



Golder Associates Inc.

5200 Pasadena N.E., Suite C
Albuquerque, NM USA 87113
Telephone (505) 821-3043
Fax (505) 821-5273
www.golder.com



**1st BIENNIAL
GROUNDWATER MONITORING REPORT
(FORM 1216)
LOVINGTON 66,
PSTB FACILITY #1489
503 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO**

Submitted to:

NMED PSTB

On Behalf of:

*Jack Walstad Oil Company
c/o Maddox, Holloman & Kirksey P.C.
205 East Bender, Ste. 150
Hobbs, New Mexico 88241*

Submitted by:

*Golder Associates Inc.
5200 Pasadena NE, Ste. C
Albuquerque, NM 87113*

Distribution:

- 1 Copy – NMED-PSTB
- 1 Copy – Jim Maddox, Maddox, Holloman & Kirksey P.C.
- 2 Copies - Golder Associates Inc., Albuquerque

February 26, 2009

073-80008

STATEMENT OF FAMILIARITY

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.

Signature:



Name: Todd Stein
Affiliation: Golder Associates Inc.
Title: Senior Hydrogeologist
Date: February 26, 2009

I. INTRODUCTION

On behalf of Jack Walstad, Golder Associates Inc. (Golder) has completed the first biannual groundwater monitoring event at the former Lovington 66 site. The monitoring event was completed in accordance with the *Work Plan for Semi-Annual Monitoring and Quarterly Free Product Recovery, Lovington 66 Site (LUST ID1182), Lovington, New Mexico* dated April 24, 2008. This work plan satisfies the requirements stated in the New Mexico Administrative Code, Title 20, Chapter 5, Section 12 and the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) Guidelines for Corrective Action (GCA). The work plan was approved by the NMED PSTB on August 5, 2008 under work plan identification number (WPID #) 15275, and an extension of time for the project deliverables was subsequently granted by the NMED PTSTB on January 27, 2009. This is the second of three deliverables under WPID #15275, and is identified as deliverable ID 15275-2.

The former Lovington 66 Site is located at 424 South Main Street, Lovington, New Mexico (Figure 1). This site is bounded by Highway 83/Avenue D on the south, and Main Street on the east. Avenue C is north of the site, and west of the site is commercial property. Southeast of the site is an Allsup's convenience store and self-service gasoline station, which is also a leaking underground storage tank site. A self-service gasoline station is located south of the site. The original Lovington 66 building has been demolished, and presently a McDonald's restaurant is located on the property. The former Lovington 66 was located on the southern portion of the property that now is the parking lot for McDonald's. The Lovington 66 dissolved phase plume has migrated southeast across the intersection of Main and Avenue D and is commingled with the Allsup's #109 site dissolved phase plume.

On January 28, 2009, fluid levels were measured in seventeen Lovington 66 monitoring wells (W-1, W-2, W-3, W-5, W-7, W-8, W-9, W-11, W-12, W-13, W-14, W-15, W-16, W-18, W-19, W-20, and W-21), and three Allsup's #109 wells (MW-1, MW-2 and MW-3). Groundwater samples were collected from nine Lovington 66 monitoring wells (W-5, W-8, W-9, W-11, W-14, W-16, W-19, W-20, and W-21) and analyzed for volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX), ethylene dichloride (EDC), methyl tertiary butyl ether (MTBE), and total naphthalenes by Environmental Protection Agency (EPA) Method 8260. In addition, pH, specific conductance, dissolved oxygen (DO), and temperature were measured in the field. The following sections provide a detailed summary of the results of the 1st biannual monitoring event.

II. ACTIVITIES PERFORMED DURING THIS QUARTER

This section provides a brief description of previous corrective action activities conducted at the site, and monitoring activities performed during this monitoring period.

A. Brief Description of Remediation System and Date Installed

A remediation system has not been installed at this site. Previous corrective action activities that have occurred at the site include the following:

- July 1991 – AEI Tank, Inc. (AEI) conducted a site assessment where seven soil borings were advanced within the UST backfill or UST perimeter, and five borings were placed in or near product pipe trenches. Hydrocarbon contamination was observed.
- November 1991 – AEI removed five USTs that contained diesel, unleaded fuels, and used oil and the associated product piping and fuel dispensers. Hydrocarbon contamination was observed in the location of the dispensers and the location of the diesel tank. It was determined that a release likely occurred from overfilling the USTs and from the dispensers and product lines (a large section of product piping had been replaced).
- November and December 1991 – AEI excavated approximately 600 cubic yards of contaminated soil from product line trenches, dispenser islands and tank excavations.
- December 1991 – AEI attempted to delineate the vertical extent of contamination by installing one soil boring. The location of this soil boring was never documented. During the drilling of the boring auger refusal was encountered at 40 feet below ground surface (bgs).
- February 1992 – AEI installed one groundwater monitoring well. Groundwater sample results indicated that groundwater contamination was present above New Mexico Water Quality Control Commission (NMWQCC) standards.
- March 1992 – AEI installed two additional monitor wells to determine the extent of dissolved phase hydrocarbon contamination. Both wells had dissolved phase hydrocarbon concentrations well above NMWQCC standards.
- June 1992 – Billings & Associates, Inc (BAI) completed an Interim Hydrogeologic Investigation Report (On-site). During this investigation six soil borings (B-4 through B-9) were advanced at the site to a depth of 40 feet bgs. Heated headspace measurements above action levels were present in all borings except B-8. NAPL was present in the three monitor wells installed by AEI. Three additional monitor wells W-4, W-5, and W-6 were installed. The three new wells exceeded NMWQCC standards.
- September 1993 – BAI completed a 2nd Interim Hydrogeologic Investigation Report. During this investigation free product recovery efforts commenced using BAI's Product Recovery Filter system. In addition six new monitor wells (W-7 through W-12) and vertical extent well V-1, were installed.

- June 1993 – BAI submitted the 3rd Interim Hydrogeologic Investigation Report. Five wells (W-13 through W-17) were installed to delineate the dissolved phase plume. NAPL was present in vertical extent well V-1, which Billings attributed to leaking casing.
- August 2006 – Golder sampled the Lovington 66 wells as part of an investigation conducted at the Allsup's #109 site located downgradient from the Lovington 66 site.
- November 2007 – Golder completed a Continued Secondary Investigation in which three downgradient wells (W-19, W-20, and W-21) were installed and a NAPL bail down test was completed on wells W-2 and W-3. The downgradient extent of contamination was delineated.
- August 2008 – Golder completed four quarters of groundwater monitoring at the Lovington 66 site.

B. Description of Activities Performed to Keep System Operating Properly

No active remediation activities have been completed at the site.

C. Monitoring Activities Performed

NAPL Recovery

NAPL remains in three Lovington 66 monitor wells (W-1, W-2, and W-3) and was also present in vertical extent well V-1 up until this well was abandoned in September 2008. Golder subcontracted CMB Environmental to hand bail NAPL from wells W-1, W-2, W-3, and V-1 on a quarterly basis. The first quarterly event occurred on September 3, 2008 and the second event occurred on January 27, 2009. Table 1 summarized the NAPL thicknesses measured in each well prior to and post bailing. A total of approximately 14 gallons of NAPL was recovered from the wells.

Abandonment of Well V-1

After the wells were hand bailed on September 3, 2008, JR Drilling, LLC plugged and abandoned vertical extent well V-1. The well was plugged by extending a tremmie pipe to the bottom of the well and pumping cement/bentonite grout to the surface. The well head was cut off below land surface after plugging. A *Well Plugging Plan of Operations* form was submitted by JR Drilling to the New Mexico Office of the State Engineer on September 4, 2008. Golder also provided a letter report to the NMED PTSB on September 23, 2008 summarizing the well plugging and abandonment of vertical extent well V-1 and the results of the first quarterly hand bailing event.

Groundwater Sampling Activities

The first biannual groundwater monitoring event under WPID # 15275 was conducted on January 28, 2009. Prior to collecting groundwater samples, fluid levels in all existing Lovington 66 wells (except W-10), and Allsup's #109 wells (MW-1, MW-2, and MW-3) were measured with an electronic water level meter or interface probe. Well W-10 is located in the middle of Main Street and it was determined that it was unsafe to measure fluid levels in this well. Table 2 provides a summary of the groundwater level measurements collected from the monitoring wells. A potentiometric surface map was prepared based on the collected data and is included in Figure 2. Hydrographs for the monitor wells are provided in Appendix A.

Nine Lovington monitoring wells (W-5, W-8, W-9, W-11, W-14, W-16, W-19, W-20, and W-21) were purged and sampled with disposable polyethylene bailers following the measurement of fluid levels in the wells. The wells were sampled from least to most contaminated where possible to minimize cross-contamination. All equipment was decontaminated between wells with an Alconox™ solution to prevent cross-contamination. Purge water was ground discharged in accordance with Section 1.7.2 of the GCA. Sampling was accomplished by carefully pouring groundwater from new disposable bailers into the sample containers.

Golder measured field parameters (pH, specific conductance and temperature) with a Hanna HI 991300 water quality meter during purging and prior to sampling. Dissolved oxygen was measured from the first bailer retrieved using a Chemetrics V-2000 meter. The meters were calibrated and/or checked against a standard in accordance with manufacturer's specifications prior to use. Specific conductance, dissolved oxygen, pH, and temperature were recorded on monitoring well sampling field forms. Monitoring well sampling field forms are provided in Appendix B.

Sample containers, preservatives, analytical methods, and holding times employed for this project are specified in Table 3. Samples for VOC analysis were collected such that no headspace air existed in the sample vial. All samples were preserved in accordance with method requirements, then immediately cooled to 4°C with ice and delivered under chain-of-custody to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The analytical laboratory report is provided in Appendix C.

Groundwater Sampling Results

The laboratory analytical results for the first biannual monitoring event are summarized in Table 4. The following are observations from this data:

- The dissolved phase hydrocarbon concentrations were at or above NMWQCC standards in six of the nine monitor wells sampled.
- The highest benzene concentration observed was 24,000 µg/L in monitor well W-14. Wells W-8 and W-14 had BTEX, MTBE, EDC and total naphthalenes concentrations above standards.
- Well W-8 also had EDB present at a concentration above standards.
- Wells W-9 and W-16 had benzene, total naphthalenes, and EDC concentrations above standards.
- Well W-11 had MTBE and EDC concentrations above standards.
- Well W-19 had EDC present at a concentration above standards.
- Wells W-5, W-20 and W-21 had concentrations below NMWQCC standards for all compounds analyzed.

D. System Performance and Effectiveness

No system has been installed at the site.

E. Statement Verifying Containment of Release

The Lovington 66 dissolved phase plume has migrated southeast across the intersection of Avenue D and Main Street to Avenue E southeast of the site. The NAPL plume appears to have migrated beneath the intersection of Avenue D and Main Street with dissolved phase concentrations observed in W-14 near NAPL levels. The downgradient extent of the dissolved phase plume has been defined by wells W-20 and W-21.

III. SUMMARY AND CONCLUSIONS

This section summarizes the results of the first biannual monitoring event and includes a brief discussion of water level and contaminant concentration trends at the Lovington 66 site. Additionally, recommendations for future site activities are provided in this section.

A. Discussion of any Trends or Changes Noted in Analytical Results or Site Conditions

The results of groundwater gauging indicate that water levels have generally fallen slightly for the majority of the monitoring network when compared to the previous groundwater gauging conducted in August 2008. Three wells (W-1, W-12, and W-16) exhibited higher water levels when compared to the previous monitoring period, and the water levels in two wells (W-2 and W-5) were the same as in August 2008. The overall direction of groundwater flow remains in a southeasterly direction and the hydraulic gradient ranges between approximately 0.003 and 0.005 foot per foot (Figure 2).

NAPL was observed in three wells, W-1, W-2, and W-3 with thicknesses ranging from 0.13 feet in well W-3 to 3.53 feet in well W-1. NAPL was bailed off of these wells on September 3, 2008 and again on January 27, 2009. There was a slight decrease in the NAPL thickness observed within these wells between the first and second bailing event. The estimated extent of NAPL beneath the site is presented on Figure 3.

The distribution of dissolved phase organic contaminants observed in January 2009 is shown on Figure 3. The dissolved phase benzene concentrations in wells W-8 and W-14 were at least 1,900 times the NMWQCC standard of 10 µg/L. Hydrocarbon concentrations generally decreased in all wells sampled except for well W-8 when compared to the previous monitoring event in August 2008. The EDC concentrations slightly increased in wells W-8, W-9, W-11, and W-19. MTBE concentrations decreased in all wells that had detectable concentrations except for well W-8. Figures 4, 5, and 6 illustrate the distribution of benzene, MTBE and EDC in January 2009, respectively. Concentration trends for benzene and MTBE for select wells are included in Appendix D.

The MNA parameters (dissolved oxygen, and temperature) were measured to evaluate the MNA remedy. The MNA parameters measured on January 28, 2009 are summarized on Table 5 and posted on Figure 7. There does not appear to be an appreciable change in the dissolved oxygen levels measured in the monitoring wells between the January 2009 and August 2008 monitoring events. Copies of the field forms associated with the first biannual monitoring event are provided in Appendix B.

B. Ongoing Assessment of Remediation System

No active remediation system has been installed at the site.

C. Recommendations

Based on the results of the first biannual groundwater monitoring event, it is recommended that biannual groundwater monitoring and quarterly NAPL recovery (via hand bailing) continue at the site.

List of Attachments

Tables 1 through 5

Figures 1 through 7

Appendix A – Hydrographs

Appendix B - Field Forms

Appendix C –Analytical Laboratory Reports

Appendix D – Concentration Trends

TABLES

February 2009

TABLE 1
SUMMARY OF NAPL RECOVERY
LOVINGTON 66, LOVINGTON, NEW MEXICO

073-80008

Monitor Well	Date Recovered	Prior to Bailing			Post Bailing			Total NAPL Recovered ¹
		Depth To NAPL (feet)	Depth to Water (feet)	NAPL Thickness (feet)	Depth to NAPL (feet)	Depth to Water (feet)	NAPL Thickness (feet)	
W-1	27-Jan-09	54.69	58.22	3.53	-	56.25	0.00	6.00
	3-Sep-08	54.69	58.52	3.83	-	57.22	0.00	6.00
W-2	27-Jan-09	54.48	54.81	0.33	-	55.55	0.00	0.25
	3-Sep-08	54.50	54.94	0.44	-	55.52	0.00	0.25
W-3	27-Jan-09	54.56	54.69	0.13	-	55.52	0.00	0.25
	3-Sep-08	54.60	54.81	0.21	-	55.57	0.00	0.25
V-1	3-Sep-08	53.92	58.45	4.53	-	55.20	0.00	1.00
Cumulative Total NAPL Recovered at the Site¹								14.00

Notes:

NAPL - Non Aqueous Phase Liquid

¹ Measured in gallons - quantity is estimated.

All NAPL recovered is temporarily stored in a 55 gallon drum on-site.

TABLE 2
SUMMARY OF FLUID GAUGING DATA
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Measured	Northing ¹	Easting ¹	Casing Elevation ²	Depth to Product ³	Product Thickness ⁴	Depth to Water ³	Groundwater Elevation ²
Allsup's # 109								
MW-1	28-Jan-2009	708392.73	843467.49	3909.74			54.91	3854.83
	7-Aug-2008						54.86	3854.88
	12-May-2008						54.36	3855.38
	7-Nov-2007						53.93	3855.81
	8-Aug-2006						54.36	3855.38
	6-Aug-2005						55.07	3854.67
MW-2	28-Jan-2009	708398.53	843584.18	3910.05			55.56	3854.49
	7-Aug-2008						55.54	3854.51
	12-May-2008						55.05	3855.00
	7-Nov-2007						54.58	3855.47
	8-Aug-2006						55.04	3855.01
	6-Aug-2005						55.74	3854.31
MW-3	28-Jan-2009	708484.61	843518.13	3910.14			55.16	3854.98
	7-Aug-2008						55.15	3854.99
	13-May-2008						54.76	3855.38
	7-Nov-2007						54.22	3855.92
	8-Aug-2006						54.65	3855.49
	6-Aug-2005						55.33	3854.81
Walstad 66								
V-1	28-Jan-2009	Well Plugged & Abandoned						
	7-Aug-2008	708614.74	843348.54	3910.67	53.75	4.55	58.30	3855.78
	13-May-2008				53.41	4.57	57.98	3856.12
	13-Feb-2008				53.01	4.57	57.58	3856.52
	7-Nov-2007				53.01	4.58	57.59	3856.52
	8-Aug-2006				53.32	4.59	57.91	3856.20
	25-May-1993			99.37			56.74	42.63
	29-Aug-1992				56.68	42.69		
W-1	28-Jan-2009	708649.18	843347.81	3911.33	55.39	0.31	55.70	3855.86
	7-Aug-2008				54.96	3.31	58.27	3855.54
	13-May-2008				54.25	3.37	57.62	3856.24
	13-Feb-2008				53.89	3.16	57.05	3856.65
	7-Nov-2007				53.91	3.11	57.02	3856.64
	8-Aug-2006				54.23	3.15	57.38	3856.31
	24-May-1993				NAPL Present			
	28-Aug-1993				NAPL Present			
	24-Jun-1992				>30" of NAPL Present			
	8-Jun-1992				>30" of NAPL Present			
	12-Feb-1992				0.125" of NAPL Present			

