/L	D			<0.0438	:			-				<0.023	:			-				<0.0272	:			-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-29	MW-29	MW-29	MW-29	MW-29	MW-4
			Sample Date	12/10/2003	1/6/2004	1/6/2004	4/15/2004	4/15/2004	10/29/2002
			Sample ID	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-4-T01N-GRWRE
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	5.22 :	-	5.9 :	-	-
Eh	millivolts	T		-	306.6 :	-	490.1 :	-	-
pH	SU	T		-	7.3 J	-	7.4 J	-	-
Specific Conductance	uS/cm	T		-	1804. :	-	1796. :	-	-
Temperature	Celsius	T		-	11.35 :	-	11.6 :	-	-
Turbidity	NTU	T		-	0. :	-	0.5 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	<0.11 J	-	<0.04 :	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	143. J	-	137. :	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Chloride	mg/L	T		-	16.9 :	-	17.3 :	-	-
Fluoride	mg/L	T		-	0.23 :	-	0.25 :	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T		-	<0.24 J	-	0.47 J	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.026 J	-	0.022 :	-	-
Phosphorus	mg/L	T		-	<0.019 :	-	0.023 :	-	-
Sulfate	mg/L	T		-	892. :	-	837. :	-	41.4 J
Total Alkalinity	mg/L	T		-	143. J	-	137. :	-	-
Total Dissolved Solids	mg/L	T		-	1530. :	-	1510. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	<2.8 :	-	-
Total Suspended Solids	mg/L	T		-	<1.2 :	-	<0.7 :	-	-
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.4 J	-	-
Specific Conductance	umhos/cm	T		-	1530. J	-	1540. J	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		-	1000. :	-	1010. :	-	-
Hardness	mg/L	D		1030. :	-	983. :	-	974. :	-
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-29	MW-29	MW-29	MW-29	MW-29	MW-4
			Sample Date	12/10/2003	1/6/2004	1/6/2004	4/15/2004	4/15/2004	10/29/2002
			Sample ID	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-29-T01N-GRW	MW-29-D01N-GRW	MW-4-T01N-GRWRE
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	T		-	<0.329 :	-	<0.201 :	-	-
Aluminum	mg/L	D		<0.221 :	-	<0.329 :	-	<0.201 :	-
Antimony	mg/L	T		-	<0.0024 :	-	<0.0008 :	-	-
Antimony	mg/L	D		<0.0024 :	-	<0.0024 :	-	<0.0008 :	-
Arsenic	mg/L	T		-	<0.0004 :	-	<0.0004 :	-	-
Arsenic	mg/L	D		<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T		-	0.026 :	-	0.0278 :	-	-
Barium	mg/L	D		0.0281 :	-	0.0253 :	-	0.0272 :	-
Beryllium	mg/L	T		-	<0.0003 :	-	<0.0002 :	-	-
Beryllium	mg/L	D		<0.0004 :	-	<0.0003 :	-	<0.0002 :	-
Boron	mg/L	T		-	0.026 :	-	0.0277 :	-	-
Boron	mg/L	D		0.0256 :	-	0.0258 :	-	0.0264 :	-
Cadmium	mg/L	T		-	<0.0007 J	-	<0.0003 :	-	-
Cadmium	mg/L	D		<0.0005 :	-	<0.0007 :	-	<0.0003 :	-
Calcium	mg/L	T		-	310. :	-	312. :	-	-
Calcium	mg/L	D		318. :	-	304. :	-	302. :	-
Chromium	mg/L	T		-	0.0016 J	-	<0.0017 :	-	-
Chromium	mg/L	D		0.0014 :	-	<0.0015 J	-	<0.0012 :	-
Cobalt	mg/L	T		-	<0.0023 :	-	<0.0011 J	-	-
Cobalt	mg/L	D		<0.0029 :	-	<0.0023 :	-	<0.0027 J	-
Copper	mg/L	T		-	<0.003 :	-	<0.00091 :	-	-
Copper	mg/L	D		<0.0022 :	-	<0.003 :	-	<0.0015 :	-
Iron	mg/L	T		-	<0.357 :	-	<0.293 J	-	-
Iron	mg/L	D		<0.278 :	-	<0.357 :	-	<0.293 :	-
Lead	mg/L	T		-	<0.0002 :	-	<0.0008 :	-	-
Lead	mg/L	D		<0.0002 J	-	<0.0002 :	-	<0.0008 :	-
Magnesium	mg/L	T		-	55.3 :	-	56.1 :	-	-
Magnesium	mg/L	D		58.3 :	-	54.2 :	-	53.6 :	-
Manganese	mg/L	T		-	<0.011 :	-	<0.014 :	-	-
Manganese	mg/L	D		<0.012 :	-	<0.011 :	-	<0.014 :	-
Mercury	mg/L	T		-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D		<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T		-	0.128 :	-	0.137 :	-	-
Molybdenum	mg/L	D		0.094 :	-	0.128 :	-	0.134 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-29 12/10/2003 MW-29-D01N-GRW GW13		MW-29 1/6/2004 MW-29-T01N-GRW GW13		MW-29 1/6/2004 MW-29-D01N-GRW GW13		MW-29 4/15/2004 MW-29-T01N-GRW GW13		MW-29 4/15/2004 MW-29-D01N-GRW GW13		MW-4 10/29/2002 MW-4-T01N-GRWRE GW13	
Nickel	mg/L	T	-		<0.0032	J	-		<0.0014	J	-		-	
Nickel	mg/L	D	<0.0024	:	-		<0.0024	J	-		<0.0014	J	-	
Potassium	mg/L	T	-		2.69	:	-		2.61	:	-		-	
Potassium	mg/L	D	<3.4	:	-		2.59	:	-		2.57	:	-	
Selenium	mg/L	T	-		<0.0015	J	-		0.0016	:	-		-	
Selenium	mg/L	D	0.0019	:	-		<0.0016	:	-		0.0015	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.00035	:	-		-	
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00034	:	-	
Sodium	mg/L	T	-		60.2	:	-		56.	J	-		-	
Sodium	mg/L	D	55.7	:	-		59.8	:	-		42.1	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00072	:	-		0.00096	:	-		-	
Vanadium	mg/L	D	0.00074	:	-		0.00071	:	-		0.00085	:	-	
Zinc	mg/L	T	-		<0.04	:	-		<0.024	:	-		-	
Zinc	mg/L	D	<0.023	:	-		<0.04	:	-		<0.024	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Fraction	MW-4 10/29/2002 MW-4-T01N-GRW GW13		MW-4 10/29/2002 MW-4-D01N-GRWRE GW13		MW-4 10/29/2002 MW-4-D01N-GRW GW13		MW-4 10/30/2002 MW-04-T01N-GRW GW13		MW-4 1/16/2003 MW-4-T01N-GRW GW13		MW-4 1/16/2003 MW-4-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	3.19	:	-		-		-		1.87	:	-	
Eh	millivolts	T	66.9	:	-		-		-		-32.5	:	-	
pH	SU	T	7.86	:	-		-		-		7.94	:	-	
Specific Conductance	uS/cm	T	250.	:	-		-		-		578.	:	-	
Temperature	Celsius	T	12.8	:	-		-		-		12.66	:	-	
Turbidity	NTU	T	7.9	:	-		-		-		25.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.11	J	-		-		-		<0.06	J	-	
Bicarbonate (as CaCO3)	mg/L	T	73.4	J	-		-		-		82.2	:	-	
Carbonate (as CaCO3)	mg/L	T	73.4	J	-		-		-		<1.	:	-	
Chloride	mg/L	T	1.9	:	-		-		-		<2.6	:	-	
Fluoride	mg/L	T	0.46	:	-		-		-		0.4	:	-	
Hydroxide (as CaCO3)	mg/L	T	73.4	J	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		-		-		<0.75	J	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.014	J	-		-		-		<0.01	J	-	
Phosphorus	mg/L	T	0.019	:	-		-		-		0.017	:	-	
Sulfate	mg/L	T	-		-		-		-		55.5	J	-	
Total Alkalinity	mg/L	T	73.4	J	-		-		-		82.2	:	-	
Total Dissolved Solids	mg/L	T	202.	:	-		-		-		<180.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	4.8	:	-		-		-		10.1	:	-	
Laboratory Parameters														
pH	SU	T	7.86	:	-		-		-		7.94	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		-		-		-		113.	:	-	
Hardness	mg/L	D	-		94.8	:	-		-		-		116.	:
Metals														
Aluminum	mg/L	T	-		-		-		-		<0.142	J	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
			Sample Date	10/29/2002	10/29/2002	10/29/2002	10/30/2002	1/16/2003	1/16/2003
			Sample ID	MW-4-T01N-GRW	MW-4-D01N-GRWRE	MW-4-D01N-GRW	MW-04-T01N-GRW	MW-4-T01N-GRW	MW-4-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Aluminum	mg/L	D		-	<0.142 :	-	-	-	<0.142 J
Antimony	mg/L	T		-	-	-	-	<0.0006 J	-
Antimony	mg/L	D		-	<0.0006 :	-	-	-	0.0015 J
Arsenic	mg/L	T		-	-	-	-	<0.0004 :	-
Arsenic	mg/L	D		-	<0.0004 :	-	-	-	<0.0004 :
Barium	mg/L	T		-	-	-	-	0.0463 :	-
Barium	mg/L	D		-	0.0392 :	-	-	-	0.041 :
Beryllium	mg/L	T		-	-	-	-	<0.0002 :	-
Beryllium	mg/L	D		-	<0.0002 :	-	-	-	<0.0002 :
Boron	mg/L	T		-	-	-	-	<0.0027 J	-
Boron	mg/L	D		-	<0.0117 :	-	-	-	<0.0027 J
Cadmium	mg/L	T		-	-	-	-	<0.0004 :	-
Cadmium	mg/L	D		-	<0.0004 :	-	-	-	<0.0004 :
Calcium	mg/L	T		-	-	-	-	34.6 :	-
Calcium	mg/L	D		-	29.2 :	-	-	-	35.4 :
Chromium	mg/L	T		-	-	-	-	<0.0037 :	-
Chromium	mg/L	D		-	<0.0037 :	-	-	-	<0.0037 :
Chromium, Hexavalent	mg/L	D		-	-	-	<0.01 :	-	-
Cobalt	mg/L	T		-	-	-	-	<0.0016 :	-
Cobalt	mg/L	D		-	<0.0016 :	-	-	-	<0.0016 :
Copper	mg/L	T		-	-	-	-	<0.0017 J	-
Copper	mg/L	D		-	<0.0017 :	-	-	-	<0.0017 J
Iron	mg/L	T		-	-	-	-	3.46 :	-
Iron	mg/L	D		-	<0.489 :	-	-	-	<0.489 :
Lead	mg/L	T		-	-	-	-	<0.0002 :	-
Lead	mg/L	D		-	<0.0002 :	-	-	-	<0.0002 :
Magnesium	mg/L	T		-	-	-	-	6.51 :	-
Magnesium	mg/L	D		-	5.31 :	-	-	-	6.72 :
Manganese	mg/L	T		-	-	-	-	0.132 :	-
Manganese	mg/L	D		-	0.007 :	-	-	-	<0.0249 :
Mercury	mg/L	T		<0.0001 :	-	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T		-	-	-	-	0.0131 J	-
Molybdenum	mg/L	D		-	0.0019 :	-	-	-	0.0197 J

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-4 10/29/2002 MW-4-T01N-GRW GW13	MW-4 10/29/2002 MW-4-D01N-GRWRE GW13	MW-4 10/29/2002 MW-4-D01N-GRW GW13	MW-4 10/30/2002 MW-04-T01N-GRW GW13	MW-4 1/16/2003 MW-4-T01N-GRW GW13	MW-4 1/16/2003 MW-4-D01N-GRW GW13
Nickel	mg/L	T	-	-	-	-	<0.0015 :	-
Nickel	mg/L	D	-	<0.0015 :	-	-	-	<0.0015 :
Potassium	mg/L	T	-	-	-	-	0.629 J	-
Potassium	mg/L	D	-	0.763 :	-	-	-	0.65 J
Selenium	mg/L	T	-	-	-	-	<0.0016 :	-
Selenium	mg/L	D	-	<0.0016 :	-	-	-	<0.0016 :
Silver	mg/L	T	-	-	-	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Sodium	mg/L	T	-	-	-	-	14.2 :	-
Sodium	mg/L	D	-	8.93 :	-	-	-	15. :
Thallium	mg/L	T	-	-	-	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Vanadium	mg/L	T	-	-	-	-	0.00082 :	-
Vanadium	mg/L	D	-	0.00074 :	-	-	-	0.00044 :
Zinc	mg/L	T	-	-	-	-	<0.039 :	-
Zinc	mg/L	D	-	<0.039 :	-	-	-	<0.039 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-4	4/2/2003	MW-4-T01N-GRW		MW-4	4/2/2003	MW-4-D01N-GRW		MW-4	7/8/2003	MW-4-T01N-GRW		MW-4	7/8/2003	MW-4-D01N-GRW		MW-4	10/14/2003	MW-4-T01N-GRW		MW-4	10/14/2003	MW-4-D01N-GRW	
			GW13				GW13				GW13				GW13				GW13				GW13			
Field Measurements																						
DO	mg/L	T	2.08	:			-				2.66	:			-				3.66	:			-			
Eh	millivolts	T	123.7	:			-				27.9	:			-				-43.3	:			-			
pH	SU	T	7.8	J			-				7.9	J			-				8.1	J			-			
Specific Conductance	uS/cm	T	246.	:			-				235.	:			-				250.	:			-			
Temperature	Celsius	T	12.68	:			-				14.43	:			-				13.49	:			-			
Turbidity	NTU	T	24.7	:			-				26.4	:			-				22.8	:			-			
General Chemistry																						
Ammonia	mg/L	T	<0.04	:			-				<0.066	J			-				<0.048	J			-			
Bicarbonate (as CaCO3)	mg/L	T	80.7	:			-				84.3	:			-				84.8	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Chloride	mg/L	T	10.1	:			-				2.2	:			-				2.	:			-			
Fluoride	mg/L	T	0.43	:			-				0.48	:			-				0.41	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	<0.67	:			-				0.58	J			-				0.45	J			-			
Nitrite	mg/L	T	<0.005	:			-				<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.016	J			-				<0.014	J			-				<0.017	J			-			
Phosphorus	mg/L	T	0.022	:			-				0.026	:			-				0.025	:			-			
Sulfate	mg/L	T	43.1	J			-				61.5	J			-				40.5	J			-			
Total Alkalinity	mg/L	T	80.7	:			-				84.3	:			-				84.8	:			-			
Total Dissolved Solids	mg/L	T	<182.	:			-				206.	:			-				194.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				2.4	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	<1.	J			-				<1.	J			-				<1.	J			-			
Total Suspended Solids	mg/L	T	<8.4	:			-				7.4	:			-				8.1	:			-			
Laboratory Parameters																						
pH	SU	T	7.8	J			-				7.9	J			-				8.1	J			-			
Specific Conductance	umhos/cm	T	237.	J			-				229.	J			-				225.	J			-			
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-				<0.01	J			-			
Physical Properties																						
Hardness	mg/L	T	103.	:			-				106.	:			-				94.6	:			-			
Hardness	mg/L	D	-				102.	:			-				98.5	:			-				93.7	:		
Metals																						

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-4 4/2/2003 MW-4-T01N-GRW GW13		MW-4 4/2/2003 MW-4-D01N-GRW GW13		MW-4 7/8/2003 MW-4-T01N-GRW GW13		MW-4 7/8/2003 MW-4-D01N-GRW GW13		MW-4 10/14/2003 MW-4-T01N-GRW GW13		MW-4 10/14/2003 MW-4-D01N-GRW GW13	
Aluminum	mg/L	T	<0.426	:	-		<0.236	:	-		<0.268	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.236	:	-		<0.217	:
Antimony	mg/L	T	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.046	:	-		0.0512	:	-		0.0478	:	-	
Barium	mg/L	D	-		0.0405	:	-		0.0404	:	-		0.0432	:
Beryllium	mg/L	T	<0.0003	J	-		<0.0002	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0003	J	-		<0.0002	:	-		<0.0003	:
Boron	mg/L	T	0.0137	:	-		0.0129	:	-		0.0142	:	-	
Boron	mg/L	D	-		0.0133	:	-		0.0114	:	-		0.0163	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0006	:	-		<0.0007	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0006	:	-		<0.0007	:
Calcium	mg/L	T	31.6	:	-		32.5	:	-		28.8	:	-	
Calcium	mg/L	D	-		31.3	:	-		30.2	:	-		28.7	:
Chromium	mg/L	T	<0.0012	:	-		<0.0014	:	-		<0.0021	J	-	
Chromium	mg/L	D	-		<0.0012	:	-		<0.0014	:	-		<0.0026	J
Cobalt	mg/L	T	<0.0029	:	-		<0.002	:	-		<0.0031	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.002	:	-		<0.0031	:
Copper	mg/L	T	<0.005	:	-		<0.0024	:	-		<0.0072	J	-	
Copper	mg/L	D	-		<0.0055	:	-		<0.0024	:	-		0.002	J
Iron	mg/L	T	3.24	:	-		4.13	:	-		2.81	J	-	
Iron	mg/L	D	-		<0.422	:	-		<0.333	:	-		<0.455	:
Lead	mg/L	T	<0.0002	:	-		<0.00021	:	-		<0.0004	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0004	:
Magnesium	mg/L	T	5.84	:	-		6.07	:	-		5.52	:	-	
Magnesium	mg/L	D	-		5.78	:	-		5.62	:	-		5.36	:
Manganese	mg/L	T	0.121	:	-		0.168	:	-		0.122	:	-	
Manganese	mg/L	D	-		<0.013	:	-		0.0075	:	-		<0.016	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	<0.0047	:	-		0.011	:	-		0.0055	:	-	
Molybdenum	mg/L	D	-		0.0057	:	-		0.0084	:	-		0.0061	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-4 4/2/2003 MW-4-T01N-GRW GW13		MW-4 4/2/2003 MW-4-D01N-GRW GW13		MW-4 7/8/2003 MW-4-T01N-GRW GW13		MW-4 7/8/2003 MW-4-D01N-GRW GW13		MW-4 10/14/2003 MW-4-T01N-GRW GW13		MW-4 10/14/2003 MW-4-D01N-GRW GW13	
Nickel	mg/L	T	<0.0026	:	-		<0.0021	:	-		<0.0028	:	-	
Nickel	mg/L	D	-		<0.0026	:	-		<0.0021	:	-		<0.0028	:
Potassium	mg/L	T	<2.43	:	-		<0.393	J	-		1.05	:	-	
Potassium	mg/L	D	-		<2.54	:	-		<0.393	J	-		1.19	:
Selenium	mg/L	T	<0.001	:	-		<0.0016	:	-		0.00084	:	-	
Selenium	mg/L	D	-		<0.001	:	-		<0.0016	J	-		0.0008	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	11.4	:	-		<15.	:	-		11.3	:	-	
Sodium	mg/L	D	-		10.6	:	-		<12.4	:	-		12.2	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0011	:	-		0.0014	:	-		0.001	:	-	
Vanadium	mg/L	D	-		0.00071	:	-		0.00094	:	-		0.00068	:
Zinc	mg/L	T	<0.039	:	-		<0.01	:	-		<0.019	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.0168	:	-		<0.019	:

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-4	MW-4	MW-4	MW-4	MW-7A	MW-7A
			Sample Date	1/6/2004	1/6/2004	4/12/2004	4/12/2004	10/29/2002	10/29/2002
			Sample ID	MW-4-T01N-GRW	MW-4-D01N-GRW	MW-4-T01N-GRW	MW-4-D01N-GRW	MW-7A-T01N-GRW	MW-7A-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		2.58 :	-	5.13 :	-	2.14 :	-
Eh	millivolts	T		-44.7 :	-	242.9 :	-	286.2 :	-
pH	SU	T		7.8 J	-	7.6 J	-	6.94 :	-
Specific Conductance	uS/cm	T		239. :	-	264. :	-	1740. :	-
Temperature	Celsius	T		11.83 :	-	13.28 :	-	11.26 :	-
Turbidity	NTU	T		18.1 :	-	0. :	-	29.8 :	-
General Chemistry									
Ammonia	mg/L	T		<0.074 J	-	<0.04 :	-	<0.17 J	-
Bicarbonate (as CaCO3)	mg/L	T		77.1 J	-	84. :	-	118. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		2.4 :	-	2.5 :	-	13.8 :	-
Fluoride	mg/L	T		0.41 :	-	0.45 :	-	0.22 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.47 :	-	0.47 J	-	<0.4 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.022 :	-	<0.01 :	-	0.25 J	-
Phosphorus	mg/L	T		<0.028 :	-	0.021 :	-	0.026 :	-
Sulfate	mg/L	T		41.1 :	-	47.3 :	-	815. :	-
Total Alkalinity	mg/L	T		77.1 J	-	84. :	-	118. :	-
Total Dissolved Solids	mg/L	T		170. :	-	140. :	-	1350. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	<2.1 J	-	1.7 :	-
Total Suspended Solids	mg/L	T		9.6 :	-	11.9 J	-	2. :	-
Laboratory Parameters									
pH	SU	T		7.8 J	-	7.6 J	-	6.94 :	-
Specific Conductance	umhos/cm	T		237. J	-	231. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		98.5 :	-	112. :	-	977. :	-
Hardness	mg/L	D		-	96.7 :	-	113. :	-	999. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area		Site ID	Sample Date	Sample ID	Exposure Area	
			MW-4	1/6/2004	MW-4-T01N-GRW	GW13		MW-4	1/6/2004	MW-4-D01N-GRW	GW13		MW-4	4/12/2004	MW-4-T01N-GRW	GW13		MW-4	4/12/2004	MW-4-D01N-GRW	GW13		MW-7A	10/29/2002	MW-7A-T01N-GRW	GW13	
			MW-7A	10/29/2002	MW-7A-D01N-GRW	GW13																					
Aluminum	mg/L	T	<0.329	:	-			<0.176	:	-			<0.0115	J	-												
Aluminum	mg/L	D	-		<0.329	:		-		<0.176	:		-		<0.003	J											
Antimony	mg/L	T	<0.0024	:	-			<0.0008	:	-			<0.0002	:	-												
Antimony	mg/L	D	-		<0.0024	:		-		<0.0008	:		-		<0.0002	:											
Arsenic	mg/L	T	0.00041	:	-			<0.0004	:	-			0.00037	J	-												
Arsenic	mg/L	D	-		<0.0004	:		-		<0.0004	:		-		0.00037	J											
Barium	mg/L	T	0.047	:	-			0.0541	:	-			0.0208	:	-												
Barium	mg/L	D	-		0.0378	:		-		0.0434	:		-		0.0215	:											
Beryllium	mg/L	T	<0.0003	:	-			<0.0003	J	-			<0.0002	:	-												
Beryllium	mg/L	D	-		<0.0003	:		-		<0.0003	J		-		<0.0002	:											
Boron	mg/L	T	<0.011	:	-			0.0137	:	-			0.0234	:	-												
Boron	mg/L	D	-		<0.0113	:		-		0.0149	:		-		0.0232	:											
Cadmium	mg/L	T	<0.0007	J	-			<0.0003	:	-			<0.0001	:	-												
Cadmium	mg/L	D	-		<0.0007	:		-		<0.0003	:		-		<0.0001	:											
Calcium	mg/L	T	30.2	:	-			34.	:	-			300.	:	-												
Calcium	mg/L	D	-		29.7	:		-		34.1	:		-		307.	:											
Chromium	mg/L	T	<0.0015	:	-			<0.0016	:	-			<0.0046	:	-												
Chromium	mg/L	D	-		<0.0015	:		-		<0.00066	:		-		<0.0046	:											
Cobalt	mg/L	T	<0.0023	:	-			<0.0016	:	-			<0.0022	:	-												
Cobalt	mg/L	D	-		0.0023	:		-		<0.0018	:		-		<0.0022	:											
Copper	mg/L	T	<0.003	:	-			<0.0014	:	-			<0.0003	:	-												
Copper	mg/L	D	-		<0.003	:		-		<0.0014	:		-		<0.00056	:											
Iron	mg/L	T	2.08	:	-			4.82	J	-			<0.0226	J	-												
Iron	mg/L	D	-		<0.357	:		-		<0.192	:		-		<0.0226	J											
Lead	mg/L	T	<0.0002	:	-			<0.0008	:	-			<0.0001	:	-												
Lead	mg/L	D	-		<0.0002	:		-		<0.0008	:		-		<0.0001	:											
Magnesium	mg/L	T	5.59	:	-			6.58	:	-			55.3	:	-												
Magnesium	mg/L	D	-		5.48	:		-		6.68	:		-		56.5	:											
Manganese	mg/L	T	0.13	:	-			0.297	:	-			<0.0025	:	-												
Manganese	mg/L	D	-		<0.011	:		-		0.0224	:		-		<0.0025	:											
Mercury	mg/L	T	<0.0001	:	-			<0.0001	:	-			<0.0001	:	-												
Mercury	mg/L	D	-		<0.0001	:		-		<0.0001	:		-		<0.0001	:											
Molybdenum	mg/L	T	<0.0024	:	-			0.0159	:	-			0.0186	:	-												
Molybdenum	mg/L	D	-		0.0033	:		-		0.0193	:		-		0.0181	:											

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-4 1/6/2004 MW-4-T01N-GRW GW13		MW-4 1/6/2004 MW-4-D01N-GRW GW13		MW-4 4/12/2004 MW-4-T01N-GRW GW13		MW-4 4/12/2004 MW-4-D01N-GRW GW13		MW-7A 10/29/2002 MW-7A-T01N-GRW GW13		MW-7A 10/29/2002 MW-7A-D01N-GRW GW13	
Nickel	mg/L	T	<0.0024	J	-		<0.0015	J	-		<0.0002	J	-	
Nickel	mg/L	D	-		<0.0024	J	-		<0.0015	J	-		<0.0002	J
Potassium	mg/L	T	0.904	:	-		1.03	:	-		3.03	:	-	
Potassium	mg/L	D	-		0.872	:	-		1.16	:	-		3.15	:
Selenium	mg/L	T	0.0011	J	-		<0.0014	:	-		0.0011	:	-	
Selenium	mg/L	D	-		0.00066	:	-		<0.0014	:	-		0.0012	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Sodium	mg/L	T	11.	:	-		15.5	:	-		60.9	:	-	
Sodium	mg/L	D	-		10.1	:	-		14.6	:	-		62.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Vanadium	mg/L	T	0.0011	:	-		0.0013	:	-		0.00073	:	-	
Vanadium	mg/L	D	-		0.00075	:	-		0.00056	:	-		0.00076	:
Zinc	mg/L	T	<0.04	:	-		<0.015	J	-		<0.0069	:	-	
Zinc	mg/L	D	-		<0.04	:	-		<0.015	J	-		<0.0069	:

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-7A	MW-7A	MW-7A	MW-7A	MW-7A	MW-7A
			Sample Date	10/30/2002	1/16/2003	1/16/2003	4/2/2003	4/2/2003	7/9/2003
			Sample ID	MW-7A-T01N-GRW	MW-7A-T01N-GRW	MW-7A-D01N-GRW	MW-7A-T01N-GRW	MW-7A-D01N-GRW	MW-7A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.24 :	-	3.14 :	-	2.33 :
Eh	millivolts	T		-	282.2 :	-	260. :	-	449.8 :
pH	SU	T		-	6.95 :	-	7.4 J	-	7.3 J
Specific Conductance	uS/cm	T		-	3614. :	-	1614. :	-	1673. :
Temperature	Celsius	T		-	11.12 :	-	12.97 :	-	20.61 :
Turbidity	NTU	T		-	0. :	-	27.7 :	-	0.9 :
General Chemistry									
Ammonia	mg/L	T		-	<0.044 :	-	<0.04 :	-	<0.095 J
Bicarbonate (as CaCO3)	mg/L	T		-	113. :	-	115. :	-	116. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.1 :	-	13.1 :	-	13.6 :
Fluoride	mg/L	T		-	0.15 :	-	0.18 :	-	0.15 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.47 J	-	<0.49 J	-	0.44 J
Nitrite	mg/L	T		-	<0.005 :	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.029 J	-	<0.034 J	-	0.89 J
Phosphorus	mg/L	T		-	0.038 :	-	0.041 :	-	0.038 J
Sulfate	mg/L	T		-	930. J	-	905. J	-	787. J
Total Alkalinity	mg/L	T		-	113. :	-	115. :	-	116. :
Total Dissolved Solids	mg/L	T		-	1500. :	-	1430. :	-	1410. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	1.1 :	-	<1. J	-	<1. J
Total Suspended Solids	mg/L	T		-	<1.7 :	-	<4.5 :	-	<1. :
Laboratory Parameters									
pH	SU	T		-	6.95 :	-	7.4 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	-	-	1560. J	-	1530. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	1020. :	-	947. :	-	941. :
Hardness	mg/L	D		-	-	1020. :	-	962. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 10/30/2002 MW-7A-T01N-GRW GW13	MW-7A 1/16/2003 MW-7A-T01N-GRW GW13	MW-7A 1/16/2003 MW-7A-D01N-GRW GW13	MW-7A 4/2/2003 MW-7A-T01N-GRW GW13	MW-7A 4/2/2003 MW-7A-D01N-GRW GW13	MW-7A 7/9/2003 MW-7A-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.142 J	-	<0.426 :	-	<0.631 :
Aluminum	mg/L	D	-	-	<0.142 J	-	<0.426 :	-
Antimony	mg/L	T	-	<0.0006 J	-	<0.0014 :	-	<0.001 :
Antimony	mg/L	D	-	-	<0.0006 J	-	<0.0006 :	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	-	-	0.00057 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0211 :	-	0.0213 :	-	0.0195 :
Barium	mg/L	D	-	-	0.0208 :	-	0.0207 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0003 J	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0002 :	-	<0.0003 J	-
Boron	mg/L	T	-	<0.0027 J	-	0.0254 :	-	0.0221 :
Boron	mg/L	D	-	-	<0.0027 J	-	0.0247 :	-
Cadmium	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0003 :
Cadmium	mg/L	D	-	-	<0.0004 :	-	<0.0004 :	-
Calcium	mg/L	T	-	315. :	-	291. :	-	289. :
Calcium	mg/L	D	-	-	314. :	-	295. :	-
Chromium	mg/L	T	-	<0.0037 :	-	<0.001 :	-	<0.0006 J
Chromium	mg/L	D	-	-	<0.0037 :	-	<0.0013 :	-
Chromium, Hexavalent	mg/L	D	0.0023 J	-	-	-	-	-
Cobalt	mg/L	T	-	<0.0016 :	-	<0.0029 :	-	<0.0018 :
Cobalt	mg/L	D	-	-	<0.0016 :	-	<0.0029 :	-
Copper	mg/L	T	-	<0.0017 J	-	<0.0056 :	-	<0.0014 :
Copper	mg/L	D	-	-	0.0077 J	-	<0.005 :	-
Iron	mg/L	T	-	<0.489 :	-	<0.422 :	-	<0.667 :
Iron	mg/L	D	-	-	<0.489 :	-	<0.422 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	57.6 :	-	53.7 :	-	53.2 :
Magnesium	mg/L	D	-	-	57.3 :	-	54.6 :	-
Manganese	mg/L	T	-	<0.005 :	-	<0.013 :	-	<0.019 :
Manganese	mg/L	D	-	-	<0.005 :	-	<0.013 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0195 :	-	0.0158 :	-	0.0147 :

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 10/30/2002 MW-7A-T01N-GRW GW13	MW-7A 1/16/2003 MW-7A-T01N-GRW GW13	MW-7A 1/16/2003 MW-7A-D01N-GRW GW13	MW-7A 4/2/2003 MW-7A-T01N-GRW GW13	MW-7A 4/2/2003 MW-7A-D01N-GRW GW13	MW-7A 7/9/2003 MW-7A-T01N-GRW GW13
Molybdenum	mg/L	D	-	-	0.0182 :	-	0.0164 :	-
Nickel	mg/L	T	-	<0.0015 :	-	<0.0026 :	-	<0.002 J
Nickel	mg/L	D	-	-	<0.0015 :	-	<0.0026 :	-
Potassium	mg/L	T	-	<3.13 :	-	<4.52 :	-	3.23 :
Potassium	mg/L	D	-	-	<3.02 :	-	<4.59 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.001 :	-	<0.0016 :
Selenium	mg/L	D	-	-	0.002 :	-	<0.001 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 J
Silver	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	56.4 :	-	53.4 :	-	54.5 :
Sodium	mg/L	D	-	-	56.6 :	-	54.2 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.00073 :	-	0.00091 :	-	0.00087 :
Vanadium	mg/L	D	-	-	0.0009 :	-	0.00076 :	-
Zinc	mg/L	T	-	<0.039 :	-	<0.039 :	-	<0.016 :
Zinc	mg/L	D	-	-	<0.039 :	-	<0.039 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-7A	MW-7A	MW-7A	MW-7A	MW-7A	MW-7A
			Sample Date	7/9/2003	10/15/2003	10/15/2003	1/6/2004	1/6/2004	4/14/2004
			Sample ID	MW-7A-D01N-GRW	MW-7A-T01N-GRW	MW-7A-D01N-GRW	MW-7A-T01N-GRW	MW-7A-D01N-GRW	MW-7A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	2.38 :	-	2.38 :	-	3.85 :
Eh	millivolts	T		-	457.3 :	-	181.8 :	-	469.4 :
pH	SU	T		-	7.2 J	-	7.3 J	-	7.3 J
Specific Conductance	uS/cm	T		-	1672. :	-	1524. :	-	1581. :
Temperature	Celsius	T		-	12.35 :	-	10.17 :	-	11.7 :
Turbidity	NTU	T		-	0.2 :	-	2.2 :	-	2.7 :
General Chemistry									
Ammonia	mg/L	T		-	<0.081 J	-	<0.069 J	-	<0.091 :
Bicarbonate (as CaCO3)	mg/L	T		-	119. :	-	117. :	-	115. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	13.8 :	-	13.8 :	-	14.2 :
Fluoride	mg/L	T		-	0.16 :	-	0.16 :	-	0.19 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.28 J	-	<0.4 :	-	0.43 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.034 J	-	<0.047 J	-	0.029 J
Phosphorus	mg/L	T		-	0.037 :	-	0.035 :	-	0.03 :
Sulfate	mg/L	T		-	936. J	-	751. :	-	823. :
Total Alkalinity	mg/L	T		-	119. :	-	117. :	-	115. :
Total Dissolved Solids	mg/L	T		-	1570. :	-	1310. :	-	1400. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	<1.4 :	-	<2. :
Total Suspended Solids	mg/L	T		-	3.3 :	-	31.1 :	-	<4.5 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.3 J	-	7.3 J
Specific Conductance	umhos/cm	T		-	1670. J	-	1410. J	-	1390. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	1040. :	-	800. :	-	935. :
Hardness	mg/L	D		883. :	-	1070. :	-	827. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 7/9/2003 MW-7A-D01N-GRW GW13		MW-7A 10/15/2003 MW-7A-T01N-GRW GW13		MW-7A 10/15/2003 MW-7A-D01N-GRW GW13		MW-7A 1/6/2004 MW-7A-T01N-GRW GW13		MW-7A 1/6/2004 MW-7A-D01N-GRW GW13		MW-7A 4/14/2004 MW-7A-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.307	:	-		<0.621	:	-		<0.176	J
Aluminum	mg/L	D	<0.631	:	-		<0.307	:	-		<0.621	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		0.00043	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		0.00045	:	-		0.00064	:	-	
Barium	mg/L	T	-		0.0198	:	-		0.0174	:	-		0.0197	:
Barium	mg/L	D	0.019	:	-		0.0203	:	-		0.0174	:	-	
Beryllium	mg/L	T	-		<0.00034	:	-		<0.0003	:	-		<0.00022	:
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0202	:	-		0.0184	:	-		0.0196	:
Boron	mg/L	D	0.0223	:	-		0.0215	:	-		0.0186	:	-	
Cadmium	mg/L	T	-		<0.0007	:	-		<0.0007	J	-		<0.0003	J
Cadmium	mg/L	D	<0.0003	:	-		<0.0007	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		321.	:	-		246.	:	-		286.	:
Calcium	mg/L	D	271.	:	-		329.	:	-		255.	:	-	
Chromium	mg/L	T	-		0.0016	J	-		<0.0015	:	-		<0.0026	:
Chromium	mg/L	D	<0.0006	J	-		<0.0013	J	-		<0.0015	:	-	
Cobalt	mg/L	T	-		<0.0031	:	-		<0.0023	:	-		<0.0014	:
Cobalt	mg/L	D	<0.0018	:	-		<0.0031	:	-		0.0026	:	-	
Copper	mg/L	T	-		<0.002	:	-		<0.003	:	-		<0.0007	J
Copper	mg/L	D	<0.0014	:	-		<0.002	:	-		<0.003	:	-	
Iron	mg/L	T	-		<0.3	:	-		<0.423	:	-		<0.192	J
Iron	mg/L	D	<0.667	:	-		<0.3	:	-		<0.423	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		58.8	:	-		44.9	:	-		53.8	:
Magnesium	mg/L	D	50.	:	-		60.2	:	-		46.4	:	-	
Manganese	mg/L	T	-		<0.01	:	-		<0.019	:	-		<0.019	:
Manganese	mg/L	D	<0.019	:	-		<0.01	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0152	:	-		0.0113	:	-		0.0113	:
Molybdenum	mg/L	D	0.0146	:	-		0.0175	:	-		0.0114	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 7/9/2003 MW-7A-D01N-GRW GW13		MW-7A 10/15/2003 MW-7A-T01N-GRW GW13		MW-7A 10/15/2003 MW-7A-D01N-GRW GW13		MW-7A 1/6/2004 MW-7A-T01N-GRW GW13		MW-7A 1/6/2004 MW-7A-D01N-GRW GW13		MW-7A 4/14/2004 MW-7A-T01N-GRW GW13	
Nickel	mg/L	T	-		<0.0028	:	-		<0.0024	J	-		0.0019	:
Nickel	mg/L	D	<0.002	J	-		<0.0028	:	-		<0.0024	J	-	
Potassium	mg/L	T	-		2.9	:	-		2.73	:	-		<3.13	J
Potassium	mg/L	D	3.22	:	-		3.09	:	-		2.8	:	-	
Selenium	mg/L	T	-		0.0012	:	-		<0.0023	J	-		<0.0014	:
Selenium	mg/L	D	<0.0016	J	-		0.0015	:	-		<0.0023	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		57.3	:	-		48.5	:	-		37.5	J
Sodium	mg/L	D	50.4	:	-		59.3	:	-		52.7	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00076	:	-		0.00087	:	-		0.0013	J
Vanadium	mg/L	D	0.00098	:	-		0.00077	:	-		0.00099	:	-	
Zinc	mg/L	T	-		<0.02	:	-		<0.091	:	-		<0.0238	:
Zinc	mg/L	D	<0.016	:	-		<0.02	:	-		<0.091	:	-	

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-7A	MW-9A	MW-9A	MW-9A	MW-9A	MW-9A
			Sample Date	4/14/2004	10/29/2002	10/29/2002	10/30/2002	12/3/2002	12/3/2002
			Sample ID	MW-7A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	4.57 :	-	-	2.6 :	-
Eh	millivolts	T		-	314. :	-	-	295.4 :	-
pH	SU	T		-	7.2 :	-	-	7.24 :	-
Specific Conductance	uS/cm	T		-	1281. :	-	-	1316. :	-
Temperature	Celsius	T		-	10.3 :	-	-	7.16 :	-
Turbidity	NTU	T		-	10.3 :	-	-	51.2 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.15 J	-	-	<0.056 :	-
Bicarbonate (as CaCO3)	mg/L	T		-	174. :	-	-	170. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	23.1 :	-	-	22.4 :	-
Fluoride	mg/L	T		-	0.48 :	-	-	0.43 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.45 J	-	-	0.68 J	-
Nitrite	mg/L	T		-	<0.005 J	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	0.012 J	-	-	<0.017 J	-
Phosphorus	mg/L	T		-	0.015 :	-	-	<0.012 J	-
Sulfate	mg/L	T		-	586. :	-	-	684. :	-
Total Alkalinity	mg/L	T		-	174. :	-	-	170. :	-
Total Dissolved Solids	mg/L	T		-	1120. :	-	-	1050. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 J	-
Total Organic Carbon	mg/L	T		-	1.7 :	-	-	1.3 :	-
Total Suspended Solids	mg/L	T		-	<1.1 :	-	-	3. J	-
Laboratory Parameters									
pH	SU	T		-	7.2 :	-	-	7.24 :	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	703. :	-	-	679. :	-
Hardness	mg/L	D		956. :	-	718. :	-	-	667. :
Metals									
Aluminum	mg/L	T		-	<0.0153 J	-	-	<0.0389 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 4/14/2004 MW-7A-D01N-GRW GW13		MW-9A 10/29/2002 MW-9A-T01N-GRW GW13		MW-9A 10/29/2002 MW-9A-D01N-GRW GW13		MW-9A 10/30/2002 MW-9A-T01N-GRW GW13		MW-9A 12/3/2002 MW-9A-T01N-GRW GW13		MW-9A 12/3/2002 MW-9A-D01N-GRW GW13	
Aluminum	mg/L	D	<0.176	J	-		<0.003	J	-		-		<0.0106	:
Antimony	mg/L	T	-		<0.0002	:	-		-		<0.0006	:	-	
Antimony	mg/L	D	<0.0008	:	-		<0.0002	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		0.00035	J	-		-		0.00045	:	-	
Arsenic	mg/L	D	<0.0004	:	-		<0.0002	:	-		-		0.00087	:
Barium	mg/L	T	-		0.0432	:	-		-		0.0413	:	-	
Barium	mg/L	D	0.0191	:	-		0.044	:	-		-		0.0422	:
Beryllium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Beryllium	mg/L	D	<0.00023	:	-		<0.0002	:	-		-		<0.0002	:
Boron	mg/L	T	-		0.0213	:	-		-		0.021	:	-	
Boron	mg/L	D	0.0183	:	-		0.0211	:	-		-		0.0209	:
Cadmium	mg/L	T	-		<0.0001	:	-		-		<0.0002	:	-	
Cadmium	mg/L	D	<0.0003	J	-		<0.0001	:	-		-		<0.0002	:
Calcium	mg/L	T	-		215.	:	-		-		208.	:	-	
Calcium	mg/L	D	291.	:	-		219.	:	-		-		205.	:
Chromium	mg/L	T	-		<0.0046	:	-		-		<0.0072	:	-	
Chromium	mg/L	D	<0.0022	:	-		<0.0046	:	-		-		<0.0037	:
Chromium, Hexavalent	mg/L	D	-		-		-		0.0023	J	-		-	
Cobalt	mg/L	T	-		<0.0022	:	-		-		<0.0016	:	-	
Cobalt	mg/L	D	<0.0027	:	-		<0.0022	:	-		-		<0.0016	:
Copper	mg/L	T	-		<0.00044	:	-		-		<0.00098	:	-	
Copper	mg/L	D	<0.0007	J	-		<0.0003	:	-		-		0.0012	J
Iron	mg/L	T	-		<0.0226	J	-		-		0.0492	:	-	
Iron	mg/L	D	<0.192	:	-		<0.0226	J	-		-		<0.0489	:
Lead	mg/L	T	-		<0.0001	:	-		-		<0.0002	:	-	
Lead	mg/L	D	<0.0008	:	-		<0.0001	:	-		-		<0.0002	:
Magnesium	mg/L	T	-		40.5	:	-		-		38.5	:	-	
Magnesium	mg/L	D	55.8	:	-		41.5	:	-		-		37.8	:
Manganese	mg/L	T	-		<0.0025	:	-		-		0.007	J	-	
Manganese	mg/L	D	<0.019	:	-		<0.0025	:	-		-		<0.0013	J
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		0.0044	:	-		-		0.0049	:	-	
Molybdenum	mg/L	D	0.0094	:	-		0.0046	:	-		-		0.0049	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-7A 4/14/2004 MW-7A-D01N-GRW GW13		MW-9A 10/29/2002 MW-9A-T01N-GRW GW13		MW-9A 10/29/2002 MW-9A-D01N-GRW GW13		MW-9A 10/30/2002 MW-9A-T01N-GRW GW13		MW-9A 12/3/2002 MW-9A-T01N-GRW GW13		MW-9A 12/3/2002 MW-9A-D01N-GRW GW13	
Nickel	mg/L	T	-		<0.0002	J	-		-		0.00064	:	-	
Nickel	mg/L	D	<0.0014	:	-		<0.0002	J	-		-		<0.0006	:
Potassium	mg/L	T	-		1.9	:	-		-		1.77	J	-	
Potassium	mg/L	D	<3.02	J	-		1.96	:	-		-		1.76	J
Selenium	mg/L	T	-		0.0016	:	-		-		0.0022	J	-	
Selenium	mg/L	D	0.0015	:	-		0.00098	:	-		-		0.0036	J
Silver	mg/L	T	-		<0.0001	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	J	-		<0.0001	:	-		-		<0.0002	:
Sodium	mg/L	T	-		48.6	:	-		-		48.9	:	-	
Sodium	mg/L	D	61.8	J	-		49.5	:	-		-		49.8	:
Thallium	mg/L	T	-		<0.0001	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		<0.0001	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.00059	:	-		-		0.00075	:	-	
Vanadium	mg/L	D	0.0013	J	-		0.00064	:	-		-		0.00067	:
Zinc	mg/L	T	-		<0.0069	:	-		-		<0.0086	J	-	
Zinc	mg/L	D	<0.015	:	-		<0.0069	:	-		-		0.0069	J

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-9A	1/7/2003	MW-9A-T01N-GRW		MW-9A	1/7/2003	MW-9A-D01N-GRW		MW-9A	2/5/2003	MW-9A-T01N-GRW		MW-9A	2/5/2003	MW-9A-D01N-GRW	
			GW13				GW13				GW13				GW13			
Field Measurements																		
DO	mg/L	T	4.89	:			-				3.2	:			6.58	:		
Eh	millivolts	T	256.4	:			-				282.8	:			283.6	:		
pH	SU	T	7.19	:			-				7.16	:			7.05	:		
Specific Conductance	uS/cm	T	1326.	:			-				1306.	:			1279.	:		
Temperature	Celsius	T	7.59	:			-				12.1	:			12.03	:		
Turbidity	NTU	T	36.2	:			-				0.3	:			0.	:		
General Chemistry																		
Ammonia	mg/L	T	<0.11	:			-				<0.056	:			<0.04	J		
Bicarbonate (as CaCO3)	mg/L	T	242.	:			-				173.	:			169.	:		
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			<1.	:		
Chloride	mg/L	T	23.7	:			-				22.5	:			31.9	:		
Fluoride	mg/L	T	0.46	:			-				0.39	:			0.46	:		
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			<1.	:		
Nitrate	mg/L	T	<0.93	J			-				0.67	:			0.73	J		
Nitrite	mg/L	T	<0.005	J			-				<0.005	:			<0.005	J		
Phosphate, Ortho As P	mg/L	T	<0.03	J			-				0.59	J			0.12	J		
Phosphorus	mg/L	T	<0.02	:			-				<0.028	J			0.017	J		
Sulfate	mg/L	T	537.	J			-				573.	J			565.	:		
Total Alkalinity	mg/L	T	242.	:			-				173.	:			169.	:		
Total Dissolved Solids	mg/L	T	1010.	:			-				1030.	:			1060.	:		
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			<0.24	:		
Total Organic Carbon	mg/L	T	1.5	:			-				1.3	:			<1.2	J		
Total Suspended Solids	mg/L	T	3.9	:			-				0.6	:			0.6	J		
Laboratory Parameters																		
pH	SU	T	7.19	:			-				7.16	:			7.05	:		
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			<0.01	J		
Physical Properties																		
Hardness	mg/L	T	733.	:			-				763.	:			746.	:		
Hardness	mg/L	D	-				713.	:			-				748.	:		
Metals																		
Aluminum	mg/L	T	<0.142	:			-				<0.142	:			<0.142	:		

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 1/7/2003 MW-9A-T01N-GRW GW13		MW-9A 1/7/2003 MW-9A-D01N-GRW GW13		MW-9A 2/5/2003 MW-9A-T01N-GRW GW13		MW-9A 2/5/2003 MW-9A-D01N-GRW GW13		MW-9A 3/2/2003 MW-9A-T01N-GRW GW13		MW-9A 3/2/2003 MW-9A-D01N-GRW GW13	
Aluminum	mg/L	D	-		<0.142	:	-		<0.142	:	-		<0.142	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.00069	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0013	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.00059	J
Barium	mg/L	T	0.0441	:	-		0.0416	:	-		0.0417	:	-	
Barium	mg/L	D	-		0.0414	:	-		0.0404	:	-		0.0409	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0219	J	-		<0.0206	J	-		0.0238	:	-	
Boron	mg/L	D	-		0.0216	:	-		<0.0201	J	-		0.0214	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Calcium	mg/L	T	223.	:	-		233.	:	-		225.	J	-	
Calcium	mg/L	D	-		217.	:	-		228.	:	-		219.	J
Chromium	mg/L	T	<0.0037	:	-		<0.0037	:	-		<0.0037	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.0037	:	-		<0.0037	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0016	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0016	:	-		<0.0016	:
Copper	mg/L	T	<0.0017	J	-		<0.0017	:	-		<0.0017	J	-	
Copper	mg/L	D	-		0.0057	J	-		<0.0017	:	-		<0.0017	J
Iron	mg/L	T	<0.489	:	-		<0.489	:	-		<0.489	J	-	
Iron	mg/L	D	-		<0.489	:	-		<0.489	:	-		<0.489	J
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	42.6	:	-		43.8	:	-		44.8	:	-	
Magnesium	mg/L	D	-		41.4	:	-		43.	:	-		43.5	:
Manganese	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	J	-	
Manganese	mg/L	D	-		<0.005	:	-		<0.005	:	-		<0.005	J
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0054	J	-		0.0044	:	-		0.005	:	-	
Molybdenum	mg/L	D	-		0.0052	:	-		0.0046	:	-		0.0039	:
Nickel	mg/L	T	<0.0015	:	-		<0.0015	:	-		<0.0015	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-9A	1/7/2003	MW-9A-T01N-GRW	GW13	MW-9A	1/7/2003	MW-9A-D01N-GRW	GW13	MW-9A	2/5/2003	MW-9A-T01N-GRW	GW13	MW-9A	2/5/2003	MW-9A-D01N-GRW	GW13	MW-9A	3/2/2003	MW-9A-T01N-GRW	GW13	MW-9A	3/2/2003	MW-9A-D01N-GRW	GW13
Nickel	mg/L	D	-				<0.0015	:			-				<0.0015	:			-				<0.0015	:		
Potassium	mg/L	T	2.02	:			-				2.15	:			-				<2.23	:			-			
Potassium	mg/L	D	-				1.95	:			-				2.18	:			-				<2.26	:		
Selenium	mg/L	T	0.0019	:			-				<0.0016	:			-				0.0019	J			-			
Selenium	mg/L	D	-				0.0021	:			-				<0.0016	:			-				0.0023	:		
Silver	mg/L	T	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Silver	mg/L	D	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Sodium	mg/L	T	47.1	:			-				47.1	J			-				50.7	:			-			
Sodium	mg/L	D	-				46.2	:			-				49.2	J			-				49.2	:		
Thallium	mg/L	T	<0.0002	:			-				<0.0002	:			-				<0.0002	:			-			
Thallium	mg/L	D	-				<0.0002	:			-				<0.0002	:			-				<0.0002	:		
Vanadium	mg/L	T	0.00081	:			-				0.00075	:			-				0.00073	:			-			
Vanadium	mg/L	D	-				0.00069	:			-				0.00044	:			-				0.00066	:		
Zinc	mg/L	T	<0.039	:			-				<0.039	:			-				<0.039	J			-			
Zinc	mg/L	D	-				<0.039	:			-				<0.039	:			-				<0.039	:		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-9A	4/2/2003	MW-9A-T01N-GRW		MW-9A	4/2/2003	MW-9A-D01N-GRW		MW-9A	5/4/2003	MW-9A-T01N-GRW		MW-9A	5/4/2003	MW-9A-D01N-GRW	
			GW13				GW13				GW13				GW13			
Field Measurements																		
DO	mg/L	T	4.31		:		-				4.2		:		-			
Eh	millivolts	T	240.4		:		-				114.		:		-			
pH	SU	T	7.4	J			-				7.2	J			-			
Specific Conductance	uS/cm	T	1297.		:		-				1356.		:		-			
Temperature	Celsius	T	12.08		:		-				12.17		:		-			
Turbidity	NTU	T	13.2		:		-				3.		:		-			
General Chemistry																		
Ammonia	mg/L	T	<0.04		:		-				<0.072		:		-			
Bicarbonate (as CaCO3)	mg/L	T	170.		:		-				170.		:		-			
Carbonate (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Chloride	mg/L	T	22.1		:		-				27.2		:		-			
Fluoride	mg/L	T	0.46		:		-				0.48		:		-			
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-				<1.		:		-			
Nitrate	mg/L	T	<0.65	J			-				0.52	J			-			
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-			
Phosphate, Ortho As P	mg/L	T	<0.014	J			-				0.012	J			-			
Phosphorus	mg/L	T	0.019		:		-				<0.015		:		-			
Sulfate	mg/L	T	558.	J			-				697.		:		-			
Total Alkalinity	mg/L	T	170.		:		-				170.		:		-			
Total Dissolved Solids	mg/L	T	1080.		:		-				1090.		:		-			
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-				<0.24		:		-			
Total Organic Carbon	mg/L	T	<1.5	J			-				1.3		:		-			
Total Suspended Solids	mg/L	T	<1.3		:		-				2.2		:		-			
Laboratory Parameters																		
pH	SU	T	7.4	J			-				7.2	J			-			
Specific Conductance	umhos/cm	T	1270.	J			-				1260.	J			-			
Inorganics																		
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-			
Physical Properties																		
Hardness	mg/L	T	737.		:		-				702.		:		-			
Hardness	mg/L	D	-				732.		:		-				721.		:	
Metals																		

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-9A	6/2/2003	MW-9A-T01N-GRW		MW-9A	6/2/2003	MW-9A-D01N-GRW							
			GW13				GW13									
Field Measurements																
DO	mg/L	T	4.44		:		-									
Eh	millivolts	T	341.8		:		-									
pH	SU	T	7.2	J			-									
Specific Conductance	uS/cm	T	1359.		:		-									
Temperature	Celsius	T	14.54		:		-									
Turbidity	NTU	T	0.		:		-									
General Chemistry																
Ammonia	mg/L	T	<0.04	J			-									
Bicarbonate (as CaCO3)	mg/L	T	172.		:		-									
Carbonate (as CaCO3)	mg/L	T	<1.		:		-									
Chloride	mg/L	T	<31.1		:		-									
Fluoride	mg/L	T	0.49		:		-									
Hydroxide (as CaCO3)	mg/L	T	<1.		:		-									
Nitrate	mg/L	T	0.56	J			-									
Nitrite	mg/L	T	<0.005	J			-									
Phosphate, Ortho As P	mg/L	T	0.087	J			-									
Phosphorus	mg/L	T	-				-									
Sulfate	mg/L	T	697.	J			-									
Total Alkalinity	mg/L	T	172.		:		-									
Total Dissolved Solids	mg/L	T	1100.		:		-									
Total Kjeldahl Nitrogen	mg/L	T	<0.24		:		-									
Total Organic Carbon	mg/L	T	2.3	J			-									
Total Suspended Solids	mg/L	T	<0.8		:		-									
Laboratory Parameters																
pH	SU	T	7.2	J			-									
Specific Conductance	umhos/cm	T	1320.	J			-									
Inorganics																
Cyanide	mg/L	T	<0.01		:		-									
Physical Properties																
Hardness	mg/L	T	669.		:		-									
Hardness	mg/L	D	-				672.		:							
Metals																

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 4/2/2003 MW-9A-T01N-GRW GW13		MW-9A 4/2/2003 MW-9A-D01N-GRW GW13		MW-9A 5/4/2003 MW-9A-T01N-GRW GW13		MW-9A 5/4/2003 MW-9A-D01N-GRW GW13		MW-9A 6/2/2003 MW-9A-T01N-GRW GW13		MW-9A 6/2/2003 MW-9A-D01N-GRW GW13	
Aluminum	mg/L	T	<0.426	:	-		<0.503	:	-		<0.426	:	-	
Aluminum	mg/L	D	-		<0.426	:	-		<0.503	:	-		<0.426	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0416	:	-		0.0411	:	-		0.0412	:	-	
Barium	mg/L	D	-		0.0412	:	-		0.0421	:	-		0.0411	:
Beryllium	mg/L	T	<0.0003	J	-		<0.0003	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0003	J	-		<0.0003	:	-		<0.0003	:
Boron	mg/L	T	0.0252	:	-		0.0228	:	-		0.0239	:	-	
Boron	mg/L	D	-		0.0251	:	-		0.0231	:	-		0.0237	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0005	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	:	-		<0.0005	:
Calcium	mg/L	T	224.	:	-		214.	:	-		203.	:	-	
Calcium	mg/L	D	-		222.	:	-		220.	:	-		204.	:
Chromium	mg/L	T	<0.0027	:	-		0.002	:	-		<0.0024	:	-	
Chromium	mg/L	D	-		<0.0023	:	-		0.0014	:	-		0.002	:
Cobalt	mg/L	T	<0.0029	:	-		<0.0038	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		<0.0038	:	-		<0.0038	:
Copper	mg/L	T	<0.006	:	-		<0.0021	:	-		<0.0015	:	-	
Copper	mg/L	D	-		<0.0053	:	-		<0.0015	:	-		<0.0015	:
Iron	mg/L	T	<0.422	:	-		<0.311	:	-		<0.422	:	-	
Iron	mg/L	D	-		<0.422	:	-		<0.311	:	-		<0.422	:
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		0.00022	:
Magnesium	mg/L	T	43.1	:	-		40.5	:	-		39.2	:	-	
Magnesium	mg/L	D	-		43.1	:	-		41.6	:	-		39.3	:
Manganese	mg/L	T	<0.013	:	-		<0.01	:	-		<0.013	:	-	
Manganese	mg/L	D	-		<0.013	:	-		<0.01	:	-		<0.013	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0038	:	-		0.0054	:	-		0.004	:	-	
Molybdenum	mg/L	D	-		0.0042	:	-		0.0048	:	-		0.0041	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 4/2/2003 MW-9A-T01N-GRW GW13		MW-9A 4/2/2003 MW-9A-D01N-GRW GW13		MW-9A 5/4/2003 MW-9A-T01N-GRW GW13		MW-9A 5/4/2003 MW-9A-D01N-GRW GW13		MW-9A 6/2/2003 MW-9A-T01N-GRW GW13		MW-9A 6/2/2003 MW-9A-D01N-GRW GW13	
Nickel	mg/L	T	<0.0026	:	-		<0.003	:	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0026	:	-		<0.003	:	-		<0.003	:
Potassium	mg/L	T	<3.46	:	-		1.98	:	-		2.09	:	-	
Potassium	mg/L	D	-		<3.46	:	-		2.05	:	-		2.09	:
Selenium	mg/L	T	0.0013	:	-		0.0018	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.001	:	-		0.0016	:	-		0.0022	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	44.6	:	-		47.1	:	-		42.4	:	-	
Sodium	mg/L	D	-		45.6	:	-		48.8	:	-		44.5	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00067	:	-		0.00079	:	-		0.00061	:	-	
Vanadium	mg/L	D	-		0.0007	:	-		0.00064	:	-		0.00073	:
Zinc	mg/L	T	<0.039	:	-		<0.014	:	-		0.0403	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.014	:	-		<0.039	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-9A	MW-9A	MW-9A	MW-9A	MW-9A	MW-9A
			Sample Date	7/9/2003	7/9/2003	8/10/2003	8/10/2003	9/7/2003	9/7/2003
			Sample ID	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		4.33 :	-	4.2 :	-	4.72 :	-
Eh	millivolts	T		583.2 :	-	51.6 :	-	363. :	-
pH	SU	T		7.4 J	-	7.3 J	-	7.1 J	-
Specific Conductance	uS/cm	T		1417. :	-	1274. :	-	1357. :	-
Temperature	Celsius	T		15.36 :	-	16.67 :	-	13.08 :	-
Turbidity	NTU	T		0. :	-	23.2 :	-	9.6 :	-
General Chemistry									
Ammonia	mg/L	T		<0.077 J	-	<0.04 :	-	<0.05 :	-
Bicarbonate (as CaCO3)	mg/L	T		172. :	-	172. :	-	172. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		22.2 :	-	21.8 :	-	22.2 :	-
Fluoride	mg/L	T		0.45 :	-	0.45 :	-	0.45 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.59 J	-	0.48 J	-	0.47 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.016 :	-	0.013 J	-	<0.015 J	-
Phosphorus	mg/L	T		0.011 :	-	0.017 :	-	0.018 :	-
Sulfate	mg/L	T		466. J	-	552. J	-	518. J	-
Total Alkalinity	mg/L	T		172. :	-	172. :	-	172. :	-
Total Dissolved Solids	mg/L	T		1090. :	-	1110. :	-	1180. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.36 :	-
Total Organic Carbon	mg/L	T		<1.6 J	-	<1.6 J	-	<4.9 :	-
Total Suspended Solids	mg/L	T		<0.7 :	-	<1.1 :	-	1. :	-
Laboratory Parameters									
pH	SU	T		7.4 J	-	7.3 J	-	7.1 J	-
Specific Conductance	umhos/cm	T		1220. J	-	1290. J	-	1220. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		654. :	-	721. :	-	774. :	-
Hardness	mg/L	D		-	690. :	-	718. :	-	783. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 7/9/2003 MW-9A-T01N-GRW GW13		MW-9A 7/9/2003 MW-9A-D01N-GRW GW13		MW-9A 8/10/2003 MW-9A-T01N-GRW GW13		MW-9A 8/10/2003 MW-9A-D01N-GRW GW13		MW-9A 9/7/2003 MW-9A-T01N-GRW GW13		MW-9A 9/7/2003 MW-9A-D01N-GRW GW13	
Aluminum	mg/L	T	<0.631	:	-		<0.631	:	-		<0.217	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.631	:	-		<0.217	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0409	:	-		0.0407	:	-		0.0408	:	-	
Barium	mg/L	D	-		0.0414	:	-		0.0407	:	-		0.0404	:
Beryllium	mg/L	T	<0.00044	:	-		<0.0002	:	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.00026	:	-		<0.0002	:	-		<0.0004	:
Boron	mg/L	T	0.0222	:	-		0.02	:	-		0.022	:	-	
Boron	mg/L	D	-		0.0231	:	-		0.0206	:	-		0.0214	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0003	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0003	:	-		<0.0005	:
Calcium	mg/L	T	199.	:	-		218.	:	-		234.	:	-	
Calcium	mg/L	D	-		210.	:	-		217.	:	-		237.	:
Chromium	mg/L	T	<0.0006	J	-		<0.0016	:	-		<0.0019	:	-	
Chromium	mg/L	D	-		<0.0006	J	-		0.0012	:	-		<0.0019	:
Cobalt	mg/L	T	<0.0018	:	-		<0.0018	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0018	:	-		<0.0018	:	-		<0.0029	:
Copper	mg/L	T	<0.0014	:	-		<0.002	:	-		<0.0035	:	-	
Copper	mg/L	D	-		<0.0014	:	-		<0.0014	:	-		<0.0024	:
Iron	mg/L	T	<0.667	:	-		<0.667	:	-		<0.455	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.667	:	-		<0.455	:
Lead	mg/L	T	<0.00082	:	-		<0.0002	:	-		<0.00078	:	-	
Lead	mg/L	D	-		<0.00076	:	-		<0.0002	:	-		<0.00064	:
Magnesium	mg/L	T	38.1	:	-		42.9	:	-		45.9	:	-	
Magnesium	mg/L	D	-		40.2	:	-		42.8	:	-		46.5	:
Manganese	mg/L	T	<0.019	:	-		<0.019	J	-		<0.016	:	-	
Manganese	mg/L	D	-		<0.019	:	-		<0.019	J	-		<0.016	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	0.0044	:	-		<0.0044	:	-		0.0026	J	-	
Molybdenum	mg/L	D	-		0.0047	:	-		0.0034	:	-		0.0032	J

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-9A	7/9/2003	MW-9A-T01N-GRW	GW13	MW-9A	7/9/2003	MW-9A-D01N-GRW	GW13	MW-9A	8/10/2003	MW-9A-T01N-GRW	GW13	MW-9A	8/10/2003	MW-9A-D01N-GRW	GW13	MW-9A	9/7/2003	MW-9A-T01N-GRW	GW13	MW-9A	9/7/2003	MW-9A-D01N-GRW	GW13
Nickel	mg/L	T	<0.002	J	-		<0.002	:	-		-		<0.0024	:	-			
Nickel	mg/L	D	-		<0.002	J	-		<0.002	:	-				<0.0024	:		
Potassium	mg/L	T	2.01	:	-		1.86	:	-		<2.5	:	-			
Potassium	mg/L	D	-		2.04	:	-		1.9	:	-				<2.43	:		
Selenium	mg/L	T	<0.0016	:	-		<0.0016	:	-		0.0021	:	-			
Selenium	mg/L	D	-		<0.0016	J	-		0.0021	:	-				0.0019	:		
Silver	mg/L	T	<0.0002	J	-		<0.0009	J	-		<0.0002	:	-			
Silver	mg/L	D	-		<0.0002	J	-		<0.0009	J	-				<0.0002	:		
Sodium	mg/L	T	40.6	:	-		51.9	:	-		51.	:	-			
Sodium	mg/L	D	-		44.3	:	-		56.6	:	-				49.7	:		
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-			
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-				<0.0002	:		
Vanadium	mg/L	T	0.00081	:	-		0.00065	:	-		0.00068	:	-			
Vanadium	mg/L	D	-		0.00068	:	-		0.00061	:	-				0.00055	:		
Zinc	mg/L	T	<0.016	:	-		<0.016	:	-		<0.019	:	-			
Zinc	mg/L	D	-		<0.016	:	-		<0.0196	:	-				<0.019	:		

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-9A	MW-9A	MW-9A	MW-9A	MW-9A	MW-9A
			Sample Date	10/13/2003	10/13/2003	11/2/2003	11/2/2003	12/7/2003	12/7/2003
			Sample ID	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		4.9 :	-	4.39 :	-	-	-
Eh	millivolts	T		510.2 :	-	18.4 :	-	76. :	-
pH	SU	T		7.4 J	-	<7.3 J	-	7.3 J	-
Specific Conductance	uS/cm	T		1314. :	-	1295. :	-	1281. :	-
Temperature	Celsius	T		13.99 :	-	12.47 :	-	12.19 :	-
Turbidity	NTU	T		0.6 :	-	38.7 :	-	5.1 :	-
General Chemistry									
Ammonia	mg/L	T		<0.04 J	-	<0.059 :	-	0.054 :	-
Bicarbonate (as CaCO3)	mg/L	T		170. :	-	161. :	-	166. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		22.4 :	-	22.8 :	-	24.1 :	-
Fluoride	mg/L	T		0.44 :	-	<0.45 :	-	0.45 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.47 :	-	0.54 J	-	0.56 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.011 :	-	0.017 :	-	0.015 J	-
Phosphorus	mg/L	T		0.018 :	-	0.016 :	-	0.02 :	-
Sulfate	mg/L	T		597. J	-	545. :	-	555. :	-
Total Alkalinity	mg/L	T		170. :	-	161. :	-	166. J	-
Total Dissolved Solids	mg/L	T		1120. :	-	1170. :	-	1100. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	-	<0.24 J	-
Total Organic Carbon	mg/L	T		1.6 J	-	1.3 :	-	<1. :	-
Total Suspended Solids	mg/L	T		<1.4 :	-	<1. :	-	2.3 :	-
Laboratory Parameters									
pH	SU	T		7.4 J	-	<7.3 J	-	7.3 J	-
Specific Conductance	umhos/cm	T		1250. J	-	1370. J	-	1110. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 :	-
Physical Properties									
Hardness	mg/L	T		727. :	-	732. :	-	720. :	-
Hardness	mg/L	D		-	711. :	-	749. :	-	695. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			MW-9A	10/13/2003	MW-9A-T01N-GRW	MW-9A	10/13/2003	MW-9A-D01N-GRW	MW-9A	11/2/2003	MW-9A-T01N-GRW	MW-9A	11/2/2003	MW-9A-D01N-GRW	MW-9A	12/7/2003	MW-9A-T01N-GRW	MW-9A	12/7/2003	MW-9A-D01N-GRW
			GW13			GW13			GW13			GW13			GW13			GW13		
Aluminum	mg/L	T	<1.22	:		-			<0.307	:		-			<0.307	J		-		
Aluminum	mg/L	D	-			<0.307	:		-			<0.889	:		-			<0.307	J	
Antimony	mg/L	T	<0.001	:		-			<0.001	:		-			<0.001	:		-		
Antimony	mg/L	D	-			<0.001	:		-			<0.001	:		-			<0.001	:	
Arsenic	mg/L	T	0.00054	:		-			<0.0004	:		-			0.00042	:		-		
Arsenic	mg/L	D	-			<0.0004	:		-			<0.0004	:		-			<0.0004	:	
Barium	mg/L	T	0.0481	:		-			0.039	:		-			0.0427	:		-		
Barium	mg/L	D	-			0.0373	:		-			0.0393	:		-			0.0405	:	
Beryllium	mg/L	T	<0.0003	J		-			<0.00032	J		-			<0.00042	:		-		
Beryllium	mg/L	D	-			<0.0003	J		-			<0.0003	J		-			<0.00093	:	
Boron	mg/L	T	0.024	:		-			0.0214	:		-			0.0235	:		-		
Boron	mg/L	D	-			0.022	:		-			0.0206	:		-			0.0224	:	
Cadmium	mg/L	T	<0.0007	:		-			<0.0007	:		-			<0.0007	:		-		
Cadmium	mg/L	D	-			<0.0007	:		-			<0.0007	:		-			<0.0007	:	
Calcium	mg/L	T	221.	:		-			222.	:		-			220.	:		-		
Calcium	mg/L	D	-			216.	:		-			227.	:		-			212.	:	
Chromium	mg/L	T	0.0034	J		-			<0.0013	:		-			<0.0013	J		-		
Chromium	mg/L	D	-			0.0024	J		-			<0.0013	:		-			<0.0013	J	
Cobalt	mg/L	T	<0.0031	:		-			<0.0032	J		-			<0.0031	:		-		
Cobalt	mg/L	D	-			<0.0031	:		-			0.0047	J		-			<0.0031	:	
Copper	mg/L	T	<0.002	:		-			<0.002	J		-			0.0029	:		-		
Copper	mg/L	D	-			<0.002	:		-			<0.002	J		-			<0.002	:	
Iron	mg/L	T	0.585	:		-			<0.3	J		-			<0.3	:		-		
Iron	mg/L	D	-			<0.3	:		-			<0.3	J		-			<0.3	:	
Lead	mg/L	T	0.001	:		-			<0.0004	:		-			<0.0004	:		-		
Lead	mg/L	D	-			<0.0004	:		-			0.0011	:		-			<0.0004	:	
Magnesium	mg/L	T	42.7	:		-			42.9	:		-			41.9	:		-		
Magnesium	mg/L	D	-			41.6	:		-			44.1	:		-			40.4	:	
Manganese	mg/L	T	0.0253	:		-			<0.01	:		-			<0.01	:		-		
Manganese	mg/L	D	-			<0.01	:		-			<0.01	:		-			<0.01	:	
Mercury	mg/L	T	<0.0001	:		-			<0.0001	:		-			<0.0001	:		-		
Mercury	mg/L	D	-			<0.0001	:		-			<0.0001	:		-			<0.0001	:	
Molybdenum	mg/L	T	<0.0055	:		-			<0.0044	:		-			0.0031	J		-		
Molybdenum	mg/L	D	-			<0.0044	:		-			<0.0048	:		-			0.0014	J	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area	Site ID	Sample Date	Sample ID	Exposure Area
			MW-9A	10/13/2003	MW-9A-T01N-GRW	GW13	MW-9A	10/13/2003	MW-9A-D01N-GRW	GW13	MW-9A	11/2/2003	MW-9A-T01N-GRW	GW13	MW-9A	11/2/2003	MW-9A-D01N-GRW	GW13	MW-9A	12/7/2003	MW-9A-T01N-GRW	GW13	MW-9A	12/7/2003	MW-9A-D01N-GRW	GW13
Nickel	mg/L	T	<0.0028	:	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:	-		-							
Nickel	mg/L	D	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:	-		<0.0028	:								
Potassium	mg/L	T	<2.66	:	-		1.7	:	-		<0.522	J	-													
Potassium	mg/L	D	-		<1.88	:	-		1.69	:	-		<0.522	J												
Selenium	mg/L	T	0.0021	:	-		0.0018	:	-		0.0024	:	-													
Selenium	mg/L	D	-		0.0017	:	-		0.0018	:	-		0.0022	:												
Silver	mg/L	T	0.00029	:	-		<0.0002	:	-		<0.0002	:	-													
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:												
Sodium	mg/L	T	44.8	:	-		<42.4	:	-		47.5	:	-													
Sodium	mg/L	D	-		46.9	:	-		<45.4	:	-		44.4	:												
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-													
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:												
Vanadium	mg/L	T	0.0017	:	-		0.00092	:	-		0.00087	:	-													
Vanadium	mg/L	D	-		0.00074	:	-		0.00075	:	-		0.00071	:												
Zinc	mg/L	T	<0.02	:	-		<0.0332	:	-		<0.02	:	-													
Zinc	mg/L	D	-		<0.02	:	-		<0.0378	:	-		<0.02	:												

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-9A	MW-9A	MW-9A	MW-9A	MW-A	MW-A
			Sample Date	1/6/2004	1/6/2004	4/13/2004	4/13/2004	10/27/2002	10/27/2002
			Sample ID	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MW-9A-T01N-GRW	MW-9A-D01N-GRW	MWA-T01N-GRW	MWA-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		4.2 :	-	4.91 :	-	0.27 :	-
Eh	millivolts	T		195.3 :	-	567.8 :	-	-291.7 :	-
pH	SU	T		7.4 :	-	7.5 J	-	8.09 :	-
Specific Conductance	uS/cm	T		1358. :	-	1303. :	-	937. :	-
Temperature	Celsius	T		10.13 :	-	13.36 :	-	11.83 :	-
Turbidity	NTU	T		0. :	-	0.6 :	-	25.6 :	-
General Chemistry									
Ammonia	mg/L	T		<0.065 J	-	<0.093 :	-	<0.16 :	-
Bicarbonate (as CaCO3)	mg/L	T		172. :	-	168. :	-	14.6 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		22.8 :	-	23.2 :	-	16.6 :	-
Fluoride	mg/L	T		0.43 :	-	0.45 :	-	0.3 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.51 J	-	0.57 J	-	<1. J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.027 J	-	0.016 J	-	<0.01 J	-
Phosphorus	mg/L	T		<0.012 :	-	0.017 :	-	0.012 :	-
Sulfate	mg/L	T		568. :	-	612. :	-	523. :	-
Total Alkalinity	mg/L	T		172. :	-	168. :	-	14.6 :	-
Total Dissolved Solids	mg/L	T		1090. :	-	1130. :	-	714. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. J	-	<2.2 J	-	<1. :	-
Total Suspended Solids	mg/L	T		<1.7 :	-	<1.1 J	-	32.4 :	-
Laboratory Parameters									
pH	SU	T		7.4 :	-	7.5 J	-	8.09 :	-
Specific Conductance	umhos/cm	T		1250. J	-	1240. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		718. :	-	767. :	-	420. :	-
Hardness	mg/L	D		-	709. :	-	760. :	-	424. :
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 1/6/2004 MW-9A-T01N-GRW GW13		MW-9A 1/6/2004 MW-9A-D01N-GRW GW13		MW-9A 4/13/2004 MW-9A-T01N-GRW GW13		MW-9A 4/13/2004 MW-9A-D01N-GRW GW13		MW-A 10/27/2002 MWA-T01N-GRW GW13		MW-A 10/27/2002 MWA-D01N-GRW GW13	
Aluminum	mg/L	T	<0.621	:	-		<0.176	:	-		<0.003	:	-	
Aluminum	mg/L	D	-		<0.621	:	-		<0.176	:	-		<0.003	:
Antimony	mg/L	T	<0.0024	:	-		<0.0008	:	-		<0.0002	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		<0.0008	:	-		<0.0002	:
Arsenic	mg/L	T	0.00062	:	-		<0.0004	:	-		<0.0002	:	-	
Arsenic	mg/L	D	-		0.00051	:	-		<0.0004	:	-		<0.0002	:
Barium	mg/L	T	0.0381	:	-		0.0409	:	-		0.0911	:	-	
Barium	mg/L	D	-		0.0384	:	-		0.0407	:	-		0.0798	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.02	:	-		0.0228	:	-		0.0154	:	-	
Boron	mg/L	D	-		0.0202	:	-		0.0223	:	-		0.015	:
Cadmium	mg/L	T	<0.0007	J	-		<0.0003	:	-		<0.0001	:	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0003	:	-		<0.0001	:
Calcium	mg/L	T	219.	:	-		234.	:	-		126.	:	-	
Calcium	mg/L	D	-		216.	:	-		232.	:	-		128.	:
Chromium	mg/L	T	<0.0015	:	-		<0.0022	:	-		<0.0046	:	-	
Chromium	mg/L	D	-		<0.0015	:	-		0.0022	:	-		<0.0046	:
Cobalt	mg/L	T	<0.0023	:	-		<0.0011	:	-		<0.0022	:	-	
Cobalt	mg/L	D	-		0.0033	:	-		<0.0012	:	-		<0.0022	:
Copper	mg/L	T	<0.003	:	-		<0.0007	:	-		<0.0014	:	-	
Copper	mg/L	D	-		<0.003	:	-		<0.0007	:	-		<0.0014	:
Iron	mg/L	T	<0.423	:	-		<0.192	J	-		15.3	:	-	
Iron	mg/L	D	-		<0.423	:	-		<0.192	:	-		14.4	:
Lead	mg/L	T	<0.0002	:	-		<0.0008	:	-		<0.0001	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0008	:	-		<0.0001	:
Magnesium	mg/L	T	41.6	:	-		44.5	:	-		25.4	:	-	
Magnesium	mg/L	D	-		41.1	:	-		44.3	:	-		25.6	:
Manganese	mg/L	T	<0.019	:	-		<0.019	:	-		1.18	:	-	
Manganese	mg/L	D	-		<0.019	:	-		<0.019	:	-		1.27	:
Mercury	mg/L	T	<0.0001	J	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0043	:	-		0.0053	:	-		0.0391	:	-	
Molybdenum	mg/L	D	-		0.0045	:	-		0.0058	:	-		0.0376	:

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-9A 1/6/2004 MW-9A-T01N-GRW GW13		MW-9A 1/6/2004 MW-9A-D01N-GRW GW13		MW-9A 4/13/2004 MW-9A-T01N-GRW GW13		MW-9A 4/13/2004 MW-9A-D01N-GRW GW13		MW-A 10/27/2002 MWA-T01N-GRW GW13		MW-A 10/27/2002 MWA-D01N-GRW GW13	
Nickel	mg/L	T	<0.0024	J	-		<0.0014	:	-		<0.0002	J	-	
Nickel	mg/L	D	-		<0.0024	J	-		<0.0014	:	-		<0.0002	J
Potassium	mg/L	T	1.88	:	-		2.05	:	-		3.04	:	-	
Potassium	mg/L	D	-		1.92	:	-		2.04	:	-		3.01	:
Selenium	mg/L	T	0.0033	J	-		0.002	:	-		<0.00037	:	-	
Selenium	mg/L	D	-		<0.0027	:	-		<0.0014	:	-		<0.00034	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Sodium	mg/L	T	51.5	:	-		48.9	:	-		48.1	:	-	
Sodium	mg/L	D	-		54.7	:	-		49.7	:	-		47.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0001	:
Vanadium	mg/L	T	0.0011	:	-		0.00076	:	-		0.00013	:	-	
Vanadium	mg/L	D	-		0.00085	:	-		0.0007	:	-		0.00011	:
Zinc	mg/L	T	<0.091	:	-		<0.015	:	-		<0.0069	:	-	
Zinc	mg/L	D	-		<0.091	:	-		<0.015	:	-		<0.0069	:

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-A	MW-A	MW-A	MW-A	MW-A	MW-A
			Sample Date	10/28/2002	1/15/2003	1/15/2003	4/1/2003	4/1/2003	7/9/2003
			Sample ID	MW-A-T01N-GRW	MW-A-T01N-GRW	MW-A-D01N-GRW	MW-A-T01N-GRW	MW-A-D01N-GRW	MW-A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	0.07 :	-	0.09 :	-	0.29 :
Eh	millivolts	T		-	-299.6 :	-	-236.8 :	-	-264.9 :
pH	SU	T		-	7.98 :	-	7.2 :	-	7. J
Specific Conductance	uS/cm	T		-	1881. :	-	985. :	-	981. :
Temperature	Celsius	T		-	11.1 :	-	11.88 :	-	13.83 :
Turbidity	NTU	T		-	6.9 :	-	62.1 :	-	42. :
General Chemistry									
Ammonia	mg/L	T		-	<0.14 :	-	<0.041 :	-	<0.11 J
Bicarbonate (as CaCO3)	mg/L	T		-	27.1 J	-	41. :	-	41.1 :
Carbonate (as CaCO3)	mg/L	T		-	<1. J	-	<1. :	-	<1. :
Chloride	mg/L	T		-	16.1 :	-	15.1 :	-	14.8 :
Fluoride	mg/L	T		-	0.27 :	-	0.26 :	-	0.26 :
Hydroxide (as CaCO3)	mg/L	T		-	27.1 J	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.4 J	-	<0.4 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 :
Phosphorus	mg/L	T		-	0.01 :	-	0.013 :	-	0.03 :
Sulfate	mg/L	T		-	505. J	-	471. J	-	475. J
Total Alkalinity	mg/L	T		-	27.1 J	-	41. :	-	41.1 :
Total Dissolved Solids	mg/L	T		-	709. :	-	816. :	-	786. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. :	-	<1. J	-	<1. J
Total Suspended Solids	mg/L	T		-	19. :	-	29.2 :	-	36.2 :
Laboratory Parameters									
pH	SU	T		-	7.98 :	-	7.2 :	-	7. J
Specific Conductance	umhos/cm	T		-	-	-	963. :	-	947. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	426. :	-	470. :	-	572. :
Hardness	mg/L	D		-	-	415. :	-	489. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-A 10/28/2002 MW-A-T01N-GRW GW13	MW-A 1/15/2003 MW-A-T01N-GRW GW13	MW-A 1/15/2003 MW-A-D01N-GRW GW13	MW-A 4/1/2003 MW-A-T01N-GRW GW13	MW-A 4/1/2003 MW-A-D01N-GRW GW13	MW-A 7/9/2003 MW-A-T01N-GRW GW13
Aluminum	mg/L	T	-	<0.142 :	-	<0.503 :	-	<0.631 :
Aluminum	mg/L	D	-	-	<0.142 :	-	<0.426 :	-
Antimony	mg/L	T	-	<0.0017 :	-	<0.0006 J	-	<0.001 :
Antimony	mg/L	D	-	-	<0.0006 :	-	<0.0006 J	-
Arsenic	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Arsenic	mg/L	D	-	-	<0.0004 :	-	<0.0004 :	-
Barium	mg/L	T	-	0.0948 :	-	0.0852 :	-	0.0565 :
Barium	mg/L	D	-	-	0.0858 :	-	0.0588 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0003 J	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0002 :	-	<0.0003 J	-
Boron	mg/L	T	-	<0.0115 :	-	0.0135 :	-	0.0183 :
Boron	mg/L	D	-	-	<0.0123 :	-	0.0192 :	-
Cadmium	mg/L	T	-	<0.0004 :	-	<0.0005 J	-	<0.0006 :
Cadmium	mg/L	D	-	-	<0.0004 :	-	<0.0005 J	-
Calcium	mg/L	T	-	131. :	-	144. :	-	176. :
Calcium	mg/L	D	-	-	128. :	-	150. :	-
Chromium	mg/L	T	-	0.009 :	-	<0.001 :	-	<0.0014 :
Chromium	mg/L	D	-	-	<0.0037 :	-	<0.001 :	-
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	-	<0.0016 :	-	<0.0038 :	-	<0.002 :
Cobalt	mg/L	D	-	-	<0.0016 :	-	<0.0038 :	-
Copper	mg/L	T	-	<0.0072 :	-	<0.0015 :	-	<0.0024 :
Copper	mg/L	D	-	-	<0.0019 :	-	<0.0015 :	-
Iron	mg/L	T	-	12.7 :	-	12. :	-	22.3 :
Iron	mg/L	D	-	-	9.61 :	-	12.4 :	-
Lead	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	24.1 :	-	26.6 :	-	32. :
Magnesium	mg/L	D	-	-	23.4 :	-	27.6 :	-
Manganese	mg/L	T	-	1.24 :	-	1.19 J	-	2.23 :
Manganese	mg/L	D	-	-	1.24 :	-	1.78 J	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0448 :	-	0.0553 :	-	0.136 :

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-A 10/28/2002 MW-A-T01N-GRW GW13		MW-A 1/15/2003 MW-A-T01N-GRW GW13		MW-A 1/15/2003 MW-A-D01N-GRW GW13		MW-A 4/1/2003 MW-A-T01N-GRW GW13		MW-A 4/1/2003 MW-A-D01N-GRW GW13		MW-A 7/9/2003 MW-A-T01N-GRW GW13	
Molybdenum	mg/L	D	-		-		0.0438	:	-		0.0473	:	-	
Nickel	mg/L	T	-		0.0139	:	-		<0.003	:	-		<0.0021	:
Nickel	mg/L	D	-		-		<0.0015	:	-		<0.003	:	-	
Potassium	mg/L	T	-		2.88	:	-		3.01	:	-		3.07	:
Potassium	mg/L	D	-		-		2.72	:	-		2.89	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.001	:	-		<0.0016	:
Selenium	mg/L	D	-		-		<0.0016	:	-		<0.001	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	J
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		49.2	:	-		49.6	:	-		48.8	:
Sodium	mg/L	D	-		-		45.5	:	-		43.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.00045	:	-		<0.0002	:	-		0.00069	:
Vanadium	mg/L	D	-		-		0.00054	:	-		0.00026	:	-	
Zinc	mg/L	T	-		<0.039	:	-		<0.0585	:	-		<0.0304	:
Zinc	mg/L	D	-		-		<0.039	:	-		<0.039	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	MW-A	MW-A	MW-A	MW-A	MW-A	MW-A
			Sample Date	7/9/2003	10/15/2003	10/15/2003	1/7/2004	1/7/2004	4/14/2004
			Sample ID	MW-A-D01N-GRW	MW-A-T01N-GRW	MW-A-D01N-GRW	MW-A-T01N-GRW	MW-A-D01N-GRW	MW-A-T01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	0.29 :	-	0.03 :	-	0.23 :
Eh	millivolts	T		-	-363.2 :	-	-382.2 :	-	-181.2 :
pH	SU	T		-	7.3 J	-	7.2 J	-	7.3 :
Specific Conductance	uS/cm	T		-	1154. :	-	1028. :	-	1047. :
Temperature	Celsius	T		-	12.31 :	-	10.82 :	-	12.68 :
Turbidity	NTU	T		-	20.6 :	-	21.1 :	-	30.8 :
General Chemistry									
Ammonia	mg/L	T		-	<0.13 J	-	0.087 J	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	49.2 :	-	41.1 J	-	75.7 :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	14.4 :	-	14.1 :	-	12.7 :
Fluoride	mg/L	T		-	0.24 :	-	0.26 :	-	0.24 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	<0.2 J	-	<0.2 J	-	-
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	<0.01 :	-	<0.01 :
Phosphorus	mg/L	T		-	0.011 :	-	<0.028 :	-	0.021 :
Sulfate	mg/L	T		-	525. J	-	502. :	-	539. :
Total Alkalinity	mg/L	T		-	49.2 :	-	41.1 J	-	75.7 :
Total Dissolved Solids	mg/L	T		-	1040. :	-	778. :	-	838. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1. J	-	<1. :	-	<2.2 J
Total Suspended Solids	mg/L	T		-	20. :	-	30. :	-	23.6 J
Laboratory Parameters									
pH	SU	T		-	7.3 J	-	7.2 J	-	7.3 :
Specific Conductance	umhos/cm	T		-	1010. J	-	987. J	-	934. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties									
Hardness	mg/L	T		-	535. :	-	472. :	-	498. :
Hardness	mg/L	D		637. :	-	547. :	-	460. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-A 7/9/2003 MW-A-D01N-GRW GW13		MW-A 10/15/2003 MW-A-T01N-GRW GW13		MW-A 10/15/2003 MW-A-D01N-GRW GW13		MW-A 1/7/2004 MW-A-T01N-GRW GW13		MW-A 1/7/2004 MW-A-D01N-GRW GW13		MW-A 4/14/2004 MW-A-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.221	:	-		<0.514	:	-		<0.201	:
Aluminum	mg/L	D	<0.631	:	-		<0.221	:	-		<0.514	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.0024	:	-		<0.0008	:
Antimony	mg/L	D	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.044	:	-		0.0418	:	-		0.0309	:
Barium	mg/L	D	0.0505	J	-		0.0425	:	-		0.0411	:	-	
Beryllium	mg/L	T	-		<0.0004	:	-		<0.0003	:	-		<0.0002	:
Beryllium	mg/L	D	<0.0002	:	-		<0.0004	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0175	:	-		0.0198	:	-		0.0216	:
Boron	mg/L	D	0.024	J	-		0.018	:	-		0.0174	:	-	
Cadmium	mg/L	T	-		<0.0005	:	-		<0.0007	J	-		<0.0003	:
Cadmium	mg/L	D	<0.0006	:	-		<0.0005	:	-		<0.0007	:	-	
Calcium	mg/L	T	-		163.	:	-		142.	:	-		149.	:
Calcium	mg/L	D	197.	J	-		167.	:	-		138.	:	-	
Chromium	mg/L	T	-		<0.0011	J	-		<0.0015	J	-		<0.0008	:
Chromium	mg/L	D	<0.0014	:	-		<0.0011	J	-		<0.0015	J	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0023	:	-		<0.0011	:
Cobalt	mg/L	D	<0.002	:	-		<0.0029	:	-		<0.0023	:	-	
Copper	mg/L	T	-		<0.0022	:	-		<0.003	:	-		<0.0007	:
Copper	mg/L	D	<0.0024	:	-		<0.0022	:	-		<0.003	:	-	
Iron	mg/L	T	-		14.3	:	-		9.87	:	-		10.2	J
Iron	mg/L	D	5.14	J	-		11.8	:	-		6.13	:	-	
Lead	mg/L	T	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Lead	mg/L	D	<0.00089	:	-		0.00054	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		31.2	:	-		28.8	:	-		30.4	:
Magnesium	mg/L	D	35.1	J	-		31.7	:	-		28.	:	-	
Manganese	mg/L	T	-		1.8	:	-		1.15	:	-		1.34	:
Manganese	mg/L	D	1.58	J	-		1.94	:	-		1.11	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		0.0554	:	-		0.0556	:	-		0.0246	J
Molybdenum	mg/L	D	0.177	J	-		0.0529	:	-		0.0639	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area Fraction	MW-A 7/9/2003 MW-A-D01N-GRW GW13	MW-A 10/15/2003 MW-A-T01N-GRW GW13	MW-A 10/15/2003 MW-A-D01N-GRW GW13	MW-A 1/7/2004 MW-A-T01N-GRW GW13	MW-A 1/7/2004 MW-A-D01N-GRW GW13	MW-A 4/14/2004 MW-A-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0024 :	-	<0.0024 :	-	<0.0014 :
Nickel	mg/L	D	<0.0021 :	-	<0.0024 :	-	<0.0024 :	-
Potassium	mg/L	T	-	2.7 :	-	2.96 :	-	2.72 :
Potassium	mg/L	D	3.26 J	-	2.73 :	-	2.88 :	-
Selenium	mg/L	T	-	<0.0006 :	-	0.0013 J	-	<0.0014 :
Selenium	mg/L	D	<0.0016 J	-	<0.0006 :	-	0.0015 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 J
Silver	mg/L	D	<0.0002 J	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	49.4 :	-	48.8 :	-	53.9 :
Sodium	mg/L	D	49.8 J	-	50.9 :	-	47.5 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0002 :	-	<0.0004 :	-	<0.0004 :
Vanadium	mg/L	D	<0.0004 :	-	<0.0002 :	-	<0.0004 :	-
Zinc	mg/L	T	-	<0.023 :	-	<0.026 :	-	<0.024 :
Zinc	mg/L	D	<0.0182 :	-	<0.023 :	-	<0.026 :	-