TABLE 2
SUMMARY OF FLUID GAUGING DATA
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Measured	Northing ¹	Easting ¹	Casing Elevation ²	Depth to Product ³	Product Thickness ⁴	Depth to Water ³	Groundwater Elevation ²
W-2	28-Jan-2009	708625.02	843381.13	3910.19	54.44	0.03	54.47	3855.74
	7-Aug-2008				54.34	0.44	54.78	3855.74
	13-May-2008				53.98	0.38	54.36	3856.12
	13-Feb-2008				53.57	0.31	53.88	3856.54
	7-Nov-2007				52.88	3.32	56.20	3856.48
	8-Aug-2006				53.21	5.34	58.55	3855.65
	24-May-1993				NAPL Present			
	28-Aug-1992				NAPL Present			
	24-Jun-1992				>30" of NAPL Present			
	8-Jun-1992				>30" of NAPL Present			
	13-Mar-1992				0.125" of NAPL Present			
	W-3				28-Jan-2009	708597.90	843348.60	3910.29
13-May-2008		54.44	0.21	54.65	3855.80			
13-May-2008		54.08	0.18	54.26	3856.17			
13-Feb-2008		53.65	0.13	53.78	3856.61			
7-Nov-2007		53.01	3.03	56.04	3856.52			
8-Aug-2006		53.30	3.20	56.50	3856.19			
24-May-1993		NAPL Present						
28-Aug-1992		NAPL Present						
24-Jun-1992		>30" of NAPL Present						
8-Jun-1992		>30" of NAPL Present						
13-Mar-1992		0.125" of NAPL Present						
W-4		8-Aug-2006	Well Destroyed					
	25-May-1993			99.62			56.48	43.14
	28-Aug-1992						56.69	42.93
	24-Jun-1992						57.04	42.58
W-5	28-Jan-2009	708759.72	843252.39	3911.71			55.36	3856.35
	7-Aug-2008						55.36	3856.35
	12-May-2008						54.87	3856.84
	13-Feb-2008						54.63	3857.08
	7-Nov-2007						54.61	3857.10
	8-Aug-2006						54.88	3856.83
	26-May-1993			100.41			57.02	43.39
	28-Aug-1992						57.24	43.17
	24-Jun-1992						57.59	42.82
W-6	8-Aug-2006	Well Destroyed						
	26-May-1993			99.48			56.49	42.99
	28-Aug-1992						56.64	42.84
	24-Jun-1992						56.97	42.51

TABLE 2
SUMMARY OF FLUID GAUGING DATA
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Measured	Northing ¹	Easting ¹	Casing Elevation ²	Depth to Product ³	Product Thickness ⁴	Depth to Water ³	Groundwater Elevation ²
W-7	28-Jan-2009	708910.73	843120.52	3910.88			54.11	3856.77
	6-Aug-2008						53.97	3856.91
	12-May-2008						53.55	3857.33
	12-Feb-2008						53.33	3857.55
	7-Nov-2007	708911.67	843120.56	3911.35			53.48	3857.87
	8-Aug-2006						53.74	3857.61
	25-May-1993			100.07			55.96	44.11
	28-Aug-1992						56.29	43.78
W-8	28-Jan-2009	708389.76	843640.62	3909.92			55.67	3854.25
	7-Aug-2008						55.64	3854.28
	12-May-2008						55.14	3854.78
	13-Feb-2008						54.79	3855.13
	7-Nov-2007						54.65	3855.27
	8-Aug-2006						55.11	3854.81
	25-May-1993			98.69			57.20	41.49
	28-Aug-1992						57.24	41.45
W-9	28-Jan-2009	708267.18	843790.26	3908.72			55.19	3853.53
	7-Aug-2008						55.18	3853.54
	12-May-2008						54.68	3854.04
	13-Feb-2008						54.31	3854.41
	7-Nov-2007						54.12	3854.60
	8-Aug-2006						54.66	3854.06
	25-May-1993			97.47			56.74	40.73
	28-Aug-1992						56.76	40.71
W-10	28-Jan-2009	Unable to gauge well due to traffic constraints						
	7-Aug-2008	Unable to gauge well due to traffic constraints						
	12-May-2008	Unable to gauge well due to traffic constraints						
	13-Feb-2008	Unable to gauge well due to traffic constraints						
	8-Aug-2006	708254.54	843452.92	3908.89			53.79	3855.10
	26-May-1993			97.85			55.80	42.05
	28-Aug-1992					56.18	41.67	
W-11	28-Jan-2009	708600.95	843650.96	3909.96			55.26	3854.70
	6-Aug-2008						55.14	3854.82
	12-May-2008						54.71	3855.25
	13-Feb-2008						54.41	3855.55
	7-Nov-2007						54.26	3855.70
	8-Aug-2006						54.70	3855.26
	26-May-1993			98.66			56.85	41.81
	28-Aug-1992						56.82	41.84

TABLE 2
SUMMARY OF FLUID GAUGING DATA
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Measured	Northing ¹	Easting ¹	Casing Elevation ²	Depth to Product ³	Product Thickness ⁴	Depth to Water ³	Groundwater Elevation ²
W-12	28-Jan-2009	708435.38	843045.85	3910.59			54.09	3856.50
	6-Aug-2008						54.50	3856.09
	12-May-2008						54.05	3856.54
	12-Feb-2008						53.29	3857.30
	7-Nov-2007						53.72	3856.87
	8-Aug-2006						53.55	3857.04
	26-May-1993						55.96	43.38
	29-Aug-1992			99.34			56.28	43.06
W-13	28-Jan-2009	708915.13	843525.37	3910.36			54.66	3855.70
	6-Aug-2008						54.50	3855.86
	12-May-2008						54.08	3856.28
	12-Feb-2008						53.80	3856.56
	7-Nov-2007						53.70	3856.66
	8-Aug-2006						54.01	3856.35
	26-May-1993						56.25	42.82
	29-Aug-1992			99.07			56.36	42.71
W-14	28-Jan-2009	708504.99	843463.76	3909.73			54.67	3855.06
	7-Aug-2008						54.65	3855.08
	13-May-2008						54.24	3855.49
	13-Feb-2008						53.80	3855.93
	7-Nov-2007						53.72	3856.01
	8-Aug-2006						54.15	3855.58
	26-May-1993			98.54			56.26	42.28
W-15	28-Jan-2009	708221.99	843030.65	3909.40			53.82	3855.58
	6-Aug-2008						53.71	3855.69
	12-May-2008						53.27	3856.13
	12-Feb-2008						53.02	3856.38
	7-Nov-2007	708195.85	843053.51	3909.71			53.11	3856.60
	8-Aug-2006						53.41	3856.30
	26-May-1993						55.40	43.09
W-16	28-Jan-2009	708153.28	843364.45	3908.67			53.52	3855.15
	7-Aug-2008						54.03	3854.64
	12-May-2008						53.52	3855.15
	13-Feb-2008						53.20	3855.47
	7-Nov-2007						53.06	3855.61
	8-Aug-2006						53.49	3855.18
	26-May-1993						55.52	41.92
				97.44				

TABLE 2
SUMMARY OF FLUID GAUGING DATA
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Measured	Northing ¹	Easting ¹	Casing Elevation ²	Depth to Product ³	Product Thickness ⁴	Depth to Water ³	Groundwater Elevation ²
W-17	8-Aug-2006	Well Destroyed						
	26-May-1993			96.94			56.86	40.08
W-18	28-Jan-2009	708697.21	843818.98	3909.38			55.04	3854.34
	6-Aug-2008						54.90	3854.48
	12-May-2008						54.65	3854.73
	12-Feb-2008						54.13	3855.25
	7-Nov-2007	708698.11	843818.96	3909.50			54.19	3855.31
	8-Aug-2006						54.60	3854.90
	26-May-1993			98.26			56.79	41.48
W-19	28-Jan-2009	708148.94	843934.18	3908.36			55.36	3853.00
	6-Aug-2008						55.31	3853.05
	12-May-2008						54.88	3853.48
	13-Feb-2008						54.51	3853.85
	7-Nov-2007						54.23	3854.13
W-20	28-Jan-2009	707780.85	844187.25	3907.45			55.54	3851.91
	6-Aug-2008						55.53	3851.92
	12-May-2008						55.09	3852.36
	13-Feb-2008						54.69	3852.76
	7-Nov-2007						54.29	3853.16
W-21	28-Jan-2009	707988.79	843841.61	3908.49			55.32	3853.17
	6-Aug-2008						55.23	3853.26
	12-May-2008						54.81	3853.68
	13-Feb-2008						54.45	3854.04
	7-Nov-2007						54.19	3854.30

Note:¹ Horizontal control to NM State Plane Coordinates Central NAD83 Grid Coordinates (in feet)² Vertical Control to NAVD88 Datum in feet above mean sea level³ Measured in feet below the top of casing at survey point on north side of well

TABLE 3
SUMMARY OF SAMPLE ANALYTICAL AND QUALITY CONTROL REQUIREMENTS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Target Analytes	Matrix	Analytical Method	Sample Container	Preservative	Holding Time
VOCs	Water	EPA 8260	3 x 40- mL glass vials	Mercuric Chloride; Cool to 4°C	14 days

Notes:

EPA = U.S. Environmental Protection Agency

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	EDB	EDC	Total Naphthalenes
W-2	13-Mar-92	29,878	28,953	3,874	13,109	5,921	NA	NA	NA
W-3	13-Mar-92	10,493	8,961	1,253	5,320	5,150	NA	NA	NA
W-4	25-May-93	2,500	980	310	470	<63	NA	NA	NA
	28-Aug-92	1,400	430	95	300	<2.5	NA	NA	NA
	24-Jun-92	200	53	21	40	<5.0	NA	NA	NA
W-5	28-Jan-09	<1.0	<1.0	<1.0	<1.5	18	<1.0	<1.0	<2.0
	7-Aug-08	5.2	<1.0	3.7	<1.5	39	<1.0	<1.0	<2.0
	12-May-08	16	<1.0	7.6	<1.5	65	<1.0	<1.0	<2.0
	13-Feb-08	26	1.1	24	<1.5	140	<1.0	<1.0	4.5
	7-Nov-07	45	8.5	29	15	170	<1.0	<1.0	4.9
	9-Aug-06	2.0	<1.0	3.7	<3.0	22	<1.0	<1.0	<2.0
	28-Aug-92	850	400	58	450	3.3	NA	NA	NA
	24-Jun-92	470	250	41	290	<10	NA	NA	NA
W-6	28-Aug-92	3,000	2,700	93	860	<2.5	NA	NA	NA
	24-Jun-92	1,400	1,200	48	500	<25	NA	NA	NA
W-7	7-Nov-07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	8-Aug-06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	<2.0
	25-May-93	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA
	28-Aug-92	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA
W-8	28-Jan-09	19,000	26,000	2,500	11,000	9,800	290	3,000	570
	7-Aug-08	20,000	24,000	2,400	11,000	8,600	270	2,900	670
	12-May-08	19,000	22,000	1,800	8,000	4,900	250	2,100	400
	13-Feb-08	27,000	39,000	4,800	16,000	8,600	670	4,000	1,350
	7-Nov-07	20,000	27,000	3,200	15,000	5,900	440	4,100	770
	9-Aug-06	21,000	29,000	2,600	13,000	6,300	<500	3,700	1,100
	4-Aug-05	27,000	35,000	3,800	18,000	3,700	1,100	4,300	622
	25-May-93	12,000	8,300	1,500	8,800	<250	NA	NA	NA
	28-Aug-92	8,000	9,500	690	5,200	<2.5	NA	NA	NA
W-9	28-Jan-09	4,800	<10	370	380	<10	<10	580	120
	7-Aug-08	5,100	<100	830	300	<100	<100	520	<200
	12-May-08	3,000	63	800	360	<10	<10	480	228
	13-Feb-08	7,500	130	910	590	<10	<10	450	129
	7-Nov-07	6,500	120	620	450	<10	<10	360	51
	9-Aug-06	6,700	560	1,200	1,400	<150	<100	650	250
	4-Aug-05	4,300	180	850	830	<1.0	<0.01	320	28.5
	25-May-93	100	6.3	2.5	170	<5.0	NA	NA	NA
	28-Aug-92	130	8.2	16	140	<2.5	NA	NA	NA

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	EDB	EDC	Total Naphthalenes
W-10*	9-Aug-06	420	<1.0	31	<3.0	22	<1.0	12	121
	4-Aug-05	940	2.6	930	140	2,400	0.11	48	27.1
	28-Aug-92	1,100	11.0	120	440	<2.5	NA	NA	NA
W-11	28-Jan-09	<1.0	<1.0	40	5.7	160	<1.0	44	<2.0
	6-Aug-08	3.2	<1.0	28	2.5	610	<1.0	38	<2.0
	12-May-08	3.0	<1.0	31	3.7	740	<1.0	36	<2.0
	13-Feb-08	3.2	<1.0	41	5.1	540	<1.0	37	<2.0
	7-Nov-07	18	<1.0	38	13	540	<1.0	35	<2.0
	9-Aug-06	5.0	<1.0	62	44	88	<1.0	33	<2.0
	28-Aug-92	770	13	13	280	<2.5	NA	NA	NA
W-12	8-Aug-06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	<2.0
	29-Aug-92	87	6.1	2.6	180	<2.5	NA	NA	NA
W-13	8-Aug-06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	<2.0
	29-Aug-92	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NAA
W-14	28-Jan-09	24,000	19,000	2,200	8,700	3,200	<100	150	640
	7-Aug-08	26,000	20,000	4,400	11,000	3,700	<100	160	840
	13-May-08	14,000	6,500	2,800	6,300	2,400	<10	170	1,001
	13-Feb-08	30,000	23,000	4,900	13,000	4,400	<50	210	1,270
	9-Aug-06	25,000	23,000	4,000	9,500	4,700	<500	<500	1,200
	5-Aug-05	27,000	26,000	4,900	9,500	7,600	3.3	120	413
	26-May-93	6,600	4,300	1,200	4,000	<125	NA	NA	NA
W-15	8-Aug-06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	<2.0
	26-May-93	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA
W-16	28-Jan-09	170	<1.0	<1.0	<1.5	39	<1.0	13	120
	7-Aug-08	790	<1.0	5.4	<1.5	59	<1.0	17	352
	12-May-08	690	<1.0	12	3.6	60	<1.0	21	327
	13-Feb-08	630	<1.0	12	8.6	47	<1.0	17	342
	7-Nov-07	640	<1.0	22	12	55	<1.0	23	363
	8-Aug-06	1.3	14	2.9	<3	<1.5	<1.0	<1.0	<2.0
	26-May-93	52	<0.5	7.9	15	<2.5	NA	NA	NA
W-17	26-May-93	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NA
W-18	8-Aug-06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	<2.0
	26-May-93	1.6	1.8	<0.5	2.0	<2.5	NA	NA	NA

TABLE 4
SUMMARY OF GROUNDWATER SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Monitor Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	EDB	EDC	Total Naphthalenes
W-19	28-Jan-09	3.8	<1.0	<1.0	<1.5	<1.0	<1.0	37	<2.0
	6-Aug-08	2.4	<1.0	<1.0	<1.5	<1.0	<1.0	19	<2.0
	12-May-08	1.6	<1.0	<1.0	<1.5	<1.0	<1.0	9.2	<2.0
	13-Feb-08	2.4	<1.0	<1.0	<1.5	<1.5	<1.0	10	<2.0
	8-Nov-07	4.3	<1.0	<1.0	<1.5	<1.5	<1.0	23	<2.0
W-20	28-Jan-09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	6-Aug-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	12-May-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	13-Feb-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	8-Nov-07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
W-21	28-Jan-09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	6-Aug-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	12-May-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	12-Feb-08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
	8-Nov-07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0
V-1	25-May-93	5,000	14,000	3,000	10,000	600	NA	NA	NA
	29-Aug-92	250	680	240	810	<2.5	NA	NA	NA

Notes:

All concentrations in micrograms per liter (parts per billion)

MTBE = Methyl tertiary butyl ether

EDB = Ethylene dibromide

EDC = Ethylene dichloride

W-10 and W-16 sample containers were labeled incorrectly, therefore results reported for August 8 and 9, 2006 have been switched.