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	MW-A	4/14/2004	MW-A-D01N-GRW	GW13	MW-B	10/27/2002	MWB-T01N-GRWRE	GW13	MW-B	10/27/2002	MWB-T01N-GRW	GW13	MW-B	10/27/2002	MWB-D01N-GRWRE	GW13	MW-B	10/27/2002	MWB-D01N-GRW	GW13	MW-B	10/28/2002	MW-B-T01N-GRW	GW13
Field Measurements																												
DO	mg/L	T				-				-				0.41	:			-				-				-			
Eh	millivolts	T				-				-				-178.	:			-				-				-			
pH	SU	T				-				-				8.33	:			-				-				-			
Specific Conductance	uS/cm	T				-				-				572.	:			-				-				-			
Temperature	Celsius	T				-				-				9.26	:			-				-				-			
Turbidity	NTU	T				-				-				69.4	:			-				-				-			
General Chemistry																												
Ammonia	mg/L	T				-				-				7.	:			-				-				-			
Bicarbonate (as CaCO3)	mg/L	T				-				-				167.	:			-				-				-			
Carbonate (as CaCO3)	mg/L	T				-				-				<1.	:			-				-				-			
Chloride	mg/L	T				-				-				13.8	:			-				-				-			
Fluoride	mg/L	T				-				-				0.25	:			-				-				-			
Hydroxide (as CaCO3)	mg/L	T				-				-				<1.	:			-				-				-			
Nitrate	mg/L	T				-				-				<1.	J			-				-				-			
Nitrite	mg/L	T				-				-				<0.005	J			-				-				-			
Phosphate, Ortho As P	mg/L	T				-				-				0.18	J			-				-				-			
Phosphorus	mg/L	T				-				-				0.1	J			-				-				-			
Sulfate	mg/L	T				-				180.	J			-				-				-				-			
Total Alkalinity	mg/L	T				-				-				167.	:			-				-				-			
Total Dissolved Solids	mg/L	T				-				-				620.	:			-				-				-			
Total Kjeldahl Nitrogen	mg/L	T				-				-				5.4	:			-				-				-			
Total Organic Carbon	mg/L	T				-				-				2.	:			-				-				-			
Total Suspended Solids	mg/L	T				-				-				20.8	:			-				-				-			
Laboratory Parameters																												
pH	SU	T				-				-				8.33	:			-				-				-			
Inorganics																												
Cyanide	mg/L	T				-				-				<0.01	J			-				-				-			
Physical Properties																												
Hardness	mg/L	D				576.	:			-				-				121.	:			-				-			
Metals																												
Aluminum	mg/L	D				<0.201	:			-				-				<0.142	:			-				-			
Antimony	mg/L	D				<0.0008	:			-				-				<0.0013	:			-				-			

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-A 4/14/2004 MW-A-D01N-GRW GW13	MW-B 10/27/2002 MWB-T01N-GRWRE GW13	MW-B 10/27/2002 MWB-T01N-GRW GW13	MW-B 10/27/2002 MWB-D01N-GRWRE GW13	MW-B 10/27/2002 MWB-D01N-GRW GW13	MW-B 10/28/2002 MW-B-T01N-GRW GW13
Arsenic	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	-
Barium	mg/L	D	0.0334 :	-	-	<0.0048 :	-	-
Beryllium	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-
Boron	mg/L	D	0.0212 :	-	-	<0.0157 :	-	-
Cadmium	mg/L	D	<0.0003 :	-	-	<0.0004 :	-	-
Calcium	mg/L	D	174. :	-	-	22.1 :	-	-
Chromium	mg/L	D	<0.0008 :	-	-	<0.0037 :	-	-
Chromium, Hexavalent	mg/L	D	-	-	-	-	-	<0.01 :
Cobalt	mg/L	D	<0.0011 :	-	-	<0.0016 :	-	-
Copper	mg/L	D	<0.0007 :	-	-	<0.0017 :	-	-
Iron	mg/L	D	9.78 :	-	-	<0.489 :	-	-
Lead	mg/L	D	<0.0008 :	-	-	<0.0002 :	-	-
Magnesium	mg/L	D	34.4 :	-	-	16.1 :	-	-
Manganese	mg/L	D	1.8 :	-	-	1.3 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	<0.0001 :	-
Molybdenum	mg/L	D	0.0414 J	-	-	0.0454 :	-	-
Nickel	mg/L	D	<0.0014 :	-	-	<0.0015 :	-	-
Potassium	mg/L	D	2.91 :	-	-	6.34 :	-	-
Selenium	mg/L	D	<0.0014 :	-	-	<0.0016 :	-	-
Silver	mg/L	D	<0.0002 J	-	-	<0.0002 :	-	-
Sodium	mg/L	D	52.2 :	-	-	65.9 :	-	-
Thallium	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	-
Vanadium	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	-
Zinc	mg/L	D	<0.024 :	-	-	<0.039 :	-	-

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-B	1/17/2003	MW-B-T01N-GRW		MW-B	1/17/2003	MW-B-D01N-GRW		MW-B	4/1/2003	MW-B-T01N-GRW		MW-B	4/1/2003	MW-B-D01N-GRW		MW-B	7/8/2003	MW-B-T01N-GRW		MW-B	7/8/2003	MW-B-D01N-GRW	
			GW13				GW13				GW13				GW13				GW13				GW13			
Field Measurements																						
DO	mg/L	T	0.3	:			-				0.36	:			-				0.19	:			-			
Eh	millivolts	T	-179.6	:			-				-180.	:			-				-123.6	:			-			
pH	SU	T	7.62	:			-				7.5	:			-				7.4	J			-			
Specific Conductance	uS/cm	T	1670.	:			-				1610.	:			-				1591.	:			-			
Temperature	Celsius	T	10.67	:			-				12.33	:			-				12.17	:			-			
Turbidity	NTU	T	58.8	:			-				67.7	:			-				79.7	:			-			
General Chemistry																						
Ammonia	mg/L	T	3.1	:			-				2.9	:			-				2.4	J			-			
Bicarbonate (as CaCO3)	mg/L	T	172.	:			-				180.	:			-				172.	:			-			
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Chloride	mg/L	T	14.	:			-				14.5	:			-				13.8	:			-			
Fluoride	mg/L	T	1.4	:			-				1.3	:			-				1.3	:			-			
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-				<1.	:			-			
Nitrate	mg/L	T	<0.4	J			-				<0.4	J			-				<0.4	J			-			
Nitrite	mg/L	T	0.013	J			-				0.0087	J			-				0.0058	:			-			
Phosphate, Ortho As P	mg/L	T	<0.01	J			-				<0.01	J			-				<0.01	:			-			
Phosphorus	mg/L	T	0.24	:			-				0.38	:			-				0.18	:			-			
Sulfate	mg/L	T	759.	J			-				709.	J			-				655.	J			-			
Total Alkalinity	mg/L	T	172.	:			-				180.	:			-				172.	:			-			
Total Dissolved Solids	mg/L	T	1280.	:			-				1380.	:			-				1150.	:			-			
Total Kjeldahl Nitrogen	mg/L	T	3.1	J			-				3.2	:			-				<0.24	:			-			
Total Organic Carbon	mg/L	T	2.1	:			-				<1.4	J			-				<3.1	J			-			
Total Suspended Solids	mg/L	T	16.3	:			-				18.3	:			-				17.3	:			-			
Laboratory Parameters																						
pH	SU	T	7.62	:			-				7.5	:			-				7.4	J			-			
Specific Conductance	umhos/cm	T	-				-				1530.	:			-				1460.	J			-			
Inorganics																						
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-				<0.01	J			-			
Physical Properties																						
Hardness	mg/L	T	801.	:			-				824.	:			-				802.	:			-			
Hardness	mg/L	D	-				815.	:			-				836.	:			-				791.	:		
Metals																						

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-B 1/17/2003 MW-B-T01N-GRW GW13		MW-B 1/17/2003 MW-B-D01N-GRW GW13		MW-B 4/1/2003 MW-B-T01N-GRW GW13		MW-B 4/1/2003 MW-B-D01N-GRW GW13		MW-B 7/8/2003 MW-B-T01N-GRW GW13		MW-B 7/8/2003 MW-B-D01N-GRW GW13	
Aluminum	mg/L	T	<0.226	:	-		<0.503	:	-		<0.236	:	-	
Aluminum	mg/L	D	-		<0.226	:	-		<0.503	:	-		<0.236	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	J	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	J	-		<0.001	:
Arsenic	mg/L	T	0.00048	:	-		0.00051	:	-		0.00059	:	-	
Arsenic	mg/L	D	-		0.00042	:	-		0.00048	:	-		0.00057	:
Barium	mg/L	T	0.0217	:	-		0.0232	:	-		0.023	:	-	
Barium	mg/L	D	-		0.0213	:	-		0.0234	:	-		0.0226	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	J	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	J	-		<0.0002	:
Boron	mg/L	T	0.0271	:	-		0.0369	:	-		0.0335	:	-	
Boron	mg/L	D	-		0.0273	:	-		0.0358	:	-		0.0341	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0005	J	-		<0.0006	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	J	-		<0.0006	:
Calcium	mg/L	T	244.	:	-		252.	:	-		245.	:	-	
Calcium	mg/L	D	-		249.	:	-		257.	:	-		242.	:
Chromium	mg/L	T	<0.0037	:	-		<0.001	:	-		<0.0014	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.001	:	-		<0.0014	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0038	:	-		<0.002	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0038	:	-		<0.002	:
Copper	mg/L	T	<0.0017	:	-		<0.0015	:	-		<0.0024	:	-	
Copper	mg/L	D	-		<0.0017	:	-		<0.0015	:	-		<0.0024	:
Iron	mg/L	T	7.08	:	-		9.5	:	-		7.82	:	-	
Iron	mg/L	D	-		4.5	:	-		4.69	:	-		5.55	:
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	46.4	:	-		47.7	:	-		45.9	:	-	
Magnesium	mg/L	D	-		46.8	:	-		47.3	:	-		45.1	:
Manganese	mg/L	T	0.751	:	-		0.81	:	-		0.681	:	-	
Manganese	mg/L	D	-		0.66	:	-		0.695	:	-		0.624	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	1.42	:	-		1.4	:	-		1.51	:	-	
Molybdenum	mg/L	D	-		1.42	:	-		1.46	:	-		1.48	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID		Site ID	Sample Date	Sample ID	
			MW-B	1/17/2003	MW-B-T01N-GRW	GW13	MW-B	1/17/2003	MW-B-D01N-GRW	GW13	MW-B	4/1/2003	MW-B-T01N-GRW	GW13	MW-B	4/1/2003	MW-B-D01N-GRW	GW13	MW-B	7/8/2003	MW-B-T01N-GRW	GW13	MW-B	7/8/2003	MW-B-D01N-GRW	GW13
Nickel	mg/L	T	<0.0015	:		-			-	:	<0.003	:		-			-	:	<0.0021	:		-		
Nickel	mg/L	D		-			<0.0015	:		-			-	:	<0.003	:		-			<0.0021	:		
Potassium	mg/L	T	5.51	:		-			-	:	5.64	:		-			-	:	3.89	:		-		
Potassium	mg/L	D		-			5.51	:		-			-	:	5.61	:		-			3.53	:		
Selenium	mg/L	T	<0.0016	:		-			-	:	<0.001	:		-			-	:	<0.0016	:		-		
Selenium	mg/L	D		-			<0.0016	:		-			-	:	<0.001	:		-			<0.0016	J		
Silver	mg/L	T	<0.0002	:		-			-	:	<0.0002	:		-			-	:	<0.0002	J		-		
Silver	mg/L	D		-			<0.0002	:		-			-	:	<0.0002	:		-			<0.0002	J		
Sodium	mg/L	T	86.	:		-			-	:	84.1	:		-			-	:	84.5	:		-		
Sodium	mg/L	D		-			86.6	:		-			-	:	85.6	:		-			83.3	:		
Thallium	mg/L	T	<0.0002	:		-			-	:	<0.0002	:		-			-	:	<0.0002	:		-		
Thallium	mg/L	D		-			<0.0002	:		-			-	:	<0.0002	:		-			<0.0002	:		
Vanadium	mg/L	T	<0.0004	:		-			-	:	<0.0002	:		-			-	:	<0.0004	:		-		
Vanadium	mg/L	D		-			<0.0004	:		-			-	:	<0.0002	:		-			<0.0004	:		
Zinc	mg/L	T	0.0334	:		-			-	:	<0.0585	:		-			-	:	<0.0172	:		-		
Zinc	mg/L	D		-			<0.028	:		-			-	:	<0.0484	:		-			<0.0105	:		

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID	MW-B	MW-B	MW-B	MW-B	MW-B	MW-B
			Sample Date	10/15/2003	10/15/2003	1/7/2004	1/7/2004	4/14/2004	4/14/2004
			Sample ID	MW-B-T01N-GRW	MW-B-D01N-GRW	MW-B-T01N-GRW	MW-B-D01N-GRW	MW-B-T01N-GRW	MW-B-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		0.2 :	-	0.13 :	-	0.28 :	-
Eh	millivolts	T		-178.7 :	-	-191.1 :	-	-166.5 :	-
pH	SU	T		7.5 J	-	7.4 J	-	7.4 J	-
Specific Conductance	uS/cm	T		1702. :	-	1622. :	-	1673. :	-
Temperature	Celsius	T		12.81 :	-	10.59 :	-	11.08 :	-
Turbidity	NTU	T		16.1 :	-	13.8 :	-	34.9 :	-
General Chemistry									
Ammonia	mg/L	T		1.2 J	-	1.6 :	-	1.4 :	-
Bicarbonate (as CaCO3)	mg/L	T		171. :	-	171. J	-	165. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		14.8 :	-	15. :	-	16. :	-
Fluoride	mg/L	T		1.4 :	-	1.4 :	-	1.5 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 :	-	<0.22 J	-	0.26 J	-
Nitrite	mg/L	T		<0.005 J	-	0.0081 J	-	0.0064 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		0.17 :	-	0.16 :	-	0.16 :	-
Sulfate	mg/L	T		881. J	-	718. :	-	785. :	-
Total Alkalinity	mg/L	T		171. :	-	171. J	-	165. :	-
Total Dissolved Solids	mg/L	T		1400. :	-	1230. :	-	1380. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.44 J	-	1.6 :	-	<1.4 :	-
Total Organic Carbon	mg/L	T		1.6 J	-	<1.3 :	-	<1.8 J	-
Total Suspended Solids	mg/L	T		13.9 :	-	15.7 :	-	14.2 J	-
Laboratory Parameters									
pH	SU	T		7.5 J	-	7.4 J	-	7.4 J	-
Specific Conductance	umhos/cm	T		1590. J	-	1530. J	-	1440. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		867. :	-	820. :	-	886. :	-
Hardness	mg/L	D		-	875. :	-	821. :	-	884. :
Metals									

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T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-B 10/15/2003 MW-B-T01N-GRW GW13		MW-B 10/15/2003 MW-B-D01N-GRW GW13		MW-B 1/7/2004 MW-B-T01N-GRW GW13		MW-B 1/7/2004 MW-B-D01N-GRW GW13		MW-B 4/14/2004 MW-B-T01N-GRW GW13		MW-B 4/14/2004 MW-B-D01N-GRW GW13	
Aluminum	mg/L	T	<0.307	:	-		<0.329	J	-		<0.176	:	-	
Aluminum	mg/L	D	-		<0.307	:	-		<0.514	:	-		<0.176	:
Antimony	mg/L	T	<0.001	:	-		<0.0024	:	-		<0.0008	J	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.0024	:	-		<0.0008	J
Arsenic	mg/L	T	0.00062	:	-		0.00067	:	-		0.00046	:	-	
Arsenic	mg/L	D	-		0.00061	:	-		0.00095	:	-		0.00053	:
Barium	mg/L	T	0.0214	:	-		0.0233	:	-		0.0232	:	-	
Barium	mg/L	D	-		0.0212	:	-		0.0227	:	-		0.0233	:
Beryllium	mg/L	T	<0.0003	:	-		<0.0003	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.00038	:	-		<0.0003	:	-		<0.0002	:
Boron	mg/L	T	0.0327	:	-		0.0366	:	-		0.0311	:	-	
Boron	mg/L	D	-		0.0315	:	-		0.0356	:	-		0.0317	:
Cadmium	mg/L	T	<0.0007	:	-		<0.0007	J	-		<0.0003	:	-	
Cadmium	mg/L	D	-		<0.0007	:	-		<0.0007	:	-		<0.0003	:
Calcium	mg/L	T	270.	:	-		254.	:	-		275.	:	-	
Calcium	mg/L	D	-		272.	:	-		254.	:	-		275.	:
Chromium	mg/L	T	<0.0013	J	-		<0.0015	J	-		<0.00098	:	-	
Chromium	mg/L	D	-		<0.0013	J	-		<0.0015	:	-		<0.00084	:
Cobalt	mg/L	T	<0.0031	:	-		<0.0023	:	-		<0.0011	:	-	
Cobalt	mg/L	D	-		<0.0031	:	-		<0.0023	J	-		<0.0038	:
Copper	mg/L	T	<0.002	J	-		<0.003	:	-		<0.0015	:	-	
Copper	mg/L	D	-		<0.002	J	-		<0.003	:	-		<0.0007	:
Iron	mg/L	T	6.1	:	-		7.28	:	-		8.19	J	-	
Iron	mg/L	D	-		5.36	:	-		5.85	:	-		8.82	:
Lead	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Lead	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0008	:
Magnesium	mg/L	T	47.	:	-		45.1	:	-		48.3	:	-	
Magnesium	mg/L	D	-		47.4	:	-		45.1	:	-		48.	:
Manganese	mg/L	T	0.464	:	-		0.536	:	-		0.544	:	-	
Manganese	mg/L	D	-		0.452	:	-		0.504	:	-		0.674	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	J	-		<0.0001	:
Molybdenum	mg/L	T	1.56	:	-		1.51	:	-		1.37	:	-	
Molybdenum	mg/L	D	-		1.57	:	-		1.51	:	-		1.38	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	MW-B 10/15/2003 MW-B-T01N-GRW GW13		MW-B 10/15/2003 MW-B-D01N-GRW GW13		MW-B 1/7/2004 MW-B-T01N-GRW GW13		MW-B 1/7/2004 MW-B-D01N-GRW GW13		MW-B 4/14/2004 MW-B-T01N-GRW GW13		MW-B 4/14/2004 MW-B-D01N-GRW GW13	
Nickel	mg/L	T	<0.0028	:	-		<0.0024	:	-		<0.0014	:	-	
Nickel	mg/L	D	-		<0.0028	:	-		<0.0024	:	-		<0.0014	:
Potassium	mg/L	T	5.32	:	-		5.66	:	-		5.54	:	-	
Potassium	mg/L	D	-		5.07	:	-		5.56	:	-		5.72	:
Selenium	mg/L	T	0.0013	:	-		0.0016	J	-		0.0016	:	-	
Selenium	mg/L	D	-		0.0008	:	-		0.0025	:	-		0.0016	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	82.8	:	-		83.8	:	-		86.3	:	-	
Sodium	mg/L	D	-		85.6	:	-		83.	:	-		85.1	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0004	:
Zinc	mg/L	T	<0.02	:	-		<0.04	:	-		0.0164	:	-	
Zinc	mg/L	D	-		<0.02	:	-		<0.026	:	-		<0.015	:

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: PR3		Site ID: PR3		Site ID: PR3		Site ID: PR3		Site ID: PR3	
		Sample Date	1/12/2004		1/12/2004		4/20/2004		4/20/2004		4/20/2004		5/12/2004	
		Sample ID	PR-3-T01N-GRW		PR-3-D01N-GRW		PR3-T01N-GRW		PR-3-T01N-GRW		PR3-D01N-GRW		PR-3-T01N-GRW	
			Tailings Spill		Tailings Spill		Tailings Spill		Tailings Spill		Tailings Spill		Tailings Spill	
Field Measurements														
DO	mg/L	T	7.58	:	-		-		8.2	:	-		7.46	:
Eh	millivolts	T	288.4	:	-		-		152.1	:	-		120.3	:
pH	SU	T	6.7	J	-		6.8	J	6.37	:	-		6.9	J
Specific Conductance	uS/cm	T	466.	:	-		-		417.	:	-		437.	:
Temperature	Celsius	T	9.28	:	-		-		9.97	:	-		12.74	:
Turbidity	NTU	T	0.2	:	-		-		-		-		0.	:
General Chemistry														
Ammonia	mg/L	T	<0.04	J	-		<0.043	:	-		-		<0.098	:
Bicarbonate (as CaCO3)	mg/L	T	46.1	:	-		56.9	:	-		-		50.5	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	4.8	:	-		5.2	J	-		-		5.1	:
Fluoride	mg/L	T	1.1	:	-		1.1	:	-		-		1.	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	<0.2	J	-		0.47	:	-		-		0.37	J
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	:	-		-		<0.01	J
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		-		<0.01	:
Sulfate	mg/L	T	158.	:	-		158.	:	-		-		173.	:
Total Alkalinity	mg/L	T	46.1	:	-		56.9	:	-		-		50.5	:
Total Dissolved Solids	mg/L	T	346.	:	-		298.	:	-		-		286.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	J	-		-		<1.	:
Total Suspended Solids	mg/L	T	<0.6	:	-		<0.7	J	-		-		<0.5	:
Laboratory Parameters														
pH	SU	T	6.7	J	-		6.8	J	6.37	:	-		6.9	J
Specific Conductance	umhos/cm	T	425.	J	-		356.	J	-		-		377.	J
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	204.	:	-		199.	:	-		-		200.	:
Hardness	mg/L	D	-		205.	:	-		-		202.	:	-	
Metals														

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	PR3 1/12/2004 PR-3-T01N-GRW Tailings Spill		PR3 1/12/2004 PR-3-D01N-GRW Tailings Spill		PR3 4/20/2004 PR3-T01N-GRW Tailings Spill		PR3 4/20/2004 PR-3-T01N-GRW Tailings Spill		PR3 4/20/2004 PR3-D01N-GRW Tailings Spill		PR3 5/12/2004 PR-3-T01N-GRW Tailings Spill	
Aluminum	mg/L	T	<0.514	:	-		<0.176	:	-		-		<0.201	:
Aluminum	mg/L	D	-		<0.514	:	-		-		<0.182	:	-	
Antimony	mg/L	T	<0.0024	:	-		<0.0008	:	-		-		<0.0008	:
Antimony	mg/L	D	-		<0.0024	:	-		-		<0.0008	:	-	
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Arsenic	mg/L	D	-		<0.0004	:	-		-		<0.0004	:	-	
Barium	mg/L	T	0.0288	:	-		0.026	:	-		-		0.0247	:
Barium	mg/L	D	-		0.0298	:	-		-		0.0262	:	-	
Beryllium	mg/L	T	<0.0003	:	-		<0.0002	:	-		-		<0.00077	:
Beryllium	mg/L	D	-		<0.0003	:	-		-		<0.0002	:	-	
Boron	mg/L	T	0.0179	:	-		<0.0054	:	-		-		0.0057	:
Boron	mg/L	D	-		0.0145	:	-		-		<0.0055	:	-	
Cadmium	mg/L	T	<0.0007	J	-		<0.0003	:	-		-		<0.0003	:
Cadmium	mg/L	D	-		0.00073	:	-		-		<0.0003	:	-	
Calcium	mg/L	T	62.4	:	-		60.6	:	-		-		60.9	:
Calcium	mg/L	D	-		62.8	:	-		-		61.4	:	-	
Chromium	mg/L	T	<0.0015	:	-		<0.0006	:	-		-		<0.0006	J
Chromium	mg/L	D	-		<0.0015	:	-		-		<0.0006	:	-	
Cobalt	mg/L	T	<0.0023	:	-		<0.0011	:	-		-		<0.0016	:
Cobalt	mg/L	D	-		<0.0023	:	-		-		<0.0035	:	-	
Copper	mg/L	T	0.0094	:	-		0.0091	J	-		-		0.0079	:
Copper	mg/L	D	-		0.0097	:	-		-		0.0198	J	-	
Iron	mg/L	T	<0.373	:	-		<0.192	J	-		-		<0.293	:
Iron	mg/L	D	-		<0.373	:	-		-		<0.384	:	-	
Lead	mg/L	T	0.00038	:	-		<0.0008	:	-		-		<0.0008	:
Lead	mg/L	D	-		<0.0002	:	-		-		<0.0008	:	-	
Magnesium	mg/L	T	11.7	:	-		11.7	:	-		-		11.5	:
Magnesium	mg/L	D	-		11.7	:	-		-		11.8	:	-	
Manganese	mg/L	T	<0.015	:	-		<0.019	:	-		-		<0.014	:
Manganese	mg/L	D	-		<0.015	:	-		-		<0.019	:	-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	0.0208	:	-		0.0208	:	-		-		0.0191	:
Molybdenum	mg/L	D	-		0.0215	:	-		-		0.0214	:	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	PR3 1/12/2004 PR-3-T01N-GRW Tailings Spill		PR3 1/12/2004 PR-3-D01N-GRW Tailings Spill		PR3 4/20/2004 PR3-T01N-GRW Tailings Spill		PR3 4/20/2004 PR-3-T01N-GRW Tailings Spill		PR3 4/20/2004 PR3-D01N-GRW Tailings Spill		PR3 5/12/2004 PR-3-T01N-GRW Tailings Spill	
Nickel	mg/L	T	<0.0024	J	-		<0.0015	J	-		-		<0.0015	J
Nickel	mg/L	D	-		<0.0024	J	-		-		<0.0015	J	-	
Potassium	mg/L	T	1.67	:	-		<1.43	:	-		-		1.59	:
Potassium	mg/L	D	-		1.72	:	-		-		1.57	:	-	
Selenium	mg/L	T	<0.0006	J	-		<0.0014	:	-		-		<0.0014	:
Selenium	mg/L	D	-		0.00076	J	-		-		<0.0014	:	-	
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		-		<0.0002	:
Silver	mg/L	D	-		<0.0002	:	-		-		<0.0002	J	-	
Sodium	mg/L	T	7.5	:	-		<5.98	:	-		-		8.19	:
Sodium	mg/L	D	-		9.08	:	-		-		<6.32	:	-	
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-		<0.0002	:
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	<0.0004	:	-		<0.0004	:	-		-		<0.0004	:
Vanadium	mg/L	D	-		<0.0004	:	-		-		<0.0004	:	-	
Zinc	mg/L	T	0.0285	J	-		0.0365	J	-		-		0.0507	:
Zinc	mg/L	D	-		0.0502	J	-		-		0.0856	J	-	

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	PR3	PR4	PR4	PR5	PR5	TPZ-5U
			Sample Date	5/12/2004	5/12/2004	5/12/2004	5/12/2004	5/12/2004	5/8/2003
			Sample ID	PR-3-D01N-GRW	PR-4-T01N-GRW	PR-4-D01N-GRW	PR-5-T01N-GRW	PR-5-D01N-GRW	TPZ-5U-T01N-GRW
				Tailings Spill	Tailings Spill	Tailings Spill	Tailings Spill	Tailings Spill	GW13
Field Measurements									
DO	mg/L	T		-	5.48 :	-	7.18 :	-	5.73 :
Eh	millivolts	T		-	128.2 :	-	107.6 :	-	336. :
pH	SU	T		-	7.2 J	-	7.1 J	-	7.4 J
Specific Conductance	uS/cm	T		-	299. :	-	437. :	-	661. :
Temperature	Celsius	T		-	13.84 :	-	12.35 :	-	8.28 :
Turbidity	NTU	T		-	0.1 :	-	0.9 :	-	12.6 :
General Chemistry									
Ammonia	mg/L	T		-	<0.078 :	-	<0.048 :	-	<0.04 :
Bicarbonate (as CaCO3)	mg/L	T		-	102. :	-	76. :	-	161. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	3.8 :	-	3.9 :	-	<5.8 :
Fluoride	mg/L	T		-	1.2 :	-	1.2 :	-	0.71 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.42 J	-	0.48 J	-	<0.4 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	<0.01 J	-	<0.01 J	-	0.034 J
Phosphorus	mg/L	T		-	0.017 :	-	<0.01 :	-	0.042 :
Sulfate	mg/L	T		-	41.3 :	-	148. :	-	147. :
Total Alkalinity	mg/L	T		-	102. :	-	76. :	-	161. :
Total Dissolved Solids	mg/L	T		-	184. :	-	276. :	-	392. :
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	<0.24 :	-	0.27 :
Total Organic Carbon	mg/L	T		-	1.8 :	-	1.4 :	-	<1. :
Total Suspended Solids	mg/L	T		-	<0.5 :	-	1.5 :	-	<1.3 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.1 J	-	7.4 J
Specific Conductance	umhos/cm	T		-	258. J	-	378. J	-	626. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	124. :	-	208. :	-	270. :
Hardness	mg/L	D		208. :	-	129. :	-	214. :	-
Metals									

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Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	PR3 5/12/2004 PR-3-D01N-GRW Tailings Spill		PR4 5/12/2004 PR-4-T01N-GRW Tailings Spill		PR4 5/12/2004 PR-4-D01N-GRW Tailings Spill		PR5 5/12/2004 PR-5-T01N-GRW Tailings Spill		PR5 5/12/2004 PR-5-D01N-GRW Tailings Spill		TPZ-5U 5/8/2003 TPZ-5U-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.201	:	-		<0.201	:	-		<0.426	:
Aluminum	mg/L	D	<0.201	:	-		<0.201	:	-		<0.201	:	-	
Antimony	mg/L	T	-		<0.0008	:	-		<0.0008	:	-		<0.0006	:
Antimony	mg/L	D	<0.0008	:	-		<0.0008	:	-		<0.0008	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0351	:	-		0.0308	:	-		0.0605	:
Barium	mg/L	D	0.026	:	-		0.0368	:	-		0.0322	:	-	
Beryllium	mg/L	T	-		<0.00076	:	-		<0.00033	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	:	-		<0.001	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0078	:	-		0.01	:	-		0.0535	:
Boron	mg/L	D	0.0051	:	-		0.0097	:	-		0.0097	:	-	
Cadmium	mg/L	T	-		<0.0003	J	-		<0.0003	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0003	:	-		<0.0003	J	-		<0.0003	:	-	
Calcium	mg/L	T	-		38.1	:	-		66.2	:	-		84.4	:
Calcium	mg/L	D	63.5	:	-		39.7	:	-		67.9	:	-	
Chromium	mg/L	T	-		<0.0006	J	-		<0.0006	J	-		<0.001	:
Chromium	mg/L	D	<0.0006	J	-		<0.0006	J	-		<0.0006	J	-	
Cobalt	mg/L	T	-		<0.0016	:	-		<0.0016	:	-		<0.0038	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0016	:	-		<0.0016	:	-	
Copper	mg/L	T	-		0.004	:	-		<0.0014	:	-		<0.0015	:
Copper	mg/L	D	0.0091	:	-		0.0046	:	-		<0.0014	:	-	
Iron	mg/L	T	-		<0.293	:	-		0.59	:	-		<0.422	J
Iron	mg/L	D	<0.293	:	-		<0.293	:	-		0.674	:	-	
Lead	mg/L	T	-		<0.0008	:	-		<0.0008	:	-		<0.0002	J
Lead	mg/L	D	<0.0008	:	-		<0.0008	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		6.95	:	-		10.4	:	-		14.3	:
Magnesium	mg/L	D	11.9	:	-		7.22	:	-		10.8	:	-	
Manganese	mg/L	T	-		<0.014	:	-		0.0208	:	-		0.051	J
Manganese	mg/L	D	<0.014	:	-		<0.014	:	-		0.0202	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.0022	J	-		0.0158	:	-		0.0579	:
Molybdenum	mg/L	D	0.02	:	-		0.0015	J	-		0.0164	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	PR3 5/12/2004 PR-3-D01N-GRW Tailings Spill	PR4 5/12/2004 PR-4-T01N-GRW Tailings Spill	PR4 5/12/2004 PR-4-D01N-GRW Tailings Spill	PR5 5/12/2004 PR-5-T01N-GRW Tailings Spill	PR5 5/12/2004 PR-5-D01N-GRW Tailings Spill	TPZ-5U 5/8/2003 TPZ-5U-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0015 J	-	<0.0015 J	-	<0.003 :
Nickel	mg/L	D	<0.0015 J	-	<0.0015 J	-	0.0026 J	-
Potassium	mg/L	T	-	1.7 :	-	1.47 :	-	1.66 :
Potassium	mg/L	D	1.7 :	-	1.71 :	-	1.48 :	-
Selenium	mg/L	T	-	<0.0014 :	-	<0.0014 :	-	<0.001 :
Selenium	mg/L	D	<0.0014 :	-	<0.0014 :	-	<0.0014 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	12.8 :	-	8.23 :	-	38.7 :
Sodium	mg/L	D	6.19 :	-	14.2 :	-	11.8 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0004 :	-	<0.0004 :	-	0.00033 :
Vanadium	mg/L	D	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Zinc	mg/L	T	-	0.0743 :	-	0.0285 J	-	<0.039 :
Zinc	mg/L	D	0.0408 :	-	0.0958 :	-	0.386 J	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID	TPZ-5U	TPZ-6U	TPZ-6U	TPZ-7U	TPZ-7U	TPZ-7U
			Sample Date	5/8/2003	5/8/2003	5/8/2003	6/13/2003	6/13/2003	6/13/2003
			Sample ID	TPZ-5U-D01N-GRW	TPZ-6U-T01N-GRW	TPZ-6U-D01N-GRW	TPZ7U-T01N-GRW	TPZ-7U-T01N-GRW	TPZ7U-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	7.03 :	-	-	4.19 :	-
Eh	millivolts	T		-	247. :	-	-	-98.4 :	-
pH	SU	T		-	7.7 :	-	-	12.72 :	-
Specific Conductance	uS/cm	T		-	448. :	-	-	3486. :	-
Temperature	Celsius	T		-	9.37 :	-	-	13.2 :	-
Turbidity	NTU	T		-	8.4 :	-	-	122.1 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.058 :	-	-	-	-
Bicarbonate (as CaCO3)	mg/L	T		-	119. :	-	-	-	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	-	-
Chloride	mg/L	T		-	<6.9 :	-	-	-	-
Fluoride	mg/L	T		-	0.6 :	-	-	-	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	-	-
Nitrate	mg/L	T		-	0.9 :	-	-	-	-
Nitrite	mg/L	T		-	<0.005 :	-	-	-	-
Phosphate, Ortho As P	mg/L	T		-	<0.01 :	-	-	-	-
Phosphorus	mg/L	T		-	<0.024 :	-	-	-	-
Sulfate	mg/L	T		-	91.4 :	-	-	-	-
Total Alkalinity	mg/L	T		-	119. :	-	-	-	-
Total Dissolved Solids	mg/L	T		-	254. :	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	-	-
Total Organic Carbon	mg/L	T		-	<1. :	-	-	-	-
Total Suspended Solids	mg/L	T		-	10.9 :	-	-	-	-
Laboratory Parameters									
pH	SU	T		-	7.7 :	-	-	12.72 :	-
Specific Conductance	umhos/cm	T		-	431. :	-	-	-	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	-	-
Physical Properties									
Hardness	mg/L	T		-	184. :	-	937. :	-	-
Hardness	mg/L	D		258. :	-	202. :	-	-	869. :
Metals									

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	TPZ-5U 5/8/2003 TPZ-5U-D01N-GRW GW13	TPZ-6U 5/8/2003 TPZ-6U-T01N-GRW GW13	TPZ-6U 5/8/2003 TPZ-6U-D01N-GRW GW13	TPZ-7U 6/13/2003 TPZ7U-T01N-GRW GW13	TPZ-7U 6/13/2003 TPZ-7U-T01N-GRW GW13	TPZ-7U 6/13/2003 TPZ7U-D01N-GRW GW13
Aluminum	mg/L	T	-	<0.426 :	-	2.99 :	-	-
Aluminum	mg/L	D	<0.426 :	-	<0.426 :	-	-	1.46 :
Antimony	mg/L	T	-	<0.0006 :	-	<0.001 :	-	-
Antimony	mg/L	D	<0.0006 :	-	<0.0006 :	-	-	<0.001 :
Arsenic	mg/L	T	-	<0.0004 :	-	0.00058 :	-	-
Arsenic	mg/L	D	<0.0004 :	-	<0.0004 :	-	-	<0.0004 :
Barium	mg/L	T	-	0.059 :	-	0.375 :	-	-
Barium	mg/L	D	0.0566 :	-	0.0603 :	-	-	0.332 :
Beryllium	mg/L	T	-	<0.0003 J	-	<0.0002 :	-	-
Beryllium	mg/L	D	<0.0003 :	-	<0.0003 J	-	-	<0.0002 :
Boron	mg/L	T	-	0.0302 :	-	0.0051 :	-	-
Boron	mg/L	D	0.0494 :	-	0.0279 :	-	-	<0.0048 :
Cadmium	mg/L	T	-	<0.0005 :	-	<0.0006 :	-	-
Cadmium	mg/L	D	<0.0005 :	-	<0.0005 :	-	-	<0.0006 :
Calcium	mg/L	T	-	58.2 :	-	374. :	-	-
Calcium	mg/L	D	80.9 :	-	63.8 :	-	-	348. :
Chromium	mg/L	T	-	<0.001 :	-	0.0179 :	-	-
Chromium	mg/L	D	<0.001 :	-	<0.001 :	-	-	0.0184 :
Cobalt	mg/L	T	-	<0.0038 :	-	<0.002 :	-	-
Cobalt	mg/L	D	<0.0038 :	-	<0.0038 :	-	-	<0.002 :
Copper	mg/L	T	-	<0.0029 :	-	0.0097 :	-	-
Copper	mg/L	D	<0.0015 :	-	0.0019 :	-	-	<0.0024 :
Iron	mg/L	T	-	<0.422 :	-	1.84 :	-	-
Iron	mg/L	D	<0.422 J	-	<0.517 :	-	-	<0.667 :
Lead	mg/L	T	-	0.00032 :	-	0.0126 :	-	-
Lead	mg/L	D	<0.0002 J	-	<0.0002 :	-	-	0.006 :
Magnesium	mg/L	T	-	9.44 :	-	<2.93 :	-	-
Magnesium	mg/L	D	13.7 :	-	10.4 :	-	-	<2.93 :
Manganese	mg/L	T	-	0.139 :	-	0.0643 :	-	-
Manganese	mg/L	D	0.0464 J	-	0.163 :	-	-	<0.019 :
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	-	<0.0001 :
Molybdenum	mg/L	T	-	0.0073 :	-	0.0182 :	-	-
Molybdenum	mg/L	D	0.0546 :	-	0.0067 :	-	-	0.0168 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6f
Groundwater - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	TPZ-5U 5/8/2003 TPZ-5U-D01N-GRW GW13	TPZ-6U 5/8/2003 TPZ-6U-T01N-GRW GW13	TPZ-6U 5/8/2003 TPZ-6U-D01N-GRW GW13	TPZ-7U 6/13/2003 TPZ7U-T01N-GRW GW13	TPZ-7U 6/13/2003 TPZ-7U-T01N-GRW GW13	TPZ-7U 6/13/2003 TPZ7U-D01N-GRW GW13
Nickel	mg/L	T	-	<0.003 :	-	<0.0021 :	-	-
Nickel	mg/L	D	<0.003 :	-	<0.003 :	-	-	<0.0021 :
Potassium	mg/L	T	-	1.55 :	-	12.8 :	-	-
Potassium	mg/L	D	1.53 :	-	1.56 :	-	-	11.7 :
Selenium	mg/L	T	-	<0.001 :	-	<0.0016 :	-	-
Selenium	mg/L	D	<0.001 :	-	<0.001 :	-	-	<0.0016 :
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Sodium	mg/L	T	-	20.7 :	-	35.9 :	-	-
Sodium	mg/L	D	37.2 :	-	23. :	-	-	35.2 :
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	-
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T	-	0.00077 :	-	0.0048 :	-	-
Vanadium	mg/L	D	0.00023 :	-	0.0003 :	-	-	<0.0004 :
Zinc	mg/L	T	-	<0.039 :	-	0.0901 :	-	-
Zinc	mg/L	D	<0.039 :	-	<0.039 :	-	-	0.0306 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

		Site ID	OUTFALL-002	Outfall-002	Outfall-002	OUTFALL-002	OUTFALL-002	OUTFALL-002
		Sample Date	11/7/2002	4/3/2003	4/3/2003	4/3/2003	7/8/2003	7/8/2003
		Sample ID	OUTFALL002-T01N-GRW	OUTFALL002SUMP-T01N-GRW	OUTFALL002SUMP-D01N-GRW	Outfall-002 Pipe-T01N-GRW	OUTFALL002-T01N-GRW	OUTFALL002-D01N-GRW
		Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Paramete	**Units**	**Fraction**						
Field Measurements								
DO	mg/L	T	-	-	-	8.25 :	8.88 :	-
Eh	millivolts	T	-	-	-	322.1 :	321.6 :	-
pH	SU	T	-	7.3 J	-	7.14 :	7.5 J	-
Specific Conductance	uS/cm	T	-	-	-	1646. :	1570. :	-
Temperature	Celsius	T	-	-	-	11.81 :	15.08 :	-
Turbidity	NTU	T	-	-	-	0. :	47.1 :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.12 :	-	-	<0.086 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	156. :	-	-	156. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	12.6 :	-	-	6.4 :	-
Fluoride	mg/L	T	-	1.1 :	-	-	1.2 :	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	<0.46 J	-	-	<0.2 J	-
Nitrite	mg/L	T	-	<0.005 :	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	<0.053 :	-	-	<0.057 :	-
Phosphorus	mg/L	T	-	0.065 :	-	-	0.066 :	-
Sulfate	mg/L	T	-	801. J	-	-	919. J	-
Total Alkalinity	mg/L	T	-	156. :	-	-	156. :	-
Total Dissolved Solids	mg/L	T	-	1420. :	-	-	1430. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	1.8 J	-	-	<2.8 J	-
Total Suspended Solids	mg/L	T	-	<5. :	-	-	<1.8 :	-
Laboratory Parameters								
pH	SU	T	-	7.3 J	-	7.14 :	7.5 J	-
Specific Conductance	umhos/cm	T	-	1620. J	-	-	1490. J	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	936. :	-	-	899. :	-
Hardness	mg/L	D	-	-	962. :	-	-	872. :
Metals								

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	OUTFALL-002 11/7/2002 OUTFALL002-T01N-GRW GW13	Outfall-002 4/3/2003 OUTFALL002SUMP-T01N-GRW GW13	Outfall-002 4/3/2003 OUTFALL002SUMP-D01N-GRW GW13	OUTFALL-002 4/3/2003 Outfall-002 Pipe-T01N-GRW GW13	OUTFALL-002 7/8/2003 OUTFALL002-T01N-GRW GW13	OUTFALL-002 7/8/2003 OUTFALL002-D01N-GRW GW13
Aluminum	mg/L	T	-	<0.277 :	-	-	<0.236 :	-
Aluminum	mg/L	D	-	-	<0.277 :	-	-	<0.236 :
Antimony	mg/L	T	-	<0.0006 J	-	-	<0.001 :	-
Antimony	mg/L	D	-	-	<0.0006 J	-	-	<0.001 :
Arsenic	mg/L	T	-	0.00051 :	-	-	0.00048 :	-
Arsenic	mg/L	D	-	-	<0.0004 :	-	-	<0.0004 :
Barium	mg/L	T	-	0.0236 :	-	-	0.0316 :	-
Barium	mg/L	D	-	-	0.023 :	-	-	0.0302 :
Beryllium	mg/L	T	-	<0.0003 :	-	-	<0.0002 :	-
Beryllium	mg/L	D	-	-	<0.0003 :	-	-	<0.0002 :
Boron	mg/L	T	-	0.0321 :	-	-	0.0322 :	-
Boron	mg/L	D	-	-	0.0301 :	-	-	0.0302 :
Cadmium	mg/L	T	-	<0.0004 :	-	-	<0.0006 :	-
Cadmium	mg/L	D	-	-	<0.0004 :	-	-	<0.0006 :
Calcium	mg/L	T	-	291. :	-	-	281. :	-
Calcium	mg/L	D	-	-	300. :	-	-	272. :
Chromium	mg/L	T	-	<0.0009 J	-	-	<0.0014 :	-
Chromium	mg/L	D	-	-	<0.0009 J	-	-	<0.0014 :
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	-	<0.0029 :	-	-	<0.002 :	-
Cobalt	mg/L	D	-	-	<0.0029 :	-	-	<0.002 :
Copper	mg/L	T	-	<0.0024 J	-	-	0.0083 :	-
Copper	mg/L	D	-	-	<0.0024 J	-	-	<0.0024 :
Iron	mg/L	T	-	<0.299 :	-	-	<0.333 :	-
Iron	mg/L	D	-	-	<0.299 :	-	-	<0.333 :
Lead	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Lead	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 :
Magnesium	mg/L	T	-	51. :	-	-	48.2 :	-
Magnesium	mg/L	D	-	-	52. :	-	-	46.7 :
Manganese	mg/L	T	-	0.697 :	-	-	0.739 :	-
Manganese	mg/L	D	-	-	0.774 :	-	-	0.712 :
Mercury	mg/L	T	-	<0.0001 :	-	-	<0.0001 J	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	<0.0001 J
Molybdenum	mg/L	T	-	1.2 :	-	-	1.37 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

		Site ID	OUTFALL-002		Outfall-002		Outfall-002		OUTFALL-002		OUTFALL-002		OUTFALL-002	
		Sample Date	11/7/2002		4/3/2003		4/3/2003		4/3/2003		7/8/2003		7/8/2003	
		Sample ID	OUTFALL002-T01N-GRW		OUTFALL002SUMP-T01N-GRW		OUTFALL002SUMP-D01N-GRW		Outfall-002 Pipe-T01N-GRW		OUTFALL002-T01N-GRW		OUTFALL002-D01N-GRW	
		Exposure Area	GW13		GW13		GW13		GW13		GW13		GW13	
Paramete	Units	Fraction												
Molybdenum	mg/L	D	-		-		1.31	:	-		-		1.32	:
Nickel	mg/L	T	-		<0.0026	:	-		-		<0.0021	:	-	
Nickel	mg/L	D	-		-		<0.0026	:	-		-		<0.0021	:
Potassium	mg/L	T	-		4.89	:	-		-		3.36	:	-	
Potassium	mg/L	D	-		-		5.11	:	-		-		2.91	:
Selenium	mg/L	T	-		0.0012	:	-		-		<0.0016	:	-	
Selenium	mg/L	D	-		-		<0.001	:	-		-		<0.0016	J
Silver	mg/L	T	-		<0.0002	:	-		-		<0.0002	J	-	
Silver	mg/L	D	-		-		<0.0002	:	-		-		<0.0002	J
Sodium	mg/L	T	-		73.8	:	-		-		76.2	:	-	
Sodium	mg/L	D	-		-		78.6	:	-		-		70.2	:
Thallium	mg/L	T	-		<0.0002	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	-		-		<0.0002	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0026	:	-		-		0.0017	:	-	
Vanadium	mg/L	D	-		-		0.0013	J	-		-		0.0017	:
Zinc	mg/L	T	-		<0.025	:	-		-		<0.0112	:	-	
Zinc	mg/L	D	-		-		<0.025	:	-		-		<0.01	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Outfall-002 Sample Date: 10/20/2003 Sample ID: OUTFALL002-T01N-SFW GW13		Site ID: OUTFALL-002 Sample Date: 10/20/2003 Sample ID: OUTFALL002-T01N-GRW GW13		Site ID: OUTFALL-002 Sample Date: 10/20/2003 Sample ID: OUTFALL002-D01N-GRW GW13		Site ID: OUTFALL-002 Sample Date: 1/7/2004 Sample ID: OUTFALL002-T01N-GRW GW13		Site ID: OUTFALL-002 Sample Date: 1/7/2004 Sample ID: OUTFALL002-D01N-GRW GW13		Site ID: OUTFALL-002 Sample Date: 4/14/2004 Sample ID: OUTFALL002-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	7.64	:	-		-		11.08	:	-		7.02	:
Eh	millivolts	T	116.4	:	-		-		316.4	:	-		178.7	:
Flow	gpm	T	-		-		-		-		-		328.	:
pH	SU	T	6.55	:	7.8	J	-		7.7	J	-		7.6	J
Specific Conductance	uS/cm	T	1687.	:	-		-		1720.	:	-		1611.	:
Temperature	Celsius	T	12.18	:	-		-		9.21	:	-		13.28	:
Turbidity	NTU	T	15.8	:	-		-		12.3	:	-		0.8	:
General Chemistry														
Ammonia	mg/L	T	-		0.049	J	-		<0.04	:	-		<0.098	:
Bicarbonate (as CaCO3)	mg/L	T	-		154.	:	-		157.	J	-		149.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	J	-		<1.	:
Chloride	mg/L	T	-		13.1	:	-		12.9	:	-		13.3	:
Fluoride	mg/L	T	-		1.3	:	-		1.1	:	-		1.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.25	J	-		<0.25	J	-		0.32	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.049	:	-		0.057	J	-		0.047	J
Phosphorus	mg/L	T	-		0.058	:	-		0.063	:	-		0.056	:
Sulfate	mg/L	T	-		763.	J	-		844.	:	-		821.	:
Total Alkalinity	mg/L	T	-		154.	:	-		157.	:	-		149.	:
Total Dissolved Solids	mg/L	T	-		1400.	:	-		1390.	:	-		1390.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		2.6	J	-		<2.1	:	-		<2.2	:
Total Suspended Solids	mg/L	T	-		2.2	:	-		<2.	:	-		<2.4	:
Laboratory Parameters														
pH	SU	T	6.55	:	7.8	J	-		7.7	J	-		7.6	J
Specific Conductance	umhos/cm	T	-		1640.	J	-		1610.	J	-		1440.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		858.	:	-		865.	:	-		911.	:
Hardness	mg/L	D	-		-		820.	:	-		884.	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Outfall-002 10/20/2003 OUTFALL002-T01N-SFW GW13	OUTFALL-002 10/20/2003 OUTFALL002-T01N-GRW GW13	OUTFALL-002 10/20/2003 OUTFALL002-D01N-GRW GW13	OUTFALL-002 1/7/2004 OUTFALL002-T01N-GRW GW13	OUTFALL-002 1/7/2004 OUTFALL002-D01N-GRW GW13	OUTFALL-002 4/14/2004 OUTFALL002-T01N-GRW GW13
Metals								
Aluminum	mg/L	T	-	<0.107 :	-	<0.0329 :	-	<0.176 J
Aluminum	mg/L	D	-	-	<0.0221 :	-	<0.0329 :	-
Antimony	mg/L	T	-	<0.0005 :	-	<0.0012 :	-	<0.0008 :
Antimony	mg/L	D	-	-	<0.0005 :	-	<0.0012 :	-
Arsenic	mg/L	T	-	0.00036 :	-	0.00061 :	-	0.00041 :
Arsenic	mg/L	D	-	-	0.00032 :	-	0.00053 :	-
Barium	mg/L	T	-	0.0317 :	-	0.0267 :	-	0.0273 :
Barium	mg/L	D	-	-	0.0296 :	-	0.0268 :	-
Beryllium	mg/L	T	-	<0.0004 :	-	<0.0003 :	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0004 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0299 :	-	0.0305 :	-	0.029 :
Boron	mg/L	D	-	-	0.0272 :	-	0.0307 :	-
Cadmium	mg/L	T	-	<0.0002 :	-	0.0003 J	-	<0.0003 :
Cadmium	mg/L	D	-	-	<0.0002 :	-	0.00038 :	-
Calcium	mg/L	T	-	266. :	-	269. :	-	282. :
Calcium	mg/L	D	-	-	254. :	-	275. :	-
Chromium	mg/L	T	-	<0.0012 J	-	<0.0015 :	-	<0.0011 :
Chromium	mg/L	D	-	-	<0.0011 J	-	<0.0015 :	-
Cobalt	mg/L	T	-	<0.0029 :	-	<0.0023 :	-	<0.0011 :
Cobalt	mg/L	D	-	-	<0.0029 :	-	<0.0023 :	-
Copper	mg/L	T	-	<0.0017 :	-	0.0016 :	-	<0.0007 :
Copper	mg/L	D	-	-	<0.0017 :	-	0.0017 :	-
Iron	mg/L	T	-	<0.104 :	-	<0.0357 :	-	<0.192 J
Iron	mg/L	D	-	-	<0.0278 :	-	<0.0357 :	-
Lead	mg/L	T	-	<0.0002 :	-	0.00011 :	-	<0.0008 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0001 :	-
Magnesium	mg/L	T	-	47. :	-	46.8 :	-	50.4 :
Magnesium	mg/L	D	-	-	44.8 :	-	47.8 :	-
Manganese	mg/L	T	-	0.514 :	-	0.624 :	-	0.522 :
Manganese	mg/L	D	-	-	0.483 :	-	0.622 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	1.17 :	-	1.24 :	-	1.24 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

		Site ID	Outfall-002	OUTFALL-002		OUTFALL-002		OUTFALL-002		OUTFALL-002		OUTFALL-002	
		Sample Date	10/20/2003	10/20/2003		10/20/2003		1/7/2004		1/7/2004		4/14/2004	
		Sample ID	OUTFALL002-T01N-SFW	OUTFALL002-T01N-GRW		OUTFALL002-D01N-GRW		OUTFALL002-T01N-GRW		OUTFALL002-D01N-GRW		OUTFALL002-T01N-GRW	
		Exposure Area	GW13	GW13		GW13		GW13		GW13		GW13	
Paramete	**Units**	**Fraction**											
Molybdenum	mg/L	D	-	-		1.12	:	-		1.26	:	-	
Nickel	mg/L	T	-	0.0031	:	-		<0.004	:	-		0.0028	:
Nickel	mg/L	D	-	-		0.0036	:	-		0.0044	:	-	
Potassium	mg/L	T	-	4.52	:	-		4.46	:	-		3.74	J
Potassium	mg/L	D	-	-		4.3	:	-		4.48	:	-	
Selenium	mg/L	T	-	0.00074	:	-		<0.0014	:	-		<0.0014	:
Selenium	mg/L	D	-	-		0.00044	:	-		<0.0013	:	-	
Silver	mg/L	T	-	<0.0001	:	-		<0.0001	:	-		<0.0002	J
Silver	mg/L	D	-	-		<0.0001	:	-		<0.0001	:	-	
Sodium	mg/L	T	-	75.9	:	-		75.7	:	-		75.	:
Sodium	mg/L	D	-	-		72.4	:	-		76.7	:	-	
Thallium	mg/L	T	-	<0.0001	:	-		<0.0001	:	-		<0.0002	:
Thallium	mg/L	D	-	-		<0.0001	:	-		<0.0001	:	-	
Vanadium	mg/L	T	-	0.0014	:	-		0.0014	:	-		0.0019	J
Vanadium	mg/L	D	-	-		0.0014	:	-		0.0014	:	-	
Zinc	mg/L	T	-	<0.0023	:	-		<0.004	:	-		<0.015	:
Zinc	mg/L	D	-	-		<0.0023	:	-		<0.004	:	-	

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: OUTFALL-002 Sample Date: 4/14/2004 Sample ID: OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 3/20/2003 Outfall-002 Pipe-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		5.61	:	-		8.7	:	-		-	
Eh	millivolts	T	-		321.6	:	-		-		-		-	
Flow	gpm	T	-		-		-		300.	:	-		300.	:
pH	SU	T	-		7.	:	-		6.39	:	-		-	
Specific Conductance	uS/cm	T	-		1624.	:	-		3403.	:	-		-	
Temperature	Celsius	T	-		11.55	:	-		9.99	:	-		-	
Turbidity	NTU	T	-		0.	:	-		0.1	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.19	:	-		<0.04	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		156.	:	-		150.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Chloride	mg/L	T	-		14.	:	-		<12.6	:	-		-	
Fluoride	mg/L	T	-		1.1	:	-		1.1	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		-	
Nitrate	mg/L	T	-		<0.4	:	-		<0.45	J	-		-	
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	-		0.049	J	-		<0.068	J	-		-	
Phosphorus	mg/L	T	-		0.054	:	-		0.061	:	-		-	
Sulfate	mg/L	T	-		989.	:	-		843.	J	-		-	
Total Alkalinity	mg/L	T	-		156.	:	-		150.	:	-		-	
Total Dissolved Solids	mg/L	T	-		1460.	:	-		1500.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	-		1.	:	-		1.1	:	-		-	
Total Suspended Solids	mg/L	T	-		<1.1	:	-		1.4	:	-		-	
Laboratory Parameters														
pH	SU	T	-		7.	:	-		6.39	:	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	-		907.	:	-		899.	:	-		-	
Hardness	mg/L	D	945.	:	-		890.	:	-		884.	:	-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	OUTFALL-002 4/14/2004 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 3/20/2003 Outfall-002 Pipe-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.02	:	-		<0.142	:	-		-	
Aluminum	mg/L	D	<0.176	J	-		<0.006	:	-		<0.142	:	-	
Antimony	mg/L	T	-		<0.0004	:	-		<0.0006	:	-		-	
Antimony	mg/L	D	<0.0008	:	-		<0.0004	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		0.0005	J	-		<0.0004	:	-		-	
Arsenic	mg/L	D	<0.0004	:	-		0.00049	J	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0288	:	-		0.0302	:	-		-	
Barium	mg/L	D	0.0271	:	-		0.0282	:	-		0.0283	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Beryllium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0351	:	-		<0.0363	:	-		-	
Boron	mg/L	D	0.0297	:	-		0.0337	:	-		<0.0337	:	-	
Cadmium	mg/L	T	-		0.00031	J	-		<0.0004	:	-		-	
Cadmium	mg/L	D	<0.0003	:	-		0.00047	J	-		<0.0004	:	-	
Calcium	mg/L	T	-		283.	:	-		280.	:	-		-	
Calcium	mg/L	D	291.	:	-		278.	:	-		275.	:	-	
Chromium	mg/L	T	-		<0.0046	:	-		<0.0037	:	-		-	
Chromium	mg/L	D	<0.0012	:	-		<0.0046	:	-		<0.0037	:	-	
Cobalt	mg/L	T	-		<0.0022	:	-		<0.0016	:	-		-	
Cobalt	mg/L	D	<0.0052	:	-		<0.0022	:	-		<0.0016	:	-	
Copper	mg/L	T	-		<0.00099	:	-		<0.0045	:	-		-	
Copper	mg/L	D	<0.0007	J	-		<0.00079	:	-		<0.0019	:	-	
Iron	mg/L	T	-		0.0254	:	-		<0.489	:	-		-	
Iron	mg/L	D	<0.192	J	-		<0.0226	:	-		<0.489	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Lead	mg/L	D	<0.0008	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		48.9	:	-		48.5	:	-		-	
Magnesium	mg/L	D	52.7	:	-		47.8	:	-		47.9	:	-	
Manganese	mg/L	T	-		0.675	:	-		0.726	:	-		-	
Manganese	mg/L	D	0.541	:	-		0.657	:	-		0.652	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		1.24	:	-		1.33	:	-		-	
Molybdenum	mg/L	D	1.26	:	-		1.21	:	-		1.24	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	OUTFALL-002 4/14/2004 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 11/7/2002 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-T01N-GRW GW13		Outfall-002 Pipe 1/11/2003 OUTFALL002-D01N-GRW GW13		Outfall-002 Pipe 3/20/2003 Outfall-002 Pipe-T01N-GRW GW13	
Nickel	mg/L	T	-		0.002	J	-		<0.0017	:	-		-	
Nickel	mg/L	D	0.0027	:	-		0.0024	J	-		<0.0015	:	-	
Potassium	mg/L	T	-		5.06	:	-		4.88	:	-		-	
Potassium	mg/L	D	4.4	J	-		4.96	:	-		4.7	:	-	
Selenium	mg/L	T	-		0.00082	:	-		<0.0016	:	-		-	
Selenium	mg/L	D	<0.0014	:	-		0.0011	:	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Silver	mg/L	D	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		81.2	:	-		75.2	:	-		-	
Sodium	mg/L	D	78.1	:	-		79.3	:	-		75.3	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		-	
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0014	:	-		0.0013	:	-		-	
Vanadium	mg/L	D	0.0018	J	-		0.0014	:	-		0.0013	:	-	
Zinc	mg/L	T	-		<0.0069	:	-		<0.039	:	-		-	
Zinc	mg/L	D	<0.015	:	-		<0.0069	:	-		<0.039	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID	Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-T01N-SFW GW13	Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-D01N-SFW GW13	Outfall-002 Pipe 4/2/2003 Outfall-002 Pipe-T01N-GRW GW13	OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-T01N-GRW GW13	OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-D01N-GRW GW13	Outfall-002 PIPE 9/26/2003 OUTFALL002-T01N-SFW GW13
Field Measurements									
DO	mg/L	T		-	-	7.63 :	8.98 :	-	-
Eh	millivolts	T		-	-	381.2 :	363.8 :	-	-
Flow	gpm	T		-	-	241. :	288.9 :	-	404. :
pH	SU	T		7.9 J	-	7.27 :	6.67 :	-	-
Specific Conductance	uS/cm	T		-	-	1704. :	1553. :	-	-
Temperature	Celsius	T		-	-	10.65 :	11.79 :	-	-
Turbidity	NTU	T		-	-	0. :	20.5 :	-	-
General Chemistry									
Ammonia	mg/L	T		<0.066 :	-	-	<0.084 J	-	-
Bicarbonate (as CaCO3)	mg/L	T		155. :	-	-	155. :	-	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Chloride	mg/L	T		12.1 :	-	-	12.5 :	-	-
Fluoride	mg/L	T		1.2 :	-	-	1.6 :	-	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	<1. :	-	-
Nitrate	mg/L	T		<0.4 J	-	-	<0.4 J	-	-
Nitrite	mg/L	T		<0.005 J	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T		<0.37 J	-	-	<0.053 J	-	-
Phosphorus	mg/L	T		0.066 J	-	-	0.057 :	-	-
Sulfate	mg/L	T		845. :	-	-	711. J	-	-
Total Alkalinity	mg/L	T		155. :	-	-	155. :	-	-
Total Dissolved Solids	mg/L	T		1460. :	-	-	1400. :	-	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T		<2.9 :	-	-	<1.2 J	-	-
Total Suspended Solids	mg/L	T		<1.4 :	-	-	<0.8 :	-	-
Laboratory Parameters									
pH	SU	T		7.9 J	-	7.27 :	6.67 :	-	-
Specific Conductance	umhos/cm	T		1580. J	-	-	1520. J	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 :	-	-	<0.01 J	-	-
Physical Properties									
Hardness	mg/L	T		863. :	-	-	903. :	-	-
Hardness	mg/L	D		-	917. :	-	-	878. :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-T01N-SFW GW13	Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-D01N-SFW GW13	Outfall-002 Pipe 4/2/2003 Outfall-002 Pipe-T01N-GRW GW13	OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-T01N-GRW GW13	OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-D01N-GRW GW13	Outfall-002 PIPE 9/26/2003 OUTFALL002-T01N-SFW GW13
Metals								
Aluminum	mg/L	T	0.0347 :	-	-	<0.631 :	-	-
Aluminum	mg/L	D	-	<0.0277 :	-	-	<0.631 :	-
Antimony	mg/L	T	<0.0006 :	-	-	<0.001 :	-	-
Antimony	mg/L	D	-	<0.0006 :	-	-	<0.001 :	-
Arsenic	mg/L	T	0.00049 :	-	-	<0.0004 :	-	-
Arsenic	mg/L	D	-	0.00039 :	-	-	<0.0004 :	-
Barium	mg/L	T	0.0276 :	-	-	0.0292 :	-	-
Barium	mg/L	D	-	0.0283 :	-	-	0.0284 :	-
Beryllium	mg/L	T	<0.0003 :	-	-	<0.0002 J	-	-
Beryllium	mg/L	D	-	<0.0003 :	-	-	<0.0002 J	-
Boron	mg/L	T	0.0323 :	-	-	<0.0355 :	-	-
Boron	mg/L	D	-	0.0273 :	-	-	<0.0356 :	-
Cadmium	mg/L	T	<0.0004 :	-	-	<0.0003 :	-	-
Cadmium	mg/L	D	-	<0.0004 :	-	-	<0.0003 :	-
Calcium	mg/L	T	268. :	-	-	281. :	-	-
Calcium	mg/L	D	-	285. :	-	-	273. :	-
Chromium	mg/L	T	<0.0009 :	-	-	<0.0006 J	-	-
Chromium	mg/L	D	-	<0.0009 :	-	-	<0.0006 J	-
Cobalt	mg/L	T	<0.0029 :	-	-	<0.0018 :	-	-
Cobalt	mg/L	D	-	<0.0029 :	-	-	0.002 :	-
Copper	mg/L	T	<0.0024 :	-	-	<0.0014 :	-	-
Copper	mg/L	D	-	<0.0024 :	-	-	<0.0014 :	-
Iron	mg/L	T	<0.422 :	-	-	<0.667 :	-	-
Iron	mg/L	D	-	<0.422 :	-	-	<0.667 :	-
Lead	mg/L	T	<0.0002 :	-	-	<0.0002 :	-	-
Lead	mg/L	D	-	<0.0002 :	-	-	<0.0002 :	-
Magnesium	mg/L	T	47.2 :	-	-	48.9 :	-	-
Magnesium	mg/L	D	-	50. :	-	-	47.6 :	-
Manganese	mg/L	T	0.633 :	-	-	0.672 :	-	-
Manganese	mg/L	D	-	0.677 :	-	-	0.646 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T	1.2 :	-	-	1.21 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-T01N-SFW GW13		Outfall-002 PIPE 4/2/2003 OUTFALL002PIPE-D01N-SFW GW13		Outfall-002 Pipe 4/2/2003 Outfall-002 Pipe-T01N-GRW GW13		OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-T01N-GRW GW13		OUTFALL-002 PIPE 7/8/2003 OUTFALL002PIPE-D01N-GRW GW13		Outfall-002 PIPE 9/26/2003 OUTFALL002-T01N-SFW GW13	
Molybdenum	mg/L	D	-		1.26	:	-		-		1.18	:	-	
Nickel	mg/L	T	<0.0026	:	-		-		<0.002	:	-		-	
Nickel	mg/L	D	-		<0.0026	:	-		-		<0.002	:	-	
Potassium	mg/L	T	5.08	:	-		-		4.71	:	-		-	
Potassium	mg/L	D	-		5.28	:	-		-		4.58	:	-	
Selenium	mg/L	T	0.002	:	-		-		<0.0016	:	-		-	
Selenium	mg/L	D	-		0.0019	:	-		-		<0.0016	J	-	
Silver	mg/L	T	<0.0002	:	-		-		<0.0002	J	-		-	
Silver	mg/L	D	-		<0.0002	:	-		-		<0.0002	J	-	
Sodium	mg/L	T	70.9	:	-		-		74.5	:	-		-	
Sodium	mg/L	D	-		76.7	:	-		-		72.8	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		<0.0002	:	-		-	
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.0002	:	-	
Vanadium	mg/L	T	0.0016	:	-		-		0.0015	:	-		-	
Vanadium	mg/L	D	-		0.0016	:	-		-		0.0015	:	-	
Zinc	mg/L	T	<0.039	:	-		-		<0.0368	:	-		-	
Zinc	mg/L	D	-		<0.039	:	-		-		<0.0374	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Outfall-002 PIPE 10/20/2003 OUTFALL002-T01N-SFW GW13		OUTFALL-002 PIPE 10/20/2003 OUTFALL002PIPE-T 01N-GRW GW13		OUTFALL-002 PIPE 10/20/2003 OUTFALL002PIPE-D01N-GRW GW13		OUTFALL-002 PIPE 1/7/2004 OUTFALL002PIPE-T 01N-GRW GW13		OUTFALL-002 PIPE 1/7/2004 OUTFALL002PIPE-D 01N-GRW GW13		OUTFALL-002 PIPE 4/14/2004 OUTFALL002PIPE-T 01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		8.79	:	-		7.23	:	-		8.14	:
Eh	millivolts	T	-		93.4	:	-		298.4	:	-		230.	:
Flow	gpm	T	-		400.	:	-		-		-		-	
pH	SU	T	-		7.7	J	-		7.6	J	-		7.7	:
Specific Conductance	uS/cm	T	-		1676.	:	-		1702.	:	-		1642.	:
Temperature	Celsius	T	-		11.75	:	-		9.34	:	-		11.6	:
Turbidity	NTU	T	-		2.5	:	-		0.7	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.052	J	-		0.043	J	-		<0.048	:
Bicarbonate (as CaCO3)	mg/L	T	-		155.	:	-		155.	J	-		148.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		13.1	:	-		12.8	:	-		13.3	:
Fluoride	mg/L	T	-		1.2	:	-		1.2	:	-		1.2	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.25	J	-		<0.26	J	-		0.32	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.047	J	-		0.051	J	-		0.047	J
Phosphorus	mg/L	T	-		0.062	:	-		0.063	:	-		0.059	:
Sulfate	mg/L	T	-		791.	J	-		862.	:	-		697.	:
Total Alkalinity	mg/L	T	-		155.	:	-		155.	J	-		148.	:
Total Dissolved Solids	mg/L	T	-		1430.	:	-		1410.	:	-		1370.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		2.6	J	-		<1.5	:	-		<2.5	J
Total Suspended Solids	mg/L	T	-		10.7	:	-		<1.1	:	-		<1.7	J
Laboratory Parameters														
pH	SU	T	-		7.7	J	-		7.6	J	-		7.7	:
Specific Conductance	umhos/cm	T	-		1620.	J	-		1600.	J	-		1370.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		833.	:	-		866.	:	-		878.	:
Hardness	mg/L	D	-		-		819.	:	-		859.	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Outfall-002 PIPE 10/20/2003 OUTFALL002-T01N-SFW GW13	OUTFALL-002 PIPE 10/20/2003 OUTFALL002PIPE-T 01N-GRW GW13	OUTFALL-002 PIPE 10/20/2003 OUTFALL002PIPE-D01N-GRW GW13	OUTFALL-002 PIPE 1/7/2004 OUTFALL002PIPE-T 01N-GRW GW13	OUTFALL-002 PIPE 1/7/2004 OUTFALL002PIPE-D 01N-GRW GW13	OUTFALL-002 PIPE 4/14/2004 OUTFALL002PIPE-T 01N-GRW GW13
Metals								
Aluminum	mg/L	T	-	0.199 :	-	<0.0329 :	-	<0.201 :
Aluminum	mg/L	D	-	-	<0.0221 :	-	<0.0329 :	-
Antimony	mg/L	T	-	<0.0005 :	-	0.0014 :	-	0.00082 :
Antimony	mg/L	D	-	-	<0.0005 :	-	<0.0012 :	-
Arsenic	mg/L	T	-	0.00041 :	-	0.00056 :	-	<0.0004 :
Arsenic	mg/L	D	-	-	0.00041 :	-	0.00059 :	-
Barium	mg/L	T	-	0.0315 :	-	0.0262 :	-	0.0286 :
Barium	mg/L	D	-	-	0.0294 :	-	0.0258 :	-
Beryllium	mg/L	T	-	<0.0004 :	-	<0.0003 :	-	<0.00028 :
Beryllium	mg/L	D	-	-	<0.0004 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0275 :	-	0.0323 :	-	0.0261 :
Boron	mg/L	D	-	-	0.028 :	-	0.03 :	-
Cadmium	mg/L	T	-	0.00021 :	-	0.00023 J	-	<0.0003 J
Cadmium	mg/L	D	-	-	0.00024 :	-	0.00042 :	-
Calcium	mg/L	T	-	258. :	-	270. :	-	271. :
Calcium	mg/L	D	-	-	254. :	-	268. :	-
Chromium	mg/L	T	-	<0.0012 J	-	<0.0015 :	-	<0.0008 J
Chromium	mg/L	D	-	-	<0.0011 J	-	<0.0015 :	-
Cobalt	mg/L	T	-	<0.0029 :	-	<0.0023 :	-	0.0045 J
Cobalt	mg/L	D	-	-	<0.0029 :	-	<0.0023 :	-
Copper	mg/L	T	-	<0.0017 :	-	0.001 :	-	<0.0012 J
Copper	mg/L	D	-	-	<0.0017 :	-	0.0019 :	-
Iron	mg/L	T	-	0.169 :	-	<0.0357 :	-	<0.293 J
Iron	mg/L	D	-	-	<0.0278 :	-	<0.0357 :	-
Lead	mg/L	T	-	0.00035 :	-	<0.0001 :	-	<0.0008 :
Lead	mg/L	D	-	-	<0.0002 :	-	<0.0001 :	-
Magnesium	mg/L	T	-	45.5 :	-	46.8 :	-	48.6 :
Magnesium	mg/L	D	-	-	44.8 :	-	46.3 :	-
Manganese	mg/L	T	-	0.484 :	-	0.603 :	-	0.455 :
Manganese	mg/L	D	-	-	0.451 :	-	0.589 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 J	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 J	-
Molybdenum	mg/L	T	-	1.15 :	-	1.27 :	-	1.2 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