NA = Not Analyzed

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
INORGANIC COMPOUNDS AND GEOCHEMICAL INDICATORS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Well Number	Date Sampled	pH	SpC (uS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
V-1	3-Sep-08	Well Plugged & Abandoned				
	13-May-08	NAPL Present				
	13-Feb-08	NAPL Present				
	7-Nov-07	NAPL Present				
	8-Aug-06	NAPL Present				
W-1	28-Jan-09	NAPL Present				
	13-May-08	NAPL Present				
	13-Feb-08	NAPL Present				
	7-Nov-07	NAPL Present				
	8-Aug-06	NAPL Present				
W-2	28-Jan-09	NAPL Present				
	13-May-08	NAPL Present				
	13-Feb-08	NAPL Present				
	7-Nov-07	NAPL Present				
	8-Aug-06	NAPL Present				
W-3	28-Jan-09	NAPL Present				
	13-May-08	NAPL Present				
	13-Feb-08	NAPL Present				
	7-Nov-07	NAPL Present				
	8-Aug-06	NAPL Present				
W-5	28-Jan-09	7.49	1,580	18.8	0.78	NA
	7-Aug-08	6.79	1,620	19.5	0.37	NA
	12-May-08	6.74	1,766	20.3	0.25	NA
	13-Feb-08	6.74	2,237	18.8	0.78	NA
	7-Nov-07	NA	2,454	19.7	0.15	NA
	9-Aug-06	6.34	2,110	21.8	0.47	-88
W-7	7-Nov-07	NA	1,200	19.7	5.30	NA
	8-Aug-06	6.78	1,475	19.3	2.43	226
W-8	28-Jan-09	7.20	1,156	19.0	0.35	NA
	7-Aug-08	6.77	1,035	20.5	0.36	NA
	12-May-08	6.72	1,079	20.2	NA	NA
	13-Feb-08	6.15	1,109	20.6	0.65	NA
	7-Nov-07	NA	1,235	19.7	1.26	NA
	9-Aug-06	6.63	1,260	22.9	0.60	-311
	6-Aug-05	6.78	1,090	20.23	3.13	234

TABLE 5
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
INORGANIC COMPOUNDS AND GEOCHEMICAL INDICATORS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Well Number	Date Sampled	pH	SpC (uS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
W-9	28-Jan-09	7.17	1,053	19.5	0.31	NA
	7-Aug-08	6.70	1,035	20.0	0.72	NA
	12-May-08	6.76	1,020	19.5	NA	NA
	13-Feb-08	6.73	1,076	20.1	0.68	NA
	7-Nov-07	NA	1,183	19.5	1.12	NA
	9-Aug-06	6.42	1,230	22.5	0.44	-218
	6-Aug-05	6.77	1,050	20.20	3.29	211
W-10	28-Jan-09	Well Not Sampled Due to Unsafe Location				
	7-Aug-08	Well Not Sampled Due to Unsafe Location				
	12-May-08	Well Not Sampled Due to Unsafe Location				
	7-Nov-07	Well Not Sampled Due to Unsafe Location				
	9-Aug-06	6.50	2,400	22.1	0.00	-175
	6-Aug-05	6.87	1,610	20.76	3.74	201
W-11	28-Jan-09	6.87	1,487	19.8	0.17	NA
	6-Aug-08	6.71	1,340	21.8	0.84	NA
	12-May-08	6.75	1,456	20.6	1.19	NA
	13-Feb-08	6.79	1,432	21.1	0.64	NA
	7-Nov-07	NA	1,592	21	0.28	NA
	9-Aug-06	6.38	1,760	22.2	0.17	-97
W-12	8-Aug-06	7.20	880	21.8	2.22	168
W-13	8-Aug-06	5.37	1,111	15.9	1.85	219
W-14	28-Jan-09	7.27	1,415	19.8	0.17	NA
	7-Aug-08	6.69	1,357	21.3	0.59	NA
	13-May-08	6.67	1,519	20.6	NA	NA
	13-Feb-08	6.72	1,537	20.6	0.54	NA
	7-Nov-07	NA	NA	NA	NA	NA
	9-Aug-06	6.59	1,850	23.4	0.00	-290
W-15	8-Aug-06	6.41	1,240	18.5	3.96	267
W-16	28-Jan-09	7.43	1,664	19.5	0.42	NA
	7-Aug-08	6.63	1,870	20.0	0.31	NA
	12-May-08	6.65	1,859	20.6	0.08	NA
	13-Feb-08	6.67	1,879	20.3	0.27	NA
	7-Nov-07	NA	2,072	20.7	0.11	NA
	8-Aug-06	6.33	2,080	22.4	1.20	-113
W-18	8-Aug-06	6.24	1,090	21.1	1.20	186

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
INORGANIC COMPOUNDS AND GEOCHEMICAL INDICATORS
LOVINGTON 66, LOVINGTON, NEW MEXICO

Well Number	Date Sampled	pH	SpC (uS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
W-19	28-Jan-09	7.34	1,017	18.8	6.75	NA
	6-Aug-08	6.67	863	21.9	8.74	NA
	12-May-08	6.77	869	20.6	7.65	NA
	13-Feb-08	6.84	901	19.3	7.05	NA
	7-Nov-07	NA	1,214	19.5	NA	NA
W-20	28-Jan-09	7.63	727	16.4	6.65	NA
	6-Aug-08	7.00	635	20.2	7.21	NA
	12-May-08	7.04	723	20.7	7.18	NA
	12-Feb-08	7.13	816	16.6	7.13	NA
	7-Nov-07	NA	1,185	19.5	NA	NA
W-21	28-Jan-09	7.38	1,575	18.7	6.44	NA
	6-Aug-08	6.60	1,230	20.2	7.89	NA
	12-May-08	6.75	1,269	19.9	5.59	NA
	13-Feb-08	6.68	1,285	17.9	6.34	NA
	7-Nov-07	NA	2,544	20.2	NA	NA

Notes:

DO = Dissolved oxygen

mg/L = Milligrams per liter

mV = Millivolts

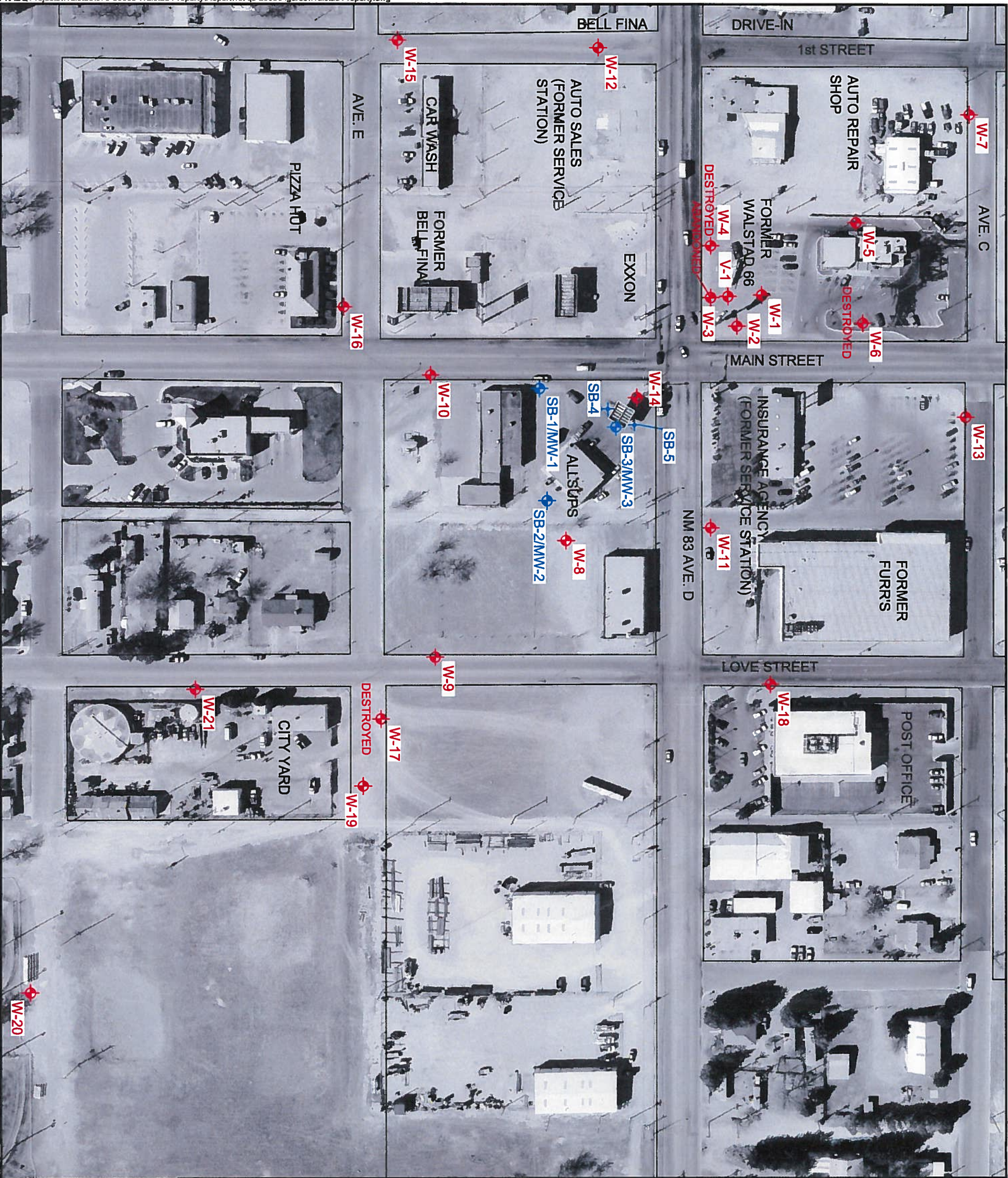
NA = Not analyzed

ORP = Oxidation-reduction potential in milli volts (mV)

SpC = Specific conductance measured in micro siemens per centimeter (uS/cm)

Temp = Temperature in degrees Celsius

uS/cm = Microsiemens per centimeter



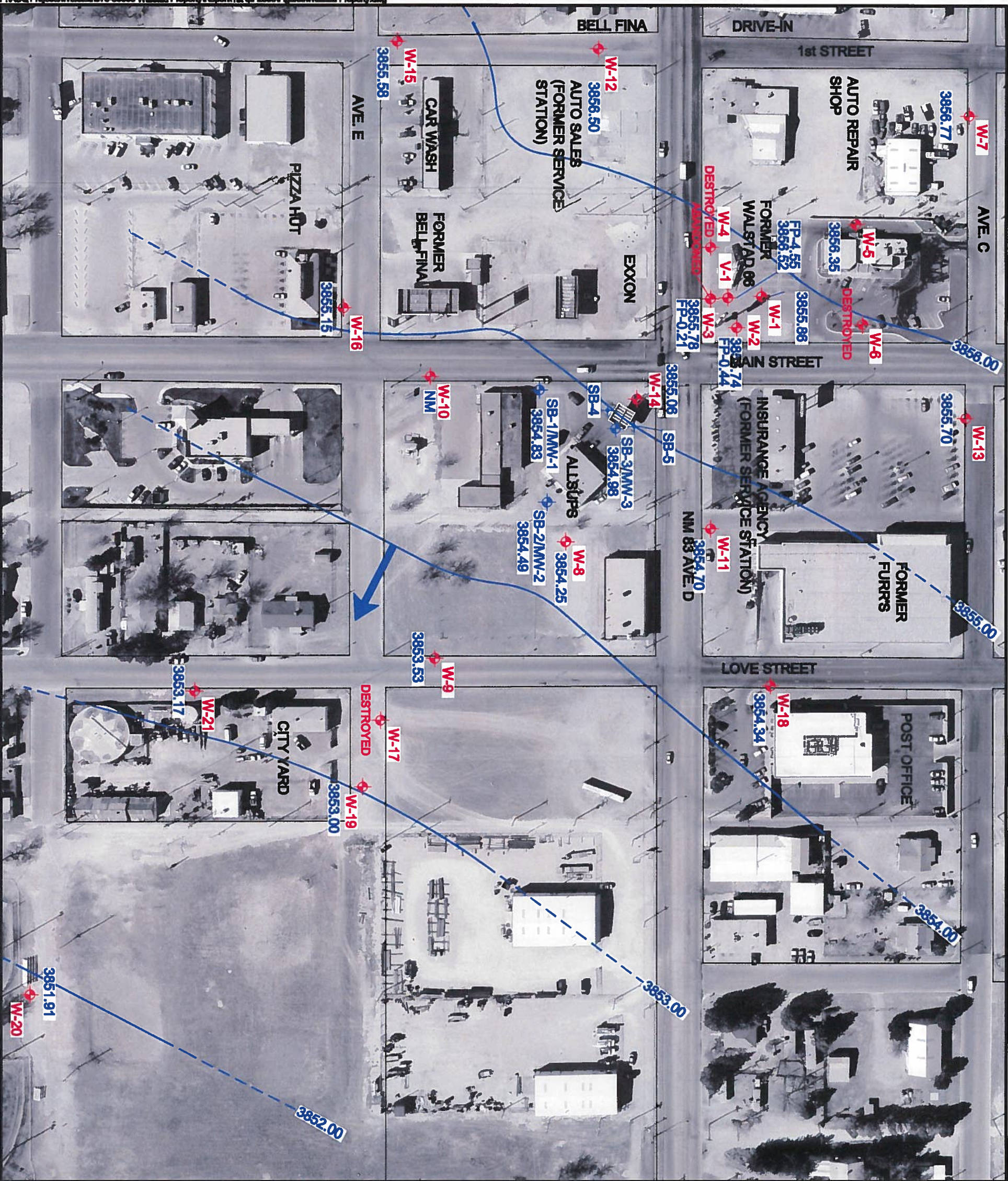
- LEGEND:**
- W-1 LOVINGTON 66 MONITORING WELL
 - SB-1/MW-1 ALL SUPS SOIL BORING/ MONITORING WELL
 - SB-1 ALL SUPS SOIL BORING



PROJECT
LOVINGTON 66
424 SOUTH MAIN
LOVINGTON, NEW MEXICO

SITE MAP

		PROJECT No. 073-80008		FILE No. Walstad Property.dwg	
DESIGN	TM	09/21/06	SCALE	AS SHOWN	REV. A
CHECK	TS	02/28/09	FIGURE 1		
REVIEW	TS	02/28/09			



LEGEND:

W-1
3855.54
LOVINGTON 66 MONITORING WELL
WITH GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

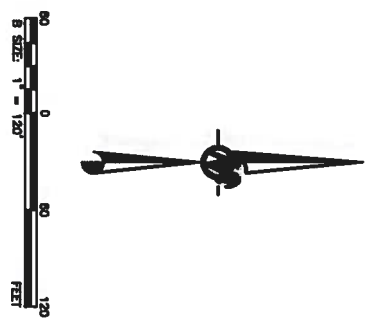
SB-1 / MW-1
ALLSIPS SOIL BORING/
MONITORING WELL LOCATION

SB-1
ALLSIPS SOIL BORING

3855.00
POTENTIOMETRIC
GROUNDWATER SURFACE
ELEVATION (FEET ABOVE
MEAN SEA LEVEL)

→
GROUNDWATER
FLOW DIRECTION

FP-0.44
FREE PRODUCT PRESENT,
THICKNESS OBSERVED
IN FEET



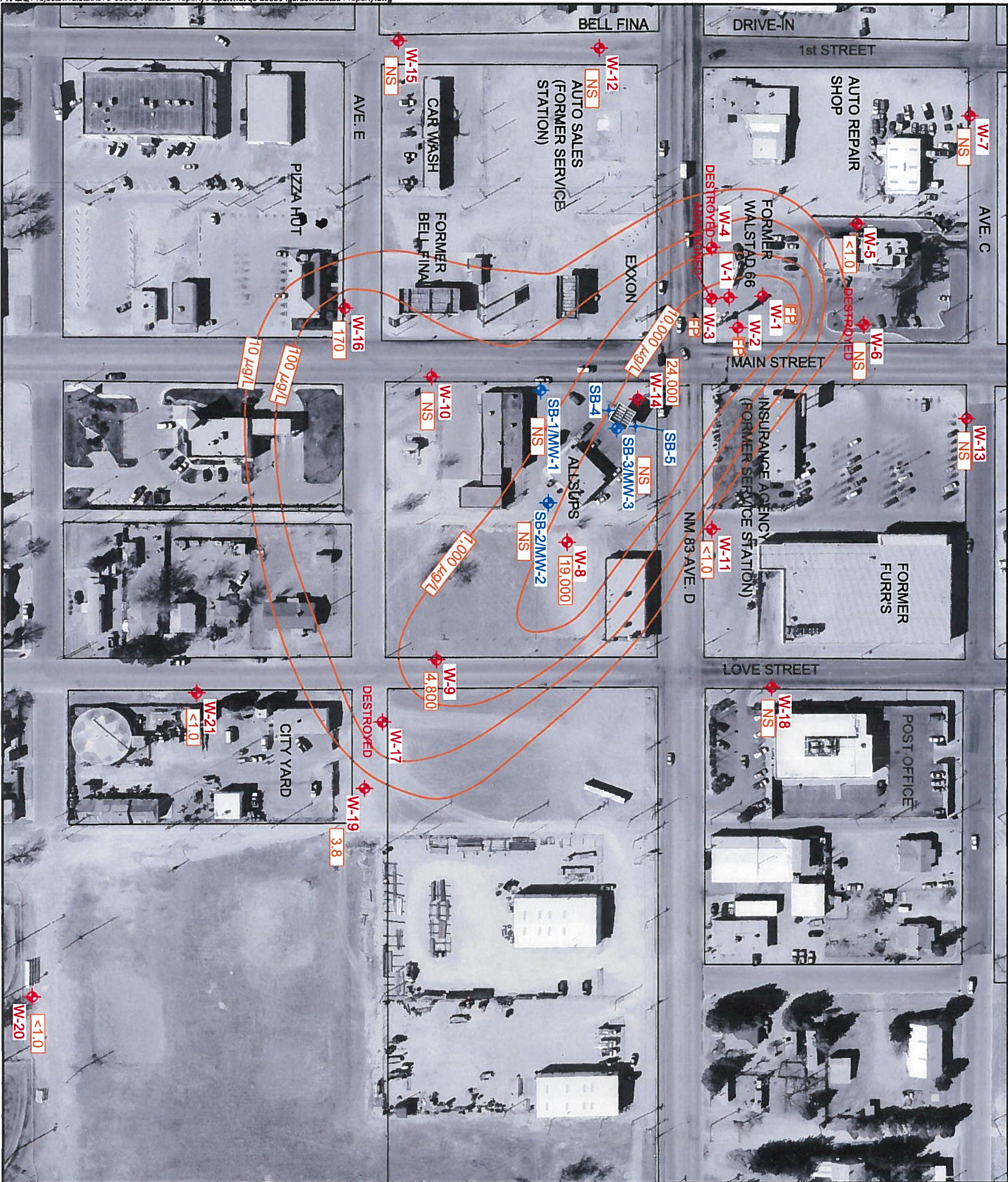
PROJECT
LOVINGTON 66
424 SOUTH MAIN
LOVINGTON, NEW MEXICO

TITLE
POTENTIOMETRIC
SURFACE MAP
JANUARY 2009

Golden Associates
Albuquerque, New Mexico

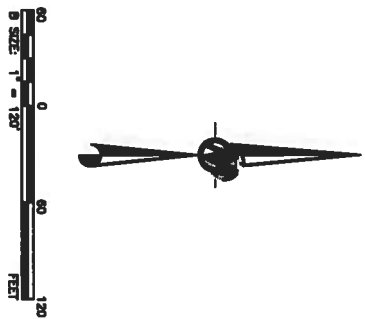
PROJECT No.	DATE	FILE No.	Wasted Property.dwg
DESIGN	TJ	09/31/08	SCALE AS SHOWN
CADD	CM	02/28/09	REV. A
CHECK	TS	02/28/09	
REVIEW	TS	02/28/09	

FIGURE 2



LEGEND:

- W-20 <1.0 LOVINGTON 66 MONITORING WELL WITH BENZENE CONCENTRATIONS ($\mu\text{g/L}$)
- SB-1/MW-1 <1.0 ALLSUP'S SOIL BORING/ MONITORING WELL WITH BENZENE CONCENTRATIONS ($\mu\text{g/L}$)
- SB-1 ALLSUP'S SOIL BORING
- $10 \mu\text{g/L}$ BENZENE CONCENTRATION CONTOUR
- FP FREE PRODUCT
- NS NOT SAMPLED



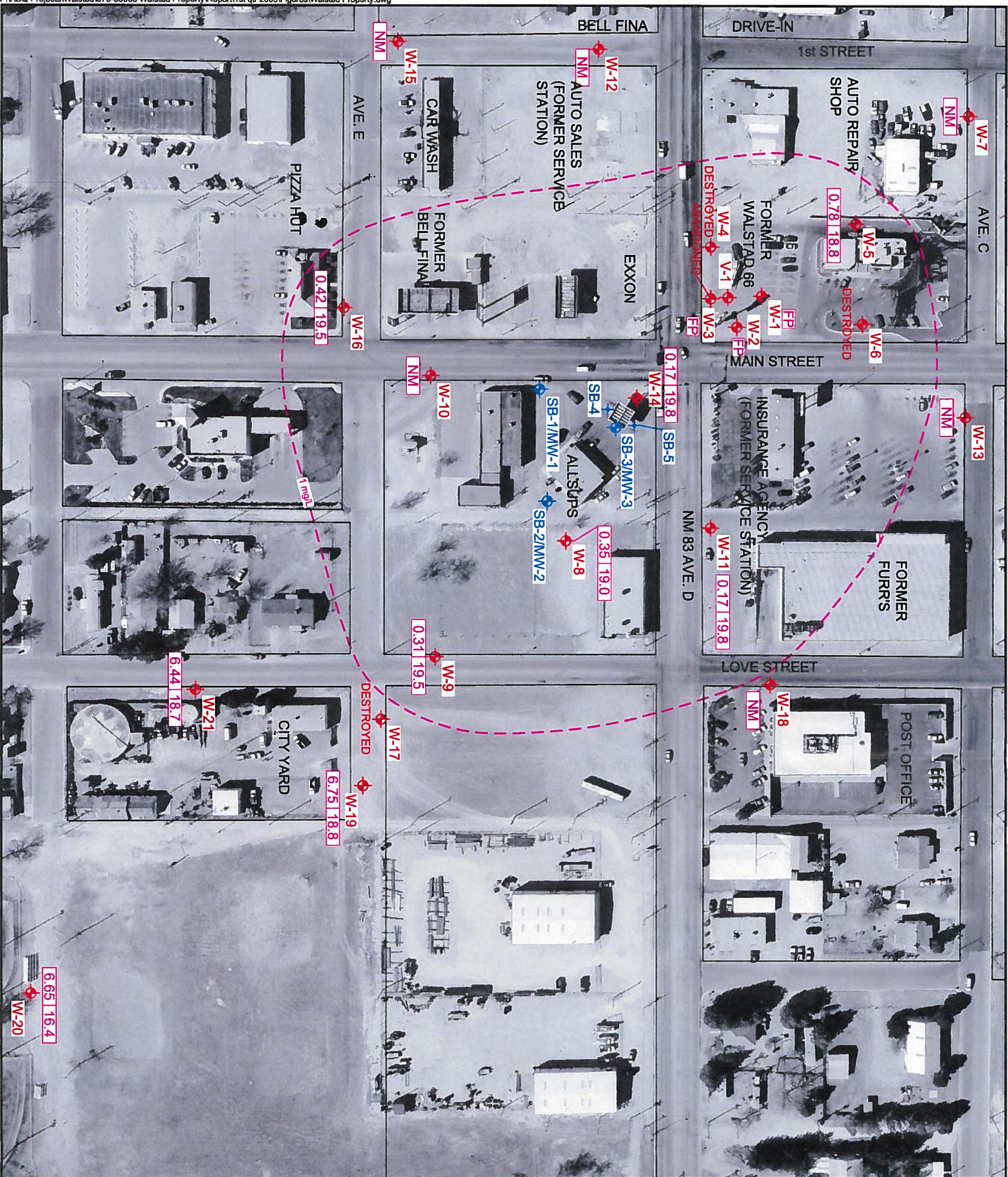
PROJECT: LOVINGTON 66
424 SOUTH MAIN
LOVINGTON, NEW MEXICO

TITLE: DISTRIBUTION OF BENZENE
IN GROUNDWATER
JANUARY 2009

PROJECT No.	073-80008	FILE No.	Walstad Property.dwg
DESIGN	TM	08/31/08	SCALE AS SHOWN
CADD	CM	02/28/09	REV. A
CHECK	TS	02/28/09	
REVIEW	TS	02/28/09	

FIGURE 4

Goldier Associates
Albuquerque, New Mexico



LEGEND:

- W-1: LOVINGTON 66 MONITORING WELL
- SB-1/MW-1: ALLSUP'S SOIL BORING/ MONITORING WELL
- SB-1: ALLSUP'S SOIL BORING
- NM: NOT MEASURED
- FP: FREE PRODUCT

DO TEMP

DISSOLVED OXYGEN (DO) CONCENTRATIONS ARE IN MILLIGRAMS PER LITER

TEMPERATURE (TEMP) VALUES ARE IN DEGREES CELSIUS

PROJECT: WALSTAD 66
424 SOUTH MAIN
LOVINGTON, NEW MEXICO

TITLE: DISTRIBUTION OF MNA PARAMETERS IN GROUNDWATER
JANUARY 2009

PROJECT No. 073-80008 FILE No. Walstad Property.dwg
DESIGN TM 09/31/06 SCALE AS SHOWN REV. A
CHECK TS 02/28/09
REVIEW TS 02/28/09

FIGURE 7

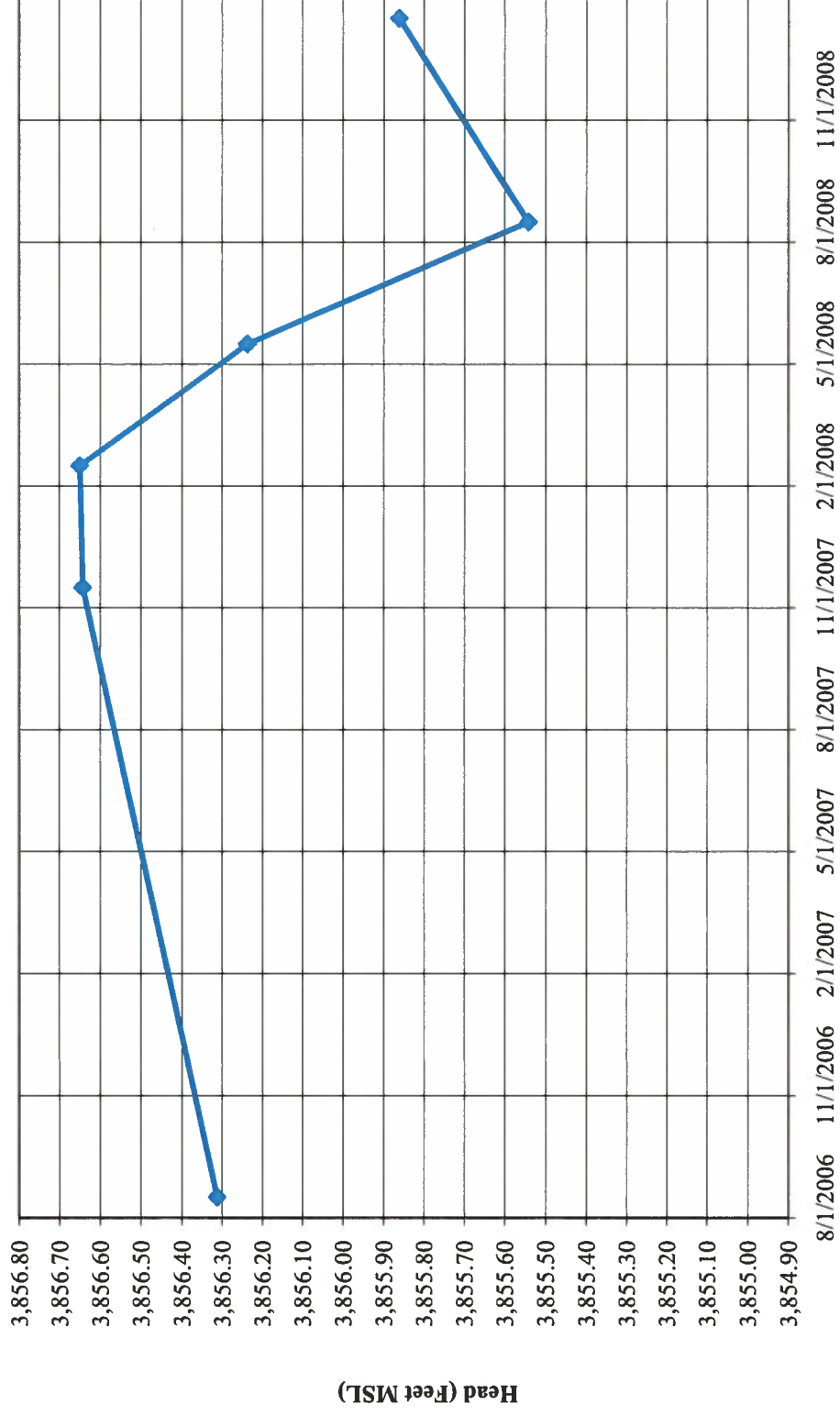
Golden Associates
Albuquerque, New Mexico