		Site ID	Outfall-002 PIPE	OUTFALL-002 PIPE	OUTFALL-002 PIPE	OUTFALL-002 PIPE	OUTFALL-002 PIPE	OUTFALL-002 PIPE
		Sample Date	10/20/2003	10/20/2003	10/20/2003	1/7/2004	1/7/2004	4/14/2004
		Sample ID	OUTFALL002-T01N-SFW	OUTFALL002PIPE-T01N-GRW	OUTFALL002PIPE-D01N-GRW	OUTFALL002PIPE-T01N-GRW	OUTFALL002PIPE-D01N-GRW	OUTFALL002PIPE-T01N-GRW
		Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Paramete	Units	Fraction						
Molybdenum	mg/L	D	-	-	1.09 :	-	1.25 :	-
Nickel	mg/L	T	-	0.0035 :	-	<0.0035 :	-	0.0019 :
Nickel	mg/L	D	-	-	0.0031 :	-	0.0042 :	-
Potassium	mg/L	T	-	4.42 :	-	4.53 :	-	4.38 :
Potassium	mg/L	D	-	-	4.22 :	-	4.49 :	-
Selenium	mg/L	T	-	0.00082 :	-	<0.0015 J	-	<0.0014 :
Selenium	mg/L	D	-	-	0.00083 :	-	<0.0015 :	-
Silver	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0002 J
Silver	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Sodium	mg/L	T	-	73.7 :	-	76.2 :	-	70.4 :
Sodium	mg/L	D	-	-	72.2 :	-	75.7 :	-
Thallium	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0002 :
Thallium	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Uranium	mg/L	T	0.0367 J	-	-	-	-	-
Vanadium	mg/L	T	-	0.0017 :	-	0.0014 :	-	0.0016 :
Vanadium	mg/L	D	-	-	0.0013 :	-	0.0013 :	-
Zinc	mg/L	T	-	<0.0023 :	-	<0.004 :	-	<0.024 :
Zinc	mg/L	D	-	-	<0.0023 :	-	<0.004 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6g
Groundwater - Upper Alluvial Aquifer - Outfall 002
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			OUTFALL-002 PIPE / 4/14/2004 / OUTFALL002PIPE-D 01N-GRW / GW13	----	----	----	----	----
Physical Properties								
Hardness	mg/L	D	912. :	-	-	-	-	-
Metals								
Aluminum	mg/L	D	<0.201 :	-	-	-	-	-
Antimony	mg/L	D	<0.0008 :	-	-	-	-	-
Arsenic	mg/L	D	<0.0004 :	-	-	-	-	-
Barium	mg/L	D	0.0295 :	-	-	-	-	-
Beryllium	mg/L	D	<0.0002 :	-	-	-	-	-
Boron	mg/L	D	0.0271 :	-	-	-	-	-
Cadmium	mg/L	D	<0.0003 J	-	-	-	-	-
Calcium	mg/L	D	282. :	-	-	-	-	-
Chromium	mg/L	D	0.0011 J	-	-	-	-	-
Cobalt	mg/L	D	<0.0011 J	-	-	-	-	-
Copper	mg/L	D	<0.0007 J	-	-	-	-	-
Iron	mg/L	D	<0.293 :	-	-	-	-	-
Lead	mg/L	D	<0.0008 :	-	-	-	-	-
Magnesium	mg/L	D	50.4 :	-	-	-	-	-
Manganese	mg/L	D	0.498 :	-	-	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	-	-
Molybdenum	mg/L	D	1.3 :	-	-	-	-	-
Nickel	mg/L	D	<0.0014 :	-	-	-	-	-
Potassium	mg/L	D	4.86 :	-	-	-	-	-
Selenium	mg/L	D	<0.0014 :	-	-	-	-	-
Silver	mg/L	D	<0.0002 J	-	-	-	-	-
Sodium	mg/L	D	70.2 :	-	-	-	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	-	-
Vanadium	mg/L	D	0.0017 :	-	-	-	-	-
Zinc	mg/L	D	<0.024 :	-	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6h
Residential Tap Water - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Red River Condo 1 Sample Date: 9/7/2003 Sample ID: SM5-T01N-TAP OMR		Site ID: Red River Condo 1 Sample Date: 9/7/2003 Sample ID: SM5-D01N-TAP OMR		Site ID: Red River Condo 2 Sample Date: 9/7/2003 Sample ID: FM9-T01N-TAP OMR		Site ID: Red River Condo 2 Sample Date: 9/7/2003 Sample ID: FM9-D01N-TAP OMR		Site ID: Red River Lodge Sample Date: 9/7/2003 Sample ID: P13A-T01N-TAP OMR		Site ID: Red River Lodge Sample Date: 9/7/2003 Sample ID: P13A-D01N-TAP OMR	
Field Measurements														
DO	mg/L	T	4.33	:	-		5.63	:	-		5.74	:	-	
Eh	millivolts	T	117.4	:	-		178.2	:	-		150.6	:	-	
pH	SU	T	7.48	:	-		6.95	:	-		7.2	:	-	
Specific Conductance	uS/cm	T	255.	:	-		211.	:	-		244.	:	-	
Temperature	Celsius	T	38.92	:	-		13.1	:	-		14.33	:	-	
Turbidity	NTU	T	0.1	:	-		56.	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	0.042	:	-		0.077	:	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	99.3	:	-		100.	:	-		101.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	2.5	:	-		2.5	:	-		2.6	:	-	
Fluoride	mg/L	T	<0.1	:	-		<0.1	:	-		<0.1	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.25	J	-		0.25	J	-		0.26	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Sulfate	mg/L	T	22.2	:	-		20.8	:	-		20.6	:	-	
Total Alkalinity	mg/L	T	99.3	:	-		100.	:	-		101.	:	-	
Total Dissolved Solids	mg/L	T	146.	:	-		136.	:	-		180.	:	-	
Total Suspended Solids	mg/L	T	<0.5	:	-		<0.5	:	-		<0.5	:	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	111.	:	-		114.	:	-		115.	:	-	
Hardness	mg/L	D	-		112.	:	-		113.	:	-		114.	:
Metals														
Aluminum	mg/L	T	0.0454	:	-		0.0283	:	-		<0.0236	J	-	
Aluminum	mg/L	D	-		<0.0236	:	-		<0.0236	:	-		<0.0236	J
Antimony	mg/L	T	<0.0011	:	-		<0.0005	:	-		<0.0005	:	-	
Antimony	mg/L	D	-		<0.0005	:	-		<0.0005	:	-		<0.0005	:
Arsenic	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Arsenic	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Barium	mg/L	T	0.0836	:	-		0.0853	:	-		0.0896	:	-	
Barium	mg/L	D	-		0.0848	:	-		0.0847	:	-		0.0885	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6h
Residential Tap Water - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Red River Condo 1 9/7/2003 SM5-T01N-TAP OMR		Red River Condo 1 9/7/2003 SM5-D01N-TAP OMR		Red River Condo 2 9/7/2003 FM9-T01N-TAP OMR		Red River Condo 2 9/7/2003 FM9-D01N-TAP OMR		Red River Lodge 9/7/2003 P13A-T01N-TAP OMR		Red River Lodge 9/7/2003 P13A-D01N-TAP OMR	
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0145	:	-		<0.0048	:	-		<0.0048	:	-	
Boron	mg/L	D	-		0.0135	:	-		<0.0048	:	-		<0.0048	:
Cadmium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Cadmium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Calcium	mg/L	T	35.1	:	-		36.1	:	-		36.5	:	-	
Calcium	mg/L	D	-		35.7	:	-		36.	:	-		36.2	:
Chromium	mg/L	T	<0.0014	:	-		<0.0014	:	-		<0.0014	:	-	
Chromium	mg/L	D	-		<0.0014	:	-		<0.0014	:	-		<0.0014	:
Cobalt	mg/L	T	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.002	:	-		<0.002	:
Copper	mg/L	T	0.0483	:	-		0.0535	:	-		0.0162	:	-	
Copper	mg/L	D	-		0.0407	:	-		0.0509	:	-		0.0277	:
Iron	mg/L	T	<0.0333	:	-		<0.0333	:	-		<0.0333	:	-	
Iron	mg/L	D	-		<0.0333	:	-		<0.0333	:	-		<0.0333	:
Lead	mg/L	T	0.0013	:	-		0.00033	:	-		0.00018	:	-	
Lead	mg/L	D	-		0.00062	:	-		0.0003	:	-		0.00025	:
Magnesium	mg/L	T	5.58	:	-		5.74	:	-		5.83	:	-	
Magnesium	mg/L	D	-		5.66	:	-		5.73	:	-		5.78	:
Manganese	mg/L	T	0.002	:	-		0.00084	:	-		<0.0007	:	-	
Manganese	mg/L	D	-		0.005	:	-		0.0031	:	-		0.001	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.00074	J	-		<0.00044	J	-		0.00041	:	-	
Molybdenum	mg/L	D	-		<0.00057	J	-		<0.00046	J	-		0.00042	:
Nickel	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.0006	:	-	
Nickel	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Potassium	mg/L	T	0.942	:	-		0.943	:	-		0.868	:	-	
Potassium	mg/L	D	-		0.929	:	-		0.993	:	-		0.88	:
Selenium	mg/L	T	<0.0008	:	-		<0.0008	:	-		<0.0008	J	-	
Selenium	mg/L	D	-		<0.0008	:	-		<0.0008	:	-		<0.0008	J
Silver	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6h
Residential Tap Water - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Red River Condo 1 9/7/2003 SM5-T01N-TAP OMR		Red River Condo 1 9/7/2003 SM5-D01N-TAP OMR		Red River Condo 2 9/7/2003 FM9-T01N-TAP OMR		Red River Condo 2 9/7/2003 FM9-D01N-TAP OMR		Red River Lodge 9/7/2003 P13A-T01N-TAP OMR		Red River Lodge 9/7/2003 P13A-D01N-TAP OMR	
Sodium	mg/L	T	3.65	:	-		4.24	:	-		3.63	:	-	
Sodium	mg/L	D	-		3.8	:	-		3.86	:	-		3.68	:
Thallium	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Uranium	mg/L	T	0.00079	J	-		0.00089	J	-		0.00095	J	-	
Vanadium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Zinc	mg/L	T	0.164	:	-		0.0444	:	-		0.0064	:	-	
Zinc	mg/L	D	-		0.152	:	-		0.043	:	-		0.0104	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6i
Residential Tap Water - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Cater Ranch Sample Date: 9/7/2003 Sample ID: CR-T01N-TAP TLR		Site ID: Cater Ranch Sample Date: 9/7/2003 Sample ID: CR-D01N-TAP TLR		----	----	----	----
Field Measurements										
DO	mg/L	T	8.04	:	-		-	-	-	-
EH	millivolts	T	192.2	:	-		-	-	-	-
pH	SU	T	7.41	:	-		-	-	-	-
Specific Conductance	uS/cm	T	149.	:	-		-	-	-	-
Temperature	Celsius	T	11.51	:	-		-	-	-	-
Turbidity	NTU	T	3.4	:	-		-	-	-	-
General Chemistry										
Ammonia	mg/L	T	<0.04	:	-		-	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	67.2	:	-		-	-	-	-
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-	-	-	-
Chloride	mg/L	T	1.7	:	-		-	-	-	-
Fluoride	mg/L	T	0.24	:	-		-	-	-	-
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-	-	-	-
Nitrate	mg/L	T	1.5	J	-		-	-	-	-
Nitrite	mg/L	T	<0.005	J	-		-	-	-	-
Sulfate	mg/L	T	5.9	:	-		-	-	-	-
Total Alkalinity	mg/L	T	67.2	:	-		-	-	-	-
Total Dissolved Solids	mg/L	T	144.	:	-		-	-	-	-
Total Suspended Solids	mg/L	T	0.6	:	-		-	-	-	-
Inorganics										
Cyanide	mg/L	T	<0.01	:	-		-	-	-	-
Physical Properties										
Hardness	mg/L	T	62.4	:	-		-	-	-	-
Hardness	mg/L	D	-		62.2	:	-	-	-	-
Metals										
Aluminum	mg/L	T	<0.0236	J	-		-	-	-	-
Aluminum	mg/L	D	-		<0.0236	J	-	-	-	-
Antimony	mg/L	T	<0.0005	:	-		-	-	-	-
Antimony	mg/L	D	-		<0.0005	:	-	-	-	-
Arsenic	mg/L	T	<0.0002	:	-		-	-	-	-
Arsenic	mg/L	D	-		<0.0002	:	-	-	-	-
Barium	mg/L	T	0.0141	:	-		-	-	-	-
Barium	mg/L	D	-		0.014	:	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6i
Residential Tap Water - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		----	----	----	----
			Cater Ranch 9/7/2003 CR-T01N-TAP	TLR	Cater Ranch 9/7/2003 CR-D01N-TAP	TLR				
Beryllium	mg/L	T	<0.00025	:	-		-	-	-	-
Beryllium	mg/L	D	-		<0.0002	:	-	-	-	-
Boron	mg/L	T	<0.0048	:	-		-	-	-	-
Boron	mg/L	D	-		<0.0048	:	-	-	-	-
Cadmium	mg/L	T	<0.0002	:	-		-	-	-	-
Cadmium	mg/L	D	-		<0.0002	:	-	-	-	-
Calcium	mg/L	T	19.9	:	-		-	-	-	-
Calcium	mg/L	D	-		19.8	:	-	-	-	-
Chromium	mg/L	T	<0.0014	:	-		-	-	-	-
Chromium	mg/L	D	-		<0.0014	:	-	-	-	-
Cobalt	mg/L	T	<0.002	:	-		-	-	-	-
Cobalt	mg/L	D	-		<0.002	:	-	-	-	-
Copper	mg/L	T	0.0168	J	-		-	-	-	-
Copper	mg/L	D	-		0.0154	:	-	-	-	-
Iron	mg/L	T	<0.085	:	-		-	-	-	-
Iron	mg/L	D	-		<0.0333	:	-	-	-	-
Lead	mg/L	T	0.00037	:	-		-	-	-	-
Lead	mg/L	D	-		<0.0001	:	-	-	-	-
Magnesium	mg/L	T	3.1	:	-		-	-	-	-
Magnesium	mg/L	D	-		3.09	:	-	-	-	-
Manganese	mg/L	T	0.0022	:	-		-	-	-	-
Manganese	mg/L	D	-		0.0021	:	-	-	-	-
Mercury	mg/L	T	<0.0001	:	-		-	-	-	-
Mercury	mg/L	D	-		<0.0001	:	-	-	-	-
Molybdenum	mg/L	T	0.0005	:	-		-	-	-	-
Molybdenum	mg/L	D	-		0.00055	:	-	-	-	-
Nickel	mg/L	T	<0.0006	:	-		-	-	-	-
Nickel	mg/L	D	-		<0.0006	:	-	-	-	-
Potassium	mg/L	T	0.602	:	-		-	-	-	-
Potassium	mg/L	D	-		0.627	:	-	-	-	-
Selenium	mg/L	T	<0.0008	J	-		-	-	-	-
Selenium	mg/L	D	-		<0.0008	J	-	-	-	-
Silver	mg/L	T	<0.0001	:	-		-	-	-	-
Silver	mg/L	D	-		<0.0001	:	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6i
Residential Tap Water - Basal Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Cater Ranch 9/7/2003 CR-T01N-TAP TLR		Cater Ranch 9/7/2003 CR-D01N-TAP TLR		----	----	----	----
Sodium	mg/L	T	4.53	:	-		-	-	-	-
Sodium	mg/L	D	-		4.33	:	-	-	-	-
Thallium	mg/L	T	<0.0001	:	-		-	-	-	-
Thallium	mg/L	D	-		<0.0001	:	-	-	-	-
Uranium	mg/L	T	0.00064	J	-		-	-	-	-
Vanadium	mg/L	T	0.00055	J	-		-	-	-	-
Vanadium	mg/L	D	-		0.00048	:	-	-	-	-
Zinc	mg/L	T	0.126	:	-		-	-	-	-
Zinc	mg/L	D	-		0.123	:	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6j
Residential Tap Water - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: PR1		Site ID: PR1		Site ID: PR2		Site ID: PR2		----	----
		Sample Date	9/8/2003		9/8/2003		9/8/2003		9/8/2003			
		Sample ID	PR1-T01N-TAP		PR1-D01N-TAP		PR2-T01N-TAP		PR2-D01N-TAP			
		Exposure Area	RTW		RTW		RTW		RTW			
Field Measurements												
DO	mg/L	T	6.56	:	-		6.79	:	-		-	-
Eh	millivolts	T	487.6	:	-		575.	:	-		-	-
pH	SU	T	7.58	:	-		7.77	:	-		-	-
Specific Conductance	uS/cm	T	394.	:	-		382.	:	-		-	-
Temperature	Celsius	T	17.08	:	-		17.3	:	-		-	-
Turbidity	NTU	T	8.6	:	-		4.5	:	-		-	-
General Chemistry												
Ammonia	mg/L	T	<0.04	:	-		<0.04	:	-		-	-
Bicarbonate (as CaCO3)	mg/L	T	164.	:	-		164.	:	-		-	-
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-	-
Chloride	mg/L	T	2.	:	-		1.9	:	-		-	-
Fluoride	mg/L	T	0.74	:	-		0.69	:	-		-	-
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-	-
Nitrate	mg/L	T	0.62	J	-		0.62	J	-		-	-
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		-	-
Sulfate	mg/L	T	31.3	:	-		35.4	J	-		-	-
Total Alkalinity	mg/L	T	164.	:	-		164.	:	-		-	-
Total Dissolved Solids	mg/L	T	190.	:	-		254.	:	-		-	-
Total Suspended Solids	mg/L	T	<0.5	:	-		<0.5	:	-		-	-
Inorganics												
Cyanide	mg/L	T	<0.01	:	-		<0.01	:	-		-	-
Physical Properties												
Hardness	mg/L	T	130.	:	-		126.	:	-		-	-
Hardness	mg/L	D	-		127.	:	-		126.	:	-	-
Metals												
Aluminum	mg/L	T	<0.0236	J	-		<0.0236	J	-		-	-
Aluminum	mg/L	D	-		<0.0236	J	-		<0.0236	J	-	-
Antimony	mg/L	T	<0.0005	:	-		<0.0005	:	-		-	-
Antimony	mg/L	D	-		<0.0005	:	-		<0.0005	:	-	-
Arsenic	mg/L	T	0.00029	:	-		0.00023	J	-		-	-
Arsenic	mg/L	D	-		0.00024	:	-		0.00023	J	-	-
Barium	mg/L	T	0.0444	:	-		0.0429	:	-		-	-
Barium	mg/L	D	-		0.0433	:	-		0.0428	:	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6j
Residential Tap Water - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: PR1		Site ID: PR1		Site ID: PR2		Site ID: PR2		----	----
		Sample Date	9/8/2003		9/8/2003		9/8/2003		9/8/2003			
		Sample ID	PR1-T01N-TAP		PR1-D01N-TAP		PR2-T01N-TAP		PR2-D01N-TAP			
			RTW		RTW		RTW		RTW			
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-	-
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-	-
Boron	mg/L	T	0.0581	:	-		0.0556	:	-		-	-
Boron	mg/L	D	-		0.0558	:	-		0.0573	:	-	-
Cadmium	mg/L	T	<0.0002	:	-		<0.0002	J	-		-	-
Cadmium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-	-
Calcium	mg/L	T	40.1	:	-		38.7	:	-		-	-
Calcium	mg/L	D	-		39.3	:	-		38.7	:	-	-
Chromium	mg/L	T	<0.0014	:	-		<0.0014	:	-		-	-
Chromium	mg/L	D	-		<0.0014	:	-		<0.0014	:	-	-
Cobalt	mg/L	T	<0.002	:	-		<0.002	:	-		-	-
Cobalt	mg/L	D	-		<0.002	:	-		<0.002	:	-	-
Copper	mg/L	T	0.0078	:	-		0.005	J	-		-	-
Copper	mg/L	D	-		0.0049	:	-		0.0051	J	-	-
Iron	mg/L	T	<0.0333	:	-		<0.0333	:	-		-	-
Iron	mg/L	D	-		<0.0333	:	-		<0.0333	:	-	-
Lead	mg/L	T	0.0014	:	-		0.00093	:	-		-	-
Lead	mg/L	D	-		0.001	:	-		0.00078	:	-	-
Magnesium	mg/L	T	7.26	:	-		7.02	:	-		-	-
Magnesium	mg/L	D	-		7.11	:	-		7.03	:	-	-
Manganese	mg/L	T	<0.0007	:	-		<0.0007	:	-		-	-
Manganese	mg/L	D	-		<0.0007	:	-		0.0023	:	-	-
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		-	-
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-	-
Molybdenum	mg/L	T	0.0051	:	-		0.005	:	-		-	-
Molybdenum	mg/L	D	-		0.0049	:	-		0.005	:	-	-
Nickel	mg/L	T	<0.0006	:	-		<0.0006	:	-		-	-
Nickel	mg/L	D	-		<0.0006	:	-		<0.0006	:	-	-
Potassium	mg/L	T	1.2	:	-		1.13	:	-		-	-
Potassium	mg/L	D	-		1.17	:	-		1.17	:	-	-
Selenium	mg/L	T	<0.0008	J	-		<0.0008	J	-		-	-
Selenium	mg/L	D	-		<0.0008	J	-		<0.0008	J	-	-
Silver	mg/L	T	<0.0001	:	-		<0.0001	:	-		-	-
Silver	mg/L	D	-		<0.0001	:	-		<0.0001	:	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6j
Residential Tap Water - Upper Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	PR1 9/8/2003 PR1-T01N-TAP RTW		PR1 9/8/2003 PR1-D01N-TAP RTW		PR2 9/8/2003 PR2-T01N-TAP RTW		PR2 9/8/2003 PR2-D01N-TAP RTW		----	----
Sodium	mg/L	T	34.5	:	-		33.5	:	-		-	-
Sodium	mg/L	D	-		33.7	:	-		33.4	:	-	-
Thallium	mg/L	T	<0.0001	:	-		<0.0001	:	-		-	-
Thallium	mg/L	D	-		<0.0001	:	-		<0.0001	:	-	-
Uranium	mg/L	T	0.0041	:	-		0.0041	:	-		-	-
Vanadium	mg/L	T	0.00083	J	-		0.00082	:	-		-	-
Vanadium	mg/L	D	-		0.00081	J	-		0.00089	:	-	-
Zinc	mg/L	T	0.147	:	-		0.0622	:	-		-	-
Zinc	mg/L	D	-		0.145	:	-		0.0572	:	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			CabinSprings 6/26/2003 CabinSprings-T01N-GRW GW4		CabinSprings 6/26/2003 CabinSprings-D01N-GRW GW4		CabinSprings 7/21/2003 CabinSprings-T01N-GRW GW4		CabinSprings 7/21/2003 CABINSPRINGS-D01N-GRW GW4		Chambers Springs 5/9/2003 CHAMBERSSPRIN-T01N-GRW OMR		Chambers Springs 5/9/2003 CHAMBERSSPRING-T01N-GRW OMR	
Field Measurements														
DO	mg/L	T	7.7	:	-		7.65	:	-		-		11.6	:
EH	millivolts	T	212.9	:	-		441.7	:	-		-		157.	:
Flow	gpm	T	-		-		0.26	:	-		-		31.8	:
pH	SU	T	4.29	:	-		4.6	J	-		8.1	J	7.52	:
Specific Conductance	uS/cm	T	2287.	:	-		1356.	:	-		-		258.	:
Temperature	Celsius	T	8.73	:	-		9.2	:	-		-		3.74	:
Turbidity	NTU	T	113.	:	-		0.5	:	-		-		3.3	:
General Chemistry														
Ammonia	mg/L	T	-		-		<0.044	J	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		104.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	14.2	:	-		12.8	:	-		1.2	:	-	
Fluoride	mg/L	T	13.9	:	-		15.4	:	-		0.42	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	2.1	:	-		2.2	J	-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Phosphorus	mg/L	T	-		-		0.023	:	-		<0.01	:	-	
Sulfate	mg/L	T	1040.	J	-		772.	J	-		29.2	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		104.	:	-	
Total Dissolved Solids	mg/L	T	1250.	:	-		1550.	:	-		132.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		<1.1	J	-		1.3	:	-	
Total Suspended Solids	mg/L	T	1.4	:	-		<1.7	:	-		1.3	:	-	
Laboratory Parameters														
pH	SU	T	4.29	:	-		4.6	J	-		8.1	J	7.52	:
Specific Conductance	umhos/cm	T	1320.	J	-		1340.	J	-		249.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	687.	:	-		674.	:	-		132.	:	-	
Hardness	mg/L	D	-		702.	:	-		673.	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: CabinSprings Sample Date: 6/26/2003 Sample ID: CabinSprings-T01N-GRW GW4		Site ID: CabinSprings Sample Date: 6/26/2003 Sample ID: CabinSprings-D01N-GRW GW4		Site ID: CabinSprings Sample Date: 7/21/2003 Sample ID: CABINSPRINGS-T01N-GRW GW4		Site ID: CabinSprings Sample Date: 7/21/2003 Sample ID: CABINSPRINGS-D01N-GRW GW4		Site ID: Chambers Springs Sample Date: 5/9/2003 Sample ID: CHAMBERSSPRIN-T01N-GRW OMR		Site ID: Chambers Springs Sample Date: 5/9/2003 Sample ID: CHAMBERSSPRING-T01N-GRW OMR	
Metals														
Aluminum	mg/L	T	33.1	:	-		33.	:	-		<0.426	:	-	
Aluminum	mg/L	D	-		33.7	:	-		32.8	:	-		-	
Antimony	mg/L	T	<0.0005	:	-		<0.038	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0005	:	-		<0.038	:	-		-	
Arsenic	mg/L	T	<0.0002	:	-		<0.024	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0002	:	-		0.0399	:	-		-	
Barium	mg/L	T	0.0152	:	-		<0.073	:	-		0.0166	:	-	
Barium	mg/L	D	-		0.0149	:	-		<0.073	:	-		-	
Beryllium	mg/L	T	0.0084	:	-		0.0109	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		0.0082	:	-		0.0094	:	-		-	
Boron	mg/L	T	0.0106	:	-		<0.046	:	-		<0.0084	:	-	
Boron	mg/L	D	-		0.0088	:	-		<0.046	:	-		-	
Cadmium	mg/L	T	0.0231	J	-		<0.12	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		0.0228	:	-		<0.12	:	-		-	
Calcium	mg/L	T	139.	:	-		135.	:	-		42.4	:	-	
Calcium	mg/L	D	-		143.	:	-		136.	:	-		-	
Chromium	mg/L	T	<0.0006	J	-		<0.19	J	-		<0.001	:	-	
Chromium	mg/L	D	-		<0.0006	J	-		<0.19	J	-		-	
Cobalt	mg/L	T	0.116	J	-		<0.37	:	-		<0.0038	:	-	
Cobalt	mg/L	D	-		0.114	:	-		<0.37	:	-		-	
Copper	mg/L	T	0.416	:	-		<0.33	:	-		<0.0016	:	-	
Copper	mg/L	D	-		0.409	:	-		<0.33	:	-		-	
Iron	mg/L	T	<0.168	J	-		<6.67	:	-		<0.422	J	-	
Iron	mg/L	D	-		<0.168	J	-		<6.67	:	-		-	
Lead	mg/L	T	0.00081	:	-		<0.001	:	-		<0.0002	J	-	
Lead	mg/L	D	-		0.0007	:	-		<0.001	:	-		-	
Magnesium	mg/L	T	82.3	:	-		81.9	:	-		6.32	:	-	
Magnesium	mg/L	D	-		84.	:	-		80.7	:	-		-	
Manganese	mg/L	T	16.8	:	-		17.	:	-		<0.013	J	-	
Manganese	mg/L	D	-		17.1	:	-		16.8	:	-		-	
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		-	
Molybdenum	mg/L	T	<0.0016	:	-		<0.016	:	-		0.0106	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	CabinSprings 6/26/2003 CabinSprings-T01N-GRW GW4		CabinSprings 6/26/2003 CabinSprings-D01N-GRW GW4		CabinSprings 7/21/2003 CABINSPRINGS-T01N-GRW GW4		CabinSprings 7/21/2003 CABINSPRINGS-D01N-GRW GW4		Chambers Springs 5/9/2003 CHAMBERSSPRIN-T01N-GRW OMR		Chambers Springs 5/9/2003 CHAMBERSSPRING-T01N-GRW OMR	
Molybdenum	mg/L	D	-		<0.0016	:	-		<0.016	:	-		-	
Nickel	mg/L	T	0.324	:	-		<0.44	:	-		<0.003	:	-	
Nickel	mg/L	D	-		0.32	:	-		<0.44	:	-		-	
Potassium	mg/L	T	2.44	:	-		<37.1	:	-		1.15	:	-	
Potassium	mg/L	D	-		2.39	:	-		<37.1	:	-		-	
Selenium	mg/L	T	0.004	:	-		<0.008	:	-		<0.001	:	-	
Selenium	mg/L	D	-		0.0044	:	-		<0.008	J	-		-	
Silver	mg/L	T	0.00012	:	-		<0.001	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.001	J	-		-	
Sodium	mg/L	T	13.	:	-		<53.2	:	-		<9.16	:	-	
Sodium	mg/L	D	-		12.9	:	-		<53.2	:	-		-	
Thallium	mg/L	T	<0.0001	:	-		<0.001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.001	:	-		-	
Vanadium	mg/L	T	<0.0002	:	-		<0.002	:	-		0.00024	:	-	
Vanadium	mg/L	D	-		<0.0002	:	-		<0.002	:	-		-	
Zinc	mg/L	T	3.4	:	-		2.87	:	-		<0.039	:	-	
Zinc	mg/L	D	-		3.47	:	-		2.91	:	-		-	
Isotopes														
Lead	mg/L	T	0.00081	:	-		<0.001	:	-		<0.0002	J	-	
Lead	mg/L	D	-		0.0007	:	-		<0.001	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Chambers Springs 5/9/2003 CHAMBERSSPRING-D01N-GRW OMR		Chambers Springs 6/4/2003 Chambers Springs-T01N-GRW OMR		Chambers Springs 7/20/2003 CHAMBER-T01N-GRW OMR		Chambers Springs 7/20/2003 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 7/20/2003 CHAMBER-D01N-GRW OMR		Chambers Springs 8/11/2003 CHAMBERSPRING-T01N-GRW OMR	
Field Measurements														
DO	mg/L	T	-		-		-		7.43	:	-		-	
EH	millivolts	T	-		-		-		399.1	:	-		-	
Flow	gpm	T	-		100.	:	-		210.	:	-		42.9	:
pH	SU	T	-		-		8.	J	7.68	:	-		-	
Specific Conductance	uS/cm	T	-		-		-		257.	:	-		-	
Temperature	Celsius	T	-		-		-		10.06	:	-		-	
Turbidity	NTU	T	-		-		-		4.1	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.049	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		111.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Chloride	mg/L	T	-		-		0.68	:	-		-		-	
Fluoride	mg/L	T	-		-		0.49	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		-	
Nitrate	mg/L	T	-		-		<0.2	J	-		-		-	
Nitrite	mg/L	T	-		-		<0.005	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	J	-		-		-	
Phosphorus	mg/L	T	-		-		<0.01	:	-		-		-	
Sulfate	mg/L	T	-		-		40.4	J	-		-		-	
Total Alkalinity	mg/L	T	-		-		111.	:	-		-		-	
Total Dissolved Solids	mg/L	T	-		-		216.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<1.	J	-		-		-	
Total Suspended Solids	mg/L	T	-		-		<2.	:	-		-		-	
Laboratory Parameters														
pH	SU	T	-		-		8.	J	7.68	:	-		-	
Specific Conductance	umhos/cm	T	-		-		269.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	-		-		141.	:	-		-		-	
Hardness	mg/L	D	134.	:	-		-		-		138.	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Chambers Springs 5/9/2003 CHAMBERSSPRING-D01N-GRW OMR	Chambers Springs 6/4/2003 Chambers Springs-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBER-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBER-D01N-GRW OMR	Chambers Springs 8/11/2003 CHAMBERSPRING-T01N-GRW OMR
Metals								
Aluminum	mg/L	T	-	-	<0.631 :	-	-	-
Aluminum	mg/L	D	<0.426 :	-	-	-	<0.631 :	-
Antimony	mg/L	T	-	-	<0.001 :	-	-	-
Antimony	mg/L	D	<0.0006 :	-	-	-	<0.001 :	-
Arsenic	mg/L	T	-	-	<0.0004 :	-	-	-
Arsenic	mg/L	D	<0.0004 :	-	-	-	<0.0004 :	-
Barium	mg/L	T	-	-	0.0186 :	-	-	-
Barium	mg/L	D	0.0165 :	-	-	-	0.0191 :	-
Beryllium	mg/L	T	-	-	<0.0002 J	-	-	-
Beryllium	mg/L	D	<0.0003 :	-	-	-	<0.0002 J	-
Boron	mg/L	T	-	-	0.0062 :	-	-	-
Boron	mg/L	D	<0.0084 :	-	-	-	<0.0046 :	-
Cadmium	mg/L	T	-	-	<0.0003 :	-	-	-
Cadmium	mg/L	D	<0.0005 :	-	-	-	<0.0003 :	-
Calcium	mg/L	T	-	-	44.9 :	-	-	-
Calcium	mg/L	D	43.2 :	-	-	-	43.9 :	-
Chromium	mg/L	T	-	-	<0.0019 :	-	-	-
Chromium	mg/L	D	<0.001 :	-	-	-	<0.0019 :	-
Cobalt	mg/L	T	-	-	<0.0018 :	-	-	-
Cobalt	mg/L	D	<0.0038 :	-	-	-	0.0026 :	-
Copper	mg/L	T	-	-	<0.0021 :	-	-	-
Copper	mg/L	D	<0.0015 :	-	-	-	<0.0014 :	-
Iron	mg/L	T	-	-	<0.667 :	-	-	-
Iron	mg/L	D	<0.422 J	-	-	-	<0.667 :	-
Lead	mg/L	T	-	-	<0.0002 :	-	-	-
Lead	mg/L	D	<0.0002 J	-	-	-	<0.0002 :	-
Magnesium	mg/L	T	-	-	6.9 :	-	-	-
Magnesium	mg/L	D	6.43 :	-	-	-	6.77 :	-
Manganese	mg/L	T	-	-	<0.0262 :	-	-	-
Manganese	mg/L	D	<0.013 J	-	-	-	<0.019 :	-
Mercury	mg/L	T	-	-	<0.00013 :	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	-	<0.00019 :	-
Molybdenum	mg/L	T	-	-	0.0136 :	-	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Chambers Springs 5/9/2003 CHAMBERSSPRING-D01N-GRW OMR	Chambers Springs 6/4/2003 Chambers Springs-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBER-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 7/20/2003 CHAMBER-D01N-GRW OMR	Chambers Springs 8/11/2003 CHAMBERSPRING-T01N-GRW OMR
Molybdenum	mg/L	D	0.0101 :	-	-	-	0.0134 :	-
Nickel	mg/L	T	-	-	<0.002 J	-	-	-
Nickel	mg/L	D	<0.003 :	-	-	-	<0.002 J	-
Potassium	mg/L	T	-	-	1.22 :	-	-	-
Potassium	mg/L	D	1.14 :	-	-	-	1.22 :	-
Selenium	mg/L	T	-	-	<0.0016 :	-	-	-
Selenium	mg/L	D	<0.001 :	-	-	-	<0.0016 J	-
Silver	mg/L	T	-	-	<0.0002 J	-	-	-
Silver	mg/L	D	<0.0002 :	-	-	-	<0.0002 J	-
Sodium	mg/L	T	-	-	<5.32 :	-	-	-
Sodium	mg/L	D	<9.16 :	-	-	-	<5.32 :	-
Thallium	mg/L	T	-	-	<0.0002 :	-	-	-
Thallium	mg/L	D	<0.0002 :	-	-	-	<0.0002 :	-
Vanadium	mg/L	T	-	-	<0.0004 :	-	-	-
Vanadium	mg/L	D	0.00028 :	-	-	-	<0.0004 :	-
Zinc	mg/L	T	-	-	<0.0527 :	-	-	-
Zinc	mg/L	D	<0.039 :	-	-	-	<0.0234 :	-
Isotopes								
Lead	mg/L	T	-	-	<0.0002 :	-	-	-
Lead	mg/L	D	<0.0002 J	-	-	-	<0.0002 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Chambers Springs Sample Date: 10/21/2003 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 10/21/2003 Sample ID: CHAMBERSPRING-D01N-GRW OMR	Site ID: Chambers Springs Sample Date: 11/5/2003 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 12/10/2003 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 1/9/2004 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 1/9/2004 Sample ID: CHAMBERSPRING-D01N-GRW OMR
Field Measurements								
DO	mg/L	T	10.25 :	-	-	-	7.87 :	-
EH	millivolts	T	416.6 :	-	-	-	264. :	-
Flow	gpm	T	60. :	-	50. :	50. :	-	-
pH	SU	T	8. J	-	-	-	8. J	-
Specific Conductance	uS/cm	T	297. :	-	-	-	252. :	-
Temperature	Celsius	T	4.78 :	-	-	-	2.38 :	-
Turbidity	NTU	T	-	-	-	-	1. :	-
General Chemistry								
Ammonia	mg/L	T	0.04 J	-	-	-	<0.056 J	-
Bicarbonate (as CaCO3)	mg/L	T	114. :	-	-	-	101. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Chloride	mg/L	T	1. :	-	-	-	1.1 :	-
Fluoride	mg/L	T	0.44 :	-	-	-	0.45 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T	<0.2 J	-	-	-	<0.2 :	-
Nitrite	mg/L	T	<0.005 J	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	-	-	<0.01 :	-
Phosphorus	mg/L	T	0.027 :	-	-	-	<0.01 :	-
Sulfate	mg/L	T	35.9 J	-	-	-	34.6 :	-
Total Alkalinity	mg/L	T	114. :	-	-	-	101. :	-
Total Dissolved Solids	mg/L	T	192. :	-	-	-	170. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	<1. J	-	-	-	<1.6 :	-
Total Suspended Solids	mg/L	T	9.8 :	-	-	-	<0.7 :	-
Laboratory Parameters								
pH	SU	T	8. J	-	-	-	8. J	-
Specific Conductance	umhos/cm	T	291. J	-	-	-	242. J	-
Inorganics								
Cyanide	mg/L	T	<0.01 J	-	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	151. :	-	-	-	127. :	-
Hardness	mg/L	D	-	154. :	-	-	-	127. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Chambers Springs 10/21/2003 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 10/21/2003 CHAMBERSPRING-D01N-GRW OMR		Chambers Springs 11/5/2003 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 12/10/2003 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 1/9/2004 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 1/9/2004 CHAMBERSPRING-D01N-GRW OMR	
Metals														
Aluminum	mg/L	T	<0.221	J	-		-		-		<0.514	:	-	
Aluminum	mg/L	D	-		<0.221	J	-		-		-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		-		-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		-		-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		-		-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		-		-		<0.0004	:
Barium	mg/L	T	0.0195	:	-		-		-		<0.0188	:	-	
Barium	mg/L	D	-		0.0191	:	-		-		-		<0.0188	:
Beryllium	mg/L	T	<0.00061	:	-		-		-		<0.001	J	-	
Beryllium	mg/L	D	-		<0.00067	:	-		-		-		<0.001	J
Boron	mg/L	T	<0.0063	:	-		-		-		<0.0117	:	-	
Boron	mg/L	D	-		<0.0063	:	-		-		-		<0.0117	:
Cadmium	mg/L	T	<0.0005	:	-		-		-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0005	:	-		-		-		<0.0007	J
Calcium	mg/L	T	49.8	:	-		-		-		40.3	:	-	
Calcium	mg/L	D	-		50.5	:	-		-		-		40.5	:
Chromium	mg/L	T	<0.0011	J	-		-		-		<0.0057	:	-	
Chromium	mg/L	D	-		<0.0011	J	-		-		-		<0.0057	:
Cobalt	mg/L	T	<0.0029	:	-		-		-		<0.0037	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		-		-		<0.0037	:
Copper	mg/L	T	0.0043	:	-		-		-		<0.0035	:	-	
Copper	mg/L	D	-		<0.0022	:	-		-		-		<0.0035	:
Iron	mg/L	T	<0.278	:	-		-		-		<0.373	:	-	
Iron	mg/L	D	-		<0.278	:	-		-		-		<0.373	:
Lead	mg/L	T	<0.0004	:	-		-		-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0004	:	-		-		-		<0.0002	:
Magnesium	mg/L	T	6.59	:	-		-		-		6.33	:	-	
Magnesium	mg/L	D	-		6.67	:	-		-		-		6.33	:
Manganese	mg/L	T	<0.012	:	-		-		-		<0.015	:	-	
Manganese	mg/L	D	-		<0.012	:	-		-		-		<0.015	:
Mercury	mg/L	T	<0.0001	:	-		-		-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		<0.0001	:
Molybdenum	mg/L	T	0.0126	:	-		-		-		0.0125	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Chambers Springs 10/21/2003 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 10/21/2003 CHAMBERSPRING-D01N-GRW OMR	Chambers Springs 11/5/2003 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 12/10/2003 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 1/9/2004 CHAMBERSPRING-T01N-GRW OMR	Chambers Springs 1/9/2004 CHAMBERSPRING-D01N-GRW OMR
Molybdenum	mg/L	D	-	0.0125 :	-	-	-	0.0133 :
Nickel	mg/L	T	<0.0024 :	-	-	-	<0.0168 :	-
Nickel	mg/L	D	-	<0.0024 :	-	-	-	<0.0168 :
Potassium	mg/L	T	0.958 J	-	-	-	<1.1 :	-
Potassium	mg/L	D	-	0.892 J	-	-	-	<1.1 :
Selenium	mg/L	T	<0.0006 :	-	-	-	<0.0006 J	-
Selenium	mg/L	D	-	<0.00085 :	-	-	-	<0.0006 :
Silver	mg/L	T	<0.0002 :	-	-	-	<0.0002 :	-
Silver	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Sodium	mg/L	T	<4.54 J	-	-	-	<4.9 :	-
Sodium	mg/L	D	-	<4.54 J	-	-	-	<4.9 :
Thallium	mg/L	T	<0.0002 :	-	-	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	-	-	<0.0002 :
Vanadium	mg/L	T	0.00024 :	-	-	-	<0.0004 :	-
Vanadium	mg/L	D	-	<0.0002 :	-	-	-	<0.0004 :
Zinc	mg/L	T	<0.023 :	-	-	-	<0.091 :	-
Zinc	mg/L	D	-	<0.023 J	-	-	-	<0.091 :
Isotopes								
Lead	mg/L	T	<0.0004 :	-	-	-	<0.0002 :	-
Lead	mg/L	D	-	<0.0004 :	-	-	-	<0.0002 :

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Chambers Springs Sample Date: 4/22/2004 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 4/22/2004 Sample ID: CHAMBERSPRING-D01N-GRW OMR	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-T01N-GRWRE GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-D01N-GRWRE GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-D01N-GRW GW1
Field Measurements								
DO	mg/L	T	10.6 :	-	-	5.12 :	-	-
EH	millivolts	T	221.9 :	-	-	404.2 :	-	-
Flow	gpm	T	60. :	-	-	3. :	-	-
pH	SU	T	8.2 J	-	-	3.62 :	-	-
Specific Conductance	uS/cm	T	261. :	-	-	2043. :	-	-
Temperature	Celsius	T	4.82 :	-	-	14.5 :	-	-
Turbidity	NTU	T	0. :	-	-	3.6 :	-	-
General Chemistry								
Ammonia	mg/L	T	<0.073 :	-	-	<0.13 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	105. :	-	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	-
Chloride	mg/L	T	1.2 :	-	-	39.7 :	-	-
Fluoride	mg/L	T	0.41 :	-	14.4 J	-	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	-
Nitrate	mg/L	T	<0.2 :	-	-	<1. J	-	-
Nitrite	mg/L	T	<0.005 :	-	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-	<0.01 :	-	-
Phosphorus	mg/L	T	<0.01 :	-	-	0.024 :	-	-
Sulfate	mg/L	T	35.2 :	-	1540. J	-	-	-
Total Alkalinity	mg/L	T	105. :	-	-	<1. :	-	-
Total Dissolved Solids	mg/L	T	202. :	-	-	2210. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	<2.1 J	-	-	<1. :	-	-
Total Suspended Solids	mg/L	T	<2.7 J	-	-	3.3 :	-	-
Laboratory Parameters								
pH	SU	T	8.2 J	-	-	3.62 :	-	-
Specific Conductance	umhos/cm	T	236. J	-	-	-	-	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	-	-	-	-
Physical Properties								
Hardness	mg/L	T	132. :	-	-	-	-	-
Hardness	mg/L	D	-	129. :	-	-	753. :	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Chambers Springs Sample Date: 4/22/2004 Sample ID: CHAMBERSPRING-T01N-GRW OMR	Site ID: Chambers Springs Sample Date: 4/22/2004 Sample ID: CHAMBERSPRING-D01N-GRW OMR	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-T01N-GRWRE GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-D01N-GRWRE GW1	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWERSPRING13-D01N-GRW GW1
Metals								
Aluminum	mg/L	T	<0.242 :	-	-	-	-	-
Aluminum	mg/L	D	-	<0.176 :	-	-	<111. :	-
Antimony	mg/L	T	<0.0011 :	-	-	-	-	-
Antimony	mg/L	D	-	<0.0012 :	-	-	<0.028 :	-
Arsenic	mg/L	T	<0.0004 :	-	-	-	-	-
Arsenic	mg/L	D	-	<0.0004 :	-	-	<0.023 :	-
Barium	mg/L	T	0.0158 :	-	-	-	-	-
Barium	mg/L	D	-	0.0155 :	-	-	<0.048 :	-
Beryllium	mg/L	T	<0.0003 :	-	-	-	-	-
Beryllium	mg/L	D	-	<0.0003 :	-	-	0.0216 :	-
Boron	mg/L	T	<0.0036 :	-	-	-	-	-
Boron	mg/L	D	-	<0.0036 :	-	-	<0.027 :	-
Cadmium	mg/L	T	<0.0003 :	-	-	-	-	-
Cadmium	mg/L	D	-	<0.0003 :	-	-	<0.08 :	-
Calcium	mg/L	T	42.2 :	-	-	-	-	-
Calcium	mg/L	D	-	41.3 :	-	-	204. :	-
Chromium	mg/L	T	<0.00076 J	-	-	-	-	-
Chromium	mg/L	D	-	<0.0006 J	-	-	<0.16 J	-
Cobalt	mg/L	T	<0.0016 :	-	-	-	-	-
Cobalt	mg/L	D	-	<0.0016 :	-	-	<0.23 :	-
Copper	mg/L	T	<0.0014 :	-	-	-	-	-
Copper	mg/L	D	-	<0.0014 :	-	-	<1.1 :	-
Iron	mg/L	T	<0.392 J	-	-	-	-	-
Iron	mg/L	D	-	<0.286 :	-	-	32.5 :	-
Lead	mg/L	T	<0.0008 :	-	-	-	-	-
Lead	mg/L	D	-	<0.0008 :	-	-	<0.001 :	-
Magnesium	mg/L	T	6.48 :	-	-	-	-	-
Magnesium	mg/L	D	-	6.3 :	-	-	59. :	-
Manganese	mg/L	T	<0.019 :	-	-	-	-	-
Manganese	mg/L	D	-	<0.019 :	-	-	15.1 :	-
Mercury	mg/L	T	<0.0001 J	-	-	<0.0001 :	-	-
Mercury	mg/L	D	-	<0.0001 J	-	-	-	<0.0001 :
Molybdenum	mg/L	T	0.0099 :	-	-	-	-	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Chambers Springs 4/22/2004 CHAMBERSPRING-T01N-GRW OMR		Chambers Springs 4/22/2004 CHAMBERSPRING-D01N-GRW OMR		Lower Spring 13 10/9/2002 LOWERSPRING13-T01N-GRWRE GW1		Lower Spring 13 10/9/2002 LOWERSPRING13-T01N-GRW GW1		Lower Spring 13 10/9/2002 LOWERSPRING13-D01N-GRWRE GW1		Lower Spring 13 10/9/2002 LOWERSPRING13-D01N-GRW GW1	
Molybdenum	mg/L	D	-		0.0105	:	-		-		<0.011	:	-	
Nickel	mg/L	T	<0.0015	J	-		-		-		-		-	
Nickel	mg/L	D	-		<0.0015	J	-		-		0.375	:	-	
Potassium	mg/L	T	1.12	:	-		-		-		-		-	
Potassium	mg/L	D	-		1.13	:	-		-		<31.4	J	-	
Selenium	mg/L	T	<0.0014	:	-		-		-		-		-	
Selenium	mg/L	D	-		<0.0014	:	-		-		<0.008	:	-	
Silver	mg/L	T	<0.0002	J	-		-		-		-		-	
Silver	mg/L	D	-		<0.0002	J	-		-		<0.001	:	-	
Sodium	mg/L	T	<1.73	J	-		-		-		-		-	
Sodium	mg/L	D	-		<2.75	J	-		-		<36.6	:	-	
Thallium	mg/L	T	<0.0002	:	-		-		-		-		-	
Thallium	mg/L	D	-		<0.0002	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	0.0005	:	-		-		-		-		-	
Vanadium	mg/L	D	-		0.0004	:	-		-		<0.002	:	-	
Zinc	mg/L	T	<0.015	:	-		-		-		-		-	
Zinc	mg/L	D	-		<0.015	:	-		-		8.85	:	-	
Isotopes														
Delta D	per mil	T	-97.4	:	-		-		-		-		-	
Delta O-18	per mil	T	-13.6	:	-		-		-		-		-	
Lead	mg/L	T	<0.0008	:	-		-		-		-		-	
Lead	mg/L	D	-		<0.0008	:	-		-		<0.001	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWER SPRING 13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/8/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/8/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/21/2003 Sample ID: LOWERSPRING13R-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 2/7/2003 Sample ID: Lower Spring 13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 3/7/2003 Sample ID: Lower Spring 13-T01N-GRW GW1
Field Measurements								
DO	mg/L	T	-	4.19 :	-	6.09 :	-	-
EH	millivolts	T	-	422. :	-	442.7 :	-	-
Flow	gpm	T	-	0.51 :	-	-	0.7 :	1.9 :
pH	SU	T	-	3.41 :	-	3.54 :	-	-
Specific Conductance	uS/cm	T	-	4169. :	-	2111. :	-	-
Temperature	Celsius	T	-	4.15 :	-	2.44 :	-	-
Turbidity	NTU	T	-	0.3 :	-	21.4 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	<0.12 :	-	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	-
Chloride	mg/L	T	-	35.3 :	-	-	-	-
Fluoride	mg/L	T	-	15.6 J	-	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	-	-
Nitrate	mg/L	T	-	<0.4 J	-	-	-	-
Nitrite	mg/L	T	-	<0.005 J	-	-	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.023 J	-	-	-	-
Phosphorus	mg/L	T	-	0.025 :	-	-	-	-
Sulfate	mg/L	T	-	1700. J	-	-	-	-
Total Alkalinity	mg/L	T	-	<1. :	-	-	-	-
Total Dissolved Solids	mg/L	T	-	2160. :	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.33 :	-	-	-	-
Total Organic Carbon	mg/L	T	-	1.4 :	-	-	-	-
Total Suspended Solids	mg/L	T	-	2.4 :	-	-	-	-
Laboratory Parameters								
pH	SU	T	-	3.41 :	-	3.54 :	-	-
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	806. :	-	-	-	-
Hardness	mg/L	D	-	-	800. :	-	-	-
Metals								

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID	Lower Spring 13 10/9/2002 LOWER SPRING 13-T01N-GRW GW1	Lower Spring 13 1/8/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 1/8/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 1/21/2003 LOWERSPRING13R-T01N-GRW GW1	Lower Spring 13 2/7/2003 Lower Spring 13-T01N-GRW GW1	Lower Spring 13 3/7/2003 Lower Spring 13-T01N-GRW GW1
Aluminum	mg/L	T		-	121. :	-	-	-	-
Aluminum	mg/L	D		-	-	119. :	-	-	-
Antimony	mg/L	T		-	<0.028 :	-	-	-	-
Antimony	mg/L	D		-	-	<0.028 :	-	-	-
Arsenic	mg/L	T		-	0.0279 :	-	-	-	-
Arsenic	mg/L	D		-	-	<0.023 :	-	-	-
Barium	mg/L	T		-	<0.048 :	-	-	-	-
Barium	mg/L	D		-	-	<0.048 :	-	-	-
Beryllium	mg/L	T		-	0.0182 :	-	-	-	-
Beryllium	mg/L	D		-	-	0.0185 :	-	-	-
Boron	mg/L	T		-	<0.027 :	-	-	-	-
Boron	mg/L	D		-	-	<0.027 :	-	-	-
Cadmium	mg/L	T		-	<0.08 :	-	-	-	-
Cadmium	mg/L	D		-	-	<0.08 :	-	-	-
Calcium	mg/L	T		-	220. :	-	-	-	-
Calcium	mg/L	D		-	-	218. :	-	-	-
Chromium	mg/L	T		-	<0.16 :	-	-	-	-
Chromium	mg/L	D		-	-	<0.16 :	-	-	-
Chromium, Hexavalent	mg/L	D		0.022 :	-	-	-	-	-
Cobalt	mg/L	T		-	0.259 :	-	-	-	-
Cobalt	mg/L	D		-	-	0.26 :	-	-	-
Copper	mg/L	T		-	1.01 :	-	-	-	-
Copper	mg/L	D		-	-	0.978 :	-	-	-
Iron	mg/L	T		-	26.8 :	-	-	-	-
Iron	mg/L	D		-	-	27.7 :	-	-	-
Lead	mg/L	T		-	<0.001 :	-	-	-	-
Lead	mg/L	D		-	-	<0.001 :	-	-	-
Magnesium	mg/L	T		-	62.7 :	-	-	-	-
Magnesium	mg/L	D		-	-	62.1 :	-	-	-
Manganese	mg/L	T		-	16.2 :	-	-	-	-
Manganese	mg/L	D		-	-	16.1 :	-	-	-
Mercury	mg/L	T		-	<0.0001 :	-	-	-	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T		-	<0.0195 :	-	-	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 10/9/2002 Sample ID: LOWER SPRING 13-T01N-GRW GW1	Lower Spring 13 1/8/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 1/8/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 1/21/2003 LOWERSPRING13R-T01N-GRW GW1	Lower Spring 13 2/7/2003 Lower Spring 13-T01N-GRW GW1	Lower Spring 13 3/7/2003 Lower Spring 13-T01N-GRW GW1
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	-
Nickel	mg/L	T	-	0.505 :	-	-	-	-
Nickel	mg/L	D	-	-	0.518 :	-	-	-
Potassium	mg/L	T	-	<31.4 :	-	-	-	-
Potassium	mg/L	D	-	-	<31.4 :	-	-	-
Selenium	mg/L	T	-	<0.008 :	-	-	-	-
Selenium	mg/L	D	-	-	<0.008 :	-	-	-
Silver	mg/L	T	-	<0.001 :	-	-	-	-
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	-	<36.6 :	-	-	-	-
Sodium	mg/L	D	-	-	<36.6 :	-	-	-
Thallium	mg/L	T	-	<0.001 :	-	-	-	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	<0.002 :	-	-	-	-
Vanadium	mg/L	D	-	-	<0.002 :	-	-	-
Zinc	mg/L	T	-	4.06 :	-	-	-	-
Zinc	mg/L	D	-	-	4.05 :	-	-	-
Isotopes								
Lead	mg/L	T	-	<0.001 :	-	-	-	-
Lead	mg/L	D	-	-	<0.001 :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			Lower Spring 13 4/4/2003 LOWERSPRING13-T01N-GRW GW1		Lower Spring 13 4/4/2003 LOWERSPRING13-D01N-GRW GW1		Lower Spring 13 5/5/2003 Lower Spring 13-T01N-GRW GW1		Lower Spring 13 7/22/2003 LOWERSPRING13-T01N-GRW GW1		Lower Spring 13 7/22/2003 LOWERSPRING13-D01N-GRW GW1		Lower Spring 13 8/11/2003 LOWERSPRING13-T01N-SFW GW1	
Field Measurements														
DO	mg/L	T	4.57	:	-		2.81	:	3.85	:	-		3.25	:
EH	millivolts	T	408.9	:	-		357.2	:	399.3	:	-		438.4	:
Flow	gpm	T	1.2	:	-		0.13	:	0.8	:	-		-	
pH	SU	T	3.65	:	-		3.6	:	3.9	J	-		2.81	:
Specific Conductance	uS/cm	T	2216.	:	-		2155.	:	2149.	:	-		2208.	:
Temperature	Celsius	T	5.83	:	-		9.47	:	17.33	:	-		15.43	:
Turbidity	NTU	T	0.	:	-		0.1	:	1.7	:	-		11.6	:
General Chemistry														
Ammonia	mg/L	T	0.12	:	-		-		<0.043	J	-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	42.4	:	-		-		30.1	:	-		-	
Fluoride	mg/L	T	15.9	:	-		-		18.	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.4	J	-		-		<0.4	J	-		-	
Nitrite	mg/L	T	<0.005	J	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	0.027	:	-		-		0.02	:	-		-	
Sulfate	mg/L	T	1470.	J	-		-		1470.	J	-		-	
Total Alkalinity	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Total Dissolved Solids	mg/L	T	2360.	:	-		-		2780.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	3.	J	-		-		<1.1	J	-		-	
Total Suspended Solids	mg/L	T	3.2	:	-		-		2.9	:	-		-	
Laboratory Parameters														
pH	SU	T	3.65	:	-		3.6	:	3.9	J	-		2.81	:
Specific Conductance	umhos/cm	T	2110.	J	-		-		2180.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	880.	:	-		-		796.	:	-		-	
Hardness	mg/L	D	-		860.	:	-		-		809.	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 4/4/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 4/4/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 5/5/2003 Sample ID: Lower Spring 13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 7/22/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 7/22/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 8/11/2003 Sample ID: LOWERSPRING13-T01N-SFW GW1
Metals								
Aluminum	mg/L	T	129. :	-	-	107. :	-	-
Aluminum	mg/L	D	-	126. :	-	-	108. :	-
Antimony	mg/L	T	<0.003 J	-	-	<0.047 :	-	-
Antimony	mg/L	D	-	<0.003 J	-	-	<0.047 :	-
Arsenic	mg/L	T	<0.047 :	-	-	<0.048 :	-	-
Arsenic	mg/L	D	-	<0.047 :	-	-	<0.048 :	-
Barium	mg/L	T	<0.135 :	-	-	<0.059 :	-	-
Barium	mg/L	D	-	<0.135 :	-	-	<0.059 :	-
Beryllium	mg/L	T	0.0202 :	-	-	<0.0252 :	-	-
Beryllium	mg/L	D	-	0.0198 :	-	-	<0.025 :	-
Boron	mg/L	T	<0.075 :	-	-	<0.048 :	-	-
Boron	mg/L	D	-	<0.075 :	-	-	<0.048 :	-
Cadmium	mg/L	T	<0.04 :	-	-	<0.12 :	-	-
Cadmium	mg/L	D	-	<0.04 :	-	-	<0.12 :	-
Calcium	mg/L	T	245. :	-	-	215. :	-	-
Calcium	mg/L	D	-	238. :	-	-	219. :	-
Chromium	mg/L	T	<0.09 J	-	-	<0.19 :	-	-
Chromium	mg/L	D	-	<0.09 J	-	-	<0.19 :	-
Cobalt	mg/L	T	<0.29 :	-	-	<0.37 :	-	-
Cobalt	mg/L	D	-	<0.29 :	-	-	<0.37 :	-
Copper	mg/L	T	<1.05 :	-	-	1.11 :	-	-
Copper	mg/L	D	-	<0.911 :	-	-	1.11 :	-
Iron	mg/L	T	48.3 :	-	-	40.2 :	-	-
Iron	mg/L	D	-	50.7 :	-	-	41. :	-
Lead	mg/L	T	<0.001 :	-	-	<0.001 :	-	-
Lead	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Magnesium	mg/L	T	65.2 :	-	-	62.9 :	-	-
Magnesium	mg/L	D	-	64.3 :	-	-	63.7 :	-
Manganese	mg/L	T	17.5 :	-	-	15.5 :	-	-
Manganese	mg/L	D	-	17.2 :	-	-	15.8 :	-
Mercury	mg/L	T	<0.0001 :	-	-	0.00058 :	-	-
Mercury	mg/L	D	-	<0.0001 :	-	-	0.00045 :	-
Molybdenum	mg/L	T	<0.016 :	-	-	<0.017 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Lower Spring 13 4/4/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 4/4/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 5/5/2003 Lower Spring 13-T01N-GRW GW1	Lower Spring 13 7/22/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 7/22/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 8/11/2003 LOWERSPRING13-T01N-SFW GW1
Molybdenum	mg/L	D	-	<0.016 :	-	-	<0.017 :	-
Nickel	mg/L	T	0.385 :	-	-	0.503 :	-	-
Nickel	mg/L	D	-	0.436 :	-	-	0.533 :	-
Potassium	mg/L	T	<32.7 :	-	-	<37.1 :	-	-
Potassium	mg/L	D	-	<32.7 :	-	-	<37.1 :	-
Selenium	mg/L	T	<0.005 :	-	-	0.0093 :	-	-
Selenium	mg/L	D	-	<0.005 :	-	-	<0.008 J	-
Silver	mg/L	T	<0.001 :	-	-	<0.001 J	-	-
Silver	mg/L	D	-	<0.001 :	-	-	<0.001 J	-
Sodium	mg/L	T	<51.3 :	-	-	<85. :	-	-
Sodium	mg/L	D	-	<51.3 :	-	-	<53.2 :	-
Thallium	mg/L	T	<0.001 :	-	-	<0.001 :	-	-
Thallium	mg/L	D	-	<0.001 :	-	-	<0.001 :	-
Vanadium	mg/L	T	<0.001 :	-	-	<0.002 :	-	-
Vanadium	mg/L	D	-	<0.001 :	-	-	<0.002 :	-
Zinc	mg/L	T	4.66 :	-	-	4.07 :	-	-
Zinc	mg/L	D	-	4.48 :	-	-	4.14 :	-
Isotopes								
Lead	mg/L	T	<0.001 :	-	-	<0.001 :	-	-
Lead	mg/L	D	-	<0.001 :	-	-	<0.001 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Lower Spring 13 8/11/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 8/11/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 9/9/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 9/9/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 10/22/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 10/22/2003 LOWERSPRING13-D01N-GRW GW1
Field Measurements								
DO	mg/L	T	-	-	6.82 :	-	5.61 :	-
EH	millivolts	T	-	-	367.1 :	-	386.8 :	-
Flow	gpm	T	-	-	-	-	1.8 :	-
pH	SU	T	3.6 J	-	3.7 J	-	3.6 J	-
Specific Conductance	uS/cm	T	-	-	2136. :	-	1466. :	-
Temperature	Celsius	T	-	-	13.55 :	-	9.36 :	-
Turbidity	NTU	T	-	-	20. :	-	0. :	-
General Chemistry								
Ammonia	mg/L	T	0.1 :	-	<0.073 :	-	0.058 J	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T	35.5 :	-	39.4 :	-	25. :	-
Fluoride	mg/L	T	15.5 :	-	15.7 :	-	13.5 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	<0.2 J	-	<0.2 J	-	<0.2 J	-
Nitrite	mg/L	T	<0.005 J	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T	0.02 :	-	0.048 :	-	<0.01 :	-
Sulfate	mg/L	T	1210. J	-	1420. J	-	1300. J	-
Total Alkalinity	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T	2400. :	-	2150. :	-	2270. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :	-	2.6 :	-
Total Organic Carbon	mg/L	T	<2. J	-	<3.2 :	-	2.3 J	-
Total Suspended Solids	mg/L	T	<2.5 :	-	135. :	-	1.4 :	-
Laboratory Parameters								
pH	SU	T	3.6 J	-	3.7 J	-	3.6 J	-
Specific Conductance	umhos/cm	T	1920. J	-	1980. J	-	1900. J	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	<0.01 :	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	756. :	-	826. :	-	666. :	-
Hardness	mg/L	D	-	762. :	-	809. :	-	662. :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 8/11/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 8/11/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 9/9/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 9/9/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 10/22/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 10/22/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1
Metals								
Aluminum	mg/L	T	111. :	-	121. :	-	91.7 :	-
Aluminum	mg/L	D	-	113. J	-	119. :	-	91.5 :
Antimony	mg/L	T	<0.038 :	-	<0.082 :	-	<0.082 :	-
Antimony	mg/L	D	-	<0.038 :	-	<0.082 :	-	<0.082 :
Arsenic	mg/L	T	<0.024 :	-	<0.035 :	-	<0.035 :	-
Arsenic	mg/L	D	-	0.0264 :	-	<0.035 :	-	<0.035 :
Barium	mg/L	T	<0.073 :	-	<0.117 :	-	<0.117 :	-
Barium	mg/L	D	-	<0.073 :	-	<0.117 :	-	<0.117 :
Beryllium	mg/L	T	0.0204 :	-	0.0264 :	-	0.0196 :	-
Beryllium	mg/L	D	-	0.0198 :	-	<0.0243 :	-	0.0217 :
Boron	mg/L	T	<0.046 :	-	<0.064 :	-	<0.064 :	-
Boron	mg/L	D	-	<0.046 :	-	<0.064 :	-	<0.064 :
Cadmium	mg/L	T	<0.12 :	-	<0.13 :	-	<0.13 :	-
Cadmium	mg/L	D	-	<0.12 :	-	<0.13 :	-	<0.13 :
Calcium	mg/L	T	204. :	-	224. :	-	182. :	-
Calcium	mg/L	D	-	205. :	-	219. :	-	180. :
Chromium	mg/L	T	<0.19 :	-	<0.23 :	-	<0.23 J	-
Chromium	mg/L	D	-	<0.19 :	-	<0.23 :	-	<0.23 J
Cobalt	mg/L	T	<0.37 :	-	<0.32 :	-	<0.32 :	-
Cobalt	mg/L	D	-	<0.37 :	-	<0.32 :	-	<0.32 :
Copper	mg/L	T	1.52 :	-	1.09 :	-	0.93 J	-
Copper	mg/L	D	-	1.3 :	-	1.09 :	-	0.995 J
Iron	mg/L	T	21.7 :	-	41.4 :	-	23.1 :	-
Iron	mg/L	D	-	22.4 :	-	40. :	-	23.4 :
Lead	mg/L	T	<0.001 :	-	0.0029 :	-	<0.002 :	-
Lead	mg/L	D	-	<0.001 :	-	<0.0021 :	-	<0.002 :
Magnesium	mg/L	T	60. :	-	65. :	-	51.6 :	-
Magnesium	mg/L	D	-	60.6 :	-	63.9 :	-	51.5 :
Manganese	mg/L	T	14.8 :	-	16.2 :	-	12.8 :	-
Manganese	mg/L	D	-	15. :	-	15.8 :	-	12.7 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	<0.016 :	-	<0.0257 :	-	<0.012 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 8/11/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1		Site ID: Lower Spring 13 Sample Date: 8/11/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1		Site ID: Lower Spring 13 Sample Date: 9/9/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1		Site ID: Lower Spring 13 Sample Date: 9/9/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1		Site ID: Lower Spring 13 Sample Date: 10/22/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1		Site ID: Lower Spring 13 Sample Date: 10/22/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.012	:	-		<0.012	:
Nickel	mg/L	T	0.566	:	-		<0.45	:	-		<0.45	:	-	
Nickel	mg/L	D	-		0.587	:	-		<0.45	:	-		<0.45	:
Potassium	mg/L	T	<37.1	:	-		<63.8	:	-		<63.8	:	-	
Potassium	mg/L	D	-		<37.1	:	-		<63.8	:	-		<63.8	:
Selenium	mg/L	T	<0.008	:	-		0.0035	:	-		<0.003	:	-	
Selenium	mg/L	D	-		<0.008	:	-		0.0042	:	-		0.0054	:
Silver	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Sodium	mg/L	T	<53.2	J	-		<99.1	:	-		<99.1	:	-	
Sodium	mg/L	D	-		<53.2	J	-		<99.1	:	-		<99.1	:
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		<0.001	:
Zinc	mg/L	T	5.5	:	-		4.12	:	-		3.46	:	-	
Zinc	mg/L	D	-		4.24	:	-		4.01	:	-		3.44	:
Isotopes														
Lead	mg/L	T	<0.001	:	-		0.0029	:	-		<0.002	:	-	
Lead	mg/L	D	-		<0.001	:	-		<0.0021	:	-		<0.002	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 11/3/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 11/3/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 12/11/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 12/11/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/14/2004 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/14/2004 Sample ID: LOWERSPRING13-D01N-GRW GW1
Field Measurements								
DO	mg/L	T	-	-	4.32 :	-	2.48 :	-
EH	millivolts	T	365.9 :	-	355.6 :	-	347.4 :	-
Flow	gpm	T	0.4 :	-	-	-	0.09 :	-
pH	SU	T	3.9 J	-	3.47 :	-	3.73 :	-
Specific Conductance	uS/cm	T	2078. :	-	1993. :	-	1093. :	-
Temperature	Celsius	T	8.59 :	-	7.31 :	-	3.29 :	-
Turbidity	NTU	T	1304.3 :	-	0. :	-	1.2 :	-
General Chemistry								
Ammonia	mg/L	T	<0.17 :	-	0.086 :	-	<0.15 J	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T	28.2 :	-	31.7 :	-	38.6 :	-
Fluoride	mg/L	T	16.8 :	-	3.8 :	-	16.5 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T	<0.2 J	-	<0.2 :	-	<0.2 J	-
Nitrite	mg/L	T	<0.005 J	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	0.077 J	-	<0.01 :	-	<0.016 J	-
Phosphorus	mg/L	T	0.041 J	-	0.02 :	-	<0.022 :	-
Sulfate	mg/L	T	1480. :	-	1310. :	-	1580. :	-
Total Alkalinity	mg/L	T	<1. :	-	<1. :	-	<1. :	-
Total Dissolved Solids	mg/L	T	2280. :	-	2130. :	-	2310. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T	2. :	-	1.2 :	-	<0.4 :	-
Total Suspended Solids	mg/L	T	23. :	-	2.3 :	-	<2.2 :	-
Laboratory Parameters								
pH	SU	T	3.9 J	-	3.47 :	-	3.73 :	-
Specific Conductance	umhos/cm	T	1770. J	-	1660. J	-	2040. J	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	<0.01 :	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	776. :	-	793. :	-	819. :	-
Hardness	mg/L	D	-	764. :	-	774. :	-	836. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Lower Spring 13 11/3/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 11/3/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 12/11/2003 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 12/11/2003 LOWERSPRING13-D01N-GRW GW1	Lower Spring 13 1/14/2004 LOWERSPRING13-T01N-GRW GW1	Lower Spring 13 1/14/2004 LOWERSPRING13-D01N-GRW GW1
Metals								
Aluminum	mg/L	T	118. :	-	116. :	-	118. :	-
Aluminum	mg/L	D	-	116. :	-	113. :	-	124. :
Antimony	mg/L	T	<0.052 :	-	<0.0024 :	-	<0.097 :	-
Antimony	mg/L	D	-	<0.052 :	-	<0.0024 :	-	<0.097 :
Arsenic	mg/L	T	<0.041 :	-	<0.0004 :	-	<0.052 :	-
Arsenic	mg/L	D	-	<0.041 :	-	<0.0004 :	-	<0.052 :
Barium	mg/L	T	<0.115 :	-	<0.0115 :	-	<0.188 :	-
Barium	mg/L	D	-	<0.115 :	-	<0.0115 :	-	<0.188 :
Beryllium	mg/L	T	0.0182 :	-	0.0159 :	-	0.0205 :	-
Beryllium	mg/L	D	-	0.0189 :	-	0.0156 :	-	0.0228 :
Boron	mg/L	T	<0.063 :	-	<0.0063 :	-	<0.117 :	-
Boron	mg/L	D	-	<0.063 :	-	<0.0063 :	-	<0.117 :
Cadmium	mg/L	T	<0.05 :	-	0.0152 :	-	<0.07 J	-
Cadmium	mg/L	D	-	<0.05 :	-	0.0149 :	-	<0.07 :
Calcium	mg/L	T	204. :	-	214. :	-	221. :	-
Calcium	mg/L	D	-	202. :	-	209. :	-	226. :
Chromium	mg/L	T	<0.11 J	-	0.0068 :	-	<0.11 :	-
Chromium	mg/L	D	-	<0.11 J	-	0.0064 :	-	<0.11 :
Cobalt	mg/L	T	<0.29 :	-	0.165 :	-	<0.31 :	-
Cobalt	mg/L	D	-	<0.29 :	-	0.166 :	-	<0.31 :
Copper	mg/L	T	1.04 :	-	0.964 :	-	1.02 :	-
Copper	mg/L	D	-	1.04 :	-	0.948 :	-	1.09 :
Iron	mg/L	T	43.3 :	-	25.9 :	-	49.7 :	-
Iron	mg/L	D	-	29.6 :	-	24.4 :	-	34.6 :
Lead	mg/L	T	0.0068 :	-	0.00033 :	-	<0.001 :	-
Lead	mg/L	D	-	<0.002 :	-	0.00036 :	-	<0.001 :
Magnesium	mg/L	T	64.8 :	-	62.4 :	-	65.2 :	-
Magnesium	mg/L	D	-	63.4 :	-	61. :	-	66.1 :
Manganese	mg/L	T	16.2 J	-	15. :	-	16. :	-
Manganese	mg/L	D	-	16. :	-	14.6 :	-	16.4 :
Mercury	mg/L	T	<0.0001 J	-	<0.0001 :	-	<0.0001 J	-
Mercury	mg/L	D	-	<0.0001 J	-	<0.0001 :	-	<0.0001 J
Molybdenum	mg/L	T	<0.011 :	-	<0.0011 :	-	<0.03 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 11/3/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 11/3/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 12/11/2003 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 12/11/2003 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/14/2004 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 1/14/2004 Sample ID: LOWERSPRING13-D01N-GRW GW1
Molybdenum	mg/L	D	-	<0.011 :	-	<0.0011 :	-	<0.03 :
Nickel	mg/L	T	<0.24 J	-	0.32 J	-	0.573 :	-
Nickel	mg/L	D	-	<0.24 J	-	0.315 J	-	0.454 :
Potassium	mg/L	T	38.1 :	-	2.57 J	-	<24.3 :	-
Potassium	mg/L	D	-	36.4 :	-	<2.52 :	-	<24.3 :
Selenium	mg/L	T	0.0035 :	-	0.0053 :	-	0.0058 J	-
Selenium	mg/L	D	-	0.0054 :	-	0.0052 :	-	0.0055 :
Silver	mg/L	T	<0.001 :	-	<0.0002 :	-	<0.001 :	-
Silver	mg/L	D	-	<0.001 :	-	<0.0002 :	-	<0.001 :
Sodium	mg/L	T	<45.4 :	-	23. :	-	66.3 :	-
Sodium	mg/L	D	-	<45.4 :	-	24.2 :	-	<49. :
Thallium	mg/L	T	<0.001 :	-	<0.0002 :	-	<0.001 :	-
Thallium	mg/L	D	-	<0.001 :	-	<0.0002 :	-	<0.001 :
Vanadium	mg/L	T	0.0013 :	-	<0.0004 :	-	<0.002 :	-
Vanadium	mg/L	D	-	<0.001 :	-	<0.0004 :	-	<0.002 :
Zinc	mg/L	T	3.65 :	-	3.91 :	-	4.23 :	-
Zinc	mg/L	D	-	3.66 :	-	3.83 :	-	4.48 :
Isotopes								
Lead	mg/L	T	0.0068 :	-	0.00033 :	-	<0.001 :	-
Lead	mg/L	D	-	<0.002 :	-	0.00036 :	-	<0.001 :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-D0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 8/12/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 11/4/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4
Field Measurements								
DO	mg/L	T	6.99 :	-	39.25 :	-	-	-
EH	millivolts	T	400.6 :	-	374.9 :	-	-	-
Flow	gpm	T	1. :	-	0.37 :	-	0.1 :	0.3 :
pH	SU	T	3.57 :	-	4.84 :	-	-	-
Specific Conductance	uS/cm	T	2005. :	-	580. :	-	-	-
Temperature	Celsius	T	6.52 :	-	10.33 :	-	-	-
Turbidity	NTU	T	0. :	-	10.1 :	-	-	-
General Chemistry								
Ammonia	mg/L	T	<0.074 :	-	<0.2 J	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	<4.5 :	-	-	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	-
Chloride	mg/L	T	51.4 :	-	9. :	-	-	-
Fluoride	mg/L	T	15.4 :	-	4.1 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	<1. :	-	-	-
Nitrate	mg/L	T	<0.2 J	-	0.93 J	-	-	-
Nitrite	mg/L	T	<0.005 J	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	<0.01 J	-	-	-
Phosphorus	mg/L	T	0.014 :	-	0.027 :	-	-	-
Sulfate	mg/L	T	1520. :	-	255. J	-	-	-
Total Alkalinity	mg/L	T	<1. :	-	<4.5 :	-	-	-
Total Dissolved Solids	mg/L	T	2250. :	-	502. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	2. J	-	<1.3 J	-	-	-
Total Suspended Solids	mg/L	T	<1.1 :	-	109. :	-	-	-
Laboratory Parameters								
pH	SU	T	3.57 :	-	4.84 :	-	-	-
Specific Conductance	umhos/cm	T	1810. J	-	547. J	-	-	-
Inorganics								
Cyanide	mg/L	T	<0.01 :	-	<0.01 J	-	-	-
Physical Properties								
Hardness	mg/L	T	817. :	-	250. :	-	-	-
Hardness	mg/L	D	-	808. :	-	258. :	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-D0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 8/12/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 11/4/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4
Metals								
Aluminum	mg/L	T	121. :	-	<1.83 J	-	-	-
Aluminum	mg/L	D	-	118. :	-	<1.83 J	-	-
Antimony	mg/L	T	<0.053 :	-	<0.038 :	-	-	-
Antimony	mg/L	D	-	<0.053 :	-	<0.038 :	-	-
Arsenic	mg/L	T	<0.037 :	-	<0.024 :	-	-	-
Arsenic	mg/L	D	-	<0.037 :	-	<0.024 :	-	-
Barium	mg/L	T	<0.049 :	-	<0.073 :	-	-	-
Barium	mg/L	D	-	<0.049 :	-	<0.073 :	-	-
Beryllium	mg/L	T	0.0253 :	-	<0.002 :	-	-	-
Beryllium	mg/L	D	-	0.0242 :	-	<0.002 :	-	-
Boron	mg/L	T	<0.036 :	-	<0.046 :	-	-	-
Boron	mg/L	D	-	<0.036 :	-	<0.046 :	-	-
Cadmium	mg/L	T	<0.1 :	-	<0.03 :	-	-	-
Cadmium	mg/L	D	-	<0.1 :	-	<0.03 :	-	-
Calcium	mg/L	T	221. :	-	65.1 :	-	-	-
Calcium	mg/L	D	-	218. :	-	67.2 :	-	-
Chromium	mg/L	T	<0.13 :	-	<0.06 J	-	-	-
Chromium	mg/L	D	-	<0.13 :	-	<0.06 J	-	-
Cobalt	mg/L	T	0.233 :	-	<0.18 :	-	-	-
Cobalt	mg/L	D	-	0.205 :	-	<0.18 :	-	-
Copper	mg/L	T	1.35 :	-	<0.17 :	-	-	-
Copper	mg/L	D	-	1.18 :	-	<0.24 :	-	-
Iron	mg/L	T	28.2 J	-	<1.68 :	-	-	-
Iron	mg/L	D	-	27.6 :	-	<1.68 :	-	-
Lead	mg/L	T	<0.004 :	-	0.002 :	-	-	-
Lead	mg/L	D	-	<0.004 :	-	<0.001 :	-	-
Magnesium	mg/L	T	64.5 :	-	21.3 :	-	-	-
Magnesium	mg/L	D	-	63.8 :	-	22. :	-	-
Manganese	mg/L	T	15.8 :	-	1.8 :	-	-	-
Manganese	mg/L	D	-	15.7 :	-	1.79 :	-	-
Mercury	mg/L	T	<0.0001 :	-	<0.0001 J	-	-	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 J	-	-
Molybdenum	mg/L	T	<0.014 :	-	<0.016 :	-	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-T01N-GRW GW1	Site ID: Lower Spring 13 Sample Date: 4/13/2004 Sample ID: LOWERSPRING13-D01N-GRW GW1	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 7/20/2003 Sample ID: PORTALSPRING-D0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 8/12/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: Portal Spring Sample Date: 11/4/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4
Molybdenum	mg/L	D	-	<0.014 :	-	<0.016 :	-	-
Nickel	mg/L	T	0.65 :	-	<0.2 J	-	-	-
Nickel	mg/L	D	-	0.419 :	-	<0.2 J	-	-
Potassium	mg/L	T	<15.5 :	-	<25. :	-	-	-
Potassium	mg/L	D	-	<15.5 :	-	<25. :	-	-
Selenium	mg/L	T	<0.007 :	-	<0.008 :	-	-	-
Selenium	mg/L	D	-	<0.007 :	-	<0.008 J	-	-
Silver	mg/L	T	<0.001 J	-	<0.0018 J	-	-	-
Silver	mg/L	D	-	<0.001 J	-	<0.0011 J	-	-
Sodium	mg/L	T	<34.5 J	-	<21.9 :	-	-	-
Sodium	mg/L	D	-	<42.4 J	-	25.7 :	-	-
Thallium	mg/L	T	<0.001 :	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	<0.001 :	-	<0.001 :	-	-
Vanadium	mg/L	T	<0.002 :	-	<0.002 :	-	-	-
Vanadium	mg/L	D	-	<0.002 :	-	<0.002 :	-	-
Zinc	mg/L	T	4.32 :	-	<0.57 J	-	-	-
Zinc	mg/L	D	-	4.29 :	-	<0.57 J	-	-
Isotopes								
Delta D	per mil	T	-91.2 :	-	-	-	-	-
Delta O-18	per mil	T	-12.6 :	-	-	-	-	-
Lead	mg/L	T	<0.004 :	-	0.002 :	-	-	-
Lead	mg/L	D	-	<0.004 :	-	<0.001 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Portal Spring Sample Date: 12/8/2003 Sample ID: PORTALSPRING-T0 1N-GRW GW4	Site ID: SPRING 13 Sample Date: 10/2/2002 Sample ID: SPRING13-T01N-G RWRE GW1	Site ID: Spring 13 Sample Date: 10/2/2002 Sample ID: SPRING13-T01N-G RW GW1	Site ID: SPRING 13 Sample Date: 10/2/2002 Sample ID: SPRING13-D01N-G RWRE GW1	Site ID: Spring 13 Sample Date: 10/2/2002 Sample ID: SPRING13-D01N-G RW GW1	Site ID: Spring 13 Sample Date: 10/2/2002 Sample ID: Spring 13-T01N-GW GW1
Field Measurements								
DO	mg/L	T	-	-	6.78 :	-	-	-
EH	millivolts	T	-	-	430.6 :	-	-	-
Flow	gpm	T	1. :	-	-	-	-	3. :
pH	SU	T	-	-	3.9 :	-	-	-
Specific Conductance	uS/cm	T	-	-	1472. :	-	-	-
Temperature	Celsius	T	-	-	12.49 :	-	-	-
Turbidity	NTU	T	-	-	1.7 :	-	-	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.065 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Chloride	mg/L	T	-	-	27.9 :	-	-	-
Fluoride	mg/L	T	-	9.6 J	-	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Nitrate	mg/L	T	-	-	<0.2 :	-	-	-
Nitrite	mg/L	T	-	-	<0.005 :	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 :	-	-	-
Phosphorus	mg/L	T	-	-	<0.01 :	-	-	-
Sulfate	mg/L	T	-	966. J	-	-	-	-
Total Alkalinity	mg/L	T	-	-	<1. :	-	-	-
Total Dissolved Solids	mg/L	T	-	-	1420. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	-
Total Organic Carbon	mg/L	T	-	-	<1. :	-	-	-
Total Suspended Solids	mg/L	T	-	-	4.5 :	-	-	-
Laboratory Parameters								
pH	SU	T	-	-	3.9 :	-	-	-
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	-
Physical Properties								
Hardness	mg/L	D	-	-	-	575. :	-	-
Metals								
Aluminum	mg/L	D	-	-	-	<67. :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Portal Spring 12/8/2003 PORTALSPRING-T0 1N-GRW GW4	SPRING 13 10/2/2002 SPRING13-T01N-G RWRE GW1	Spring 13 10/2/2002 SPRING13-T01N-G RW GW1	SPRING 13 10/2/2002 SPRING13-D01N-G RWRE GW1	Spring 13 10/2/2002 SPRING13-D01N-G RW GW1	Spring 13 10/2/2002 Spring 13-T01N-GW GW1
Antimony	mg/L	D	-	-	-	<0.028 :	-	-
Arsenic	mg/L	D	-	-	-	<0.023 :	-	-
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	D	-	-	-	0.0128 :	-	-
Boron	mg/L	D	-	-	-	<0.0497 :	-	-
Cadmium	mg/L	D	-	-	-	<0.08 :	-	-
Calcium	mg/L	D	-	-	-	160. :	-	-
Chromium	mg/L	D	-	-	-	<0.16 J	-	-
Cobalt	mg/L	D	-	-	-	<0.23 :	-	-
Copper	mg/L	D	-	-	-	<0.649 :	-	-
Iron	mg/L	D	-	-	-	<13.4 :	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-
Magnesium	mg/L	D	-	-	-	42.8 :	-	-
Manganese	mg/L	D	-	-	-	9.96 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	-	-	-	<0.0001 :	-
Molybdenum	mg/L	D	-	-	-	<0.0145 :	-	-
Nickel	mg/L	D	-	-	-	<0.34 :	-	-
Potassium	mg/L	D	-	-	-	<31.4 J	-	-
Selenium	mg/L	D	-	-	-	<0.008 :	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	D	-	-	-	<36.6 :	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	-
Zinc	mg/L	D	-	-	-	2.48 :	-	-
Isotopes								
Lead	mg/L	D	-	-	-	<0.001 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID											
			SPRING 13		SPRING 13		Spring 13		Spring 13		Spring 13		Spring 13	
			1/8/2003		1/8/2003		1/21/2003		2/7/2003		3/7/2003		4/9/2003	
			SPRING13-T01N-G		SPRING13-D01N-G		SPRING13R-T01N-GRW		Spring 13-T01N-GW		Spring 13-T01N-GW		SPRING13-T01N-G	
			RW		RW								RW	
			GW1		GW1		GW1		GW1		GW1		GW1	
Field Measurements														
DO	mg/L	T	5.76	:	-		-		-		-		4.99	:
EH	millivolts	T	435.6	:	-		-		-		-		433.2	:
Flow	gpm	T	0.16	:	-		-		0.7	:	0.48	:	1.3	:
pH	SU	T	3.79	:	-		-		-		-		3.58	:
Specific Conductance	uS/cm	T	1484.	:	-		-		-		-		2046.	:
Temperature	Celsius	T	4.98	:	-		-		-		-		12.81	:
Turbidity	NTU	T	-		-		-		-		-		1.	:
General Chemistry														
Ammonia	mg/L	T	<0.13	:	-		-		-		-		0.12	:
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		-		<1.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		-		<1.	:
Chloride	mg/L	T	16.	:	-		-		-		-		6.6	:
Fluoride	mg/L	T	5.8	J	-		-		-		-		16.	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		-		<1.	:
Nitrate	mg/L	T	<0.44	J	-		-		-		-		<0.4	J
Nitrite	mg/L	T	<0.005	J	-		-		-		-		<0.005	:
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		-		-		0.013	:
Phosphorus	mg/L	T	0.078	:	-		-		-		-		0.028	:
Sulfate	mg/L	T	573.	J	-		-		-		-		1390.	J
Total Alkalinity	mg/L	T	<1.	:	-		-		-		-		<1.	:
Total Dissolved Solids	mg/L	T	<592.	:	-		-		-		-		2210.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.25	:	-		-		-		-		<0.24	:
Total Organic Carbon	mg/L	T	<1.	:	-		-		-		-		1.5	J
Total Suspended Solids	mg/L	T	30.4	:	-		-		-		-		11.7	:
Laboratory Parameters														
pH	SU	T	3.79	:	-		-		-		-		3.58	:
Specific Conductance	umhos/cm	T	-		-		-		-		-		2080.	J
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		-		<0.01	J
Physical Properties														
Hardness	mg/L	T	254.	:	-		-		-		-		721.	:
Hardness	mg/L	D	-		251.	:	-		-		-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 1/8/2003 SPRING13-T01N-G RW GW1		SPRING 13 1/8/2003 SPRING13-D01N-G RW GW1		Spring 13 1/21/2003 SPRING13R-T01N-GRW GW1		Spring 13 2/7/2003 Spring 13-T01N-GW GW1		Spring 13 3/7/2003 Spring 13-T01N-GW GW1		SPRING 13 4/9/2003 SPRING13-T01N-G RW GW1	
Metals														
Aluminum	mg/L	T	27.	:	-		-		-		-		107.	:
Aluminum	mg/L	D	-		25.2	:	-		-		-		-	
Antimony	mg/L	T	<0.028	:	-		-		-		-		<0.072	:
Antimony	mg/L	D	-		<0.028	:	-		-		-		-	
Arsenic	mg/L	T	<0.023	:	-		-		-		-		<0.04	:
Arsenic	mg/L	D	-		<0.023	:	-		-		-		-	
Barium	mg/L	T	<0.048	:	-		-		-		-		<0.123	:
Barium	mg/L	D	-		<0.048	:	-		-		-		-	
Beryllium	mg/L	T	0.0057	:	-		-		-		-		0.0118	J
Beryllium	mg/L	D	-		0.0059	:	-		-		-		-	
Boron	mg/L	T	<0.027	:	-		-		-		-		<0.084	:
Boron	mg/L	D	-		<0.027	:	-		-		-		-	
Cadmium	mg/L	T	<0.08	:	-		-		-		-		<0.05	:
Cadmium	mg/L	D	-		<0.08	:	-		-		-		-	
Calcium	mg/L	T	70.4	:	-		-		-		-		198.	:
Calcium	mg/L	D	-		69.6	:	-		-		-		-	
Chromium	mg/L	T	<0.16	:	-		-		-		-		<0.1	:
Chromium	mg/L	D	-		<0.16	:	-		-		-		-	
Cobalt	mg/L	T	<0.23	:	-		-		-		-		<0.38	:
Cobalt	mg/L	D	-		<0.23	:	-		-		-		-	
Copper	mg/L	T	0.43	:	-		-		-		-		1.05	:
Copper	mg/L	D	-		0.388	:	-		-		-		-	
Iron	mg/L	T	<2.66	:	-		-		-		-		18.8	:
Iron	mg/L	D	-		<2.66	:	-		-		-		-	
Lead	mg/L	T	0.0015	:	-		-		-		-		<0.0032	:
Lead	mg/L	D	-		<0.001	:	-		-		-		-	
Magnesium	mg/L	T	<26.9	:	-		-		-		-		54.9	:
Magnesium	mg/L	D	-		<26.9	:	-		-		-		-	
Manganese	mg/L	T	3.42	:	-		-		-		-		14.5	:
Manganese	mg/L	D	-		3.36	:	-		-		-		-	
Mercury	mg/L	T	<0.0001	:	-		-		-		-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		-		-	
Molybdenum	mg/L	T	<0.0161	:	-		-		-		-		<0.023	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 1/8/2003 SPRING13-T01N-G RW GW1		SPRING 13 1/8/2003 SPRING13-D01N-G RW GW1		Spring 13 1/21/2003 SPRING13R-T01N-GRW GW1	Spring 13 2/7/2003 Spring 13-T01N-GW GW1	Spring 13 3/7/2003 Spring 13-T01N-GW GW1	SPRING 13 4/9/2003 SPRING13-T01N-G RW GW1	
Molybdenum	mg/L	D	-		<0.0117	:	-	-	-	-	
Nickel	mg/L	T	<0.34	:	-		-	-	-	<0.3	:
Nickel	mg/L	D	-		<0.34	:	-	-	-	-	
Potassium	mg/L	T	<31.4	:	-		-	-	-	33.9	:
Potassium	mg/L	D	-		<31.4	:	-	-	-	-	
Selenium	mg/L	T	<0.008	:	-		-	-	-	<0.005	J
Selenium	mg/L	D	-		<0.008	:	-	-	-	-	
Silver	mg/L	T	<0.001	:	-		-	-	-	<0.001	:
Silver	mg/L	D	-		<0.001	:	-	-	-	-	
Sodium	mg/L	T	<36.6	:	-		-	-	-	<35.2	:
Sodium	mg/L	D	-		<36.6	:	-	-	-	-	
Thallium	mg/L	T	<0.001	:	-		-	-	-	<0.001	:
Thallium	mg/L	D	-		<0.001	:	-	-	-	-	
Vanadium	mg/L	T	<0.002	:	-		-	-	-	<0.001	:
Vanadium	mg/L	D	-		<0.002	:	-	-	-	-	
Zinc	mg/L	T	0.817	:	-		-	-	-	3.77	:
Zinc	mg/L	D	-		0.794	:	-	-	-	-	
Isotopes											
Lead	mg/L	T	0.0015	:	-		-	-	-	<0.0032	:
Lead	mg/L	D	-		<0.001	:	-	-	-	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 13 Sample Date: 4/9/2003 Sample ID: SPRING13-D01N-G Exposure Area: RW Fraction: GW1	Site ID: SPRING 13 Sample Date: 5/5/2003 Sample ID: SPRING13-T01N-G Exposure Area: RW Fraction: GW1	Site ID: SPRING 13 Sample Date: 5/5/2003 Sample ID: SPRING13-D01N-G Exposure Area: RW Fraction: GW1	Site ID: SPRING 13 Sample Date: 9/9/2003 Sample ID: SPRING13-T01N-G Exposure Area: RW Fraction: GW1	Site ID: SPRING 13 Sample Date: 9/9/2003 Sample ID: SPRING13-D01N-G Exposure Area: RW Fraction: GW1	Site ID: SPRING 13 Sample Date: 11/3/2003 Sample ID: SPRING13-T01N-G Exposure Area: RW Fraction: GW1
Field Measurements								
DO	mg/L	T	-	-	-	6.38 :	-	5.44 :
EH	millivolts	T	-	-	-	333.3 :	-	287.5 :
Flow	gpm	T	-	-	-	-	-	0.05 :
pH	SU	T	-	4.2 J	-	3.8 J	-	4.9 J
Specific Conductance	uS/cm	T	-	-	-	2111. :	-	2133. :
Temperature	Celsius	T	-	-	-	13.32 :	-	10.77 :
Turbidity	NTU	T	-	-	-	6.4 :	-	54.2 :
General Chemistry								
Ammonia	mg/L	T	-	0.067 :	-	<0.084 :	-	<0.15 :
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	27.5 :	-	30.4 :	-	39.1 :
Fluoride	mg/L	T	-	16.9 :	-	14.7 :	-	16.1 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.4 J	-	<0.2 J	-	<0.2 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T	-	0.037 :	-	0.06 :	-	0.22 :
Sulfate	mg/L	T	-	1250. :	-	1990. J	-	1460. :
Total Alkalinity	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Total Dissolved Solids	mg/L	T	-	2290. :	-	2240. :	-	2310. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	1.2 :	-	<1.6 :	-	<1. :
Total Suspended Solids	mg/L	T	-	2.6 :	-	12.6 :	-	110. :
Laboratory Parameters								
pH	SU	T	-	4.2 J	-	3.8 J	-	4.9 J
Specific Conductance	umhos/cm	T	-	2040. J	-	1950. J	-	2090. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	835. :	-	846. :	-	785. :
Hardness	mg/L	D	754. :	-	798. :	-	843. :	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 4/9/2003 SPRING13-D01N-G RW GW1	SPRING 13 5/5/2003 SPRING13-T01N-G RW GW1	SPRING 13 5/5/2003 SPRING13-D01N-G RW GW1	SPRING 13 9/9/2003 SPRING13-T01N-G RW GW1	SPRING 13 9/9/2003 SPRING13-D01N-G RW GW1	SPRING 13 11/3/2003 SPRING13-T01N-G RW GW1
Metals								
Aluminum	mg/L	T	-	121. :	-	122. :	-	117. :
Aluminum	mg/L	D	113. :	-	115. :	-	122. :	-
Antimony	mg/L	T	-	<0.048 J	-	<0.082 :	-	<0.052 :
Antimony	mg/L	D	<0.072 :	-	<0.048 J	-	<0.082 :	-
Arsenic	mg/L	T	-	<0.047 :	-	<0.035 :	-	<0.041 :
Arsenic	mg/L	D	<0.04 :	-	<0.047 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.135 :	-	<0.117 :	-	<0.115 :
Barium	mg/L	D	<0.123 :	-	<0.135 :	-	<0.117 :	-
Beryllium	mg/L	T	-	0.02 :	-	<0.0237 :	-	0.017 :
Beryllium	mg/L	D	0.0118 J	-	0.0192 :	-	<0.0229 :	-
Boron	mg/L	T	-	<0.075 :	-	<0.064 :	-	<0.063 :
Boron	mg/L	D	<0.084 :	-	<0.075 :	-	<0.064 :	-
Cadmium	mg/L	T	-	0.0186 :	-	<0.13 :	-	<0.05 :
Cadmium	mg/L	D	<0.05 :	-	0.0193 :	-	<0.13 :	-
Calcium	mg/L	T	-	227. :	-	229. :	-	207. :
Calcium	mg/L	D	206. :	-	217. :	-	229. :	-
Chromium	mg/L	T	-	<0.009 :	-	<0.23 :	-	<0.11 J
Chromium	mg/L	D	<0.1 :	-	<0.009 :	-	<0.23 :	-
Cobalt	mg/L	T	-	0.212 :	-	<0.32 :	-	<0.29 :
Cobalt	mg/L	D	<0.38 :	-	0.206 :	-	<0.32 :	-
Copper	mg/L	T	-	1.16 :	-	1.19 :	-	1.18 :
Copper	mg/L	D	1.14 :	-	1.1 :	-	1.17 :	-
Iron	mg/L	T	-	35.6 :	-	31.4 :	-	31.8 :
Iron	mg/L	D	18.7 :	-	33.1 :	-	29.8 :	-
Lead	mg/L	T	-	<0.001 :	-	0.0027 :	-	0.0039 :
Lead	mg/L	D	<0.0037 :	-	<0.001 :	-	<0.002 :	-
Magnesium	mg/L	T	-	65. :	-	66.5 :	-	65.2 :
Magnesium	mg/L	D	57.8 :	-	62.2 :	-	66. :	-
Manganese	mg/L	T	-	16.4 :	-	15.4 :	-	15.3 J
Manganese	mg/L	D	15.2 :	-	15.7 :	-	15.2 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.016 :	-	<0.012 :	-	<0.011 :

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 4/9/2003 SPRING13-D01N-G RW GW1		SPRING 13 5/5/2003 SPRING13-T01N-G RW GW1		SPRING 13 5/5/2003 SPRING13-D01N-G RW GW1		SPRING 13 9/9/2003 SPRING13-T01N-G RW GW1		SPRING 13 9/9/2003 SPRING13-D01N-G RW GW1		SPRING 13 11/3/2003 SPRING13-T01N-G RW GW1	
Molybdenum	mg/L	D	<0.023	:	-		<0.016	:	-		<0.012	:	-	
Nickel	mg/L	T	-		0.427	:	-		<0.45	:	-		<0.24	J
Nickel	mg/L	D	0.324	:	-		0.416	:	-		<0.45	:	-	
Potassium	mg/L	T	-		<3.27	:	-		<63.8	:	-		51.9	:
Potassium	mg/L	D	<32.6	:	-		<3.27	:	-		<63.8	:	-	
Selenium	mg/L	T	-		<0.008	:	-		0.0046	:	-		0.0067	:
Selenium	mg/L	D	<0.005	J	-		<0.008	:	-		0.005	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		24.3	:	-		<99.1	:	-		<45.4	:
Sodium	mg/L	D	<35.2	:	-		22.2	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	
Zinc	mg/L	T	-		4.28	:	-		4.09	:	-		3.61	:
Zinc	mg/L	D	3.96	:	-		4.08	:	-		4.16	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		0.0027	:	-		0.0039	:
Lead	mg/L	D	<0.0037	:	-		<0.001	:	-		<0.002	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 11/3/2003 SPRING13-D01N-G RW GW1	SPRING 13 12/11/2003 SPRING13-T01N-G RW GW1	SPRING 13 12/11/2003 SPRING13-D01N-G RW GW1	SPRING 13 1/13/2004 SPRING13-T01N-G RW GW1	SPRING 13 1/13/2004 SPRING13-D01N-G RW GW1	SPRING 13 2/22/2004 SPRING13-T01N-G RW GW1
Field Measurements								
DO	mg/L	T	-	5.41 :	-	2.26 :	-	-
EH	millivolts	T	-	399.8 :	-	376.4 :	-	-
Flow	gpm	T	-	0.05 :	-	0.08 :	-	-
pH	SU	T	-	3.53 :	-	3.45 :	-	-
Specific Conductance	uS/cm	T	-	592. :	-	2040. :	-	-
Temperature	Celsius	T	-	5.84 :	-	6.92 :	-	-
Turbidity	NTU	T	-	0.9 :	-	1.1 :	-	-
General Chemistry								
Ammonia	mg/L	T	-	0.069 :	-	<0.28 J	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Chloride	mg/L	T	-	41.2 :	-	40.1 :	-	-
Fluoride	mg/L	T	-	15.3 :	-	15.1 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T	-	<0.2 :	-	<0.25 :	-	-
Nitrite	mg/L	T	-	<0.005 :	-	<0.005 :	-	-
Phosphate, Ortho As P	mg/L	T	-	0.012 :	-	<0.011 :	-	-
Phosphorus	mg/L	T	-	0.013 :	-	<0.012 :	-	-
Sulfate	mg/L	T	-	1320. :	-	1450. :	-	-
Total Alkalinity	mg/L	T	-	<1. :	-	<1. :	-	-
Total Dissolved Solids	mg/L	T	-	2050. J	-	2120. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	1.6 :	-	<1. :	-	-
Total Suspended Solids	mg/L	T	-	3.4 :	-	98. :	-	-
Laboratory Parameters								
pH	SU	T	-	3.53 :	-	3.45 :	-	-
Specific Conductance	umhos/cm	T	-	1870. J	-	2080. J	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 J	-	-
Physical Properties								
Hardness	mg/L	T	-	797. :	-	786. :	-	-
Hardness	mg/L	D	792. :	-	784. :	-	808. :	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 11/3/2003 SPRING13-D01N-G RW GW1		SPRING 13 12/11/2003 SPRING13-T01N-G RW GW1		SPRING 13 12/11/2003 SPRING13-D01N-G RW GW1		SPRING 13 1/13/2004 SPRING13-T01N-G RW GW1		SPRING 13 1/13/2004 SPRING13-D01N-G RW GW1		SPRING 13 2/22/2004 SPRING13-T01N-G RW GW1	
Metals														
Aluminum	mg/L	T	-		115.	:	-		111.	:	-		-	
Aluminum	mg/L	D	118.	:	-		113.	:	-		114.	:	-	
Antimony	mg/L	T	-		<0.082	:	-		<0.097	:	-		-	
Antimony	mg/L	D	<0.052	:	-		<0.082	:	-		<0.097	:	-	
Arsenic	mg/L	T	-		<0.0375	:	-		<0.052	:	-		-	
Arsenic	mg/L	D	<0.041	:	-		0.0459	:	-		<0.052	:	-	
Barium	mg/L	T	-		<0.117	:	-		<0.188	:	-		-	
Barium	mg/L	D	<0.115	:	-		<0.117	:	-		<0.188	:	-	
Beryllium	mg/L	T	-		<0.0314	J	-		0.0206	:	-		-	
Beryllium	mg/L	D	0.0175	:	-		<0.0132	J	-		0.0205	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.117	:	-		-	
Boron	mg/L	D	<0.063	:	-		<0.064	:	-		<0.117	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.07	J	-		-	
Cadmium	mg/L	D	<0.05	:	-		<0.13	:	-		<0.07	:	-	
Calcium	mg/L	T	-		215.	:	-		213.	:	-		-	
Calcium	mg/L	D	209.	:	-		212.	:	-		218.	:	-	
Chromium	mg/L	T	-		<0.23	:	-		<0.11	:	-		-	
Chromium	mg/L	D	<0.11	J	-		<0.23	:	-		<0.11	:	-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.31	:	-		-	
Cobalt	mg/L	D	<0.29	:	-		<0.32	:	-		<0.31	:	-	
Copper	mg/L	T	-		1.2	:	-		1.12	:	-		-	
Copper	mg/L	D	1.16	:	-		1.13	:	-		1.31	:	-	
Iron	mg/L	T	-		28.5	:	-		25.5	:	-		-	
Iron	mg/L	D	27.3	:	-		26.2	:	-		27.9	:	-	
Lead	mg/L	T	-		<0.001	:	-		0.0013	:	-		0.00068	J
Lead	mg/L	D	<0.002	:	-		<0.001	:	-		<0.001	:	-	
Magnesium	mg/L	T	-		63.3	:	-		61.7	:	-		-	
Magnesium	mg/L	D	65.8	:	-		61.8	:	-		64.4	:	-	
Manganese	mg/L	T	-		15.	:	-		14.8	:	-		-	
Manganese	mg/L	D	15.5	:	-		14.9	:	-		15.2	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	J	-		-	
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	J	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.03	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 11/3/2003 SPRING13-D01N-G RW GW1		SPRING 13 12/11/2003 SPRING13-T01N-G RW GW1		SPRING 13 12/11/2003 SPRING13-D01N-G RW GW1		SPRING 13 1/13/2004 SPRING13-T01N-G RW GW1		SPRING 13 1/13/2004 SPRING13-D01N-G RW GW1		SPRING 13 2/22/2004 SPRING13-T01N-G RW GW1	
Molybdenum	mg/L	D	<0.011	:	-		<0.012	:	-		<0.03	:	-	
Nickel	mg/L	T	-		<0.45	:	-		0.334	:	-		-	
Nickel	mg/L	D	<0.24	J	-		<0.45	:	-		0.43	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<24.3	:	-		-	
Potassium	mg/L	D	38.6	:	-		<63.8	:	-		<24.3	:	-	
Selenium	mg/L	T	-		0.0046	:	-		0.004	J	-		-	
Selenium	mg/L	D	<0.003	:	-		0.0056	:	-		0.0063	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<49.	:	-		-	
Sodium	mg/L	D	<45.4	:	-		<99.1	:	-		<49.	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		-	
Vanadium	mg/L	D	<0.001	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		4.04	:	-		4.06	:	-		-	
Zinc	mg/L	D	3.63	:	-		3.97	:	-		4.13	:	-	
Isotopes														
204Pb/206Pb	mg/L	T	-		-		-		-		-		0.00014	:
207Pb/206Pb	mg/L	T	-		-		-		-		-		0.00058	:
208Pb/206Pb	mg/L	T	-		-		-		-		-		0.00058	:
Lead	mg/L	T	-		<0.001	:	-		0.0013	:	-		0.00068	J
Lead	mg/L	D	<0.002	:	-		<0.001	:	-		<0.001	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 13 Sample Date: 2/22/2004 Sample ID: SPRING-13-T01N-G RW GW1		Site ID: SPRING 13 Sample Date: 2/22/2004 Sample ID: SPRING13-D01N-G RW GW1		Site ID: Spring 13 Sample Date: 2/22/2004 Sample ID: SPRING-13-D01N-G RW GW1		Site ID: SPRING 13 Sample Date: 3/22/2004 Sample ID: SPR-13 GW1		Site ID: SPRING 13 Sample Date: 4/13/2004 Sample ID: SPRING13-T01N-G RW GW1		Site ID: Spring 13 Sample Date: 4/13/2004 Sample ID: SPRING-13-T01N-G RW GW1	
Field Measurements														
DO	mg/L	T	3.23	:	-		-		-		-		4.36	:
EH	millivolts	T	367.7	:	-		-		-		-		400.6	:
Flow	gpm	T	1.	:	-		-		-		-		0.0353	:
pH	SU	T	3.56	:	-		-		-		4.1	J	3.59	:
Specific Conductance	uS/cm	T	2089.	:	-		-		-		-		2082.	:
Temperature	Celsius	T	7.1	:	-		-		-		-		7.09	:
Turbidity	NTU	T	0.8	:	-		-		-		-		0.1	:
General Chemistry														
Ammonia	mg/L	T	-		-		-		-		<0.052	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Chloride	mg/L	T	-		-		-		-		42.8	:	-	
Fluoride	mg/L	T	49.7	:	-		-		-		14.9	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		-		-		<1.	:	-	
Nitrate	mg/L	T	-		-		-		-		0.21	J	-	
Nitrite	mg/L	T	-		-		-		-		0.0069	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		-		-		0.014	J	-	
Phosphorus	mg/L	T	-		-		-		-		0.015	:	-	
Sulfate	mg/L	T	1590.	:	-		-		-		1510.	:	-	
Total Alkalinity	mg/L	T	-		-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	1770.	:	-		-		-		2230.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		-		-		1.5	J	-	
Total Suspended Solids	mg/L	T	<1.6	:	-		-		-		<1.9	J	-	
Laboratory Parameters														
pH	SU	T	3.56	:	-		-		-		4.1	J	3.59	:
Specific Conductance	umhos/cm	T	-		-		-		-		1930.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		-		-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	825.	:	-		-		-		829.	:	-	
Hardness	mg/L	D	-		-		823.	:	-		-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 13 Sample Date: 2/22/2004 Sample ID: SPRING-13-T01N-G RW GW1	Site ID: SPRING 13 Sample Date: 2/22/2004 Sample ID: SPRING13-D01N-G RW GW1	Site ID: Spring 13 Sample Date: 2/22/2004 Sample ID: SPRING-13-D01N-G RW GW1	Site ID: SPRING 13 Sample Date: 3/22/2004 Sample ID: SPR-13 GW1	Site ID: SPRING 13 Sample Date: 4/13/2004 Sample ID: SPRING13-T01N-G RW GW1	Site ID: Spring 13 Sample Date: 4/13/2004 Sample ID: SPRING-13-T01N-G RW GW1
Metals								
Aluminum	mg/L	T	120. :	-	-	-	115. :	-
Aluminum	mg/L	D	-	-	119. :	-	-	-
Antimony	mg/L	T	<0.029 :	-	-	-	<0.053 :	-
Antimony	mg/L	D	-	-	<0.029 :	-	-	-
Arsenic	mg/L	T	<0.028 :	-	-	-	<0.037 J	-
Arsenic	mg/L	D	-	-	<0.028 :	-	-	-
Barium	mg/L	T	<0.053 :	-	-	-	<0.049 :	-
Barium	mg/L	D	-	-	<0.053 :	-	-	-
Beryllium	mg/L	T	0.0134 J	-	-	-	0.0241 :	-
Beryllium	mg/L	D	-	-	0.0123 J	-	-	-
Boron	mg/L	T	<0.023 :	-	-	-	<0.036 :	-
Boron	mg/L	D	-	-	<0.023 :	-	-	-
Cadmium	mg/L	T	<0.07 :	-	-	-	<0.1 :	-
Cadmium	mg/L	D	-	-	0.0709 J	-	-	-
Calcium	mg/L	T	222. :	-	-	-	225. :	-
Calcium	mg/L	D	-	-	220. :	-	-	-
Chromium	mg/L	T	<0.11 :	-	-	-	<0.13 :	-
Chromium	mg/L	D	-	-	<0.11 :	-	-	-
Cobalt	mg/L	T	<0.31 :	-	-	-	<0.18 :	-
Cobalt	mg/L	D	-	-	<0.31 :	-	-	-
Copper	mg/L	T	1.17 :	-	-	-	1.11 :	-
Copper	mg/L	D	-	-	1.1 :	-	-	-
Iron	mg/L	T	28.8 :	-	-	-	24.6 J	-
Iron	mg/L	D	-	-	29.7 :	-	-	-
Lead	mg/L	T	<0.0019 :	-	-	-	<0.004 :	-
Lead	mg/L	D	-	0.00752 J	<0.0019 :	-	-	-
Magnesium	mg/L	T	65.8 :	-	-	-	65. :	-
Magnesium	mg/L	D	-	-	66.3 :	-	-	-
Manganese	mg/L	T	15.9 :	-	-	-	15. :	-
Manganese	mg/L	D	-	-	15.8 :	-	-	-
Mercury	mg/L	T	<0.0001 :	-	-	-	<0.0001 J	-
Mercury	mg/L	D	-	-	<0.0001 :	-	-	-
Molybdenum	mg/L	T	<0.024 :	-	-	-	<0.014 :	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 13 2/22/2004 SPRING-13-T01N-G RW GW1	SPRING 13 2/22/2004 SPRING13-D01N-G RW GW1	Spring 13 2/22/2004 SPRING-13-D01N-G RW GW1	SPRING 13 3/22/2004 SPR-13 GW1	SPRING 13 4/13/2004 SPRING13-T01N-G RW GW1	Spring 13 4/13/2004 SPRING-13-T01N-G RW GW1
Molybdenum	mg/L	D	-	-	<0.024 :	-	-	-
Nickel	mg/L	T	0.364 :	-	-	-	0.489 :	-
Nickel	mg/L	D	-	-	0.5 :	-	-	-
Potassium	mg/L	T	<24.3 :	-	-	-	<15.5 :	-
Potassium	mg/L	D	-	-	<24.3 :	-	-	-
Selenium	mg/L	T	0.0036 J	-	-	-	<0.007 :	-
Selenium	mg/L	D	-	-	<0.002 J	-	-	-
Silver	mg/L	T	<0.001 :	-	-	-	<0.001 J	-
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	<49. J	-	-	-	<32.8 J	-
Sodium	mg/L	D	-	-	<49. J	-	-	-
Thallium	mg/L	T	<0.0018 :	-	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.0018 :	-	-	-
Vanadium	mg/L	T	<0.0021 :	-	-	-	<0.002 :	-
Vanadium	mg/L	D	-	-	<0.0023 :	-	-	-
Zinc	mg/L	T	3.88 :	-	-	-	4.08 :	-
Zinc	mg/L	D	-	-	3.85 :	-	-	-
Isotopes								
204Pb/206Pb	mg/L	D	-	0.00014 :	-	-	-	-
207Pb/206Pb	mg/L	D	-	0.00061 :	-	-	-	-
208Pb/206Pb	mg/L	D	-	0.00066 :	-	-	-	-
Delta 34S	per mil	D	-	-2.5 :	-	-	-	-
Delta D	per mil	T	-	-	-	-	-91.8 :	-
Delta O-18	per mil	T	-	-	-	-	-12.8 :	-
Lead	mg/L	T	<0.0019 :	-	-	-	<0.004 :	-
Lead	mg/L	D	-	0.00752 J	<0.0019 :	-	-	-
Helium Isotope and Tritium								
3H-3He	Years	T	-	-	-	18.76 :	-	-
DEL He3	%	T	-	-	-	80.8 :	-	-
DEL He4	%	T	-	-	-	13.9 :	-	-
He Corr	1E-8cc/g	T	-	-	-	5.186 :	-	-
Tritium TU	TU	T	-	-	-	10.92 :	-	-
Uncert Age	Years	T	-	-	-	0.53 :	-	-
Uncert TU	TU	T	-	-	-	0.36 :	-	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 4/13/2004 SPRING13-D01N-G RW GW1	SPRING 13 5/10/2004 SPRING13-T01N-G RW GW1	SPRING 13 5/10/2004 SPRING13-D01N-G RW GW1	SPRING 13-PUMP 2/12/2003 SPRING13PUMP-T0 1N-GRWRE GW1	Spring 13-PUMP 2/12/2003 SPRING13PUMP-T0 1N-GRW GW1	SPRING 13-PUMP 2/12/2003 SPRING13PUMP-D0 1N-GRW GW1
Field Measurements								
DO	mg/L	T	-	5.86 :	-	-	91.5 :	-
EH	millivolts	T	-	421. :	-	-	447.1 :	-
pH	SU	T	-	3.8 J	-	-	3.44 :	-
Specific Conductance	uS/cm	T	-	2051. :	-	-	2434. :	-
Temperature	Celsius	T	-	17.58 :	-	-	6.23 :	-
Turbidity	NTU	T	-	2.6 :	-	-	27.3 :	-
General Chemistry								
Ammonia	mg/L	T	-	<0.11 :	-	-	<0.085 :	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Chloride	mg/L	T	-	33.4 :	-	-	27. :	-
Fluoride	mg/L	T	-	12.6 :	-	11. J	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T	-	0.24 :	-	-	<0.4 J	-
Nitrite	mg/L	T	-	0.0091 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-	-	<0.01 J	-
Phosphorus	mg/L	T	-	0.022 :	-	-	<0.023 :	-
Sulfate	mg/L	T	-	1390. :	-	-	1060. J	-
Total Alkalinity	mg/L	T	-	<1. :	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	-	1890. :	-	-	1600. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	-	1.4 :	-	-	<1. :	-
Total Suspended Solids	mg/L	T	-	19.1 J	-	-	2.2 :	-
Laboratory Parameters								
pH	SU	T	-	3.8 J	-	-	3.44 :	-
Specific Conductance	umhos/cm	T	-	1970. J	-	-	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	775. :	-	-	677. :	-
Hardness	mg/L	D	810. :	-	789. :	-	-	675. :
Metals								