Scale: 1" = 120'
0 60 120
FEET

North Arrow

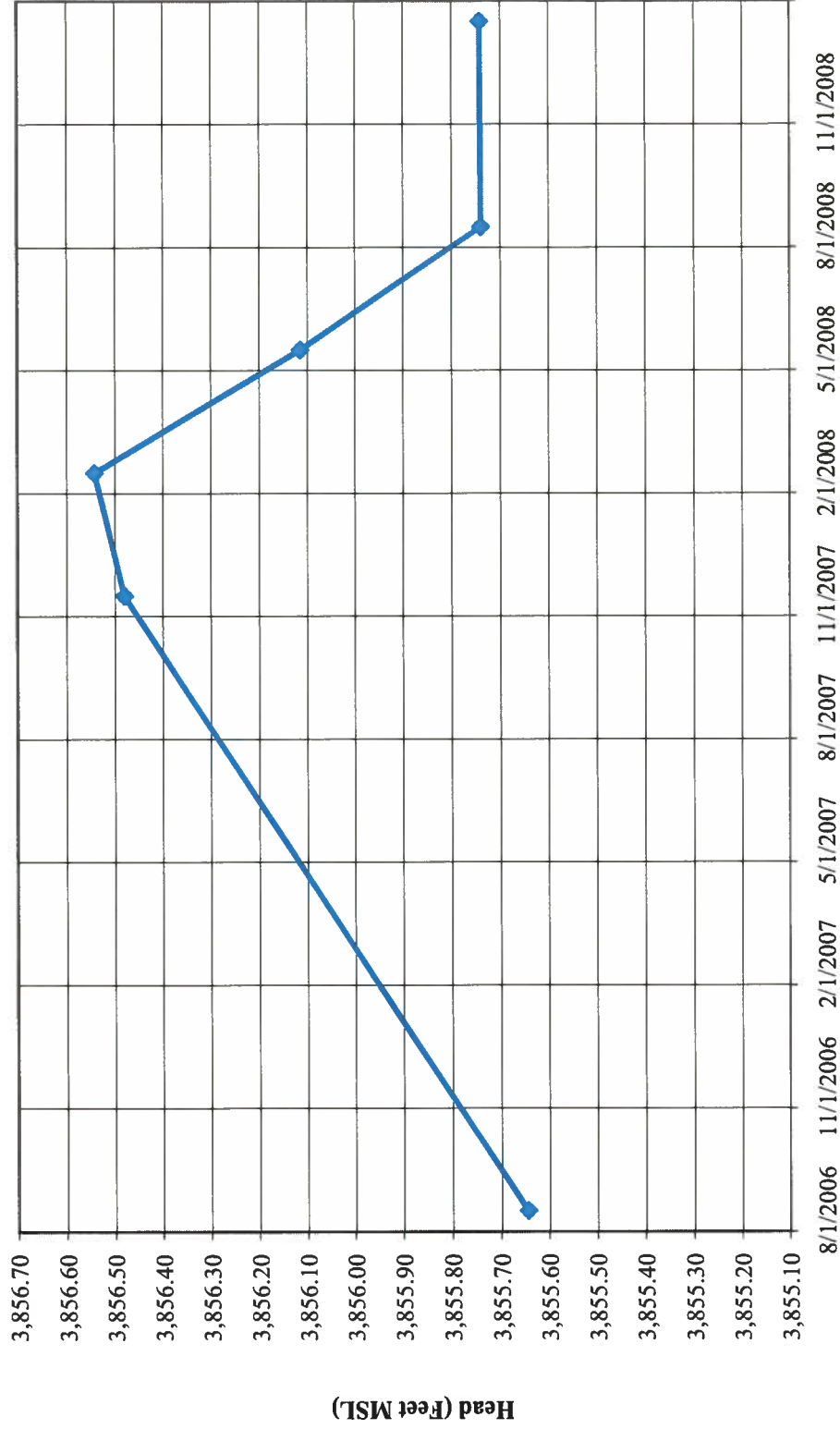
APPENDIX A
HYDROGRAPHS

HYDROGRAPH FOR WELL W-1



Date

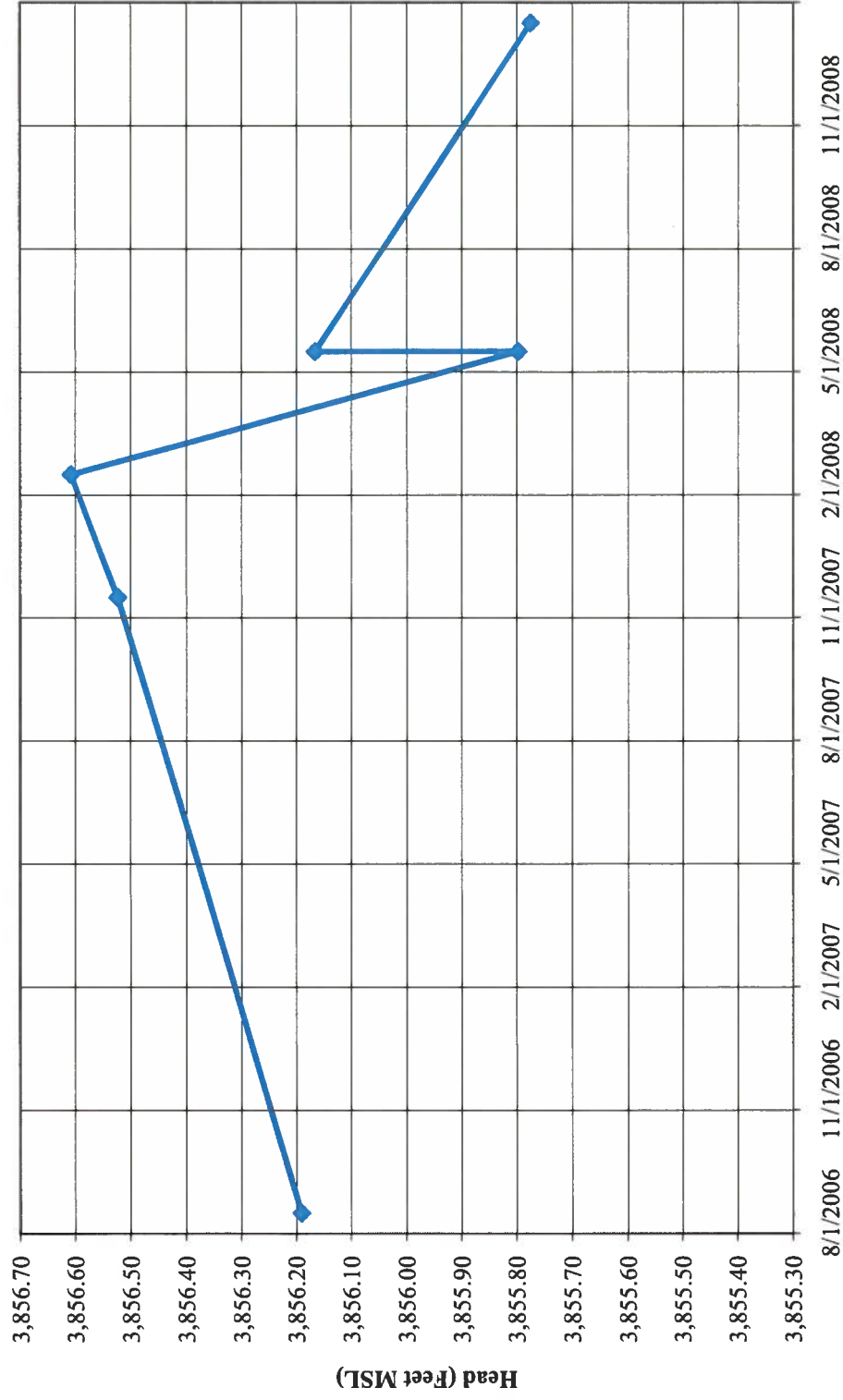
HYDROGRAPH FOR WELL W-2



Date

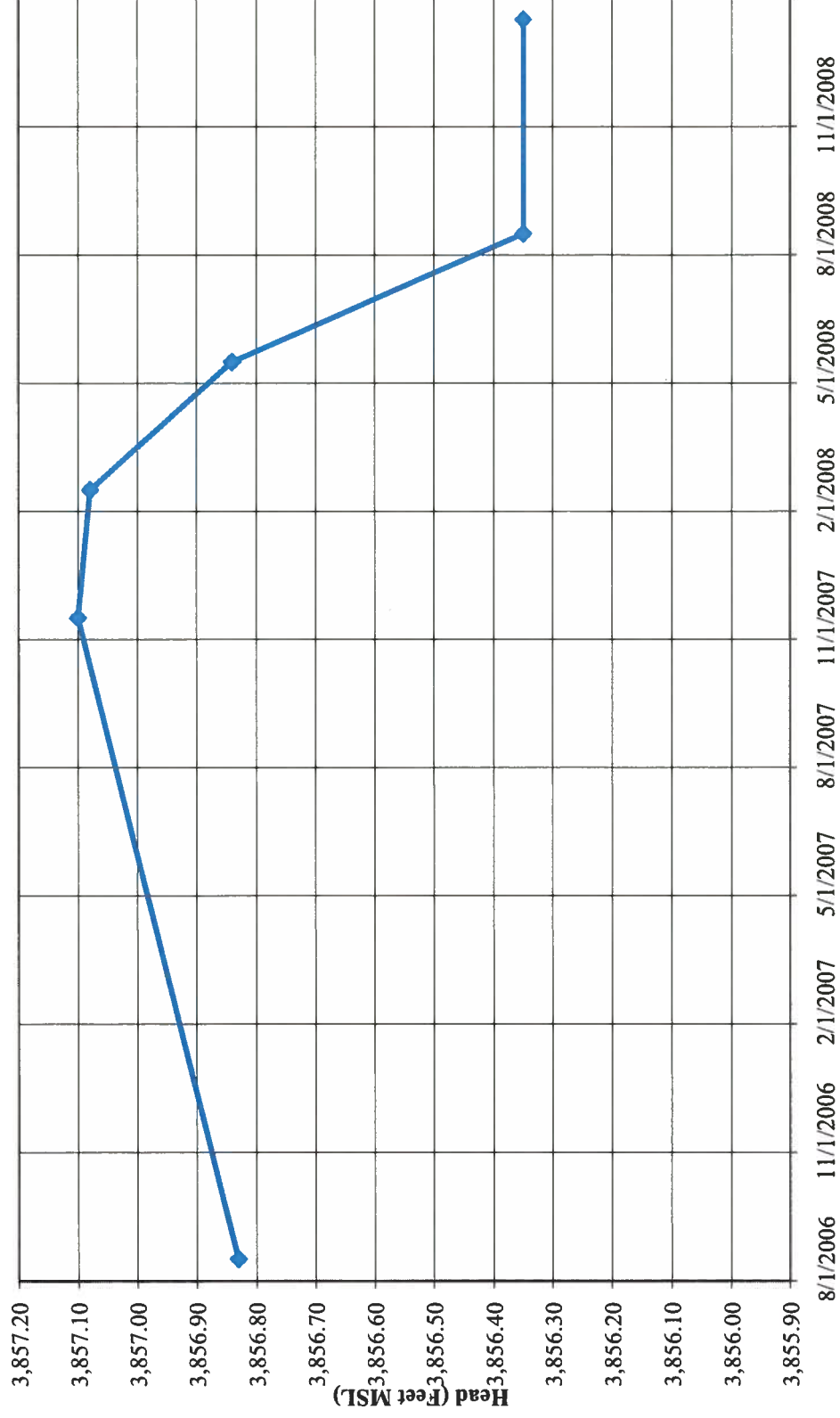
Golder Associates

HYDROGRAPH FOR WELL W-3



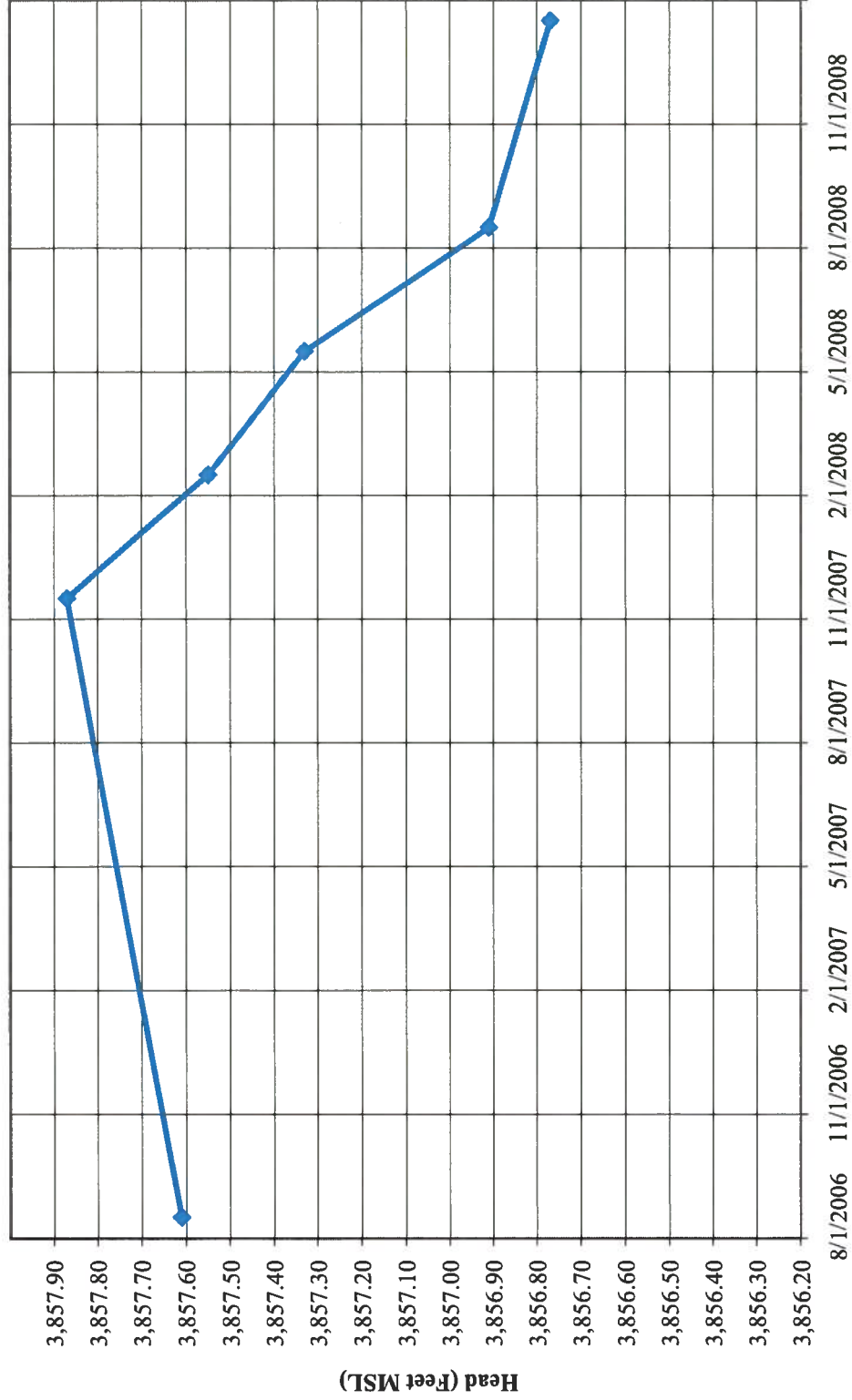
Date

HYDROGRAPH FOR WELL W-5



Date

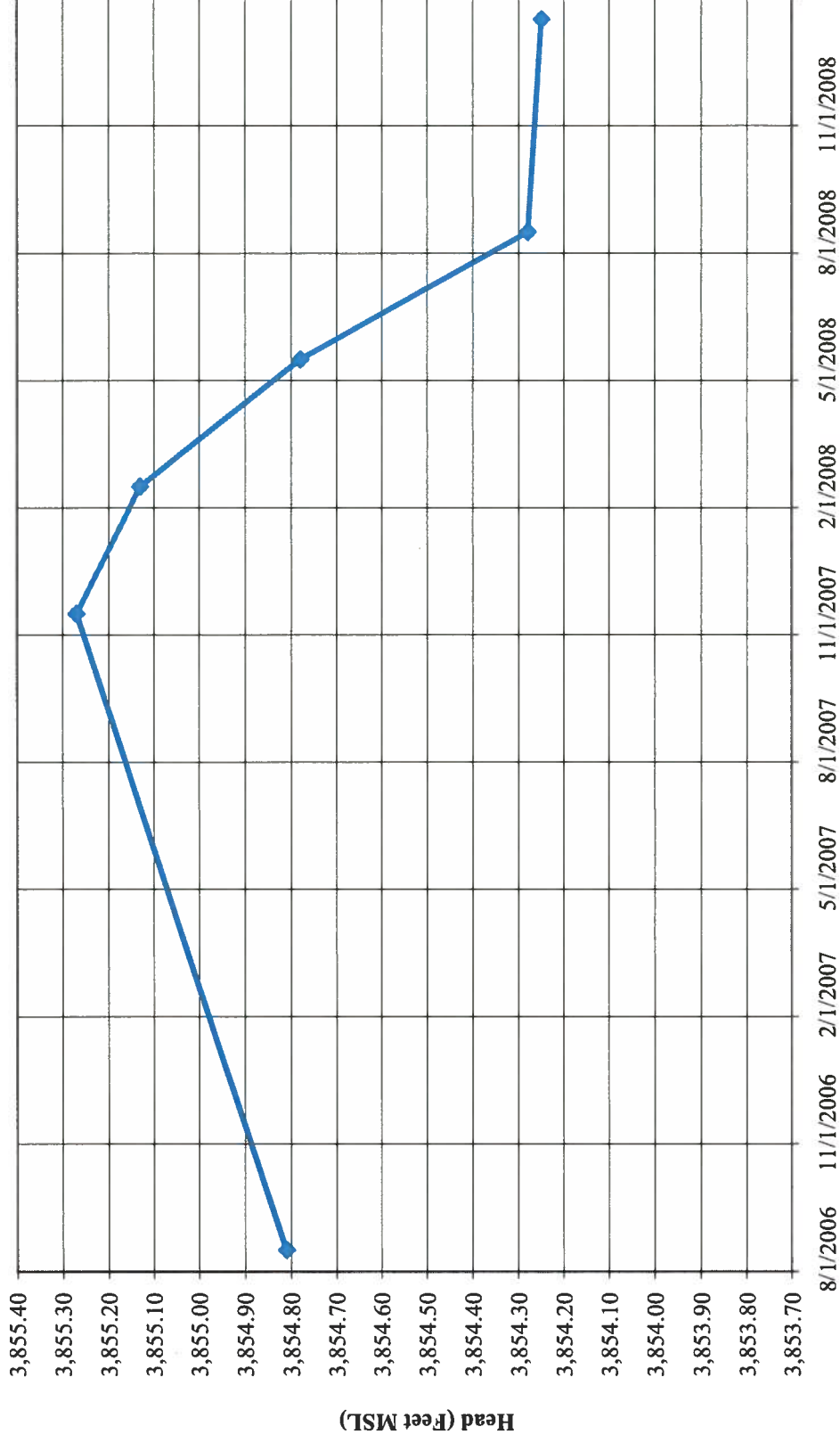
HYDROGRAPH FOR WELL W-7



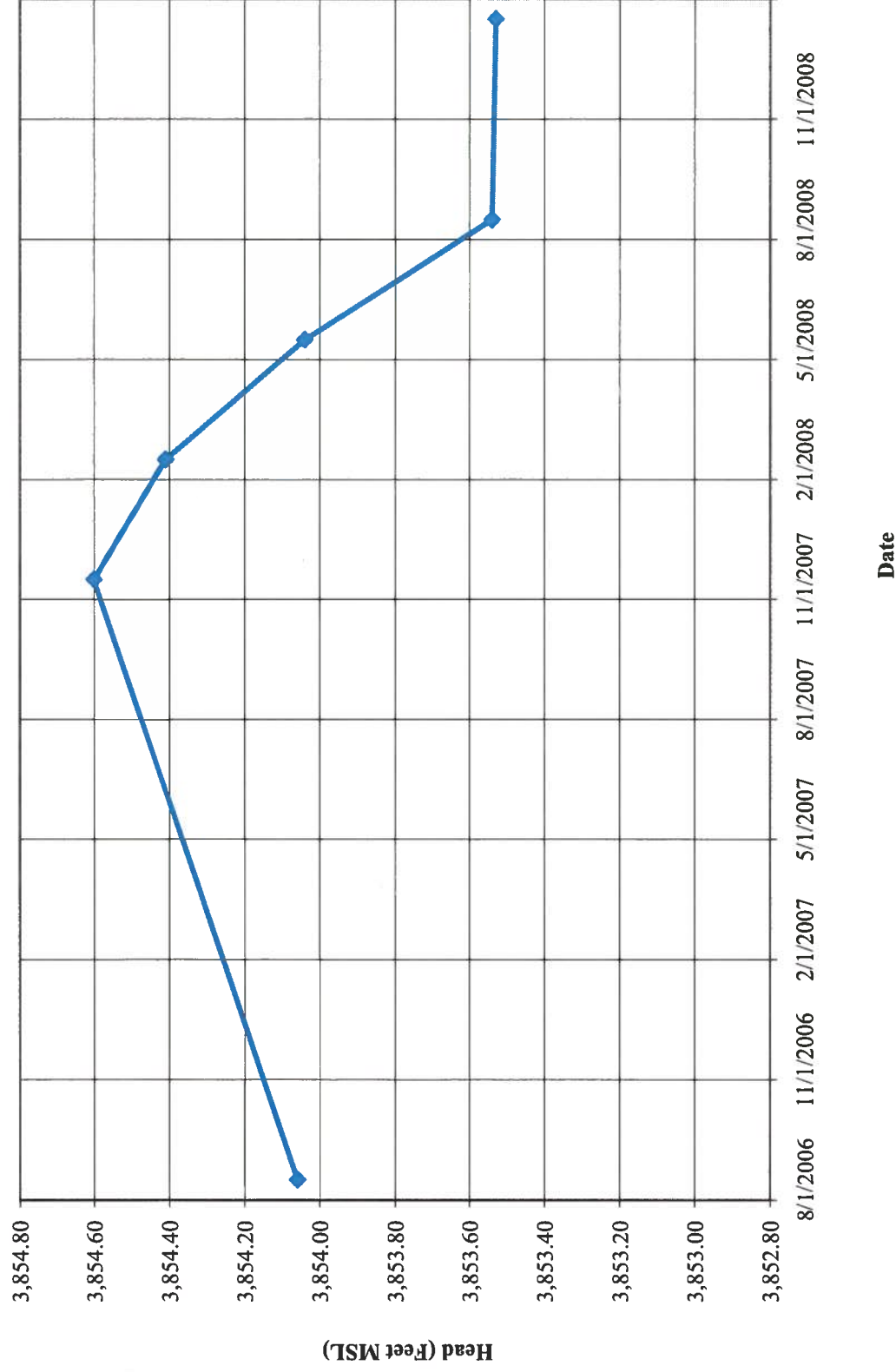
Date

Goldier Associates

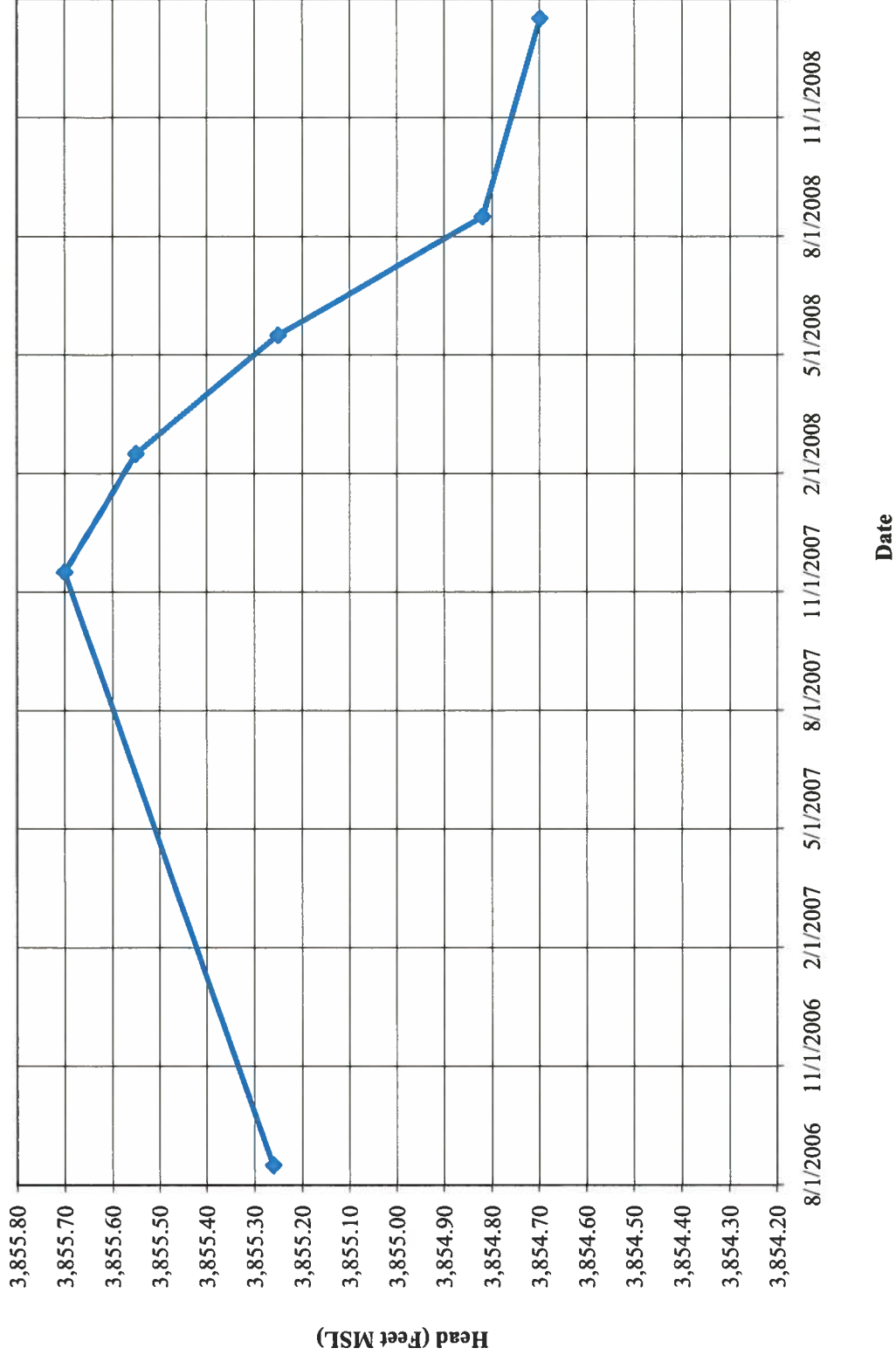
HYDROGRAPH FOR WELL W-8



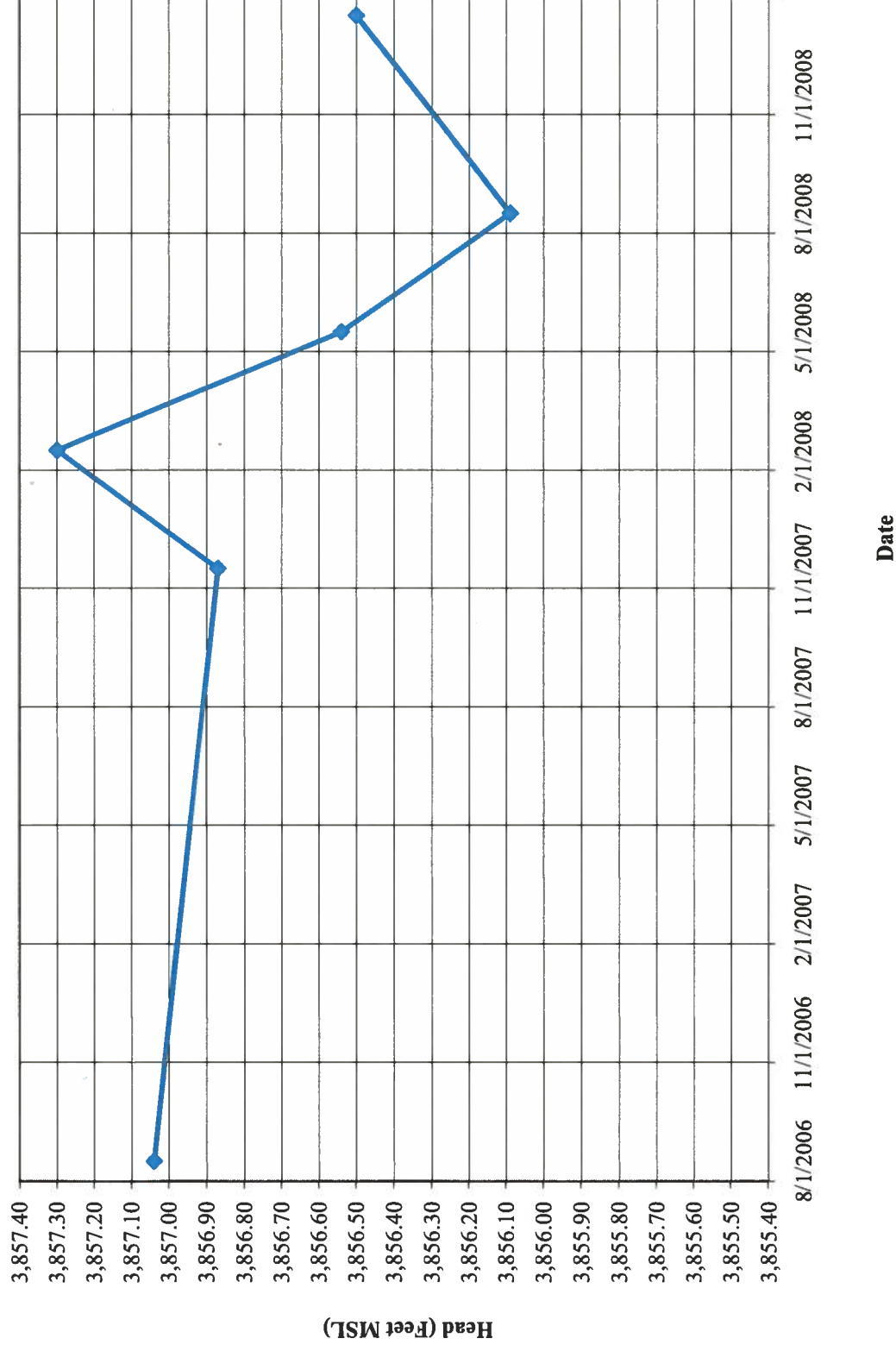
HYDROGRAPH FOR WELL W-9