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 13		Site ID: SPRING 13		Site ID: SPRING 13		Site ID: SPRING 13-PUMP		Site ID: SPRING 13-PUMP		Site ID: SPRING 13-PUMP	
		Sample Date:	4/13/2004		5/10/2004		5/10/2004		2/12/2003		2/12/2003		2/12/2003	
		Sample ID:	SPRING13-D01N-G		SPRING13-T01N-G		SPRING13-D01N-G		SPRING13PUMP-T0		SPRING13PUMP-T0		SPRING13PUMP-D0	
		Exposure Area:	RW		RW		RW		1N-GRWRE		1N-GRW		1N-GRW	
		Fraction:	GW1		GW1		GW1		GW1		GW1		GW1	
Aluminum	mg/L	T	-		100.	:	-		-		82.7	:	-	
Aluminum	mg/L	D	114.	:	-		102.	:	-		-		81.8	:
Antimony	mg/L	T	-		<0.027	:	-		-		<0.0006	:	-	
Antimony	mg/L	D	<0.053	:	-		<0.027	:	-		-		<0.0006	:
Arsenic	mg/L	T	-		<0.026	:	-		-		<0.0004	:	-	
Arsenic	mg/L	D	<0.037	:	-		<0.026	:	-		-		<0.0004	:
Barium	mg/L	T	-		<0.012	:	-		-		0.0098	:	-	
Barium	mg/L	D	<0.049	:	-		<0.012	:	-		-		0.0098	:
Beryllium	mg/L	T	-		0.0175	:	-		-		0.0121	:	-	
Beryllium	mg/L	D	0.0222	:	-		0.0175	:	-		-		0.0122	:
Boron	mg/L	T	-		<0.018	:	-		-		<0.004	:	-	
Boron	mg/L	D	<0.036	:	-		<0.018	:	-		-		<0.0036	:
Cadmium	mg/L	T	-		<0.1	:	-		-		0.0119	:	-	
Cadmium	mg/L	D	<0.1	:	-		<0.1	:	-		-		0.0119	:
Calcium	mg/L	T	-		211.	:	-		-		188.	:	-	
Calcium	mg/L	D	219.	:	-		215.	:	-		-		187.	:
Chromium	mg/L	T	-		<0.13	:	-		-		<0.0037	:	-	
Chromium	mg/L	D	<0.13	:	-		<0.13	:	-		-		<0.0037	:
Cobalt	mg/L	T	-		0.227	:	-		-		0.145	:	-	
Cobalt	mg/L	D	0.199	:	-		0.279	:	-		-		0.145	:
Copper	mg/L	T	-		0.9	:	-		-		0.741	:	-	
Copper	mg/L	D	1.33	:	-		0.931	:	-		-		0.744	:
Iron	mg/L	T	-		21.5	:	-		-		11.1	:	-	
Iron	mg/L	D	26.2	:	-		21.4	:	-		-		11.2	:
Lead	mg/L	T	-		<0.004	:	-		-		0.0011	:	-	
Lead	mg/L	D	<0.004	:	-		<0.004	:	-		-		0.001	:
Magnesium	mg/L	T	-		60.2	:	-		-		50.8	:	-	
Magnesium	mg/L	D	64.2	:	-		61.3	:	-		-		50.8	:
Manganese	mg/L	T	-		13.4	:	-		-		11.7	J	-	
Manganese	mg/L	D	14.7	:	-		13.7	:	-		-		11.7	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	J	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	J
Molybdenum	mg/L	T	-		<0.01	:	-		-		<0.0011	:	-	
Molybdenum	mg/L	D	<0.014	:	-		<0.01	:	-		-		<0.0011	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13 4/13/2004 SPRING13-D01N-G RW GW1		SPRING 13 5/10/2004 SPRING13-T01N-G RW GW1		SPRING 13 5/10/2004 SPRING13-D01N-G RW GW1		SPRING 13-PUMP 2/12/2003 SPRING13PUMP-T0 1N-GRWRE GW1		SPRING 13-PUMP 2/12/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 2/12/2003 SPRING13PUMP-D0 1N-GRW GW1	
Nickel	mg/L	T	-		0.397	:	-		-		0.262	:	-	
Nickel	mg/L	D	0.477	:	-		0.384	:	-		-		0.263	:
Potassium	mg/L	T	-		<15.5	:	-		-		2.15	:	-	
Potassium	mg/L	D	<15.5	:	-		<15.5	:	-		-		2.17	:
Selenium	mg/L	T	-		<0.007	:	-		-		<0.0016	:	-	
Selenium	mg/L	D	<0.007	:	-		<0.007	:	-		-		0.0017	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.0002	:	-	
Silver	mg/L	D	<0.001	J	-		<0.001	:	-		-		<0.0002	:
Sodium	mg/L	T	-		<32.8	:	-		-		15.2	:	-	
Sodium	mg/L	D	<32.8	J	-		<34.	:	-		-		15.3	:
Thallium	mg/L	T	-		<0.001	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		<0.002	:	-		-		<0.0004	:	-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		-		<0.0004	:
Zinc	mg/L	T	-		3.62	:	-		-		2.98	:	-	
Zinc	mg/L	D	3.98	:	-		3.68	:	-		-		2.96	:
Explosives														
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-		<0.00025	:	-	
2,6-Pyridinediamine,	mg/L	T	-		-		-		-		<0.00025	J	-	
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-		<0.00025	:	-	
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-		<0.00025	:	-	
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-		<0.01	:	-	
Isotopes														
Lead	mg/L	T	-		<0.004	:	-		-		0.0011	:	-	
Lead	mg/L	D	<0.004	:	-		<0.004	:	-		-		0.001	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 13-PUMP 3/5/2003 SPRING13PUMP-T0 1N-GRWRE GW1		Spring 13-PUMP 3/5/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 3/5/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 4/1/2003 Spring 13-PUMP-T01N-GR GW1		SPRING 13-PUMP 4/10/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 4/10/2003 SPRING13PUMP-D0 1N-GRW GW1	
Field Measurements														
DO	mg/L	T	-		5.15	:	-		5.52	:	-		-	
EH	millivolts	T	-		469.	:	-		458.7	:	-		-	
pH	SU	T	-		3.63	:	-		3.56	:	4.	:	-	
Specific Conductance	uS/cm	T	-		1705.	:	-		1584.	:	-		-	
Temperature	Celsius	T	-		5.93	:	-		8.37	:	-		-	
Turbidity	NTU	T	-		0.	:	-		6.	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		0.086	J	-		-		0.053	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		15.9	:	-		-		35.1	:	-	
Fluoride	mg/L	T	12.2	J	-		-		-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.4	:	-		-		<0.4	J	-	
Nitrite	mg/L	T	-		0.0071	:	-		-		0.0058	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		0.14	J	-	
Phosphorus	mg/L	T	-		0.01	J	-		-		<0.01	J	-	
Sulfate	mg/L	T	-		1080.	:	-		-		1030.	J	-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		1610.	:	-		-		1740.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	J	-	
Total Organic Carbon	mg/L	T	-		<1.5	J	-		-		1.7	J	-	
Total Suspended Solids	mg/L	T	-		2.2	J	-		-		3.5	:	-	
Laboratory Parameters														
pH	SU	T	-		3.63	:	-		3.56	:	4.	:	-	
Specific Conductance	umhos/cm	T	-		-		-		-		1630.	:	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		688.	:	-		-		605.	:	-	
Hardness	mg/L	D	-		-		680.	:	-		-		611.	:
Metals														

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13-PUMP 3/5/2003 SPRING13PUMP-T0 1N-GRWRE GW1		SPRING 13-PUMP 3/5/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 3/5/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 4/1/2003 Spring 13-PUMP-T01N-GR GW1		SPRING 13-PUMP 4/10/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 4/10/2003 SPRING13PUMP-D0 1N-GRW GW1	
Aluminum	mg/L	T	-		86.4	:	-		-		82.6	:	-	
Aluminum	mg/L	D	-		-		84.9	:	-		-		83.9	:
Antimony	mg/L	T	-		<0.028	:	-		-		<0.072	:	-	
Antimony	mg/L	D	-		-		<0.028	:	-		-		<0.072	:
Arsenic	mg/L	T	-		<0.023	:	-		-		<0.04	:	-	
Arsenic	mg/L	D	-		-		<0.023	:	-		-		<0.04	:
Barium	mg/L	T	-		<0.048	:	-		-		<0.123	:	-	
Barium	mg/L	D	-		-		<0.048	:	-		-		<0.123	:
Beryllium	mg/L	T	-		0.0134	:	-		-		0.0146	:	-	
Beryllium	mg/L	D	-		-		0.0129	:	-		-		0.0162	:
Boron	mg/L	T	-		<0.027	:	-		-		<0.084	:	-	
Boron	mg/L	D	-		-		<0.027	:	-		-		<0.084	:
Cadmium	mg/L	T	-		<0.04	:	-		-		0.0114	:	-	
Cadmium	mg/L	D	-		-		<0.04	:	-		-		0.0123	:
Calcium	mg/L	T	-		189.	J	-		-		166.	:	-	
Calcium	mg/L	D	-		-		187.	J	-		-		167.	:
Chromium	mg/L	T	-		<0.37	:	-		-		<0.01	:	-	
Chromium	mg/L	D	-		-		<0.37	:	-		-		<0.01	:
Cobalt	mg/L	T	-		0.167	:	-		-		0.154	:	-	
Cobalt	mg/L	D	-		-		0.19	:	-		-		0.146	:
Copper	mg/L	T	-		0.81	:	-		-		0.807	:	-	
Copper	mg/L	D	-		-		0.684	:	-		-		0.804	:
Iron	mg/L	T	-		11.6	:	-		-		12.	:	-	
Iron	mg/L	D	-		-		10.3	J	-		-		11.7	:
Lead	mg/L	T	-		0.0027	:	-		-		<0.0061	:	-	
Lead	mg/L	D	-		-		0.0027	:	-		-		<0.0058	:
Magnesium	mg/L	T	-		52.4	:	-		-		46.4	:	-	
Magnesium	mg/L	D	-		-		51.7	:	-		-		47.	:
Manganese	mg/L	T	-		12.5	:	-		-		11.1	:	-	
Manganese	mg/L	D	-		-		12.4	:	-		-		11.3	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	-		-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.011	:	-		-		<0.023	:	-	
Molybdenum	mg/L	D	-		-		<0.011	:	-		-		<0.023	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Site ID			SPRING 13-PUMP		SPRING 13-PUMP		SPRING 13-PUMP		Spring 13-PUMP		SPRING 13-PUMP		SPRING 13-PUMP	
Sample Date			3/5/2003		3/5/2003		3/5/2003		4/1/2003		4/10/2003		4/10/2003	
Sample ID			SPRING13PUMP-T0		SPRING13PUMP-T0		SPRING13PUMP-D		Spring		SPRING13PUMP-T0		SPRING13PUMP-D0	
Exposure Area			1N-GRWRE		1N-GRW		01N-GRW		13-PUMP-T01N-GR		1N-GRW		1N-GRW	
Paramete	Units	Fraction	GW1		GW1		GW1		GW1		GW1		GW1	
Nickel	mg/L	T	-		0.338	:	-		-		0.293	:	-	
Nickel	mg/L	D	-		-		0.371	:	-		-		0.288	:
Potassium	mg/L	T	-		<20.2	:	-		-		<3.26	:	-	
Potassium	mg/L	D	-		-		<20.2	:	-		-		<3.26	:
Selenium	mg/L	T	-		<0.008	J	-		-		0.0013	:	-	
Selenium	mg/L	D	-		-		<0.008	J	-		-		0.0015	:
Silver	mg/L	T	-		<0.001	:	-		-		<0.0002	:	-	
Silver	mg/L	D	-		-		<0.001	:	-		-		<0.0002	:
Sodium	mg/L	T	-		33.7	:	-		-		18.8	:	-	
Sodium	mg/L	D	-		-		<32.7	:	-		-		17.6	:
Thallium	mg/L	T	-		<0.001	:	-		-		<0.0002	:	-	
Thallium	mg/L	D	-		-		<0.001	:	-		-		<0.0002	:
Vanadium	mg/L	T	-		0.0027	:	-		-		<0.0002	:	-	
Vanadium	mg/L	D	-		-		0.0024	:	-		-		<0.0002	:
Zinc	mg/L	T	-		3.34	J	-		-		2.74	:	-	
Zinc	mg/L	D	-		-		4.58	J	-		-		2.8	:
Isotopes														
Lead	mg/L	T	-		0.0027	:	-		-		<0.0061	:	-	
Lead	mg/L	D	-		-		0.0027	:	-		-		<0.0058	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 13-PUMP Sample Date: 4/10/2003 Sample ID: Spring 13-PUMP-T01N-GR GW1		Site ID: SPRING 13-PUMP Sample Date: 5/5/2003 Sample ID: SPRING13PUMP-T0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 5/5/2003 Sample ID: SPRING13PUMP-D 01N-GRW GW1		Site ID: Spring 13-PUMP Sample Date: 5/5/2003 Sample ID: Spring 13-PUMP-T01N-GR GW1		Site ID: SPRING 13-PUMP Sample Date: 6/3/2003 Sample ID: SPRING13PUMP-T0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 6/3/2003 Sample ID: SPRING13PUMP-D0 1N-GRW GW1	
Field Measurements														
DO	mg/L	T	8.36	:	-		-		5.93	:	4.05	:	-	
EH	millivolts	T	394.9	:	-		-		440.2	:	498.1	:	-	
pH	SU	T	3.58	:	4.9	J	-		3.52	:	3.38	:	-	
Specific Conductance	uS/cm	T	1647.	:	-		-		1608.	:	1414.	:	-	
Temperature	Celsius	T	8.49	:	-		-		9.51	:	11.28	:	-	
Turbidity	NTU	T	0.	:	-		-		12.5	:	0.	:	-	
General Chemistry														
Ammonia	mg/L	T	-		0.12	:	-		-		0.085	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		21.7	:	-		-		16.3	:	-	
Fluoride	mg/L	T	-		9.7	:	-		-		11.1	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.4	J	-		-		<0.4	J	-	
Nitrite	mg/L	T	-		<0.005	J	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		0.071	J	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		-		-	
Sulfate	mg/L	T	-		950.	:	-		-		805.	J	-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		1610.	:	-		-		1370.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		-		-	
Total Organic Carbon	mg/L	T	-		<1.	:	-		-		1.2	J	-	
Total Suspended Solids	mg/L	T	-		1.8	:	-		-		2.9	:	-	
Laboratory Parameters														
pH	SU	T	3.58	:	4.9	J	-		3.52	:	3.38	:	-	
Specific Conductance	umhos/cm	T	-		1550.	J	-		-		1400.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		605.	:	-		-		484.	:	-	
Hardness	mg/L	D	-		-		616.	:	-		-		516.	:
Metals														

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 13-PUMP 4/10/2003 Spring 13-PUMP-T01N-GR GW1		SPRING 13-PUMP 5/5/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 5/5/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 5/5/2003 Spring 13-PUMP-T01N-GR GW1		SPRING 13-PUMP 6/3/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 6/3/2003 SPRING13PUMP-D0 1N-GRW GW1	
Aluminum	mg/L	T	-		78.	:	-		-		59.5	:	-	
Aluminum	mg/L	D	-		-		79.9	:	-		-		63.3	:
Antimony	mg/L	T	-		<0.072	:	-		-		<0.072	:	-	
Antimony	mg/L	D	-		-		<0.072	:	-		-		<0.072	:
Arsenic	mg/L	T	-		<0.04	:	-		-		<0.04	:	-	
Arsenic	mg/L	D	-		-		<0.04	:	-		-		<0.04	J
Barium	mg/L	T	-		<0.123	:	-		-		<0.123	:	-	
Barium	mg/L	D	-		-		<0.123	:	-		-		<0.123	:
Beryllium	mg/L	T	-		<0.0168	:	-		-		<0.0142	:	-	
Beryllium	mg/L	D	-		-		<0.0172	:	-		-		<0.0122	:
Boron	mg/L	T	-		<0.084	:	-		-		<0.084	:	-	
Boron	mg/L	D	-		-		<0.084	:	-		-		<0.084	:
Cadmium	mg/L	T	-		0.0153	:	-		-		0.0108	:	-	
Cadmium	mg/L	D	-		-		0.0161	:	-		-		0.0106	:
Calcium	mg/L	T	-		166.	:	-		-		135.	:	-	
Calcium	mg/L	D	-		-		170.	:	-		-		144.	:
Chromium	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
Chromium	mg/L	D	-		-		<0.01	:	-		-		<0.01	:
Cobalt	mg/L	T	-		0.156	:	-		-		0.121	:	-	
Cobalt	mg/L	D	-		-		0.156	:	-		-		0.13	:
Copper	mg/L	T	-		0.762	:	-		-		0.591	J	-	
Copper	mg/L	D	-		-		0.756	:	-		-		0.627	:
Iron	mg/L	T	-		10.4	:	-		-		7.38	:	-	
Iron	mg/L	D	-		-		10.5	:	-		-		7.68	:
Lead	mg/L	T	-		0.0014	:	-		-		0.0011	:	-	
Lead	mg/L	D	-		-		<0.001	:	-		-		0.0014	:
Magnesium	mg/L	T	-		45.9	:	-		-		35.4	:	-	
Magnesium	mg/L	D	-		-		46.5	:	-		-		37.8	:
Manganese	mg/L	T	-		11.2	:	-		-		8.77	:	-	
Manganese	mg/L	D	-		-		11.4	:	-		-		9.33	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	-		-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.023	:	-		-		<0.023	:	-	
Molybdenum	mg/L	D	-		-		<0.023	:	-		-		<0.023	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 13-PUMP 4/10/2003 Spring 13-PUMP-T01N-GR GW1	SPRING 13-PUMP 5/5/2003 SPRING13PUMP-T0 1N-GRW GW1	SPRING 13-PUMP 5/5/2003 SPRING13PUMP-D 01N-GRW GW1	Spring 13-PUMP 5/5/2003 Spring 13-PUMP-T01N-GR GW1	SPRING 13-PUMP 6/3/2003 SPRING13PUMP-T0 1N-GRW GW1	SPRING 13-PUMP 6/3/2003 SPRING13PUMP-D0 1N-GRW GW1
Nickel	mg/L	T	-	0.288 :	-	-	0.231 :	-
Nickel	mg/L	D	-	-	0.291 :	-	-	0.244 :
Potassium	mg/L	T	-	<40.5 :	-	-	<3.26 :	-
Potassium	mg/L	D	-	-	<40.5 :	-	-	<3.26 :
Selenium	mg/L	T	-	0.0065 :	-	-	<0.008 :	-
Selenium	mg/L	D	-	-	<0.005 :	-	-	<0.008 :
Silver	mg/L	T	-	<0.001 :	-	-	0.0011 :	-
Silver	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Sodium	mg/L	T	-	<91.6 :	-	-	11.7 :	-
Sodium	mg/L	D	-	-	<91.6 :	-	-	12.8 :
Thallium	mg/L	T	-	<0.001 :	-	-	<0.001 :	-
Thallium	mg/L	D	-	-	<0.001 :	-	-	<0.001 :
Vanadium	mg/L	T	-	<0.001 :	-	-	<0.002 :	-
Vanadium	mg/L	D	-	-	<0.001 :	-	-	<0.002 :
Zinc	mg/L	T	-	2.84 :	-	-	2.1 :	-
Zinc	mg/L	D	-	-	2.9 :	-	-	2.22 :
Isotopes								
Lead	mg/L	T	-	0.0014 :	-	-	0.0011 :	-
Lead	mg/L	D	-	-	<0.001 :	-	-	0.0014 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
			SPRING 13-PUMP 7/22/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 7/22/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-SFW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 9/9/2003 SPRING13PUMP-T0 1N-GRW GW1	
Field Measurements														
DO	mg/L	T	3.68	:	-		6.05	:	-		-		1.99	:
EH	millivolts	T	454.6	:	-		383.8	:	-		-		417.5	:
pH	SU	T	3.8	J	-		3.53	:	3.8	J	-		3.7	J
Specific Conductance	uS/cm	T	1584.	:	-		1654.	:	-		-		1653.	:
Temperature	Celsius	T	13.95	:	-		14.68	:	-		-		12.25	:
Turbidity	NTU	T	0.3	:	-		0.	:	-		-		9.	:
General Chemistry														
Ammonia	mg/L	T	<0.065	J	-		-		0.049	:	-		<0.071	:
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Chloride	mg/L	T	22.2	:	-		-		18.6	:	-		19.9	:
Fluoride	mg/L	T	11.2	:	-		-		10.5	:	-		11.	:
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Nitrate	mg/L	T	<0.4	J	-		-		<0.2	J	-		<0.2	J
Nitrite	mg/L	T	<0.005	:	-		-		0.0066	J	-		0.013	J
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		<0.01	J	-		<0.01	J
Phosphorus	mg/L	T	0.014	:	-		-		0.017	:	-		0.01	:
Sulfate	mg/L	T	913.	J	-		-		1230.	J	-		990.	J
Total Alkalinity	mg/L	T	<1.	:	-		-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	2170.	:	-		-		1910.	:	-		1670.	:
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	<1.1	J	-		-		<2.5	J	-		<1.	:
Total Suspended Solids	mg/L	T	<2.	:	-		-		<2.	:	-		2.2	:
Laboratory Parameters														
pH	SU	T	3.8	J	-		3.53	:	3.8	J	-		3.7	J
Specific Conductance	umhos/cm	T	1600.	J	-		-		1490.	J	-		1570.	J
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		<0.01	:	-		<0.01	:
Physical Properties														
Hardness	mg/L	T	584.	:	-		-		621.	:	-		643.	:
Hardness	mg/L	D	-		583.	:	-		-		600.	:	-	
Metals														

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 13-PUMP 7/22/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 7/22/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-SFW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 9/9/2003 SPRING13PUMP-T0 1N-GRW GW1	
Aluminum	mg/L	T	67.7	:	-		-		80.8	:	-		86.5	:
Aluminum	mg/L	D	-		67.3	:	-		-		76.4	J	-	
Antimony	mg/L	T	<0.047	:	-		-		<0.038	:	-		<0.082	:
Antimony	mg/L	D	-		<0.047	:	-		-		<0.038	:	-	
Arsenic	mg/L	T	<0.048	:	-		-		<0.024	:	-		<0.035	:
Arsenic	mg/L	D	-		<0.048	:	-		-		<0.024	:	-	
Barium	mg/L	T	<0.059	:	-		-		<0.073	:	-		<0.117	:
Barium	mg/L	D	-		<0.059	:	-		-		<0.073	:	-	
Beryllium	mg/L	T	<0.017	:	-		-		0.0131	J	-		<0.0156	:
Beryllium	mg/L	D	-		<0.0165	:	-		-		0.0132	J	-	
Boron	mg/L	T	<0.048	:	-		-		<0.046	:	-		<0.064	:
Boron	mg/L	D	-		<0.048	:	-		-		<0.046	:	-	
Cadmium	mg/L	T	<0.12	:	-		-		<0.12	:	-		<0.13	:
Cadmium	mg/L	D	-		<0.12	:	-		-		<0.12	:	-	
Calcium	mg/L	T	161.	:	-		-		169.	:	-		174.	:
Calcium	mg/L	D	-		161.	:	-		-		164.	:	-	
Chromium	mg/L	T	<0.19	J	-		-		<0.19	:	-		<0.23	:
Chromium	mg/L	D	-		<0.19	J	-		-		<0.19	:	-	
Cobalt	mg/L	T	<0.37	:	-		-		<0.37	:	-		<0.32	:
Cobalt	mg/L	D	-		<0.37	:	-		-		<0.37	:	-	
Copper	mg/L	T	0.74	:	-		-		1.03	:	-		0.66	:
Copper	mg/L	D	-		0.698	:	-		-		0.848	:	-	
Iron	mg/L	T	12.6	:	-		-		19.4	:	-		14.6	:
Iron	mg/L	D	-		12.	:	-		-		15.4	:	-	
Lead	mg/L	T	0.0013	:	-		-		0.0041	J	-		<0.002	:
Lead	mg/L	D	-		0.0015	:	-		-		0.0072	J	-	
Magnesium	mg/L	T	44.4	:	-		-		48.3	:	-		51.	:
Magnesium	mg/L	D	-		44.	:	-		-		45.9	:	-	
Manganese	mg/L	T	10.1	:	-		-		10.8	:	-		11.	:
Manganese	mg/L	D	-		10.1	:	-		-		10.4	:	-	
Mercury	mg/L	T	0.00011	:	-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	<0.017	:	-		-		0.0194	:	-		<0.012	:
Molybdenum	mg/L	D	-		<0.017	:	-		-		<0.016	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 13-PUMP 7/22/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 7/22/2003 SPRING13PUMP-D 01N-GRW GW1		Spring 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-SFW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 8/11/2003 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 9/9/2003 SPRING13PUMP-T0 1N-GRW GW1	
Nickel	mg/L	T	<0.44	:	-		-		0.456	:	-		<0.45	:
Nickel	mg/L	D	-		<0.44	:	-		-		<0.44	:	-	
Potassium	mg/L	T	<37.1	:	-		-		<37.1	:	-		<63.8	:
Potassium	mg/L	D	-		<37.1	:	-		-		<37.1	:	-	
Selenium	mg/L	T	<0.008	:	-		-		<0.008	:	-		<0.003	:
Selenium	mg/L	D	-		<0.008	J	-		-		<0.008	:	-	
Silver	mg/L	T	<0.001	J	-		-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		<0.001	J	-		-		<0.001	:	-	
Sodium	mg/L	T	<53.2	:	-		-		<53.2	J	-		<99.1	:
Sodium	mg/L	D	-		<59.8	:	-		-		<53.2	J	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.002	:	-		-		<0.002	:	-		<0.001	:
Vanadium	mg/L	D	-		<0.002	:	-		-		<0.002	:	-	
Zinc	mg/L	T	2.68	:	-		-		3.19	:	-		2.82	:
Zinc	mg/L	D	-		2.72	:	-		-		2.9	:	-	
Isotopes														
Lead	mg/L	T	0.0013	:	-		-		0.0041	J	-		<0.002	:
Lead	mg/L	D	-		0.0015	:	-		-		0.0072	J	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 13-PUMP Sample Date: 9/9/2003 Sample ID: SPRING13PUMP-D0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 11/3/2003 Sample ID: SPRING13PUMP-T0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 11/3/2003 Sample ID: SPRING13PUMP-D 01N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 12/11/2003 Sample ID: SPRING13PUMP-T0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 12/11/2003 Sample ID: SPRING13PUMP-D0 1N-GRW GW1		Site ID: SPRING 13-PUMP Sample Date: 1/13/2004 Sample ID: SPRING13PUMP-T0 1N-GRW GW1	
Field Measurements														
DO	mg/L	T	-		2.22	:	-		8.9	:	-		6.43	:
EH	millivolts	T	-		419.9	:	-		350.2	:	-		436.8	:
pH	SU	T	-		3.72	:	-		3.83	:	-		3.53	:
Specific Conductance	uS/cm	T	-		1748.	:	-		1644.	:	-		1747.	:
Temperature	Celsius	T	-		10.18	:	-		6.55	:	-		5.14	:
Turbidity	NTU	T	-		0.	:	-		10.6	:	-		7.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.1	:	-		0.059	:	-		<0.062	J
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		26.6	:	-		24.5	:	-		25.8	:
Fluoride	mg/L	T	-		11.8	:	-		12.4	:	-		12.6	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.2	J	-		<0.2	:	-		<0.28	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		0.013	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	J
Phosphorus	mg/L	T	-		0.014	:	-		<0.01	:	-		<0.014	:
Sulfate	mg/L	T	-		1060.	:	-		1070.	:	-		1220.	:
Total Alkalinity	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Total Dissolved Solids	mg/L	T	-		1800.	:	-		1600.	J	-		1770.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.7	:	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.5	:	-		3.6	:	-		3.6	:
Laboratory Parameters														
pH	SU	T	-		3.72	:	-		3.83	:	-		3.53	:
Specific Conductance	umhos/cm	T	-		1770.	J	-		1500.	J	-		1840.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		692.	:	-		618.	:	-		669.	:
Hardness	mg/L	D	633.	:	-		724.	:	-		593.	:	-	
Metals														

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13-PUMP 9/9/2003 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 11/3/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 11/3/2003 SPRING13PUMP-D 01N-GRW GW1		SPRING 13-PUMP 12/11/2003 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 12/11/2003 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 1/13/2004 SPRING13PUMP-T0 1N-GRW GW1	
Aluminum	mg/L	T	-		90.5	:	-		83.5	:	-		90.9	:
Aluminum	mg/L	D	84.5	:	-		94.1	:	-		76.5	:	-	
Antimony	mg/L	T	-		<0.082	J	-		<0.082	:	-		<0.097	:
Antimony	mg/L	D	<0.082	:	-		<0.082	J	-		<0.052	:	-	
Arsenic	mg/L	T	-		<0.035	:	-		<0.035	:	-		<0.052	:
Arsenic	mg/L	D	<0.035	:	-		<0.035	:	-		<0.041	:	-	
Barium	mg/L	T	-		<0.117	:	-		<0.117	:	-		<0.188	:
Barium	mg/L	D	<0.117	:	-		<0.117	:	-		<0.115	:	-	
Beryllium	mg/L	T	-		<0.0234	:	-		<0.0191	:	-		0.0166	:
Beryllium	mg/L	D	<0.0161	:	-		<0.0333	:	-		<0.0174	:	-	
Boron	mg/L	T	-		<0.064	:	-		<0.064	:	-		<0.117	:
Boron	mg/L	D	<0.064	:	-		<0.064	:	-		<0.063	:	-	
Cadmium	mg/L	T	-		<0.13	:	-		<0.13	:	-		<0.07	J
Cadmium	mg/L	D	<0.13	:	-		<0.13	:	-		<0.05	J	-	
Calcium	mg/L	T	-		190.	:	-		169.	:	-		182.	:
Calcium	mg/L	D	171.	:	-		198.	:	-		162.	:	-	
Chromium	mg/L	T	-		<0.23	:	-		<0.23	:	-		<0.11	:
Chromium	mg/L	D	<0.23	:	-		<0.23	:	-		-		-	
Cobalt	mg/L	T	-		<0.32	:	-		<0.32	:	-		<0.31	:
Cobalt	mg/L	D	<0.32	:	-		<0.32	:	-		<0.29	:	-	
Copper	mg/L	T	-		<0.963	:	-		0.87	J	-		1.01	:
Copper	mg/L	D	0.548	:	-		<1.24	:	-		<0.366	J	-	
Iron	mg/L	T	-		18.5	:	-		17.8	:	-		17.5	:
Iron	mg/L	D	14.8	:	-		21.3	:	-		9.8	:	-	
Lead	mg/L	T	-		<0.002	:	-		0.002	:	-		0.0011	:
Lead	mg/L	D	<0.002	:	-		<0.002	:	-		0.0035	:	-	
Magnesium	mg/L	T	-		52.9	:	-		47.6	:	-		52.2	:
Magnesium	mg/L	D	50.3	:	-		55.5	:	-		45.8	:	-	
Manganese	mg/L	T	-		11.6	J	-		11.2	:	-		12.2	:
Manganese	mg/L	D	10.9	:	-		12.2	:	-		10.5	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		<0.012	:	-		<0.012	:	-		<0.03	:
Molybdenum	mg/L	D	<0.012	:	-		<0.012	:	-		<0.011	J	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13-PUMP 9/9/2003 SPRING13PUMP-D0 1N-GRW GW1	SPRING 13-PUMP 11/3/2003 SPRING13PUMP-T0 1N-GRW GW1	SPRING 13-PUMP 11/3/2003 SPRING13PUMP-D 01N-GRW GW1	SPRING 13-PUMP 12/11/2003 SPRING13PUMP-T0 1N-GRW GW1	SPRING 13-PUMP 12/11/2003 SPRING13PUMP-D0 1N-GRW GW1	SPRING 13-PUMP 1/13/2004 SPRING13PUMP-T0 1N-GRW GW1
Nickel	mg/L	T	-	<0.45 :	-	<0.45 :	-	0.435 :
Nickel	mg/L	D	<0.45 :	-	<0.45 :	-	-	-
Potassium	mg/L	T	-	<63.8 :	-	<63.8 :	-	<24.3 :
Potassium	mg/L	D	<63.8 :	-	<63.8 :	-	<31.8 J	-
Selenium	mg/L	T	-	0.0044 :	-	0.0091 :	-	0.0045 J
Selenium	mg/L	D	0.0034 :	-	<0.003 :	-	0.0034 :	-
Silver	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Sodium	mg/L	T	-	<99.1 :	-	<99.1 :	-	<49. :
Sodium	mg/L	D	<99.1 :	-	<99.1 :	-	<45.4 J	-
Thallium	mg/L	T	-	<0.001 :	-	<0.001 :	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.001 :	-
Vanadium	mg/L	T	-	<0.001 :	-	<0.002 :	-	<0.002 :
Vanadium	mg/L	D	<0.001 :	-	<0.001 :	-	<0.0053 :	-
Zinc	mg/L	T	-	3.14 :	-	3. :	-	3.34 :
Zinc	mg/L	D	2.83 :	-	3.46 :	-	2.07 J	-
Isotopes								
Lead	mg/L	T	-	<0.002 :	-	0.002 :	-	0.0011 :
Lead	mg/L	D	<0.002 :	-	<0.002 :	-	0.0035 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 13-PUMP 1/13/2004 SPRING13PUMP-D01N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-T01N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-D01N-GRW GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RWRE GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RW GW1		Spring 14-M 11/7/2002 SPRING14-D01N-G RWRE GW1	
Field Measurements														
DO	mg/L	T	-		5.51	:	-		-		7.58	:	-	
EH	millivolts	T	-		461.9	:	-		-		148.6	:	-	
pH	SU	T	-		3.54	:	-		-		4.77	:	-	
Specific Conductance	uS/cm	T	-		1601.	:	-		-		288.	:	-	
Temperature	Celsius	T	-		10.85	:	-		-		6.58	:	-	
Turbidity	NTU	T	-		0.	:	-		-		3.1	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.081	:	-		-		<0.092	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		32.5	:	-		-		6.5	:	-	
Fluoride	mg/L	T	-		10.2	:	-		2.8	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		0.25	J	-		-		<0.4	:	-	
Nitrite	mg/L	T	-		0.011	J	-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Phosphorus	mg/L	T	-		0.011	:	-		-		<0.01	:	-	
Sulfate	mg/L	T	-		927.	:	-		279.	J	-		-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		1570.	:	-		-		408.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		1.4	J	-		-		<1.	:	-	
Total Suspended Solids	mg/L	T	-		<2.1	J	-		-		<0.71	:	-	
Laboratory Parameters														
pH	SU	T	-		3.54	:	-		-		4.77	:	-	
Specific Conductance	umhos/cm	T	-		1420.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	:	-		-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		591.	:	-		-		-		-	
Hardness	mg/L	D	662.	:	-		599.	:	-		-		198.	:
Metals														

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13-PUMP 1/13/2004 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-D 01N-GRW GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RWRE GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RW GW1		Spring 14-M 11/7/2002 SPRING14-D01N-G RWRE GW1	
Aluminum	mg/L	T	-		78.	:	-		-		-		-	
Aluminum	mg/L	D	89.5	:	-		77.9	:	-		-		<14.8	:
Antimony	mg/L	T	-		<0.053	:	-		-		-		-	
Antimony	mg/L	D	<0.097	:	-		<0.053	:	-		-		<0.028	:
Arsenic	mg/L	T	-		<0.037	J	-		-		-		-	
Arsenic	mg/L	D	<0.052	:	-		<0.037	:	-		-		<0.0439	:
Barium	mg/L	T	-		<0.049	:	-		-		-		-	
Barium	mg/L	D	<0.188	:	-		<0.049	:	-		-		<0.048	:
Beryllium	mg/L	T	-		<0.0186	:	-		-		-		-	
Beryllium	mg/L	D	0.0152	:	-		0.0166	:	-		-		0.0086	:
Boron	mg/L	T	-		<0.036	:	-		-		-		-	
Boron	mg/L	D	<0.117	:	-		<0.036	:	-		-		<0.027	:
Cadmium	mg/L	T	-		<0.1	:	-		-		-		-	
Cadmium	mg/L	D	<0.07	:	-		<0.1	:	-		-		<0.08	:
Calcium	mg/L	T	-		162.	:	-		-		-		-	
Calcium	mg/L	D	180.	:	-		164.	:	-		-		56.	:
Chromium	mg/L	T	-		<0.13	:	-		-		-		-	
Chromium	mg/L	D	<0.11	:	-		<0.13	:	-		-		<0.16	J
Chromium, Hexavalent	mg/L	D	-		-		-		-		<0.01	:	-	
Cobalt	mg/L	T	-		0.195	:	-		-		-		-	
Cobalt	mg/L	D	<0.31	:	-		0.191	:	-		-		<0.23	:
Copper	mg/L	T	-		0.954	:	-		-		-		-	
Copper	mg/L	D	0.915	:	-		0.974	:	-		-		<0.21	:
Iron	mg/L	T	-		<11.6	J	-		-		-		-	
Iron	mg/L	D	16.1	:	-		13.8	:	-		-		<2.66	:
Lead	mg/L	T	-		<0.004	:	-		-		-		-	
Lead	mg/L	D	0.001	:	-		<0.004	:	-		-		<0.001	:
Magnesium	mg/L	T	-		45.5	:	-		-		-		-	
Magnesium	mg/L	D	51.4	:	-		46.2	:	-		-		<26.9	:
Manganese	mg/L	T	-		10.3	:	-		-		-		-	
Manganese	mg/L	D	12.	:	-		10.3	:	-		-		2.85	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		<0.014	:	-		-		-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 13-PUMP 1/13/2004 SPRING13PUMP-D0 1N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-T0 1N-GRW GW1		SPRING 13-PUMP 4/13/2004 SPRING13PUMP-D 01N-GRW GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RWRE GW1		Spring 14-M 11/7/2002 SPRING14-T01N-G RW GW1		Spring 14-M 11/7/2002 SPRING14-D01N-G RWRE GW1	
Molybdenum	mg/L	D	<0.03	:	-		<0.014	:	-		-		<0.011	:
Nickel	mg/L	T	-		0.466	:	-		-		-		-	
Nickel	mg/L	D	0.409	:	-		0.55	:	-		-		<0.34	:
Potassium	mg/L	T	-		<15.5	:	-		-		-		-	
Potassium	mg/L	D	<24.3	:	-		<15.5	:	-		-		<31.4	J
Selenium	mg/L	T	-		<0.007	:	-		-		-		-	
Selenium	mg/L	D	0.0038	:	-		<0.007	:	-		-		<0.008	:
Silver	mg/L	T	-		<0.001	J	-		-		-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		-		<0.001	:
Sodium	mg/L	T	-		<32.8	J	-		-		-		-	
Sodium	mg/L	D	<49.	:	-		<37.2	J	-		-		<36.6	:
Thallium	mg/L	T	-		<0.001	:	-		-		-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.002	:	-		-		-		-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		-		<0.002	:
Zinc	mg/L	T	-		2.9	:	-		-		-		-	
Zinc	mg/L	D	3.32	:	-		2.96	:	-		-		1.01	:
Isotopes														
Lead	mg/L	T	-		<0.004	:	-		-		-		-	
Lead	mg/L	D	0.001	:	-		<0.004	:	-		-		<0.001	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 14-M Sample Date: 11/7/2002 Sample ID: SPRING14-D01N-G RW GW1	Spring 14-M 11/7/2002 Spring 14-M-T01N-GW GW1	Spring 14-M 1/7/2003 SPRING14-T01N-G RW GW1	Spring 14-M 1/7/2003 SPRING14-D01N-G RW GW1	Spring 14-M 1/21/2003 SPRING14MR-T01N-GRW GW1	Spring 14-M 2/7/2003 Spring 14-M-T01N-GW GW1
Field Measurements								
DO	mg/L	T	-	-	6.54 :	-	6.34 :	-
EH	millivolts	T	-	-	447.7 :	-	407.5 :	-
Flow	gpm	T	-	3. :	1.16 :	-	-	1.6 :
pH	SU	T	-	-	4.25 :	-	4.49 :	-
Specific Conductance	uS/cm	T	-	-	291. :	-	489. :	-
Temperature	Celsius	T	-	-	4.17 :	-	1.98 :	-
Turbidity	NTU	T	-	-	2.5 :	-	31.3 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	<0.1 :	-	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	<2.6 :	-	-	-
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Chloride	mg/L	T	-	-	6.6 :	-	-	-
Fluoride	mg/L	T	-	-	1.6 :	-	-	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	-
Nitrate	mg/L	T	-	-	0.46 J	-	-	-
Nitrite	mg/L	T	-	-	<0.005 J	-	-	-
Phosphate, Ortho As P	mg/L	T	-	-	0.077 J	-	-	-
Phosphorus	mg/L	T	-	-	<0.027 J	-	-	-
Sulfate	mg/L	T	-	-	205. J	-	-	-
Total Alkalinity	mg/L	T	-	-	<2.6 :	-	-	-
Total Dissolved Solids	mg/L	T	-	-	<315. :	-	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.26 :	-	-	-
Total Organic Carbon	mg/L	T	-	-	1.2 :	-	-	-
Total Suspended Solids	mg/L	T	-	-	6.2 :	-	-	-
Laboratory Parameters								
pH	SU	T	-	-	4.25 :	-	4.49 :	-
Inorganics								
Cyanide	mg/L	T	-	-	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	-	-	189. :	-	-	-
Hardness	mg/L	D	-	-	-	182. :	-	-
Metals								

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 11/7/2002 SPRING14-D01N-G RW GW1	Spring 14-M 11/7/2002 Spring 14-M-T01N-GW GW1	Spring 14-M 1/7/2003 SPRING14-T01N-G RW GW1	Spring 14-M 1/7/2003 SPRING14-D01N-G RW GW1	Spring 14-M 1/21/2003 SPRING14MR-T01N -GRW GW1	Spring 14-M 2/7/2003 Spring 14-M-T01N-GW GW1
Aluminum	mg/L	T	-	-	5.51 :	-	-	-
Aluminum	mg/L	D	-	-	-	4.9 :	-	-
Antimony	mg/L	T	-	-	<0.028 :	-	-	-
Antimony	mg/L	D	-	-	-	<0.028 :	-	-
Arsenic	mg/L	T	-	-	0.0265 :	-	-	-
Arsenic	mg/L	D	-	-	-	<0.023 :	-	-
Barium	mg/L	T	-	-	<0.048 :	-	-	-
Barium	mg/L	D	-	-	-	<0.048 :	-	-
Beryllium	mg/L	T	-	-	0.0024 :	-	-	-
Beryllium	mg/L	D	-	-	-	0.0022 :	-	-
Boron	mg/L	T	-	-	<0.027 :	-	-	-
Boron	mg/L	D	-	-	-	<0.027 :	-	-
Cadmium	mg/L	T	-	-	<0.08 :	-	-	-
Cadmium	mg/L	D	-	-	-	<0.08 :	-	-
Calcium	mg/L	T	-	-	53.9 :	-	-	-
Calcium	mg/L	D	-	-	-	52. :	-	-
Chromium	mg/L	T	-	-	<0.16 :	-	-	-
Chromium	mg/L	D	-	-	-	<0.16 :	-	-
Cobalt	mg/L	T	-	-	<0.23 :	-	-	-
Cobalt	mg/L	D	-	-	-	<0.23 :	-	-
Copper	mg/L	T	-	-	<0.17 :	-	-	-
Copper	mg/L	D	-	-	-	<0.17 :	-	-
Iron	mg/L	T	-	-	<2.66 :	-	-	-
Iron	mg/L	D	-	-	-	<2.66 :	-	-
Lead	mg/L	T	-	-	0.0012 :	-	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-
Magnesium	mg/L	T	-	-	<26.9 :	-	-	-
Magnesium	mg/L	D	-	-	-	<26.9 :	-	-
Manganese	mg/L	T	-	-	1.16 :	-	-	-
Manganese	mg/L	D	-	-	-	0.965 :	-	-
Mercury	mg/L	T	-	-	<0.0001 :	-	-	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T	-	-	<0.011 :	-	-	-
Molybdenum	mg/L	D	-	-	-	<0.011 :	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			Spring 14-M 11/7/2002 SPRING14-D01N-G RW GW1	Spring 14-M 11/7/2002 Spring 14-M-T01N-GW GW1	Spring 14-M 1/7/2003 SPRING14-T01N-G RW GW1	Spring 14-M 1/7/2003 SPRING14-D01N-G RW GW1	Spring 14-M 1/21/2003 SPRING14MR-T01N -GRW GW1	Spring 14-M 2/7/2003 Spring 14-M-T01N-GW GW1
Nickel	mg/L	T	-	-	<0.34 :	-	-	-
Nickel	mg/L	D	-	-	-	<0.34 :	-	-
Potassium	mg/L	T	-	-	<31.4 :	-	-	-
Potassium	mg/L	D	-	-	-	<31.4 :	-	-
Selenium	mg/L	T	-	-	<0.008 :	-	-	-
Selenium	mg/L	D	-	-	-	<0.008 :	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	-
Silver	mg/L	D	-	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<36.6 :	-	-	-
Sodium	mg/L	D	-	-	-	<36.6 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	-
Thallium	mg/L	D	-	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	<0.002 :	-	-	-
Vanadium	mg/L	D	-	-	-	<0.002 :	-	-
Zinc	mg/L	T	-	-	0.573 :	-	-	-
Zinc	mg/L	D	-	-	-	0.512 :	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0012 :	-	-	-
Lead	mg/L	D	-	-	-	<0.001 :	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 14-M	Spring 14-M	Spring 14-M	Spring 14-M	Spring 14-M	Spring 14-M
		Sample Date:	4/4/2003	4/4/2003	4/4/2003	5/9/2003	7/20/2003	7/20/2003
		Sample ID:	SPRING14M-T01N-GRW	SPRING14M-D01N-GRW	Spring 14-M-T01N-GRW	Spring 14-M-T01N-GW	SPRING14M-T01N-GRW	SPRING14M-D01N-GRW
		Exposure Area:	GW1	GW1	GW1	GW1	GW1	GW1
Field Measurements								
DO	mg/L	T	-	-	7.14 :	-	3.86 :	-
EH	millivolts	T	-	-	455.6 :	-	418.5 :	-
Flow	gpm	T	-	-	5.6 :	2.59 :	0.2 :	-
pH	SU	T	5.3 J	-	4.39 :	-	4.3 J	-
Specific Conductance	uS/cm	T	-	-	549. :	-	867. :	-
Temperature	Celsius	T	-	-	4.19 :	-	11.56 :	-
Turbidity	NTU	T	-	-	0. :	-	9.5 :	-
General Chemistry								
Ammonia	mg/L	T	0.064 :	-	-	-	<0.17 J	-
Bicarbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Chloride	mg/L	T	7. :	-	-	-	9. :	-
Fluoride	mg/L	T	2.4 :	-	-	-	5.7 :	-
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T	<0.4 J	-	-	-	<0.2 J	-
Nitrite	mg/L	T	<0.005 :	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	<0.01 :	-	-	-	<0.01 J	-
Phosphorus	mg/L	T	0.021 :	-	-	-	0.012 :	-
Sulfate	mg/L	T	248. J	-	-	-	504. J	-
Total Alkalinity	mg/L	T	<1. :	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T	416. :	-	-	-	936. :	-
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T	<1. J	-	-	-	<1.1 J	-
Total Suspended Solids	mg/L	T	1.2 :	-	-	-	17.8 :	-
Laboratory Parameters								
pH	SU	T	5.3 J	-	4.39 :	-	4.3 J	-
Specific Conductance	umhos/cm	T	523. J	-	-	-	820. J	-
Inorganics								
Cyanide	mg/L	T	<0.01 J	-	-	-	<0.01 J	-
Physical Properties								
Hardness	mg/L	T	201. :	-	-	-	311. :	-
Hardness	mg/L	D	-	205. :	-	-	-	306. :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 4/4/2003 SPRING14M-T01N-GRW GW1	Spring 14-M 4/4/2003 SPRING14M-D01N-GRW GW1	Spring 14-M 4/4/2003 Spring 14-M-T01N-GRW GW1	Spring 14-M 5/9/2003 Spring 14-M-T01N-GW GW1	Spring 14-M 7/20/2003 SPRING14M-T01N-GRW GW1	Spring 14-M 7/20/2003 SPRING14M-D01N-GRW GW1
Metals								
Aluminum	mg/L	T	<11.4 :	-	-	-	26.8 J	-
Aluminum	mg/L	D	-	<12.2 :	-	-	-	26.4 J
Antimony	mg/L	T	<0.003 J	-	-	-	0.0427 :	-
Antimony	mg/L	D	-	<0.003 J	-	-	-	<0.038 :
Arsenic	mg/L	T	<0.047 :	-	-	-	<0.024 :	-
Arsenic	mg/L	D	-	<0.047 :	-	-	-	<0.024 :
Barium	mg/L	T	<0.135 :	-	-	-	<0.073 :	-
Barium	mg/L	D	-	<0.135 :	-	-	-	<0.073 :
Beryllium	mg/L	T	0.0066 :	-	-	-	0.0254 :	-
Beryllium	mg/L	D	-	0.0073 :	-	-	-	0.0239 :
Boron	mg/L	T	<0.075 :	-	-	-	<0.046 :	-
Boron	mg/L	D	-	<0.075 :	-	-	-	<0.046 :
Cadmium	mg/L	T	<0.04 :	-	-	-	<0.03 :	-
Cadmium	mg/L	D	-	<0.04 :	-	-	-	<0.03 :
Calcium	mg/L	T	59.3 :	-	-	-	86.4 :	-
Calcium	mg/L	D	-	60.7 :	-	-	-	84.8 :
Chromium	mg/L	T	<0.09 J	-	-	-	<0.06 J	-
Chromium	mg/L	D	-	<0.09 J	-	-	-	<0.06 J
Cobalt	mg/L	T	<0.29 :	-	-	-	<0.18 :	-
Cobalt	mg/L	D	-	<0.29 :	-	-	-	<0.18 :
Copper	mg/L	T	<0.24 J	-	-	-	<0.58 :	-
Copper	mg/L	D	-	<0.24 J	-	-	-	<0.568 :
Iron	mg/L	T	<2.99 :	-	-	-	<1.68 :	-
Iron	mg/L	D	-	<2.99 :	-	-	-	<1.68 :
Lead	mg/L	T	<0.001 :	-	-	-	0.0013 :	-
Lead	mg/L	D	-	<0.001 :	-	-	-	0.0017 :
Magnesium	mg/L	T	<29.5 :	-	-	-	23. :	-
Magnesium	mg/L	D	-	<29.5 :	-	-	-	23. :
Manganese	mg/L	T	2.13 :	-	-	-	6. :	-
Manganese	mg/L	D	-	2.39 :	-	-	-	5.95 :
Mercury	mg/L	T	<0.0001 :	-	-	-	<0.0001 J	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 J
Molybdenum	mg/L	T	<0.016 :	-	-	-	<0.016 :	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 4/4/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 4/4/2003 SPRING14M-D01N-GRW GW1		Spring 14-M 4/4/2003 Spring 14-M-T01N-GRW GW1		Spring 14-M 5/9/2003 Spring 14-M-T01N-GW GW1		Spring 14-M 7/20/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 7/20/2003 SPRING14M-D01N-GRW GW1	
Molybdenum	mg/L	D	-		<0.016	:	-		-		-		<0.016	:
Nickel	mg/L	T	<0.26	:	-		-		-		<0.2	J	-	
Nickel	mg/L	D	-		<0.26	:	-		-		-		1.28	:
Potassium	mg/L	T	<32.7	:	-		-		-		<25.	:	-	
Potassium	mg/L	D	-		<32.7	:	-		-		-		<25.	:
Selenium	mg/L	T	<0.005	:	-		-		-		<0.008	:	-	
Selenium	mg/L	D	-		<0.005	:	-		-		-		<0.008	J
Silver	mg/L	T	<0.001	:	-		-		-		<0.0009	J	-	
Silver	mg/L	D	-		<0.001	:	-		-		-		<0.0014	J
Sodium	mg/L	T	<51.3	:	-		-		-		<21.9	:	-	
Sodium	mg/L	D	-		<51.3	:	-		-		-		<21.9	:
Thallium	mg/L	T	<0.001	:	-		-		-		<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-		-		-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		-		-		<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-		-		-		<0.002	:
Zinc	mg/L	T	0.835	:	-		-		-		0.64	J	-	
Zinc	mg/L	D	-		0.912	:	-		-		-		0.575	J
Isotopes														
Lead	mg/L	T	<0.001	:	-		-		-		0.0013	:	-	
Lead	mg/L	D	-		<0.001	:	-		-		-		0.0017	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 14-M 10/21/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 10/21/2003 SPRING14M-D01N-GRW GW1		Spring 14-M 11/4/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 12/8/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 1/9/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 1/9/2004 SPRING14M-D01N-GRW GW1	
Field Measurements														
DO	mg/L	T	3.1	:	-		-		-		6.03	:	-	
EH	millivolts	T	180.4	:	-		-		-		358.4	:	-	
Flow	gpm	T	1.2	:	-		2.4	:	0.6	:	1.6	:	-	
pH	SU	T	4.21	:	-		-		-		4.4	:	-	
Specific Conductance	uS/cm	T	526.	:	-		-		-		552.	:	-	
Temperature	Celsius	T	9.32	:	-		-		-		4.27	:	-	
Turbidity	NTU	T	2.7	:	-		-		-		1.1	:	-	
General Chemistry														
Ammonia	mg/L	T	0.079	J	-		-		-		<0.12	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	5.6	:	-		-		-		6.6	:	-	
Fluoride	mg/L	T	2.9	:	-		-		-		3.3	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		-		-		<0.2	:	-	
Nitrite	mg/L	T	<0.005	J	-		-		-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		-		-		<0.01	:	-	
Phosphorus	mg/L	T	0.013	:	-		-		-		<0.01	:	-	
Sulfate	mg/L	T	357.	J	-		-		-		287.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	538.	:	-		-		-		466.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.28	:	-		-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	J	-		-		-		<1.3	:	-	
Total Suspended Solids	mg/L	T	1.4	:	-		-		-		<1.	:	-	
Laboratory Parameters														
pH	SU	T	4.21	:	-		-		-		4.4	:	-	
Specific Conductance	umhos/cm	T	533.	J	-		-		-		544.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	184.	:	-		-		-		205.	:	-	
Hardness	mg/L	D	-		175.	:	-		-		-		203.	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 10/21/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 10/21/2003 SPRING14M-D01N-GRW GW1		Spring 14-M 11/4/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 12/8/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 1/9/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 1/9/2004 SPRING14M-D01N-GRW GW1	
Metals														
Aluminum	mg/L	T	15.8	:	-		-		-		18.3	:	-	
Aluminum	mg/L	D	-		15.2	:	-		-		-		17.1	:
Antimony	mg/L	T	<0.082	:	-		-		-		<0.029	:	-	
Antimony	mg/L	D	-		<0.082	:	-		-		-		<0.029	:
Arsenic	mg/L	T	<0.035	:	-		-		-		<0.028	:	-	
Arsenic	mg/L	D	-		<0.035	:	-		-		-		<0.028	:
Barium	mg/L	T	<0.117	:	-		-		-		<0.053	:	-	
Barium	mg/L	D	-		<0.117	:	-		-		-		<0.053	:
Beryllium	mg/L	T	0.0105	J	-		-		-		0.0116	:	-	
Beryllium	mg/L	D	-		0.0092	J	-		-		-		0.0112	:
Boron	mg/L	T	<0.064	:	-		-		-		<0.117	:	-	
Boron	mg/L	D	-		<0.064	:	-		-		-		<0.117	:
Cadmium	mg/L	T	<0.13	:	-		-		-		<0.07	J	-	
Cadmium	mg/L	D	-		<0.13	:	-		-		-		<0.07	:
Calcium	mg/L	T	51.9	:	-		-		-		58.9	:	-	
Calcium	mg/L	D	-		49.	:	-		-		-		58.6	:
Chromium	mg/L	T	0.184	J	-		-		-		<0.11	:	-	
Chromium	mg/L	D	-		<0.11	J	-		-		-		<0.11	:
Cobalt	mg/L	T	<0.32	:	-		-		-		<0.31	:	-	
Cobalt	mg/L	D	-		<0.32	:	-		-		-		<0.31	:
Copper	mg/L	T	0.248	:	-		-		-		<0.24	J	-	
Copper	mg/L	D	-		0.256	:	-		-		-		<0.24	J
Iron	mg/L	T	<4.55	:	-		-		-		<3.73	:	-	
Iron	mg/L	D	-		<4.55	:	-		-		-		<3.73	:
Lead	mg/L	T	<0.002	:	-		-		-		<0.001	:	-	
Lead	mg/L	D	-		<0.002	:	-		-		-		<0.001	:
Magnesium	mg/L	T	<16.7	:	-		-		-		<24.9	:	-	
Magnesium	mg/L	D	-		<16.7	:	-		-		-		<24.9	:
Manganese	mg/L	T	2.65	:	-		-		-		3.18	:	-	
Manganese	mg/L	D	-		2.54	:	-		-		-		3.02	:
Mercury	mg/L	T	<0.0001	:	-		-		-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		-		-		<0.0001	:
Molybdenum	mg/L	T	<0.012	:	-		-		-		<0.024	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 10/21/2003 SPRING14M-T01N-GRW GW1		Spring 14-M 10/21/2003 SPRING14M-D01N-GRW GW1		Spring 14-M 11/4/2003 SPRING14M-T01N-GRW GW1	Spring 14-M 12/8/2003 SPRING14M-T01N-GRW GW1	Spring 14-M 1/9/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 1/9/2004 SPRING14M-D01N-GRW GW1	
Molybdenum	mg/L	D	-		<0.012	:	-	-	-		<0.024	:
Nickel	mg/L	T	<0.45	:	-		-	-	<0.27	:	-	
Nickel	mg/L	D	-		<0.45	:	-	-	-		0.272	:
Potassium	mg/L	T	<63.8	:	-		-	-	<24.3	:	-	
Potassium	mg/L	D	-		<63.8	:	-	-	-		<24.3	:
Selenium	mg/L	T	<0.03	:	-		-	-	<0.003	J	-	
Selenium	mg/L	D	-		<0.03	:	-	-	-		0.0034	:
Silver	mg/L	T	<0.001	:	-		-	-	<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-	-	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		-	-	<92.	:	-	
Sodium	mg/L	D	-		<99.1	:	-	-	-		<92.	:
Thallium	mg/L	T	<0.001	:	-		-	-	<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-	-	-		<0.001	:
Vanadium	mg/L	T	<0.001	:	-		-	-	<0.002	:	-	
Vanadium	mg/L	D	-		<0.001	:	-	-	-		<0.002	:
Zinc	mg/L	T	2.2	:	-		-	-	1.21	:	-	
Zinc	mg/L	D	-		2.14	:	-	-	-		1.18	:
Isotopes												
Lead	mg/L	T	<0.002	:	-		-	-	<0.001	:	-	
Lead	mg/L	D	-		<0.002	:	-	-	-		<0.001	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 4/21/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 4/21/2004 SPRING14M-D01N-GRW GW1		Spring 14-M 4/22/2004 SPRING14M-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-D01N-GRW GW1		Spring 14-MA 5/9/2003 Spring 14-MA-T01N-GW GW1	
Field Measurements														
DO	mg/L	T	7.25	:	-		-		6.11	:	-		-	
EH	millivolts	T	282.1	:	-		-		325.7	:	-		-	
Flow	gpm	T	1.6	:	-		-		0.1	:	-		1.9	:
pH	SU	T	4.37	:	-		-		4.19	:	-		-	
Specific Conductance	uS/cm	T	508.	:	-		-		1063.	:	-		-	
Temperature	Celsius	T	11.54	:	-		-		12.36	:	-		-	
Turbidity	NTU	T	-		-		-		0.1	:	-		-	
General Chemistry														
Ammonia	mg/L	T	<0.045	:	-		-		0.082	:	-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Chloride	mg/L	T	6.	:	-		-		9.2	:	-		-	
Fluoride	mg/L	T	2.5	:	-		-		3.6	:	-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Nitrate	mg/L	T	<0.2	J	-		-		<0.4	J	-		-	
Nitrite	mg/L	T	<0.005	:	-		-		<0.005	J	-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		-		<0.01	J	-		-	
Phosphorus	mg/L	T	<0.01	:	-		-		0.013	:	-		-	
Sulfate	mg/L	T	250.	:	-		-		550.	J	-		-	
Total Alkalinity	mg/L	T	<1.	:	-		-		<1.	:	-		-	
Total Dissolved Solids	mg/L	T	450.	:	-		-		952.	:	-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		<0.24	:	-		-	
Total Organic Carbon	mg/L	T	1.5	J	-		-		<1.	J	-		-	
Total Suspended Solids	mg/L	T	<0.9	J	-		-		0.5	:	-		-	
Laboratory Parameters														
pH	SU	T	4.37	:	-		-		4.19	:	-		-	
Specific Conductance	umhos/cm	T	455.	J	-		-		928.	J	-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	176.	:	-		-		392.	:	-		-	
Hardness	mg/L	D	-		180.	:	-		-		346.	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 4/21/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 4/21/2004 SPRING14M-D01N-GRW GW1		Spring 14-M 4/22/2004 SPRING14M-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-D01N-GRW GW1		Spring 14-MA 5/9/2003 Spring 14-MA-T01N-GW GW1	
Metals														
Aluminum	mg/L	T	13.2	:	-		-		49.4	:	-		-	
Aluminum	mg/L	D	-		13.5	:	-		-		41.2	:	-	
Antimony	mg/L	T	<0.027	:	-		-		<0.003	:	-		-	
Antimony	mg/L	D	-		<0.027	:	-		-		<0.003	:	-	
Arsenic	mg/L	T	<0.026	:	-		-		<0.04	:	-		-	
Arsenic	mg/L	D	-		<0.026	:	-		-		<0.04	:	-	
Barium	mg/L	T	<0.012	:	-		-		<0.123	:	-		-	
Barium	mg/L	D	-		<0.012	:	-		-		<0.123	:	-	
Beryllium	mg/L	T	0.0091	:	-		-		0.0378	:	-		-	
Beryllium	mg/L	D	-		0.0099	:	-		-		0.0343	:	-	
Boron	mg/L	T	<0.018	:	-		-		<0.084	:	-		-	
Boron	mg/L	D	-		<0.018	:	-		-		<0.084	:	-	
Cadmium	mg/L	T	<0.1	:	-		-		0.0091	J	-		-	
Cadmium	mg/L	D	-		<0.1	:	-		-		0.0071	J	-	
Calcium	mg/L	T	50.2	:	-		-		108.	:	-		-	
Calcium	mg/L	D	-		51.4	:	-		-		95.3	:	-	
Chromium	mg/L	T	<0.13	:	-		-		<0.01	:	-		-	
Chromium	mg/L	D	-		<0.13	:	-		-		<0.01	:	-	
Cobalt	mg/L	T	<0.18	:	-		-		0.0945	:	-		-	
Cobalt	mg/L	D	-		<0.18	:	-		-		0.0803	:	-	
Copper	mg/L	T	<0.27	:	-		-		0.528	:	-		-	
Copper	mg/L	D	-		<0.27	:	-		-		0.503	:	-	
Iron	mg/L	T	<2.93	J	-		-		<3.11	:	-		-	
Iron	mg/L	D	-		<2.93	:	-		-		<3.11	:	-	
Lead	mg/L	T	<0.004	:	-		-		<0.001	:	-		-	
Lead	mg/L	D	-		<0.004	:	-		-		<0.001	:	-	
Magnesium	mg/L	T	12.3	:	-		-		29.7	:	-		-	
Magnesium	mg/L	D	-		12.6	:	-		-		<29.	:	-	
Manganese	mg/L	T	2.12	:	-		-		8.39	:	-		-	
Manganese	mg/L	D	-		2.18	:	-		-		7.19	:	-	
Mercury	mg/L	T	<0.0001	:	-		-		<0.0001	:	-		-	
Mercury	mg/L	D	-		<0.0001	:	-		-		<0.0001	:	-	
Molybdenum	mg/L	T	<0.01	:	-		-		<0.023	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-M 4/21/2004 SPRING14M-T01N-GRW GW1		Spring 14-M 4/21/2004 SPRING14M-D01N-GRW GW1		Spring 14-M 4/22/2004 SPRING14M-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-T01N-GRW GW1		Spring 14-MA 4/8/2003 SPRING14A-D01N-GRW GW1		Spring 14-MA 5/9/2003 Spring 14-MA-T01N-GW GW1	
Molybdenum	mg/L	D	-		<0.01	:	-		-		<0.023	:	-	
Nickel	mg/L	T	<0.33	:	-		-		<0.3	:	-		-	
Nickel	mg/L	D	-		<0.33	:	-		-		<0.3	:	-	
Potassium	mg/L	T	<15.5	:	-		-		<3.26	:	-		-	
Potassium	mg/L	D	-		<15.5	:	-		-		<3.26	:	-	
Selenium	mg/L	T	<0.007	:	-		-		<0.005	:	-		-	
Selenium	mg/L	D	-		<0.007	:	-		-		<0.005	:	-	
Silver	mg/L	T	<0.001	:	-		-		<0.001	:	-		-	
Silver	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Sodium	mg/L	T	<32.8	J	-		-		<35.2	:	-		-	
Sodium	mg/L	D	-		<32.8	J	-		-		<35.2	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		-	
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.002	:	-		-		<0.001	:	-		-	
Vanadium	mg/L	D	-		<0.002	:	-		-		<0.001	:	-	
Zinc	mg/L	T	0.64	J	-		-		2.71	:	-		-	
Zinc	mg/L	D	-		0.658	J	-		-		2.32	:	-	
Isotopes														
Delta D	per mil	T	-		-		-95.7	:	-		-		-	
Delta O-18	per mil	T	-		-		-13.3	:	-		-		-	
Lead	mg/L	T	<0.004	:	-		-		<0.001	:	-		-	
Lead	mg/L	D	-		<0.004	:	-		-		<0.001	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 14-MA 7/20/2003 SPRING14MA-T01N -GRW GW1		Spring 14-MA 7/20/2003 SPRING14MA-D01N -GRW GW1		SPRING 14-MA 10/21/2003 SPRING14MA-T01N -GRW GW1		Spring 14-MA 10/21/2003 SPRING14MA-D01N -GRW GW1		SPRING 14-MA 11/4/2003 SPRING14MA-T01N -GRW GW1		SPRING 14-MA 12/8/2003 SPRING14MA-T01N -GRW GW1	
Field Measurements														
DO	mg/L	T	30.2	:	-		5.4	:	-		-		-	
EH	millivolts	T	435.8	:	-		244.1	:	-		-		-	
Flow	gpm	T	3.2	:	-		1.4	:	-		2.4	:	0.6	:
pH	SU	T	4.34	:	-		4.4	J	-		-		-	
Specific Conductance	uS/cm	T	699.	:	-		623.	:	-		-		-	
Temperature	Celsius	T	14.37	:	-		9.9	:	-		-		-	
Turbidity	NTU	T	0.5	:	-		9.2	:	-		-		-	
General Chemistry														
Ammonia	mg/L	T	<0.19	J	-		0.083	J	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Chloride	mg/L	T	6.8	:	-		7.9	:	-		-		-	
Fluoride	mg/L	T	4.2	:	-		4.9	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Nitrate	mg/L	T	<0.2	J	-		<0.2	J	-		-		-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	J	-		-		-	
Phosphorus	mg/L	T	0.011	:	-		0.016	:	-		-		-	
Sulfate	mg/L	T	322.	J	-		607.	J	-		-		-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Total Dissolved Solids	mg/L	T	626.	:	-		772.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.26	:	-		-		-	
Total Organic Carbon	mg/L	T	<1.1	J	-		<1.	J	-		-		-	
Total Suspended Solids	mg/L	T	<1.8	:	-		1.	:	-		-		-	
Laboratory Parameters														
pH	SU	T	4.34	:	-		4.4	J	-		-		-	
Specific Conductance	umhos/cm	T	618.	J	-		732.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	248.	:	-		253.	:	-		-		-	
Hardness	mg/L	D	-		229.	:	-		253.	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 14-MA Sample Date: 7/20/2003 Sample ID: SPRING14MA-T01N -GRW GW1	Site ID: Spring 14-MA Sample Date: 7/20/2003 Sample ID: SPRING14MA-D01N -GRW GW1	Site ID: SPRING 14-MA Sample Date: 10/21/2003 Sample ID: SPRING14MA-T01N -GRW GW1	Site ID: Spring 14-MA Sample Date: 10/21/2003 Sample ID: SPRING14MA-D01N -GRW GW1	Site ID: SPRING 14-MA Sample Date: 11/4/2003 Sample ID: SPRING14MA-T01N -GRW GW1	Site ID: SPRING 14-MA Sample Date: 12/8/2003 Sample ID: SPRING14MA-T01N -GRW GW1
Metals								
Aluminum	mg/L	T	12.5 J	-	28.1 :	-	-	-
Aluminum	mg/L	D	-	9.39 J	-	28. :	-	-
Antimony	mg/L	T	<0.038 :	-	<0.082 :	-	-	-
Antimony	mg/L	D	-	<0.038 :	-	<0.082 :	-	-
Arsenic	mg/L	T	<0.024 :	-	<0.035 :	-	-	-
Arsenic	mg/L	D	-	<0.024 :	-	<0.035 :	-	-
Barium	mg/L	T	<0.073 :	-	<0.117 :	-	-	-
Barium	mg/L	D	-	<0.073 :	-	<0.117 :	-	-
Beryllium	mg/L	T	0.0154 :	-	0.0218 J	-	-	-
Beryllium	mg/L	D	-	0.0143 :	-	0.0192 J	-	-
Boron	mg/L	T	<0.046 :	-	<0.064 :	-	-	-
Boron	mg/L	D	-	<0.046 :	-	<0.064 :	-	-
Cadmium	mg/L	T	<0.03 :	-	<0.13 :	-	-	-
Cadmium	mg/L	D	-	<0.03 :	-	<0.13 :	-	-
Calcium	mg/L	T	70. :	-	71. :	-	-	-
Calcium	mg/L	D	-	65.3 :	-	71. :	-	-
Chromium	mg/L	T	<0.06 J	-	<0.11 J	-	-	-
Chromium	mg/L	D	-	<0.06 J	-	<0.11 J	-	-
Cobalt	mg/L	T	<0.18 :	-	<0.32 :	-	-	-
Cobalt	mg/L	D	-	<0.18 :	-	<0.32 :	-	-
Copper	mg/L	T	<0.447 :	-	0.39 :	-	-	-
Copper	mg/L	D	-	<0.381 :	-	0.446 :	-	-
Iron	mg/L	T	<1.68 :	-	<4.55 :	-	-	-
Iron	mg/L	D	-	<1.68 :	-	<4.55 :	-	-
Lead	mg/L	T	<0.001 :	-	<0.002 :	-	-	-
Lead	mg/L	D	-	<0.001 :	-	<0.002 :	-	-
Magnesium	mg/L	T	<18.2 :	-	18.4 :	-	-	-
Magnesium	mg/L	D	-	<18.2 :	-	18.5 :	-	-
Manganese	mg/L	T	4.58 :	-	4.93 :	-	-	-
Manganese	mg/L	D	-	3.86 :	-	4.9 :	-	-
Mercury	mg/L	T	<0.0001 J	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	<0.0001 J	-	<0.0001 :	-	-
Molybdenum	mg/L	T	<0.016 :	-	<0.012 :	-	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 14-MA Sample Date: 7/20/2003 Sample ID: SPRING14MA-T01N-GRW GW1		Spring 14-MA 7/20/2003 SPRING14MA-D01N-GRW GW1		SPRING 14-MA 10/21/2003 SPRING14MA-T01N-GRW GW1		Spring 14-MA 10/21/2003 SPRING14MA-D01N-GRW GW1		SPRING 14-MA 11/4/2003 SPRING14MA-T01N-GRW GW1		SPRING 14-MA 12/8/2003 SPRING14MA-T01N-GRW GW1	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.012	:	-		-	
Nickel	mg/L	T	6.02	:	-		0.568	:	-		-		-	
Nickel	mg/L	D	-		<0.2	J	-		0.59	:	-		-	
Potassium	mg/L	T	<25.	:	-		<63.8	:	-		-		-	
Potassium	mg/L	D	-		<25.	:	-		<63.8	:	-		-	
Selenium	mg/L	T	<0.008	:	-		<0.03	:	-		-		-	
Selenium	mg/L	D	-		<0.008	J	-		<0.03	:	-		-	
Silver	mg/L	T	<0.0019	J	-		<0.001	:	-		-		-	
Silver	mg/L	D	-		<0.0012	J	-		<0.001	:	-		-	
Sodium	mg/L	T	<25.1	:	-		<99.1	:	-		-		-	
Sodium	mg/L	D	-		<21.9	:	-		<99.1	:	-		-	
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		-		-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Vanadium	mg/L	T	<0.002	:	-		<0.001	:	-		-		-	
Vanadium	mg/L	D	-		<0.002	:	-		<0.001	:	-		-	
Zinc	mg/L	T	<0.57	J	-		6.08	:	-		-		-	
Zinc	mg/L	D	-		<0.57	J	-		6.06	:	-		-	
Isotopes														
Lead	mg/L	T	<0.001	:	-		<0.002	:	-		-		-	
Lead	mg/L	D	-		<0.001	:	-		<0.002	:	-		-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 14-MA Sample Date: 1/9/2004 Sample ID: SPRING14MA-T01N-GRW GW1		Spring 14-MA 1/9/2004 SPRING14MA-D01N-GRW GW1		SPRING 14-MA 4/21/2004 SPRING14MA-T01N-GRW GW1		Spring 14-MA 4/21/2004 SPRING14MA-D01N-GRW GW1		Spring 15-M 5/8/2003 SPRING15M-T01N-GRW GW1		Spring 15-M 5/8/2003 SPRING15M-D01N-GRW GW1	
Field Measurements														
DO	mg/L	T	5.79	:	-		6.19	:	-		5.88	:	-	
EH	millivolts	T	363.2	:	-		276.7	:	-		259.4	:	-	
Flow	gpm	T	0.6	:	-		0.6	:	-		0.1	:	-	
pH	SU	T	4.5	J	-		5.3	J	-		4.6	J	-	
Specific Conductance	uS/cm	T	766.	:	-		840.	:	-		1045.	:	-	
Temperature	Celsius	T	4.05	:	-		9.56	:	-		18.31	:	-	
Turbidity	NTU	T	0.3	:	-		-		-		2.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.084	J	-		<0.052	:	-		0.072	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.4	:	-		11.4	:	-		6.8	:	-	
Fluoride	mg/L	T	5.1	:	-		5.3	:	-		7.3	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	:	-		0.22	:	-		<0.4	:	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Phosphorus	mg/L	T	<0.01	:	-		<0.01	:	-		<0.01	:	-	
Sulfate	mg/L	T	433.	:	-		487.	:	-		770.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L	T	638.	:	-		720.	:	-		868.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.1	:	-		1.	J	-		1.6	:	-	
Total Suspended Solids	mg/L	T	4.	:	-		<7.3	J	-		0.6	:	-	
Laboratory Parameters														
pH	SU	T	4.5	J	-		5.3	J	-		4.6	J	-	
Specific Conductance	umhos/cm	T	729.	J	-		735.	J	-		1000.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	296.	:	-		276.	:	-		390.	:	-	
Hardness	mg/L	D	-		285.	:	-		286.	:	-		390.	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 14-MA 1/9/2004 SPRING14MA-T01N -GRW GW1	Spring 14-MA 1/9/2004 SPRING14MA-D01N -GRW GW1	SPRING 14-MA 4/21/2004 SPRING14MA-T01N -GRW GW1	Spring 14-MA 4/21/2004 SPRING14MA-D01N -GRW GW1	Spring 15-M 5/8/2003 SPRING15M-T01N- GRW GW1	Spring 15-M 5/8/2003 SPRING15M-D01N- GRW GW1
Metals								
Aluminum	mg/L	T	28. :	-	32.7 :	-	34.5 :	-
Aluminum	mg/L	D	-	27.7 :	-	33.9 :	-	34.6 :
Antimony	mg/L	T	<0.029 :	-	<0.027 :	-	<0.048 :	-
Antimony	mg/L	D	-	<0.029 :	-	<0.027 :	-	<0.048 :
Arsenic	mg/L	T	<0.028 :	-	<0.026 :	-	<0.047 :	-
Arsenic	mg/L	D	-	<0.028 :	-	<0.026 :	-	<0.047 :
Barium	mg/L	T	<0.053 :	-	<0.012 :	-	<0.135 :	-
Barium	mg/L	D	-	<0.053 :	-	<0.012 :	-	<0.135 :
Beryllium	mg/L	T	0.0163 :	-	0.0206 :	-	0.0129 :	-
Beryllium	mg/L	D	-	0.0158 :	-	0.0209 :	-	0.0121 :
Boron	mg/L	T	<0.117 :	-	<0.018 :	-	<0.075 :	-
Boron	mg/L	D	-	<0.117 :	-	<0.018 :	-	<0.075 :
Cadmium	mg/L	T	<0.07 J	-	<0.1 :	-	<0.0129 :	-
Cadmium	mg/L	D	-	<0.07 :	-	<0.1 :	-	<0.0124 :
Calcium	mg/L	T	84.9 :	-	76.6 :	-	97. :	-
Calcium	mg/L	D	-	81. :	-	78.8 :	-	96.9 :
Chromium	mg/L	T	<0.11 :	-	<0.13 :	-	<0.009 :	-
Chromium	mg/L	D	-	<0.11 :	-	<0.13 :	-	<0.009 :
Cobalt	mg/L	T	<0.31 :	-	<0.18 :	-	0.0773 :	-
Cobalt	mg/L	D	-	<0.31 :	-	<0.18 :	-	0.0771 :
Copper	mg/L	T	0.33 J	-	0.349 :	-	0.268 :	-
Copper	mg/L	D	-	0.352 J	-	0.395 :	-	0.261 :
Iron	mg/L	T	<3.73 :	-	<2.93 J	-	<0.299 J	-
Iron	mg/L	D	-	<3.73 :	-	<2.93 :	-	<0.299 J
Lead	mg/L	T	<0.001 :	-	<0.004 :	-	<0.001 J	-
Lead	mg/L	D	-	<0.001 :	-	<0.004 :	-	<0.001 J
Magnesium	mg/L	T	<24.9 :	-	20.5 :	-	35.9 :	-
Magnesium	mg/L	D	-	<24.9 :	-	21.7 :	-	35.9 :
Manganese	mg/L	T	5.36 :	-	5.47 :	-	12.3 :	-
Manganese	mg/L	D	-	5.18 :	-	5.64 :	-	12.4 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	<0.024 :	-	<0.01 :	-	<0.016 :	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area	SPRING 14-MA 1/9/2004 SPRING14MA-T01N -GRW GW1	Spring 14-MA 1/9/2004 SPRING14MA-D01N -GRW GW1	SPRING 14-MA 4/21/2004 SPRING14MA-T01N -GRW GW1	Spring 14-MA 4/21/2004 SPRING14MA-D01N -GRW GW1	Spring 15-M 5/8/2003 SPRING15M-T01N- GRW GW1	Spring 15-M 5/8/2003 SPRING15M-D01N- GRW GW1
Molybdenum	mg/L	D		-	<0.024 :	-	<0.01 :	-	<0.016 :
Nickel	mg/L	T		<0.27 :	-	<0.33 :	-	0.26 :	-
Nickel	mg/L	D		-	<0.27 :	-	<0.33 :	-	0.243 :
Potassium	mg/L	T		<24.3 :	-	<15.5 :	-	<3.27 :	-
Potassium	mg/L	D		-	<24.3 :	-	<15.5 :	-	<3.27 :
Selenium	mg/L	T		0.0074 J	-	<0.007 :	-	0.0051 :	-
Selenium	mg/L	D		-	0.005 :	-	<0.007 :	-	0.0066 :
Silver	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 :	-
Silver	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 :
Sodium	mg/L	T		<92. :	-	<32.8 J	-	15.8 :	-
Sodium	mg/L	D		-	<92. :	-	<32.8 J	-	15.5 :
Thallium	mg/L	T		<0.001 :	-	<0.001 :	-	<0.001 :	-
Thallium	mg/L	D		-	<0.001 :	-	<0.001 :	-	<0.001 :
Vanadium	mg/L	T		<0.002 :	-	<0.002 :	-	<0.001 :	-
Vanadium	mg/L	D		-	<0.002 :	-	<0.002 :	-	<0.001 :
Zinc	mg/L	T		2.33 :	-	1.54 J	-	3.68 :	-
Zinc	mg/L	D		-	1.8 :	-	1.5 J	-	3.67 :
Isotopes									
Lead	mg/L	T		<0.001 :	-	<0.004 :	-	<0.001 J	-
Lead	mg/L	D		-	<0.001 :	-	<0.004 :	-	<0.001 J

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39 10/8/2002 SPRING39-T01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-T01N-G RW GW5	Spring 39 10/8/2002 SPRING39-D01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-D01N-G RW GW5	Spring 39 10/8/2002 Spring 39-T01N-GW GW5	SPRING 39 1/8/2003 SPRING39-T01N-G RW GW5
Field Measurements								
DO	mg/L	T	-	5.6 :	-	-	-	8.37 :
EH	millivolts	T	-	458.1 :	-	-	-	396.2 :
Flow	gpm	T	-	-	-	-	3. :	0.86 :
pH	SU	T	-	4.74 :	-	-	-	6.2 :
Specific Conductance	uS/cm	T	-	1265. :	-	-	-	242. :
Temperature	Celsius	T	-	12.41 :	-	-	-	6.71 :
Turbidity	NTU	T	-	8.5 :	-	-	-	3.8 :
General Chemistry								
Ammonia	mg/L	T	-	<0.027 :	-	-	-	<0.072 :
Bicarbonate (as CaCO3)	mg/L	T	-	<1.8 :	-	-	-	70.6 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Chloride	mg/L	T	-	18.8 :	-	-	-	<1.3 :
Fluoride	mg/L	T	6.2 J	-	-	-	-	<1. :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T	-	1.6 :	-	-	-	<0.47 J
Nitrite	mg/L	T	-	<0.005 :	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 :	-	-	-	<0.016 J
Phosphorus	mg/L	T	-	0.11 :	-	-	-	0.13 :
Sulfate	mg/L	T	-	827. :	-	-	-	49.9 J
Total Alkalinity	mg/L	T	-	<1.8 :	-	-	-	70.6 :
Total Dissolved Solids	mg/L	T	-	1070. :	-	-	-	<145. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	-	<0.25 :
Total Organic Carbon	mg/L	T	-	<1. :	-	-	-	<1. :
Total Suspended Solids	mg/L	T	-	9.3 :	-	-	-	64.5 :
Laboratory Parameters								
pH	SU	T	-	4.74 :	-	-	-	6.2 :
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	-	-	-	<130. :
Hardness	mg/L	D	-	-	756. :	-	-	-
Metals								