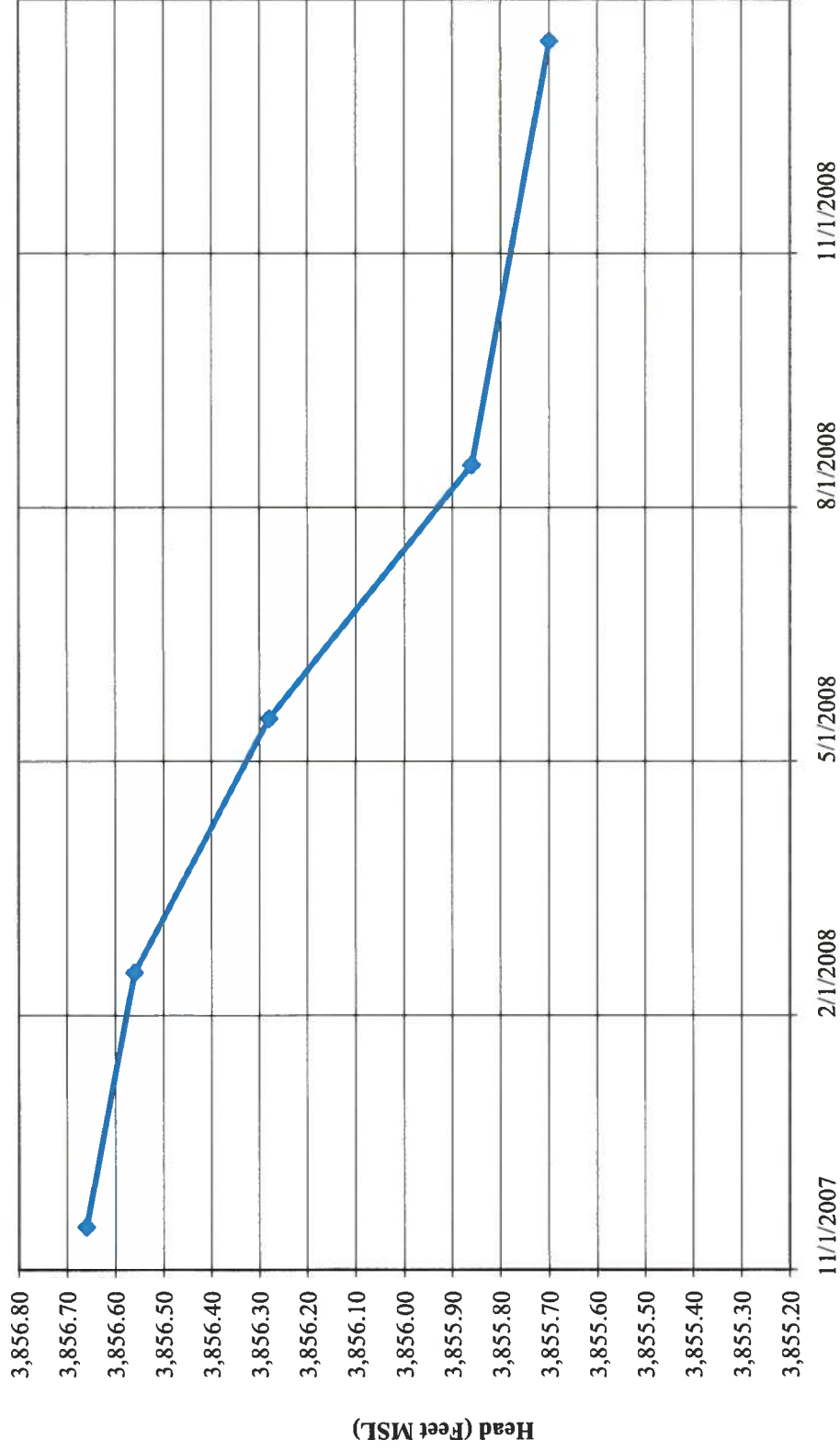
HYDROGRAPH FOR WELL W-11



HYDROGRAPH FOR WELL W-12

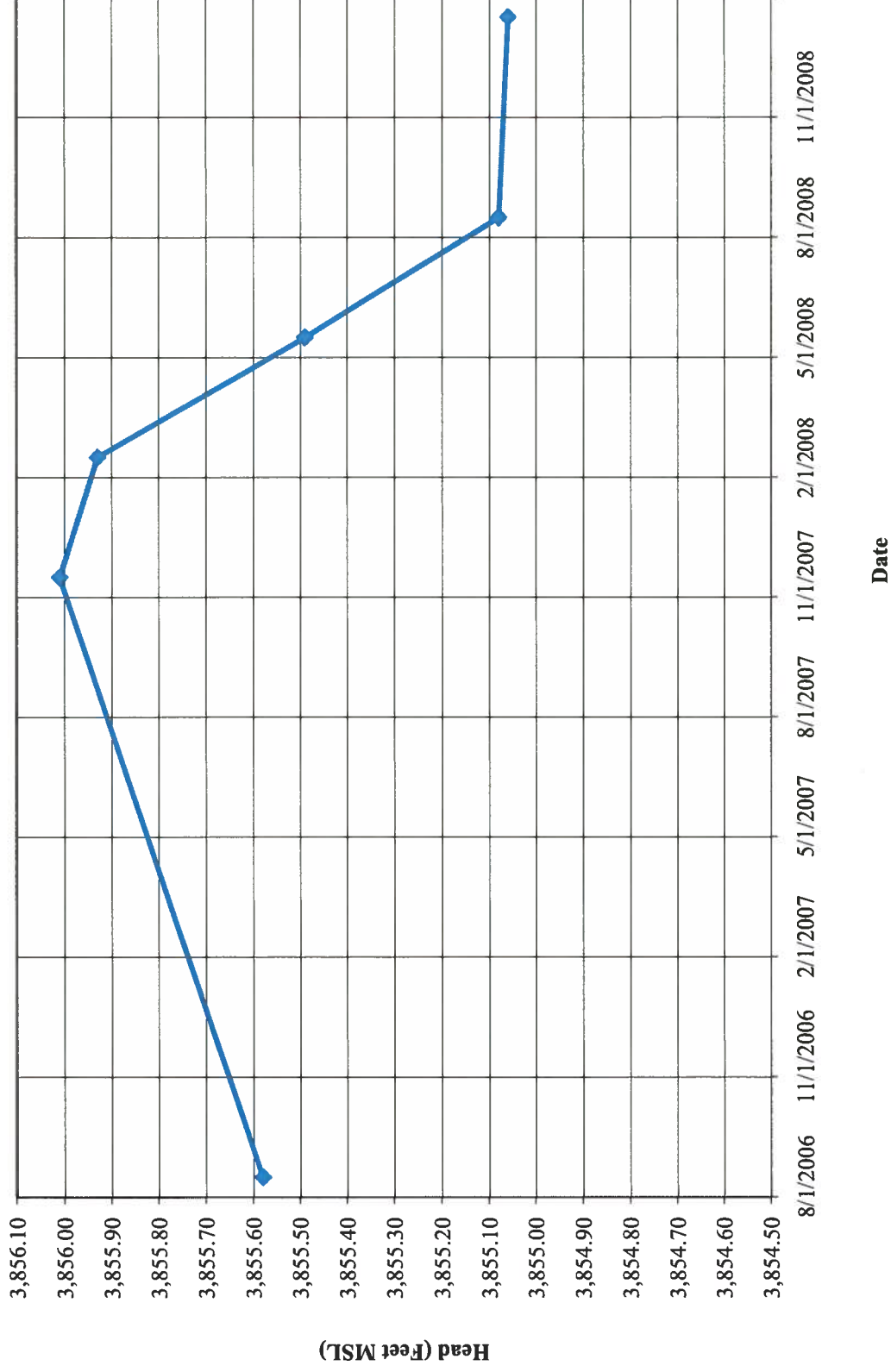


HYDROGRAPH FOR WELL W-13

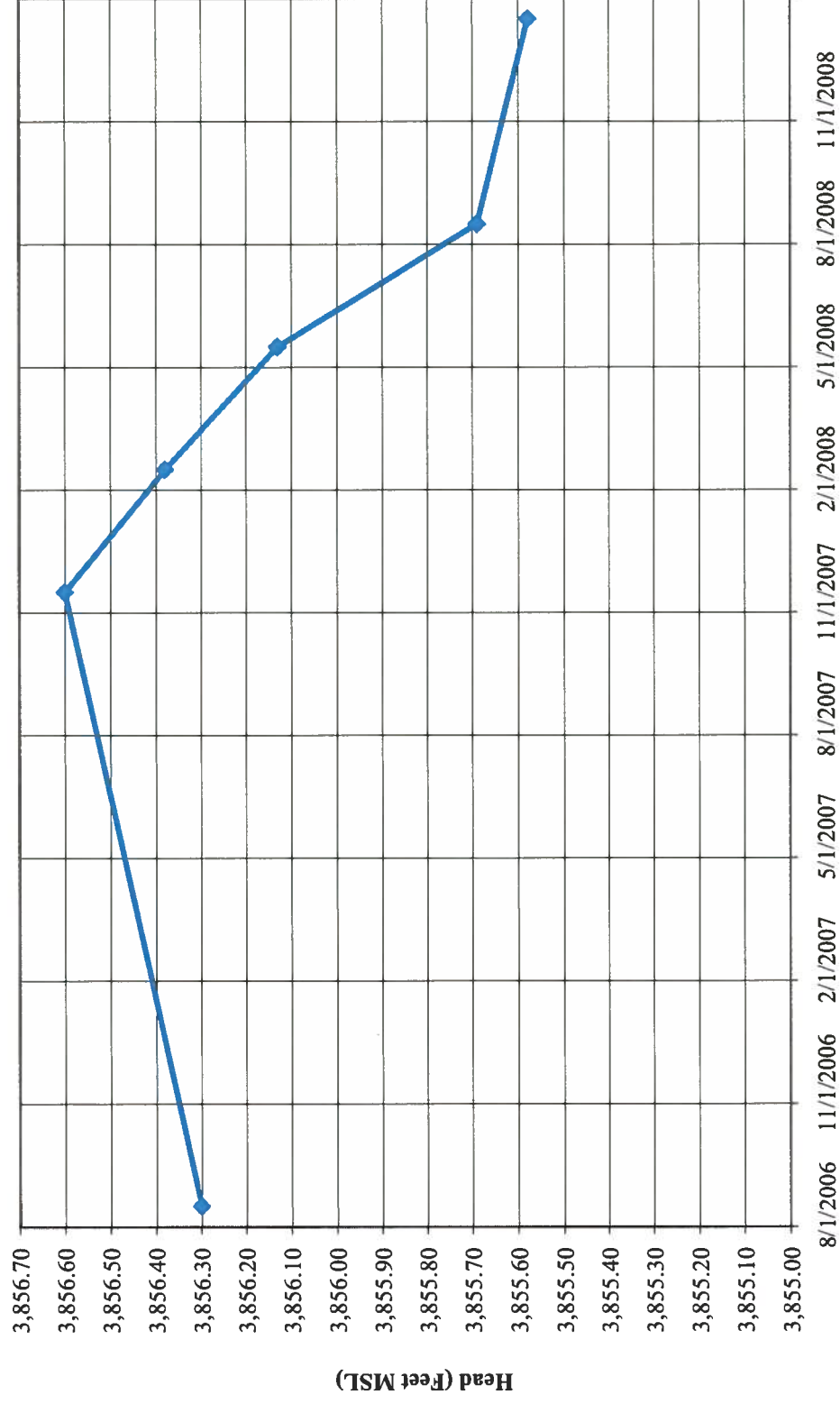


Date

HYDROGRAPH FOR WELL W-14

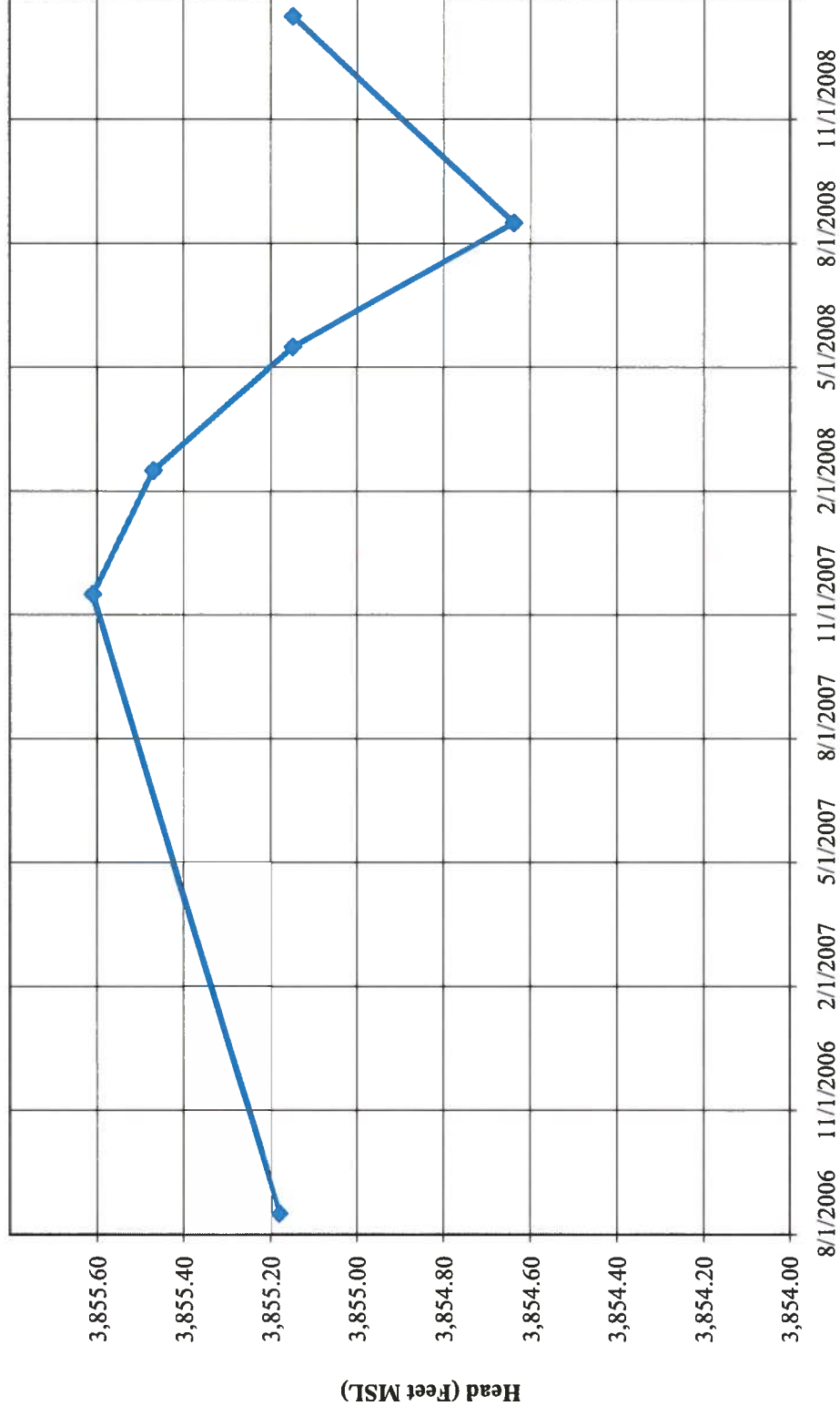


HYDROGRAPH FOR WELL W-15



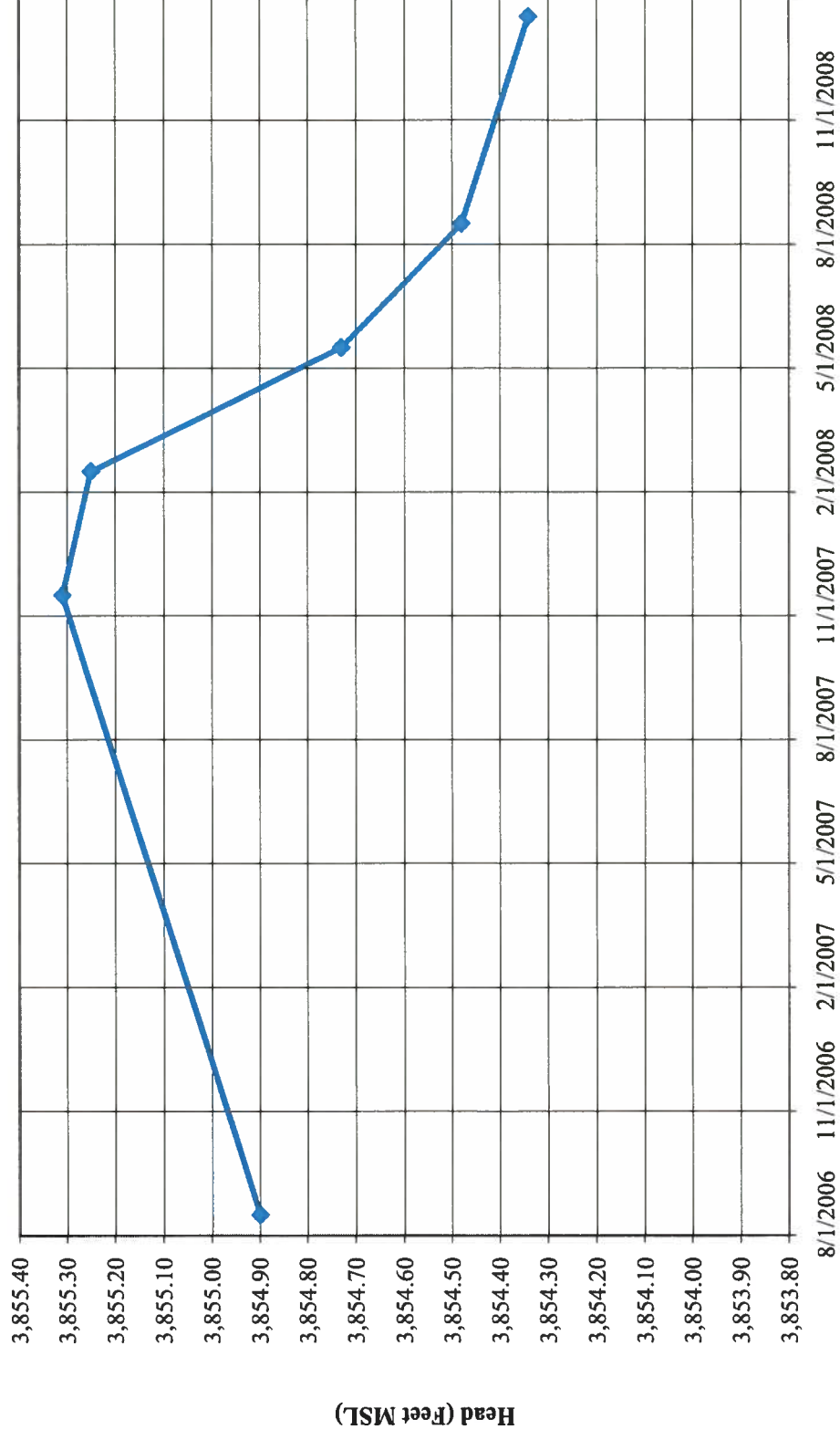
Date

HYDROGRAPH FOR WELL W-16



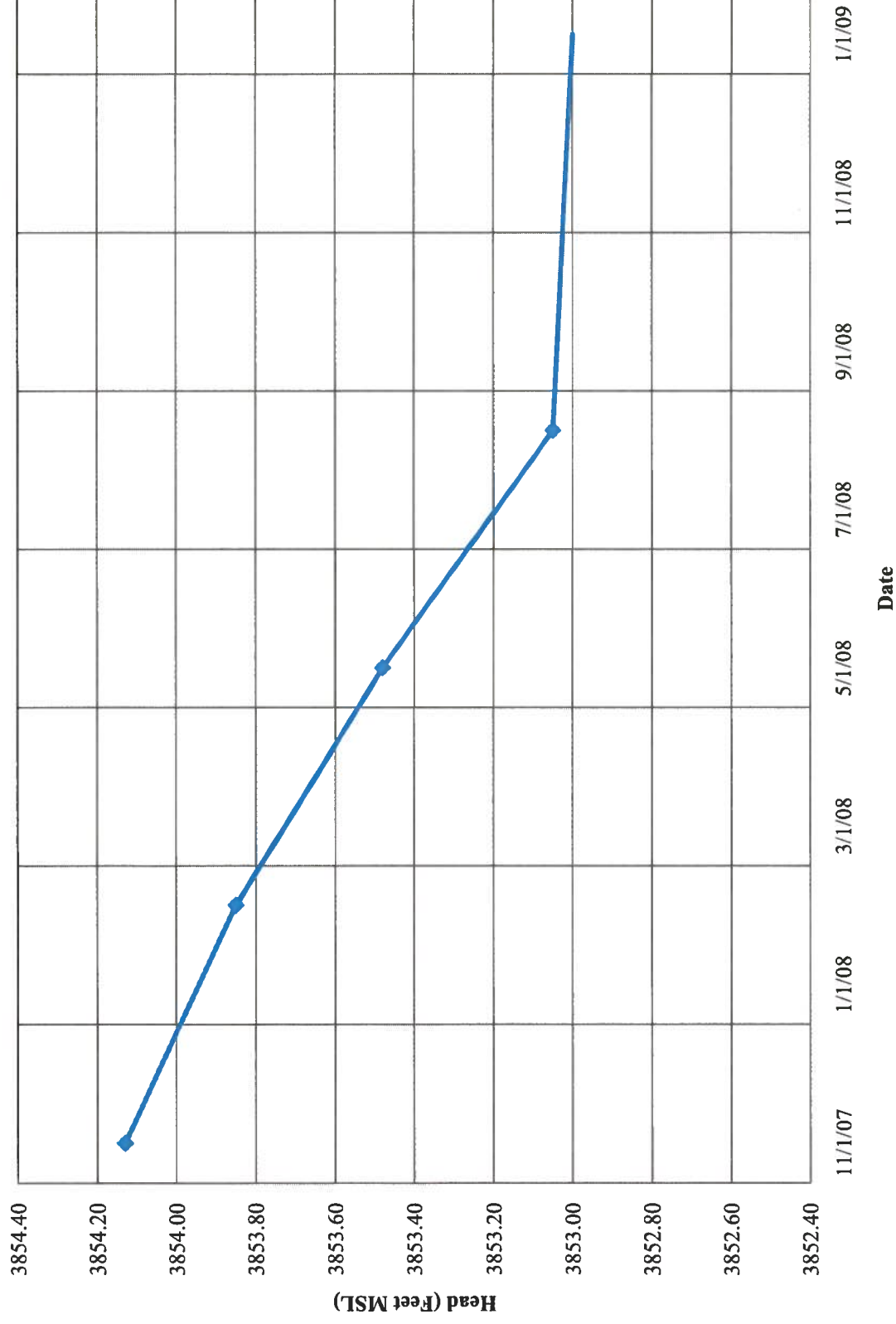
Date

HYDROGRAPH FOR WELL W-18

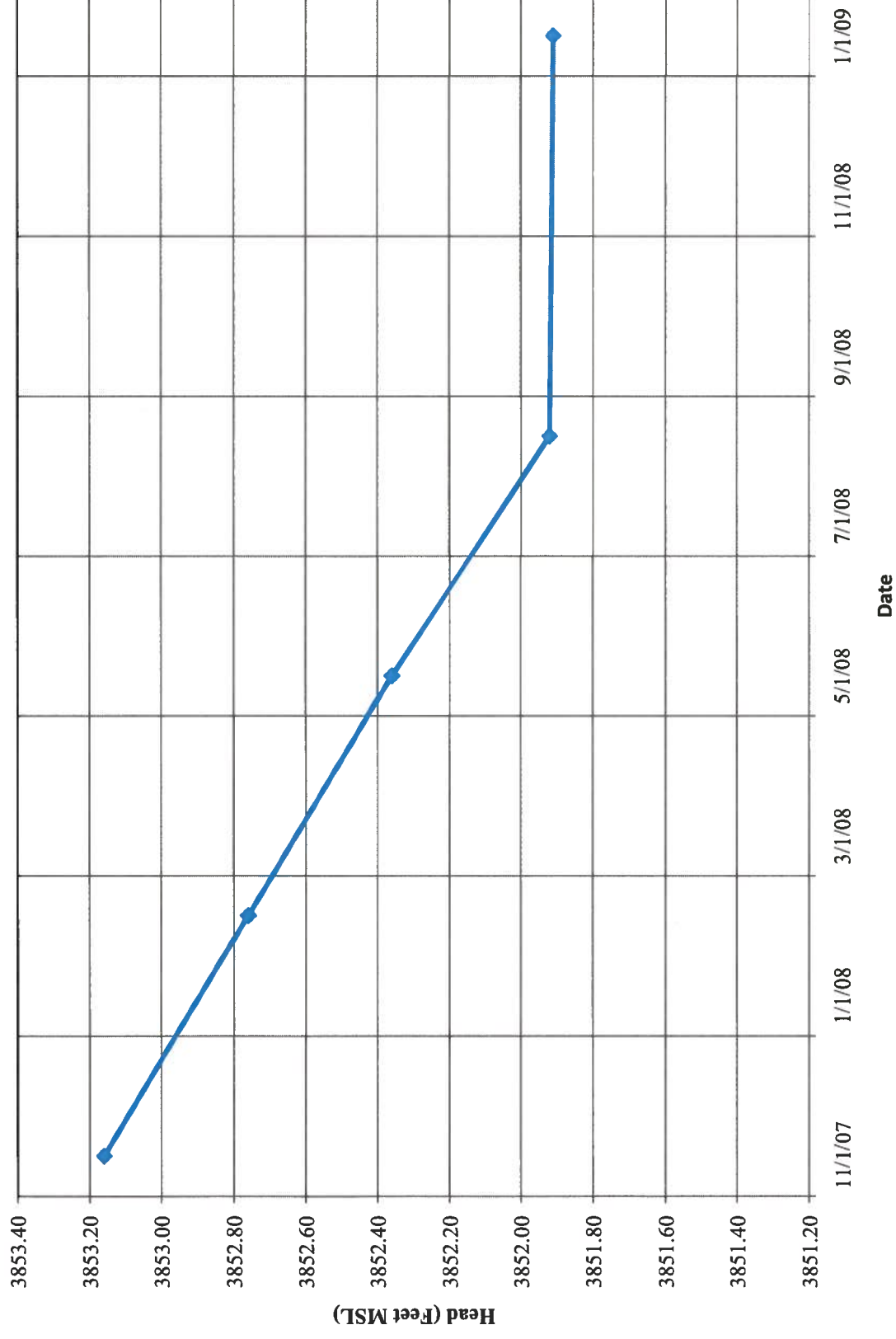


Date

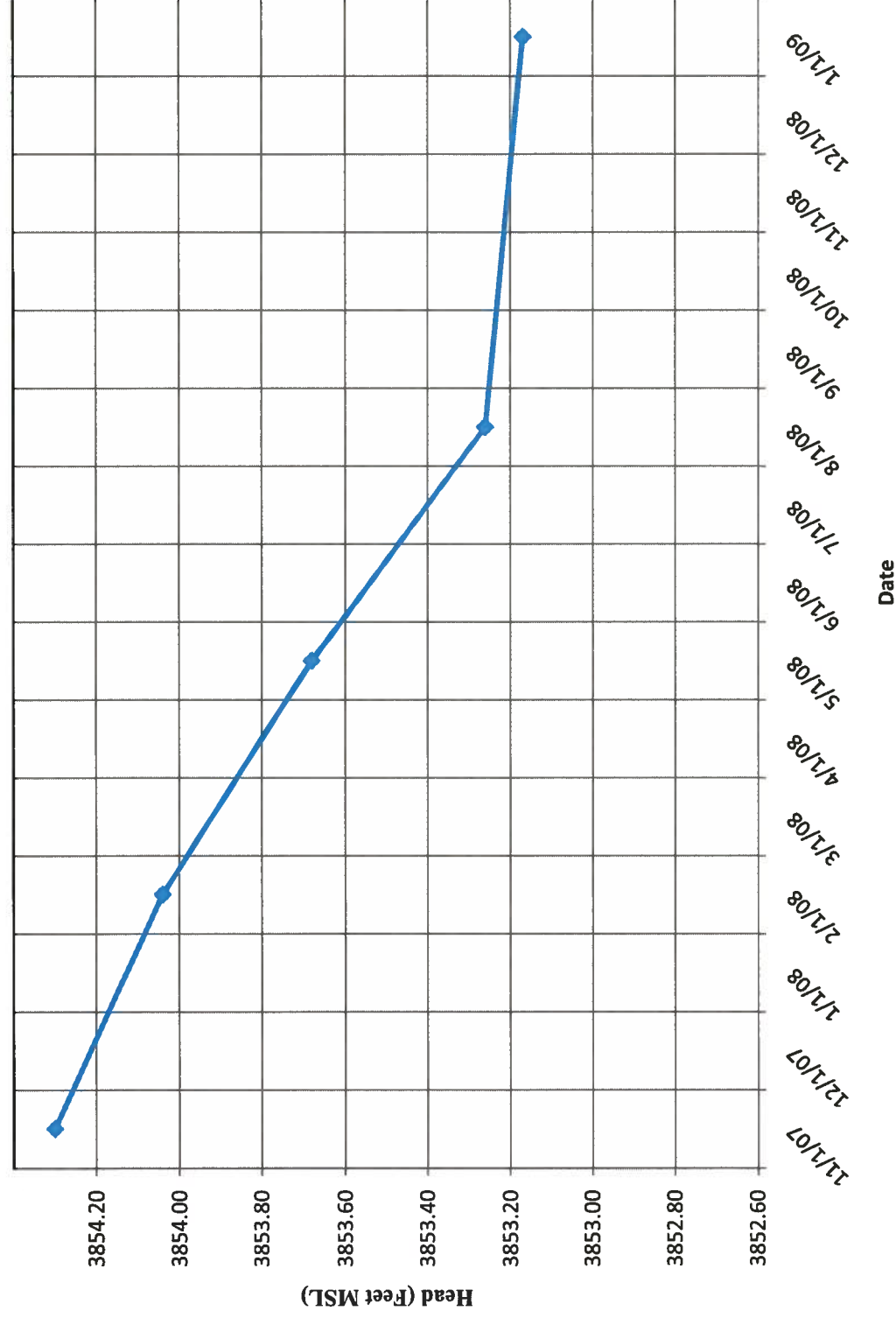
HYDROGRAPH FOR WELL W-19



HYDROGRAPH FOR WELL W-20



HYDROGRAPH FOR WELL W-21



APPENDIX B
FIELD FORMS

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-5 Date gauged 10/01/2009
Site Lection 46 Time gauged 1050
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.36 Feet Height of fluid column 10.31 Feet
Total depth 69.67 Feet Volume in well 1.75 Gallons

(3 well volumes = 5.25 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged _____

Purge Method _____

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>1050</u>	<u>2.5</u>	<u>17.5</u>	<u>1590</u>	<u>7.55</u>		<u>.78</u>
<u>1105</u>	<u>2.5</u>	<u>18.7</u>	<u>1650</u>	<u>7.50</u>		
<u>1115</u>	<u>5</u>	<u>18.8</u>	<u>1980</u>	<u>7.49</u>		

Actual purge volume 5 gal.