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39 10/8/2002 SPRING39-T01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-T01N-G RW GW5	Spring 39 10/8/2002 SPRING39-D01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-D01N-G RW GW5	Spring 39 10/8/2002 Spring 39-T01N-GW GW5	SPRING 39 1/8/2003 SPRING39-T01N-G RW GW5
Aluminum	mg/L	T	-	-	-	-	-	<1.42 :
Aluminum	mg/L	D	-	-	10.1 :	-	-	-
Antimony	mg/L	T	-	-	-	-	-	<0.028 :
Antimony	mg/L	D	-	-	<0.028 :	-	-	-
Arsenic	mg/L	T	-	-	-	-	-	<0.023 :
Arsenic	mg/L	D	-	-	<0.023 :	-	-	-
Barium	mg/L	T	-	-	-	-	-	0.108 :
Barium	mg/L	D	-	-	<0.048 :	-	-	-
Beryllium	mg/L	T	-	-	-	-	-	<0.002 :
Beryllium	mg/L	D	-	-	0.0059 :	-	-	-
Boron	mg/L	T	-	-	-	-	-	<0.027 :
Boron	mg/L	D	-	-	<0.027 :	-	-	-
Cadmium	mg/L	T	-	-	-	-	-	<0.04 :
Cadmium	mg/L	D	-	-	<0.04 :	-	-	-
Calcium	mg/L	T	-	-	-	-	-	34.1 :
Calcium	mg/L	D	-	-	198. :	-	-	-
Chromium	mg/L	T	-	-	-	-	-	<0.37 :
Chromium	mg/L	D	-	-	<0.37 :	-	-	-
Chromium, Hexavalent	mg/L	D	-	<0.01 :	-	-	-	-
Cobalt	mg/L	T	-	-	-	-	-	<0.16 :
Cobalt	mg/L	D	-	-	<0.16 :	-	-	-
Copper	mg/L	T	-	-	-	-	-	<0.17 :
Copper	mg/L	D	-	-	<0.237 :	-	-	-
Iron	mg/L	T	-	-	-	-	-	<4.89 :
Iron	mg/L	D	-	-	<4.89 :	-	-	-
Lead	mg/L	T	-	-	-	-	-	0.0072 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-
Magnesium	mg/L	T	-	-	-	-	-	<10.7 :
Magnesium	mg/L	D	-	-	63.3 :	-	-	-
Manganese	mg/L	T	-	-	-	-	-	<0.05 :
Manganese	mg/L	D	-	-	1.35 :	-	-	-
Mercury	mg/L	T	-	<0.0001 J	-	-	-	<0.0001 :
Mercury	mg/L	D	-	-	-	<0.0001 J	-	-
Molybdenum	mg/L	T	-	-	-	-	-	<0.11 :

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39 10/8/2002 SPRING39-T01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-T01N-G RW GW5	Spring 39 10/8/2002 SPRING39-D01N-G RWRE GW5	Spring 39 10/8/2002 SPRING39-D01N-G RW GW5	Spring 39 10/8/2002 Spring 39-T01N-GW GW5	SPRING 39 1/8/2003 SPRING39-T01N-G RW GW5
Molybdenum	mg/L	D	-	-	<0.011 :	-	-	-
Nickel	mg/L	T	-	-	-	-	-	<0.15 :
Nickel	mg/L	D	-	-	0.339 :	-	-	-
Potassium	mg/L	T	-	-	-	-	-	<20.2 :
Potassium	mg/L	D	-	-	<20.2 :	-	-	-
Selenium	mg/L	T	-	-	-	-	-	<0.008 :
Selenium	mg/L	D	-	-	<0.008 :	-	-	-
Silver	mg/L	T	-	-	-	-	-	<0.001 :
Silver	mg/L	D	-	-	<0.001 :	-	-	-
Sodium	mg/L	T	-	-	-	-	-	<32.7 :
Sodium	mg/L	D	-	-	57.6 :	-	-	-
Thallium	mg/L	T	-	-	-	-	-	<0.001 :
Thallium	mg/L	D	-	-	<0.001 :	-	-	-
Vanadium	mg/L	T	-	-	-	-	-	0.0023 :
Vanadium	mg/L	D	-	-	<0.002 :	-	-	-
Zinc	mg/L	T	-	-	-	-	-	<0.39 :
Zinc	mg/L	D	-	-	<0.929 :	-	-	-
Isotopes								
Lead	mg/L	T	-	-	-	-	-	0.0072 :
Lead	mg/L	D	-	-	<0.001 :	-	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 39 1/8/2003 SPRING39-D01N-G RW GW5	Spring 39 2/7/2003 Spring 39-T01N-GW GW5	Spring 39 3/7/2003 Spring 39-T01N-GW GW5	Spring 39 4/4/2003 SPRING39-T01N-G RW GW5	SPRING 39 4/4/2003 SPRING39-D01N-G RW GW5	Spring 39 4/25/2003 SPRING39-T01N-G RW GW5
Field Measurements								
DO	mg/L	T	-	-	-	8.22 :	-	4.6 :
EH	millivolts	T	-	-	-	367.7 :	-	255.7 :
Flow	gpm	T	-	1.6 :	2.85 :	0.1 :	-	1.27 :
pH	SU	T	-	-	-	6.35 :	-	5.7 :
Specific Conductance	uS/cm	T	-	-	-	228. :	-	1192. :
Temperature	Celsius	T	-	-	-	7.42 :	-	6.51 :
Turbidity	NTU	T	-	-	-	0.1 :	-	38.6 :
General Chemistry								
Ammonia	mg/L	T	-	-	-	0.1 :	-	0.054 :
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	75.6 :	-	12.7 :
Carbonate (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Chloride	mg/L	T	-	-	-	1.2 :	-	13.2 :
Fluoride	mg/L	T	-	-	-	-	-	3.1 :
Hydroxide (as CaCO3)	mg/L	T	-	-	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	-	-	0.46 :	-	0.81 :
Nitrite	mg/L	T	-	-	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	-	-	<0.01 :	-	<0.01 :
Phosphorus	mg/L	T	-	-	-	0.049 :	-	0.013 :
Sulfate	mg/L	T	-	-	-	35.8 J	-	647. J
Total Alkalinity	mg/L	T	-	-	-	75.6 :	-	12.7 :
Total Dissolved Solids	mg/L	T	-	-	-	148. :	-	1010. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	-	<1. J	-	1.1 J
Total Suspended Solids	mg/L	T	-	-	-	<0.5 :	-	3.6 :
Laboratory Parameters								
pH	SU	T	-	-	-	6.35 :	-	5.7 :
Specific Conductance	umhos/cm	T	-	-	-	210. J	-	1160. J
Inorganics								
Cyanide	mg/L	T	-	-	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	-	108. :	-	649. :
Hardness	mg/L	D	<130. :	-	-	-	117. :	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 39 1/8/2003 SPRING39-D01N-G RW GW5		Spring 39 2/7/2003 Spring 39-T01N-GW GW5		Spring 39 3/7/2003 Spring 39-T01N-GW GW5		SPRING 39 4/4/2003 SPRING39-T01N-G RW GW5		SPRING 39 4/4/2003 SPRING39-D01N-G RW GW5		SPRING 39 4/25/2003 SPRING39-T01N-G RW GW5	
Metals														
Aluminum	mg/L	T	-		-		-		<0.277	:	-		<2.76	:
Aluminum	mg/L	D	<1.42	:	-		-		-		<0.277	:	-	
Antimony	mg/L	T	-		-		-		<0.0006	J	-		<0.005	:
Antimony	mg/L	D	<0.028	:	-		-		-		<0.0006	J	-	
Arsenic	mg/L	T	-		-		-		<0.0004	:	-		<0.002	:
Arsenic	mg/L	D	<0.023	:	-		-		-		<0.0004	:	-	
Barium	mg/L	T	-		-		-		0.0642	:	-		<0.123	:
Barium	mg/L	D	0.0551	:	-		-		-		0.0488	:	-	
Beryllium	mg/L	T	-		-		-		<0.0003	:	-		<0.003	:
Beryllium	mg/L	D	<0.002	:	-		-		-		<0.0003	:	-	
Boron	mg/L	T	-		-		-		<0.0075	:	-		<0.084	:
Boron	mg/L	D	<0.027	:	-		-		-		<0.0075	:	-	
Cadmium	mg/L	T	-		-		-		<0.0004	:	-		0.0027	:
Cadmium	mg/L	D	<0.04	:	-		-		-		<0.0004	:	-	
Calcium	mg/L	T	-		-		-		36.4	:	-		177.	:
Calcium	mg/L	D	33.4	:	-		-		-		39.8	:	-	
Chromium	mg/L	T	-		-		-		0.00091	J	-		<0.01	J
Chromium	mg/L	D	<0.37	:	-		-		-		<0.0009	J	-	
Cobalt	mg/L	T	-		-		-		<0.0029	:	-		<0.038	:
Cobalt	mg/L	D	<0.16	:	-		-		-		<0.0029	:	-	
Copper	mg/L	T	-		-		-		<0.003	J	-		<0.015	:
Copper	mg/L	D	<0.17	:	-		-		-		<0.0024	J	-	
Iron	mg/L	T	-		-		-		<0.782	:	-		<0.311	:
Iron	mg/L	D	<4.89	:	-		-		-		<0.299	:	-	
Lead	mg/L	T	-		-		-		0.0012	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		-		-		<0.0002	:	-	
Magnesium	mg/L	T	-		-		-		4.16	:	-		50.3	:
Magnesium	mg/L	D	<10.7	:	-		-		-		4.31	:	-	
Manganese	mg/L	T	-		-		-		<0.0221	:	-		0.778	:
Manganese	mg/L	D	<0.05	:	-		-		-		<0.009	:	-	
Mercury	mg/L	T	-		-		-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		-		-		<0.0001	:	-	
Molybdenum	mg/L	T	-		-		-		0.0038	:	-		<0.023	:

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 39 1/8/2003 SPRING39-D01N-G RW GW5		Spring 39 2/7/2003 Spring 39-T01N-GW GW5		Spring 39 3/7/2003 Spring 39-T01N-GW GW5		SPRING 39 4/4/2003 SPRING39-T01N-G RW GW5		SPRING 39 4/4/2003 SPRING39-D01N-G RW GW5		SPRING 39 4/25/2003 SPRING39-T01N-G RW GW5	
Molybdenum	mg/L	D	<0.11	:	-		-		-		0.0046	:	-	
Nickel	mg/L	T	-		-		-		<0.0026	:	-		0.112	:
Nickel	mg/L	D	<0.15	:	-		-		-		<0.0026	:	-	
Potassium	mg/L	T	-		-		-		1.08	:	-		5.06	:
Potassium	mg/L	D	<20.2	:	-		-		-		1.01	:	-	
Selenium	mg/L	T	-		-		-		<0.001	:	-		<0.008	:
Selenium	mg/L	D	<0.008	:	-		-		-		<0.001	:	-	
Silver	mg/L	T	-		-		-		<0.0002	:	-		<0.001	:
Silver	mg/L	D	<0.001	:	-		-		-		<0.0002	:	-	
Sodium	mg/L	T	-		-		-		<5.13	:	-		16.5	:
Sodium	mg/L	D	<32.7	:	-		-		-		<5.13	:	-	
Thallium	mg/L	T	-		-		-		<0.0002	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		-		-		<0.0002	:	-	
Vanadium	mg/L	T	-		-		-		0.00047	:	-		<0.002	:
Vanadium	mg/L	D	<0.002	:	-		-		-		<0.0002	:	-	
Zinc	mg/L	T	-		-		-		0.0384	:	-		0.443	J
Zinc	mg/L	D	<0.39	:	-		-		-		<0.025	:	-	
Isotopes														
Lead	mg/L	T	-		-		-		0.0012	:	-		<0.001	:
Lead	mg/L	D	<0.001	:	-		-		-		<0.0002	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: SPRING 39 Sample Date: 4/25/2003 Sample ID: SPRING39-D01N-G RW GW5	Site ID: SPRING 39 Sample Date: 5/5/2003 Sample ID: SPRING39-T01N-G RW GW5	Site ID: SPRING 39 Sample Date: 5/5/2003 Sample ID: SPRING39-D01N-G RW GW5	Site ID: Spring 39 Sample Date: 5/5/2003 Sample ID: Spring 39-T01N-GRW GW5	Site ID: Spring 39-PUMP Sample Date: 2/8/2003 Sample ID: SPRING39PUMP-T0 1N-GRWRE GW5	Site ID: Spring 39-PUMP Sample Date: 2/8/2003 Sample ID: SPRING39PUMP-T0 1N-GRW GW5
Field Measurements								
DO	mg/L	T	-	-	-	6.84 :	-	5.89 :
EH	millivolts	T	-	-	-	143.7 :	-	344. :
Flow	gpm	T	-	-	-	0.25 :	-	-
pH	SU	T	-	5.1 J	-	5.83 :	-	4.9 :
Specific Conductance	uS/cm	T	-	-	-	1238. :	-	168. :
Temperature	Celsius	T	-	-	-	12.76 :	-	6.05 :
Turbidity	NTU	T	-	-	-	1.1 :	-	12.7 :
General Chemistry								
Ammonia	mg/L	T	-	0.072 :	-	-	-	<0.089 :
Bicarbonate (as CaCO3)	mg/L	T	-	21.8 :	-	-	-	<4.4 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Chloride	mg/L	T	-	12.9 :	-	-	-	16. :
Fluoride	mg/L	T	-	2.9 :	-	-	7.3 J	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	-	-	<1. :
Nitrate	mg/L	T	-	0.78 J	-	-	-	1.9 J
Nitrite	mg/L	T	-	<0.005 J	-	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	-	-	0.059 J
Phosphorus	mg/L	T	-	0.016 :	-	-	-	<0.01 J
Sulfate	mg/L	T	-	634. :	-	-	-	843. J
Total Alkalinity	mg/L	T	-	21.8 :	-	-	-	<4.4 :
Total Dissolved Solids	mg/L	T	-	1020. :	-	-	-	1230. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. :	-	-	-	<1. :
Total Suspended Solids	mg/L	T	-	2.3 :	-	-	-	2. :
Laboratory Parameters								
pH	SU	T	-	5.1 J	-	5.83 :	-	4.9 :
Specific Conductance	umhos/cm	T	-	1120. J	-	-	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	670. :	-	-	-	826. :
Hardness	mg/L	D	678. :	-	666. :	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 39 4/25/2003 SPRING39-D01N-G RW GW5		SPRING 39 5/5/2003 SPRING39-T01N-G RW GW5		SPRING 39 5/5/2003 SPRING39-D01N-G RW GW5		Spring 39 5/5/2003 Spring 39-T01N-GRW GW5		Spring 39-PUMP 2/8/2003 SPRING39PUMP-T0 1N-GRWRE GW5		Spring 39-PUMP 2/8/2003 SPRING39PUMP-T0 1N-GRW GW5	
Metals														
Aluminum	mg/L	T	-		2.32	:	-		-		-		<21.3	:
Aluminum	mg/L	D	<2.92	:	-		2.3	:	-		-		-	
Antimony	mg/L	T	-		<0.048	J	-		-		-		<0.028	:
Antimony	mg/L	D	<0.005	:	-		<0.048	J	-		-		-	
Arsenic	mg/L	T	-		<0.047	:	-		-		-		<0.023	:
Arsenic	mg/L	D	<0.002	:	-		<0.047	:	-		-		-	
Barium	mg/L	T	-		<0.135	:	-		-		-		<0.048	:
Barium	mg/L	D	<0.123	:	-		<0.135	:	-		-		-	
Beryllium	mg/L	T	-		<0.003	:	-		-		-		0.0045	:
Beryllium	mg/L	D	<0.003	:	-		<0.003	:	-		-		-	
Boron	mg/L	T	-		<0.075	:	-		-		-		<0.027	:
Boron	mg/L	D	<0.084	:	-		<0.075	:	-		-		-	
Cadmium	mg/L	T	-		<0.004	:	-		-		-		<0.08	:
Cadmium	mg/L	D	0.0026	:	-		<0.004	:	-		-		-	
Calcium	mg/L	T	-		183.	:	-		-		-		215.	:
Calcium	mg/L	D	185.	:	-		182.	:	-		-		-	
Chromium	mg/L	T	-		<0.009	:	-		-		-		<0.16	:
Chromium	mg/L	D	<0.01	J	-		<0.009	:	-		-		-	
Cobalt	mg/L	T	-		<0.029	:	-		-		-		<0.23	:
Cobalt	mg/L	D	<0.038	:	-		<0.029	:	-		-		-	
Copper	mg/L	T	-		<0.024	:	-		-		-		<0.17	:
Copper	mg/L	D	<0.015	:	-		<0.024	:	-		-		-	
Iron	mg/L	T	-		0.901	:	-		-		-		<2.66	J
Iron	mg/L	D	<0.311	:	-		0.618	:	-		-		-	
Lead	mg/L	T	-		<0.001	:	-		-		-		<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		-		-	
Magnesium	mg/L	T	-		52.1	:	-		-		-		70.4	:
Magnesium	mg/L	D	52.5	:	-		51.5	:	-		-		-	
Manganese	mg/L	T	-		0.535	:	-		-		-		1.87	J
Manganese	mg/L	D	0.882	:	-		<0.456	:	-		-		-	
Mercury	mg/L	T	-		<0.0001	:	-		-		-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		-	
Molybdenum	mg/L	T	-		<0.016	:	-		-		-		<0.011	J

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 39 4/25/2003 SPRING39-D01N-G RW GW5		SPRING 39 5/5/2003 SPRING39-T01N-G RW GW5		SPRING 39 5/5/2003 SPRING39-D01N-G RW GW5		Spring 39 5/5/2003 Spring 39-T01N-GRW GW5	Spring 39-PUMP 2/8/2003 SPRING39PUMP-T01N-GRWRE GW5	Spring 39-PUMP 2/8/2003 SPRING39PUMP-T01N-GRW GW5	
Molybdenum	mg/L	D	<0.023	:	-		<0.016	:	-	-	-	
Nickel	mg/L	T	-		0.112	:	-		-	-	0.398	:
Nickel	mg/L	D	0.12	:	-		0.102	:	-	-	-	
Potassium	mg/L	T	-		<3.27	:	-		-	-	4.41	:
Potassium	mg/L	D	5.42	:	-		<3.27	:	-	-	-	
Selenium	mg/L	T	-		<0.008	:	-		-	-	<0.008	:
Selenium	mg/L	D	<0.008	:	-		<0.008	:	-	-	-	
Silver	mg/L	T	-		<0.001	:	-		-	-	<0.001	:
Silver	mg/L	D	<0.001	:	-		<0.001	:	-	-	-	
Sodium	mg/L	T	-		15.9	:	-		-	-	<36.6	:
Sodium	mg/L	D	17.8	:	-		16.1	:	-	-	-	
Thallium	mg/L	T	-		<0.001	:	-		-	-	<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-	-	-	
Vanadium	mg/L	T	-		<0.002	:	-		-	-	<0.002	:
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-	-	-	
Zinc	mg/L	T	-		<0.393	:	-		-	-	0.93	:
Zinc	mg/L	D	0.458	J	-		<0.414	:	-	-	-	
Explosives												
2,4,6-Trinitrotoluene	mg/L	T	-		-		-		-	-	<0.00025	J
2,6-Pyridinediamine,	mg/L	T	-		-		-		-	-	<0.00025	J
Cyclotetramethylenetetranitramine	mg/L	T	-		-		-		-	-	<0.00025	J
Cyclotrimethylenetrinitramine	mg/L	T	-		-		-		-	-	<0.00025	J
Pentaerythritol tetranitrate	mg/L	T	-		-		-		-	-	<0.01	J
Isotopes												
Lead	mg/L	T	-		<0.001	:	-		-	-	<0.001	:
Lead	mg/L	D	<0.001	:	-		<0.001	:	-	-	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 2/8/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRWRE GW5	SPRING 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 3/5/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRWRE GW5	Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRW GW5
Field Measurements								
DO	mg/L	T	-	-	5.78 :	-	-	-
EH	millivolts	T	-	-	402.3 :	-	-	-
pH	SU	T	-	-	4.84 :	-	-	4.8 J
Specific Conductance	uS/cm	T	-	-	1450. :	-	-	-
Temperature	Celsius	T	-	-	6.03 :	-	-	-
Turbidity	NTU	T	-	-	0. :	-	-	-
General Chemistry								
Ammonia	mg/L	T	-	-	0.061 J	-	-	0.19 :
Bicarbonate (as CaCO3)	mg/L	T	-	-	4.3 :	-	-	55.4 :
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Chloride	mg/L	T	-	-	11.2 :	-	-	17.1 :
Fluoride	mg/L	T	-	7.3 J	-	-	7. J	-
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	-	-	1.9 :	-	-	1.8 J
Nitrite	mg/L	T	-	-	<0.005 :	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	-	<0.01 :	-	-	<0.01 J
Phosphorus	mg/L	T	-	-	<0.01 J	-	-	0.012 :
Sulfate	mg/L	T	-	-	817. :	-	-	746. J
Total Alkalinity	mg/L	T	-	-	4.3 :	-	-	55.4 :
Total Dissolved Solids	mg/L	T	-	-	1270. :	-	-	1170. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	<1. J	-	-	<1. J
Total Suspended Solids	mg/L	T	-	-	3. J	-	-	2.8 :
Laboratory Parameters								
pH	SU	T	-	-	4.84 :	-	-	4.8 J
Specific Conductance	umhos/cm	T	-	-	-	-	-	1230. J
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	822. :	-	-	723. :
Hardness	mg/L	D	844. :	-	-	792. :	-	-
Metals								

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 2/8/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRWRE GW5		Spring 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 3/5/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRWRE GW5		Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRW GW5	
Aluminum	mg/L	T	-		-		15.2	:	-		-		10.4	:
Aluminum	mg/L	D	<22.	:	-		-		13.9	:	-		-	
Antimony	mg/L	T	-		-		<0.028	:	-		-		<0.072	:
Antimony	mg/L	D	<0.028	:	-		-		<0.028	:	-		-	
Arsenic	mg/L	T	-		-		<0.023	:	-		-		<0.04	:
Arsenic	mg/L	D	<0.023	:	-		-		<0.023	:	-		-	
Barium	mg/L	T	-		-		<0.048	:	-		-		<0.123	:
Barium	mg/L	D	<0.048	:	-		-		<0.048	:	-		-	
Beryllium	mg/L	T	-		-		0.003	:	-		-		<0.0161	:
Beryllium	mg/L	D	0.005	:	-		-		0.0027	:	-		-	
Boron	mg/L	T	-		-		<0.027	:	-		-		<0.084	:
Boron	mg/L	D	<0.027	:	-		-		<0.027	:	-		-	
Cadmium	mg/L	T	-		-		<0.04	:	-		-		<0.07	:
Cadmium	mg/L	D	<0.08	:	-		-		<0.04	:	-		-	
Calcium	mg/L	T	-		-		<214.	J	-		-		191.	:
Calcium	mg/L	D	219.	:	-		-		206.	J	-		-	
Chromium	mg/L	T	-		-		<0.37	:	-		-		<0.19	:
Chromium	mg/L	D	<0.16	:	-		-		<0.37	:	-		-	
Cobalt	mg/L	T	-		-		<0.16	:	-		-		<0.36	:
Cobalt	mg/L	D	<0.23	:	-		-		<0.16	:	-		-	
Copper	mg/L	T	-		-		0.188	:	-		-		<0.2	:
Copper	mg/L	D	<0.17	:	-		-		<0.17	:	-		-	
Iron	mg/L	T	-		-		<4.89	:	-		-		<4.22	:
Iron	mg/L	D	<2.66	J	-		-		<4.89	J	-		-	
Lead	mg/L	T	-		-		0.0019	:	-		-		0.001	:
Lead	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Magnesium	mg/L	T	-		-		69.7	:	-		-		60.	:
Magnesium	mg/L	D	72.2	:	-		-		67.5	:	-		-	
Manganese	mg/L	T	-		-		1.86	:	-		-		1.64	:
Manganese	mg/L	D	1.97	:	-		-		1.78	:	-		-	
Mercury	mg/L	T	-		-		<0.0001	:	-		-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		-		<0.0001	:	-		-	
Molybdenum	mg/L	T	-		-		<0.011	:	-		-		<0.023	:
Molybdenum	mg/L	D	<0.011	J	-		-		<0.011	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 2/8/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRWRE GW5	Spring 39-PUMP 3/5/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 3/5/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRWRE GW5	Spring 39-PUMP 4/1/2003 SPRING39PUMP-T0 1N-GRW GW5
Nickel	mg/L	T	-	-	0.236 :	-	-	<0.73 :
Nickel	mg/L	D	0.39 :	-	-	0.222 :	-	-
Potassium	mg/L	T	-	-	<20.2 :	-	-	<40.5 :
Potassium	mg/L	D	3.43 :	-	-	<20.2 :	-	-
Selenium	mg/L	T	-	-	0.009 J	-	-	<0.0105 :
Selenium	mg/L	D	<0.008 :	-	-	<0.008 J	-	-
Silver	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Silver	mg/L	D	<0.001 :	-	-	<0.001 :	-	-
Sodium	mg/L	T	-	-	<32.7 :	-	-	<91.6 :
Sodium	mg/L	D	<36.6 :	-	-	<32.7 :	-	-
Thallium	mg/L	T	-	-	<0.001 :	-	-	<0.001 :
Thallium	mg/L	D	<0.001 :	-	-	<0.001 :	-	-
Vanadium	mg/L	T	-	-	<0.002 :	-	-	<0.001 :
Vanadium	mg/L	D	<0.002 :	-	-	<0.002 :	-	-
Zinc	mg/L	T	-	-	1.16 J	-	-	0.846 :
Zinc	mg/L	D	0.947 :	-	-	1.14 :	-	-
Isotopes								
Lead	mg/L	T	-	-	0.0019 :	-	-	0.001 :
Lead	mg/L	D	<0.001 :	-	-	<0.001 :	-	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			Spring 39-PUMP 4/1/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 4/1/2003 Spring 39-PUMP-T01N-GRW GW5		Spring 39-PUMP 5/5/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 5/5/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 5/5/2003 Spring 39-PUMP-T01N-GRW GW5		Spring 39-PUMP 6/3/2003 SPRING39PUMP-T0 1N-GRW GW5	
Field Measurements														
DO	mg/L	T	-		5.14	:	-		-		4.98	:	6.42	:
EH	millivolts	T	-		415.9	:	-		-		397.8	:	438.8	:
pH	SU	T	-		4.78	:	4.8	J	-		4.75	:	4.43	:
Specific Conductance	uS/cm	T	-		1397.	:	-		-		1416.	:	1339.	:
Temperature	Celsius	T	-		7.33	:	-		-		11.02	:	10.06	:
Turbidity	NTU	T	-		0.8	:	-		-		12.8	:	0.	:
General Chemistry														
Ammonia	mg/L	T	-		-		0.11	:	-		-		0.089	J
Bicarbonate (as CaCO3)	mg/L	T	-		-		4.9	:	-		-		5.5	:
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Chloride	mg/L	T	-		-		14.9	:	-		-		19.9	:
Fluoride	mg/L	T	-		-		7.4	:	-		-		6.1	:
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		-		<1.	:
Nitrate	mg/L	T	-		-		1.8	J	-		-		1.7	J
Nitrite	mg/L	T	-		-		<0.005	J	-		-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		-		<0.01	J	-		-		0.16	J
Phosphorus	mg/L	T	-		-		<0.01	:	-		-		-	
Sulfate	mg/L	T	-		-		820.	:	-		-		605.	J
Total Alkalinity	mg/L	T	-		-		4.9	:	-		-		5.5	:
Total Dissolved Solids	mg/L	T	-		-		1270.	:	-		-		1150.	:
Total Kjeldahl Nitrogen	mg/L	T	-		-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	-		-		<1.	:	-		-		1.2	J
Total Suspended Solids	mg/L	T	-		-		2.4	:	-		-		5.4	:
Laboratory Parameters														
pH	SU	T	-		4.78	:	4.8	J	-		4.75	:	4.43	:
Specific Conductance	umhos/cm	T	-		-		1370.	J	-		-		1270.	J
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		-		<0.01	:
Physical Properties														
Hardness	mg/L	T	-		-		777.	:	-		-		668.	:
Hardness	mg/L	D	725.	:	-		-		765.	:	-		-	
Metals														

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area	Spring 39-PUMP 4/1/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 4/1/2003 Spring 39-PUMP-T01N-GRW GW5	Spring 39-PUMP 5/5/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 5/5/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 5/5/2003 Spring 39-PUMP-T01N-GRW GW5	Spring 39-PUMP 6/3/2003 SPRING39PUMP-T0 1N-GRW GW5
Aluminum	mg/L	T		-	-	13.4 :	-	-	9.92 :
Aluminum	mg/L	D		10.4 :	-	-	11.5 :	-	-
Antimony	mg/L	T		-	-	<0.072 :	-	-	<0.072 :
Antimony	mg/L	D		<0.072 :	-	-	<0.072 :	-	-
Arsenic	mg/L	T		-	-	<0.04 :	-	-	<0.04 :
Arsenic	mg/L	D		<0.04 :	-	-	<0.04 :	-	-
Barium	mg/L	T		-	-	<0.123 :	-	-	<0.123 :
Barium	mg/L	D		<0.123 :	-	-	<0.123 :	-	-
Beryllium	mg/L	T		-	-	<0.0068 :	-	-	<0.0062 :
Beryllium	mg/L	D		<0.0194 :	-	-	<0.0065 :	-	-
Boron	mg/L	T		-	-	<0.084 :	-	-	<0.084 :
Boron	mg/L	D		<0.084 :	-	-	<0.084 :	-	-
Cadmium	mg/L	T		-	-	0.0094 :	-	-	<0.005 :
Cadmium	mg/L	D		<0.07 :	-	-	0.0073 :	-	-
Calcium	mg/L	T		-	-	202. :	-	-	178. :
Calcium	mg/L	D		192. :	-	-	200. :	-	-
Chromium	mg/L	T		-	-	<0.01 :	-	-	<0.01 :
Chromium	mg/L	D		<0.19 :	-	-	<0.01 :	-	-
Cobalt	mg/L	T		-	-	0.0461 :	-	-	<0.038 :
Cobalt	mg/L	D		<0.36 :	-	-	0.0425 :	-	-
Copper	mg/L	T		-	-	0.157 :	-	-	0.11 :
Copper	mg/L	D		<0.2 :	-	-	0.151 :	-	-
Iron	mg/L	T		-	-	<0.311 :	-	-	<0.311 :
Iron	mg/L	D		<4.22 :	-	-	<0.311 :	-	-
Lead	mg/L	T		-	-	<0.001 :	-	-	0.0047 :
Lead	mg/L	D		0.001 :	-	-	<0.001 :	-	-
Magnesium	mg/L	T		-	-	65.9 :	-	-	54.1 :
Magnesium	mg/L	D		60. :	-	-	64.5 :	-	-
Manganese	mg/L	T		-	-	1.65 :	-	-	1.26 :
Manganese	mg/L	D		1.62 :	-	-	1.57 :	-	-
Mercury	mg/L	T		-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T		-	-	<0.023 :	-	-	<0.023 :
Molybdenum	mg/L	D		<0.023 :	-	-	<0.023 :	-	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		Spring 39-PUMP 4/1/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 4/1/2003 Spring 39-PUMP-T01N-GRW GW5		Spring 39-PUMP 5/5/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 5/5/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 5/5/2003 Spring 39-PUMP-T01N-GRW GW5		Spring 39-PUMP 6/3/2003 SPRING39PUMP-T0 1N-GRW GW5	
Nickel	mg/L	T	-		-		0.218	:	-		-		0.173	:
Nickel	mg/L	D	<0.73	:	-		-		0.213	:	-		-	
Potassium	mg/L	T	-		-		<40.5	:	-		-		<3.26	:
Potassium	mg/L	D	<40.5	:	-		-		<40.5	:	-		-	
Selenium	mg/L	T	-		-		0.0055	:	-		-		<0.008	:
Selenium	mg/L	D	<0.0111	:	-		-		<0.005	:	-		-	
Silver	mg/L	T	-		-		<0.001	:	-		-		<0.001	:
Silver	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Sodium	mg/L	T	-		-		<91.6	:	-		-		16.8	:
Sodium	mg/L	D	<91.6	:	-		-		<91.6	:	-		-	
Thallium	mg/L	T	-		-		<0.001	:	-		-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Vanadium	mg/L	T	-		-		<0.001	:	-		-		<0.002	:
Vanadium	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Zinc	mg/L	T	-		-		1.61	:	-		-		0.683	:
Zinc	mg/L	D	0.885	:	-		-		0.872	:	-		-	
Isotopes														
Lead	mg/L	T	-		-		<0.001	:	-		-		0.0047	:
Lead	mg/L	D	0.001	:	-		-		<0.001	:	-		-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 39-PUMP 6/3/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-D 01N-GRW GW5		Spring 39-Pump 8/11/2003 Spring39Pump-T01N- SFW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-D0 1N-GRW GW5	
Field Measurements														
DO	mg/L	T	-		7.69	:	-		6.29	:	-		-	
EH	millivolts	T	-		368.4	:	-		318.9	:	-		-	
pH	SU	T	-		4.48	:	-		4.49	:	4.7	J	-	
Specific Conductance	uS/cm	T	-		1561.	:	-		1702.	:	-		-	
Temperature	Celsius	T	-		12.37	:	-		13.8	:	-		-	
Turbidity	NTU	T	-		0.6	:	-		-		0.1	:	-	
General Chemistry														
Ammonia	mg/L	T	-		<0.04	J	-		-		0.11	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.9	:	-		-		<4.3	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		18.3	:	-		-		18.7	:	-	
Fluoride	mg/L	T	-		8.8	:	-		-		8.9	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		1.9	J	-		-		1.9	J	-	
Nitrite	mg/L	T	-		<0.005	:	-		-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Phosphorus	mg/L	T	-		<0.01	:	-		-		0.018	:	-	
Sulfate	mg/L	T	-		889.	J	-		-		880.	J	-	
Total Alkalinity	mg/L	T	-		<1.9	:	-		-		<4.3	:	-	
Total Dissolved Solids	mg/L	T	-		1900.	:	-		-		1750.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		<1.	J	-		-		<1.6	J	-	
Total Suspended Solids	mg/L	T	-		2.7	:	-		-		3.5	:	-	
Laboratory Parameters														
pH	SU	T	-		4.48	:	-		4.49	:	4.7	J	-	
Specific Conductance	umhos/cm	T	-		1540.	J	-		-		1480.	J	-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	-		820.	:	-		-		894.	:	-	
Hardness	mg/L	D	664.	:	-		845.	:	-		-		873.	:
Metals														

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 6/3/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-D 01N-GRW GW5		Spring 39-Pump 8/11/2003 Spring39Pump-T01N- SFW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-D0 1N-GRW GW5	
Aluminum	mg/L	T	-		12.9	:	-		-		19.3	:	-	
Aluminum	mg/L	D	9.54	:	-		14.	:	-		-		18.8	:
Antimony	mg/L	T	-		<0.047	:	-		-		<0.038	:	-	
Antimony	mg/L	D	<0.072	:	-		<0.047	:	-		-		<0.038	:
Arsenic	mg/L	T	-		<0.048	:	-		-		<0.024	:	-	
Arsenic	mg/L	D	<0.04	:	-		<0.048	:	-		-		<0.024	:
Barium	mg/L	T	-		<0.059	:	-		-		<0.073	:	-	
Barium	mg/L	D	<0.123	:	-		<0.059	:	-		-		<0.073	:
Beryllium	mg/L	T	-		<0.0081	:	-		-		0.0063	J	-	
Beryllium	mg/L	D	<0.0051	:	-		<0.008	:	-		-		0.0037	J
Boron	mg/L	T	-		<0.048	:	-		-		<0.046	:	-	
Boron	mg/L	D	<0.084	:	-		<0.048	:	-		-		<0.046	:
Cadmium	mg/L	T	-		<0.12	:	-		-		<0.12	:	-	
Cadmium	mg/L	D	<0.005	:	-		<0.12	:	-		-		<0.12	:
Calcium	mg/L	T	-		214.	:	-		-		230.	:	-	
Calcium	mg/L	D	178.	:	-		220.	:	-		-		225.	:
Chromium	mg/L	T	-		<0.19	J	-		-		<0.19	:	-	
Chromium	mg/L	D	<0.01	:	-		<0.19	J	-		-		<0.19	:
Cobalt	mg/L	T	-		<0.37	:	-		-		<0.37	:	-	
Cobalt	mg/L	D	<0.038	:	-		<0.37	:	-		-		<0.37	:
Copper	mg/L	T	-		<0.33	:	-		-		<0.33	:	-	
Copper	mg/L	D	0.108	:	-		<0.33	:	-		-		<0.33	:
Iron	mg/L	T	-		<6.67	:	-		-		<6.67	:	-	
Iron	mg/L	D	<0.311	:	-		<6.67	:	-		-		<6.67	:
Lead	mg/L	T	-		0.0013	:	-		-		<0.001	:	-	
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Magnesium	mg/L	T	-		69.8	:	-		-		77.3	:	-	
Magnesium	mg/L	D	53.5	:	-		72.	:	-		-		75.8	:
Manganese	mg/L	T	-		1.82	:	-		-		2.19	:	-	
Manganese	mg/L	D	1.24	:	-		1.96	:	-		-		2.16	:
Mercury	mg/L	T	-		<0.0001	:	-		-		<0.0001	:	-	
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		-		<0.0001	:
Molybdenum	mg/L	T	-		<0.017	:	-		-		<0.016	:	-	
Molybdenum	mg/L	D	<0.023	:	-		<0.017	:	-		-		<0.016	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 6/3/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 7/22/2003 SPRING39PUMP-D 01N-GRW GW5		Spring 39-Pump 8/11/2003 Spring39Pump-T01N- SFW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 8/11/2003 SPRING39PUMP-D0 1N-GRW GW5	
Nickel	mg/L	T	-		<0.44	:	-		-		<0.44	:	-	
Nickel	mg/L	D	0.172	:	-		0.691	:	-		-		<0.44	:
Potassium	mg/L	T	-		<37.1	:	-		-		<37.1	:	-	
Potassium	mg/L	D	<3.26	:	-		<37.1	:	-		-		<37.1	:
Selenium	mg/L	T	-		<0.008	:	-		-		<0.008	:	-	
Selenium	mg/L	D	<0.008	:	-		<0.008	J	-		-		<0.008	:
Silver	mg/L	T	-		<0.001	J	-		-		<0.001	:	-	
Silver	mg/L	D	<0.001	:	-		<0.001	J	-		-		<0.001	:
Sodium	mg/L	T	-		<53.2	:	-		-		<53.2	J	-	
Sodium	mg/L	D	18.	:	-		<53.2	:	-		-		<53.2	J
Thallium	mg/L	T	-		<0.001	:	-		-		<0.001	:	-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.002	:	-		-		<0.002	:	-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		-		<0.002	:
Zinc	mg/L	T	-		0.958	:	-		-		1.38	:	-	
Zinc	mg/L	D	0.681	:	-		1.1	:	-		-		1.24	:
Isotopes														
Lead	mg/L	T	-		0.0013	:	-		-		<0.001	:	-	
Lead	mg/L	D	<0.001	:	-		<0.001	:	-		-		<0.001	:

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 39-PUMP Sample Date: 9/9/2003 Sample ID: SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 9/10/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 9/10/2003 SPRING39PUMP-D 01N-GRW GW5	Spring 39-PUMP 11/3/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 11/3/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 12/11/2003 SPRING39PUMP-T0 1N-GRW GW5
Field Measurements								
DO	mg/L	T	3.41 :	-	-	3.24 :	-	5.61 :
EH	millivolts	T	377.7 :	-	-	391. :	-	329.6 :
pH	SU	T	4.75 :	4.7 J	-	4.66 :	-	4.7 J
Specific Conductance	uS/cm	T	1741. :	-	-	1855. :	-	1743. :
Temperature	Celsius	T	10.66 :	-	-	9.46 :	-	5.43 :
Turbidity	NTU	T	9.1 :	-	-	0. :	-	0.6 :
General Chemistry								
Ammonia	mg/L	T	-	<0.056 J	-	<0.045 :	-	0.055 :
Bicarbonate (as CaCO3)	mg/L	T	-	<2.7 J	-	<2.2 :	-	1.9 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	21. :	-	22.4 :	-	20.3 :
Fluoride	mg/L	T	-	10.8 :	-	12.2 :	-	11.6 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	1.8 J	-	1.9 J	-	1.8 :
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	0.032 J	-	<0.01 :
Phosphorus	mg/L	T	-	<0.01 :	-	0.012 J	-	0.018 :
Sulfate	mg/L	T	-	938. J	-	1080. :	-	1100. :
Total Alkalinity	mg/L	T	-	<2.7 J	-	<2.2 J	-	1.9 :
Total Dissolved Solids	mg/L	T	-	1600. :	-	1820. :	-	1740. J
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	1.3 J	-	<1. :
Total Suspended Solids	mg/L	T	-	1.8 :	-	<1.5 :	-	1.8 :
Laboratory Parameters								
pH	SU	T	4.75 :	4.7 J	-	4.66 :	-	4.7 J
Specific Conductance	umhos/cm	T	-	1590. J	-	1780. J	-	1610. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 :	-	<0.01 :	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	945. :	-	1020. :	-	966. :
Hardness	mg/L	D	-	-	945. :	-	1050. :	-
Metals								

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 9/9/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 9/10/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 9/10/2003 SPRING39PUMP-D 01N-GRW GW5	Spring 39-PUMP 11/3/2003 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 11/3/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 12/11/2003 SPRING39PUMP-T0 1N-GRW GW5
Aluminum	mg/L	T	-	23.5 :	-	29.5 :	-	29.7 :
Aluminum	mg/L	D	-	-	24. :	-	30.6 :	-
Antimony	mg/L	T	-	<0.082 :	-	<0.082 :	-	<0.082 :
Antimony	mg/L	D	-	-	<0.082 :	-	<0.082 :	-
Arsenic	mg/L	T	-	<0.035 :	-	<0.035 J	-	<0.035 :
Arsenic	mg/L	D	-	-	<0.035 :	-	<0.035 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.117 :	-	<0.117 :
Barium	mg/L	D	-	-	<0.117 :	-	<0.117 :	-
Beryllium	mg/L	T	-	0.0092 :	-	<0.0145 :	-	<0.0103 :
Beryllium	mg/L	D	-	-	<0.0096 :	-	<0.0123 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.064 :	-	<0.064 :
Boron	mg/L	D	-	-	<0.064 :	-	<0.064 :	-
Cadmium	mg/L	T	-	<0.13 :	-	<0.13 :	-	<0.13 :
Cadmium	mg/L	D	-	-	<0.13 :	-	<0.13 :	-
Calcium	mg/L	T	-	239. :	-	258. :	-	242. :
Calcium	mg/L	D	-	-	240. :	-	265. :	-
Chromium	mg/L	T	-	<0.23 :	-	<0.23 :	-	<0.23 :
Chromium	mg/L	D	-	-	<0.23 :	-	<0.23 :	-
Cobalt	mg/L	T	-	<0.32 :	-	<0.32 :	-	<0.32 :
Cobalt	mg/L	D	-	-	<0.32 :	-	<0.32 :	-
Copper	mg/L	T	-	<0.23 :	-	<0.42 :	-	0.395 J
Copper	mg/L	D	-	-	<0.23 :	-	<0.53 :	-
Iron	mg/L	T	-	<4.55 :	-	<4.55 :	-	<4.55 :
Iron	mg/L	D	-	-	<4.55 :	-	<4.55 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.002 :	-	<0.001 :
Lead	mg/L	D	-	-	<0.002 :	-	<0.002 :	-
Magnesium	mg/L	T	-	84.4 :	-	91.7 :	-	87.6 :
Magnesium	mg/L	D	-	-	84.3 :	-	94.6 :	-
Manganese	mg/L	T	-	2.84 :	-	3.48 J	-	3.55 :
Manganese	mg/L	D	-	-	2.88 :	-	3.57 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 J	-
Molybdenum	mg/L	T	-	<0.012 :	-	<0.0232 :	-	<0.012 :
Molybdenum	mg/L	D	-	-	<0.012 :	-	<0.012 J	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 9/9/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 9/10/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 9/10/2003 SPRING39PUMP-D 01N-GRW GW5		Spring 39-PUMP 11/3/2003 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 11/3/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 12/11/2003 SPRING39PUMP-T0 1N-GRW GW5	
Nickel	mg/L	T	-		<0.45	:	-		<0.45	:	-		<0.45	:
Nickel	mg/L	D	-		-		<0.45	:	-		<0.45	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<63.8	:	-		<63.8	:
Potassium	mg/L	D	-		-		<63.8	:	-		<63.8	:	-	
Selenium	mg/L	T	-		0.0046	:	-		0.006	:	-		0.0032	:
Selenium	mg/L	D	-		-		0.004	:	-		0.0066	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<99.1	:	-		<99.1	:
Sodium	mg/L	D	-		-		<99.1	:	-		<99.1	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	-		-		<0.001	:	-		<0.001	:	-	
Zinc	mg/L	T	-		<1.22	J	-		1.58	:	-		1.5	:
Zinc	mg/L	D	-		-		1.74	J	-		1.66	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.002	:	-		<0.001	:
Lead	mg/L	D	-		-		<0.002	:	-		<0.002	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Spring 39-PUMP Sample Date: 12/11/2003 Sample ID: SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 1/13/2004 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 1/13/2004 SPRING39PUMP-D 01N-GRW GW5	Spring 39-PUMP 4/13/2004 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 4/13/2004 SPRING39PUMP-D0 1N-GRW GW5	Sulphur Gulch Seep 10/21/2003 SULPHURGULCHS EEP-T01N-GRW GW4
Field Measurements								
DO	mg/L	T	-	10.08 :	-	3.55 :	-	4.98 :
EH	millivolts	T	-	385.3 :	-	296.8 :	-	200. :
Flow	gpm	T	-	-	-	-	-	0.16 :
pH	SU	T	-	4.9 J	-	5.1 J	-	5.78 :
Specific Conductance	uS/cm	T	-	1675. :	-	1499. :	-	772. :
Temperature	Celsius	T	-	1.94 :	-	12.12 :	-	12. :
Turbidity	NTU	T	-	7.6 :	-	0. :	-	2.3 :
General Chemistry								
Ammonia	mg/L	T	-	<0.041 J	-	<0.079 :	-	-
Bicarbonate (as CaCO3)	mg/L	T	-	<1.6 :	-	<2.1 :	-	-
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Chloride	mg/L	T	-	19.1 :	-	18.1 :	-	-
Fluoride	mg/L	T	-	11.2 :	-	8.7 :	-	-
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	-
Nitrate	mg/L	T	-	1.8 J	-	1.6 J	-	-
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	-
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 J	-	-
Phosphorus	mg/L	T	-	<0.01 :	-	<0.01 :	-	-
Sulfate	mg/L	T	-	1010. :	-	925. J	-	-
Total Alkalinity	mg/L	T	-	<1.6 :	-	<2.1 :	-	-
Total Dissolved Solids	mg/L	T	-	1530. :	-	1300. :	-	-
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	-
Total Organic Carbon	mg/L	T	-	<1. :	-	1.8 J	-	-
Total Suspended Solids	mg/L	T	-	<1.2 :	-	<0.9 J	-	-
Laboratory Parameters								
pH	SU	T	-	4.9 J	-	5.1 J	-	5.78 :
Specific Conductance	umhos/cm	T	-	1720. J	-	1310. J	-	-
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 :	-	-
Physical Properties								
Hardness	mg/L	T	-	928. :	-	780. :	-	-
Hardness	mg/L	D	981. :	-	895. :	-	800. :	-

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 12/11/2003 SPRING39PUMP-D0 1N-GRW GW5	Spring 39-PUMP 1/13/2004 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 1/13/2004 SPRING39PUMP-D 01N-GRW GW5	Spring 39-PUMP 4/13/2004 SPRING39PUMP-T0 1N-GRW GW5	Spring 39-PUMP 4/13/2004 SPRING39PUMP-D0 1N-GRW GW5	Sulphur Gulch Seep 10/21/2003 SULPHURGULCHS EEP-T01N-GRW GW4
Metals								
Aluminum	mg/L	T	-	26.4 :	-	20.8 :	-	-
Aluminum	mg/L	D	30.4 :	-	25.8 :	-	22. :	-
Antimony	mg/L	T	-	<0.097 :	-	<0.027 :	-	-
Antimony	mg/L	D	<0.082 :	-	<0.097 :	-	<0.027 :	-
Arsenic	mg/L	T	-	<0.052 :	-	<0.026 :	-	-
Arsenic	mg/L	D	<0.035 :	-	<0.052 :	-	<0.026 :	-
Barium	mg/L	T	-	<0.188 :	-	<0.0142 :	-	-
Barium	mg/L	D	<0.117 :	-	<0.188 :	-	<0.012 :	-
Beryllium	mg/L	T	-	<0.01 :	-	<0.0086 :	-	-
Beryllium	mg/L	D	<0.0155 :	-	<0.01 :	-	<0.0089 :	-
Boron	mg/L	T	-	<0.117 :	-	0.0275 :	-	-
Boron	mg/L	D	<0.064 :	-	<0.117 :	-	<0.0212 :	-
Cadmium	mg/L	T	-	<0.07 J	-	<0.1 :	-	-
Cadmium	mg/L	D	<0.13 :	-	<0.07 :	-	<0.1 :	-
Calcium	mg/L	T	-	235. :	-	199. :	-	-
Calcium	mg/L	D	246. :	-	226. :	-	205. :	-
Chromium	mg/L	T	-	<0.11 :	-	<0.13 J	-	-
Chromium	mg/L	D	<0.23 :	-	<0.11 :	-	<0.13 J	-
Cobalt	mg/L	T	-	<0.31 :	-	<0.18 :	-	-
Cobalt	mg/L	D	<0.32 :	-	<0.31 :	-	0.224 :	-
Copper	mg/L	T	-	0.309 :	-	<0.273 :	-	-
Copper	mg/L	D	0.403 J	-	0.292 :	-	<0.27 :	-
Iron	mg/L	T	-	<3.73 :	-	<2.93 J	-	-
Iron	mg/L	D	<4.55 :	-	<3.73 :	-	<2.93 :	-
Lead	mg/L	T	-	<0.001 :	-	<0.004 :	-	-
Lead	mg/L	D	<0.001 :	-	0.002 :	-	<0.004 :	-
Magnesium	mg/L	T	-	82.9 :	-	68.6 :	-	-
Magnesium	mg/L	D	89.1 :	-	80. :	-	70.2 :	-
Manganese	mg/L	T	-	3.19 :	-	2.45 :	-	-
Manganese	mg/L	D	3.61 :	-	3.06 :	-	2.68 :	-
Mercury	mg/L	T	-	<0.0001 J	-	<0.0001 J	-	-
Mercury	mg/L	D	<0.0001 :	-	<0.0001 J	-	<0.0001 J	-
Molybdenum	mg/L	T	-	<0.03 :	-	<0.0102 :	-	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 39-PUMP 12/11/2003 SPRING39PUMP-D0 1N-GRW GW5		Spring 39-PUMP 1/13/2004 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 1/13/2004 SPRING39PUMP-D 01N-GRW GW5		Spring 39-PUMP 4/13/2004 SPRING39PUMP-T0 1N-GRW GW5		Spring 39-PUMP 4/13/2004 SPRING39PUMP-D0 1N-GRW GW5		Sulphur Gulch Seep 10/21/2003 SULPHURGULCHS EEP-T01N-GRW GW4	
Molybdenum	mg/L	D	<0.012	:	-		<0.03	:	-		<0.013	:	-	
Nickel	mg/L	T	-		0.36	:	-		<0.33	:	-		-	
Nickel	mg/L	D	<0.45	:	-		<0.27	:	-		<0.33	:	-	
Potassium	mg/L	T	-		<24.3	:	-		<15.5	:	-		-	
Potassium	mg/L	D	<63.8	:	-		<24.3	:	-		<15.5	:	-	
Selenium	mg/L	T	-		0.0051	J	-		<0.007	:	-		-	
Selenium	mg/L	D	0.0046	:	-		0.006	:	-		<0.007	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	J	-		-	
Silver	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	J	-	
Sodium	mg/L	T	-		<49.	:	-		<32.8	J	-		-	
Sodium	mg/L	D	<99.1	:	-		<49.	:	-		<68.6	J	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		-	
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.002	:	-		<0.002	:	-		-	
Vanadium	mg/L	D	<0.002	:	-		<0.002	:	-		<0.002	:	-	
Zinc	mg/L	T	-		1.57	:	-		1.21	:	-		-	
Zinc	mg/L	D	1.57	:	-		1.48	:	-		1.24	:	-	
Isotopes														
Lead	mg/L	T	-		<0.001	:	-		<0.004	:	-		-	
Lead	mg/L	D	<0.001	:	-		0.002	:	-		<0.004	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Sulphur Gulch Seep 10/21/2003 SULFURGULCH-T0 1N-GRW GW4	Sulphur Gulch Seep 10/21/2003 SULFURGULCH-D0 1N-GRW GW4	Sulphur Gulch Seep 11/4/2003 SULPHURGULCHS EEP-T01N-GRW GW4	Upper Spring 39 4/8/2003 SHAFTSPRING-T01 N-GRW GW5	Upper Spring 39 4/8/2003 SHAFTSPRING-D01 N-GRW GW5	Upper Spring 39 7/22/2003 UPPERSPRING39-T 01N-GRW GW5
Field Measurements								
DO	mg/L	T	-	-	-	6.93 :	-	0.83 :
EH	millivolts	T	-	-	-	308.4 :	-	337.8 :
Flow	gpm	T	-	-	0.1 :	200. :	-	-
pH	SU	T	4.7 J	-	-	5.61 :	-	5.95 :
Specific Conductance	uS/cm	T	-	-	-	1053. :	-	753. :
Temperature	Celsius	T	-	-	-	7.34 :	-	9.42 :
Turbidity	NTU	T	-	-	-	0. :	-	0. :
General Chemistry								
Ammonia	mg/L	T	0.059 J	-	-	0.049 :	-	<0.04 J
Bicarbonate (as CaCO3)	mg/L	T	44.5 :	-	-	18. :	-	18.7 :
Carbonate (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	<1. :
Chloride	mg/L	T	11.9 :	-	-	10. :	-	7.7 :
Fluoride	mg/L	T	1. :	-	-	7.9 :	-	6.5 :
Hydroxide (as CaCO3)	mg/L	T	<1. :	-	-	<1. :	-	<1. :
Nitrate	mg/L	T	0.36 J	-	-	1.6 J	-	0.78 J
Nitrite	mg/L	T	<0.005 J	-	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	<0.01 J	-	-	<0.01 J	-	<0.01 J
Phosphorus	mg/L	T	0.015 :	-	-	0.011 :	-	<0.01 :
Sulfate	mg/L	T	302. J	-	-	489. J	-	358. J
Total Alkalinity	mg/L	T	44.5 :	-	-	18. :	-	18.7 :
Total Dissolved Solids	mg/L	T	512. J	-	-	1000. :	-	724. :
Total Kjeldahl Nitrogen	mg/L	T	<0.24 :	-	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	1.1 J	-	-	<1. J	-	<1.5 J
Total Suspended Solids	mg/L	T	7.5 :	-	-	0.6 :	-	<0.5 :
Laboratory Parameters								
pH	SU	T	4.7 J	-	-	5.61 :	-	5.95 :
Specific Conductance	umhos/cm	T	704. J	-	-	941. J	-	760. J
Inorganics								
Cyanide	mg/L	T	<0.01 J	-	-	<0.01 J	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	359. :	-	-	569. :	-	373. :
Hardness	mg/L	D	-	352. :	-	-	565. :	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Sulphur Gulch Seep 10/21/2003 SULFURGULCH-T0 1N-GRW GW4	Sulphur Gulch Seep 10/21/2003 SULFURGULCH-D0 1N-GRW GW4	Sulphur Gulch Seep 11/4/2003 SULPHURGULCHS EEP-T01N-GRW GW4	Upper Spring 39 4/8/2003 SHAFTSPRING-T01 N-GRW GW5	Upper Spring 39 4/8/2003 SHAFTSPRING-D01 N-GRW GW5	Upper Spring 39 7/22/2003 UPPERSPRING39-T 01N-GRW GW5
Metals								
Aluminum	mg/L	T	<2.17 :	-	-	<7.54 :	-	<6.31 :
Aluminum	mg/L	D	-	<2.17 :	-	-	<7.89 :	-
Antimony	mg/L	T	<0.082 :	-	-	<0.003 :	-	<0.047 :
Antimony	mg/L	D	-	<0.082 :	-	-	<0.003 :	-
Arsenic	mg/L	T	<0.035 :	-	-	<0.04 :	-	<0.048 :
Arsenic	mg/L	D	-	<0.035 :	-	-	<0.04 :	-
Barium	mg/L	T	<0.117 :	-	-	<0.123 :	-	<0.059 :
Barium	mg/L	D	-	<0.117 :	-	-	<0.123 :	-
Beryllium	mg/L	T	<0.003 J	-	-	0.0078 :	-	<0.0067 :
Beryllium	mg/L	D	-	<0.003 J	-	-	0.0085 :	-
Boron	mg/L	T	<0.064 :	-	-	<0.084 :	-	<0.048 :
Boron	mg/L	D	-	<0.064 :	-	-	<0.084 :	-
Cadmium	mg/L	T	<0.13 :	-	-	0.0059 J	-	<0.12 :
Cadmium	mg/L	D	-	<0.13 :	-	-	0.0062 J	-
Calcium	mg/L	T	105. :	-	-	144. :	-	94.4 :
Calcium	mg/L	D	-	102. :	-	-	144. :	-
Chromium	mg/L	T	<0.11 J	-	-	<0.01 :	-	<0.19 :
Chromium	mg/L	D	-	<0.11 J	-	-	<0.01 :	-
Cobalt	mg/L	T	<0.32 :	-	-	<0.038 :	-	<0.37 :
Cobalt	mg/L	D	-	<0.32 :	-	-	<0.038 :	-
Copper	mg/L	T	<0.23 :	-	-	<0.0311 :	-	<0.33 :
Copper	mg/L	D	-	<0.23 :	-	-	<0.0321 :	-
Iron	mg/L	T	<4.55 :	-	-	<3.11 :	-	<6.67 :
Iron	mg/L	D	-	<4.55 :	-	-	<3.11 :	-
Lead	mg/L	T	<0.002 :	-	-	<0.001 :	-	<0.001 :
Lead	mg/L	D	-	<0.002 :	-	-	<0.001 :	-
Magnesium	mg/L	T	23.7 :	-	-	50.6 :	-	33.3 :
Magnesium	mg/L	D	-	23.5 :	-	-	50. :	-
Manganese	mg/L	T	0.177 :	-	-	<0.1 :	-	<0.19 :
Manganese	mg/L	D	-	0.176 :	-	-	<0.1 :	-
Mercury	mg/L	T	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	<0.0001 :	-	-	<0.0001 :	-
Molybdenum	mg/L	T	<0.012 :	-	-	<0.023 :	-	<0.017 :

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Sulphur Gulch Seep 10/21/2003 SULFURGULCH-T0 1N-GRW GW4		Sulphur Gulch Seep 10/21/2003 SULFURGULCH-D0 1N-GRW GW4		Sulphur Gulch Seep 11/4/2003 SULPHURGULCHS EEP-T01N-GRW GW4		Upper Spring 39 4/8/2003 SHAFTSPRING-T01 N-GRW GW5		Upper Spring 39 4/8/2003 SHAFTSPRING-D01 N-GRW GW5		Upper Spring 39 7/22/2003 UPPERSPRING39-T 01N-GRW GW5	
Molybdenum	mg/L	D	-		<0.012	:	-		-		<0.023	:	-	
Nickel	mg/L	T	<0.45	:	-		-		0.424	:	-		<0.44	:
Nickel	mg/L	D	-		<0.45	:	-		-		0.402	:	-	
Potassium	mg/L	T	<63.8	:	-		-		<3.26	:	-		<37.1	:
Potassium	mg/L	D	-		<63.8	:	-		-		<3.26	:	-	
Selenium	mg/L	T	<0.03	:	-		-		<0.005	:	-		<0.008	:
Selenium	mg/L	D	-		<0.03	:	-		-		<0.005	:	-	
Silver	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	J
Silver	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Sodium	mg/L	T	<99.1	:	-		-		<35.2	:	-		<53.2	:
Sodium	mg/L	D	-		<99.1	:	-		-		<35.2	:	-	
Thallium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Vanadium	mg/L	T	<0.001	:	-		-		<0.001	:	-		<0.002	:
Vanadium	mg/L	D	-		<0.001	:	-		-		<0.001	:	-	
Zinc	mg/L	T	<1.51	:	-		-		3.32	:	-		1.9	:
Zinc	mg/L	D	-		<1.48	:	-		-		3.14	:	-	
Isotopes														
Lead	mg/L	T	<0.002	:	-		-		<0.001	:	-		<0.001	:
Lead	mg/L	D	-		<0.002	:	-		-		<0.001	:	-	

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area / Fraction	Site ID / Sample Date / Sample ID / Exposure Area					
			Upper Spring 39 7/22/2003 UPPERSPRING39-D 01N-GRW GW5	Upper Spring 39 9/10/2003 UPPERSPRING39-T 01N-GRW GW5	Upper Spring 39 10/21/2003 UPPERSPRING39-T 01N-GRW GW5	Upper Spring 39 10/21/2003 UPPERSPRING39-D 01N-GRW GW5	Upper Spring 39 11/5/2003 UPPERSPRING39-T 01N-GRW GW5	Waldo Spring 7/21/2003 WALDOSPRING-T0 1N-GRW OMR
Field Measurements								
DO	mg/L	T	-	-	1.1 :	-	-	3.37 :
EH	millivolts	T	-	-	103. :	-	-	411.9 :
Flow	gpm	T	-	1.4 :	39. :	-	28.6 :	0.1 :
pH	SU	T	-	-	5.62 :	-	-	5.1 J
Specific Conductance	uS/cm	T	-	-	955. :	-	-	804. :
Temperature	Celsius	T	-	-	9.56 :	-	-	10.72 :
Turbidity	NTU	T	-	-	8.9 :	-	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	-	0.053 J	-	-	<0.12 J
Bicarbonate (as CaCO3)	mg/L	T	-	-	19.8 :	-	-	<2.9 :
Carbonate (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Chloride	mg/L	T	-	-	8.4 :	-	-	5.9 :
Fluoride	mg/L	T	-	-	8.4 :	-	-	1.4 :
Hydroxide (as CaCO3)	mg/L	T	-	-	<1. :	-	-	<1. :
Nitrate	mg/L	T	-	-	0.71 J	-	-	<0.2 J
Nitrite	mg/L	T	-	-	<0.005 J	-	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	-	0.11 J	-	-	<0.01 J
Phosphorus	mg/L	T	-	-	<0.01 J	-	-	<0.01 :
Sulfate	mg/L	T	-	-	630. J	-	-	446. J
Total Alkalinity	mg/L	T	-	-	19.8 :	-	-	<2.9 :
Total Dissolved Solids	mg/L	T	-	-	884. :	-	-	778. :
Total Kjeldahl Nitrogen	mg/L	T	-	-	<0.24 :	-	-	<0.24 :
Total Organic Carbon	mg/L	T	-	-	1. J	-	-	<2.6 J
Total Suspended Solids	mg/L	T	-	-	3.2 :	-	-	9.4 :
Laboratory Parameters								
pH	SU	T	-	-	5.62 :	-	-	5.1 J
Specific Conductance	umhos/cm	T	-	-	977. J	-	-	794. J
Inorganics								
Cyanide	mg/L	T	-	-	<0.01 J	-	-	<0.01 J
Physical Properties								
Hardness	mg/L	T	-	-	502. :	-	-	411. :
Hardness	mg/L	D	384. :	-	-	544. :	-	-

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Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area	Upper Spring 39 7/22/2003 UPPERSPRING39-D 01N-GRW GW5	Upper Spring 39 9/10/2003 UPPERSPRING39-T 01N-GRW GW5	Upper Spring 39 10/21/2003 UPPERSPRING39-T 01N-GRW GW5	Upper Spring 39 10/21/2003 UPPERSPRING39-D 01N-GRW GW5	Upper Spring 39 11/5/2003 UPPERSPRING39-T 01N-GRW GW5	Waldo Spring 7/21/2003 WALDOSPRING-T0 1N-GRW OMR
Metals									
Aluminum	mg/L	T		-	-	4.5 :	-	-	<6.31 :
Aluminum	mg/L	D		<6.31 :	-	-	4.88 :	-	-
Antimony	mg/L	T		-	-	<0.082 :	-	-	<0.038 :
Antimony	mg/L	D		<0.047 :	-	-	<0.082 :	-	-
Arsenic	mg/L	T		-	-	0.036 :	-	-	<0.024 :
Arsenic	mg/L	D		<0.048 :	-	-	<0.035 :	-	-
Barium	mg/L	T		-	-	<0.117 :	-	-	<0.073 :
Barium	mg/L	D		<0.059 :	-	-	<0.117 :	-	-
Beryllium	mg/L	T		-	-	<0.003 J	-	-	0.002 :
Beryllium	mg/L	D		<0.0069 :	-	-	<0.003 J	-	-
Boron	mg/L	T		-	-	<0.064 :	-	-	<0.046 :
Boron	mg/L	D		<0.048 :	-	-	<0.064 :	-	-
Cadmium	mg/L	T		-	-	<0.13 :	-	-	<0.12 :
Cadmium	mg/L	D		<0.12 :	-	-	<0.13 :	-	-
Calcium	mg/L	T		-	-	126. :	-	-	112. :
Calcium	mg/L	D		96.5 :	-	-	136. :	-	-
Chromium	mg/L	T		-	-	<0.11 J	-	-	<0.19 J
Chromium	mg/L	D		<0.19 :	-	-	<0.11 J	-	-
Cobalt	mg/L	T		-	-	<0.32 :	-	-	<0.37 :
Cobalt	mg/L	D		<0.37 :	-	-	<0.32 :	-	-
Copper	mg/L	T		-	-	<0.23 :	-	-	<0.33 :
Copper	mg/L	D		<0.33 :	-	-	<0.23 :	-	-
Iron	mg/L	T		-	-	<4.55 :	-	-	<6.67 :
Iron	mg/L	D		<6.67 :	-	-	<4.55 :	-	-
Lead	mg/L	T		-	-	<0.002 :	-	-	<0.001 :
Lead	mg/L	D		<0.001 :	-	-	<0.002 :	-	-
Magnesium	mg/L	T		-	-	45.5 :	-	-	31.7 :
Magnesium	mg/L	D		34.8 :	-	-	49.4 :	-	-
Manganese	mg/L	T		-	-	<0.16 :	-	-	1.18 :
Manganese	mg/L	D		<0.19 :	-	-	<0.16 :	-	-
Mercury	mg/L	T		-	-	<0.0001 :	-	-	<0.0001 :
Mercury	mg/L	D		<0.0001 :	-	-	<0.0001 :	-	-
Molybdenum	mg/L	T		-	-	<0.012 :	-	-	<0.016 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Upper Spring 39 7/22/2003 UPPERSPRING39-D 01N-GRW GW5		Upper Spring 39 9/10/2003 UPPERSPRING39-T 01N-GRW GW5		Upper Spring 39 10/21/2003 UPPERSPRING39-T 01N-GRW GW5		Upper Spring 39 10/21/2003 UPPERSPRING39-D 01N-GRW GW5		Upper Spring 39 11/5/2003 UPPERSPRING39-T 01N-GRW GW5		Waldo Spring 7/21/2003 WALDOSPRING-T0 1N-GRW OMR	
Molybdenum	mg/L	D	<0.017	:	-		-		<0.012	:	-		-	
Nickel	mg/L	T	-		-		<0.45	:	-		-		<0.44	:
Nickel	mg/L	D	<0.44	:	-		-		<0.45	:	-		-	
Potassium	mg/L	T	-		-		<63.8	:	-		-		<37.1	:
Potassium	mg/L	D	<37.1	:	-		-		<63.8	:	-		-	
Selenium	mg/L	T	-		-		<0.03	:	-		-		<0.008	:
Selenium	mg/L	D	<0.008	J	-		-		<0.03	:	-		-	
Silver	mg/L	T	-		-		<0.001	:	-		-		<0.001	J
Silver	mg/L	D	<0.001	J	-		-		<0.001	:	-		-	
Sodium	mg/L	T	-		-		<99.1	:	-		-		<53.2	:
Sodium	mg/L	D	<53.2	:	-		-		<99.1	:	-		-	
Thallium	mg/L	T	-		-		<0.001	:	-		-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		-		<0.001	:	-		-	
Vanadium	mg/L	T	-		-		<0.001	:	-		-		<0.002	:
Vanadium	mg/L	D	<0.002	:	-		-		<0.001	:	-		-	
Zinc	mg/L	T	-		-		3.72	:	-		-		<0.16	J
Zinc	mg/L	D	1.97	:	-		-		3.98	:	-		-	
Isotopes														
Lead	mg/L	T	-		-		<0.002	:	-		-		<0.001	:
Lead	mg/L	D	<0.001	:	-		-		<0.002	:	-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Exposure Area Fraction	Site ID: Waldo Spring Sample Date: 7/21/2003 Sample ID: WALDOSPRING-D0 1N-GRW OMR	Site ID: Waldo Spring Sample Date: 10/21/2003 Sample ID: WALDOSPRING-T0 1N-GRW OMR	Site ID: Waldo Spring Sample Date: 10/21/2003 Sample ID: WALDOSPRING-D0 1N-GRW OMR	Site ID: Waldo Spring Sample Date: 1/9/2004 Sample ID: WALDOSPRING-T0 1N-GRW OMR	Site ID: Waldo Spring Sample Date: 1/9/2004 Sample ID: WALDOSPRING-D0 1N-GRW OMR	Site ID: Waldo Spring Sample Date: 4/20/2004 Sample ID: WALDOSPRING-T0 1N-GRW OMR
Field Measurements								
DO	mg/L	T	-	2.65 :	-	1.85 :	-	6.26 :
EH	millivolts	T	-	367.7 :	-	264.2 :	-	380. :
pH	SU	T	-	5.2 J	-	4.8 J	-	4.46 :
Specific Conductance	uS/cm	T	-	906. :	-	855. :	-	773. :
Temperature	Celsius	T	-	6.79 :	-	4.63 :	-	6.95 :
Turbidity	NTU	T	-	0. :	-	0.6 :	-	0. :
General Chemistry								
Ammonia	mg/L	T	-	0.044 J	-	<0.04 :	-	<0.06 :
Bicarbonate (as CaCO3)	mg/L	T	-	6.5 :	-	<2.9 :	-	<1. :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	7.4 :	-	6.9 :	-	5.5 :
Fluoride	mg/L	T	-	1.1 :	-	1.2 :	-	1.4 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	<0.2 J	-	<0.2 :	-	<0.26 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 :	-	<0.005 :
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 :	-	<0.01 :
Phosphorus	mg/L	T	-	0.021 :	-	<0.01 :	-	<0.01 :
Sulfate	mg/L	T	-	520. J	-	393. :	-	445. :
Total Alkalinity	mg/L	T	-	6.5 :	-	<2.9 :	-	<1. :
Total Dissolved Solids	mg/L	T	-	952. :	-	636. :	-	638. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	<1. :	-	<1. J
Total Suspended Solids	mg/L	T	-	10.8 :	-	<2. :	-	<0.6 J
Laboratory Parameters								
pH	SU	T	-	5.2 J	-	4.8 J	-	4.46 :
Specific Conductance	umhos/cm	T	-	821. J	-	748. J	-	667. J
Inorganics								
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 :
Physical Properties								
Hardness	mg/L	T	-	420. :	-	381. :	-	323. :
Hardness	mg/L	D	410. :	-	397. :	-	386. :	-
Metals								

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Waldo Spring 7/21/2003 WALDOSPRING-D0 1N-GRW OMR	Waldo Spring 10/21/2003 WALDOSPRING-T0 1N-GRW OMR	Waldo Spring 10/21/2003 WALDOSPRING-D0 1N-GRW OMR	Waldo Spring 1/9/2004 WALDOSPRING-T0 1N-GRW OMR	Waldo Spring 1/9/2004 WALDOSPRING-D0 1N-GRW OMR	Waldo Spring 4/20/2004 WALDOSPRING-T0 1N-GRW OMR
Aluminum	mg/L	T	-	5.52 :	-	10.2 :	-	<12.3 :
Aluminum	mg/L	D	<6.31 :	-	8.3 :	-	9.62 :	-
Antimony	mg/L	T	-	<0.082 :	-	<0.029 :	-	<0.053 :
Antimony	mg/L	D	<0.038 :	-	<0.082 :	-	<0.029 :	-
Arsenic	mg/L	T	-	<0.035 :	-	<0.028 :	-	<0.037 :
Arsenic	mg/L	D	<0.024 :	-	<0.035 :	-	<0.028 :	-
Barium	mg/L	T	-	<0.117 :	-	<0.053 :	-	<0.049 :
Barium	mg/L	D	<0.073 :	-	<0.117 :	-	<0.053 :	-
Beryllium	mg/L	T	-	<0.003 J	-	0.0032 :	-	0.0076 :
Beryllium	mg/L	D	0.0039 :	-	<0.003 J	-	<0.003 :	-
Boron	mg/L	T	-	<0.064 :	-	<0.117 :	-	<0.036 :
Boron	mg/L	D	<0.046 :	-	<0.064 :	-	<0.117 :	-
Cadmium	mg/L	T	-	<0.13 :	-	<0.07 J	-	<0.03 :
Cadmium	mg/L	D	<0.12 :	-	<0.13 :	-	<0.07 :	-
Calcium	mg/L	T	-	116. :	-	104. :	-	88.3 :
Calcium	mg/L	D	112. :	-	109. :	-	105. :	-
Chromium	mg/L	T	-	<0.11 J	-	<0.11 :	-	<0.08 :
Chromium	mg/L	D	<0.19 J	-	<0.11 J	-	<0.11 :	-
Cobalt	mg/L	T	-	<0.32 :	-	<0.31 :	-	<0.11 :
Cobalt	mg/L	D	<0.37 :	-	<0.32 :	-	<0.31 :	-
Copper	mg/L	T	-	<0.23 :	-	<0.24 :	-	<0.07 :
Copper	mg/L	D	<0.33 :	-	<0.23 :	-	<0.24 :	-
Iron	mg/L	T	-	<4.55 :	-	<3.73 :	-	<1.92 J
Iron	mg/L	D	<6.67 :	-	<4.55 :	-	<3.73 :	-
Lead	mg/L	T	-	<0.002 :	-	<0.001 :	-	<0.004 :
Lead	mg/L	D	<0.001 :	-	<0.002 :	-	<0.001 :	-
Magnesium	mg/L	T	-	31.8 :	-	29.4 :	-	24.9 :
Magnesium	mg/L	D	31.5 :	-	30.6 :	-	30.1 :	-
Manganese	mg/L	T	-	1.07 :	-	1.66 :	-	1.77 :
Manganese	mg/L	D	1.16 :	-	1.44 :	-	1.48 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	<0.012 :	-	<0.024 :	-	<0.014 :
Molybdenum	mg/L	D	<0.016 :	-	<0.012 :	-	<0.024 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Waldo Spring 7/21/2003 WALDOSPRING-D0 1N-GRW OMR		Waldo Spring 10/21/2003 WALDOSPRING-T0 1N-GRW OMR		Waldo Spring 10/21/2003 WALDOSPRING-D0 1N-GRW OMR		Waldo Spring 1/9/2004 WALDOSPRING-T0 1N-GRW OMR		Waldo Spring 1/9/2004 WALDOSPRING-D0 1N-GRW OMR		Waldo Spring 4/20/2004 WALDOSPRING-T0 1N-GRW OMR	
Nickel	mg/L	T	-		0.539	:	-		<0.27	:	-		<0.14	:
Nickel	mg/L	D	<0.44	:	-		<0.45	:	-		<0.27	:	-	
Potassium	mg/L	T	-		<63.8	:	-		<24.3	:	-		<10.9	J
Potassium	mg/L	D	<37.1	:	-		<63.8	:	-		<24.3	:	-	
Selenium	mg/L	T	-		<0.03	:	-		<0.003	J	-		<0.007	:
Selenium	mg/L	D	<0.008	J	-		<0.03	:	-		<0.003	:	-	
Silver	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Silver	mg/L	D	<0.001	J	-		<0.001	:	-		<0.001	:	-	
Sodium	mg/L	T	-		<99.1	:	-		<92.	:	-		<17.3	:
Sodium	mg/L	D	<53.2	:	-		<99.1	:	-		<92.	:	-	
Thallium	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.001	:
Thallium	mg/L	D	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Vanadium	mg/L	T	-		<0.001	:	-		<0.002	:	-		<0.002	:
Vanadium	mg/L	D	<0.002	:	-		<0.001	:	-		<0.002	:	-	
Zinc	mg/L	T	-		4.84	:	-		0.617	:	-		0.64	:
Zinc	mg/L	D	<0.16	J	-		<1.81	:	-		0.688	:	-	
Isotopes														
Lead	mg/L	T	-		<0.002	:	-		<0.001	:	-		<0.004	:
Lead	mg/L	D	<0.001	:	-		<0.002	:	-		<0.001	:	-	

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T = Total Fraction

Appendix A-6k
Seep/Spring - Alluvial Aquifer
Validated Analytical Results

Paramete	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Waldo Spring 4/20/2004 WALDOSPRING-D0 1N-GRW OMR		----	----	----	----	----
Physical Properties									
Hardness	mg/L	D	337.	:	-	-	-	-	-
Metals									
Aluminum	mg/L	D	<15.2	:	-	-	-	-	-
Antimony	mg/L	D	<0.053	:	-	-	-	-	-
Arsenic	mg/L	D	<0.037	:	-	-	-	-	-
Barium	mg/L	D	<0.049	:	-	-	-	-	-
Beryllium	mg/L	D	<0.003	:	-	-	-	-	-
Boron	mg/L	D	<0.036	:	-	-	-	-	-
Cadmium	mg/L	D	<0.0676	:	-	-	-	-	-
Calcium	mg/L	D	91.1	:	-	-	-	-	-
Chromium	mg/L	D	<0.08	:	-	-	-	-	-
Cobalt	mg/L	D	<0.11	:	-	-	-	-	-
Copper	mg/L	D	<0.385	:	-	-	-	-	-
Iron	mg/L	D	<5.36	:	-	-	-	-	-
Lead	mg/L	D	<0.004	:	-	-	-	-	-
Magnesium	mg/L	D	26.6	:	-	-	-	-	-
Manganese	mg/L	D	1.84	:	-	-	-	-	-
Mercury	mg/L	D	<0.0001	:	-	-	-	-	-
Molybdenum	mg/L	D	<0.014	:	-	-	-	-	-
Nickel	mg/L	D	0.173	:	-	-	-	-	-
Potassium	mg/L	D	<10.9	J	-	-	-	-	-
Selenium	mg/L	D	<0.007	:	-	-	-	-	-
Silver	mg/L	D	<0.001	:	-	-	-	-	-
Sodium	mg/L	D	<17.3	:	-	-	-	-	-
Thallium	mg/L	D	<0.001	:	-	-	-	-	-
Vanadium	mg/L	D	<0.002	:	-	-	-	-	-
Zinc	mg/L	D	0.69	:	-	-	-	-	-
Isotopes									
Lead	mg/L	D	<0.004	:	-	-	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 10 10/8/2002 SPRING10-T01N-GRW GW13		Spring 10 10/8/2002 SPRING10-D01N-GRW GW13		Spring 10 1/11/2003 SPRING10-T01N-GRW GW13		SPRING 10 1/11/2003 SPRING10-D01N-GRW GW13		Spring 10 4/2/2003 SPRING10-T01N-GRW GW13		SPRING 10 4/2/2003 SPRING10-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	8.01	:	-		9.79	:	-		9.21	:	-	
Eh	millivolts	T	348.2	:	-		367.4	:	-		414.2	:	-	
Flow	gpm	T	-		-		11.6	:	-		-		-	
pH	SU	T	7.04	:	-		6.69	:	-		7.6	J	-	
Specific Conductance	uS/cm	T	681.	:	-		1480.	:	-		609.	:	-	
Temperature	Celsius	T	13.19	:	-		6.38	:	-		7.33	:	-	
Turbidity	NTU	T	0.9	:	-		0.1	:	-		0.8	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.041	:	-		<0.11	:	-		0.079	:	-	
Bicarbonate (as CaCO3)	mg/L	T	162.	:	-		158.	:	-		160.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	5.2	:	-		<5.6	:	-		4.3	:	-	
Fluoride	mg/L	T	0.84	:	-		0.61	:	-		0.7	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.41	J	-		<0.61	J	-		0.49	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.018	J	-		<0.018	J	-		0.1	J	-	
Phosphorus	mg/L	T	0.019	:	-		0.021	:	-		0.024	J	-	
Sulfate	mg/L	T	170.	:	-		198.	J	-		131.	J	-	
Total Alkalinity	mg/L	T	162.	:	-		158.	:	-		160.	:	-	
Total Dissolved Solids	mg/L	T	413.	:	-		<448.	J	-		432.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.	:	-		<1.	:	-		<1.	J	-	
Total Suspended Solids	mg/L	T	<1.	:	-		<0.9	:	-		1.5	:	-	
Laboratory Parameters														
pH	SU	T	7.04	:	-		6.69	:	-		7.6	J	-	
Specific Conductance	umhos/cm	T	-		-		-		-		565.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	256.	:	-		333.	:	-		240.	:	-	
Hardness	mg/L	D	-		251.	:	-		334.	:	-		238.	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 10 10/8/2002 SPRING10-T01N-GRW GW13	Spring 10 10/8/2002 SPRING10-D01N-GRW GW13	SPRING 10 1/11/2003 SPRING10-T01N-GRW GW13	SPRING 10 1/11/2003 SPRING10-D01N-GRW GW13	SPRING 10 4/2/2003 SPRING10-T01N-GRW GW13	SPRING 10 4/2/2003 SPRING10-D01N-GRW GW13
Metals								
Aluminum	mg/L	T	<0.0054 :	-	<0.142 :	-	0.0311 :	-
Aluminum	mg/L	D	-	<0.0055 :	-	<0.142 :	-	<0.0277 :
Antimony	mg/L	T	<0.0002 :	-	<0.0006 J	-	<0.0006 :	-
Antimony	mg/L	D	-	<0.0002 :	-	<0.0006 J	-	<0.0006 :
Arsenic	mg/L	T	<0.0002 :	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	0.00024 J	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T	0.0425 :	-	0.0453 :	-	0.0396 :	-
Barium	mg/L	D	-	0.0418 :	-	0.0453 :	-	0.0394 :
Beryllium	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.0003 :	-
Beryllium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	<0.0003 :
Boron	mg/L	T	0.0699 :	-	0.0635 :	-	0.0657 :	-
Boron	mg/L	D	-	0.0684 :	-	0.0634 :	-	0.0649 :
Cadmium	mg/L	T	<0.0001 :	-	<0.0004 :	-	<0.0004 :	-
Cadmium	mg/L	D	-	<0.0001 :	-	<0.0004 :	-	<0.0004 :
Calcium	mg/L	T	81. :	-	105. :	-	75.6 :	-
Calcium	mg/L	D	-	79.7 :	-	105. :	-	75.2 :
Chromium	mg/L	T	<0.0046 :	-	<0.0037 :	-	0.001 :	-
Chromium	mg/L	D	-	<0.0046 :	-	<0.0037 :	-	0.0011 :
Chromium, Hexavalent	mg/L	D	<0.01 :	-	-	-	-	-
Cobalt	mg/L	T	<0.0022 :	-	<0.0016 :	-	<0.0029 :	-
Cobalt	mg/L	D	-	<0.0022 :	-	<0.0016 :	-	<0.0029 :
Copper	mg/L	T	<0.001 :	-	<0.0028 :	-	<0.0024 :	-
Copper	mg/L	D	-	<0.0011 :	-	<0.0042 :	-	<0.0024 :
Iron	mg/L	T	<0.0226 :	-	<0.489 :	-	0.0469 :	-
Iron	mg/L	D	-	<0.0226 :	-	<0.489 :	-	<0.0299 :
Lead	mg/L	T	<0.0001 :	-	<0.0002 :	-	<0.0002 :	-
Lead	mg/L	D	-	<0.0001 :	-	<0.0002 :	-	<0.0002 :
Magnesium	mg/L	T	13. :	-	17.5 :	-	12.4 :	-
Magnesium	mg/L	D	-	12.8 :	-	17.6 :	-	12.3 :
Manganese	mg/L	T	<0.0025 :	-	<0.005 :	-	<0.0009 :	-
Manganese	mg/L	D	-	<0.0025 :	-	<0.005 :	-	<0.0009 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	0.00022 :	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 10 10/8/2002 SPRING10-T01N-GRW GW13		Spring 10 10/8/2002 SPRING10-D01N-GRW GW13		SPRING 10 1/11/2003 SPRING10-T01N-GRW GW13		SPRING 10 1/11/2003 SPRING10-D01N-GRW GW13		SPRING 10 4/2/2003 SPRING10-T01N-GRW GW13		SPRING 10 4/2/2003 SPRING10-D01N-GRW GW13	
Molybdenum	mg/L	T	0.0282	:	-		0.0281	:	-		0.0268	:	-	
Molybdenum	mg/L	D	-		0.0289	:	-		0.0273	:	-		0.0265	:
Nickel	mg/L	T	<0.00037	J	-		<0.0015	:	-		<0.0026	:	-	
Nickel	mg/L	D	-		<0.00055	J	-		<0.0015	:	-		<0.0026	:
Potassium	mg/L	T	2.13	:	-		1.9	:	-		1.85	:	-	
Potassium	mg/L	D	-		2.1	:	-		1.86	:	-		1.83	:
Selenium	mg/L	T	<0.00041	:	-		<0.0016	:	-		<0.001	J	-	
Selenium	mg/L	D	-		<0.00069	:	-		<0.0016	:	-		<0.001	J
Silver	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	41.6	:	-		50.2	:	-		42.	:	-	
Sodium	mg/L	D	-		40.9	:	-		45.9	:	-		42.2	:
Thallium	mg/L	T	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00018	J	-		<0.0004	:	-		<0.00053	:	-	
Vanadium	mg/L	D	-		0.00017	J	-		<0.0004	:	-		<0.00029	:
Zinc	mg/L	T	<0.0069	:	-		<0.039	:	-		<0.0025	:	-	
Zinc	mg/L	D	-		<0.0069	:	-		<0.039	:	-		<0.0025	:

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			SPRING 10	7/8/2003	SPRING10-T01N-GRW	GW13	SPRING 10	7/8/2003	SPRING10-D01N-GRW	GW13	SPRING 10	10/20/2003	SPRING10-T01N-GRW	GW13	SPRING 10	10/20/2003	SPRING10-D01N-GRW	GW13
Field Measurements																
DO	mg/L	T	8.56	:			-				9.07	:			-	
Eh	millivolts	T	342.2	:			-				108.	:			-	
Flow	gpm	T	19.	:			-				15.9	:			-	
pH	SU	T	6.65	:			-				7.7	J			-	
Specific Conductance	uS/cm	T	600.	:			-				573.	:			-	
Temperature	Celsius	T	13.33	:			-				12.46	:			-	
Turbidity	NTU	T	30.2	:			-				-				-	
General Chemistry																
Ammonia	mg/L	T	<0.099	J			-				<0.043	J			-	
Bicarbonate (as CaCO3)	mg/L	T	154.	:			-				166.	:			-	
Carbonate (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-	
Chloride	mg/L	T	5.6	:			-				4.5	:			-	
Fluoride	mg/L	T	0.69	:			-				0.71	:			-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-				<1.	:			-	
Nitrate	mg/L	T	0.52	J			-				0.27	J			-	
Nitrite	mg/L	T	<0.005	J			-				<0.005	J			-	
Phosphate, Ortho As P	mg/L	T	<0.021	J			-				0.019	J			-	
Phosphorus	mg/L	T	0.027	:			-				0.024	:			-	
Sulfate	mg/L	T	180.	J			-				116.	J			-	
Total Alkalinity	mg/L	T	154.	:			-				166.	:			-	
Total Dissolved Solids	mg/L	T	460.	:			-				390.	:			-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-				<0.24	:			-	
Total Organic Carbon	mg/L	T	<1.	J			-				2.3	J			-	
Total Suspended Solids	mg/L	T	<0.5	:			-				2.	:			-	
Laboratory Parameters																
pH	SU	T	6.65	:			-				7.7	J			-	
Specific Conductance	umhos/cm	T	576.	J			-				501.	J			-	
Inorganics																
Cyanide	mg/L	T	<0.01	J			-				<0.01	J			-	
Physical Properties																
Hardness	mg/L	T	268.	:			-				254.	:			-	
Hardness	mg/L	D	-				268.	:			-				243.	:

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID											
			SPRING 10	1/7/2004	SPRING10-T01N-GRW	GW13	SPRING 10	1/7/2004	SPRING10-D01N-GRW	GW13						
Field Measurements																
DO	mg/L	T	9.15	:			-									
Eh	millivolts	T	272.4	:			-									
Flow	gpm	T	8.7	:			-									
pH	SU	T	7.7	:			-									
Specific Conductance	uS/cm	T	592.	:			-									
Temperature	Celsius	T	6.64	:			-									
Turbidity	NTU	T	0.	:			-									
General Chemistry																
Ammonia	mg/L	T	<0.052	J			-									
Bicarbonate (as CaCO3)	mg/L	T	164.	J			-									
Carbonate (as CaCO3)	mg/L	T	<1.	:			-									
Chloride	mg/L	T	4.8	:			-									
Fluoride	mg/L	T	0.64	:			-									
Hydroxide (as CaCO3)	mg/L	T	<1.	:			-									
Nitrate	mg/L	T	<0.32	J			-									
Nitrite	mg/L	T	<0.005	J			-									
Phosphate, Ortho As P	mg/L	T	<0.018	J			-									
Phosphorus	mg/L	T	<0.015	:			-									
Sulfate	mg/L	T	135.	:			-									
Total Alkalinity	mg/L	T	164.	J			-									
Total Dissolved Solids	mg/L	T	378.	:			-									
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:			-									
Total Organic Carbon	mg/L	T	<1.4	:			-									
Total Suspended Solids	mg/L	T	<0.5	:			-									
Laboratory Parameters																
pH	SU	T	7.7	:			-									
Specific Conductance	umhos/cm	T	534.	J			-									
Inorganics																
Cyanide	mg/L	T	<0.01	J			-									
Physical Properties																
Hardness	mg/L	T	224.	:			-									
Hardness	mg/L	D	-				222.	:								

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 10 7/8/2003 SPRING10-T01N-GRW GW13	SPRING 10 7/8/2003 SPRING10-D01N-GRW GW13	SPRING 10 10/20/2003 SPRING10-T01N-GRW GW13	SPRING 10 10/20/2003 SPRING10-D01N-GRW GW13	SPRING 10 1/7/2004 SPRING10-T01N-GRW GW13	SPRING 10 1/7/2004 SPRING10-D01N-GRW GW13
Metals								
Aluminum	mg/L	T	<0.631 :	-	<0.307 :	-	<0.514 :	-
Aluminum	mg/L	D	-	<0.631 :	-	<0.307 :	-	<0.514 :
Antimony	mg/L	T	<0.001 :	-	<0.001 :	-	<0.0024 :	-
Antimony	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.0024 :
Arsenic	mg/L	T	<0.0004 :	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T	0.0427 :	-	0.0379 :	-	0.037 :	-
Barium	mg/L	D	-	0.0428 :	-	0.0373 :	-	0.0368 :
Beryllium	mg/L	T	<0.0002 J	-	<0.0004 :	-	<0.0003 :	-
Beryllium	mg/L	D	-	<0.0002 J	-	<0.0004 :	-	<0.0003 :
Boron	mg/L	T	0.0524 :	-	0.0444 :	-	0.0569 :	-
Boron	mg/L	D	-	0.0594 :	-	0.0441 :	-	0.0568 :
Cadmium	mg/L	T	<0.0003 :	-	<0.0005 :	-	<0.0007 J	-
Cadmium	mg/L	D	-	<0.0003 :	-	<0.0005 :	-	<0.0007 :
Calcium	mg/L	T	84.2 :	-	79.9 :	-	70.1 :	-
Calcium	mg/L	D	-	84. :	-	76.5 :	-	69.5 :
Chromium	mg/L	T	<0.0006 J	-	<0.0011 J	-	<0.0015 J	-
Chromium	mg/L	D	-	<0.0006 J	-	<0.0011 J	-	<0.0015 J
Cobalt	mg/L	T	<0.0018 :	-	<0.0029 :	-	<0.0023 :	-
Cobalt	mg/L	D	-	<0.0018 :	-	<0.0029 :	-	<0.0023 :
Copper	mg/L	T	<0.0014 :	-	<0.0022 :	-	<0.003 :	-
Copper	mg/L	D	-	<0.0038 :	-	<0.0022 :	-	<0.003 :
Iron	mg/L	T	<0.667 :	-	<0.3 J	-	<0.373 :	-
Iron	mg/L	D	-	<0.667 :	-	<0.3 J	-	<0.373 :
Lead	mg/L	T	<0.0002 :	-	<0.0004 :	-	<0.0002 :	-
Lead	mg/L	D	-	<0.0002 :	-	<0.0004 :	-	<0.0002 :
Magnesium	mg/L	T	14.1 :	-	13.3 :	-	11.8 :	-
Magnesium	mg/L	D	-	14. :	-	12.7 :	-	11.8 :
Manganese	mg/L	T	<0.019 :	-	<0.01 :	-	<0.015 :	-
Manganese	mg/L	D	-	<0.019 :	-	<0.01 :	-	<0.015 :
Mercury	mg/L	T	<0.0001 :	-	<0.0001 :	-	<0.0001 J	-
Mercury	mg/L	D	-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Molybdenum	mg/L	T	0.0378 :	-	0.0287 :	-	0.022 :	-

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 10 7/8/2003 SPRING10-T01N-GRW GW13		SPRING 10 7/8/2003 SPRING10-D01N-GRW GW13		SPRING 10 10/20/2003 SPRING10-T01N-GRW GW13		SPRING 10 10/20/2003 SPRING10-D01N-GRW GW13		SPRING 10 1/7/2004 SPRING10-T01N-GRW GW13		SPRING 10 1/7/2004 SPRING10-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0366	:	-		0.0281	:	-		0.0225	:
Nickel	mg/L	T	<0.002	:	-		<0.0024	:	-		<0.0024	J	-	
Nickel	mg/L	D	-		<0.002	:	-		<0.0024	:	-		<0.0024	J
Potassium	mg/L	T	2.61	:	-		2.31	:	-		1.88	:	-	
Potassium	mg/L	D	-		2.54	:	-		2.33	:	-		1.92	:
Selenium	mg/L	T	<0.0016	:	-		<0.00063	:	-		0.0012	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.0016	:	-		0.00095	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	37.5	:	-		26.3	:	-		33.	:	-	
Sodium	mg/L	D	-		36.	:	-		24.3	:	-		34.3	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		0.00034	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.00029	:	-		<0.0004	:
Zinc	mg/L	T	<0.016	:	-		<0.02	:	-		<0.026	:	-	
Zinc	mg/L	D	-		<0.016	:	-		<0.02	:	-		<0.026	:

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 10 4/15/2004 SPRING10-T01N-GRW GW13		SPRING 10 4/15/2004 SPRING10-D01N-GRW GW13		Spring 12 10/2/2002 SPRING12-T01N-GRW GW13		Spring 12 10/2/2002 SPRING12-D01N-GRW GW13		Spring 12 1/10/2003 SPRING12-T01N-GRW GW13		SPRING 12 1/10/2003 SPRING12-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	9.45	:	-		7.85	:	-		8.27	:	-	
Eh	millivolts	T	304.4	:	-		369.6	:	-		355.	:	-	
Flow	gpm	T	8.	:	-		-		-		6.3	:	-	
pH	SU	T	6.9	:	-		7.87	:	-		7.04	:	-	
Specific Conductance	uS/cm	T	553.	:	-		479.	:	-		985.	:	-	
Temperature	Celsius	T	7.33	:	-		15.22	:	-		14.01	:	-	
Turbidity	NTU	T	0.6	:	-		0.3	:	-		0.5	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.04	:	-		<0.026	:	-		<0.092	:	-	
Bicarbonate (as CaCO3)	mg/L	T	164.	:	-		82.	:	-		80.6	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	4.4	:	-		10.8	:	-		10.1	:	-	
Fluoride	mg/L	T	0.78	:	-		0.84	:	-		0.75	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.52	J	-		0.38	:	-		<0.64	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	0.021	:	-		<0.01	:	-		<0.085	J	-	
Phosphorus	mg/L	T	0.019	:	-		<0.01	:	-		0.01	J	-	
Sulfate	mg/L	T	114.	:	-		145.	:	-		140.	J	-	
Total Alkalinity	mg/L	T	164.	:	-		82.	:	-		80.6	:	-	
Total Dissolved Solids	mg/L	T	340.	:	-		356.	:	-		<280.	J	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<2.1	:	-		<1.	:	-		<1.	:	-	
Total Suspended Solids	mg/L	T	<2.4	:	-		<1.6	:	-		<1.2	:	-	
Laboratory Parameters														
pH	SU	T	6.9	:	-		7.87	:	-		7.04	:	-	
Specific Conductance	umhos/cm	T	480.	J	-		-		-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	210.	:	-		182.	:	-		157.	:	-	
Hardness	mg/L	D	-		214.	:	-		177.	:	-		159.	:

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 10 4/15/2004 SPRING10-T01N-GRW GW13		SPRING 10 4/15/2004 SPRING10-D01N-GRW GW13		Spring 12 10/2/2002 SPRING12-T01N-GRW GW13		Spring 12 10/2/2002 SPRING12-D01N-GRW GW13		SPRING 12 1/10/2003 SPRING12-T01N-GRW GW13		SPRING 12 1/10/2003 SPRING12-D01N-GRW GW13	
Metals														
Aluminum	mg/L	T	<0.201	:	-		<0.0311	J	-		<0.142	:	-	
Aluminum	mg/L	D	-		<0.201	:	-		<0.003	:	-		<0.142	:
Antimony	mg/L	T	<0.0008	:	-		<0.0002	:	-		<0.0006	:	-	
Antimony	mg/L	D	-		<0.0008	:	-		<0.0002	:	-		<0.0006	:
Arsenic	mg/L	T	<0.0004	:	-		0.0014	J	-		0.0019	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.0013	J	-		0.0017	:
Barium	mg/L	T	0.0358	:	-		0.0407	:	-		0.0365	:	-	
Barium	mg/L	D	-		0.0365	:	-		0.0393	:	-		0.0365	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	:	-		<0.0002	:
Boron	mg/L	T	0.0642	:	-		0.0443	:	-		0.0441	:	-	
Boron	mg/L	D	-		0.0646	:	-		0.0402	:	-		0.0454	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0001	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0001	:	-		<0.0004	:
Calcium	mg/L	T	66.	:	-		48.5	:	-		42.	:	-	
Calcium	mg/L	D	-		67.6	:	-		47.2	:	-		42.6	:
Chromium	mg/L	T	<0.00091	:	-		0.0028	:	-		<0.0037	:	-	
Chromium	mg/L	D	-		<0.0008	:	-		0.0034	:	-		<0.0037	:
Cobalt	mg/L	T	<0.0011	J	-		<0.0034	:	-		<0.0016	:	-	
Cobalt	mg/L	D	-		<0.0011	J	-		<0.0034	:	-		<0.0016	:
Copper	mg/L	T	<0.0012	:	-		<0.0003	:	-		<0.0035	:	-	
Copper	mg/L	D	-		<0.0016	:	-		<0.0003	:	-		<0.0022	:
Iron	mg/L	T	<0.293	J	-		0.062	:	-		<0.489	:	-	
Iron	mg/L	D	-		<0.293	:	-		<0.0378	:	-		<0.489	:
Lead	mg/L	T	<0.0008	:	-		<0.0001	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0008	:	-		<0.0001	:	-		<0.0002	:
Magnesium	mg/L	T	10.8	:	-		14.8	:	-		12.6	:	-	
Magnesium	mg/L	D	-		11.	:	-		14.4	:	-		12.9	:
Manganese	mg/L	T	<0.014	J	-		<0.0014	:	-		<0.005	:	-	
Manganese	mg/L	D	-		<0.014	J	-		<0.0007	:	-		<0.005	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0247	:	-		0.128	:	-		0.128	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 10 4/15/2004 SPRING10-T01N-GRW GW13		SPRING 10 4/15/2004 SPRING10-D01N-GRW GW13		Spring 12 10/2/2002 SPRING12-T01N-GRW GW13		Spring 12 10/2/2002 SPRING12-D01N-GRW GW13		SPRING 12 1/10/2003 SPRING12-T01N-GRW GW13		SPRING 12 1/10/2003 SPRING12-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0235	:	-		0.125	:	-		0.132	:
Nickel	mg/L	T	<0.0014	J	-		<0.0002	J	-		<0.0015	:	-	
Nickel	mg/L	D	-		<0.0014	J	-		<0.0002	J	-		<0.0015	:
Potassium	mg/L	T	1.72	:	-		3.96	:	-		4.19	:	-	
Potassium	mg/L	D	-		1.64	:	-		3.83	:	-		4.28	:
Selenium	mg/L	T	<0.0014	:	-		0.00034	J	-		<0.0016	J	-	
Selenium	mg/L	D	-		<0.0014	:	-		0.00025	J	-		<0.0016	J
Silver	mg/L	T	<0.00034	:	-		<0.0019	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.00034	:	-		<0.0019	:	-		<0.0002	:
Sodium	mg/L	T	18.4	J	-		38.4	:	-		32.2	:	-	
Sodium	mg/L	D	-		7.81	J	-		37.5	:	-		32.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		0.0056	:	-		<0.0059	J	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.0054	:	-		<0.0053	J
Zinc	mg/L	T	<0.024	:	-		<0.0021	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.037	:	-		<0.0021	:	-		<0.039	:

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Spring 12	SPRING 12	SPRING 12	SPRING 12	SPRING 12	SPRING 12
			Sample Date	4/2/2003	4/2/2003	7/21/2003	7/21/2003	10/20/2003	10/20/2003
			Sample ID	SPRING12-T01N-GRW	SPRING12-D01N-GRW	SPRING12-T01N-GRW	SPRING12-D01N-GRW	SPRING12-T01N-GRW	SPRING12-D01N-GRW
			Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		7. :	-	7.01 :	-	7.54 :	-
Eh	millivolts	T		339.5 :	-	380.1 :	-	111.2 :	-
Flow	gpm	T		-	-	6.3 :	-	5.3 :	-
pH	SU	T		7.8 J	-	7.7 J	-	8. J	-
Specific Conductance	uS/cm	T		303. :	-	485. :	-	505. :	-
Temperature	Celsius	T		15.1 :	-	15.73 :	-	14.31 :	-
Turbidity	NTU	T		0.5 :	-	0. :	-	2. :	-
General Chemistry									
Ammonia	mg/L	T		0.092 :	-	<0.04 J	-	<0.067 J	-
Bicarbonate (as CaCO3)	mg/L	T		82.5 :	-	88.1 :	-	85.6 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		9.8 :	-	11. :	-	10.2 :	-
Fluoride	mg/L	T		0.83 :	-	0.83 :	-	0.83 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.61 :	-	0.37 J	-	0.44 J	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		0.01 J	-	<0.01 J	-	<0.01 J	-
Phosphorus	mg/L	T		<0.01 :	-	<0.01 :	-	0.021 :	-
Sulfate	mg/L	T		141. J	-	140. J	-	127. J	-
Total Alkalinity	mg/L	T		82.5 :	-	88.1 :	-	85.6 :	-
Total Dissolved Solids	mg/L	T		358. :	-	426. :	-	312. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. J	-	<1. J	-	<1. J	-
Total Suspended Solids	mg/L	T		6.7 :	-	<0.6 :	-	20.2 :	-
Laboratory Parameters									
pH	SU	T		7.8 J	-	7.7 J	-	8. J	-
Specific Conductance	umhos/cm	T		465. J	-	480. J	-	501. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		171. :	-	172. :	-	175. :	-
Hardness	mg/L	D		-	169. :	-	165. :	-	178. :

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: SPRING 12 Sample Date: 4/2/2003 Sample ID: SPRING12-T01N-GRW GW13		Site ID: SPRING 12 Sample Date: 4/2/2003 Sample ID: SPRING12-D01N-GRW GW13		Site ID: SPRING 12 Sample Date: 7/21/2003 Sample ID: SPRING12-T01N-GRW GW13		Site ID: SPRING 12 Sample Date: 7/21/2003 Sample ID: SPRING12-D01N-GRW GW13		Site ID: SPRING 12 Sample Date: 10/20/2003 Sample ID: SPRING12-T01N-GRW GW13		Site ID: SPRING 12 Sample Date: 10/20/2003 Sample ID: SPRING12-D01N-GRW GW13	
Metals														
Aluminum	mg/L	T	0.0279	:	-		<0.631	:	-		<0.307	:	-	
Aluminum	mg/L	D	-		<0.0277	:	-		<0.631	:	-		<0.307	:
Antimony	mg/L	T	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.0016	:	-		0.0015	:	-		0.0017	:	-	
Arsenic	mg/L	D	-		0.0019	:	-		0.0013	:	-		0.0016	:
Barium	mg/L	T	0.0357	:	-		0.034	:	-		0.044	:	-	
Barium	mg/L	D	-		0.035	:	-		0.0362	:	-		0.0368	:
Beryllium	mg/L	T	<0.0003	:	-		<0.00031	:	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.0003	:	-		<0.0002	:	-		<0.0004	:
Boron	mg/L	T	0.0434	:	-		0.0456	:	-		0.0456	:	-	
Boron	mg/L	D	-		0.0424	:	-		0.0492	:	-		0.0472	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0003	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0003	:	-		<0.0005	:
Calcium	mg/L	T	45.8	:	-		46.9	:	-		46.7	:	-	
Calcium	mg/L	D	-		45.1	:	-		46.1	:	-		47.5	:
Chromium	mg/L	T	0.0023	:	-		<0.0012	:	-		0.0023	J	-	
Chromium	mg/L	D	-		0.0025	:	-		<0.0016	:	-		0.0017	J
Cobalt	mg/L	T	<0.0029	:	-		<0.0018	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0029	:	-		0.0019	:	-		<0.0029	:
Copper	mg/L	T	<0.0024	:	-		<0.0014	:	-		<0.0022	:	-	
Copper	mg/L	D	-		<0.0024	:	-		<0.0014	:	-		<0.0022	:
Iron	mg/L	T	0.054	:	-		<0.667	:	-		<0.598	:	-	
Iron	mg/L	D	-		<0.0299	:	-		<0.667	:	-		<0.3	:
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		0.00076	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0004	:
Magnesium	mg/L	T	13.8	:	-		14.5	:	-		14.3	:	-	
Magnesium	mg/L	D	-		13.6	:	-		14.4	:	-		14.5	:
Manganese	mg/L	T	0.0011	:	-		<0.019	:	-		0.0448	:	-	
Manganese	mg/L	D	-		<0.0009	:	-		<0.019	:	-		<0.01	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.136	:	-		0.128	:	-		0.134	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12 4/2/2003 SPRING12-T01N-GRW GW13		SPRING 12 4/2/2003 SPRING12-D01N-GRW GW13		SPRING 12 7/21/2003 SPRING12-T01N-GRW GW13		SPRING 12 7/21/2003 SPRING12-D01N-GRW GW13		SPRING 12 10/20/2003 SPRING12-T01N-GRW GW13		SPRING 12 10/20/2003 SPRING12-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.134	:	-		0.136	:	-		0.138	:
Nickel	mg/L	T	<0.0026	:	-		<0.002	:	-		<0.0024	:	-	
Nickel	mg/L	D	-		<0.0026	:	-		<0.002	:	-		<0.0024	:
Potassium	mg/L	T	4.17	:	-		4.01	:	-		3.82	:	-	
Potassium	mg/L	D	-		4.09	:	-		4.33	:	-		3.91	:
Selenium	mg/L	T	<0.001	J	-		<0.0016	:	-		<0.0006	:	-	
Selenium	mg/L	D	-		<0.001	J	-		<0.0016	J	-		<0.0006	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	35.5	:	-		30.8	:	-		35.	:	-	
Sodium	mg/L	D	-		35.1	:	-		33.7	:	-		35.4	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0071	:	-		0.0054	:	-		0.006	:	-	
Vanadium	mg/L	D	-		0.0068	:	-		0.0052	:	-		0.0056	:
Zinc	mg/L	T	<0.0025	:	-		<0.016	:	-		<0.02	:	-	
Zinc	mg/L	D	-		<0.0025	:	-		<0.016	:	-		<0.02	:

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SPRING 12	SPRING 12	SPRING 12	SPRING 12	SPRING 12A	SPRING 12A
			Sample Date	1/8/2004	1/8/2004	4/15/2004	4/15/2004	7/18/2003	7/18/2003
			Sample ID	SPRING12-T01N-GRW	SPRING12-D01N-GRW	SPRING12-T01N-GRW	SPRING12-D01N-GRW	SPRING12-T01N-GRW	SPRING12-D01N-GRW
			Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		7.69 :	-	6.86 :	-	-	-
Eh	millivolts	T		236.2 :	-	211.8 :	-	-	-
Flow	gpm	T		7.9 :	-	2. :	-	-	-
pH	SU	T		7.94 :	-	7.92 :	-	8. J	-
Specific Conductance	uS/cm	T		364. :	-	507. :	-	-	-
Temperature	Celsius	T		14.86 :	-	15.96 :	-	-	-
Turbidity	NTU	T		0.4 :	-	10.6 :	-	-	-
General Chemistry									
Ammonia	mg/L	T		<0.053 J	-	<0.05 :	-	0.41 J	-
Bicarbonate (as CaCO3)	mg/L	T		82. :	-	83.6 :	-	82.1 :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		10.5 :	-	10.3 :	-	9.4 :	-
Fluoride	mg/L	T		0.78 :	-	0.88 :	-	0.89 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.49 :	-	0.5 J	-	0.38 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.017 :	-	0.011 J	-	<0.051 J	-
Phosphorus	mg/L	T		<0.01 :	-	0.013 :	-	<0.01 :	-
Sulfate	mg/L	T		148. :	-	141. :	-	134. J	-
Total Alkalinity	mg/L	T		82. :	-	83.6 :	-	82.1 :	-
Total Dissolved Solids	mg/L	T		338. :	-	330. :	-	298. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	<1.3 :	-	<1. J	-
Total Suspended Solids	mg/L	T		<1. :	-	<0.9 :	-	<0.5 :	-
Laboratory Parameters									
pH	SU	T		7.94 :	-	7.92 :	-	8. J	-
Specific Conductance	umhos/cm	T		454. J	-	459. J	-	405. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		163. :	-	171. :	-	154. :	-
Hardness	mg/L	D		-	167. :	-	162. :	-	158. :

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12 1/8/2004 SPRING12-T01N-GRW GW13		SPRING 12 1/8/2004 SPRING12-D01N-GRW GW13		SPRING 12 4/15/2004 SPRING12-T01N-GRW GW13		SPRING 12 4/15/2004 SPRING12-D01N-GRW GW13		SPRING 12A 7/18/2003 SPRING12-T01N-GRW GW13		SPRING 12A 7/18/2003 SPRING12-D01N-GRW GW13	
Metals														
Aluminum	mg/L	T	<0.514	:	-		<0.58	:	-		<0.631	:	-	
Aluminum	mg/L	D	-		<0.514	:	-		<0.176	:	-		<0.631	:
Antimony	mg/L	T	<0.0024	:	-		<0.0008	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0024	:	-		<0.0008	:	-		<0.001	:
Arsenic	mg/L	T	0.0017	:	-		0.0016	:	-		0.0018	:	-	
Arsenic	mg/L	D	-		0.002	:	-		0.0016	:	-		0.0017	:
Barium	mg/L	T	0.0346	:	-		0.0471	:	-		0.0469	:	-	
Barium	mg/L	D	-		0.0345	:	-		0.0344	:	-		0.0475	:
Beryllium	mg/L	T	<0.001	J	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.001	J	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0477	:	-		0.048	:	-		0.0491	:	-	
Boron	mg/L	D	-		0.0484	:	-		0.0455	:	-		0.0495	:
Cadmium	mg/L	T	<0.0007	J	-		<0.0003	:	-		<0.0006	:	-	
Cadmium	mg/L	D	-		<0.0007	J	-		<0.0003	:	-		<0.0006	:
Calcium	mg/L	T	43.4	:	-		45.6	:	-		41.2	:	-	
Calcium	mg/L	D	-		44.5	:	-		43.4	:	-		42.1	:
Chromium	mg/L	T	<0.0057	:	-		<0.0036	:	-		<0.0014	J	-	
Chromium	mg/L	D	-		<0.0057	:	-		0.0024	:	-		<0.0014	J
Cobalt	mg/L	T	<0.0037	:	-		<0.0011	:	-		<0.002	:	-	
Cobalt	mg/L	D	-		<0.0037	:	-		<0.0011	:	-		<0.002	:
Copper	mg/L	T	<0.0035	:	-		<0.002	:	-		<0.0024	:	-	
Copper	mg/L	D	-		<0.0035	:	-		<0.0007	:	-		<0.0024	:
Iron	mg/L	T	<0.373	:	-		0.515	J	-		<0.667	:	-	
Iron	mg/L	D	-		<0.373	:	-		<0.192	J	-		<0.667	:
Lead	mg/L	T	<0.0002	:	-		0.00096	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0008	:	-		<0.0002	:
Magnesium	mg/L	T	13.2	:	-		13.9	:	-		12.5	:	-	
Magnesium	mg/L	D	-		13.5	:	-		13.	:	-		12.7	:
Manganese	mg/L	T	<0.015	:	-		0.0267	:	-		<0.019	:	-	
Manganese	mg/L	D	-		<0.015	:	-		<0.019	:	-		<0.019	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.145	:	-		0.0756	:	-		0.0995	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SPRING 12 1/8/2004 SPRING12-T01N-GRW GW13		SPRING 12 1/8/2004 SPRING12-D01N-GRW GW13		SPRING 12 4/15/2004 SPRING12-T01N-GRW GW13		SPRING 12 4/15/2004 SPRING12-D01N-GRW GW13		SPRING 12A 7/18/2003 SPRING12-T01N-GRW GW13		SPRING 12A 7/18/2003 SPRING12-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.145	:	-		0.0717	:	-		0.103	:
Nickel	mg/L	T	<0.0168	:	-		<0.0014	:	-		<0.0021	J	-	
Nickel	mg/L	D	-		<0.0168	:	-		<0.0014	:	-		<0.0021	J
Potassium	mg/L	T	6.75	:	-		4.27	:	-		4.39	:	-	
Potassium	mg/L	D	-		5.94	:	-		3.84	:	-		4.54	:
Selenium	mg/L	T	0.0011	J	-		<0.0014	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		0.0016	:	-		<0.0014	:	-		<0.0016	J
Silver	mg/L	T	<0.0002	:	-		<0.00089	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.00089	:	-		<0.0002	J
Sodium	mg/L	T	30.6	:	-		41.4	:	-		34.	:	-	
Sodium	mg/L	D	-		31.4	:	-		35.9	:	-		33.6	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0052	:	-		0.0068	:	-		0.0071	:	-	
Vanadium	mg/L	D	-		0.0051	:	-		0.006	:	-		0.0069	:
Zinc	mg/L	T	<0.026	:	-		<0.015	:	-		<0.016	:	-	
Zinc	mg/L	D	-		<0.026	:	-		<0.015	:	-		<0.016	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area											
			SPRING 12A 7/18/2003 SPRING12A-T01N-G RW GW13		SPRING 12A 10/20/2003 SPRING12A-T01N-G RW GW13		SPRING 12A 10/20/2003 SPRING12A-D01N-G RW GW13		SPRING 12A 1/8/2004 SPRING12A-T01N-G RW GW13		SPRING 12A 1/8/2004 SPRING12A-D01N-G RW GW13		SPRING 12A 4/15/2004 SPRING12A-T01N-G RW GW13	
Field Measurements														
DO	mg/L	T	7.28	:	7.77	:	-		8.	:	-		8.14	:
Eh	millivolts	T	181.4	:	109.1	:	-		238.7	:	-		152.6	:
Flow	gpm	T	-		4.	:	-		3.6	:	-		2.6	:
pH	SU	T	7.96	:	8.	J	-		7.95	:	-		8.1	J
Specific Conductance	uS/cm	T	454.	:	429.	:	-		373.	:	-		467.	:
Temperature	Celsius	T	16.57	:	13.49	:	-		12.45	:	-		13.7	:
Turbidity	NTU	T	0.	:	1.2	:	-		0.8	:	-		0.1	:
General Chemistry														
Ammonia	mg/L	T	-		<0.075	J	-		<0.074	J	-		<0.046	:
Bicarbonate (as CaCO3)	mg/L	T	-		84.3	:	-		81.3	:	-		84.3	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		9.7	:	-		9.9	:	-		10.2	:
Fluoride	mg/L	T	-		0.9	:	-		0.84	:	-		0.92	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.36	J	-		<0.42	:	-		0.51	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.011	J	-		<0.013	:	-		0.014	J
Phosphorus	mg/L	T	-		0.018	:	-		<0.01	:	-		0.012	:
Sulfate	mg/L	T	-		106.	J	-		107.	:	-		122.	:
Total Alkalinity	mg/L	T	-		84.3	:	-		81.3	:	-		84.3	:
Total Dissolved Solids	mg/L	T	-		300.	:	-		260.	:	-		292.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.	:	-		<1.4	:
Total Suspended Solids	mg/L	T	-		14.8	:	-		<2.2	:	-		<1.3	:
Laboratory Parameters														
pH	SU	T	7.96	:	8.	J	-		7.95	:	-		8.1	J
Specific Conductance	umhos/cm	T	-		424.	J	-		373.	J	-		414.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		139.	:	-		130.	:	-		154.	:
Hardness	mg/L	D	-		-		143.	:	-		137.	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12A 7/18/2003 SPRING12A-T01N-G RW GW13	SPRING 12A 10/20/2003 SPRING12A-T01N-G RW GW13	SPRING 12A 10/20/2003 SPRING12A-D01N-G RW GW13	SPRING 12A 1/8/2004 SPRING12A-T01N-G RW GW13	SPRING 12A 1/8/2004 SPRING12A-D01N-G RW GW13	SPRING 12A 4/15/2004 SPRING12A-T01N-G RW GW13
Metals								
Aluminum	mg/L	T	-	<0.307 :	-	<0.514 :	-	<0.183 :
Aluminum	mg/L	D	-	-	<0.307 :	-	<0.514 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.0024 :	-	<0.0008 :
Antimony	mg/L	D	-	-	<0.001 :	-	<0.0024 :	-
Arsenic	mg/L	T	-	0.0017 :	-	0.0018 :	-	0.0017 :
Arsenic	mg/L	D	-	-	0.0016 :	-	0.002 :	-
Barium	mg/L	T	-	0.0507 :	-	0.0476 :	-	0.0447 :
Barium	mg/L	D	-	-	0.05 :	-	0.049 :	-
Beryllium	mg/L	T	-	<0.0004 :	-	<0.001 J	-	<0.0002 :
Beryllium	mg/L	D	-	-	<0.0004 :	-	<0.001 J	-
Boron	mg/L	T	-	0.0458 :	-	0.048 :	-	0.0479 :
Boron	mg/L	D	-	-	0.0478 :	-	0.0495 :	-
Cadmium	mg/L	T	-	<0.0005 :	-	<0.0007 J	-	<0.0003 :
Cadmium	mg/L	D	-	-	<0.0005 :	-	<0.0007 J	-
Calcium	mg/L	T	-	37.2 :	-	34.8 :	-	41.1 :
Calcium	mg/L	D	-	-	38.5 :	-	36.7 :	-
Chromium	mg/L	T	-	0.0017 J	-	<0.0057 :	-	<0.0029 :
Chromium	mg/L	D	-	-	0.0019 J	-	<0.0057 :	-
Cobalt	mg/L	T	-	<0.0029 :	-	<0.0037 :	-	<0.0011 :
Cobalt	mg/L	D	-	-	<0.0029 :	-	0.0056 :	-
Copper	mg/L	T	-	<0.0022 :	-	<0.0035 :	-	<0.0013 :
Copper	mg/L	D	-	-	<0.0022 :	-	<0.0035 :	-
Iron	mg/L	T	-	<0.3 :	-	<0.373 :	-	<0.192 J
Iron	mg/L	D	-	-	<0.3 :	-	<0.373 :	-
Lead	mg/L	T	-	<0.0004 :	-	<0.0002 :	-	<0.0008 :
Lead	mg/L	D	-	-	<0.0004 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	11.2 :	-	10.5 :	-	12.5 :
Magnesium	mg/L	D	-	-	11.5 :	-	11.1 :	-
Manganese	mg/L	T	-	0.0107 :	-	<0.015 :	-	<0.019 :
Manganese	mg/L	D	-	-	<0.01 :	-	<0.015 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	-	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0696 :	-	0.0761 :	-	0.106 :

J = Qualified as estimated during data validation
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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12A 7/18/2003 SPRING12A-T01N-G RW GW13		SPRING 12A 10/20/2003 SPRING12A-T01N-G RW GW13		SPRING 12A 10/20/2003 SPRING12A-D01N-G RW GW13		SPRING 12A 1/8/2004 SPRING12A-T01N-G RW GW13		SPRING 12A 1/8/2004 SPRING12A-D01N-G RW GW13		SPRING 12A 4/15/2004 SPRING12A-T01N-G RW GW13	
Molybdenum	mg/L	D	-		-		0.0742	:	-		0.0805	:	-	
Nickel	mg/L	T	-		<0.0024	:	-		<0.0168	:	-		<0.0014	:
Nickel	mg/L	D	-		-		<0.0024	:	-		<0.0168	:	-	
Potassium	mg/L	T	-		3.65	:	-		5.13	:	-		3.73	:
Potassium	mg/L	D	-		-		3.7	:	-		4.69	:	-	
Selenium	mg/L	T	-		<0.0006	:	-		0.00076	J	-		<0.0014	:
Selenium	mg/L	D	-		-		<0.0006	:	-		0.0014	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.00088	:
Silver	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		31.5	:	-		30.5	:	-		36.6	:
Sodium	mg/L	D	-		-		35.	:	-		33.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	-		-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0073	:	-		0.0059	:	-		0.0062	:
Vanadium	mg/L	D	-		-		0.0065	:	-		0.0059	:	-	
Zinc	mg/L	T	-		<0.02	:	-		<0.026	:	-		<0.015	:
Zinc	mg/L	D	-		-		<0.02	:	-		<0.026	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12A 4/15/2004 SPRING12A-D01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-T01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-D01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-T01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-D01N-GRW GW13		Spring 14-T 4/2/2003 SPRING14T-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		7.54	:	-		7.29	:	-		6.28	:
Eh	millivolts	T	-		361.	:	-		340.8	:	-		334.4	:
Flow	gpm	T	-		-		-		23.8	:	-		-	
pH	SU	T	-		7.34	:	-		7.21	:	-		8.2	:
Specific Conductance	uS/cm	T	-		422.	:	-		873.	:	-		437.	:
Temperature	Celsius	T	-		17.2	:	-		16.24	:	-		16.61	:
Turbidity	NTU	T	-		0.	:	-		0.1	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.024	:	-		<0.078	:	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		76.5	:	-		76.9	:	-		78.2	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		9.6	:	-		8.7	:	-		8.8	:
Fluoride	mg/L	T	-		0.9	:	-		0.82	:	-		0.88	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.34	:	-		0.59	J	-		0.54	:
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		3.1	J	-		0.12	J
Phosphorus	mg/L	T	-		<0.01	:	-		<0.01	J	-		0.018	J
Sulfate	mg/L	T	-		120.	:	-		120.	J	-		123.	J
Total Alkalinity	mg/L	T	-		76.5	:	-		76.9	:	-		78.2	:
Total Dissolved Solids	mg/L	T	-		315.	:	-		<298.	J	-		306.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	J
Total Suspended Solids	mg/L	T	-		2.2	:	-		<0.5	:	-		1.4	:
Laboratory Parameters														
pH	SU	T	-		7.34	:	-		7.21	:	-		8.2	:
Specific Conductance	umhos/cm	T	-		-		-		-		-		411.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		154.	:	-		162.	:	-		145.	:
Hardness	mg/L	D	158.	:	-		148.	:	-		164.	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area													
			SPRING 12A 4/15/2004 SPRING12A-D01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-T01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-D01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-T01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-D01N-GRW GW13		Spring 14-T 4/2/2003 SPRING14T-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	-	<0.0033 :	-	<0.142 :	-	<0.0277 :
Aluminum	mg/L	D	<0.176 :	-	<0.0038 :	-	<0.142 :	-
Antimony	mg/L	T	-	<0.0002 :	-	<0.0006 J	-	<0.0006 :
Antimony	mg/L	D	<0.0008 :	-	<0.0002 :	-	<0.0006 J	-
Arsenic	mg/L	T	-	0.0013 J	-	0.0015 :	-	0.0015 J
Arsenic	mg/L	D	0.0015 :	-	0.0013 J	-	0.0014 :	-
Barium	mg/L	T	-	0.0381 :	-	0.0376 :	-	0.0372 :
Barium	mg/L	D	0.045 :	-	0.0366 :	-	0.0381 :	-
Beryllium	mg/L	T	-	<0.0003 :	-	<0.0002 :	-	<0.0003 :
Beryllium	mg/L	D	<0.0002 :	-	<0.0003 :	-	<0.0002 :	-
Boron	mg/L	T	-	0.0405 :	-	0.0471 :	-	0.0392 :
Boron	mg/L	D	0.0486 :	-	0.0416 :	-	0.047 :	-
Cadmium	mg/L	T	-	<0.0001 :	-	<0.0004 :	-	<0.0004 :
Cadmium	mg/L	D	<0.0003 :	-	<0.0001 :	-	<0.0004 :	-
Calcium	mg/L	T	-	41.6 :	-	43.9 :	-	39.4 :
Calcium	mg/L	D	42. :	-	39.9 :	-	44.4 :	-
Chromium	mg/L	T	-	0.0029 :	-	<0.0037 :	-	0.0029 :
Chromium	mg/L	D	0.0031 :	-	0.0027 :	-	<0.0037 :	-
Cobalt	mg/L	T	-	<0.0034 :	-	<0.0016 :	-	<0.0029 :
Cobalt	mg/L	D	<0.0011 :	-	<0.0034 :	-	<0.0016 :	-
Copper	mg/L	T	-	<0.0003 :	-	<0.0017 :	-	<0.0024 :
Copper	mg/L	D	0.0011 :	-	<0.00057 :	-	<0.0017 :	-
Iron	mg/L	T	-	<0.0378 :	-	<0.489 :	-	<0.0299 :
Iron	mg/L	D	<0.192 J	-	<0.0378 :	-	<0.489 :	-
Lead	mg/L	T	-	<0.0001 :	-	<0.0002 :	-	<0.0002 :
Lead	mg/L	D	<0.0008 :	-	<0.0001 :	-	<0.0002 :	-
Magnesium	mg/L	T	-	12.1 :	-	12.8 :	-	11.4 :
Magnesium	mg/L	D	12.8 :	-	11.6 :	-	12.9 :	-
Manganese	mg/L	T	-	<0.0007 :	-	<0.005 :	-	<0.0009 :
Manganese	mg/L	D	<0.019 :	-	<0.0007 :	-	<0.005 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.066 :	-	0.0722 :	-	0.0736 :

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 12A 4/15/2004 SPRING12A-D01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-T01N-GRW GW13		Spring 14-T 10/2/2002 SPRING14-D01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-T01N-GRW GW13		Spring 14-T 1/10/2003 SPRING14T-D01N-GRW GW13		Spring 14-T 4/2/2003 SPRING14T-T01N-GRW GW13	
Molybdenum	mg/L	D	0.107	:	-		0.0649	:	-		0.0744	:	-	
Nickel	mg/L	T	-		<0.0002	J	-		<0.0015	:	-		<0.0026	:
Nickel	mg/L	D	<0.0014	:	-		<0.0002	J	-		<0.0015	:	-	
Potassium	mg/L	T	-		3.8	:	-		4.	:	-		3.96	:
Potassium	mg/L	D	3.74	:	-		3.62	:	-		4.13	:	-	
Selenium	mg/L	T	-		<0.0002	J	-		<0.0016	:	-		<0.001	J
Selenium	mg/L	D	<0.0014	:	-		0.00033	J	-		<0.0016	:	-	
Silver	mg/L	T	-		<0.0019	:	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.00088	:	-		<0.0019	:	-		<0.0002	:	-	
Sodium	mg/L	T	-		35.4	:	-		36.6	:	-		33.2	:
Sodium	mg/L	D	37.6	:	-		34.2	:	-		37.2	:	-	
Thallium	mg/L	T	-		<0.0001	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0001	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0065	:	-		0.0062	:	-		0.0074	:
Vanadium	mg/L	D	0.0061	:	-		0.0063	:	-		0.0061	:	-	
Zinc	mg/L	T	-		0.0022	:	-		<0.039	:	-		<0.0025	:
Zinc	mg/L	D	<0.015	:	-		0.0045	:	-		<0.039	:	-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 14-T 4/2/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 7/14/2003 SPRING14T-T01N-G RW GW13		Spring 14-T 7/14/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 10/20/2003 SPRING14T-T01N-G RW GW13		Spring 14-T 10/20/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 1/8/2004 SPRING14T-T01N-G RW GW13	
Field Measurements														
DO	mg/L	T	-		6.91	:	-		6.86	:	-		6.2	:
Eh	millivolts	T	-		337.1	:	-		135.8	:	-		231.4	:
Flow	gpm	T	-		5.	:	-		15.9	:	-		3.2	:
pH	SU	T	-		8.2	J	-		8.3	J	-		8.09	:
Specific Conductance	uS/cm	T	-		240.	:	-		448.	:	-		398.	:
Temperature	Celsius	T	-		21.28	:	-		15.25	:	-		17.13	:
Turbidity	NTU	T	-		0.	:	-		0.8	:	-		1.8	:
General Chemistry														
Ammonia	mg/L	T	-		<0.087	J	-		<0.047	J	-		<0.051	J
Bicarbonate (as CaCO3)	mg/L	T	-		83.2	:	-		80.6	:	-		76.6	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		9.2	J	-		9.4	:	-		9.4	:
Fluoride	mg/L	T	-		1.1	:	-		0.87	:	-		0.78	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.38	J	-		0.41	J	-		<0.39	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		<0.01	J	-		<0.012	J
Phosphorus	mg/L	T	-		0.2	:	-		0.012	:	-		<0.01	:
Sulfate	mg/L	T	-		29.5	J	-		116.	J	-		119.	:
Total Alkalinity	mg/L	T	-		83.2	:	-		80.6	:	-		76.6	:
Total Dissolved Solids	mg/L	T	-		178.	:	-		276.	:	-		340.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		1.1	J	-		<1.	:
Total Suspended Solids	mg/L	T	-		18.5	:	-		<0.5	:	-		<0.7	:
Laboratory Parameters														
pH	SU	T	-		8.2	J	-		8.3	J	-		8.09	:
Specific Conductance	umhos/cm	T	-		230.	J	-		447.	J	-		434.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		77.2	:	-		190.	:	-		138.	:
Hardness	mg/L	D	147.	:	-		74.7	:	-		157.	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-T 4/2/2003 SPRING14T-D01N-G RW GW13	Spring 14-T 7/14/2003 SPRING14T-T01N-G RW GW13	Spring 14-T 7/14/2003 SPRING14T-D01N-G RW GW13	Spring 14-T 10/20/2003 SPRING14T-T01N-G RW GW13	Spring 14-T 10/20/2003 SPRING14T-D01N-G RW GW13	Spring 14-T 1/8/2004 SPRING14T-T01N-G RW GW13
Metals								
Aluminum	mg/L	T	-	<0.631 :	-	<0.307 :	-	<0.514 :
Aluminum	mg/L	D	<0.0277 :	-	<0.631 :	-	<0.307 :	-
Antimony	mg/L	T	-	<0.001 :	-	<0.0013 :	-	<0.0024 :
Antimony	mg/L	D	<0.0006 :	-	<0.001 :	-	<0.001 :	-
Arsenic	mg/L	T	-	0.0018 :	-	0.0013 :	-	0.0016 :
Arsenic	mg/L	D	0.0014 J	-	0.0018 :	-	0.0013 :	-
Barium	mg/L	T	-	0.0207 :	-	0.0376 :	-	0.0383 :
Barium	mg/L	D	0.0375 :	-	0.0148 :	-	0.0377 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0004 :	-	<0.001 :
Beryllium	mg/L	D	<0.0003 :	-	<0.0002 :	-	<0.0004 :	-
Boron	mg/L	T	-	0.0413 :	-	0.0469 :	-	0.0468 :
Boron	mg/L	D	0.0388 :	-	0.0413 :	-	0.0452 :	-
Cadmium	mg/L	T	-	<0.0006 :	-	<0.0005 :	-	<0.0007 J
Cadmium	mg/L	D	<0.0004 :	-	<0.0006 :	-	<0.0005 :	-
Calcium	mg/L	T	-	20.7 :	-	51.3 :	-	37.4 :
Calcium	mg/L	D	39.9 :	-	20.2 :	-	42.5 :	-
Chromium	mg/L	T	-	0.0027 :	-	0.0019 J	-	<0.0057 :
Chromium	mg/L	D	0.0028 :	-	0.0024 :	-	0.0022 J	-
Cobalt	mg/L	T	-	<0.002 :	-	<0.0029 :	-	<0.0037 :
Cobalt	mg/L	D	<0.0029 :	-	<0.002 :	-	<0.0029 :	-
Copper	mg/L	T	-	<0.0024 :	-	<0.0022 :	-	0.0067 :
Copper	mg/L	D	<0.0024 :	-	<0.0024 :	-	<0.0022 :	-
Iron	mg/L	T	-	<0.667 :	-	<0.566 :	-	<0.373 :
Iron	mg/L	D	<0.0299 :	-	<0.667 :	-	<0.3 :	-
Lead	mg/L	T	-	0.0014 :	-	<0.0004 :	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	0.00039 :	-	<0.0004 :	-
Magnesium	mg/L	T	-	6.2 :	-	15. :	-	11. :
Magnesium	mg/L	D	11.5 :	-	5.9 :	-	12.3 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.01 :	-	<0.015 :
Manganese	mg/L	D	<0.0009 :	-	<0.019 :	-	<0.01 :	-
Mercury	mg/L	T	-	<0.00015 :	-	<0.0001 :	-	<0.0001 J
Mercury	mg/L	D	<0.0001 :	-	<0.00013 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0183 :	-	0.0756 :	-	0.0757 :

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-T 4/2/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 7/14/2003 SPRING14T-T01N-G RW GW13		Spring 14-T 7/14/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 10/20/2003 SPRING14T-T01N-G RW GW13		Spring 14-T 10/20/2003 SPRING14T-D01N-G RW GW13		Spring 14-T 1/8/2004 SPRING14T-T01N-G RW GW13	
Molybdenum	mg/L	D	0.0738	:	-		0.0194	:	-		0.0741	:	-	
Nickel	mg/L	T	-		<0.0021	:	-		<0.0024	:	-		<0.0168	:
Nickel	mg/L	D	<0.0026	:	-		<0.0021	:	-		<0.0024	:	-	
Potassium	mg/L	T	-		2.68	:	-		3.7	:	-		3.06	:
Potassium	mg/L	D	4.02	:	-		2.64	:	-		3.77	:	-	
Selenium	mg/L	T	-		<0.0016	:	-		<0.0006	J	-		<0.0012	J
Selenium	mg/L	D	<0.001	J	-		<0.0016	J	-		<0.0006	J	-	
Silver	mg/L	T	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		0.00063	J	-		<0.0002	:	-	
Sodium	mg/L	T	-		23.1	:	-		40.	:	-		28.9	:
Sodium	mg/L	D	33.6	:	-		22.	:	-		34.8	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0083	:	-		0.0064	:	-		0.0064	:
Vanadium	mg/L	D	0.0077	:	-		0.0077	:	-		0.006	:	-	
Zinc	mg/L	T	-		<0.016	:	-		<0.02	:	-		<0.026	:
Zinc	mg/L	D	<0.0025	:	-		<0.016	:	-		<0.02	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 14-T 1/8/2004 SPRING14T-D01N-GRW GW13		Spring 14-T 4/15/2004 SPRING14T-T01N-GRW GW13		Spring 14-T 4/15/2004 SPRING14T-D01N-GRW GW13		Spring 15-T 10/2/2002 SPRING15-T01N-GRW GW13		Spring 15-T 10/2/2002 SPRING15-D01N-GRW GW13		Spring 15-T 1/10/2003 SPRING15-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		7.15	:	-		7.4	:	-		7.31	:
Eh	millivolts	T	-		131.8	:	-		349.5	:	-		363.2	:
Flow	gpm	T	-		23.7	:	-		-		-		3.2	:
pH	SU	T	-		8.3	J	-		7.26	:	-		6.63	:
Specific Conductance	uS/cm	T	-		219.	:	-		226.	:	-		46.	:
Temperature	Celsius	T	-		17.34	:	-		17.34	:	-		15.93	:
Turbidity	NTU	T	-		0.	:	-		1.3	:	-		0.3	:
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		<0.026	:	-		<0.086	:
Bicarbonate (as CaCO3)	mg/L	T	-		83.2	:	-		82.4	:	-		84.5	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		8.8	:	-		8.7	:	-		7.7	:
Fluoride	mg/L	T	-		1.1	:	-		0.86	:	-		1.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.48	J	-		0.29	:	-		<0.58	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.014	J	-		<0.01	:	-		<1.2	J
Phosphorus	mg/L	T	-		0.014	:	-		0.011	:	-		0.012	J
Sulfate	mg/L	T	-		30.5	:	-		19.7	:	-		17.2	J
Total Alkalinity	mg/L	T	-		83.2	:	-		82.4	:	-		84.5	:
Total Dissolved Solids	mg/L	T	-		178.	:	-		174.	:	-		<164.	J
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.8	:	-		<1.	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.7	:	-		2.8	:	-		<1.5	:
Laboratory Parameters														
pH	SU	T	-		8.3	J	-		7.26	:	-		6.63	:
Specific Conductance	umhos/cm	T	-		227.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		76.	:	-		75.9	:	-		75.4	:
Hardness	mg/L	D	133.	:	-		75.	:	-		72.4	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-T 1/8/2004 SPRING14T-D01N-GRW GW13	Spring 14-T 4/15/2004 SPRING14T-T01N-GRW GW13	Spring 14-T 4/15/2004 SPRING14T-D01N-GRW GW13	Spring 15-T 10/2/2002 SPRING15-T01N-GRW GW13	Spring 15-T 10/2/2002 SPRING15-D01N-GRW GW13	Spring 15-T 1/10/2003 SPRING15-T01N-GRW GW13
Metals								
Aluminum	mg/L	T	-	<0.176 :	-	0.161 :	-	<0.142 :
Aluminum	mg/L	D	<0.514 :	-	<0.176 :	-	<0.0057 :	-
Antimony	mg/L	T	-	<0.0008 :	-	<0.0002 :	-	<0.0006 J
Antimony	mg/L	D	<0.0024 :	-	<0.0008 :	-	<0.0002 :	-
Arsenic	mg/L	T	-	0.0017 :	-	0.0014 J	-	0.0019 :
Arsenic	mg/L	D	0.0015 :	-	0.0016 :	-	0.0015 J	-
Barium	mg/L	T	-	0.0146 :	-	0.0223 :	-	0.0196 :
Barium	mg/L	D	0.0372 :	-	0.0146 :	-	0.0202 :	-
Beryllium	mg/L	T	-	<0.0002 :	-	<0.0003 :	-	<0.0002 :
Beryllium	mg/L	D	<0.001 :	-	<0.0002 :	-	<0.0003 :	-
Boron	mg/L	T	-	0.0402 :	-	0.0373 :	-	0.0402 :
Boron	mg/L	D	0.0438 :	-	0.0396 :	-	0.0338 :	-
Cadmium	mg/L	T	-	<0.0003 :	-	<0.0001 :	-	<0.0004 :
Cadmium	mg/L	D	<0.0007 :	-	<0.0003 :	-	<0.0001 :	-
Calcium	mg/L	T	-	20.4 :	-	20.6 :	-	20.5 :
Calcium	mg/L	D	36. :	-	20.3 :	-	19.7 :	-
Chromium	mg/L	T	-	<0.0029 :	-	0.0032 :	-	<0.0037 :
Chromium	mg/L	D	<0.0057 :	-	0.0029 :	-	0.0036 :	-
Cobalt	mg/L	T	-	<0.0011 J	-	<0.0034 :	-	<0.0016 :
Cobalt	mg/L	D	<0.0037 :	-	<0.0048 J	-	<0.0034 :	-
Copper	mg/L	T	-	<0.00089 :	-	<0.0003 :	-	<0.0017 :
Copper	mg/L	D	0.0038 :	-	<0.0007 :	-	<0.0003 :	-
Iron	mg/L	T	-	<0.192 J	-	0.0922 :	-	<0.489 :
Iron	mg/L	D	<0.373 :	-	<0.192 J	-	<0.0378 :	-
Lead	mg/L	T	-	<0.0008 :	-	<0.00015 :	-	<0.0002 :
Lead	mg/L	D	<0.0002 :	-	<0.0008 :	-	<0.0001 :	-
Magnesium	mg/L	T	-	6.06 :	-	5.92 :	-	5.87 :
Magnesium	mg/L	D	10.6 :	-	5.92 :	-	5.66 :	-
Manganese	mg/L	T	-	<0.019 :	-	<0.0071 :	-	<0.005 :
Manganese	mg/L	D	<0.015 :	-	<0.019 :	-	<0.0007 :	-
Mercury	mg/L	T	-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Mercury	mg/L	D	<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Molybdenum	mg/L	T	-	0.0218 :	-	0.0075 :	-	0.0089 :

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 14-T 1/8/2004 SPRING14T-D01N-GRW GW13		Spring 14-T 4/15/2004 SPRING14T-T01N-GRW GW13		Spring 14-T 4/15/2004 SPRING14T-D01N-GRW GW13		Spring 15-T 10/2/2002 SPRING15-T01N-GRW GW13		Spring 15-T 10/2/2002 SPRING15-D01N-GRW GW13		Spring 15-T 1/10/2003 SPRING15-T01N-GRW GW13	
Molybdenum	mg/L	D	0.0702	:	-		0.0208	:	-		0.0078	:	-	
Nickel	mg/L	T	-		<0.0014	:	-		0.0004	J	-		<0.0015	:
Nickel	mg/L	D	<0.0168	:	-		<0.0014	:	-		<0.0002	J	-	
Potassium	mg/L	T	-		2.54	:	-		2.69	:	-		2.76	:
Potassium	mg/L	D	2.84	:	-		2.44	:	-		2.51	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0002	:	-		<0.0016	:
Selenium	mg/L	D	<0.0006	:	-		<0.0014	:	-		<0.0002	:	-	
Silver	mg/L	T	-		<0.0009	:	-		<0.0019	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.00088	:	-		<0.0019	:	-	
Sodium	mg/L	T	-		22.6	:	-		23.5	:	-		25.3	:
Sodium	mg/L	D	30.3	:	-		25.6	:	-		21.9	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Vanadium	mg/L	T	-		0.0073	:	-		0.0072	:	-		0.0068	:
Vanadium	mg/L	D	0.0067	:	-		0.007	:	-		0.0073	:	-	
Zinc	mg/L	T	-		<0.015	J	-		<0.0021	:	-		<0.039	:
Zinc	mg/L	D	<0.026	:	-		0.05	J	-		<0.0021	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 15-T 1/10/2003 SPRING15-D01N-GRW GW13		Spring 15-T 4/2/2003 SPRING15-T01N-GRW GW13		Spring 15-T 4/2/2003 SPRING15-D01N-GRW GW13		SPRING 15-T 7/14/2003 SPRING15T-T01N-GRW GW13		SPRING 15-T 7/14/2003 SPRING15T-D01N-GRW GW13		SPRING 15-T 10/20/2003 SPRING15T-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		6.75	:	-		6.31	:	-		7.06	:
Eh	millivolts	T	-		327.7	:	-		415.1	:	-		115.7	:
pH	SU	T	-		8.3	:	-		7.9	J	-		8.3	J
Specific Conductance	uS/cm	T	-		233.	:	-		336.	:	-		259.	:
Temperature	Celsius	T	-		16.72	:	-		18.66	:	-		15.47	:
Turbidity	NTU	T	-		0.	:	-		2.2	:	-		3.7	:
General Chemistry														
Ammonia	mg/L	T	-		0.052	:	-		<0.074	J	-		<0.056	J
Bicarbonate (as CaCO3)	mg/L	T	-		83.4	:	-		79.3	:	-		85.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		7.9	:	-		8.6	:	-		8.7	:
Fluoride	mg/L	T	-		1.1	:	-		0.96	:	-		1.1	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.57	:	-		0.45	J	-		0.38	J
Nitrite	mg/L	T	-		<0.005	:	-		<0.005	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.011	J	-		<0.01	:	-		0.011	J
Phosphorus	mg/L	T	-		0.012	:	-		0.032	:	-		0.012	:
Sulfate	mg/L	T	-		20.5	J	-		77.6	J	-		33.2	J
Total Alkalinity	mg/L	T	-		83.4	:	-		79.3	:	-		85.	:
Total Dissolved Solids	mg/L	T	-		178.	:	-		238.	:	-		126.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	J	-		<1.1	J	-		1.3	J
Total Suspended Solids	mg/L	T	-		1.6	:	-		15.	:	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		8.3	:	-		7.9	J	-		8.3	J
Specific Conductance	umhos/cm	T	-		214.	J	-		340.	J	-		255.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		67.5	:	-		111.	:	-		84.	:
Hardness	mg/L	D	74.1	:	-		68.6	:	-		110.	:	-	
Metals														

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 15-T 1/10/2003 SPRING15-D01N-GRW GW13		Spring 15-T 4/2/2003 SPRING15-T01N-GRW GW13		Spring 15-T 4/2/2003 SPRING15-D01N-GRW GW13		SPRING 15-T 7/14/2003 SPRING15T-T01N-GRW GW13		SPRING 15-T 7/14/2003 SPRING15T-D01N-GRW GW13		SPRING 15-T 10/20/2003 SPRING15T-T01N-GRW GW13	
Aluminum	mg/L	T	-		0.0514	:	-		<0.631	:	-		<0.307	:
Aluminum	mg/L	D	<0.142	:	-		<0.0277	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.00085	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	J	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.0017	:	-		0.0016	:
Arsenic	mg/L	D	0.0016	:	-		0.0015	J	-		0.0014	:	-	
Barium	mg/L	T	-		0.019	:	-		0.0381	:	-		0.0149	:
Barium	mg/L	D	0.0191	:	-		0.0186	:	-		0.0324	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		0.00021	:	-		<0.0004	:
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0346	:	-		0.0443	:	-		0.0414	:
Boron	mg/L	D	0.0398	:	-		0.0339	:	-		0.0438	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0006	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0006	:	-	
Calcium	mg/L	T	-		18.4	:	-		29.9	:	-		22.7	:
Calcium	mg/L	D	20.1	:	-		18.7	:	-		29.8	:	-	
Chromium	mg/L	T	-		0.0025	:	-		0.0029	:	-		0.0017	J
Chromium	mg/L	D	<0.0037	:	-		0.003	:	-		0.0022	:	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.002	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0029	:	-		<0.002	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0025	:	-		<0.0022	:
Copper	mg/L	D	<0.0019	:	-		<0.0024	:	-		<0.0024	:	-	
Iron	mg/L	T	-		0.0628	:	-		<0.667	:	-		<0.3	:
Iron	mg/L	D	<0.489	:	-		<0.0299	:	-		<0.667	:	-	
Lead	mg/L	T	-		<0.0002	:	-		0.0023	:	-		<0.0004	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		0.00034	:	-	
Magnesium	mg/L	T	-		5.26	:	-		8.83	:	-		6.66	:
Magnesium	mg/L	D	5.81	:	-		5.34	:	-		8.73	:	-	
Manganese	mg/L	T	-		0.0023	:	-		<0.019	:	-		<0.01	:
Manganese	mg/L	D	<0.005	:	-		<0.0009	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.00016	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0002	:	-	
Molybdenum	mg/L	T	-		0.0091	:	-		0.037	:	-		0.0187	:
Molybdenum	mg/L	D	0.0081	:	-		0.0095	:	-		0.0388	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 15-T 1/10/2003 SPRING15-D01N-GRW GW13	Spring 15-T 4/2/2003 SPRING15-T01N-GRW GW13	Spring 15-T 4/2/2003 SPRING15-D01N-GRW GW13	SPRING 15-T 7/14/2003 SPRING15T-T01N-GRW GW13	SPRING 15-T 7/14/2003 SPRING15T-D01N-GRW GW13	SPRING 15-T 10/20/2003 SPRING15T-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0026 :	-	<0.0021 :	-	<0.0024 :
Nickel	mg/L	D	<0.0015 :	-	<0.0026 :	-	<0.0021 :	-
Potassium	mg/L	T	-	2.73 :	-	3.54 :	-	2.52 :
Potassium	mg/L	D	2.75 :	-	2.79 :	-	3.46 :	-
Selenium	mg/L	T	-	<0.001 J	-	<0.0016 :	-	<0.0006 J
Selenium	mg/L	D	<0.0016 :	-	<0.001 J	-	<0.0016 J	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 J	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 J	-
Sodium	mg/L	T	-	20.8 :	-	30. :	-	23.1 :
Sodium	mg/L	D	22.9 :	-	21.2 :	-	27.5 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.0089 :	-	0.0092 :	-	0.0068 :
Vanadium	mg/L	D	0.0067 :	-	0.0087 :	-	0.0079 :	-
Zinc	mg/L	T	-	<0.0025 :	-	<0.016 :	-	<0.02 :
Zinc	mg/L	D	<0.039 :	-	<0.0025 :	-	<0.016 :	-

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SPRING 15-T 10/20/2003 SPRING15T-D01N-G RW GW13		SPRING 15-T 1/8/2004 SPRING15T-T01N-G RW GW13		SPRING 15-T 1/8/2004 SPRING15T-D01N-G RW GW13		SPRING 15-T 4/15/2004 SPRING15T-T01N-G RW GW13		SPRING 15-T 4/15/2004 SPRING15T-D01N-G RW GW13		Spring 18 10/2/2002 SPRING18-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		6.82	:	-		7.46	:	-		7.84	:
Eh	millivolts	T	-		238.2	:	-		93.	:	-		355.	:
Flow	gpm	T	-		3.2	:	-		31.7	:	-		-	
pH	SU	T	-		8.3	J	-		8.4	J	-		7.15	:
Specific Conductance	uS/cm	T	-		228.	:	-		459.	:	-		343.	:
Temperature	Celsius	T	-		16.89	:	-		17.08	:	-		16.71	:
Turbidity	NTU	T	-		1.3	:	-		8.5	:	-		0.	:
General Chemistry														
Ammonia	mg/L	T	-		<0.071	J	-		<0.04	:	-		<0.029	:
Bicarbonate (as CaCO3)	mg/L	T	-		80.5	:	-		78.7	:	-		79.6	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		8.8	:	-		9.4	:	-		9.9	:
Fluoride	mg/L	T	-		0.98	:	-		0.91	:	-		0.98	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.42	J	-		0.6	J	-		0.36	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		<0.015	J	-		0.012	J	-		<0.01	:
Phosphorus	mg/L	T	-		<0.01	:	-		<0.01	:	-		<0.01	:
Sulfate	mg/L	T	-		29.9	:	-		116.	:	-		78.	:
Total Alkalinity	mg/L	T	-		80.5	:	-		78.7	:	-		79.6	:
Total Dissolved Solids	mg/L	T	-		204.	:	-		244.	:	-		234.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.7	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.8	:	-		<0.5	J	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		8.3	J	-		8.4	J	-		7.15	:
Specific Conductance	umhos/cm	T	-		240.	J	-		397.	J	-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		73.7	:	-		150.	:	-		119.	:
Hardness	mg/L	D	75.3	:	-		71.1	:	-		145.	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 15-T 10/20/2003 SPRING15T-D01N-GRW GW13		SPRING 15-T 1/8/2004 SPRING15T-T01N-GRW GW13		SPRING 15-T 1/8/2004 SPRING15T-D01N-GRW GW13		SPRING 15-T 4/15/2004 SPRING15T-T01N-GRW GW13		SPRING 15-T 4/15/2004 SPRING15T-D01N-GRW GW13		Spring 18 10/2/2002 SPRING18-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	-		<0.514	:	-		<0.201	:	-		<0.005	:
Aluminum	mg/L	D	<0.307	:	-		<0.514	:	-		0.318	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0008	:	-		<0.0002	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.0008	:	-	
Arsenic	mg/L	T	-		0.0021	:	-		0.0014	:	-		0.0016	J
Arsenic	mg/L	D	0.0018	:	-		0.0018	:	-		0.0014	:	-	
Barium	mg/L	T	-		<0.0188	:	-		0.0403	:	-		0.0246	:
Barium	mg/L	D	0.0146	:	-		<0.0188	:	-		0.0371	:	-	
Beryllium	mg/L	T	-		<0.001	:	-		<0.0002	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0004	:	-		<0.001	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0395	:	-		0.0467	:	-		0.047	:
Boron	mg/L	D	0.0406	:	-		0.0402	:	-		0.0427	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	:	-		<0.0001	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		19.9	:	-		40.8	:	-		32.1	:
Calcium	mg/L	D	20.4	:	-		19.2	:	-		39.1	:	-	
Chromium	mg/L	T	-		<0.0057	:	-		<0.0026	:	-		0.0034	:
Chromium	mg/L	D	0.0016	J	-		<0.0057	:	-		<0.0016	:	-	
Cobalt	mg/L	T	-		<0.0037	:	-		<0.0011	J	-		<0.0034	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0037	:	-		<0.0011	J	-	
Copper	mg/L	T	-		<0.0035	:	-		<0.0007	:	-		<0.0003	:
Copper	mg/L	D	<0.0022	:	-		0.0063	:	-		<0.0007	:	-	
Iron	mg/L	T	-		<0.373	:	-		0.312	J	-		<0.0378	:
Iron	mg/L	D	<0.3	:	-		<0.373	:	-		0.333	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		<0.0001	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		5.83	:	-		11.8	:	-		9.53	:
Magnesium	mg/L	D	5.89	:	-		5.61	:	-		11.4	:	-	
Manganese	mg/L	T	-		<0.015	:	-		<0.014	J	-		<0.0007	:
Manganese	mg/L	D	<0.01	:	-		<0.015	:	-		0.0142	J	-	
Mercury	mg/L	T	-		<0.0001	J	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0193	:	-		0.0784	:	-		0.0468	:

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction											
		SPRING 15-T 10/20/2003 SPRING15T-D01N-GRW GW13		SPRING 15-T 1/8/2004 SPRING15T-T01N-GRW GW13		SPRING 15-T 1/8/2004 SPRING15T-D01N-GRW GW13		SPRING 15-T 4/15/2004 SPRING15T-T01N-GRW GW13		SPRING 15-T 4/15/2004 SPRING15T-D01N-GRW GW13		Spring 18 10/2/2002 SPRING18-T01N-GRW GW13	
Molybdenum	mg/L	D	0.0187 :		-		0.0198 :		-		0.0736 :		-	
Nickel	mg/L	T	-		<0.0168 :		-		<0.0014 J		-		<0.0002 J	
Nickel	mg/L	D	<0.0024 :		-		<0.0168 :		-		<0.0014 J		-	
Potassium	mg/L	T	-		2.1 :		-		3.82 :		-		3.3 :	
Potassium	mg/L	D	2.48 :		-		2.29 :		-		3.62 :		-	
Selenium	mg/L	T	-		<0.00069 J		-		<0.0014 :		-		<0.0002 :	
Selenium	mg/L	D	<0.0006 J		-		<0.0006 :		-		<0.0014 :		-	
Silver	mg/L	T	-		<0.0002 :		-		<0.00034 :		-		<0.0019 :	
Silver	mg/L	D	<0.0002 :		-		<0.0002 :		-		<0.00034 :		-	
Sodium	mg/L	T	-		21.9 :		-		27.4 J		-		31.8 :	
Sodium	mg/L	D	21.2 :		-		15.8 :		-		16.6 J		-	
Thallium	mg/L	T	-		<0.0002 :		-		<0.0002 :		-		<0.0001 :	
Thallium	mg/L	D	<0.0002 :		-		<0.0002 :		-		<0.0002 :		-	
Vanadium	mg/L	T	-		0.0071 :		-		0.0064 :		-		0.0066 :	
Vanadium	mg/L	D	0.0072 :		-		0.0071 :		-		0.0064 :		-	
Zinc	mg/L	T	-		<0.026 :		-		<0.024 :		-		<0.0021 :	
Zinc	mg/L	D	<0.02 :		-		<0.026 :		-		<0.024 :		-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Spring 18 10/2/2002 SPRING18-D01N-GRW GW13		Spring 18 1/10/2003 SPRING18-T01N-GRW GW13		SPRING 18 1/10/2003 SPRING18-D01N-GRW GW13		Spring 18 3/20/2003 SPRING18-T01N-GRW GW13		SPRING 18 3/20/2003 SPRING18-D01N-GRW GW13		Spring 18 4/2/2003 SPRING18-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		8.	:	-		6.71	:	-		6.86	:
Eh	millivolts	T	-		364.7	:	-		123.1	:	-		328.7	:
pH	SU	T	-		7.17	:	-		7.84	:	-		8.	J
Specific Conductance	uS/cm	T	-		648.	:	-		350.	:	-		354.	:
Temperature	Celsius	T	-		15.42	:	-		15.34	:	-		15.26	:
Turbidity	NTU	T	-		0.5	:	-		57.	:	-		0.1	:
General Chemistry														
Ammonia	mg/L	T	-		<0.12	:	-		<0.062	J	-		<0.04	:
Bicarbonate (as CaCO3)	mg/L	T	-		78.2	:	-		81.	:	-		81.1	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		9.1	:	-		<0.4	:	-		8.9	:
Fluoride	mg/L	T	-		0.84	:	-		1.	:	-		0.98	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		<0.6	J	-		0.52	J	-		0.57	:
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	:
Phosphate, Ortho As P	mg/L	T	-		6.7	J	-		0.097	J	-		0.44	J
Phosphorus	mg/L	T	-		<0.01	J	-		<0.017	J	-		0.012	J
Sulfate	mg/L	T	-		30.3	J	-		74.	:	-		83.9	J
Total Alkalinity	mg/L	T	-		78.2	:	-		81.	:	-		81.1	:
Total Dissolved Solids	mg/L	T	-		<208.	J	-		230.	:	-		246.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		<0.24	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		<1.	:	-		<1.	J	-		<1.	J
Total Suspended Solids	mg/L	T	-		<0.5	:	-		<0.5	J	-		<0.5	:
Laboratory Parameters														
pH	SU	T	-		7.17	:	-		7.84	:	-		8.	J
Specific Conductance	umhos/cm	T	-		-		-		314.	J	-		331.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	:	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		104.	:	-		112.	:	-		110.	:
Hardness	mg/L	D	112.	:	-		103.	:	-		116.	:	-	
Metals														

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 18 10/2/2002 SPRING18-D01N-GR W GW13		SPRING 18 1/10/2003 SPRING18-T01N-GR W GW13		SPRING 18 1/10/2003 SPRING18-D01N-GR W GW13		SPRING 18 3/20/2003 SPRING18-T01N-GR W GW13		SPRING 18 3/20/2003 SPRING18-D01N-GR W GW13		SPRING 18 4/2/2003 SPRING18-T01N-GR W GW13	
Aluminum	mg/L	T	-		<0.142	:	-		<0.426	:	-		<0.0277	:
Aluminum	mg/L	D	<0.003	:	-		<0.142	:	-		<0.426	:	-	
Antimony	mg/L	T	-		<0.0006	:	-		<0.0006	:	-		<0.0006	:
Antimony	mg/L	D	<0.0002	:	-		<0.0006	:	-		<0.0006	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.0021	:	-		0.0019	:
Arsenic	mg/L	D	0.0016	J	-		0.0018	:	-		0.0022	:	-	
Barium	mg/L	T	-		0.024	:	-		0.0263	:	-		0.0234	:
Barium	mg/L	D	0.0228	:	-		0.0236	:	-		0.0265	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0003	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0003	:	-	
Boron	mg/L	T	-		0.0443	:	-		0.0444	:	-		0.0388	:
Boron	mg/L	D	0.0433	:	-		0.0431	:	-		0.0456	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0005	:	-		<0.0004	:
Cadmium	mg/L	D	<0.0001	:	-		<0.0004	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		28.	:	-		30.	:	-		29.7	:
Calcium	mg/L	D	30.1	:	-		27.8	:	-		31.	:	-	
Chromium	mg/L	T	-		<0.0037	:	-		<0.0026	:	-		0.0026	:
Chromium	mg/L	D	0.0034	:	-		<0.0037	:	-		<0.0026	:	-	
Cobalt	mg/L	T	-		<0.0016	:	-		<0.0038	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0034	:	-		<0.0016	:	-		<0.0038	:	-	
Copper	mg/L	T	-		<0.0028	:	-		<0.0026	:	-		<0.0024	:
Copper	mg/L	D	<0.00038	:	-		<0.0026	:	-		<0.0025	:	-	
Iron	mg/L	T	-		<0.489	:	-		<0.422	:	-		<0.0299	:
Iron	mg/L	D	<0.0378	:	-		<0.489	:	-		<0.422	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Lead	mg/L	D	<0.0001	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		8.22	:	-		9.14	:	-		8.8	:
Magnesium	mg/L	D	8.97	:	-		8.14	:	-		9.46	:	-	
Manganese	mg/L	T	-		<0.005	:	-		<0.013	:	-		<0.0009	:
Manganese	mg/L	D	<0.0007	:	-		<0.005	:	-		<0.013	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.049	:	-		0.049	:	-		0.0505	:
Molybdenum	mg/L	D	0.0434	:	-		0.0481	:	-		0.051	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 18 10/2/2002 SPRING18-D01N-GRW GW13	SPRING 18 1/10/2003 SPRING18-T01N-GRW GW13	SPRING 18 1/10/2003 SPRING18-D01N-GRW GW13	SPRING 18 3/20/2003 SPRING18-T01N-GRW GW13	SPRING 18 3/20/2003 SPRING18-D01N-GRW GW13	SPRING 18 4/2/2003 SPRING18-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0015 :	-	<0.003 :	-	<0.0026 :
Nickel	mg/L	D	<0.0002 J	-	<0.0015 :	-	<0.003 :	-
Potassium	mg/L	T	-	3.54 :	-	3.16 :	-	3.39 :
Potassium	mg/L	D	3.09 :	-	3.47 :	-	3.16 :	-
Selenium	mg/L	T	-	<0.0016 J	-	<0.001 :	-	<0.001 J
Selenium	mg/L	D	0.00032 :	-	<0.0016 J	-	<0.0017 :	-
Silver	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0019 :	-	<0.0002 :	-	<0.0002 :	-
Sodium	mg/L	T	-	25.7 :	-	26.7 :	-	28.6 :
Sodium	mg/L	D	29.8 :	-	25.8 :	-	28.3 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0001 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	<0.0064 J	-	0.0068 :	-	0.0081 :
Vanadium	mg/L	D	0.0066 :	-	<0.0063 J	-	0.0067 :	-
Zinc	mg/L	T	-	<0.039 :	-	<0.039 :	-	<0.0025 :
Zinc	mg/L	D	<0.0021 :	-	<0.039 :	-	<0.039 :	-

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Sample Date	Sample ID	
			SPRING 18	4/2/2003	SPRING18-D01N-GRW	GW13
			SPRING 18	7/14/2003	SPRING18-T01N-GRW	GW13
			SPRING 18	7/14/2003	SPRING18-D01N-GRW	GW13
			SPRING 18	10/20/2003	SPRING18-T01N-GRW	GW13
			SPRING 18	10/20/2003	SPRING18-D01N-GRW	GW13
			SPRING 18	1/8/2004	SPRING18-T01N-GRW	GW13
Field Measurements						
DO	mg/L	T	-	7.06 :	-	7.47 :	-	7.45 :
Eh	millivolts	T	-	451.6 :	-	125. :	-	254.7 :
pH	SU	T	-	8.1 J	-	8.3 J	-	7.36 :
Specific Conductance	uS/cm	T	-	333. :	-	345. :	-	291. :
Temperature	Celsius	T	-	17.8 :	-	14.22 :	-	15.13 :
Turbidity	NTU	T	-	0. :	-	0.4 :	-	0.1 :
General Chemistry						
Ammonia	mg/L	T	-	<0.051 J	-	<0.049 J	-	<0.065 J
Bicarbonate (as CaCO3)	mg/L	T	-	82.7 :	-	82.7 :	-	80.7 :
Carbonate (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T	-	9.6 :	-	9.7 :	-	9.3 :
Fluoride	mg/L	T	-	1. :	-	1. :	-	0.94 :
Hydroxide (as CaCO3)	mg/L	T	-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T	-	0.53 J	-	0.44 J	-	<0.46 J
Nitrite	mg/L	T	-	<0.005 J	-	<0.005 J	-	<0.005 J
Phosphate, Ortho As P	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.025 J
Phosphorus	mg/L	T	-	<0.01 :	-	0.013 :	-	<0.01 J
Sulfate	mg/L	T	-	72.7 J	-	79.8 J	-	61.7 :
Total Alkalinity	mg/L	T	-	82.7 :	-	82.7 :	-	80.7 :
Total Dissolved Solids	mg/L	T	-	228. :	-	176. :	-	224. :
Total Kjeldahl Nitrogen	mg/L	T	-	<0.24 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T	-	<1. J	-	<1. J	-	<1. :
Total Suspended Solids	mg/L	T	-	<0.5 :	-	<0.5 :	-	<0.5 :
Laboratory Parameters						
pH	SU	T	-	8.1 J	-	8.3 J	-	7.36 :
Specific Conductance	umhos/cm	T	-	320. J	-	339. J	-	309. J
Inorganics						
Cyanide	mg/L	T	-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties						
Hardness	mg/L	T	-	107. :	-	113. :	-	98.8 :
Hardness	mg/L	D	115. :	-	104. :	-	107. :	-
Metals						

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 18 4/2/2003 SPRING18-D01N-GRW GW13		SPRING 18 7/14/2003 SPRING18-T01N-GRW GW13		SPRING 18 7/14/2003 SPRING18-D01N-GRW GW13		SPRING 18 10/20/2003 SPRING18-T01N-GRW GW13		SPRING 18 10/20/2003 SPRING18-D01N-GRW GW13		SPRING 18 1/8/2004 SPRING18-T01N-GRW GW13	
Aluminum	mg/L	T	-		<0.631	:	-		<0.307	:	-		<0.514	:
Aluminum	mg/L	D	<0.0277	:	-		<0.631	:	-		<0.307	:	-	
Antimony	mg/L	T	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Antimony	mg/L	D	<0.0006	:	-		<0.001	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.0017	:	-		0.002	:
Arsenic	mg/L	D	0.0018	:	-		0.0018	J	-		0.0017	:	-	
Barium	mg/L	T	-		0.0251	:	-		0.0232	:	-		0.0209	:
Barium	mg/L	D	0.0243	:	-		0.0235	:	-		0.0218	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		<0.001	:
Beryllium	mg/L	D	<0.0003	:	-		<0.0002	:	-		<0.0004	:	-	
Boron	mg/L	T	-		0.046	:	-		0.0445	:	-		0.0434	:
Boron	mg/L	D	0.0398	:	-		0.0461	:	-		0.0435	:	-	
Cadmium	mg/L	T	-		<0.0006	:	-		<0.0005	:	-		<0.0007	J
Cadmium	mg/L	D	<0.0004	:	-		<0.0006	:	-		<0.0005	:	-	
Calcium	mg/L	T	-		28.6	:	-		30.4	:	-		26.6	:
Calcium	mg/L	D	30.9	:	-		28.	:	-		28.9	:	-	
Chromium	mg/L	T	-		<0.0014	:	-		0.0017	J	-		<0.0057	:
Chromium	mg/L	D	0.0027	:	-		0.0024	:	-		0.0017	J	-	
Cobalt	mg/L	T	-		<0.002	:	-		<0.0029	:	-		<0.0037	:
Cobalt	mg/L	D	<0.0029	:	-		<0.002	:	-		<0.0029	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0022	:	-		<0.0035	:
Copper	mg/L	D	<0.0024	:	-		<0.0024	:	-		<0.0022	:	-	
Iron	mg/L	T	-		<0.667	:	-		<0.3	:	-		<0.373	:
Iron	mg/L	D	<0.0299	:	-		<0.667	:	-		<0.3	:	-	
Lead	mg/L	T	-		0.0017	:	-		<0.0004	:	-		<0.0002	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Magnesium	mg/L	T	-		8.63	:	-		9.02	:	-		7.85	:
Magnesium	mg/L	D	9.17	:	-		8.38	:	-		8.51	:	-	
Manganese	mg/L	T	-		<0.019	J	-		<0.01	:	-		<0.015	:
Manganese	mg/L	D	<0.0009	:	-		<0.019	J	-		<0.01	:	-	
Mercury	mg/L	T	-		<0.00017	:	-		<0.0001	:	-		<0.0001	J
Mercury	mg/L	D	<0.0001	:	-		<0.0002	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0511	:	-		0.045	:	-		0.0402	:
Molybdenum	mg/L	D	0.0532	:	-		0.0492	:	-		0.0446	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 18 4/2/2003 SPRING18-D01N-GRW GW13	SPRING 18 7/14/2003 SPRING18-T01N-GRW GW13	SPRING 18 7/14/2003 SPRING18-D01N-GRW GW13	SPRING 18 10/20/2003 SPRING18-T01N-GRW GW13	SPRING 18 10/20/2003 SPRING18-D01N-GRW GW13	SPRING 18 1/8/2004 SPRING18-T01N-GRW GW13
Nickel	mg/L	T	-	<0.0021 :	-	<0.0024 :	-	<0.0168 :
Nickel	mg/L	D	<0.0026 :	-	<0.0021 :	-	<0.0024 :	-
Potassium	mg/L	T	-	3.31 :	-	3.02 :	-	2.24 :
Potassium	mg/L	D	3.53 :	-	3.3 :	-	2.98 :	-
Selenium	mg/L	T	-	<0.0016 :	-	<0.0006 J	-	<0.0012 J
Selenium	mg/L	D	<0.001 J	-	<0.0016 J	-	<0.0006 J	-
Silver	mg/L	T	-	<0.0002 J	-	<0.0002 :	-	<0.0002 :
Silver	mg/L	D	<0.0002 :	-	<0.0002 J	-	<0.0002 :	-
Sodium	mg/L	T	-	27.4 :	-	28.6 :	-	26.2 :
Sodium	mg/L	D	29.5 :	-	29.2 :	-	27.7 :	-
Thallium	mg/L	T	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Thallium	mg/L	D	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Vanadium	mg/L	T	-	0.0071 :	-	0.0065 :	-	0.0065 :
Vanadium	mg/L	D	0.0081 :	-	0.0072 :	-	0.0066 :	-
Zinc	mg/L	T	-	<0.016 :	-	0.0744 :	-	<0.026 :
Zinc	mg/L	D	<0.0025 :	-	<0.016 :	-	<0.02 :	-

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SPRING 18 1/8/2004 SPRING18-D01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-T01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-D01N-GRW GW13		Spring 9 10/8/2002 SPRING9-T01N-GRW GW13		Spring 9 10/8/2002 SPRING9-D01N-GRW GW13		Spring 9 1/11/2003 SPRING9-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		6.65	:	-		6.97	:	-		9.08	:
Eh	millivolts	T	-		194.2	:	-		327.5	:	-		366.1	:
Flow	gpm	T	-		-		-		-		-		0.26	:
pH	SU	T	-		7.05	:	-		7.23	:	-		6.51	:
Specific Conductance	uS/cm	T	-		341.	:	-		881.	:	-		2590.	:
Temperature	Celsius	T	-		15.96	:	-		15.43	:	-		10.73	:
Turbidity	NTU	T	-		0.	:	-		5.4	:	-		3.6	:
General Chemistry														
Ammonia	mg/L	T	-		<0.04	:	-		<0.096	:	-		<0.041	:
Bicarbonate (as CaCO3)	mg/L	T	-		83.3	:	-		139.	:	-		133.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		9.4	:	-		8.6	:	-		11.6	:
Fluoride	mg/L	T	-		1.	:	-		0.6	:	-		0.34	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.62	J	-		1.1	J	-		1.6	J
Nitrite	mg/L	T	-		<0.005	J	-		<0.005	J	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.013	J	-		0.049	J	-		0.063	J
Phosphorus	mg/L	T	-		0.011	:	-		0.085	:	-		0.14	:
Sulfate	mg/L	T	-		64.7	:	-		454.	:	-		584.	J
Total Alkalinity	mg/L	T	-		83.3	:	-		139.	:	-		133.	:
Total Dissolved Solids	mg/L	T	-		214.	:	-		699.	:	-		1040.	J
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		0.4	:	-		<0.33	:
Total Organic Carbon	mg/L	T	-		<1.9	:	-		1.3	:	-		<1.	:
Total Suspended Solids	mg/L	T	-		<0.5	J	-		13.7	:	-		79.7	:
Laboratory Parameters														
pH	SU	T	-		7.05	:	-		7.23	:	-		6.51	:
Specific Conductance	umhos/cm	T	-		291.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		109.	:	-		494.	:	-		768.	:
Hardness	mg/L	D	96.4	:	-		105.	:	-		462.	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 18 1/8/2004 SPRING18-D01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-T01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-D01N-GRW GW13		Spring 9 10/8/2002 SPRING9-T01N-GRW GW13		Spring 9 10/8/2002 SPRING9-D01N-GRW GW13		SPRING 9 1/11/2003 SPRING9-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	-		0.259	:	-		0.112	:	-		0.763	:
Aluminum	mg/L	D	<0.514	:	-		<0.201	:	-		<0.0038	:	-	
Antimony	mg/L	T	-		<0.0008	:	-		<0.0002	:	-		<0.0006	J
Antimony	mg/L	D	<0.0024	:	-		<0.0008	:	-		<0.0002	:	-	
Arsenic	mg/L	T	-		0.0018	:	-		0.00032	J	-		<0.0004	:
Arsenic	mg/L	D	0.0021	:	-		0.0018	:	-		0.00034	J	-	
Barium	mg/L	T	-		0.0238	:	-		0.0394	:	-		0.0569	:
Barium	mg/L	D	0.0223	:	-		0.0224	:	-		0.0357	:	-	
Beryllium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Beryllium	mg/L	D	<0.001	:	-		<0.0002	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.0468	:	-		0.0326	:	-		<0.0314	:
Boron	mg/L	D	0.0489	:	-		0.044	:	-		0.032	:	-	
Cadmium	mg/L	T	-		<0.0003	:	-		<0.0001	:	-		<0.0004	:
Cadmium	mg/L	D	<0.0007	:	-		<0.0003	:	-		<0.0001	:	-	
Calcium	mg/L	T	-		29.2	:	-		152.	:	-		236.	:
Calcium	mg/L	D	26.	:	-		28.2	:	-		142.	:	-	
Chromium	mg/L	T	-		<0.0022	:	-		<0.0046	:	-		<0.0037	:
Chromium	mg/L	D	<0.0057	:	-		<0.0022	:	-		<0.0046	:	-	
Chromium, Hexavalent	mg/L	D	-		-		-		<0.01	:	-		-	
Cobalt	mg/L	T	-		0.0011	J	-		<0.0022	:	-		<0.0016	:
Cobalt	mg/L	D	<0.0037	:	-		0.0018	J	-		<0.0022	:	-	
Copper	mg/L	T	-		<0.00081	:	-		<0.0015	:	-		<0.0049	:
Copper	mg/L	D	0.0039	:	-		<0.0022	:	-		<0.00072	:	-	
Iron	mg/L	T	-		0.678	J	-		0.335	:	-		0.605	:
Iron	mg/L	D	<0.373	:	-		<0.293	:	-		<0.0226	:	-	
Lead	mg/L	T	-		<0.0008	:	-		0.0007	:	-		0.001	:
Lead	mg/L	D	<0.0002	:	-		<0.0008	:	-		<0.0001	:	-	
Magnesium	mg/L	T	-		8.85	:	-		27.5	:	-		43.5	:
Magnesium	mg/L	D	7.66	:	-		8.39	:	-		25.8	:	-	
Manganese	mg/L	T	-		0.0294	:	-		0.0075	:	-		<0.0092	:
Manganese	mg/L	D	<0.015	:	-		<0.014	:	-		0.0046	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	J	-		<0.0001	:	-		<0.0001	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 18 1/8/2004 SPRING18-D01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-T01N-GRW GW13		SPRING 18 4/15/2004 SPRING18-D01N-GRW GW13		Spring 9 10/8/2002 SPRING9-T01N-GRW GW13		Spring 9 10/8/2002 SPRING9-D01N-GRW GW13		SPRING 9 1/11/2003 SPRING9-T01N-GRW GW13	
Molybdenum	mg/L	T	-		0.0509	:	-		0.0705	:	-		0.0626	:
Molybdenum	mg/L	D	0.0462	:	-		0.0487	:	-		0.0758	:	-	
Nickel	mg/L	T	-		<0.0014	J	-		<0.00055	J	-		<0.0015	:
Nickel	mg/L	D	<0.0168	:	-		<0.0014	J	-		<0.00055	J	-	
Potassium	mg/L	T	-		3.41	:	-		2.51	:	-		2.79	:
Potassium	mg/L	D	3.09	:	-		3.03	:	-		2.34	:	-	
Selenium	mg/L	T	-		<0.0014	:	-		<0.0005	:	-		<0.0016	:
Selenium	mg/L	D	<0.00088	:	-		<0.0014	:	-		<0.00072	:	-	
Silver	mg/L	T	-		<0.00034	:	-		<0.0001	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.00034	:	-		<0.0001	:	-	
Sodium	mg/L	T	-		19.3	J	-		37.4	:	-		43.5	:
Sodium	mg/L	D	23.4	:	-		16.7	J	-		35.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0001	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0001	:	-	
Vanadium	mg/L	T	-		0.007	:	-		0.0026	:	-		0.0022	:
Vanadium	mg/L	D	0.0068	:	-		0.007	:	-		0.0022	J	-	
Zinc	mg/L	T	-		<0.024	:	-		<0.0069	:	-		<0.039	:
Zinc	mg/L	D	<0.026	:	-		<0.0492	:	-		<0.0069	:	-	

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			SPRING 9 1/11/2003 SPRING9-D01N-GRW GW13		Spring 9 4/2/2003 SPRING9-T01N-GRW GW13		SPRING 9 4/2/2003 SPRING9-D01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-T01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-D01N-GRW GW13		SPRING 9 10/20/2003 SPRING9-T01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		6.59	:	-		5.38	:	-		4.69	:
Eh	millivolts	T	-		369.5	:	-		349.5	:	-		109.	:
Flow	gpm	T	-		-		-		1.9	:	-		1.6	:
pH	SU	T	-		7.3	J	-		7.2	J	-		7.25	:
Specific Conductance	uS/cm	T	-		1592.	:	-		889.	:	-		816.	:
Temperature	Celsius	T	-		8.36	:	-		12.76	:	-		13.79	:
Turbidity	NTU	T	-		1.1	:	-		32.5	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		0.058	:	-		<0.093	J	-		<0.084	J
Bicarbonate (as CaCO3)	mg/L	T	-		132.	:	-		310.	:	-		147.	:
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Chloride	mg/L	T	-		13.5	:	-		8.	:	-		6.2	:
Fluoride	mg/L	T	-		0.37	:	-		0.45	:	-		0.46	:
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		<1.	:	-		<1.	:
Nitrate	mg/L	T	-		0.86	J	-		0.63	J	-		0.52	J
Nitrite	mg/L	T	-		<0.005	J	-		0.0052	:	-		<0.005	J
Phosphate, Ortho As P	mg/L	T	-		0.04	J	-		<0.033	J	-		0.05	J
Phosphorus	mg/L	T	-		0.045	:	-		0.029	:	-		0.1	:
Sulfate	mg/L	T	-		809.	J	-		264.	J	-		256.	J
Total Alkalinity	mg/L	T	-		132.	:	-		310.	:	-		147.	:
Total Dissolved Solids	mg/L	T	-		1340.	:	-		724.	:	-		528.	:
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		0.53	:	-		<0.24	:
Total Organic Carbon	mg/L	T	-		1.4	J	-		<1.9	J	-		1.2	J
Total Suspended Solids	mg/L	T	-		4.3	:	-		39.8	:	-		37.2	:
Laboratory Parameters														
pH	SU	T	-		7.3	J	-		7.2	J	-		7.25	:
Specific Conductance	umhos/cm	T	-		1450.	J	-		869.	J	-		794.	J
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		<0.01	J	-		<0.01	J
Physical Properties														
Hardness	mg/L	T	-		859.	:	-		493.	:	-		369.	:
Hardness	mg/L	D	764.	:	-		839.	:	-		471.	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 9 1/11/2003 SPRING9-D01N-GRW GW13		SPRING 9 4/2/2003 SPRING9-T01N-GRW GW13		SPRING 9 4/2/2003 SPRING9-D01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-T01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-D01N-GRW GW13		SPRING 9 10/20/2003 SPRING9-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	-		0.0398	:	-		<0.631	:	-		<0.307	:
Aluminum	mg/L	D	<0.142	:	-		<0.0277	:	-		<0.631	:	-	
Antimony	mg/L	T	-		<0.0013	:	-		<0.001	:	-		<0.001	:
Antimony	mg/L	D	<0.0006	J	-		<0.0006	:	-		<0.001	:	-	
Arsenic	mg/L	T	-		<0.0004	:	-		0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		0.00047	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0571	:	-		0.0331	:	-		0.03	:
Barium	mg/L	D	0.05	:	-		0.0552	:	-		0.0306	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0002	J	-		<0.0004	:
Beryllium	mg/L	D	<0.0002	:	-		<0.0003	:	-		<0.0002	J	-	
Boron	mg/L	T	-		0.0267	:	-		<0.039	:	-		0.0306	:
Boron	mg/L	D	<0.0306	:	-		0.0237	:	-		<0.0378	:	-	
Cadmium	mg/L	T	-		<0.0004	:	-		<0.0003	:	-		<0.0005	:
Cadmium	mg/L	D	<0.0004	:	-		<0.0004	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		266.	:	-		152.	:	-		114.	:
Calcium	mg/L	D	235.	:	-		260.	:	-		146.	:	-	
Chromium	mg/L	T	-		0.0013	:	-		<0.0006	J	-		<0.0011	J
Chromium	mg/L	D	<0.0037	:	-		<0.0009	:	-		<0.0006	J	-	
Cobalt	mg/L	T	-		<0.0029	:	-		<0.0018	:	-		<0.0029	:
Cobalt	mg/L	D	<0.0016	:	-		<0.0029	:	-		<0.0018	:	-	
Copper	mg/L	T	-		<0.0024	:	-		<0.0028	:	-		0.0025	:
Copper	mg/L	D	<0.0039	:	-		<0.0024	:	-		<0.002	:	-	
Iron	mg/L	T	-		0.0642	:	-		<0.667	:	-		<0.592	:
Iron	mg/L	D	<0.489	:	-		<0.0299	:	-		<0.667	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0004	:	-		0.0011	:
Lead	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Magnesium	mg/L	T	-		47.3	:	-		27.5	:	-		20.6	:
Magnesium	mg/L	D	43.1	:	-		46.	:	-		26.1	:	-	
Manganese	mg/L	T	-		<0.0009	:	-		<0.019	:	-		0.0178	:
Manganese	mg/L	D	<0.005	:	-		<0.0009	:	-		<0.019	:	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0705	:	-		0.0806	:	-		0.0758	:

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 9 1/11/2003 SPRING9-D01N-GRW GW13		SPRING 9 4/2/2003 SPRING9-T01N-GRW GW13		SPRING 9 4/2/2003 SPRING9-D01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-T01N-GRW GW13		SPRING 9 7/8/2003 SPRING9-D01N-GRW GW13		SPRING 9 10/20/2003 SPRING9-T01N-GRW GW13	
Molybdenum	mg/L	D	0.0629	:	-		0.0678	:	-		0.0832	:	-	
Nickel	mg/L	T	-		<0.0026	:	-		<0.002	:	-		<0.0024	:
Nickel	mg/L	D	<0.0015	:	-		<0.0026	:	-		<0.002	:	-	
Potassium	mg/L	T	-		3.56	:	-		2.8	:	-		2.06	:
Potassium	mg/L	D	2.68	:	-		3.43	:	-		2.84	:	-	
Selenium	mg/L	T	-		<0.001	J	-		<0.0016	:	-		<0.0006	:
Selenium	mg/L	D	<0.0016	:	-		0.0018	J	-		<0.0016	J	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	J	-	
Sodium	mg/L	T	-		49.	:	-		43.1	:	-		31.2	:
Sodium	mg/L	D	45.7	:	-		47.2	:	-		37.4	:	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		<0.0017	:	-		0.0025	:	-		0.0026	:
Vanadium	mg/L	D	0.0015	:	-		<0.0017	:	-		0.0021	:	-	
Zinc	mg/L	T	-		0.0036	:	-		<0.0394	:	-		0.0231	:
Zinc	mg/L	D	<0.039	:	-		<0.0025	:	-		<0.0845	:	-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	SPRING 9	SPRING 9	SPRING 9	SPRING 9	SPRING 9	Spring 9A
			Sample Date	10/20/2003	1/7/2004	1/7/2004	4/15/2004	4/15/2004	4/2/2003
			Sample ID	SPRING9-D01N-GRW	SPRING9-T01N-GRW	SPRING9-D01N-GRW	SPRING9-T01N-GRW	SPRING9-D01N-GRW	SPRING9A-T01N-GRW
			Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		-	6.83 :	-	6.44 :	-	-
Eh	millivolts	T		-	214.8 :	-	383.6 :	-	-
Flow	gpm	T		-	2. :	-	1.1 :	-	-
pH	SU	T		-	7.2 J	-	7.3 J	-	7.5 J
Specific Conductance	uS/cm	T		-	627. :	-	1631. :	-	-
Temperature	Celsius	T		-	7.07 :	-	8.52 :	-	-
Turbidity	NTU	T		-	20.1 :	-	6.1 :	-	-
General Chemistry									
Ammonia	mg/L	T		-	0.055 J	-	<0.04 :	-	0.1 :
Bicarbonate (as CaCO3)	mg/L	T		-	133. J	-	132. :	-	136. :
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Chloride	mg/L	T		-	11.9 :	-	14.5 :	-	12.4 :
Fluoride	mg/L	T		-	0.37 :	-	0.46 :	-	0.34 :
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	<1. :	-	<1. :
Nitrate	mg/L	T		-	0.63 J	-	0.82 J	-	1.1 J
Nitrite	mg/L	T		-	<0.005 J	-	<0.005 :	-	<0.005 J
Phosphate, Ortho As P	mg/L	T		-	0.037 J	-	0.042 :	-	0.038 J
Phosphorus	mg/L	T		-	0.039 :	-	0.042 :	-	0.11 :
Sulfate	mg/L	T		-	635. :	-	708. :	-	612. J
Total Alkalinity	mg/L	T		-	133. J	-	132. :	-	136. :
Total Dissolved Solids	mg/L	T		-	1060. :	-	1260. :	-	1210. :
Total Kjeldahl Nitrogen	mg/L	T		-	0.29 :	-	<0.24 :	-	<0.24 :
Total Organic Carbon	mg/L	T		-	<1.5 :	-	<2.3 :	-	1.8 J
Total Suspended Solids	mg/L	T		-	<1.1 :	-	5.4 J	-	29.7 :
Laboratory Parameters									
pH	SU	T		-	7.2 J	-	7.3 J	-	7.5 J
Specific Conductance	umhos/cm	T		-	1260. J	-	1370. J	-	1360. J
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	<0.01 J	-	<0.01 J
Physical Properties									
Hardness	mg/L	T		-	694. :	-	814. :	-	806. :
Hardness	mg/L	D		386. :	-	657. :	-	849. :	-

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 9 10/20/2003 SPRING9-D01N-GRW GW13		SPRING 9 1/7/2004 SPRING9-T01N-GRW GW13		SPRING 9 1/7/2004 SPRING9-D01N-GRW GW13		SPRING 9 4/15/2004 SPRING9-T01N-GRW GW13		SPRING 9 4/15/2004 SPRING9-D01N-GRW GW13		Spring 9A 4/2/2003 SPRING9A-T01N-GRW GW13	
Metals														
Aluminum	mg/L	T	-		<0.514	:	-		<0.201	:	-		0.216	:
Aluminum	mg/L	D	<0.307	:	-		<0.514	:	-		<0.201	:	-	
Antimony	mg/L	T	-		<0.0024	:	-		<0.0008	:	-		<0.0006	:
Antimony	mg/L	D	<0.001	:	-		<0.0024	:	-		<0.0008	:	-	
Arsenic	mg/L	T	-		0.00046	:	-		<0.0004	:	-		<0.0004	:
Arsenic	mg/L	D	<0.0004	:	-		0.00044	:	-		<0.0004	:	-	
Barium	mg/L	T	-		0.0507	:	-		0.0506	:	-		0.0496	:
Barium	mg/L	D	0.0267	:	-		0.0485	:	-		0.0525	:	-	
Beryllium	mg/L	T	-		<0.0003	:	-		<0.0002	:	-		<0.0003	:
Beryllium	mg/L	D	<0.0004	:	-		<0.0003	:	-		<0.0002	:	-	
Boron	mg/L	T	-		0.029	:	-		0.0274	:	-		0.027	:
Boron	mg/L	D	0.0316	:	-		0.0254	:	-		0.0285	:	-	
Cadmium	mg/L	T	-		<0.0007	J	-		<0.0003	:	-		<0.0004	:
Cadmium	mg/L	D	<0.0005	:	-		<0.0007	:	-		<0.0003	:	-	
Calcium	mg/L	T	-		214.	:	-		252.	:	-		248.	:
Calcium	mg/L	D	119.	:	-		203.	:	-		264.	:	-	
Chromium	mg/L	T	-		<0.0015	J	-		<0.0008	:	-		0.0014	:
Chromium	mg/L	D	<0.0011	J	-		<0.0015	J	-		<0.0013	:	-	
Cobalt	mg/L	T	-		<0.0023	:	-		<0.0011	J	-		<0.0029	:
Cobalt	mg/L	D	<0.0029	:	-		<0.0023	:	-		0.0029	J	-	
Copper	mg/L	T	-		<0.003	:	-		<0.0018	:	-		0.0028	:
Copper	mg/L	D	<0.0022	:	-		<0.003	:	-		<0.0027	:	-	
Iron	mg/L	T	-		<0.373	:	-		<0.293	J	-		0.372	:
Iron	mg/L	D	<0.3	:	-		<0.373	:	-		<0.293	:	-	
Lead	mg/L	T	-		<0.0002	:	-		<0.0008	:	-		0.0012	:
Lead	mg/L	D	<0.0004	:	-		<0.0002	:	-		<0.0008	:	-	
Magnesium	mg/L	T	-		38.5	:	-		44.6	:	-		45.3	:
Magnesium	mg/L	D	21.5	:	-		36.4	:	-		46.3	:	-	
Manganese	mg/L	T	-		<0.015	J	-		<0.014	J	-		0.0071	:
Manganese	mg/L	D	<0.01	:	-		<0.015	:	-		<0.014	J	-	
Mercury	mg/L	T	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Mercury	mg/L	D	<0.0001	:	-		<0.0001	J	-		<0.0001	:	-	
Molybdenum	mg/L	T	-		0.0682	:	-		0.0588	:	-		0.0582	:

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 9 10/20/2003 SPRING9-D01N-GRW GW13		SPRING 9 1/7/2004 SPRING9-T01N-GRW GW13		SPRING 9 1/7/2004 SPRING9-D01N-GRW GW13		SPRING 9 4/15/2004 SPRING9-T01N-GRW GW13		SPRING 9 4/15/2004 SPRING9-D01N-GRW GW13		Spring 9A 4/2/2003 SPRING9A-T01N-GRW GW13	
Molybdenum	mg/L	D	0.0824	:	-		0.0642	:	-		0.0602	:	-	
Nickel	mg/L	T	-		<0.0024	J	-		<0.0014	J	-		<0.0026	:
Nickel	mg/L	D	<0.0024	:	-		<0.0024	J	-		<0.0014	J	-	
Potassium	mg/L	T	-		3.11	:	-		2.84	:	-		2.78	:
Potassium	mg/L	D	2.16	:	-		2.99	:	-		3.08	:	-	
Selenium	mg/L	T	-		0.0015	J	-		0.0014	:	-		<0.001	J
Selenium	mg/L	D	0.00084	:	-		0.0014	:	-		0.0017	:	-	
Silver	mg/L	T	-		<0.0002	:	-		<0.00034	:	-		<0.0002	:
Silver	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.00034	:	-	
Sodium	mg/L	T	-		41.7	:	-		30.1	J	-		46.2	:
Sodium	mg/L	D	35.3	:	-		38.9	:	-		44.	J	-	
Thallium	mg/L	T	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Thallium	mg/L	D	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Vanadium	mg/L	T	-		0.0014	:	-		0.0017	:	-		0.0035	:
Vanadium	mg/L	D	0.0018	:	-		0.0014	:	-		0.0016	:	-	
Zinc	mg/L	T	-		<0.026	:	-		<0.024	:	-		<0.0025	:
Zinc	mg/L	D	<0.02	:	-		<0.026	:	-		<0.024	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Spring 9A Sample Date: 4/2/2003 Sample ID: SPRING9A-D01N-GRW GW13		Site ID: Spring 9A Sample Date: 4/2/2003 Sample ID: Spring 9A-T01N-GRW GW13		Site ID: Spring 9A Sample Date: 7/8/2003 Sample ID: SPRING9A-T01N-GRW GW13		Site ID: Spring 9A Sample Date: 7/8/2003 Sample ID: SPRING9A-D01N-GRW GW13		Site ID: Spring 9A Sample Date: 10/20/2003 Sample ID: SPRING9A-T01N-GRW GW13		Site ID: Spring 9A Sample Date: 10/20/2003 Sample ID: SPRING9A-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	-		7.94	:	7.71	:	-		-		-	
Eh	millivolts	T	-		386.3	:	342.7	:	-		106.6	:	-	
Flow	gpm	T	-		-		5.6	:	-		4.2	:	-	
pH	SU	T	-		7.21	:	7.3	J	-		7.4	J	-	
Specific Conductance	uS/cm	T	-		789.	:	910.	:	-		714.	:	-	
Temperature	Celsius	T	-		9.95	:	12.99	:	-		13.05	:	-	
Turbidity	NTU	T	-		1.7	:	33.6	:	-		9.	:	-	
General Chemistry														
Ammonia	mg/L	T	-		-		<0.1	J	-		<0.04	J	-	
Bicarbonate (as CaCO3)	mg/L	T	-		-		153.	:	-		147.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	-		-		8.2	:	-		6.2	:	-	
Fluoride	mg/L	T	-		-		0.38	:	-		0.42	:	-	
Hydroxide (as CaCO3)	mg/L	T	-		-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	-		-		1.4	J	-		0.88	J	-	
Nitrite	mg/L	T	-		-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	-		-		<0.047	J	-		0.06	J	-	
Phosphorus	mg/L	T	-		-		0.085	:	-		0.11	:	-	
Sulfate	mg/L	T	-		-		357.	J	-		276.	J	-	
Total Alkalinity	mg/L	T	-		-		153.	:	-		147.	:	-	
Total Dissolved Solids	mg/L	T	-		-		732.	:	-		644.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		-		0.38	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	-		-		<1.3	J	-		1.6	J	-	
Total Suspended Solids	mg/L	T	-		-		21.7	:	-		73.2	:	-	
Laboratory Parameters														
pH	SU	T	-		7.21	:	7.3	J	-		7.4	J	-	
Specific Conductance	umhos/cm	T	-		-		863.	J	-		691.	J	-	
Inorganics														
Cyanide	mg/L	T	-		-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		-		478.	:	-		393.	:	-	
Hardness	mg/L	D	800.	:	-		-		497.	:	-		375.	:

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Spring 9A Sample Date: 4/2/2003 Sample ID: SPRING9A-D01N-GRW GW13	Site ID: Spring 9A Sample Date: 4/2/2003 Sample ID: Spring 9A-T01N-GRW GW13	Site ID: Spring 9A Sample Date: 7/8/2003 Sample ID: SPRING9A-T01N-GRW GW13	Site ID: Spring 9A Sample Date: 7/8/2003 Sample ID: SPRING9A-D01N-GRW GW13	Site ID: Spring 9A Sample Date: 10/20/2003 Sample ID: SPRING9A-T01N-GRW GW13	Site ID: Spring 9A Sample Date: 10/20/2003 Sample ID: SPRING9A-D01N-GRW GW13
Metals								
Aluminum	mg/L	T	-	-	<0.631 :	-	<0.488 :	-
Aluminum	mg/L	D	<0.0277 :	-	-	<0.631 :	-	<0.307 :
Antimony	mg/L	T	-	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D	<0.0006 :	-	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T	-	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D	<0.0004 :	-	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T	-	-	0.0353 :	-	0.0324 :	-
Barium	mg/L	D	0.0475 :	-	-	0.0311 :	-	0.0266 :
Beryllium	mg/L	T	-	-	<0.0002 J	-	<0.0004 :	-
Beryllium	mg/L	D	<0.0003 :	-	-	<0.0002 J	-	<0.0004 :
Boron	mg/L	T	-	-	<0.0335 :	-	0.0307 :	-
Boron	mg/L	D	0.0259 :	-	-	<0.033 :	-	0.0299 :
Cadmium	mg/L	T	-	-	<0.0003 :	-	<0.0005 :	-
Cadmium	mg/L	D	<0.0004 :	-	-	<0.0003 :	-	<0.0005 :
Calcium	mg/L	T	-	-	145. :	-	120. :	-
Calcium	mg/L	D	246. :	-	-	152. :	-	115. :
Chromium	mg/L	T	-	-	<0.0006 J	-	0.0031 J	-
Chromium	mg/L	D	0.0011 :	-	-	<0.0006 J	-	<0.0011 J
Cobalt	mg/L	T	-	-	<0.0018 :	-	<0.0029 :	-
Cobalt	mg/L	D	<0.0029 :	-	-	<0.0018 :	-	<0.0029 :
Copper	mg/L	T	-	-	<0.0032 :	-	0.0038 :	-
Copper	mg/L	D	<0.0024 :	-	-	<0.0023 :	-	0.0023 :
Iron	mg/L	T	-	-	<0.667 :	-	<0.3 J	-
Iron	mg/L	D	<0.0299 :	-	-	<0.667 :	-	<0.3 J
Lead	mg/L	T	-	-	<0.0005 :	-	0.00064 :	-
Lead	mg/L	D	<0.0002 :	-	-	<0.0002 :	-	<0.0004 :
Magnesium	mg/L	T	-	-	27.8 :	-	22.5 :	-
Magnesium	mg/L	D	44.9 :	-	-	28.9 :	-	21.5 :
Manganese	mg/L	T	-	-	<0.019 :	-	0.011 :	-
Manganese	mg/L	D	0.0028 :	-	-	<0.019 :	-	<0.01 :
Mercury	mg/L	T	-	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	<0.0001 :	-	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	-	-	0.0654 :	-	0.0739 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 9A 4/2/2003 SPRING9A-D01N-GRW GW13		Spring 9A 4/2/2003 Spring 9A-T01N-GRW GW13		Spring 9A 7/8/2003 SPRING9A-T01N-GRW GW13		Spring 9A 7/8/2003 SPRING9A-D01N-GRW GW13		Spring 9A 10/20/2003 SPRING9A-T01N-GRW GW13		Spring 9A 10/20/2003 SPRING9A-D01N-GRW GW13	
Molybdenum	mg/L	D	0.0614	:	-		-		0.0696	:	-		0.0725	:
Nickel	mg/L	T	-		-		<0.002	:	-		<0.0024	:	-	
Nickel	mg/L	D	<0.0026	:	-		-		<0.002	:	-		<0.0024	:
Potassium	mg/L	T	-		-		2.32	:	-		2.16	:	-	
Potassium	mg/L	D	2.71	:	-		-		2.26	:	-		1.97	:
Selenium	mg/L	T	-		-		<0.0016	:	-		<0.0006	:	-	
Selenium	mg/L	D	0.001	J	-		-		<0.0016	J	-		<0.00081	:
Silver	mg/L	T	-		-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	<0.0002	:	-		-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	-		-		33.7	:	-		31.1	:	-	
Sodium	mg/L	D	45.8	:	-		-		36.6	:	-		29.4	:
Thallium	mg/L	T	-		-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	<0.0002	:	-		-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	-		-		0.0026	:	-		0.0025	:	-	
Vanadium	mg/L	D	<0.0018	:	-		-		0.0022	:	-		0.0021	:
Zinc	mg/L	T	-		-		<0.0466	:	-		<0.0364	:	-	
Zinc	mg/L	D	<0.0025	:	-		-		<0.016	:	-		<0.0232	:

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T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 9A 1/7/2004 SPRING9A-T01N-GRW GW13		Spring 9A 1/7/2004 SPRING9A-D01N-GRW GW13		Spring 9A 4/15/2004 SPRING9A-T01N-GRW GW13		Spring 9A 4/15/2004 SPRING9A-D01N-GRW GW13		----		----	
Field Measurements														
DO	mg/L	T	11.9	:	-		6.96	:	-		-		-	
Eh	millivolts	T	239.9	:	-		309.4	:	-		-		-	
Flow	gpm	T	2.2	:	-		0.6	:	-		-		-	
pH	SU	T	8.	J	-		6.45	:	-		-		-	
Specific Conductance	uS/cm	T	1188.	:	-		1478.	:	-		-		-	
Temperature	Celsius	T	11.35	:	-		12.32	:	-		-		-	
Turbidity	NTU	T	0.9	:	-		6.4	:	-		-		-	
General Chemistry														
Ammonia	mg/L	T	<0.08	J	-		<0.04	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	130.	J	-		135.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Chloride	mg/L	T	10.8	:	-		13.5	:	-		-		-	
Fluoride	mg/L	T	0.34	:	-		0.44	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Nitrate	mg/L	T	0.86	J	-		0.9	J	-		-		-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		-		-	
Phosphate, Ortho As P	mg/L	T	0.056	J	-		0.034	:	-		-		-	
Phosphorus	mg/L	T	0.061	:	-		0.067	:	-		-		-	
Sulfate	mg/L	T	543.	:	-		712.	:	-		-		-	
Total Alkalinity	mg/L	T	130.	J	-		135.	:	-		-		-	
Total Dissolved Solids	mg/L	T	994.	:	-		1270.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	0.24	:	-		<0.24	:	-		-		-	
Total Organic Carbon	mg/L	T	<2.	:	-		<3.3	:	-		-		-	
Total Suspended Solids	mg/L	T	3.5	:	-		38.1	J	-		-		-	
Laboratory Parameters														
pH	SU	T	8.	J	-		6.45	:	-		-		-	
Specific Conductance	umhos/cm	T	1150.	J	-		1360.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	J	-		-		-	
Physical Properties														
Hardness	mg/L	T	628.	:	-		800.	:	-		-		-	
Hardness	mg/L	D	-		596.	:	-		829.	:	-		-	

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Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 9A 1/7/2004 SPRING9A-T01N-GRW GW13	Spring 9A 1/7/2004 SPRING9A-D01N-GRW GW13	Spring 9A 4/15/2004 SPRING9A-T01N-GRW GW13	Spring 9A 4/15/2004 SPRING9A-D01N-GRW GW13	----	----
Metals								
Aluminum	mg/L	T	<0.514 :	-	1.59 :	-	-	-
Aluminum	mg/L	D	-	<0.514 :	-	<0.201 :	-	-
Antimony	mg/L	T	<0.0024 :	-	<0.0008 :	-	-	-
Antimony	mg/L	D	-	<0.0024 :	-	<0.0008 :	-	-
Arsenic	mg/L	T	0.00051 :	-	0.00046 :	-	-	-
Arsenic	mg/L	D	-	<0.0004 :	-	<0.0004 :	-	-
Barium	mg/L	T	0.0403 :	-	0.0624 :	-	-	-
Barium	mg/L	D	-	0.0398 :	-	0.0465 :	-	-
Beryllium	mg/L	T	<0.0003 :	-	<0.0002 :	-	-	-
Beryllium	mg/L	D	-	<0.0003 :	-	<0.0002 :	-	-
Boron	mg/L	T	0.0301 :	-	0.0315 :	-	-	-
Boron	mg/L	D	-	0.0295 :	-	0.031 :	-	-
Cadmium	mg/L	T	<0.0007 J	-	<0.0003 :	-	-	-
Cadmium	mg/L	D	-	<0.0007 :	-	<0.0003 :	-	-
Calcium	mg/L	T	193. :	-	247. :	-	-	-
Calcium	mg/L	D	-	183. :	-	256. :	-	-
Chromium	mg/L	T	<0.0015 J	-	<0.0019 :	-	-	-
Chromium	mg/L	D	-	<0.0015 J	-	<0.0011 :	-	-
Cobalt	mg/L	T	<0.0023 :	-	<0.0011 J	-	-	-
Cobalt	mg/L	D	-	<0.0023 :	-	<0.0018 J	-	-
Copper	mg/L	T	<0.003 :	-	<0.0052 :	-	-	-
Copper	mg/L	D	-	<0.003 :	-	<0.0027 :	-	-
Iron	mg/L	T	<0.373 :	-	1.41 J	-	-	-
Iron	mg/L	D	-	<0.373 :	-	<0.293 :	-	-
Lead	mg/L	T	<0.0002 :	-	0.0025 :	-	-	-
Lead	mg/L	D	-	<0.0002 :	-	<0.0008 :	-	-
Magnesium	mg/L	T	35.6 :	-	44.5 :	-	-	-
Magnesium	mg/L	D	-	33.7 :	-	46.3 :	-	-
Manganese	mg/L	T	<0.015 :	-	<0.014 J	-	-	-
Manganese	mg/L	D	-	<0.015 :	-	<0.014 J	-	-
Mercury	mg/L	T	<0.0001 J	-	<0.0001 :	-	-	-
Mercury	mg/L	D	-	<0.0001 J	-	<0.0001 :	-	-
Molybdenum	mg/L	T	0.0556 :	-	0.0592 :	-	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-6l
Seep/Spring - Basal Bedrock Aquifer
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID Sample Date Sample ID									
			Spring 9A 1/7/2004 SPRING9A-T01N-GRW GW13		Spring 9A 1/7/2004 SPRING9A-D01N-GRW GW13		Spring 9A 4/15/2004 SPRING9A-T01N-GRW GW13		Spring 9A 4/15/2004 SPRING9A-D01N-GRW GW13		----	----
Molybdenum	mg/L	D	-		0.0565	:	-		0.0592	:	-	-
Nickel	mg/L	T	<0.0024	J	-		<0.0014	J	-		-	-
Nickel	mg/L	D	-		<0.0024	J	-		<0.0014	J	-	-
Potassium	mg/L	T	2.44	:	-		3.23	:	-		-	-
Potassium	mg/L	D	-		2.4	:	-		2.81	:	-	-
Selenium	mg/L	T	0.0019	J	-		<0.0014	:	-		-	-
Selenium	mg/L	D	-		0.0014	:	-		<0.0014	:	-	-
Silver	mg/L	T	<0.0002	:	-		<0.00034	:	-		-	-
Silver	mg/L	D	-		<0.0002	:	-		<0.00034	:	-	-
Sodium	mg/L	T	40.7	:	-		34.8	J	-		-	-
Sodium	mg/L	D	-		39.4	:	-		40.8	J	-	-
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		-	-
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-	-
Vanadium	mg/L	T	0.0019	:	-		0.0037	:	-		-	-
Vanadium	mg/L	D	-		0.0017	:	-		0.0018	:	-	-
Zinc	mg/L	T	<0.026	:	-		<0.0393	:	-		-	-
Zinc	mg/L	D	-		<0.026	:	-		<0.024	:	-	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID		Site ID / Sample Date / Sample ID	
			Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-D01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-D01N-GRW GW2		Goathill Gulch Seep 2/7/2003 Goathill Gulch Seep-T01N-GRW GW5		Goathill Gulch Seep 3/7/2003 Goathill Gulch Seep-T01N-GRW GW5	
Field Measurements														
DO	mg/L	T	8.92	:	-		10.49	:	-		-		-	
EH	millivolts	T	555.8	:	-		603.9	:	-		-		-	
Flow	gpm	T	15.9	:	-		5.3	:	-		0.05	:	10.8	:
pH	SU	T	3.	J	-		3.1	J	-		-		-	
Specific Conductance	uS/cm	T	10785.	:	-		11093.	:	-		-		-	
Temperature	Celsius	T	10.45	:	-		6.76	:	-		-		-	
Turbidity	NTU	T	-		-		20.9	:	-		-		-	
General Chemistry														
Ammonia	mg/L	T	0.51	J	-		<0.42	:	-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Chloride	mg/L	T	21.3	:	-		127.	:	-		-		-	
Fluoride	mg/L	T	208.	:	-		77.5	:	-		-		-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Nitrate	mg/L	T	<2.	J	-		<1.	J	-		-		-	
Nitrite	mg/L	T	0.08	J	-		0.053	J	-		-		-	
Phosphate, Ortho As P	mg/L	T	0.67	J	-		0.37	J	-		-		-	
Phosphorus	mg/L	T	<0.01	J	-		0.031	J	-		-		-	
Sulfate	mg/L	T	11600.	J	-		13700.	:	-		-		-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		-		-	
Total Dissolved Solids	mg/L	T	22700.	J	-		18900.	:	-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	0.84	:	-		<0.82	:	-		-		-	
Total Organic Carbon	mg/L	T	13.3	J	-		12.6	J	-		-		-	
Total Suspended Solids	mg/L	T	72.7	:	-		70.	J	-		-		-	
Laboratory Parameters														
pH	SU	T	3.	J	-		3.1	J	-		-		-	
Specific Conductance	umhos/cm	T	10300.	J	-		9060.	J	-		-		-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-		-	
Physical Properties														
Hardness	mg/L	T	5370.	:	-		5150.	:	-		-		-	
Hardness	mg/L	D	-		5430.	:	-		4810.	:	-		-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID									
			Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-D01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-D01N-GRW GW2		Goathill Gulch Seep 2/7/2003 Goathill Gulch Seep-T01N-GRW GW5		Goathill Gulch Seep 3/7/2003 Goathill Gulch Seep-T01N-GRW GW5	
Metals												
Aluminum	mg/L	T	1170.	:	-		1160.	:	-		-	-
Aluminum	mg/L	D	-		1190.	:	-		1080.	:	-	-
Antimony	mg/L	T	<0.038	:	-		<0.053	:	-		-	-
Antimony	mg/L	D	-		<0.038	:	-		<0.053	:	-	-
Arsenic	mg/L	T	0.09	:	-		<0.121	:	-		-	-
Arsenic	mg/L	D	-		0.0913	:	-		<0.105	:	-	-
Barium	mg/L	T	<0.073	:	-		<0.049	:	-		-	-
Barium	mg/L	D	-		<0.073	:	-		<0.049	:	-	-
Beryllium	mg/L	T	0.278	:	-		0.284	:	-		-	-
Beryllium	mg/L	D	-		0.282	:	-		0.282	:	-	-
Boron	mg/L	T	<0.046	:	-		<0.036	:	-		-	-
Boron	mg/L	D	-		0.0526	:	-		<0.036	:	-	-
Cadmium	mg/L	T	0.624	:	-		0.664	:	-		-	-
Cadmium	mg/L	D	-		0.661	:	-		0.652	J	-	-
Calcium	mg/L	T	466.	:	-		445.	:	-		-	-
Calcium	mg/L	D	-		471.	:	-		414.	:	-	-
Chromium	mg/L	T	0.191	J	-		0.603	:	-		-	-
Chromium	mg/L	D	-		0.247	J	-		0.584	:	-	-
Cobalt	mg/L	T	3.82	:	-		3.77	:	-		-	-
Cobalt	mg/L	D	-		3.91	:	-		3.53	:	-	-
Copper	mg/L	T	8.56	:	-		9.16	:	-		-	-
Copper	mg/L	D	-		8.73	:	-		8.56	:	-	-
Iron	mg/L	T	363.	:	-		419.	J	-		-	-
Iron	mg/L	D	-		369.	:	-		391.	:	-	-
Lead	mg/L	T	<0.001	:	-		<0.004	:	-		-	-
Lead	mg/L	D	-		<0.001	:	-		<0.004	:	-	-
Magnesium	mg/L	T	1020.	:	-		980.	:	-		-	-
Magnesium	mg/L	D	-		1030.	:	-		917.	:	-	-
Manganese	mg/L	T	527.	:	-		478.	:	-		-	-
Manganese	mg/L	D	-		533.	:	-		447.	:	-	-
Mercury	mg/L	T	0.00023	J	-		<0.0001	:	-		-	-
Mercury	mg/L	D	-		0.00022	J	-		<0.0001	:	-	-
Molybdenum	mg/L	T	<0.016	:	-		<0.0216	:	-		-	-

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 7/20/2003 CAPULINSPRINGSOURCE-D01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-T01N-GRW GW2		Capulin Spring Source 4/20/2004 CAPULINSPRINGSOURCE-D01N-GRW GW2		Goathill Gulch Seep 2/7/2003 Goathill Gulch Seep-T01N-GRW GW5		Goathill Gulch Seep 3/7/2003 Goathill Gulch Seep-T01N-GRW GW5	
Molybdenum	mg/L	D	-		<0.016	:	-		<0.0281	:	-		-	
Nickel	mg/L	T	8.82	:	-		8.87	:	-		-		-	
Nickel	mg/L	D	-		8.87	:	-		8.3	:	-		-	
Potassium	mg/L	T	<25.	:	-		<15.5	:	-		-		-	
Potassium	mg/L	D	-		<25.	:	-		<15.5	:	-		-	
Selenium	mg/L	T	0.103	:	-		0.0853	:	-		-		-	
Selenium	mg/L	D	-		0.112	J	-		0.0784	:	-		-	
Silver	mg/L	T	<0.0056	J	-		<0.001	:	-		-		-	
Silver	mg/L	D	-		<0.0055	J	-		<0.001	:	-		-	
Sodium	mg/L	T	<21.9	:	-		<32.8	:	-		-		-	
Sodium	mg/L	D	-		<21.9	:	-		<44.2	:	-		-	
Thallium	mg/L	T	<0.001	:	-		<0.001	:	-		-		-	
Thallium	mg/L	D	-		<0.001	:	-		<0.001	:	-		-	
Vanadium	mg/L	T	0.005	:	-		0.0106	:	-		-		-	
Vanadium	mg/L	D	-		0.0061	:	-		0.0089	:	-		-	
Zinc	mg/L	T	124.	:	-		111.	:	-		-		-	
Zinc	mg/L	D	-		126.	:	-		104.	:	-		-	
Isotopes														
Delta D	per mil	T	-		-		-91.	:	-		-		-	
Delta O-18	per mil	T	-		-		-12.5	:	-		-		-	

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Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID											
			Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRWRE GW5		Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRW GW5		Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-D01 N-GRW GW5		Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRWRE GW3		Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 10/7/2002 GOATHILLSPRING-D 01N-GRWRE GW3	
Field Measurements														
DO	mg/L	T	-		6.46	:	-		-		8.27	:	-	
EH	millivolts	T	-		444.5	:	-		-		456.6	:	-	
Flow	gpm	T	-		0.1	:	-		-		8.	:	-	
pH	SU	T	-		5.4	J	-		-		2.75	:	-	
Specific Conductance	uS/cm	T	-		1810.	:	-		-		10670.	:	-	
Temperature	Celsius	T	-		4.37	:	-		-		10.11	:	-	
Turbidity	NTU	T	-		0.	:	-		-		28.2	:	-	
General Chemistry														
Ammonia	mg/L	T	-		0.073	:	-		-		<0.49	:	-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Chloride	mg/L	T	-		39.9	:	-		-		17.9	:	-	
Fluoride	mg/L	T	6.5	J	-		-		102.	J	-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Nitrate	mg/L	T	-		<0.4	:	-		-		<2.	J	-	
Nitrite	mg/L	T	-		<0.005	:	-		-		0.063	J	-	
Phosphate, Ortho As P	mg/L	T	-		<0.01	:	-		-		11.9	J	-	
Phosphorus	mg/L	T	-		0.017	:	-		-		0.088	J	-	
Sulfate	mg/L	T	-		1070.	J	-		-		16100.	:	-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	-		1610.	:	-		-		26100.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.24	:	-		-		0.39	:	-	
Total Organic Carbon	mg/L	T	-		1.5	J	-		-		9.1	:	-	
Total Suspended Solids	mg/L	T	-		2.3	:	-		-		40.	:	-	
Laboratory Parameters														
pH	SU	T	-		5.4	J	-		-		2.75	:	-	
Specific Conductance	umhos/cm	T	-		1700.	J	-		-		-		-	
Inorganics														
Cyanide	mg/L	T	-		<0.01	J	-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	-		894.	:	-		-		-		-	
Hardness	mg/L	D	-		-		898.	:	-		-		4140.	:

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID / Exposure Area	Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRWRE GW5	Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRW GW5	Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-D01 N-GRW GW5	Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRWRE GW3	Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRW GW3	Goathill Spring 10/7/2002 GOATHILLSPRING-D 01N-GRWRE GW3
Metals									
Aluminum	mg/L	T		-	<36.8 :	-	-	-	-
Aluminum	mg/L	D		-	-	<37.6 :	-	-	1490. :
Antimony	mg/L	T		-	<0.003 J	-	-	-	-
Antimony	mg/L	D		-	-	<0.003 J	-	-	<0.028 :
Arsenic	mg/L	T		-	<0.047 :	-	-	-	-
Arsenic	mg/L	D		-	-	<0.047 :	-	-	0.0742 :
Barium	mg/L	T		-	<0.135 :	-	-	-	-
Barium	mg/L	D		-	-	<0.135 :	-	-	<0.048 :
Beryllium	mg/L	T		-	0.0062 :	-	-	-	-
Beryllium	mg/L	D		-	-	0.0061 :	-	-	0.231 :
Boron	mg/L	T		-	<0.075 :	-	-	-	-
Boron	mg/L	D		-	-	<0.075 :	-	-	0.24 :
Cadmium	mg/L	T		-	<0.04 :	-	-	-	-
Cadmium	mg/L	D		-	-	<0.04 :	-	-	0.512 :
Calcium	mg/L	T		-	250. :	-	-	-	-
Calcium	mg/L	D		-	-	250. :	-	-	418. :
Chromium	mg/L	T		-	<0.09 J	-	-	-	-
Chromium	mg/L	D		-	-	<0.09 J	-	-	0.729 :
Chromium, Hexavalent	mg/L	D		-	-	-	-	0.0023 J	-
Cobalt	mg/L	T		-	<0.29 :	-	-	-	-
Cobalt	mg/L	D		-	-	<0.29 :	-	-	3.32 :
Copper	mg/L	T		-	<0.47 :	-	-	-	-
Copper	mg/L	D		-	-	0.468 J	-	-	9.06 :
Iron	mg/L	T		-	<2.99 :	-	-	-	-
Iron	mg/L	D		-	-	<2.99 :	-	-	661. :
Lead	mg/L	T		-	<0.001 :	-	-	-	-
Lead	mg/L	D		-	-	0.0017 :	-	-	0.0011 :
Magnesium	mg/L	T		-	65.9 :	-	-	-	-
Magnesium	mg/L	D		-	-	66.4 :	-	-	752. :
Manganese	mg/L	T		-	6.11 :	-	-	-	-
Manganese	mg/L	D		-	-	6.2 :	-	-	402. :
Mercury	mg/L	T		-	<0.0001 :	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 :	-	-	-

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRWRE GW5		Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-T01 N-GRW GW5		Goathill Gulch Seep 4/4/2003 GOATHILLSEEP-D01 N-GRW GW5		Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRWRE GW3		Goathill Spring 10/7/2002 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 10/7/2002 GOATHILLSPRING-D 01N-GRWRE GW3	
Molybdenum	mg/L	T	-		<0.016	:	-		-		-		-	
Molybdenum	mg/L	D	-		-		<0.016	:	-		-		<0.011	:
Nickel	mg/L	T	-		<0.26	:	-		-		-		-	
Nickel	mg/L	D	-		-		<0.26	:	-		-		7.83	:
Potassium	mg/L	T	-		<32.7	:	-		-		-		-	
Potassium	mg/L	D	-		-		<32.7	:	-		-		<20.2	:
Selenium	mg/L	T	-		<0.005	:	-		-		-		-	
Selenium	mg/L	D	-		-		<0.005	:	-		-		0.153	:
Silver	mg/L	T	-		<0.001	:	-		-		-		-	
Silver	mg/L	D	-		-		<0.001	:	-		-		<0.001	:
Sodium	mg/L	T	-		<51.3	:	-		-		-		-	
Sodium	mg/L	D	-		-		<51.3	:	-		-		55.6	:
Thallium	mg/L	T	-		<0.001	:	-		-		-		-	
Thallium	mg/L	D	-		-		<0.001	:	-		-		<0.001	:
Vanadium	mg/L	T	-		<0.001	:	-		-		-		-	
Vanadium	mg/L	D	-		-		<0.001	:	-		-		0.0264	:
Zinc	mg/L	T	-		2.16	:	-		-		-		-	
Zinc	mg/L	D	-		-		2.15	:	-		-		94.4	:

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Goathill Spring Sample Date: 10/7/2002 Sample ID: GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 1/7/2003 GOATHILLSPRING-T01N-GRW GW3		GOATHILL SPRING 1/7/2003 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 1/20/2003 GOATHILLSPRINGR-T01N-GRW GW3		Goathill Spring 2/6/2003 Goathill Spring-T01N-GRW GW3		Goathill Spring 3/4/2003 Goathill Spring-T01N-GRW GW3	
Field Measurements														
DO	mg/L	T	-		11.56	:	-		10.35	:	-		-	
EH	millivolts	T	-		475.5	:	-		573.3	:	-		-	
Flow	gpm	T	-		10.	:	-		-		9.5	:	6.02	:
pH	SU	T	-		2.39	:	-		2.56	:	-		-	
Specific Conductance	uS/cm	T	-		11927.	:	-		10826.	:	-		-	
Temperature	Celsius	T	-		2.08	:	-		0.95	:	-		-	
Turbidity	NTU	T	-		1196.7	:	-		1024.1	:	-		-	
General Chemistry														
Ammonia	mg/L	T	-		<0.13	:	-		-		-		-	
Bicarbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Carbonate (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Chloride	mg/L	T	-		10.2	:	-		-		-		-	
Fluoride	mg/L	T	-		143.	:	-		-		-		-	
Hydroxide (as CaCO3)	mg/L	T	-		<1.	:	-		-		-		-	
Nitrate	mg/L	T	-		<1.	:	-		-		-		-	
Nitrite	mg/L	T	-		0.044	:	-		-		-		-	
Phosphate, Ortho As P	mg/L	T	-		17.9	J	-		-		-		-	
Phosphorus	mg/L	T	-		<0.01	J	-		-		-		-	
Sulfate	mg/L	T	-		13600.	J	-		-		-		-	
Total Alkalinity	mg/L	T	-		<1.	:	-		-		-		-	
Total Dissolved Solids	mg/L	T	-		19700.	J	-		-		-		-	
Total Kjeldahl Nitrogen	mg/L	T	-		<0.68	:	-		-		-		-	
Total Organic Carbon	mg/L	T	-		8.5	J	-		-		-		-	
Total Suspended Solids	mg/L	T	-		8690.	J	-		-		-		-	
Laboratory Parameters														
pH	SU	T	-		2.39	:	-		2.56	:	-		-	
Inorganics														
Cyanide	mg/L	T	-		-		-		<0.01	J	-		-	
Physical Properties														
Hardness	mg/L	T	-		4090.	:	-		-		-		-	
Hardness	mg/L	D	-		-		4070.	:	-		-		-	
Metals														

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Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Spring 10/7/2002 GOATHILLSPRING-D01N-GRW GW3		GOATHILL SPRING 1/7/2003 GOATHILLSPRING-T01N-GRW GW3		GOATHILL SPRING 1/7/2003 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 1/20/2003 GOATHILLSPRINGR-T01N-GRW GW3	Goathill Spring 2/6/2003 Goathill Spring-T01N-GRW GW3	Goathill Spring 3/4/2003 Goathill Spring-T01N-GRW GW3
Aluminum	mg/L	T	-		1520.	:	-		-	-	-
Aluminum	mg/L	D	-		-		1470.	:	-	-	-
Antimony	mg/L	T	-		<0.028	:	-		-	-	-
Antimony	mg/L	D	-		-		<0.028	:	-	-	-
Arsenic	mg/L	T	-		0.121	:	-		-	-	-
Arsenic	mg/L	D	-		-		0.0777	:	-	-	-
Barium	mg/L	T	-		0.253	:	-		-	-	-
Barium	mg/L	D	-		-		<0.048	:	-	-	-
Beryllium	mg/L	T	-		0.228	:	-		-	-	-
Beryllium	mg/L	D	-		-		0.226	:	-	-	-
Boron	mg/L	T	-		<0.027	:	-		-	-	-
Boron	mg/L	D	-		-		<0.027	:	-	-	-
Cadmium	mg/L	T	-		0.521	:	-		-	-	-
Cadmium	mg/L	D	-		-		0.506	:	-	-	-
Calcium	mg/L	T	-		423.	:	-		-	-	-
Calcium	mg/L	D	-		-		406.	:	-	-	-
Chromium	mg/L	T	-		0.652	:	-		-	-	-
Chromium	mg/L	D	-		-		0.628	:	-	-	-
Cobalt	mg/L	T	-		3.43	:	-		-	-	-
Cobalt	mg/L	D	-		-		3.52	:	-	-	-
Copper	mg/L	T	-		9.64	:	-		-	-	-
Copper	mg/L	D	-		-		9.56	:	-	-	-
Iron	mg/L	T	-		1290.	J	-		-	-	-
Iron	mg/L	D	-		-		631.	:	-	-	-
Lead	mg/L	T	-		0.658	J	-		-	-	-
Lead	mg/L	D	-		-		0.0015	:	-	-	-
Magnesium	mg/L	T	-		737.	:	-		-	-	-
Magnesium	mg/L	D	-		-		741.	:	-	-	-
Manganese	mg/L	T	-		420.	:	-		-	-	-
Manganese	mg/L	D	-		-		427.	:	-	-	-
Mercury	mg/L	T	-		0.00011	:	-		-	-	-
Mercury	mg/L	D	<0.0001	:	-		<0.0001	:	-	-	-
Molybdenum	mg/L	T	-		<0.011	J	-		-	-	-
Molybdenum	mg/L	D	-		-		<0.011	J	-	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Spring 10/7/2002 GOATHILLSPRING-D01N-GRW GW3		GOATHILL SPRING 1/7/2003 GOATHILLSPRING-T01N-GRW GW3		GOATHILL SPRING 1/7/2003 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 1/20/2003 GOATHILLSPRINGR-T01N-GRW GW3	Goathill Spring 2/6/2003 Goathill Spring-T01N-GRW GW3	Goathill Spring 3/4/2003 Goathill Spring-T01N-GRW GW3
Nickel	mg/L	T	-		7.88	:	-		-	-	-
Nickel	mg/L	D	-		-		8.06	:	-	-	-
Potassium	mg/L	T	-		146.	:	-		-	-	-
Potassium	mg/L	D	-		-		<31.4	:	-	-	-
Selenium	mg/L	T	-		0.124	:	-		-	-	-
Selenium	mg/L	D	-		-		0.105	:	-	-	-
Silver	mg/L	T	-		0.0069	:	-		-	-	-
Silver	mg/L	D	-		-		<0.001	:	-	-	-
Sodium	mg/L	T	-		<36.6	:	-		-	-	-
Sodium	mg/L	D	-		-		<36.6	:	-	-	-
Thallium	mg/L	T	-		0.0029	:	-		-	-	-
Thallium	mg/L	D	-		-		<0.001	:	-	-	-
Vanadium	mg/L	T	-		0.099	:	-		-	-	-
Vanadium	mg/L	D	-		-		0.036	:	-	-	-
Zinc	mg/L	T	-		96.3	:	-		-	-	-
Zinc	mg/L	D	-		-		98.4	:	-	-	-

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID	Goathill Spring	Goathill Spring	Goathill Spring	Goathill Spring	Goathill Spring	Goathill Spring
			Sample Date	4/10/2003	4/10/2003	5/9/2003	6/4/2003	7/20/2003	7/20/2003
			Sample ID	GOATHILLSPRING-T 01N-GRW	GOATHILLSPRING-D01N-GRW	Goathill Spring-T01N-GRW	Goathill Spring-T01N-GRW	GOATHILLSPRING-T 01N-GRW	GOATHILLSPRING-D 01N-GRW
			Exposure Area	GW3	GW3	GW3	GW3	GW3	GW3
Field Measurements									
DO	mg/L	T		8.79 :	-	-	-	12.15 :	-
EH	millivolts	T		477.8 :	-	-	-	479.1 :	-
Flow	gpm	T		5.6 :	-	15.9 :	11.9 :	12.7 :	-
pH	SU	T		3.1 J	-	-	-	2.8 J	-
Specific Conductance	uS/cm	T		10534. :	-	-	-	10796. :	-
Temperature	Celsius	T		8.11 :	-	-	-	17.97 :	-
Turbidity	NTU	T		128.4 :	-	-	-	9.6 :	-
General Chemistry									
Ammonia	mg/L	T		0.071 :	-	-	-	<0.23 J	-
Bicarbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Chloride	mg/L	T		15.6 :	-	-	-	10.5 :	-
Fluoride	mg/L	T		89.5 :	-	-	-	100. :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	-	-	<1. :	-
Nitrate	mg/L	T		<2. J	-	-	-	<2. J	-
Nitrite	mg/L	T		0.063 :	-	-	-	0.072 :	-
Phosphate, Ortho As P	mg/L	T		11.5 J	-	-	-	14.5 J	-
Phosphorus	mg/L	T		0.018 J	-	-	-	<0.01 J	-
Sulfate	mg/L	T		12300. J	-	-	-	14200. J	-
Total Alkalinity	mg/L	T		<1. :	-	-	-	<1. :	-
Total Dissolved Solids	mg/L	T		21200. J	-	-	-	22200. J	-
Total Kjeldahl Nitrogen	mg/L	T		0.32 :	-	-	-	0.39 :	-
Total Organic Carbon	mg/L	T		8.6 J	-	-	-	11.6 J	-
Total Suspended Solids	mg/L	T		83.5 :	-	-	-	19.3 :	-
Laboratory Parameters									
pH	SU	T		3.1 J	-	-	-	2.8 J	-
Specific Conductance	umhos/cm	T		9370. J	-	-	-	10300. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		3520. :	-	-	-	4450. :	-
Hardness	mg/L	D		-	3480. :	-	-	-	4450. :

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Goathill Spring Sample Date: 4/10/2003 Sample ID: GOATHILLSPRING-T 01N-GRW GW3	Site ID: Goathill Spring Sample Date: 4/10/2003 Sample ID: GOATHILLSPRING- D01N-GRW GW3	Site ID: Goathill Spring Sample Date: 5/9/2003 Sample ID: Goathill Spring-T01N-GRW GW3	Site ID: Goathill Spring Sample Date: 6/4/2003 Sample ID: Goathill Spring-T01N-GRW GW3	Site ID: Goathill Spring Sample Date: 7/20/2003 Sample ID: GOATHILLSPRING-T 01N-GRW GW3	Site ID: Goathill Spring Sample Date: 7/20/2003 Sample ID: GOATHILLSPRING-D 01N-GRW GW3
Metals								
Aluminum	mg/L	T	1300. :	-	-	-	1560. :	-
Aluminum	mg/L	D	-	1280. :	-	-	-	1540. :
Antimony	mg/L	T	<0.072 :	-	-	-	<0.047 :	-
Antimony	mg/L	D	-	<0.072 :	-	-	-	<0.047 :
Arsenic	mg/L	T	0.0584 :	-	-	-	0.0881 :	-
Arsenic	mg/L	D	-	0.0612 :	-	-	-	0.0808 :
Barium	mg/L	T	<0.123 :	-	-	-	<0.059 :	-
Barium	mg/L	D	-	<0.123 :	-	-	-	<0.059 :
Beryllium	mg/L	T	0.274 :	-	-	-	0.245 :	-
Beryllium	mg/L	D	-	0.273 :	-	-	-	0.248 :
Boron	mg/L	T	<0.084 :	-	-	-	<0.048 :	-
Boron	mg/L	D	-	<0.084 :	-	-	-	<0.048 :
Cadmium	mg/L	T	0.394 :	-	-	-	0.445 J	-
Cadmium	mg/L	D	-	0.318 J	-	-	-	0.465 J
Calcium	mg/L	T	350. :	-	-	-	423. :	-
Calcium	mg/L	D	-	352. :	-	-	-	422. :
Chromium	mg/L	T	0.582 :	-	-	-	0.612 J	-
Chromium	mg/L	D	-	0.499 :	-	-	-	0.587 J
Cobalt	mg/L	T	2.79 :	-	-	-	3.5 :	-
Cobalt	mg/L	D	-	2.9 :	-	-	-	3.52 :
Copper	mg/L	T	7.67 :	-	-	-	9.25 :	-
Copper	mg/L	D	-	7.42 :	-	-	-	9.12 :
Iron	mg/L	T	550. :	-	-	-	651. :	-
Iron	mg/L	D	-	547. :	-	-	-	630. :
Lead	mg/L	T	0.0093 :	-	-	-	0.0013 :	-
Lead	mg/L	D	-	0.0022 :	-	-	-	0.0013 :
Magnesium	mg/L	T	643. :	-	-	-	825. :	-
Magnesium	mg/L	D	-	633. :	-	-	-	826. :
Manganese	mg/L	T	364. :	-	-	-	429. :	-
Manganese	mg/L	D	-	363. :	-	-	-	425. :
Mercury	mg/L	T	<0.0001 :	-	-	-	0.001 J	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	0.00077 J
Molybdenum	mg/L	T	<0.023 :	-	-	-	<0.017 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Spring 4/10/2003 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 4/10/2003 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 5/9/2003 Goathill Spring-T01N-GRW GW3		Goathill Spring 6/4/2003 Goathill Spring-T01N-GRW GW3		Goathill Spring 7/20/2003 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 7/20/2003 GOATHILLSPRING-D 01N-GRW GW3	
Molybdenum	mg/L	D	-		<0.023	:	-		-		-		<0.017	:
Nickel	mg/L	T	6.47	:	-		-		-		8.38	:	-	
Nickel	mg/L	D	-		6.4	:	-		-		-		8.35	:
Potassium	mg/L	T	<3.26	:	-		-		-		<37.1	:	-	
Potassium	mg/L	D	-		<3.26	:	-		-		-		<37.1	:
Selenium	mg/L	T	0.0733	:	-		-		-		<0.104	:	-	
Selenium	mg/L	D	-		0.0849	:	-		-		-		<0.0948	J
Silver	mg/L	T	<0.0002	:	-		-		-		<0.001	J	-	
Silver	mg/L	D	-		<0.0002	:	-		-		-		<0.001	J
Sodium	mg/L	T	<3.52	:	-		-		-		<53.2	:	-	
Sodium	mg/L	D	-		<3.52	:	-		-		-		<69.2	:
Thallium	mg/L	T	<0.0002	:	-		-		-		<0.001	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		-		-		<0.001	:
Vanadium	mg/L	T	0.014	J	-		-		-		0.0178	:	-	
Vanadium	mg/L	D	-		0.0128	J	-		-		-		0.0159	:
Zinc	mg/L	T	79.	:	-		-		-		99.	:	-	
Zinc	mg/L	D	-		78.5	:	-		-		-		98.3	:

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Goathill Spring Sample Date: 10/21/2003 Sample ID: GOATHILLSPRING-T01N-GRW GW3		Site ID: Goathill Spring Sample Date: 10/21/2003 Sample ID: GOATHILLSPRING-D01N-GRW GW3		Site ID: Goathill Spring Sample Date: 11/4/2003 Sample ID: GOATHILLSPRINGR-T01N-GRW GW3		Site ID: Goathill Spring Sample Date: 12/11/2003 Sample ID: GOATHILLSPRINGR-T01N-GRW GW3		Site ID: Goathill Spring Sample Date: 1/7/2004 Sample ID: GOATHILLSPRING-T01N-GRW GW3		Site ID: Goathill Spring Sample Date: 1/7/2004 Sample ID: GOATHILLSPRING-D01N-GRW GW3	
Field Measurements														
DO	mg/L	T	9.53	:	-		-		-		10.46	:	-	
EH	millivolts	T	478.5	:	-		-		-		471.8	:	-	
Flow	gpm	T	15.9	:	-		20.	:	17.6	:	20.	:	-	
pH	SU	T	2.8	J	-		-		-		2.7	J	-	
Specific Conductance	uS/cm	T	11635.	:	-		-		-		10903.	:	-	
Temperature	Celsius	T	6.4	:	-		-		-		3.71	:	-	
Turbidity	NTU	T	19.6	:	-		-		-		172.9	:	-	
General Chemistry														
Ammonia	mg/L	T	0.15	J	-		-		-		<0.14	J	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Chloride	mg/L	T	14.1	:	-		-		-		22.8	:	-	
Fluoride	mg/L	T	88.	:	-		-		-		92.8	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Nitrate	mg/L	T	<1.	J	-		-		-		1.3	J	-	
Nitrite	mg/L	T	0.0539	J	-		-		-		0.078	J	-	
Phosphate, Ortho As P	mg/L	T	15.	J	-		-		-		13.6	J	-	
Phosphorus	mg/L	T	0.016	J	-		-		-		13.	:	-	
Sulfate	mg/L	T	14600.	J	-		-		-		13800.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		-		-		<1.	:	-	
Total Dissolved Solids	mg/L	T	22900.	J	-		-		-		23800.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		-		-		0.32	J	-	
Total Organic Carbon	mg/L	T	10.6	J	-		-		-		10.8	:	-	
Total Suspended Solids	mg/L	T	33.1	:	-		-		-		90.3	:	-	
Laboratory Parameters														
pH	SU	T	2.8	J	-		-		-		2.7	J	-	
Specific Conductance	umhos/cm	T	11500.	J	-		-		-		9580.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		-		-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	4120.	:	-		-		-		4020.	:	-	
Hardness	mg/L	D	-		4040.	:	-		-		-		4030.	:

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T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Goathill Spring Sample Date: 10/21/2003 Sample ID: GOATHILLSPRING-T 01N-GRW GW3	Site ID: Goathill Spring Sample Date: 10/21/2003 Sample ID: GOATHILLSPRING-D01N-GRW GW3	Site ID: Goathill Spring Sample Date: 11/4/2003 Sample ID: GOATHILLSPRINGR-T01N-GRW GW3	Site ID: Goathill Spring Sample Date: 12/11/2003 Sample ID: GOATHILLSPRINGR-T01N-GRW GW3	Site ID: Goathill Spring Sample Date: 1/7/2004 Sample ID: GOATHILLSPRING-T 01N-GRW GW3	Site ID: Goathill Spring Sample Date: 1/7/2004 Sample ID: GOATHILLSPRING-D 01N-GRW GW3
Metals								
Aluminum	mg/L	T	1470. :	-	-	-	1410. :	-
Aluminum	mg/L	D	-	1430. :	-	-	-	1420. :
Antimony	mg/L	T	<0.082 :	-	-	-	<0.029 :	-
Antimony	mg/L	D	-	<0.082 :	-	-	-	<0.029 :
Arsenic	mg/L	T	0.142 :	-	-	-	0.0996 :	-
Arsenic	mg/L	D	-	0.12 :	-	-	-	0.095 :
Barium	mg/L	T	<0.117 :	-	-	-	<0.053 :	-
Barium	mg/L	D	-	<0.117 :	-	-	-	<0.053 :
Beryllium	mg/L	T	0.268 :	-	-	-	0.23 :	-
Beryllium	mg/L	D	-	0.266 :	-	-	-	0.227 :
Boron	mg/L	T	<0.064 :	-	-	-	<0.117 :	-
Boron	mg/L	D	-	<0.064 :	-	-	-	<0.117 :
Cadmium	mg/L	T	0.499 :	-	-	-	0.468 J	-
Cadmium	mg/L	D	-	0.485 :	-	-	-	0.467 :
Calcium	mg/L	T	399. :	-	-	-	389. :	-
Calcium	mg/L	D	-	391. :	-	-	-	390. :
Chromium	mg/L	T	0.715 J	-	-	-	0.71 :	-
Chromium	mg/L	D	-	0.648 J	-	-	-	0.743 :
Cobalt	mg/L	T	3.54 :	-	-	-	3.34 J	-
Cobalt	mg/L	D	-	3.43 :	-	-	-	3.35 :
Copper	mg/L	T	9.66 :	-	-	-	9.29 :	-
Copper	mg/L	D	-	9.5 :	-	-	-	9.4 :
Iron	mg/L	T	627. :	-	-	-	598. :	-
Iron	mg/L	D	-	614. :	-	-	-	599. :
Lead	mg/L	T	<0.002 :	-	-	-	0.0015 :	-
Lead	mg/L	D	-	0.002 :	-	-	-	0.0013 :
Magnesium	mg/L	T	759. :	-	-	-	740. :	-
Magnesium	mg/L	D	-	743. :	-	-	-	742. :
Manganese	mg/L	T	430. :	-	-	-	421. :	-
Manganese	mg/L	D	-	420. :	-	-	-	424. :
Mercury	mg/L	T	<0.0001 :	-	-	-	<0.0001 J	-
Mercury	mg/L	D	-	<0.0001 :	-	-	-	<0.0001 J
Molybdenum	mg/L	T	<0.012 :	-	-	-	<0.024 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Spring 10/21/2003 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 10/21/2003 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring 11/4/2003 GOATHILLSPRINGR-T01N-GRW GW3	Goathill Spring 12/11/2003 GOATHILLSPRINGR-T01N-GRW GW3	Goathill Spring 1/7/2004 GOATHILLSPRING-T 01N-GRW GW3		Goathill Spring 1/7/2004 GOATHILLSPRING-D 01N-GRW GW3	
Molybdenum	mg/L	D	-		<0.012	:	-	-	-		<0.024	:
Nickel	mg/L	T	8.23	:	-		-	-	7.93	:	-	
Nickel	mg/L	D	-		7.96	:	-	-	-		8.01	:
Potassium	mg/L	T	<63.8	:	-		-	-	<24.3	:	-	
Potassium	mg/L	D	-		<63.8	:	-	-	-		<24.3	:
Selenium	mg/L	T	0.147	:	-		-	-	0.221	J	-	
Selenium	mg/L	D	-		0.157	:	-	-	-		0.214	:
Silver	mg/L	T	<0.001	:	-		-	-	<0.001	:	-	
Silver	mg/L	D	-		<0.001	:	-	-	-		<0.001	:
Sodium	mg/L	T	<99.1	:	-		-	-	<92.	:	-	
Sodium	mg/L	D	-		<99.1	:	-	-	-		<92.	:
Thallium	mg/L	T	<0.001	:	-		-	-	<0.001	:	-	
Thallium	mg/L	D	-		<0.001	:	-	-	-		<0.001	:
Vanadium	mg/L	T	0.0214	:	-		-	-	0.0177	:	-	
Vanadium	mg/L	D	-		0.0236	:	-	-	-		0.0169	:
Zinc	mg/L	T	98.8	:	-		-	-	93.9	:	-	
Zinc	mg/L	D	-		96.9	:	-	-	-		94.1	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Goathill Spring 4/20/2004 GOATHILLSPRING-T01N-GRW GW3		Goathill Spring 4/20/2004 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring Source 7/20/2003 GOATHILLSPRINGSOURCE-T01N-GRW GW3		Goathill Spring Source 7/20/2003 GOATHILLSPRINGSOURCE-D01N-GRW GW3		Goathill Spring Source 4/20/2004 GOATHILLSPRINGSOURCE-T01N-GRW GW3		Goathill Spring Source 4/20/2004 GOATHILLSPRINGSOURCE-D01N-GRW GW3	
Field Measurements														
DO	mg/L	T	8.58	:	-		14.27	:	-		9.81	:	-	
EH	millivolts	T	487.4	:	-		578.7	:	-		604.3	:	-	
Flow	gpm	T	3.96	:	-		2.4	:	-		-		-	
pH	SU	T	2.8	J	-		2.9	J	-		3.	J	-	
Specific Conductance	uS/cm	T	11218.	:	-		11820.	:	-		13718.	:	-	
Temperature	Celsius	T	11.9	:	-		16.75	:	-		6.81	:	-	
Turbidity	NTU	T	35.	:	-		8.7	:	-		91.1	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.18	:	-		<0.24	J	-		<0.25	:	-	
Bicarbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	256.	J	-		13.	:	-		258.	:	-	
Fluoride	mg/L	T	78.1	:	-		175.	:	-		77.5	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	1.8	J	-		<2.	J	-		<1.	J	-	
Nitrite	mg/L	T	0.098	J	-		0.081	J	-		0.11	J	-	
Phosphate, Ortho As P	mg/L	T	12.9	J	-		8.6	J	-		0.095	J	-	
Phosphorus	mg/L	T	0.022	J	-		<0.01	J	-		0.022	J	-	
Sulfate	mg/L	T	16600.	:	-		14900.	J	-		17400.	:	-	
Total Alkalinity	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Total Dissolved Solids	mg/L	T	17900.	:	-		27900.	J	-		24400.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.31	:	-		0.49	:	-		<0.37	:	-	
Total Organic Carbon	mg/L	T	8.3	J	-		11.7	J	-		10.3	J	-	
Total Suspended Solids	mg/L	T	153.	J	-		26.4	:	-		156.	:	-	
Laboratory Parameters														
pH	SU	T	2.8	J	-		2.9	J	-		3.	J	-	
Specific Conductance	umhos/cm	T	8600.	J	-		11000.	J	-		14300.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	3720.	:	-		5260.	:	-		5400.	:	-	
Hardness	mg/L	D	-		3840.	:	-		5020.	:	-		5250.	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Exposure Area Fraction	Site ID: Goathill Spring Sample Date: 4/20/2004 Sample ID: GOATHILLSPRING-T01N-GRW GW3		Site ID: Goathill Spring Sample Date: 4/20/2004 Sample ID: GOATHILLSPRING-D01N-GRW GW3		Site ID: Goathill Spring Source Sample Date: 7/20/2003 Sample ID: GOATHILLSPRINGSOURCE-T01N-GRW GW3		Site ID: Goathill Spring Source Sample Date: 7/20/2003 Sample ID: GOATHILLSPRINGSOURCE-D01N-GRW GW3		Site ID: Goathill Spring Source Sample Date: 4/20/2004 Sample ID: GOATHILLSPRINGSOURCE-T01N-GRW GW3		Site ID: Goathill Spring Source Sample Date: 4/20/2004 Sample ID: GOATHILLSPRINGSOURCE-D01N-GRW GW3	
Metals														
Aluminum	mg/L	T	1330.	:	-		1540.	:	-		1750.	:	-	
Aluminum	mg/L	D	-		1380.	:	-		1470.	:	-		1700.	:
Antimony	mg/L	T	<0.053	:	-		<0.038	:	-		<0.053	:	-	
Antimony	mg/L	D	-		<0.053	:	-		<0.038	:	-		<0.053	:
Arsenic	mg/L	T	<0.07	:	-		0.082	:	-		<0.103	:	-	
Arsenic	mg/L	D	-		<0.0936	:	-		0.0908	:	-		<0.116	:
Barium	mg/L	T	<0.049	:	-		<0.073	:	-		<0.049	:	-	
Barium	mg/L	D	-		<0.049	:	-		<0.073	:	-		<0.049	:
Beryllium	mg/L	T	0.246	J	-		0.306	:	-		0.328	:	-	
Beryllium	mg/L	D	-		0.252	:	-		0.299	:	-		0.318	:
Boron	mg/L	T	<0.036	:	-		<0.046	:	-		<0.036	:	-	
Boron	mg/L	D	-		<0.036	:	-		<0.046	:	-		<0.036	:
Cadmium	mg/L	T	0.518	:	-		0.574	:	-		0.639	:	-	
Cadmium	mg/L	D	-		0.517	J	-		0.542	:	-		0.621	J
Calcium	mg/L	T	362.	:	-		439.	:	-		432.	:	-	
Calcium	mg/L	D	-		373.	:	-		421.	:	-		418.	:
Chromium	mg/L	T	0.606	:	-		0.218	J	-		0.597	:	-	
Chromium	mg/L	D	-		0.634	:	-		0.178	J	-		0.623	:
Cobalt	mg/L	T	3.14	:	-		4.23	:	-		4.55	:	-	
Cobalt	mg/L	D	-		3.15	:	-		4.03	:	-		4.49	:
Copper	mg/L	T	8.39	:	-		7.47	:	-		7.48	:	-	
Copper	mg/L	D	-		8.75	:	-		7.1	:	-		7.33	:
Iron	mg/L	T	608.	J	-		359.	:	-		261.	J	-	
Iron	mg/L	D	-		625.	:	-		343.	:	-		248.	:
Lead	mg/L	T	0.0082	:	-		<0.001	:	-		0.0291	:	-	
Lead	mg/L	D	-		<0.004	:	-		<0.001	:	-		<0.004	:
Magnesium	mg/L	T	684.	:	-		1010.	:	-		1050.	:	-	
Magnesium	mg/L	D	-		706.	:	-		964.	:	-		1020.	:
Manganese	mg/L	T	372.	:	-		601.	:	-		596.	:	-	
Manganese	mg/L	D	-		384.	:	-		574.	:	-		579.	:
Mercury	mg/L	T	<0.0001	:	-		0.00075	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		0.0002	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0462	:	-		<0.016	:	-		<0.0225	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6m
Seep/Spring - Colluvium
Validated Analytical Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	Goathill Spring 4/20/2004 GOATHILLSPRING-T01N-GRW GW3		Goathill Spring 4/20/2004 GOATHILLSPRING-D01N-GRW GW3		Goathill Spring Source 7/20/2003 GOATHILLSPRINGSOURCE-T01N-GRW GW3		Goathill Spring Source 7/20/2003 GOATHILLSPRINGSOURCE-D01N-GRW GW3		Goathill Spring Source 4/20/2004 GOATHILLSPRINGSOURCE-T01N-GRW GW3		Goathill Spring Source 4/20/2004 GOATHILLSPRINGSOURCE-D01N-GRW GW3	
Molybdenum	mg/L		D	-		<0.0176	:	-		<0.016	:	-		<0.0203	:
Nickel	mg/L		T	6.99	:	-		9.03	:	-		9.84	:	-	
Nickel	mg/L		D	-		7.48	:	-		8.77	:	-		9.63	:
Potassium	mg/L		T	<15.5	:	-		<25.	:	-		<15.5	:	-	
Potassium	mg/L		D	-		<15.5	:	-		<25.	:	-		<15.5	:
Selenium	mg/L		T	0.0533	:	-		0.13	:	-		0.102	:	-	
Selenium	mg/L		D	-		0.0609	:	-		0.123	J	-		0.0814	:
Silver	mg/L		T	<0.001	:	-		<0.0051	J	-		<0.001	:	-	
Silver	mg/L		D	-		<0.001	:	-		<0.0051	J	-		<0.001	:
Sodium	mg/L		T	<32.8	:	-		<21.9	:	-		<32.8	:	-	
Sodium	mg/L		D	-		<32.8	:	-		<21.9	:	-		<32.8	:
Thallium	mg/L		T	<0.001	:	-		<0.001	:	-		<0.001	:	-	
Thallium	mg/L		D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Vanadium	mg/L		T	0.0221	:	-		<0.002	:	-		<0.002	:	-	
Vanadium	mg/L		D	-		0.0216	:	-		<0.002	:	-		<0.002	:
Zinc	mg/L		T	84.6	:	-		126.	:	-		120.	:	-	
Zinc	mg/L		D	-		87.2	:	-		121.	:	-		117.	:
Isotopes															
Delta D	per mil		T	-		-		-		-		-89.2	:	-	
Delta O-18	per mil		T	-		-		-		-		-12.3	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID: 003 Central Seep Sample Date: 7/9/2003 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 7/9/2003 Sample ID: 003CENTRALSEEP-D01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 10/20/2003 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 10/20/2003 Sample ID: 003CENTRALSEEP-D01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 1/8/2004 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 1/8/2004 Sample ID: 003CENTRALSEEP-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	6.54	:	-		5.54	:	-		9.11	:	-	
EH	millivolts	T	410.7	:	-		105.1	:	-		256.8	:	-	
Flow	gpm	T	0.1	:	-		0.5	:	-		1.3	:	-	
pH	SU	T	7.3	J	-		7.6	J	-		5.98	:	-	
Specific Conductance	uS/cm	T	2441.	:	-		2641.	:	-		2479.	:	-	
Temperature	Celsius	T	13.84	:	-		12.89	:	-		4.3	:	-	
Turbidity	NTU	T	40.9	:	-		11.4	:	-		5.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.12	J	-		0.1	J	-		<0.067	:	-	
Bicarbonate (as CaCO3)	mg/L	T	212.	:	-		208.	:	-		194.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	18.4	:	-		15.	:	-		14.5	:	-	
Fluoride	mg/L	T	0.55	:	-		0.74	:	-		0.51	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	J	-		<0.2	J	-		<0.25	J	-	
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T	<0.041	J	-		0.031	:	-		<0.026	J	-	
Phosphorus	mg/L	T	0.15	:	-		0.091	:	-		0.062	:	-	
Sulfate	mg/L	T	1530.	J	-		1470.	J	-		1400.	:	-	
Total Alkalinity	mg/L	T	212.	:	-		208.	:	-		194.	:	-	
Total Dissolved Solids	mg/L	T	2560.	:	-		2480.	:	-		2420.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	0.41	:	-		0.38	:	-		<0.24	J	-	
Total Organic Carbon	mg/L	T	3.9	J	-		4.3	J	-		<2.6	:	-	
Total Suspended Solids	mg/L	T	12.5	:	-		110.	:	-		27.1	:	-	
Laboratory Parameters														
pH	SU	T	7.3	J	-		7.6	J	-		5.98	:	-	
Specific Conductance	umhos/cm	T	2390.	J	-		2590.	J	-		2270.	J	-	
Inorganics														
Cyanide	mg/L	T	0.0111	J	-		0.0114	J	-		0.0121	J	-	
Physical Properties														
Hardness	mg/L	T	1530.	:	-		1680.	:	-		1410.	:	-	
Hardness	mg/L	D	-		1570.	:	-		1680.	:	-		1540.	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID: 003 Central Seep Sample Date: 7/9/2003 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 7/9/2003 Sample ID: 003CENTRALSEEP-D01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 10/20/2003 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 10/20/2003 Sample ID: 003CENTRALSEEP-D01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 1/8/2004 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 1/8/2004 Sample ID: 003CENTRALSEEP-D01N-GRW GW13	
Metals														
Aluminum	mg/L	T	4.86	:	-		<1.76	:	-		<0.621	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.307	:	-		<0.621	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	0.00065	:	-		0.00082	:	-		0.00056	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		0.00069	:
Barium	mg/L	T	0.0761	:	-		0.0513	:	-		0.0234	:	-	
Barium	mg/L	D	-		0.0307	:	-		0.0343	:	-		0.0235	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.001	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.001	:
Boron	mg/L	T	0.0497	:	-		0.0392	:	-		0.0278	:	-	
Boron	mg/L	D	-		0.0465	:	-		0.0376	:	-		0.0256	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0005	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0005	:	-		<0.0007	J
Calcium	mg/L	T	453.	:	-		496.	:	-		417.	:	-	
Calcium	mg/L	D	-		466.	:	-		495.	:	-		454.	:
Chromium	mg/L	T	0.0036	J	-		0.0017	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		<0.0006	J	-		<0.0011	J	-		<0.0057	:
Cobalt	mg/L	T	0.0034	:	-		<0.0029	:	-		<0.0037	:	-	
Cobalt	mg/L	D	-		<0.0018	:	-		<0.0029	:	-		0.0039	:
Copper	mg/L	T	0.007	:	-		0.0031	:	-		<0.0035	:	-	
Copper	mg/L	D	-		<0.0014	:	-		<0.0022	:	-		<0.0035	:
Iron	mg/L	T	4.61	:	-		<1.92	:	-		<0.423	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.3	:	-		<0.423	:
Lead	mg/L	T	0.0035	:	-		0.0016	:	-		0.00034	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		<0.0002	:
Magnesium	mg/L	T	97.2	:	-		108.	:	-		89.6	:	-	
Magnesium	mg/L	D	-		99.2	:	-		107.	:	-		97.8	:
Manganese	mg/L	T	0.369	:	-		0.516	:	-		0.0356	:	-	
Manganese	mg/L	D	-		<0.019	:	-		0.0132	:	-		<0.019	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.453	:	-		0.582	:	-		0.461	:	-	

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 Central Seep 7/9/2003 003CENTRALSEEP-T 01N-GRW GW13		003 Central Seep 7/9/2003 003CENTRALSEEP-D01N-GRW GW13		003 Central Seep 10/20/2003 003CENTRALSEEP-T01N-GRW GW13		003 Central Seep 10/20/2003 003CENTRALSEEP-D 01N-GRW GW13		003 Central Seep 1/8/2004 003CENTRALSEEP-T 01N-GRW GW13		003 Central Seep 1/8/2004 003CENTRALSEEP-D 01N-GRW GW13	
Molybdenum	mg/L	D	-		0.439	:	-		0.585	:	-		0.499	:
Nickel	mg/L	T	0.0024	J	-		<0.0024	:	-		<0.0168	:	-	
Nickel	mg/L	D	-		0.0261	:	-		<0.0024	:	-		<0.0168	:
Potassium	mg/L	T	5.74	:	-		2.74	:	-		1.41	:	-	
Potassium	mg/L	D	-		4.17	:	-		2.39	:	-		1.68	:
Selenium	mg/L	T	<0.0016	:	-		0.00082	:	-		<0.0019	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.0006	:	-		<0.0021	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	78.	:	-		79.9	:	-		62.6	:	-	
Sodium	mg/L	D	-		78.6	:	-		77.2	:	-		68.7	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0059	:	-		0.0038	:	-		0.0016	:	-	
Vanadium	mg/L	D	-		0.0019	:	-		0.0012	:	-		0.0012	:
Zinc	mg/L	T	<0.0442	:	-		<0.02	:	-		<0.091	:	-	
Zinc	mg/L	D	-		<0.016	:	-		<0.02	:	-		<0.091	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	003 Central Seep	003 Central Seep	003 East Seep	003 East Seep	003 East Seep	003 East Seep
			Sample Date	4/15/2004	4/15/2004	6/12/2003	6/12/2003	7/8/2003	7/8/2003
			Sample ID	003CENTRALSEEP-T01N-GRW GW13	003CENTRALSEEP-D01N-GRW GW13	003EASTSEEP-T01N-GRW GW13	003EASTSEEP-D01N-GRW GW13	003EASTSEEP-T01N-GRW GW13	003EASTSEEP-D01N-GRW GW13
Field Measurements									
DO	mg/L	T		5.62 :	-	7.55 :	-	8.23 :	-
EH	millivolts	T		226.9 :	-	92.2 :	-	349.5 :	-
Flow	gpm	T		0.8 :	-	2.7 :	-	2.4 :	-
pH	SU	T		7.7 J	-	7.7 J	-	7.8 J	-
Specific Conductance	uS/cm	T		2553. :	-	2216. :	-	2083. :	-
Temperature	Celsius	T		14.18 :	-	13. :	-	15.67 :	-
Turbidity	NTU	T		22.7 :	-	1.4 :	-	30.9 :	-
General Chemistry									
Ammonia	mg/L	T		<0.046 :	-	0.11 J	-	<0.11 J	-
Bicarbonate (as CaCO3)	mg/L	T		190. :	-	130. :	-	131. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		15.4 :	-	12.4 :	-	13. :	-
Fluoride	mg/L	T		0.65 :	-	0.59 :	-	0.69 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.25 J	-	<0.4 J	-	<0.2 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		0.026 :	-	0.012 :	-	<0.016 :	-
Phosphorus	mg/L	T		0.27 :	-	0.025 J	-	0.027 :	-
Sulfate	mg/L	T		1430. :	-	1090. J	-	1190. J	-
Total Alkalinity	mg/L	T		190. :	-	130. :	-	131. :	-
Total Dissolved Solids	mg/L	T		2450. :	-	1930. :	-	1990. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	0.27 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<3.2 :	-	2. J	-	<2.2 J	-
Total Suspended Solids	mg/L	T		383. :	-	4.7 :	-	5.3 :	-
Laboratory Parameters									
pH	SU	T		7.7 J	-	7.7 J	-	7.8 J	-
Specific Conductance	umhos/cm	T		2350. J	-	2060. J	-	2080. J	-
Inorganics									
Cyanide	mg/L	T		0.0153 J	-	0.0154 J	-	0.019 J	-
Physical Properties									
Hardness	mg/L	T		1720. :	-	1240. :	-	1320. :	-
Hardness	mg/L	D		-	1630. :	-	1270. :	-	1390. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID: 003 Central Seep Sample Date: 4/15/2004 Sample ID: 003CENTRALSEEP-T01N-GRW GW13		Site ID: 003 Central Seep Sample Date: 4/15/2004 Sample ID: 003CENTRALSEEP-D01N-GRW GW13		Site ID: 003 East Seep Sample Date: 6/12/2003 Sample ID: 003EASTSEEP-T01N-GRW GW13		Site ID: 003 East Seep Sample Date: 6/12/2003 Sample ID: 003EASTSEEP-D01N-GRW GW13		Site ID: 003 East Seep Sample Date: 7/8/2003 Sample ID: 003EASTSEEP-T01N-GRW GW13		Site ID: 003 East Seep Sample Date: 7/8/2003 Sample ID: 003EASTSEEP-D01N-GRW GW13	
Metals														
Aluminum	mg/L	T	1.22	:	-		<0.631	:	-		<0.236	:	-	
Aluminum	mg/L	D	-		<0.176	:	-		<0.631	:	-		<0.236	:
Antimony	mg/L	T	<0.0008	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.0008	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.00061	:	-		0.00047	:	-		0.00053	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.00053	:	-		0.00046	:
Barium	mg/L	T	0.0383	:	-		0.0272	:	-		0.0362	:	-	
Barium	mg/L	D	-		0.0273	:	-		0.0278	:	-		0.0369	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Boron	mg/L	T	0.0416	:	-		0.0596	:	-		0.0765	:	-	
Boron	mg/L	D	-		0.0396	:	-		0.0603	:	-		0.0824	:
Cadmium	mg/L	T	<0.0003	:	-		<0.0006	:	-		<0.0006	:	-	
Cadmium	mg/L	D	-		<0.0003	:	-		<0.0006	:	-		<0.0006	:
Calcium	mg/L	T	511.	:	-		378.	:	-		401.	:	-	
Calcium	mg/L	D	-		484.	:	-		388.	:	-		424.	:
Chromium	mg/L	T	0.0024	:	-		<0.0014	:	-		<0.0014	:	-	
Chromium	mg/L	D	-		0.00096	:	-		<0.0014	:	-		<0.0014	:
Cobalt	mg/L	T	<0.0023	:	-		<0.002	:	-		<0.002	:	-	
Cobalt	mg/L	D	-		<0.0011	:	-		<0.002	:	-		<0.002	:
Copper	mg/L	T	0.0043	:	-		<0.0024	:	-		<0.0024	J	-	
Copper	mg/L	D	-		0.00083	:	-		<0.0024	:	-		0.0072	J
Iron	mg/L	T	1.28	J	-		<0.667	:	-		<0.333	:	-	
Iron	mg/L	D	-		<0.192	:	-		<0.667	:	-		<0.333	:
Lead	mg/L	T	0.0036	:	-		<0.0003	:	-		<0.00022	:	-	
Lead	mg/L	D	-		<0.0008	:	-		<0.00025	:	-		<0.0002	:
Magnesium	mg/L	T	109.	:	-		72.1	:	-		76.4	:	-	
Magnesium	mg/L	D	-		103.	:	-		73.8	:	-		80.5	:
Manganese	mg/L	T	0.306	:	-		0.121	:	-		0.186	:	-	
Manganese	mg/L	D	-		<0.019	:	-		0.0731	:	-		0.0846	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.577	:	-		<0.0017	:	-		<0.0017	J	-	

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 Central Seep 4/15/2004 003CENTRALSEEP-T01N-GRW GW13		003 Central Seep 4/15/2004 003CENTRALSEEP-D01N-GRW GW13		003 East Seep 6/12/2003 003EASTSEEP-T01N-GRW GW13		003 East Seep 6/12/2003 003EASTSEEP-D01N-GRW GW13		003 East Seep 7/8/2003 003EASTSEEP-T01N-GRW GW13		003 East Seep 7/8/2003 003EASTSEEP-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.628	:	-		<0.0017	:	-		<0.0017	J
Nickel	mg/L	T	<0.0014	:	-		<0.0021	:	-		<0.0021	:	-	
Nickel	mg/L	D	-		<0.0014	:	-		<0.0021	:	-		<0.0021	:
Potassium	mg/L	T	2.27	:	-		<2.49	:	-		<0.393	J	-	
Potassium	mg/L	D	-		1.82	:	-		<3.	:	-		0.604	J
Selenium	mg/L	T	<0.0014	:	-		<0.0016	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		<0.0016	:	-		<0.0016	J
Silver	mg/L	T	<0.00089	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.00088	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	81.4	:	-		99.8	:	-		109.	:	-	
Sodium	mg/L	D	-		82.	:	-		101.	:	-		116.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.005	:	-		0.00083	:	-		0.0011	:	-	
Vanadium	mg/L	D	-		0.002	:	-		0.00069	:	-		0.0007	:
Zinc	mg/L	T	<0.015	:	-		<0.016	:	-		<0.0125	:	-	
Zinc	mg/L	D	-		0.0157	:	-		<0.016	:	-		<0.01	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Fraction	003 East Seep 10/20/2003 003EASTSEEP-T01N-GRW GW13		003 East Seep 10/20/2003 003EASTSEEP-D01N-GRW GW13		003 East Seep 1/8/2004 003EASTSEEP-T01N-GRW GW13		003 East Seep 1/8/2004 003EASTSEEP-D01N-GRW GW13		003 East Seep 4/15/2004 003EASTSEEP-T01N-GRW GW13		003 East Seep 4/15/2004 003EASTSEEP-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	7.62	:	-		11.01	:	-		5.96	:	-	
EH	millivolts	T	94.9	:	-		108.8	:	-		207.	:	-	
Flow	gpm	T	2.4	:	-		2.1	:	-		-		-	
pH	SU	T	7.45	:	-		7.62	:	-		7.56	:	-	
Specific Conductance	uS/cm	T	2194.	:	-		2111.	:	-		2119.	:	-	
Temperature	Celsius	T	12.33	:	-		3.94	:	-		14.44	:	-	
Turbidity	NTU	T	1.3	:	-		4.7	:	-		8.6	:	-	
General Chemistry														
Ammonia	mg/L	T	0.054	J	-		<0.067	J	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	130.	:	-		121.	:	-		124.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	12.5	:	-		12.4	:	-		12.5	:	-	
Fluoride	mg/L	T	0.58	:	-		0.52	:	-		0.67	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.2	J	-		<0.2	J	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.014	J	-		0.012	:	-	
Phosphorus	mg/L	T	0.022	:	-		<0.022	:	-		0.11	:	-	
Sulfate	mg/L	T	1320.	J	-		1150.	:	-		1230.	:	-	
Total Alkalinity	mg/L	T	130.	:	-		121.	:	-		124.	:	-	
Total Dissolved Solids	mg/L	T	1910.	:	-		1930.	:	-		1960.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	1.8	J	-		<1.2	:	-		<2.7	:	-	
Total Suspended Solids	mg/L	T	6.1	:	-		6.6	:	-		119.	J	-	
Laboratory Parameters														
pH	SU	T	7.45	:	-		7.62	:	-		7.56	:	-	
Specific Conductance	umhos/cm	T	1910.	J	-		1880.	J	-		1940.	J	-	
Inorganics														
Cyanide	mg/L	T	0.0146	J	-		0.0132	J	-		0.0129	:	-	
Physical Properties														
Hardness	mg/L	T	1320.	:	-		1090.	:	-		1250.	:	-	
Hardness	mg/L	D	-		1230.	:	-		1120.	:	-		1200.	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	003 East Seep	003 East Seep	003 East Seep	003 East Seep	003 East Seep	003 East Seep
			Sample Date	10/20/2003	10/20/2003	1/8/2004	1/8/2004	4/15/2004	4/15/2004
			Sample ID	003EASTSEEP-T01N-GRW	003EASTSEEP-D01N-GRW	003EASTSEEP-T01N-GRW	003EASTSEEP-D01N-GRW	003EASTSEEP-T01N-GRW	003EASTSEEP-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Metals									
Aluminum	mg/L	T		<0.307 :	-	<0.621 :	-	<0.708 :	-
Aluminum	mg/L	D		-	<0.307 :	-	<0.621 :	-	<0.219 :
Antimony	mg/L	T		<0.001 :	-	<0.0024 :	-	<0.0008 :	-
Antimony	mg/L	D		-	<0.001 :	-	<0.0024 :	-	<0.0008 :
Arsenic	mg/L	T		0.00052 :	-	0.00059 :	-	0.0009 :	-
Arsenic	mg/L	D		-	0.00051 :	-	0.00043 :	-	<0.0004 :
Barium	mg/L	T		0.0288 :	-	0.0259 :	-	0.0391 :	-
Barium	mg/L	D		-	0.0287 :	-	0.0225 :	-	0.0287 :
Beryllium	mg/L	T		<0.0004 :	-	<0.001 :	-	<0.0002 :	-
Beryllium	mg/L	D		-	<0.0004 :	-	<0.001 :	-	<0.0002 :
Boron	mg/L	T		0.06 :	-	0.0506 :	-	0.0692 :	-
Boron	mg/L	D		-	0.0604 :	-	0.0463 :	-	0.065 :
Cadmium	mg/L	T		<0.0005 :	-	<0.0007 J	-	<0.00035 :	-
Cadmium	mg/L	D		-	<0.0005 :	-	<0.0007 :	-	<0.0003 :
Calcium	mg/L	T		400. :	-	332. :	-	380. :	-
Calcium	mg/L	D		-	375. :	-	340. :	-	364. :
Chromium	mg/L	T		<0.0011 J	-	<0.0057 :	-	<0.0023 :	-
Chromium	mg/L	D		-	<0.0011 J	-	<0.0057 :	-	<0.0008 :
Cobalt	mg/L	T		<0.0029 :	-	<0.0037 :	-	0.0034 :	-
Cobalt	mg/L	D		-	<0.0029 :	-	<0.0037 :	-	<0.0017 :
Copper	mg/L	T		<0.0022 :	-	<0.0037 :	-	<0.0024 :	-
Copper	mg/L	D		-	0.0043 :	-	<0.0035 :	-	0.00099 :
Iron	mg/L	T		<0.3 J	-	<0.423 :	-	1.58 J	-
Iron	mg/L	D		-	<0.3 J	-	<0.423 :	-	<0.192 :
Lead	mg/L	T		<0.0004 :	-	<0.0002 :	-	0.0018 :	-
Lead	mg/L	D		-	<0.0004 :	-	<0.0002 :	-	<0.0008 :
Magnesium	mg/L	T		77.1 :	-	64.8 :	-	73.9 :	-
Magnesium	mg/L	D		-	72.2 :	-	66.5 :	-	70.9 :
Manganese	mg/L	T		0.148 :	-	0.0832 :	-	0.703 :	-
Manganese	mg/L	D		-	0.126 :	-	0.051 :	-	0.0585 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		<0.0011 :	-	<0.003 :	-	<0.0018 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 East Seep 10/20/2003 003EASTSEEP-T01N-GRW GW13		003 East Seep 10/20/2003 003EASTSEEP-D01N-GRW GW13		003 East Seep 1/8/2004 003EASTSEEP-T01N-GRW GW13		003 East Seep 1/8/2004 003EASTSEEP-D01N-GRW GW13		003 East Seep 4/15/2004 003EASTSEEP-T01N-GRW GW13		003 East Seep 4/15/2004 003EASTSEEP-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.0015	:	-		<0.003	:	-		<0.0033	:
Nickel	mg/L	T	<0.0024	:	-		<0.0168	:	-		0.0044	:	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.0168	:	-		<0.0014	:
Potassium	mg/L	T	1.59	:	-		1.38	:	-		2.19	:	-	
Potassium	mg/L	D	-		1.65	:	-		1.4	:	-		1.92	:
Selenium	mg/L	T	<0.0013	:	-		<0.0016	J	-		<0.0014	:	-	
Selenium	mg/L	D	-		<0.0013	:	-		<0.0011	:	-		<0.0014	:
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.00089	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.00088	:
Sodium	mg/L	T	100.	:	-		81.4	:	-		98.7	:	-	
Sodium	mg/L	D	-		91.1	:	-		85.6	:	-		99.2	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00039	:	-		0.00075	:	-		0.0032	:	-	
Vanadium	mg/L	D	-		0.00043	:	-		0.00048	:	-		0.0011	:
Zinc	mg/L	T	<0.02	:	-		<0.091	:	-		<0.015	:	-	
Zinc	mg/L	D	-		<0.02	:	-		<0.091	:	-		0.0189	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID					
			003 Seeps Confluence 6/12/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 7/9/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 10/20/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 4/15/2004 003SEEPCONFLUEN CE-T01N-GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-T01N -GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-D01 N-GRW GW13
Field Measurements								
DO	mg/L	T	8. :	9.8 :	-	-	6.85 :	-
EH	millivolts	T	79.6 :	362.7 :	-	-	68.8 :	-
Flow	gpm	T	-	39.6 :	42. :	15. :	0.35 :	-
pH	SU	T	7.28 :	7.66 :	-	-	7.6 J	-
Specific Conductance	uS/cm	T	2366. :	2254. :	-	-	2618. :	-
Temperature	Celsius	T	14.68 :	12.74 :	-	-	13.27 :	-
Turbidity	NTU	T	1.3 :	36.4 :	-	-	154.5 :	-
General Chemistry								
Ammonia	mg/L	T	-	-	-	-	0.11 J	-
Bicarbonate (as CaCO3)	mg/L	T	-	-	-	-	196. :	-
Carbonate (as CaCO3)	mg/L	T	-	-	-	-	<1. :	-
Chloride	mg/L	T	-	-	-	-	<0.4 :	-
Fluoride	mg/L	T	-	-	-	-	0.71 :	-
Hydroxide (as CaCO3)	mg/L	T	-	-	-	-	<1. :	-
Nitrate	mg/L	T	-	-	-	-	<0.4 J	-
Nitrite	mg/L	T	-	-	-	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T	-	-	-	-	<0.01 :	-
Phosphorus	mg/L	T	-	-	-	-	0.062 J	-
Sulfate	mg/L	T	-	-	-	-	1370. J	-
Total Alkalinity	mg/L	T	-	-	-	-	196. :	-
Total Dissolved Solids	mg/L	T	-	-	-	-	2600. :	-
Total Kjeldahl Nitrogen	mg/L	T	-	-	-	-	0.3 :	-
Total Organic Carbon	mg/L	T	-	-	-	-	2.6 J	-
Total Suspended Solids	mg/L	T	-	-	-	-	6.9 :	-
Laboratory Parameters								
pH	SU	T	7.28 :	7.66 :	-	-	7.6 J	-
Specific Conductance	umhos/cm	T	-	-	-	-	2430. J	-
Inorganics								
Cyanide	mg/L	T	-	-	-	-	<0.01 :	-
Physical Properties								
Hardness	mg/L	T	-	-	-	-	1560. :	-
Hardness	mg/L	D	-	-	-	-	-	1630. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID: 003 Seeps Confluence Sample Date: 6/12/2003 Sample ID: 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 7/9/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 10/20/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 4/15/2004 003SEEPCONFLUEN CE-T01N-GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-T01N -GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-D01 N-GRW GW13
Metals								
Aluminum	mg/L	T	-	-	-	-	<0.631 :	-
Aluminum	mg/L	D	-	-	-	-	-	<0.631 :
Antimony	mg/L	T	-	-	-	-	<0.001 :	-
Antimony	mg/L	D	-	-	-	-	-	<0.001 :
Arsenic	mg/L	T	-	-	-	-	0.00087 :	-
Arsenic	mg/L	D	-	-	-	-	-	0.00068 :
Barium	mg/L	T	-	-	-	-	0.0313 :	-
Barium	mg/L	D	-	-	-	-	-	0.0328 :
Beryllium	mg/L	T	-	-	-	-	<0.0002 :	-
Beryllium	mg/L	D	-	-	-	-	-	<0.0002 :
Boron	mg/L	T	-	-	-	-	0.0354 :	-
Boron	mg/L	D	-	-	-	-	-	0.0361 :
Cadmium	mg/L	T	-	-	-	-	<0.0006 :	-
Cadmium	mg/L	D	-	-	-	-	-	<0.0006 :
Calcium	mg/L	T	-	-	-	-	473. :	-
Calcium	mg/L	D	-	-	-	-	-	495. :
Chromium	mg/L	T	-	-	-	-	<0.0014 :	-
Chromium	mg/L	D	-	-	-	-	-	<0.0014 :
Cobalt	mg/L	T	-	-	-	-	<0.002 :	-
Cobalt	mg/L	D	-	-	-	-	-	<0.002 :
Copper	mg/L	T	-	-	-	-	<0.0024 :	-
Copper	mg/L	D	-	-	-	-	-	<0.0024 :
Iron	mg/L	T	-	-	-	-	<0.667 :	-
Iron	mg/L	D	-	-	-	-	-	<0.667 :
Lead	mg/L	T	-	-	-	-	<0.00041 :	-
Lead	mg/L	D	-	-	-	-	-	<0.00023 :
Magnesium	mg/L	T	-	-	-	-	91.1 :	-
Magnesium	mg/L	D	-	-	-	-	-	95.3 :
Manganese	mg/L	T	-	-	-	-	0.209 :	-
Manganese	mg/L	D	-	-	-	-	-	0.208 :
Mercury	mg/L	T	-	-	-	-	<0.0001 :	-
Mercury	mg/L	D	-	-	-	-	-	<0.0001 :
Molybdenum	mg/L	T	-	-	-	-	<0.0017 :	-

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 Seeps Confluence 6/12/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 7/9/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 10/20/2003 003SEEPCONFLUEN CE-T01N-GRW GW13	003 Seeps Confluence 4/15/2004 003SEEPCONFLUEN CE-T01N-GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-T01N -GRW GW13	003 West Seep 6/12/2003 003WESTSEEP-D01 N-GRW GW13
Molybdenum	mg/L	D	-	-	-	-	-	<0.0017 :
Nickel	mg/L	T	-	-	-	-	<0.0021 :	-
Nickel	mg/L	D	-	-	-	-	-	<0.0021 :
Potassium	mg/L	T	-	-	-	-	<2.2 :	-
Potassium	mg/L	D	-	-	-	-	-	<1.6 :
Selenium	mg/L	T	-	-	-	-	<0.0016 :	-
Selenium	mg/L	D	-	-	-	-	-	<0.0016 :
Silver	mg/L	T	-	-	-	-	<0.0002 :	-
Silver	mg/L	D	-	-	-	-	-	<0.0002 :
Sodium	mg/L	T	-	-	-	-	114. :	-
Sodium	mg/L	D	-	-	-	-	-	116. :
Thallium	mg/L	T	-	-	-	-	<0.0002 :	-
Thallium	mg/L	D	-	-	-	-	-	<0.0002 :
Vanadium	mg/L	T	-	-	-	-	0.0011 :	-
Vanadium	mg/L	D	-	-	-	-	-	0.00083 :
Zinc	mg/L	T	-	-	-	-	<0.016 :	-
Zinc	mg/L	D	-	-	-	-	-	<0.016 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	003 West Seep	003 West Seep	003 West Seep	003 West Seep	003 West Seep	003 West Seep
			Sample Date	7/8/2003	7/8/2003	10/20/2003	10/20/2003	1/8/2004	1/8/2004
			Sample ID	003WESTSEEP-T01N	003WESTSEEP-D01	003WESTSEEP-T01	003WESTSEEP-D01	003WESTSEEP-T01N	003WESTSEEP-D01
			Exposure Area	-GRW	N-GRW	N-GRW	N-GRW	-GRW	N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		6.75 :	-	6.51 :	-	9.41 :	-
EH	millivolts	T		332.4 :	-	19.6 :	-	182.2 :	-
Flow	gpm	T		0.1 :	-	0.8 :	-	0.7 :	-
pH	SU	T		7.55 :	-	7.4 :	-	7.6 J	-
Specific Conductance	uS/cm	T		2757. :	-	2612. :	-	2381. :	-
Temperature	Celsius	T		-	-	15.84 :	-	2.75 :	-
Turbidity	NTU	T		40.1 :	-	8.7 :	-	88.1 :	-
General Chemistry									
Ammonia	mg/L	T		<0.086 J	-	0.071 J	-	<0.072 J	-
Bicarbonate (as CaCO3)	mg/L	T		215. :	-	190. :	-	155. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		16.7 :	-	13.4 :	-	12.7 :	-
Fluoride	mg/L	T		0.72 :	-	0.68 :	-	0.55 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.67 J	-	<0.2 J	-	<0.2 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.042 :	-	<0.01 :	-	<0.021 J	-
Phosphorus	mg/L	T		0.17 :	-	0.056 :	-	0.11 :	-
Sulfate	mg/L	T		1560. J	-	1380. J	-	1340. :	-
Total Alkalinity	mg/L	T		215. :	-	190. :	-	155. :	-
Total Dissolved Solids	mg/L	T		2870. :	-	2580. :	-	2190. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	0.27 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<3.1 J	-	2.7 J	-	5.3 :	-
Total Suspended Solids	mg/L	T		61.8 :	-	23.2 :	-	111. :	-
Laboratory Parameters									
pH	SU	T		7.55 :	-	7.4 :	-	7.6 J	-
Specific Conductance	umhos/cm	T		2720. J	-	2280. J	-	2130. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1900. :	-	1490. :	-	1370. :	-
Hardness	mg/L	D		-	1910. :	-	1590. :	-	1370. :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID: 003 West Seep Sample Date: 7/8/2003 Sample ID: 003WESTSEEP-T01N-GRW GW13	Site ID: 003 West Seep Sample Date: 7/8/2003 Sample ID: 003WESTSEEP-D01 N-GRW GW13	Site ID: 003 West Seep Sample Date: 10/20/2003 Sample ID: 003WESTSEEP-T01 N-GRW GW13	Site ID: 003 West Seep Sample Date: 10/20/2003 Sample ID: 003WESTSEEP-D01 N-GRW GW13	Site ID: 003 West Seep Sample Date: 1/8/2004 Sample ID: 003WESTSEEP-T01N-GRW GW13	Site ID: 003 West Seep Sample Date: 1/8/2004 Sample ID: 003WESTSEEP-D01 N-GRW GW13
Metals								
Aluminum	mg/L	T	5.39 :	-	<0.307 :	-	2.83 :	-
Aluminum	mg/L	D	-	2.1 :	-	<0.307 :	-	<0.621 :
Antimony	mg/L	T	<0.001 :	-	<0.001 :	-	<0.0024 :	-
Antimony	mg/L	D	-	<0.001 :	-	<0.001 :	-	<0.0024 :
Arsenic	mg/L	T	0.00098 :	-	0.00068 :	-	0.00077 :	-
Arsenic	mg/L	D	-	<0.0004 :	-	0.00058 :	-	0.00069 :
Barium	mg/L	T	0.0801 :	-	0.0309 :	-	0.0414 :	-
Barium	mg/L	D	-	0.0381 :	-	0.0312 :	-	0.0211 :
Beryllium	mg/L	T	0.0003 :	-	<0.0004 :	-	<0.001 :	-
Beryllium	mg/L	D	-	<0.0002 :	-	<0.0004 :	-	<0.001 :
Boron	mg/L	T	0.0564 :	-	0.0356 :	-	0.0207 :	-
Boron	mg/L	D	-	0.0558 :	-	0.0368 :	-	0.0194 :
Cadmium	mg/L	T	<0.0006 :	-	<0.0005 :	-	<0.0007 J	-
Cadmium	mg/L	D	-	<0.0006 :	-	<0.0005 :	-	<0.0007 :
Calcium	mg/L	T	576. :	-	452. :	-	414. :	-
Calcium	mg/L	D	-	582. :	-	484. :	-	414. :
Chromium	mg/L	T	0.0046 :	-	<0.0011 J	-	<0.0057 :	-
Chromium	mg/L	D	-	<0.0014 :	-	<0.0011 J	-	<0.0057 :
Cobalt	mg/L	T	0.0024 :	-	<0.0029 :	-	<0.0037 :	-
Cobalt	mg/L	D	-	<0.002 :	-	<0.0029 :	-	0.0044 :
Copper	mg/L	T	0.0099 :	-	<0.0022 :	-	<0.0048 :	-
Copper	mg/L	D	-	<0.0024 :	-	<0.0022 :	-	<0.0035 :
Iron	mg/L	T	3.55 :	-	0.525 J	-	2.08 :	-
Iron	mg/L	D	-	<0.333 :	-	<0.3 J	-	<0.423 :
Lead	mg/L	T	0.0046 :	-	<0.0004 :	-	0.0018 :	-
Lead	mg/L	D	-	<0.0002 :	-	<0.0004 :	-	<0.0002 :
Magnesium	mg/L	T	112. :	-	86.9 :	-	82.4 :	-
Magnesium	mg/L	D	-	112. :	-	92.8 :	-	82.1 :
Manganese	mg/L	T	0.0521 :	-	0.128 :	-	<0.0447 :	-
Manganese	mg/L	D	-	0.0225 :	-	0.124 :	-	<0.019 :
Mercury	mg/L	T	<0.0001 J	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D	-	<0.0001 J	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T	0.0028 :	-	0.0032 :	-	0.0034 :	-

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T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 West Seep 7/8/2003 003WESTSEEP-T01N -GRW GW13		003 West Seep 7/8/2003 003WESTSEEP-D01 N-GRW GW13		003 West Seep 10/20/2003 003WESTSEEP-T01 N-GRW GW13		003 West Seep 10/20/2003 003WESTSEEP-D01 N-GRW GW13		003 West Seep 1/8/2004 003WESTSEEP-T01N -GRW GW13		003 West Seep 1/8/2004 003WESTSEEP-D01 N-GRW GW13	
Molybdenum	mg/L	D	-		<0.0017	:	-		0.0042	:	-		<0.003	:
Nickel	mg/L	T	0.0028	:	-		<0.0024	:	-		<0.0168	:	-	
Nickel	mg/L	D	-		<0.0021	:	-		<0.0024	:	-		<0.0168	:
Potassium	mg/L	T	1.24	J	-		1.61	:	-		1.89	:	-	
Potassium	mg/L	D	-		<0.393	J	-		1.53	:	-		1.28	:
Selenium	mg/L	T	<0.0016	:	-		<0.0013	:	-		<0.0018	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.00086	:	-		<0.002	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	135.	:	-		101.	:	-		81.1	:	-	
Sodium	mg/L	D	-		135.	:	-		109.	:	-		79.3	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0079	:	-		0.00092	:	-		0.0027	:	-	
Vanadium	mg/L	D	-		0.0018	:	-		0.00078	:	-		0.00084	:
Zinc	mg/L	T	<0.0289	:	-		<0.02	:	-		<0.091	:	-	
Zinc	mg/L	D	-		<0.0235	:	-		<0.02	:	-		<0.091	:

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	003 West Seep	003 West Seep	EAST SEEP	EAST SEEP	EAST SEEP	EAST SEEP
			Sample Date	4/15/2004	4/15/2004	6/11/2003	6/11/2003	7/8/2003	7/8/2003
			Sample ID	003WESTSEEP-T01N-GRW	003WESTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		5.65 :	-	12.2 :	-	5.8 :	-
EH	millivolts	T		75.5 :	-	204.6 :	-	152.3 :	-
Flow	gpm	T		0.8 :	-	-	-	-	-
pH	SU	T		7.9 J	-	7.7 J	-	7.4 J	-
Specific Conductance	uS/cm	T		2403. :	-	2009. :	-	2062. :	-
Temperature	Celsius	T		16.64 :	-	25.46 :	-	26.94 :	-
Turbidity	NTU	T		7.3 :	-	45. :	-	35.4 :	-
General Chemistry									
Ammonia	mg/L	T		<0.04 :	-	0.11 J	-	<0.23 J	-
Bicarbonate (as CaCO3)	mg/L	T		166. :	-	85.5 :	-	111. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		13.7 :	-	10.1 :	-	14.6 :	-
Fluoride	mg/L	T		0.74 :	-	0.34 :	-	0.38 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 J	-	<0.4 J	-	<0.4 J	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 :	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		0.022 J	-	<0.01 :	-	<0.01 :	-
Phosphorus	mg/L	T		0.051 :	-	0.027 J	-	0.038 :	-
Sulfate	mg/L	T		1220. :	-	1130. J	-	1420. J	-
Total Alkalinity	mg/L	T		166. :	-	85.5 :	-	111. :	-
Total Dissolved Solids	mg/L	T		2320. :	-	1760. :	-	2000. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	0.66 :	-	0.89 :	-
Total Organic Carbon	mg/L	T		<4.2 :	-	6.4 J	-	5.8 J	-
Total Suspended Solids	mg/L	T		<24.7 :	-	7.3 :	-	52.3 :	-
Laboratory Parameters									
pH	SU	T		7.9 J	-	7.7 J	-	7.4 J	-
Specific Conductance	umhos/cm	T		2160. J	-	1890. J	-	1960. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1500. :	-	1040. :	-	1210. :	-
Hardness	mg/L	D		-	1460. :	-	1090. :	-	1250. :

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	003 West Seep	003 West Seep	EAST SEEP	EAST SEEP	EAST SEEP	EAST SEEP
			Sample Date	4/15/2004	4/15/2004	6/11/2003	6/11/2003	7/8/2003	7/8/2003
			Sample ID	003WESTSEEP-T01N-GRW	003WESTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Metals									
Aluminum	mg/L	T		4.14 :	-	<0.631 :	-	2.38 :	-
Aluminum	mg/L	D		-	<0.176 :	-	<0.631 :	-	<0.236 :
Antimony	mg/L	T		<0.0008 :	-	<0.001 :	-	<0.001 :	-
Antimony	mg/L	D		-	<0.0008 :	-	<0.001 :	-	<0.001 :
Arsenic	mg/L	T		0.0012 :	-	0.00045 :	-	0.00073 :	-
Arsenic	mg/L	D		-	<0.0004 :	-	<0.0004 :	-	0.00044 :
Barium	mg/L	T		0.0621 :	-	0.0289 :	-	0.0604 :	-
Barium	mg/L	D		-	0.0299 :	-	0.0312 :	-	0.0374 :
Beryllium	mg/L	T		<0.0002 :	-	<0.0002 :	-	0.00028 :	-
Beryllium	mg/L	D		-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Boron	mg/L	T		0.0348 :	-	0.0657 :	-	0.0521 :	-
Boron	mg/L	D		-	0.0324 :	-	0.0668 :	-	0.0565 :
Cadmium	mg/L	T		<0.0003 :	-	<0.0006 :	-	<0.0006 :	-
Cadmium	mg/L	D		-	<0.0003 :	-	<0.0006 :	-	<0.0006 :
Calcium	mg/L	T		454. :	-	316. :	-	371. :	-
Calcium	mg/L	D		-	441. :	-	330. :	-	385. :
Chromium	mg/L	T		0.0043 :	-	<0.0014 :	-	0.0027 :	-
Chromium	mg/L	D		-	0.00085 :	-	<0.0014 :	-	<0.0014 :
Cobalt	mg/L	T		0.0022 :	-	<0.002 :	-	<0.002 :	-
Cobalt	mg/L	D		-	<0.0039 :	-	<0.002 :	-	<0.002 :
Copper	mg/L	T		0.0052 :	-	<0.0024 :	-	<0.0034 :	-
Copper	mg/L	D		-	<0.0007 :	-	<0.0024 :	-	<0.0024 :
Iron	mg/L	T		4.22 J	-	<0.667 :	-	2.33 :	-
Iron	mg/L	D		-	<0.192 :	-	<0.667 :	-	<0.333 :
Lead	mg/L	T		0.0033 :	-	<0.00057 :	-	0.0037 :	-
Lead	mg/L	D		-	<0.0008 :	-	<0.00027 :	-	<0.0002 :
Magnesium	mg/L	T		89.6 :	-	60.6 :	-	68.7 :	-
Magnesium	mg/L	D		-	86.3 :	-	63.6 :	-	70.5 :
Manganese	mg/L	T		0.17 :	-	0.0238 :	-	0.0612 :	-
Manganese	mg/L	D		-	0.036 :	-	0.0245 :	-	0.0329 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 J	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 J
Molybdenum	mg/L	T		<0.0056 :	-	0.436 :	-	0.34 :	-

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	003 West Seep 4/15/2004 003WESTSEEP-T01N-GRW GW13		003 West Seep 4/15/2004 003WESTSEEP-D01N-GRW GW13		EAST SEEP 6/11/2003 EASTSEEP-T01N-GRW GW13		EAST SEEP 6/11/2003 EASTSEEP-D01N-GRW GW13		EAST SEEP 7/8/2003 EASTSEEP-T01N-GRW GW13		EAST SEEP 7/8/2003 EASTSEEP-D01N-GRW GW13	
Molybdenum	mg/L	D	-		<0.0044	:	-		0.466	:	-		0.437	:
Nickel	mg/L	T	0.0034	:	-		<0.0021	:	-		0.0023	:	-	
Nickel	mg/L	D	-		<0.0014	:	-		<0.0021	:	-		<0.0021	:
Potassium	mg/L	T	2.61	:	-		<3.11	:	-		4.21	J	-	
Potassium	mg/L	D	-		1.73	:	-		<2.8	:	-		2.89	:
Selenium	mg/L	T	<0.0014	:	-		<0.0016	:	-		<0.0016	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		<0.0016	:	-		<0.0016	J
Silver	mg/L	T	<0.00089	:	-		<0.0002	:	-		<0.0002	J	-	
Silver	mg/L	D	-		<0.00088	:	-		<0.0002	:	-		<0.0002	J
Sodium	mg/L	T	108.	:	-		105.	:	-		123.	:	-	
Sodium	mg/L	D	-		103.	:	-		108.	:	-		128.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0049	:	-		0.0014	:	-		0.0039	:	-	
Vanadium	mg/L	D	-		0.0017	:	-		0.0013	:	-		0.00092	:
Zinc	mg/L	T	0.0197	:	-		<0.016	:	-		<0.0274	:	-	
Zinc	mg/L	D	-		<0.015	:	-		<0.016	:	-		<0.0171	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	EAST SEEP	EAST SEEP	EAST SEEP	EAST SEEP	Embargo Road Seep	Embargo Road Seep
			Sample Date	10/20/2003	10/20/2003	4/15/2004	4/15/2004	5/8/2003	5/8/2003
			Sample ID	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EMBARGORDSEEP-T01N-GRW	EMBARGORDSEEP-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		11.8 :	-	6.47 :	-	9.63 :	-
EH	millivolts	T		4. :	-	12.4 :	-	39.8 :	-
Flow	gpm	T		-	-	-	-	3.17 :	-
pH	SU	T		7.74 :	-	7.7 J	-	7.5 J	-
Specific Conductance	uS/cm	T		1935. :	-	1958. :	-	1555. :	-
Temperature	Celsius	T		21.9 :	-	11.26 :	-	13.22 :	-
Turbidity	NTU	T		1. :	-	4.1 :	-	4. :	-
General Chemistry									
Ammonia	mg/L	T		<0.071 J	-	<0.045 :	-	0.065 :	-
Bicarbonate (as CaCO3)	mg/L	T		139. :	-	181. :	-	183. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		11.3 :	-	13.8 :	-	16.9 :	-
Fluoride	mg/L	T		0.32 :	-	0.4 :	-	0.51 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.2 J	-	<0.2 :	-	0.59 :	-
Nitrite	mg/L	T		<0.005 :	-	<0.005 J	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		<0.01 :	-	<0.01 J	-	0.018 J	-
Phosphorus	mg/L	T		0.012 :	-	<0.01 :	-	0.029 :	-
Sulfate	mg/L	T		1030. J	-	915. :	-	572. :	-
Total Alkalinity	mg/L	T		139. :	-	181. :	-	183. :	-
Total Dissolved Solids	mg/L	T		1790. :	-	1780. :	-	1210. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	0.25 :	-
Total Organic Carbon	mg/L	T		3.8 J	-	<3.8 :	-	1.4 :	-
Total Suspended Solids	mg/L	T		2.4 :	-	<1.3 :	-	4.4 :	-
Laboratory Parameters									
pH	SU	T		7.74 :	-	7.7 J	-	7.5 J	-
Specific Conductance	umhos/cm	T		1750. J	-	1770. J	-	1480. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		1120. :	-	1150. :	-	835. :	-
Hardness	mg/L	D		-	1070. :	-	1130. :	-	833. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	EAST SEEP	EAST SEEP	EAST SEEP	EAST SEEP	Embargo Road Seep	Embargo Road Seep
			Sample Date	10/20/2003	10/20/2003	4/15/2004	4/15/2004	5/8/2003	5/8/2003
			Sample ID	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EASTSEEP-T01N-GRW	EASTSEEP-D01N-GRW	EMBARGORDSEEP-T01N-GRW	EMBARGORDSEEP-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Metals									
Aluminum	mg/L	T		<0.307 :	-	<0.201 :	-	<0.426 :	-
Aluminum	mg/L	D		-	<0.307 :	-	<0.201 :	-	<0.426 :
Antimony	mg/L	T		<0.001 :	-	<0.0008 :	-	<0.0006 :	-
Antimony	mg/L	D		-	<0.001 :	-	<0.0008 :	-	<0.0006 :
Arsenic	mg/L	T		0.00041 :	-	<0.0004 :	-	<0.0004 :	-
Arsenic	mg/L	D		-	0.00045 :	-	<0.0004 :	-	<0.0004 :
Barium	mg/L	T		0.0228 :	-	0.0198 :	-	0.028 :	-
Barium	mg/L	D		-	0.0229 :	-	0.0195 :	-	0.0268 :
Beryllium	mg/L	T		<0.0004 :	-	<0.0002 :	-	<0.0003 :	-
Beryllium	mg/L	D		-	<0.0004 :	-	<0.0002 :	-	<0.0003 :
Boron	mg/L	T		0.0248 :	-	0.019 :	-	0.0473 :	-
Boron	mg/L	D		-	0.025 :	-	0.0189 :	-	0.0476 :
Cadmium	mg/L	T		<0.0005 :	-	<0.0003 :	-	<0.0005 :	-
Cadmium	mg/L	D		-	<0.0005 :	-	<0.0003 :	-	<0.0005 :
Calcium	mg/L	T		344. :	-	353. :	-	254. :	-
Calcium	mg/L	D		-	327. :	-	346. :	-	254. :
Chromium	mg/L	T		<0.0011 J	-	<0.0008 :	-	0.0013 :	-
Chromium	mg/L	D		-	<0.0011 J	-	<0.0008 :	-	0.0011 :
Cobalt	mg/L	T		<0.0029 :	-	<0.0011 J	-	<0.0038 :	-
Cobalt	mg/L	D		-	<0.0029 :	-	<0.0011 J	-	<0.0038 :
Copper	mg/L	T		<0.0022 :	-	<0.00087 :	-	<0.0015 :	-
Copper	mg/L	D		-	<0.0022 :	-	<0.0018 :	-	<0.0015 :
Iron	mg/L	T		<0.3 J	-	<0.293 J	-	<0.422 J	-
Iron	mg/L	D		-	<0.3 J	-	<0.293 :	-	<0.422 J
Lead	mg/L	T		<0.0004 :	-	<0.0008 :	-	<0.0002 J	-
Lead	mg/L	D		-	<0.0004 :	-	<0.0008 :	-	<0.0002 J
Magnesium	mg/L	T		64.1 :	-	65. :	-	48.4 :	-
Magnesium	mg/L	D		-	61.2 :	-	63.5 :	-	48.2 :
Manganese	mg/L	T		<0.01 :	-	0.0504 J	-	<0.013 J	-
Manganese	mg/L	D		-	<0.01 :	-	0.0613 :	-	<0.013 J
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.387 :	-	0.387 :	-	0.0059 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	EAST SEEP 10/20/2003 EASTSEEP-T01N-GRW GW13		EAST SEEP 10/20/2003 EASTSEEP-D01N-GRW GW13		EAST SEEP 4/15/2004 EASTSEEP-T01N-GRW GW13		EAST SEEP 4/15/2004 EASTSEEP-D01N-GRW GW13		Embargo Road Seep 5/8/2003 EMBARGORDSEEP-T01N-GRW GW13		Embargo Road Seep 5/8/2003 EMBARGORDSEEP-D01N-GRW GW13	
Molybdenum	mg/L	D	-		0.396	:	-		0.386	:	-		0.0063	:
Nickel	mg/L	T	<0.0024	:	-		<0.0014	J	-		<0.003	:	-	
Nickel	mg/L	D	-		<0.0024	:	-		<0.0014	J	-		<0.003	:
Potassium	mg/L	T	1.67	:	-		1.9	:	-		1.82	:	-	
Potassium	mg/L	D	-		1.69	:	-		1.67	:	-		1.78	:
Selenium	mg/L	T	<0.0012	:	-		<0.0014	:	-		0.0014	:	-	
Selenium	mg/L	D	-		<0.0014	:	-		<0.0014	:	-		0.0011	:
Silver	mg/L	T	<0.0002	:	-		<0.00034	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.00034	:	-		<0.0002	:
Sodium	mg/L	T	94.4	:	-		80.7	:	-		66.4	:	-	
Sodium	mg/L	D	-		90.5	:	-		76.1	:	-		63.	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.00073	:	-		0.00061	:	-		0.00099	:	-	
Vanadium	mg/L	D	-		0.00072	:	-		0.00056	:	-		0.00079	:
Zinc	mg/L	T	<0.02	:	-		<0.024	:	-		<0.039	:	-	
Zinc	mg/L	D	-		<0.02	:	-		<0.024	:	-		<0.039	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep
			Sample Date	6/4/2003	7/8/2003	7/8/2003	7/8/2003	10/20/2003	10/20/2003
			Sample ID	Embargo Road Seep-T01N-GRW GW13	EmbargoRoadSeep-T 01N-GRW GW13	EmbargoRoadSeep-D 01N-GRW GW13	EMBARGORDSEEP-T01N-GRW GW13	EMBARGOROADSEEP-T01N-GRW GW13	EMBARGOROADSEEP-D01N-GRW GW13
Field Measurements									
DO	mg/L	T		-	-	-	7.68 :	7.28 :	-
EH	millivolts	T		-	-	-	344.8 :	117.8 :	-
Flow	gpm	T		4. :	-	-	2.6 :	2.3 :	-
pH	SU	T		-	7.4 J	-	7.46 :	7.3 :	-
Specific Conductance	uS/cm	T		-	-	-	1388. :	1434. :	-
Temperature	Celsius	T		-	-	-	14.64 :	12.74 :	-
Turbidity	NTU	T		-	-	-	29.9 :	9.4 :	-
General Chemistry									
Ammonia	mg/L	T		-	<0.058 J	-	-	<0.04 J	-
Bicarbonate (as CaCO3)	mg/L	T		-	179. :	-	-	179. :	-
Carbonate (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Chloride	mg/L	T		-	8. :	-	-	16.3 :	-
Fluoride	mg/L	T		-	0.51 :	-	-	0.5 :	-
Hydroxide (as CaCO3)	mg/L	T		-	<1. :	-	-	<1. :	-
Nitrate	mg/L	T		-	0.3 J	-	-	0.49 J	-
Nitrite	mg/L	T		-	<0.005 :	-	-	<0.005 J	-
Phosphate, Ortho As P	mg/L	T		-	<0.02 :	-	-	0.019 J	-
Phosphorus	mg/L	T		-	0.027 :	-	-	0.03 :	-
Sulfate	mg/L	T		-	519. J	-	-	711. J	-
Total Alkalinity	mg/L	T		-	179. :	-	-	179. :	-
Total Dissolved Solids	mg/L	T		-	1190. :	-	-	1240. :	-
Total Kjeldahl Nitrogen	mg/L	T		-	<0.24 :	-	-	<0.24 :	-
Total Organic Carbon	mg/L	T		-	<1.2 J	-	-	2.4 J	-
Total Suspended Solids	mg/L	T		-	3.9 :	-	-	10.5 :	-
Laboratory Parameters									
pH	SU	T		-	7.4 J	-	7.46 :	7.3 :	-
Specific Conductance	umhos/cm	T		-	1350. J	-	-	1330. J	-
Inorganics									
Cyanide	mg/L	T		-	<0.01 J	-	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		-	784. :	-	-	751. :	-
Hardness	mg/L	D		-	-	756. :	-	-	762. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep
			Sample Date	6/4/2003	7/8/2003	7/8/2003	7/8/2003	10/20/2003	10/20/2003
			Sample ID	Embargo Road Seep-T01N-GRW GW13	EmbargoRoadSeep-T01N-GRW GW13	EmbargoRoadSeep-D01N-GRW GW13	EMBARGORDSEEP-T01N-GRW GW13	EMBARGOROADSEEP-T01N-GRW GW13	EMBARGOROADSEEP-D01N-GRW GW13
Metals									
Aluminum	mg/L	T		-	<0.236 :	-	-	<0.411 :	-
Aluminum	mg/L	D		-	-	<0.236 :	-	-	<0.307 :
Antimony	mg/L	T		-	<0.001 :	-	-	<0.001 :	-
Antimony	mg/L	D		-	-	<0.001 :	-	-	<0.001 :
Arsenic	mg/L	T		-	<0.0004 :	-	-	0.00053 :	-
Arsenic	mg/L	D		-	-	<0.0004 :	-	-	0.00043 :
Barium	mg/L	T		-	0.0281 :	-	-	0.027 :	-
Barium	mg/L	D		-	-	0.025 :	-	-	0.0276 :
Beryllium	mg/L	T		-	<0.0002 :	-	-	<0.0004 :	-
Beryllium	mg/L	D		-	-	<0.0002 :	-	-	<0.0004 :
Boron	mg/L	T		-	0.0535 :	-	-	0.0483 :	-
Boron	mg/L	D		-	-	0.0494 :	-	-	0.0465 :
Cadmium	mg/L	T		-	<0.0006 :	-	-	<0.0005 :	-
Cadmium	mg/L	D		-	-	<0.0006 :	-	-	<0.0005 :
Calcium	mg/L	T		-	239. :	-	-	229. :	-
Calcium	mg/L	D		-	-	231. :	-	-	232. :
Chromium	mg/L	T		-	0.0022 :	-	-	0.0022 J	-
Chromium	mg/L	D		-	-	0.0025 :	-	-	0.002 J
Cobalt	mg/L	T		-	<0.002 :	-	-	<0.0029 :	-
Cobalt	mg/L	D		-	-	<0.002 :	-	-	<0.0029 :
Copper	mg/L	T		-	<0.0024 :	-	-	<0.0022 :	-
Copper	mg/L	D		-	-	<0.0024 :	-	-	<0.0022 :
Iron	mg/L	T		-	<0.333 :	-	-	<0.3 J	-
Iron	mg/L	D		-	-	<0.333 :	-	-	<0.3 J
Lead	mg/L	T		-	<0.0002 :	-	-	<0.0004 :	-
Lead	mg/L	D		-	-	<0.0002 :	-	-	<0.0004 :
Magnesium	mg/L	T		-	45.4 :	-	-	43.6 :	-
Magnesium	mg/L	D		-	-	43.7 :	-	-	44.1 :
Manganese	mg/L	T		-	<0.007 :	-	-	<0.01 :	-
Manganese	mg/L	D		-	-	<0.007 :	-	-	<0.01 :
Mercury	mg/L	T		-	<0.0001 J	-	-	<0.0001 :	-
Mercury	mg/L	D		-	-	<0.0001 J	-	-	<0.0001 :
Molybdenum	mg/L	T		-	0.011 :	-	-	0.0115 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Embargo Road Seep 6/4/2003 Embargo Road Seep-T01N-GRW GW13	Embargo Road Seep 7/8/2003 EmbargoRoadSeep-T 01N-GRW GW13	Embargo Road Seep 7/8/2003 EmbargoRoadSeep-D 01N-GRW GW13	Embargo Road Seep 7/8/2003 EMBARGORDSEEP-T01N-GRW GW13	Embargo Road Seep 10/20/2003 EMBARGOROADSEEP-T01N-GRW GW13	Embargo Road Seep 10/20/2003 EMBARGOROADSEEP-D01N-GRW GW13
Molybdenum	mg/L	D	-	-	0.0084 :	-	-	0.01 :
Nickel	mg/L	T	-	<0.0021 :	-	-	<0.0024 :	-
Nickel	mg/L	D	-	-	<0.0021 :	-	-	<0.0024 :
Potassium	mg/L	T	-	0.462 J	-	-	1.48 :	-
Potassium	mg/L	D	-	-	<0.393 J	-	-	1.48 :
Selenium	mg/L	T	-	0.0018 :	-	-	<0.0024 :	-
Selenium	mg/L	D	-	-	<0.0016 J	-	-	<0.0021 :
Silver	mg/L	T	-	<0.0002 J	-	-	<0.0002 :	-
Silver	mg/L	D	-	-	<0.0002 J	-	-	<0.0002 :
Sodium	mg/L	T	-	63.9 :	-	-	63.1 :	-
Sodium	mg/L	D	-	-	65.7 :	-	-	59.7 :
Thallium	mg/L	T	-	<0.0002 :	-	-	<0.0002 :	-
Thallium	mg/L	D	-	-	<0.0002 :	-	-	<0.0002 :
Vanadium	mg/L	T	-	0.0011 :	-	-	0.0011 :	-
Vanadium	mg/L	D	-	-	0.00083 :	-	-	0.00067 :
Zinc	mg/L	T	-	<0.0113 :	-	-	<0.02 :	-
Zinc	mg/L	D	-	-	<0.0112 :	-	-	<0.02 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Spring 17	Spring 17
			Sample Date	1/8/2004	1/8/2004	4/15/2004	4/15/2004	10/2/2002	10/2/2002
			Sample ID	EMBARGOROADSEEP-T01N-GRW	EMBARGOROADSEEP-D01N-GRW	EMBARGOROADSEEP-T01N-GRW	EMBARGOROADSEEP-D01N-GRW	SPRING17-T01N-GRW	SPRING17-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		0.43 :	-	6.96 :	-	9.01 :	-
EH	millivolts	T		-	-	152.2 :	-	344.1 :	-
Flow	gpm	T		-	-	2.7 :	-	-	-
pH	SU	T		7.5 J	-	7.5 J	-	6.66 :	-
Specific Conductance	uS/cm	T		1362. :	-	1532. :	-	256. :	-
Temperature	Celsius	T		10.9 :	-	13.7 :	-	13.19 :	-
Turbidity	NTU	T		0.7 :	-	2.1 :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		<0.069 J	-	<0.04 :	-	<0.043 :	-
Bicarbonate (as CaCO3)	mg/L	T		177. :	-	179. :	-	116. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		14.6 :	-	18.7 :	-	5.5 :	-
Fluoride	mg/L	T		0.48 :	-	0.6 :	-	0.75 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		<0.52 J	-	0.59 J	-	0.72 :	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.023 J	-	0.018 J	-	<0.01 :	-
Phosphorus	mg/L	T		0.19 :	-	0.067 :	-	0.012 :	-
Sulfate	mg/L	T		563. :	-	753. :	-	134. :	-
Total Alkalinity	mg/L	T		177. :	-	179. :	-	116. :	-
Total Dissolved Solids	mg/L	T		1080. :	-	1320. :	-	357. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<2.1 :	-	<2.5 :	-	<1. :	-
Total Suspended Solids	mg/L	T		25.1 :	-	70.5 J	-	<0.5 :	-
Laboratory Parameters									
pH	SU	T		7.5 J	-	7.5 J	-	6.66 :	-
Specific Conductance	umhos/cm	T		1290. J	-	1430. J	-	-	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 J	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		659. :	-	868. :	-	227. :	-
Hardness	mg/L	D		-	669. :	-	867. :	-	234. :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Embargo Road Seep	Spring 17	Spring 17
			Sample Date	1/8/2004	1/8/2004	4/15/2004	4/15/2004	10/2/2002	10/2/2002
			Sample ID	EMBARGOROADSEEP-T01N-GRW	EMBARGOROADSEEP-D01N-GRW	EMBARGOROADSEEP-T01N-GRW	EMBARGOROADSEEP-D01N-GRW	SPRING17-T01N-GRW	SPRING17-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Metals									
Aluminum	mg/L	T		<0.514 :	-	<0.754 :	-	<0.003 :	-
Aluminum	mg/L	D		-	<0.514 :	-	<0.176 :	-	<0.003 :
Antimony	mg/L	T		<0.0024 :	-	<0.0008 :	-	<0.0002 :	-
Antimony	mg/L	D		-	<0.0024 :	-	<0.0008 :	-	<0.0002 :
Arsenic	mg/L	T		0.0008 :	-	<0.0004 :	-	<0.0002 :	-
Arsenic	mg/L	D		-	0.0005 :	-	<0.0004 :	-	<0.0002 :
Barium	mg/L	T		0.0263 :	-	0.0358 :	-	0.0582 :	-
Barium	mg/L	D		-	0.0249 :	-	0.0269 :	-	0.0596 :
Beryllium	mg/L	T		<0.0003 :	-	<0.0002 :	-	<0.0003 :	-
Beryllium	mg/L	D		-	<0.0003 :	-	<0.0002 :	-	<0.0003 :
Boron	mg/L	T		0.0557 :	-	0.0489 :	-	0.0361 :	-
Boron	mg/L	D		-	0.0584 :	-	0.0479 :	-	0.0409 :
Cadmium	mg/L	T		<0.0007 J	-	<0.0003 :	-	<0.0001 :	-
Cadmium	mg/L	D		-	<0.0007 :	-	<0.0003 :	-	<0.0001 :
Calcium	mg/L	T		200. :	-	265. :	-	71.2 :	-
Calcium	mg/L	D		-	203. :	-	264. :	-	73.2 :
Chromium	mg/L	T		0.0064 :	-	<0.0043 :	-	<0.0019 :	-
Chromium	mg/L	D		-	<0.0057 :	-	<0.0029 :	-	0.0021 :
Cobalt	mg/L	T		<0.0023 :	-	0.0021 :	-	<0.0034 :	-
Cobalt	mg/L	D		-	<0.0023 :	-	<0.0036 :	-	<0.0034 :
Copper	mg/L	T		<0.003 :	-	<0.0032 :	-	0.00054 :	-
Copper	mg/L	D		-	<0.003 :	-	<0.0017 :	-	<0.00051 :
Iron	mg/L	T		<0.373 :	-	1.12 J	-	<0.0378 :	-
Iron	mg/L	D		-	<0.373 :	-	<0.192 J	-	<0.0378 :
Lead	mg/L	T		0.00051 :	-	0.0032 :	-	<0.0001 :	-
Lead	mg/L	D		-	<0.0002 :	-	<0.0008 :	-	<0.0001 :
Magnesium	mg/L	T		38.6 :	-	50.2 :	-	12. :	-
Magnesium	mg/L	D		-	39.3 :	-	50.2 :	-	12.4 :
Manganese	mg/L	T		<0.015 :	-	0.156 :	-	<0.0007 :	-
Manganese	mg/L	D		-	<0.015 :	-	<0.019 :	-	<0.0007 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.012 :	-	0.0072 :	-	0.0115 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Embargo Road Seep 1/8/2004 EMBARGOROADSEEP-T01N-GRW GW13	Embargo Road Seep 1/8/2004 EMBARGOROADSEEP-D01N-GRW GW13	Embargo Road Seep 4/15/2004 EMBARGOROADSEEP-T01N-GRW GW13	Embargo Road Seep 4/15/2004 EMBARGOROADSEEP-D01N-GRW GW13	Spring 17 10/2/2002 SPRING17-T01N-GRW GW13	Spring 17 10/2/2002 SPRING17-D01N-GRW GW13
Molybdenum	mg/L	D	-	0.0118 :	-	0.0098 :	-	0.0117 :
Nickel	mg/L	T	<0.0024 :	-	0.0043 :	-	0.00039 J	-
Nickel	mg/L	D	-	<0.0024 :	-	<0.0014 :	-	0.00031 J
Potassium	mg/L	T	1.59 :	-	1.84 :	-	1.7 :	-
Potassium	mg/L	D	-	1.57 :	-	1.69 :	-	1.76 :
Selenium	mg/L	T	<0.0029 J	-	<0.0014 :	-	<0.0002 :	-
Selenium	mg/L	D	-	<0.0024 :	-	<0.0014 :	-	<0.0002 :
Silver	mg/L	T	<0.0002 :	-	<0.00091 :	-	<0.0019 :	-
Silver	mg/L	D	-	<0.0002 :	-	<0.00088 :	-	<0.0019 :
Sodium	mg/L	T	59.2 :	-	67. :	-	25.7 :	-
Sodium	mg/L	D	-	60.1 :	-	66.3 :	-	26.4 :
Thallium	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.0001 :	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	<0.0001 :
Vanadium	mg/L	T	0.0011 :	-	0.0036 :	-	0.0001 :	-
Vanadium	mg/L	D	-	0.00068 :	-	0.0011 :	-	<0.0001 :
Zinc	mg/L	T	<0.026 :	-	0.0242 :	-	0.0048 :	-
Zinc	mg/L	D	-	<0.026 :	-	<0.015 :	-	0.0059 :

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Spring 17	SPRING 17	Spring 17	SPRING 17	Spring 17	SPRING 17
			Sample Date	1/10/2003	1/10/2003	3/20/2003	3/20/2003	4/2/2003	4/2/2003
			Sample ID	SPRING17-T01N-GRW	SPRING17-D01N-GRW	SPRING17-T01N-GRW	SPRING17-D01N-GRW	SPRING17-T01N-GRW	SPRING17-D01N-GRW
				GW13	GW13	GW13	GW13	GW13	GW13
Field Measurements									
DO	mg/L	T		9.65 :	-	8.62 :	-	8.53 :	-
EH	millivolts	T		321.9 :	-	86.9 :	-	336.4 :	-
pH	SU	T		7.68 :	-	7.55 :	-	7.82 :	-
Specific Conductance	uS/cm	T		966. :	-	476. :	-	486. :	-
Temperature	Celsius	T		8.63 :	-	8.61 :	-	9.72 :	-
Turbidity	NTU	T		0.3 :	-	55.8 :	-	0. :	-
General Chemistry									
Ammonia	mg/L	T		<0.08 :	-	<0.068 J	-	0.043 :	-
Bicarbonate (as CaCO3)	mg/L	T		111. :	-	112. :	-	111. :	-
Carbonate (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Chloride	mg/L	T		<4.5 :	-	4.4 :	-	4.6 :	-
Fluoride	mg/L	T		0.59 :	-	0.63 :	-	0.61 :	-
Hydroxide (as CaCO3)	mg/L	T		<1. :	-	<1. :	-	<1. :	-
Nitrate	mg/L	T		0.66 J	-	0.55 J	-	0.58 :	-
Nitrite	mg/L	T		<0.005 J	-	<0.005 J	-	<0.005 :	-
Phosphate, Ortho As P	mg/L	T		<0.092 J	-	0.37 J	-	0.01 J	-
Phosphorus	mg/L	T		0.015 J	-	<0.01 J	-	0.011 :	-
Sulfate	mg/L	T		119. J	-	117. :	-	128. J	-
Total Alkalinity	mg/L	T		111. :	-	112. :	-	111. :	-
Total Dissolved Solids	mg/L	T		<330. :	-	330. :	-	332. :	-
Total Kjeldahl Nitrogen	mg/L	T		<0.24 :	-	<0.24 :	-	<0.24 :	-
Total Organic Carbon	mg/L	T		<1. :	-	1.1 J	-	1.1 J	-
Total Suspended Solids	mg/L	T		<0.6 :	-	<0.5 J	-	0.7 :	-
Laboratory Parameters									
pH	SU	T		7.68 :	-	7.55 :	-	7.82 :	-
Specific Conductance	umhos/cm	T		-	-	444. J	-	457. J	-
Inorganics									
Cyanide	mg/L	T		<0.01 J	-	<0.01 :	-	<0.01 J	-
Physical Properties									
Hardness	mg/L	T		214. :	-	233. :	-	211. :	-
Hardness	mg/L	D		-	210. :	-	229. :	-	206. :
Metals									

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 17 1/10/2003 SPRING17-T01N-GRW GW13		SPRING 17 1/10/2003 SPRING17-D01N-GRW GW13		SPRING 17 3/20/2003 SPRING17-T01N-GRW GW13		SPRING 17 3/20/2003 SPRING17-D01N-GRW GW13		SPRING 17 4/2/2003 SPRING17-T01N-GRW GW13		SPRING 17 4/2/2003 SPRING17-D01N-GRW GW13	
Aluminum	mg/L	T	<0.142	J	-		<0.426	:	-		<0.0277	:	-	
Aluminum	mg/L	D	-		<0.142	J	-		<0.426	:	-		<0.0277	:
Antimony	mg/L	T	<0.0006	:	-		<0.0006	:	-		<0.00076	:	-	
Antimony	mg/L	D	-		<0.0006	:	-		<0.0006	:	-		<0.00067	:
Arsenic	mg/L	T	<0.0004	:	-		0.00076	:	-		<0.0004	J	-	
Arsenic	mg/L	D	-		<0.0004	:	-		0.0012	:	-		<0.0004	J
Barium	mg/L	T	0.0532	:	-		0.0601	:	-		0.0529	:	-	
Barium	mg/L	D	-		0.0515	:	-		0.0564	:	-		0.0515	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0003	:	-		<0.0003	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0003	:	-		<0.0003	:
Boron	mg/L	T	0.0388	:	-		0.03	:	-		0.0261	:	-	
Boron	mg/L	D	-		0.0362	:	-		0.0286	:	-		0.0251	:
Cadmium	mg/L	T	<0.0004	:	-		<0.0005	:	-		<0.0004	:	-	
Cadmium	mg/L	D	-		<0.0004	:	-		<0.0005	:	-		<0.0004	:
Calcium	mg/L	T	66.8	:	-		72.3	:	-		66.2	:	-	
Calcium	mg/L	D	-		65.6	:	-		71.1	:	-		64.5	:
Chromium	mg/L	T	<0.0037	:	-		<0.001	:	-		<0.0009	:	-	
Chromium	mg/L	D	-		<0.0037	:	-		<0.001	:	-		<0.0009	:
Cobalt	mg/L	T	<0.0016	:	-		<0.0038	:	-		<0.0029	:	-	
Cobalt	mg/L	D	-		<0.0016	:	-		<0.0038	:	-		<0.0029	:
Copper	mg/L	T	<0.0067	:	-		<0.0036	:	-		0.0047	:	-	
Copper	mg/L	D	-		<0.0028	:	-		<0.0032	:	-		<0.0024	:
Iron	mg/L	T	<0.489	:	-		<0.422	:	-		<0.0299	:	-	
Iron	mg/L	D	-		<0.489	:	-		<0.422	:	-		0.0318	:
Lead	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Lead	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Magnesium	mg/L	T	11.4	:	-		12.7	:	-		11.2	:	-	
Magnesium	mg/L	D	-		11.1	:	-		12.5	:	-		10.9	:
Manganese	mg/L	T	<0.005	:	-		<0.013	:	-		<0.0009	:	-	
Manganese	mg/L	D	-		<0.005	:	-		<0.013	:	-		0.00091	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	0.0109	:	-		0.0095	J	-		0.0109	:	-	
Molybdenum	mg/L	D	-		0.0103	:	-		0.0078	J	-		0.0109	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 17 1/10/2003 SPRING17-T01N-GR W GW13		SPRING 17 1/10/2003 SPRING17-D01N-GR W GW13		SPRING 17 3/20/2003 SPRING17-T01N-GR W GW13		SPRING 17 3/20/2003 SPRING17-D01N-GR W GW13		SPRING 17 4/2/2003 SPRING17-T01N-GR W GW13		SPRING 17 4/2/2003 SPRING17-D01N-GR W GW13	
Nickel	mg/L	T	<0.0015	:	-		<0.003	:	-		<0.0026	:	-	
Nickel	mg/L	D	-		<0.0015	:	-		<0.003	:	-		<0.0026	:
Potassium	mg/L	T	1.76	:	-		1.64	:	-		1.75	:	-	
Potassium	mg/L	D	-		1.72	:	-		1.46	:	-		1.68	:
Selenium	mg/L	T	<0.0016	:	-		<0.0029	:	-		<0.001	J	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.0048	:	-		<0.001	J
Silver	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	21.1	:	-		20.	:	-		19.9	:	-	
Sodium	mg/L	D	-		20.	:	-		18.5	:	-		19.5	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.00038	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0002	:
Zinc	mg/L	T	<0.039	:	-		<0.039	:	-		0.0051	:	-	
Zinc	mg/L	D	-		<0.039	:	-		<0.039	:	-		0.0049	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	SPRING 17		SPRING 17		Spring 17		Spring 17		Spring 17	
			Sample Date	7/14/2003		7/14/2003		10/20/2003		10/20/2003		1/8/2004		1/8/2004	
			Sample ID	SPRING17-T01N-GRW		SPRING17-D01N-GRW		SPRING17-T01N-GRW		SPRING17-D01N-GRW		SPRING17-T01N-GRW		SPRING17-D01N-GRW	
				GW13		GW13		GW13		GW13		GW13		GW13	
Field Measurements															
DO	mg/L	T		7.55	:	-		7.31	:	-		8.28	:	-	
EH	millivolts	T		290.1	:	-		141.4	:	-		267.4	:	-	
pH	SU	T		6.91	:	-		7.5	J	-		7.4	J	-	
Specific Conductance	uS/cm	T		449.	:	-		425.	:	-		365.	:	-	
Temperature	Celsius	T		13.11	:	-		11.74	:	-		9.	:	-	
Turbidity	NTU	T		0.1	:	-		0.9	:	-		7.7	:	-	
General Chemistry															
Ammonia	mg/L	T		<0.075	J	-		<0.062	J	-		<0.056	J	-	
Bicarbonate (as CaCO3)	mg/L	T		134.	:	-		118.	:	-		107.	:	-	
Carbonate (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T		8.1	:	-		4.	:	-		4.3	:	-	
Fluoride	mg/L	T		0.71	:	-		0.72	:	-		0.6	:	-	
Hydroxide (as CaCO3)	mg/L	T		<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T		0.83	J	-		0.4	J	-		<0.37	J	-	
Nitrite	mg/L	T		<0.005	J	-		<0.005	J	-		<0.005	J	-	
Phosphate, Ortho As P	mg/L	T		<0.01	J	-		0.012	J	-		<0.011	J	-	
Phosphorus	mg/L	T		0.011	:	-		0.013	:	-		<0.01	:	-	
Sulfate	mg/L	T		104.	J	-		98.9	J	-		84.2	:	-	
Total Alkalinity	mg/L	T		134.	:	-		118.	:	-		107.	:	-	
Total Dissolved Solids	mg/L	T		286.	:	-		234.	J	-		282.	:	-	
Total Kjeldahl Nitrogen	mg/L	T		<0.24	:	-		<0.24	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T		<1.6	J	-		2.1	J	-		<1.	J	-	
Total Suspended Solids	mg/L	T		<0.5	:	-		<0.5	:	-		<0.5	:	-	
Laboratory Parameters															
pH	SU	T		6.91	:	-		7.5	J	-		7.4	J	-	
Specific Conductance	umhos/cm	T		455.	J	-		437.	J	-		395.	J	-	
Inorganics															
Cyanide	mg/L	T		<0.01	J	-		<0.01	J	-		<0.01	J	-	
Physical Properties															
Hardness	mg/L	T		194.	:	-		177.	:	-		165.	:	-	
Hardness	mg/L	D		-		188.	:	-		177.	:	-		163.	:
Metals															

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 17 7/14/2003 SPRING17-T01N-GR W GW13		SPRING 17 7/14/2003 SPRING17-D01N-GR W GW13		Spring 17 10/20/2003 SPRING17-T01N-GR W GW13		Spring 17 10/20/2003 SPRING17-D01N-GR W GW13		Spring 17 1/8/2004 SPRING17-T01N-GR W GW13		Spring 17 1/8/2004 SPRING17-D01N-GR W GW13	
Aluminum	mg/L	T	<0.631	:	-		<0.307	:	-		<0.514	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.307	:	-		<0.514	:
Antimony	mg/L	T	<0.001	:	-		<0.001	:	-		<0.0024	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.0024	:
Arsenic	mg/L	T	<0.0004	:	-		<0.0004	:	-		<0.0004	:	-	
Arsenic	mg/L	D	-		<0.0004	:	-		<0.0004	:	-		<0.0004	:
Barium	mg/L	T	0.0525	:	-		0.045	:	-		0.0426	:	-	
Barium	mg/L	D	-		0.0519	:	-		0.0447	:	-		0.0408	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0004	:	-		<0.001	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.0004	:	-		0.001	:
Boron	mg/L	T	0.0476	:	-		0.0376	:	-		0.0295	:	-	
Boron	mg/L	D	-		0.0461	:	-		0.0371	:	-		0.0279	:
Cadmium	mg/L	T	<0.0006	:	-		<0.0005	:	-		<0.0007	J	-	
Cadmium	mg/L	D	-		<0.0006	:	-		<0.0005	:	-		<0.0007	:
Calcium	mg/L	T	60.7	:	-		55.4	:	-		51.6	:	-	
Calcium	mg/L	D	-		58.7	:	-		55.6	:	-		51.2	:
Chromium	mg/L	T	<0.0014	:	-		<0.0011	J	-		<0.0057	:	-	
Chromium	mg/L	D	-		<0.0014	:	-		<0.0011	J	-		<0.0057	:
Cobalt	mg/L	T	<0.002	:	-		<0.0029	:	-		<0.0037	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.0029	:	-		<0.0037	:
Copper	mg/L	T	<0.0055	:	-		<0.0022	:	-		0.0121	:	-	
Copper	mg/L	D	-		0.0024	:	-		<0.0022	:	-		<0.0035	:
Iron	mg/L	T	<0.667	:	-		<0.45	:	-		<0.373	:	-	
Iron	mg/L	D	-		<0.667	:	-		<0.3	:	-		<0.373	:
Lead	mg/L	T	<0.00046	:	-		<0.0004	:	-		0.00036	:	-	
Lead	mg/L	D	-		0.00038	:	-		<0.0004	:	-		<0.0002	:
Magnesium	mg/L	T	10.3	:	-		9.34	:	-		8.77	:	-	
Magnesium	mg/L	D	-		9.98	:	-		9.32	:	-		8.64	:
Manganese	mg/L	T	<0.019	:	-		<0.01	:	-		<0.015	:	-	
Manganese	mg/L	D	-		<0.019	:	-		<0.01	:	-		<0.015	:
Mercury	mg/L	T	<0.00015	:	-		<0.0001	:	-		<0.0001	J	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	J
Molybdenum	mg/L	T	0.0127	:	-		0.0101	:	-		0.0113	:	-	
Molybdenum	mg/L	D	-		0.0129	:	-		0.0104	:	-		0.0111	:

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	SPRING 17 7/14/2003 SPRING17-T01N-GR W GW13		SPRING 17 7/14/2003 SPRING17-D01N-GR W GW13		Spring 17 10/20/2003 SPRING17-T01N-GR W GW13		Spring 17 10/20/2003 SPRING17-D01N-GR W GW13		Spring 17 1/8/2004 SPRING17-T01N-GR W GW13		Spring 17 1/8/2004 SPRING17-D01N-GR W GW13	
Nickel	mg/L	T	<0.0021	:	-		<0.0024	:	-		<0.0168	:	-	
Nickel	mg/L	D	-		<0.0021	:	-		<0.0024	:	-		<0.0168	:
Potassium	mg/L	T	1.79	:	-		1.42	:	-		<1.1	:	-	
Potassium	mg/L	D	-		1.71	:	-		1.42	:	-		<1.1	:
Selenium	mg/L	T	<0.0016	:	-		<0.0006	:	-		<0.0006	J	-	
Selenium	mg/L	D	-		<0.0016	J	-		<0.0006	:	-		0.00079	:
Silver	mg/L	T	<0.0002	J	-		<0.0002	:	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	J	-		<0.0002	:	-		<0.0002	:
Sodium	mg/L	T	25.8	:	-		22.1	:	-		15.6	:	-	
Sodium	mg/L	D	-		23.6	:	-		20.5	:	-		16.6	:
Thallium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	<0.0004	:	-		<0.0002	:	-		<0.0004	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		<0.0002	:	-		<0.0004	:
Zinc	mg/L	T	<0.016	:	-		<0.02	:	-		<0.026	:	-	
Zinc	mg/L	D	-		<0.016	:	-		<0.02	:	-		<0.026	:

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 17 4/15/2004 SPRING17-T01N-GRW GW13		Spring 17 4/15/2004 SPRING17-D01N-GRW GW13		Spring 7 5/6/2004 SPRING7-T01N-GRW GW13		Spring 7 5/6/2004 SPRING7-D01N-GRW GW13		Spring 8 5/6/2004 SPRING8-T01N-GRW GW13		SPRING 8 5/6/2004 SPRING8-D01N-GRW GW13	
Field Measurements														
DO	mg/L	T	8.13	:	-		5.9	:	-		7.82	:	-	
EH	millivolts	T	138.	:	-		79.6	:	-		158.9	:	-	
Flow	gpm	T	-		-		1.	:	-		63.	:	-	
pH	SU	T	7.5	J	-		7.16	:	-		7.3	J	-	
Specific Conductance	uS/cm	T	405.	:	-		1580.	:	-		365.	:	-	
Temperature	Celsius	T	11.24	:	-		14.28	:	-		10.55	:	-	
Turbidity	NTU	T	0.	:	-		29.8	:	-		0.	:	-	
General Chemistry														
Ammonia	mg/L	T	<0.059	:	-		0.13	:	-		<0.04	:	-	
Bicarbonate (as CaCO3)	mg/L	T	108.	:	-		150.	:	-		110.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	4.5	:	-		13.4	:	-		5.7	:	-	
Fluoride	mg/L	T	0.74	:	-		0.72	:	-		0.6	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	0.63	J	-		0.33	:	-		0.36	:	-	
Nitrite	mg/L	T	<0.005	J	-		0.0087	:	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	0.012	J	-		0.081	:	-		0.039	:	-	
Phosphorus	mg/L	T	0.01	:	-		0.23	:	-		0.051	:	-	
Sulfate	mg/L	T	84.1	:	-		757.	:	-		242.	:	-	
Total Alkalinity	mg/L	T	108.	:	-		150.	:	-		110.	:	-	
Total Dissolved Solids	mg/L	T	230.	:	-		1290.	:	-		552.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	0.25	:	-		0.92	:	-		<0.24	:	-	
Total Organic Carbon	mg/L	T	<1.4	J	-		<3.7	:	-		<1.	:	-	
Total Suspended Solids	mg/L	T	6.7	J	-		67.8	:	-		8.1	:	-	
Laboratory Parameters														
pH	SU	T	7.5	J	-		7.16	:	-		7.3	J	-	
Specific Conductance	umhos/cm	T	352.	J	-		1440.	J	-		614.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		<0.01	:	-	
Physical Properties														
Hardness	mg/L	T	167.	:	-		804.	:	-		308.	:	-	
Hardness	mg/L	D	-		174.	:	-		787.	:	-		304.	:

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID	Spring 17	Spring 17	Spring 7	Spring 7	Spring 8	SPRING 8
			Sample Date	4/15/2004	4/15/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
			Sample ID	SPRING17-T01N-GRW	SPRING17-D01N-GRW	SPRING7-T01N-GRW	SPRING7-D01N-GRW	SPRING8-T01N-GRW	SPRING8-D01N-GRW
			Exposure Area	GW13	GW13	GW13	GW13	GW13	GW13
Metals									
Aluminum	mg/L	T		0.218 :	-	<0.479 :	-	<0.176 :	-
Aluminum	mg/L	D		-	<0.201 :	-	<0.176 :	-	<0.176 :
Antimony	mg/L	T		<0.0008 :	-	<0.0008 :	-	<0.0008 :	-
Antimony	mg/L	D		-	<0.0008 :	-	<0.0008 :	-	<0.0008 :
Arsenic	mg/L	T		<0.0004 :	-	0.00083 :	-	<0.0004 :	-
Arsenic	mg/L	D		-	<0.0004 :	-	0.00071 :	-	<0.0004 :
Barium	mg/L	T		0.0426 :	-	0.0488 :	-	0.0605 :	-
Barium	mg/L	D		-	0.0432 :	-	0.0461 :	-	0.0593 :
Beryllium	mg/L	T		<0.0002 :	-	<0.0003 J	-	<0.0003 J	-
Beryllium	mg/L	D		-	<0.0002 :	-	<0.00034 J	-	<0.0003 J
Boron	mg/L	T		0.0238 :	-	0.0357 :	-	0.0323 :	-
Boron	mg/L	D		-	0.0255 :	-	0.0334 :	-	0.0315 :
Cadmium	mg/L	T		<0.0003 :	-	<0.0003 :	-	<0.0003 :	-
Cadmium	mg/L	D		-	<0.0003 :	-	<0.0003 :	-	<0.0003 :
Calcium	mg/L	T		52.2 :	-	253. :	-	95.8 :	-
Calcium	mg/L	D		-	54.4 :	-	247. :	-	94.7 :
Chromium	mg/L	T		<0.00098 :	-	<0.0017 :	-	<0.00079 :	-
Chromium	mg/L	D		-	<0.0008 :	-	<0.0006 :	-	<0.00074 :
Cobalt	mg/L	T		<0.0011 J	-	<0.0016 :	-	<0.0016 :	-
Cobalt	mg/L	D		-	<0.0011 J	-	0.0019 :	-	<0.0016 :
Copper	mg/L	T		<0.0053 :	-	0.003 :	-	<0.0014 :	-
Copper	mg/L	D		-	<0.0017 :	-	<0.0014 :	-	<0.0014 :
Iron	mg/L	T		<0.293 J	-	<0.854 :	-	<0.222 :	-
Iron	mg/L	D		-	<0.293 :	-	<0.386 :	-	<0.192 :
Lead	mg/L	T		<0.0008 :	-	0.0013 :	-	<0.0008 :	-
Lead	mg/L	D		-	<0.0008 :	-	<0.0008 :	-	<0.0008 :
Magnesium	mg/L	T		8.78 :	-	42.1 :	-	16.7 :	-
Magnesium	mg/L	D		-	9.23 :	-	41. :	-	16.5 :
Manganese	mg/L	T		<0.014 J	-	0.11 :	-	<0.019 :	-
Manganese	mg/L	D		-	<0.014 J	-	0.1 :	-	<0.019 :
Mercury	mg/L	T		<0.0001 :	-	<0.0001 :	-	<0.0001 :	-
Mercury	mg/L	D		-	<0.0001 :	-	<0.0001 :	-	<0.0001 :
Molybdenum	mg/L	T		0.0124 :	-	0.602 :	-	0.0827 :	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	Spring 17 4/15/2004 SPRING17-T01N-GRW GW13	Spring 17 4/15/2004 SPRING17-D01N-GRW GW13	Spring 7 5/6/2004 SPRING7-T01N-GRW GW13	Spring 7 5/6/2004 SPRING7-D01N-GRW GW13	Spring 8 5/6/2004 SPRING8-T01N-GRW GW13	SPRING 8 5/6/2004 SPRING8-D01N-GRW GW13
Molybdenum	mg/L	D	-	0.0117 :	-	0.673 :	-	0.0834 :
Nickel	mg/L	T	<0.0014 J	-	<0.0015 :	-	<0.0015 :	-
Nickel	mg/L	D	-	<0.0014 J	-	<0.0015 :	-	<0.0015 :
Potassium	mg/L	T	1.39 :	-	3.76 :	-	1.73 :	-
Potassium	mg/L	D	-	1.44 :	-	3.76 :	-	1.79 :
Selenium	mg/L	T	<0.0014 :	-	<0.0014 :	-	<0.0014 :	-
Selenium	mg/L	D	-	<0.0014 :	-	<0.0014 :	-	<0.0014 :
Silver	mg/L	T	<0.00034 :	-	<0.0002 :	-	<0.0002 :	-
Silver	mg/L	D	-	<0.00034 :	-	<0.0002 :	-	<0.0002 :
Sodium	mg/L	T	<3.28 J	-	73.3 :	-	28.7 :	-
Sodium	mg/L	D	-	<3.28 J	-	73.5 :	-	29.4 :
Thallium	mg/L	T	<0.0002 :	-	<0.0002 :	-	<0.0002 :	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.0002 :	-	<0.0002 :
Vanadium	mg/L	T	<0.0004 :	-	0.0053 :	-	0.00051 :	-
Vanadium	mg/L	D	-	<0.0004 :	-	0.004 :	-	0.00048 :
Zinc	mg/L	T	<0.024 :	-	0.0217 :	-	0.0282 :	-
Zinc	mg/L	D	-	<0.024 :	-	<0.015 :	-	0.02 :

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T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13	
Field Measurements														
DO	mg/L	T	-		-		6.2	:	-		2.83	:	-	
EH	millivolts	T	-		-		185.2	:	-		-102.3	:	-	
pH	SU	T	7.4	J	-		7.2	J	-		7.6	J	-	
Specific Conductance	uS/cm	T	-		-		2001.	:	-		1740.	:	-	
Temperature	Celsius	T	-		-		15.31	:	-		13.63	:	-	
Turbidity	NTU	T	-		-		60.3	:	-		203.1	:	-	
General Chemistry														
Ammonia	mg/L	T	0.15	J	-		<0.17	J	-		<0.17	J	-	
Bicarbonate (as CaCO3)	mg/L	T	183.	:	-		207.	:	-		191.	:	-	
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Chloride	mg/L	T	29.8	:	-		39.9	:	-		36.	:	-	
Fluoride	mg/L	T	0.23	:	-		0.21	:	-		0.24	:	-	
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		<1.	:	-	
Nitrate	mg/L	T	<0.4	:	-		<0.4	J	-		<0.2	J	-	
Nitrite	mg/L	T	<0.005	:	-		<0.005	J	-		<0.005	:	-	
Phosphate, Ortho As P	mg/L	T	<0.01	:	-		<0.01	J	-		0.045	:	-	
Phosphorus	mg/L	T	0.58	J	-		0.097	:	-		0.41	:	-	
Sulfate	mg/L	T	801.	J	-		1050.	J	-		861.	J	-	
Total Alkalinity	mg/L	T	183.	:	-		207.	:	-		191.	:	-	
Total Dissolved Solids	mg/L	T	1540.	:	-		1990.	:	-		1370.	:	-	
Total Kjeldahl Nitrogen	mg/L	T	3.3	:	-		0.97	:	-		1.6	:	-	
Total Organic Carbon	mg/L	T	3.3	J	-		6.2	J	-		6.	J	-	
Total Suspended Solids	mg/L	T	129.	:	-		25.7	:	-		266.	:	-	
Laboratory Parameters														
pH	SU	T	7.4	J	-		7.2	J	-		7.6	J	-	
Specific Conductance	umhos/cm	T	1730.	J	-		1920.	J	-		1600.	J	-	
Inorganics														
Cyanide	mg/L	T	<0.01	:	-		<0.01	J	-		<0.01	J	-	
Physical Properties														
Hardness	mg/L	T	1040.	:	-		1190.	:	-		951.	:	-	
Hardness	mg/L	D	-		1080.	:	-		1180.	:	-		981.	:
Metals														

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13	
Aluminum	mg/L	T	1.61	:	-		1.36	:	-		8.75	:	-	
Aluminum	mg/L	D	-		<0.631	:	-		<0.631	:	-		<0.307	:
Antimony	mg/L	T	<0.0025	:	-		<0.001	:	-		<0.001	:	-	
Antimony	mg/L	D	-		<0.001	:	-		<0.001	:	-		<0.001	:
Arsenic	mg/L	T	0.0039	:	-		0.0016	:	-		0.0023	:	-	
Arsenic	mg/L	D	-		0.00081	:	-		0.0014	:	-		0.00086	:
Barium	mg/L	T	0.0422	:	-		0.0446	:	-		0.0886	:	-	
Barium	mg/L	D	-		0.028	:	-		0.0295	:	-		0.0215	:
Beryllium	mg/L	T	<0.0002	:	-		<0.0002	:	-		<0.0004	:	-	
Beryllium	mg/L	D	-		<0.0002	:	-		<0.00029	:	-		<0.0004	:
Boron	mg/L	T	0.0279	:	-		0.0282	:	-		0.0265	:	-	
Boron	mg/L	D	-		0.0272	:	-		0.0246	:	-		0.0194	:
Cadmium	mg/L	T	<0.0006	:	-		<0.0003	:	-		<0.0005	:	-	
Cadmium	mg/L	D	-		<0.0006	:	-		<0.0003	:	-		<0.0005	:
Calcium	mg/L	T	329.	:	-		375.	:	-		299.	:	-	
Calcium	mg/L	D	-		340.	:	-		371.	:	-		310.	:
Chromium	mg/L	T	0.0015	:	-		<0.0006	J	-		0.0075	J	-	
Chromium	mg/L	D	-		<0.0014	:	-		<0.0006	J	-		<0.0011	J
Cobalt	mg/L	T	<0.002	:	-		<0.0018	:	-		0.0032	:	-	
Cobalt	mg/L	D	-		<0.002	:	-		<0.0018	:	-		0.0044	:
Copper	mg/L	T	<0.0024	:	-		<0.0018	:	-		0.0092	:	-	
Copper	mg/L	D	-		<0.0024	:	-		<0.0014	:	-		<0.0022	:
Iron	mg/L	T	4.16	:	-		1.96	:	-		8.54	:	-	
Iron	mg/L	D	-		0.897	:	-		<0.667	:	-		<0.3	J
Lead	mg/L	T	0.0082	:	-		0.002	:	-		0.0075	:	-	
Lead	mg/L	D	-		<0.00024	:	-		<0.0002	:	-		<0.0004	:
Magnesium	mg/L	T	52.8	:	-		62.5	:	-		49.6	:	-	
Magnesium	mg/L	D	-		54.6	:	-		62.	:	-		50.4	:
Manganese	mg/L	T	1.41	:	-		1.18	:	-		0.519	:	-	
Manganese	mg/L	D	-		1.39	:	-		1.24	:	-		0.194	:
Mercury	mg/L	T	<0.0001	:	-		<0.0001	:	-		<0.0001	:	-	
Mercury	mg/L	D	-		<0.0001	:	-		<0.0001	:	-		<0.0001	:
Molybdenum	mg/L	T	<0.0017	:	-		0.0069	:	-		0.0108	:	-	
Molybdenum	mg/L	D	-		<0.0017	:	-		0.0061	:	-		0.0057	:

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13		West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13		West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13	
Nickel	mg/L	T	0.0043	:	-		0.0027	J	-		0.0083	:	-	
Nickel	mg/L	D	-		0.0035	:	-		<0.002	J	-		<0.0024	:
Potassium	mg/L	T	<1.35	J	-		2.41	:	-		5.28	:	-	
Potassium	mg/L	D	-		<1.99	J	-		2.04	:	-		2.75	:
Selenium	mg/L	T	0.0044	:	-		<0.0016	:	-		<0.0033	:	-	
Selenium	mg/L	D	-		<0.0016	:	-		<0.0016	J	-		<0.0018	:
Silver	mg/L	T	<0.0005	:	-		<0.0002	J	-		<0.0002	:	-	
Silver	mg/L	D	-		<0.0002	:	-		<0.0002	J	-		<0.0002	:
Sodium	mg/L	T	75.4	:	-		86.4	:	-		62.1	:	-	
Sodium	mg/L	D	-		80.1	:	-		83.9	:	-		66.5	:
Thallium	mg/L	T	<0.0005	:	-		<0.0002	:	-		<0.0002	:	-	
Thallium	mg/L	D	-		<0.0002	:	-		<0.0002	:	-		<0.0002	:
Vanadium	mg/L	T	0.0103	:	-		0.0022	:	-		0.0086	:	-	
Vanadium	mg/L	D	-		<0.0004	:	-		0.00065	:	-		0.00043	:
Zinc	mg/L	T	<0.016	:	-		<0.0171	:	-		<0.0437	:	-	
Zinc	mg/L	D	-		0.0198	:	-		<0.016	:	-		<0.02	:
Volatile Organics														
1,1,1-Trichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2,2-Tetrachloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1,2-Trichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,1-Dichloroethene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2,4-Trichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dibromo-3-chloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethane	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloroethene (total)	mg/L	T	<0.01	:	-		-		-		-		-	
1,2-Dichloropropane	mg/L	T	<0.01	:	-		-		-		-		-	
1,3-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
1,4-Dichlorobenzene	mg/L	T	<0.01	:	-		-		-		-		-	
2-Butanone	mg/L	T	<0.01	:	-		-		-		-		-	
2-Hexanone	mg/L	T	<0.01	:	-		-		-		-		-	
4-Methyl-2-pentanone	mg/L	T	<0.01	:	-		-		-		-		-	

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R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction

Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13
Acetone	mg/L	T	<0.01	:	-	-	-	-	-
Benzene	mg/L	T	<0.01	:	-	-	-	-	-
Bromodichloromethane	mg/L	T	<0.01	:	-	-	-	-	-
Bromoform	mg/L	T	<0.01	:	-	-	-	-	-
Bromomethane	mg/L	T	<0.01	:	-	-	-	-	-
Carbon disulfide	mg/L	T	<0.01	:	-	-	-	-	-
Carbon tetrachloride	mg/L	T	<0.01	:	-	-	-	-	-
Chlorobenzene	mg/L	T	<0.01	:	-	-	-	-	-
Chloroethane	mg/L	T	<0.01	:	-	-	-	-	-
Chloroform	mg/L	T	<0.01	:	-	-	-	-	-
Chloromethane	mg/L	T	<0.01	:	-	-	-	-	-
cis-1,2-Dichloroethene	mg/L	T	<0.01	:	-	-	-	-	-
cis-1,3-Dichloropropene	mg/L	T	<0.01	:	-	-	-	-	-
Dibromochloromethane	mg/L	T	<0.01	:	-	-	-	-	-
Dichlorodifluoromethane	mg/L	T	<0.01	:	-	-	-	-	-
Ethylbenzene	mg/L	T	<0.01	:	-	-	-	-	-
Methylene chloride	mg/L	T	<0.01	:	-	-	-	-	-
Styrene	mg/L	T	<0.01	:	-	-	-	-	-
Tetrachloroethene	mg/L	T	<0.01	:	-	-	-	-	-
Toluene	mg/L	T	<0.01	:	-	-	-	-	-
Total Xylene	mg/L	T	<0.01	:	-	-	-	-	-
trans-1,2-Dichloroethene	mg/L	T	<0.01	:	-	-	-	-	-
trans-1,3-Dichloropropene	mg/L	T	<0.01	:	-	-	-	-	-
Trichloroethene	mg/L	T	<0.01	:	-	-	-	-	-
Trichlorofluoromethane	mg/L	T	<0.01	:	-	-	-	-	-
Vinyl chloride	mg/L	T	<0.01	:	-	-	-	-	-
Semi-Volatile Organics									
1,1`-Biphenyl	mg/L	T	<0.01	:	-	-	-	-	-
2,4,5-Trichlorophenol	mg/L	T	<0.026	:	-	-	-	-	-
2,4,6-Trichlorophenol	mg/L	T	<0.01	:	-	-	-	-	-
2,4-Dichlorophenol	mg/L	T	<0.01	:	-	-	-	-	-
2,4-Dimethylphenol	mg/L	T	<0.01	:	-	-	-	-	-
2,4-Dinitrophenol	mg/L	T	<0.026	J	-	-	-	-	-
2,4-Dinitrotoluene	mg/L	T	<0.01	:	-	-	-	-	-

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13
2,6-Dinitrotoluene	mg/L		T	<0.01	:	-	-	-	-	-
2-Chloronaphthalene	mg/L		T	<0.01	:	-	-	-	-	-
2-Chlorophenol	mg/L		T	<0.01	:	-	-	-	-	-
2-Methylnaphthalene	mg/L		T	<0.01	:	-	-	-	-	-
2-Methylphenol	mg/L		T	<0.01	:	-	-	-	-	-
2-Nitroaniline	mg/L		T	<0.026	:	-	-	-	-	-
2-Nitrophenol	mg/L		T	<0.01	:	-	-	-	-	-
3,3-Dichlorobenzidine	mg/L		T	<0.01	:	-	-	-	-	-
3-Nitroaniline	mg/L		T	<0.026	:	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/L		T	<0.026	J	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/L		T	<0.01	:	-	-	-	-	-
4-Chloro-3-methylphenol	mg/L		T	<0.01	:	-	-	-	-	-
4-Chloroaniline	mg/L		T	<0.01	:	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/L		T	<0.01	:	-	-	-	-	-
4-Methylphenol	mg/L		T	<0.01	:	-	-	-	-	-
4-Nitroaniline	mg/L		T	<0.026	:	-	-	-	-	-
4-Nitrophenol	mg/L		T	<0.026	J	-	-	-	-	-
Acenaphthene	mg/L		T	<0.01	:	-	-	-	-	-
Acenaphthylene	mg/L		T	<0.01	:	-	-	-	-	-
Anthracene	mg/L		T	<0.01	:	-	-	-	-	-
Benzaldehyde	mg/L		T	<0.01	:	-	-	-	-	-
Benzo(a)anthracene	mg/L		T	<0.01	:	-	-	-	-	-
Benzo(a)pyrene	mg/L		T	<0.01	:	-	-	-	-	-
Benzo(b)fluoranthene	mg/L		T	<0.01	:	-	-	-	-	-
Benzo(g,h,i)perylene	mg/L		T	<0.01	:	-	-	-	-	-
Benzo(k)fluoranthene	mg/L		T	<0.01	:	-	-	-	-	-
Bis(2-chloroethoxy)methane	mg/L		T	<0.01	:	-	-	-	-	-
Bis(2-chloroethyl)ether	mg/L		T	<0.01	:	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	mg/L		T	<0.01	:	-	-	-	-	-
Butyl benzyl phthalate	mg/L		T	<0.01	:	-	-	-	-	-
Carbazole	mg/L		T	<0.01	:	-	-	-	-	-
Chrysene	mg/L		T	<0.01	:	-	-	-	-	-
Dibenz(a,h)anthracene	mg/L		T	<0.01	:	-	-	-	-	-
Dibenzofuran	mg/L		T	<0.01	:	-	-	-	-	-

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 6/12/2003 WESTSEEP-T01N-G RW GW13		West Seep 6/12/2003 WESTSEEP-D01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-T01N-G RW GW13	West Seep 7/9/2003 WESTSEEP-D01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-T01N-G RW GW13	West Seep 10/20/2003 WESTSEEP-D01N-G RW GW13
Dichlorodiisopropyl ether	mg/L	T	<0.01	:	-	-	-	-	-
Diethylphthalate	mg/L	T	<0.01	:	-	-	-	-	-
Dimethylphthalate	mg/L	T	<0.01	:	-	-	-	-	-
Di-n-Butyl phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Di-n-Octyl phthalate	mg/L	T	<0.01	:	-	-	-	-	-
Fluoranthene	mg/L	T	<0.01	:	-	-	-	-	-
Fluorene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorobenzene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorobutadiene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachlorocyclopentadiene	mg/L	T	<0.01	:	-	-	-	-	-
Hexachloroethane	mg/L	T	<0.01	:	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/L	T	<0.01	:	-	-	-	-	-
Isophorone	mg/L	T	<0.01	:	-	-	-	-	-
Naphthalene	mg/L	T	<0.01	:	-	-	-	-	-
Nitrobenzene	mg/L	T	<0.01	:	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/L	T	<0.01	:	-	-	-	-	-
N-Nitrosodiphenylamine	mg/L	T	<0.01	:	-	-	-	-	-
Pentachlorophenol	mg/L	T	<0.026	:	-	-	-	-	-
Phenanthrene	mg/L	T	<0.01	:	-	-	-	-	-
Phenol	mg/L	T	<0.01	:	-	-	-	-	-
Pyrene	mg/L	T	<0.01	:	-	-	-	-	-
Petroleum Hydrocarbons									
Diesel Fuel (No. 2)	mg/L	T	<0.1	:	-	-	-	-	-
Gasoline	mg/L	T	<0.05	:	-	-	-	-	-
Motor Oil	mg/L	T	<0.26	:	-	-	-	-	-

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Exposure Area Fraction	Site ID / Sample Date / Sample ID									
			West Seep 1/8/2004 WESTSEEP-T01N-G RW GW13		West Seep 1/8/2004 WESTSEEP-D01N-G RW GW13		West Seep 4/15/2004 WESTSEEP-T01N-G RW GW13		West Seep 4/15/2004 WESTSEEP-D01N-G RW GW13		----	----
Field Measurements												
DO	mg/L	T	8.17	:	-		5.06	:	-		-	-
EH	millivolts	T	154.5	:	-		-42.4	:	-		-	-
pH	SU	T	7.5	J	-		7.25	:	-		-	-
Specific Conductance	uS/cm	T	1624.	:	-		1634.	:	-		-	-
Temperature	Celsius	T	1.51	:	-		12.34	:	-		-	-
Turbidity	NTU	T	107.6	:	-		27.1	:	-		-	-
General Chemistry												
Ammonia	mg/L	T	<0.13	J	-		<0.049	:	-		-	-
Bicarbonate (as CaCO3)	mg/L	T	167.	:	-		170.	:	-		-	-
Carbonate (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-	-
Chloride	mg/L	T	31.8	:	-		33.2	:	-		-	-
Fluoride	mg/L	T	0.18	:	-		0.24	:	-		-	-
Hydroxide (as CaCO3)	mg/L	T	<1.	:	-		<1.	:	-		-	-
Nitrate	mg/L	T	<0.2	J	-		<0.2	:	-		-	-
Nitrite	mg/L	T	<0.005	J	-		<0.005	:	-		-	-
Phosphate, Ortho As P	mg/L	T	<0.01	J	-		<0.01	:	-		-	-
Phosphorus	mg/L	T	0.2	:	-		0.051	:	-		-	-
Sulfate	mg/L	T	718.	:	-		809.	:	-		-	-
Total Alkalinity	mg/L	T	167.	:	-		170.	:	-		-	-
Total Dissolved Solids	mg/L	T	1340.	:	-		1430.	:	-		-	-
Total Kjeldahl Nitrogen	mg/L	T	0.33	:	-		0.85	:	-		-	-
Total Organic Carbon	mg/L	T	<2.2	:	-		<4.	J	-		-	-
Total Suspended Solids	mg/L	T	251.	:	-		175.	J	-		-	-
Laboratory Parameters												
pH	SU	T	7.5	J	-		7.25	:	-		-	-
Specific Conductance	umhos/cm	T	1480.	J	-		1560.	J	-		-	-
Inorganics												
Cyanide	mg/L	T	<0.01	J	-		<0.01	:	-		-	-
Physical Properties												
Hardness	mg/L	T	892.	:	-		894.	:	-		-	-
Hardness	mg/L	D	-		874.	:	-		904.	:	-	-
Metals												

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area	Fraction	West Seep 1/8/2004 WESTSEEP-T01N-G RW GW13		West Seep 1/8/2004 WESTSEEP-D01N-G RW GW13		West Seep 4/15/2004 WESTSEEP-T01N-G RW GW13		West Seep 4/15/2004 WESTSEEP-D01N-G RW GW13		----	----
Aluminum	mg/L		T	0.896	:	-		<0.201	J	-		-	-
Aluminum	mg/L		D	-		<0.621	:	-		0.296	J	-	-
Antimony	mg/L		T	<0.0024	:	-		<0.0011	:	-		-	-
Antimony	mg/L		D	-		<0.0024	:	-		<0.0013	:	-	-
Arsenic	mg/L		T	0.0017	:	-		0.00068	:	-		-	-
Arsenic	mg/L		D	-		0.0012	:	-		<0.0004	:	-	-
Barium	mg/L		T	0.027	:	-		0.0228	:	-		-	-
Barium	mg/L		D	-		<0.0188	:	-		0.0188	:	-	-
Beryllium	mg/L		T	<0.001	:	-		<0.0003	J	-		-	-
Beryllium	mg/L		D	-		<0.001	:	-		<0.0003	J	-	-
Boron	mg/L		T	0.0127	:	-		0.0223	:	-		-	-
Boron	mg/L		D	-		<0.0117	:	-		0.0183	:	-	-
Cadmium	mg/L		T	<0.0007	J	-		<0.0003	:	-		-	-
Cadmium	mg/L		D	-		<0.0007	:	-		<0.0003	:	-	-
Calcium	mg/L		T	280.	:	-		281.	:	-		-	-
Calcium	mg/L		D	-		275.	:	-		284.	:	-	-
Chromium	mg/L		T	<0.0057	:	-		<0.0006	:	-		-	-
Chromium	mg/L		D	-		<0.0057	:	-		<0.0006	:	-	-
Cobalt	mg/L		T	<0.0037	:	-		<0.0016	:	-		-	-
Cobalt	mg/L		D	-		0.0045	:	-		<0.0026	:	-	-
Copper	mg/L		T	<0.0035	:	-		<0.0017	:	-		-	-
Copper	mg/L		D	-		<0.0035	:	-		<0.0014	:	-	-
Iron	mg/L		T	1.57	:	-		<0.293	J	-		-	-
Iron	mg/L		D	-		<0.423	:	-		0.48	J	-	-
Lead	mg/L		T	0.0045	:	-		0.0011	:	-		-	-
Lead	mg/L		D	-		<0.0002	:	-		<0.0008	:	-	-
Magnesium	mg/L		T	46.5	:	-		46.7	:	-		-	-
Magnesium	mg/L		D	-		45.3	:	-		47.3	:	-	-
Manganese	mg/L		T	0.142	:	-		0.197	:	-		-	-
Manganese	mg/L		D	-		0.0841	:	-		0.204	:	-	-
Mercury	mg/L		T	<0.0001	:	-		<0.0001	:	-		-	-
Mercury	mg/L		D	-		<0.0001	:	-		<0.0001	:	-	-
Molybdenum	mg/L		T	<0.003	:	-		0.0048	:	-		-	-
Molybdenum	mg/L		D	-		0.0052	:	-		0.0047	:	-	-

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Appendix A-6n
Seep/Spring - Upper Alluvial Aquifer
Validated Results

Parameter	Units	Site ID / Sample Date / Sample ID / Exposure Area / Fraction	West Seep 1/8/2004 WESTSEEP-T01N-G RW GW13	West Seep 1/8/2004 WESTSEEP-D01N-G RW GW13	West Seep 4/15/2004 WESTSEEP-T01N-G RW GW13	West Seep 4/15/2004 WESTSEEP-D01N-G RW GW13	----	----
Nickel	mg/L	T	<0.0168 :	-	<0.0015 J	-	-	-
Nickel	mg/L	D	-	<0.0168 :	-	<0.0015 J	-	-
Potassium	mg/L	T	1.09 :	-	1.51 :	-	-	-
Potassium	mg/L	D	-	0.969 :	-	1.24 :	-	-
Selenium	mg/L	T	<0.0043 J	-	<0.0014 :	-	-	-
Selenium	mg/L	D	-	<0.0031 :	-	<0.0014 :	-	-
Silver	mg/L	T	<0.0002 :	-	<0.0002 J	-	-	-
Silver	mg/L	D	-	<0.0002 :	-	<0.0002 J	-	-
Sodium	mg/L	T	52.8 :	-	<63.9 J	-	-	-
Sodium	mg/L	D	-	53.4 :	-	<57.2 J	-	-
Thallium	mg/L	T	<0.0002 :	-	<0.00023 :	-	-	-
Thallium	mg/L	D	-	<0.0002 :	-	<0.00022 :	-	-
Vanadium	mg/L	T	0.0053 :	-	0.002 :	-	-	-
Vanadium	mg/L	D	-	0.00043 :	-	0.0007 :	-	-
Zinc	mg/L	T	<0.091 :	-	<0.024 :	-	-	-
Zinc	mg/L	D	-	<0.091 :	-	<0.024 :	-	-

J = Qualified as estimated during data validation
R = Qualified as rejected value from data validation and results are considered unusable for any purpose
T = Total Fraction