Field measurements stabilized within 10%

Time/date sampled 1115 11/29/09

Purged/sampled by [Signature]

Sample method DESIGNABLE BATH

Requested analyses 8260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID	<u>4-2</u>	Date gauged	<u>01/28/09</u>
Site	<u>Lorington Rd</u>	Time gauged	<u>0755</u>
Depth to PSH	_____ Feet	Well diameter	<u>2"</u> Inches
Depth to water	<u>54.11</u> Feet	Height of fluid column	_____ Feet
Total depth	<u>65.95</u> Feet	Volume in well	_____ Gallons

(3 well volumes = _____ gallons)

GROUNDWATER SAMPLING DATA

Time/date purged NA Purge Method NA

[illegible]

Actual purge volume _____ gal. Field measurements stabilized within $\pm 10\%$? _____

Time/date sampled _____ Purged/sampled by Rob Dondkowski

Sample method

Requested analyses

Comments/observations	
------------------------------	--

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-8 Date gauged 1/29/09
Site Lovington Time gauged _____
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.67 Feet Height of fluid column 9.33 Feet
Total depth 65.00 Feet Volume in well 1.5861 Gallons
(3 well volumes = 4.7583 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged _____ Purge Method HAND BAILED

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1410	1.5	19.2	1046	7.29		.35
	2.5	19.2	1136	7.26		
1420	5	19.0	1156	7.20		

Actual purge volume 5 gal.

Field measurements stabilized within ± 10%? Yes

Time/date sampled 1420

Purged/sampled by [Signature]

Sample method DISPOSABLE BAILEY

Requested analyses 8260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

x12



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-9 Date gauged 1325
Site Lovington 65 Time gauged 1/28/09
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.19 Feet Height of fluid column 9.42 Feet
Total depth 64.61 Feet Volume in well 1.6014 Gallons

(3 well volumes = 4.8042 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/09 Purge Method HAND BORED

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1330	.25	20.3	988	7.14		-31
	2.5	19.5	1029	7.11		
1345	5	19.5	1053	7.17		

Actual purge volume 5 gal.

Field measurements stabilized within ± 10%?

Time/date sampled 1345 1/28/09 Purged/sampled by [Signature]

Sample method PLSPO-AUGLE BADER

Requested analyses 0260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-11 Date gauged 1/28/09
Site Lovington Time gauged 11:50
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.26 Feet Height of fluid column 9.64 Feet
Total depth 64.9 Feet Volume in well 1.6348 Gallons

(3 well volumes = 4.9164 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1200/1/28/09 Purge Method HAND BAZLER

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1155	1.25	19.5	1472	6.94		0.17
1205	2.5	19.8	1562	6.80		
1210	5	19.8	1482	6.82		

Actual purge volume 5 gal.

Field measurements stabilized within ± 10%? ☒

Time/date sampled 1210/1/28/09 Purged/sampled by [Signature]

Sample method Disposable Bazler

Requested analyses B260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

ATTACHED LID BEST I COULD BUT NOT VERY
SECURE



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID	<u>W-13</u>	Date gauged	<u>01/28/09</u>
Site	<u>Longview 4F</u>	Time gauged	<u>0802</u>
Depth to PSH	<u> </u> Feet	Well diameter	<u>2"</u> Inches
Depth to water	<u>54.66</u> Feet	Height of fluid column	<u> </u> Feet
Total depth	<u>65.01</u> Feet	Volume in well	<u> </u> Gallons

(3 well volumes = _____ gallons)

GROUNDWATER SAMPLING DATA

Time/date purged NA Purge Method NA

[illegible]

Actual purge volume _____ gal. Field measurements stabilized within $\pm 10\%$? _____

Time/date sampled _____ Purged/sampled by WR Rob Bandkowski

Sample method

Requested analyses

Comments/observations	
-----------------------	--

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID L-14 Date gauged 1/28/09
Site Luxembourg Time gauged 1458
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 54.62 Feet Height of fluid column 9.21 Feet
Total depth 64.38 Feet Volume in well 1.6302 Gallons

(3 well volumes = 4.9521 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/09 Purge Method HAND BAILED

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1500	1.25	10.7	1506	7.19		1.3
	2.5	10.4	1515	7.16		
	5.	19.8	1415	7.22		

Actual purge volume 5 gal.

Field measurements stabilized within ± 10%?

Time/date sampled 15:55

Purged/sampled by [Signature]

Sample method DISPOSABLE BAILER

Requested analyses 8260

Comments/observations

Lost BAILER DOWN well Replaced
w/ SPARE FINISHED SANDPAPER NO LUCK
Remains DOWN w/ pressure kept up

Well Casing Volumes
2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

will remove next time



MONITOR WELL SAMPLING FIELD FORM

Well ID	<u>W-15</u>	Date gauged	<u>1/28/09</u>
Site	<u>LOUGHBOROUGH</u>	Time gauged	<u>0735</u>
Depth to PSH	<u> </u> Feet	Well diameter	<u>2"</u> Inches
Depth to water	<u>53.82</u> Feet	Height of fluid column	<u> </u> Feet
Total depth	<u>64.9</u> Feet	Volume in well	<u> </u> Gallons

Time/date purged NA Purge Method NA

[illegible]

Purged/sampled by Kob Isenclawsk.

Comments/observations

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113

Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-14 Date gauged 1/28/09
Site Lowman 66 Time gauged 1225
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 53.52 Feet Height of fluid column 11.39 Feet
Total depth 64.91 Feet Volume in well 1.9363 Gallons

(3 well volumes = 5.80 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/09 Purge Method HAND BAUER

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
<u>1255</u>	<u>27</u>	<u>19.5</u>	<u>1586</u>	<u>7.41</u>		<u>.42</u>
<u>1305</u>	<u>3</u>	<u>19.5</u>	<u>1684</u>	<u>7.63</u>		
		<u>19.5</u>	<u>1664</u>	<u>7.43</u>		

Actual purge volume 6.6 gal.

Field measurements stabilized within +10%?

Time/date sampled 1310 1/28/09 Purged/sampled by DISPOSABLE BAUER

Sample method DISPOSABLE BAUER

Requested analyses 8260

Comments/observations

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

**Golder Associates**

4910 Alameda Blvd, NE Suite A

Albuquerque, NM 87113

Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-14 Date gauged 1/28/01

Site Lovinston 44 Time gauged 0810

Depth to PSH _____ Feet Well diameter 2" Inches

Depth to water 55.04 Feet Height of fluid column _____ Feet

Total depth 64.31 Feet Volume in well _____ Gallons

(3 well volumes = _____ gallons)

GROUNDWATER SAMPLING DATA

Time/date purged NA Purge Method NA

Purge Method NA

[illegible]

Actual purge volume _____ gal.

Field measurements stabilized within $\pm 10\%$?

Time/date sampled _____

Purged/sampled by W Rob Bendkowski

Sample method

Requested analyses

Comments/observations	
-----------------------	--

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113
Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-19 Date gauged 1/28/09
Site LOWENSTON 66 Time gauged 1010
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.36 Feet Height of fluid column 9.8 Feet
Total depth 65.16 Feet Volume in well 1.66 Gallons
(3 well volumes = 4.98 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/09 Purge Method HAND BAILED

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
1020	25	17.5	772	7.63		6.25
1030	25	18.5	1042	7.42		
1040	5	18.8	1018	7.34		

Actual purge volume 5 gal.

Field measurements stabilized within 10%? X

Time/date sampled 1040 1/28/09

Purged/sampled by DISPOSABLE BAILER

Sample method DISPOSABLE BAILER

Requested analyses 8260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113

Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-20 Date gauged 01/28/04
 Site LOWE'S TOWN 46 Time gauged 0825
 Depth to PSH _____ Feet Well diameter 2 Inches
 Depth to water 55.54 Feet Height of fluid column 9.36 Feet
 Total depth 64.90 Feet Volume in well 1.5912 Gallons

(3 well volumes = 4.7736 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/04 Purge Method FLAND BAEL

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
	<u>1.25</u>	<u>14.5</u>	<u>1004</u>	<u>7.57</u>		<u>6.65</u>
<u>0340</u>	<u>1.5</u>	<u>15.5</u>	<u>685</u>	<u>7.60</u>		
	<u>3.2</u>	<u>16.2</u>	<u>730</u>	<u>7.63</u>		
	<u>5</u>	<u>16.4</u>	<u>727</u>	<u>7.63</u>		

Actual purge volume 5 gal. Field measurements stabilized within ± 10%? Y

Time/date sampled 0900 Purged/sampled by R. J. [Signature]

Sample method DISPOSABLE BACL

Requested analyses 8200

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft



Golder Associates
4910 Alameda Blvd, NE Suite A
Albuquerque, NM 87113

Phone: (505) 821-3043; Fax: (505) 821-5273

MONITOR WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID W-21 Date gauged 1/28/09
Site Loungston GS Time gauged 9:30
Depth to PSH _____ Feet Well diameter 2" Inches
Depth to water 55.32 Feet Height of fluid column 9.41 Feet
Total depth 64.23 Feet Volume in well 1.59 Gallons

(3 well volumes = 4.7 gallons)

GROUNDWATER SAMPLING DATA

Time/date purged 1/28/09 9:30 Purge Method HAIRD BACK

Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)
940	1.25	18.2	1620	7.42		6.44
950	2.5	18.8	1651	7.37		
1000	5	18.7	1575	7.38		

Actual purge volume 5 gal.

Field measurements stabilized within ± 10%? Y

Time/date sampled 1000

Purged/sampled by R. J. [Signature]

Sample method RESPONDABLE BAC

Requested analyses 4260

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft

Location _____

Date _____

Project / Client _____

PHOTOS OF ALL THE PHOTOS 1, 2, 3, 4, 5
 & PHOTOS OF RW 1 + 3

PHOTOS OF BAKEN FARMHOUSE CAUSED
 & BORN WE MOUNTED

RW 5 + 2 NOT RECENTLY BECAUSE OF
 TRAILER + VAN ON TOP OF THEM

LAST PHOTOS IS OF RW 5

Location _____

Lorenson CC

Date _____

1/28/05

Project / Client LSJ

Scale

All Subic 4e1/5

MW-2 55.56 DTW

MW-1 54.91 DTW

MW-3 55.16 DTW

APPENDIX C

ANALYTICAL LABORATORY REPORTS



COVER LETTER

Thursday, February 05, 2009

Todd Stein
Golder Associates
5200 Pasadena, NE Suite C
Albuquerque, NM 87113

TEL: (505) 821-3043

FAX (505) 821-5273

RE: Lovington 66

Order No.: 0901398

Dear Todd Stein:

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 1/29/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", written over a horizontal line.

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425

AZ license # AZ0682

ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-01

Client Sample ID: W-20
Collection Date: 1/28/2009 9:00:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 12:02:25 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 12:02:25 AM
Acetone	ND	10		µg/L	1	2/3/2009 12:02:25 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 12:02:25 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 12:02:25 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 12:02:25 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 1 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-01

Client Sample ID: W-20
Collection Date: 1/28/2009 9:00:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 12:02:25 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 12:02:25 AM
n-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 12:02:25 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 12:02:25 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 12:02:25 AM
Surr: 1,2-Dichloroethane-d4	77.5	68.1-123		%REC	1	2/3/2009 12:02:25 AM
Surr: 4-Bromofluorobenzene	90.4	53.2-145		%REC	1	2/3/2009 12:02:25 AM
Surr: Dibromofluoromethane	85.6	68.5-119		%REC	1	2/3/2009 12:02:25 AM
Surr: Toluene-d8	89.3	64-131		%REC	1	2/3/2009 12:02:25 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 2 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
 Lab Order: 0901398
 Project: Lovington 66
 Lab ID: 0901398-02

Client Sample ID: W-21
 Collection Date: 1/28/2009 10:00:00 AM
 Date Received: 1/29/2009
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 1:27:37 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 1:27:37 AM
Acetone	ND	10		µg/L	1	2/3/2009 1:27:37 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 1:27:37 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 1:27:37 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 1:27:37 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
 E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 MCL Maximum Contaminant Level
 RL Reporting Limit

Page 3 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-02

Client Sample ID: W-21
Collection Date: 1/28/2009 10:00:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 1:27:37 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 1:27:37 AM
n-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 1:27:37 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 1:27:37 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 1:27:37 AM
Surr: 1,2-Dichloroethane-d4	78.2	68.1-123		%REC	1	2/3/2009 1:27:37 AM
Surr: 4-Bromofluorobenzene	89.2	53.2-145		%REC	1	2/3/2009 1:27:37 AM
Surr: Dibromofluoromethane	83.8	68.5-119		%REC	1	2/3/2009 1:27:37 AM
Surr: Toluene-d8	90.2	64-131		%REC	1	2/3/2009 1:27:37 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 4 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-03

Client Sample ID: W-19
Collection Date: 1/28/2009 10:40:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	3.8	1.0		µg/L	1	2/3/2009 1:56:00 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2-Dichloroethane (EDC)	37	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 1:56:00 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 1:56:00 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 1:56:00 AM
Acetone	ND	10		µg/L	1	2/3/2009 1:56:00 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 1:56:00 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 1:56:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 1:56:00 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 1:56:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,2-Dichloropropane	3.8	1.0		µg/L	1	2/3/2009 1:56:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 1:56:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 1:56:00 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 1:56:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 5 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-03

Client Sample ID: W-19
Collection Date: 1/28/2009 10:40:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	2.8	1.0		µg/L	1	2/3/2009 1:58:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 1:58:00 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 1:58:00 AM
n-Butylbenzene	1.7	1.0		µg/L	1	2/3/2009 1:58:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 1:58:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 1:58:00 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 1:58:00 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 1:58:00 AM
Surr: 1,2-Dichloroethane-d4	80.8	68.1-123		%REC	1	2/3/2009 1:58:00 AM
Surr: 4-Bromofluorobenzene	96.6	53.2-145		%REC	1	2/3/2009 1:58:00 AM
Surr: Dibromofluoromethane	97.6	68.5-119		%REC	1	2/3/2009 1:58:00 AM
Surr: Toluene-d8	88.8	64-131		%REC	1	2/3/2009 1:58:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 6 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-04

Client Sample ID: W-5
Collection Date: 1/28/2009 11:15:00 AM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Methyl tert-butyl ether (MTBE)	18	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 2:24:25 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 2:24:25 AM
Acetone	ND	10		µg/L	1	2/3/2009 2:24:25 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 2:24:25 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 2:24:25 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 2:24:25 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 7 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
 Lab Order: 0901398
 Project: Lovington 66
 Lab ID: 0901398-04

Client Sample ID: W-5
 Collection Date: 1/28/2009 11:15:00 AM
 Date Received: 1/29/2009
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 2:24:25 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 2:24:25 AM
n-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
Tetrachloroethane (PCE)	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 2:24:25 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 2:24:25 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 2:24:25 AM
Surr: 1,2-Dichloroethane-d4	76.7	88.1-123		%REC	1	2/3/2009 2:24:25 AM
Surr: 4-Bromofluorobenzene	91.2	53.2-145		%REC	1	2/3/2009 2:24:25 AM
Surr: Dibromofluoromethane	89.4	88.5-119		%REC	1	2/3/2009 2:24:25 AM
Surr: Toluene-d8	88.2	64-131		%REC	1	2/3/2009 2:24:25 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
 E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 MCL Maximum Contaminant Level
 RL Reporting Limit

Page 8 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-05

Client Sample ID: W-11
Collection Date: 1/28/2009 12:10:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Ethylbenzene	40	1.0		µg/L	1	2/3/2009 3:21:14 AM
Methyl tert-butyl ether (MTBE)	160	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2,4-Trimethylbenzene	3.8	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,3,5-Trimethylbenzene	8.4	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2-Dichloroethane (EDC)	44	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 3:21:14 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 3:21:14 AM
Acetone	ND	10		µg/L	1	2/3/2009 3:21:14 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 3:21:14 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 3:21:14 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
cis-1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 3:21:14 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 9 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
 Lab Order: 0901398
 Project: Lovington 66
 Lab ID: 0901398-05

Client Sample ID: W-11
 Collection Date: 1/28/2009 12:10:00 PM
 Date Received: 1/29/2009
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	5.7	1.0		µg/L	1	2/3/2009 3:21:14 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 3:21:14 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 3:21:14 AM
n-Butylbenzene	1.1	1.0		µg/L	1	2/3/2009 3:21:14 AM
n-Propylbenzene	8.2	1.0		µg/L	1	2/3/2009 3:21:14 AM
sec-Butylbenzene	3.1	1.0		µg/L	1	2/3/2009 3:21:14 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 3:21:14 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 3:21:14 AM
Xylenes, Total	5.7	1.5		µg/L	1	2/3/2009 3:21:14 AM
Surr: 1,2-Dichloroethane-d4	86.6	68.1-123		%REC	1	2/3/2009 3:21:14 AM
Surr: 4-Bromofluorobenzene	89.3	53.2-145		%REC	1	2/3/2009 3:21:14 AM
Surr: Dibromofluoromethane	85.2	68.5-119		%REC	1	2/3/2009 3:21:14 AM
Surr: Toluene-d8	87.1	64-131		%REC	1	2/3/2009 3:21:14 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
 E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 MCL Maximum Contaminant Level
 RL Reporting Limit

Page 10 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-06

Client Sample ID: W-16
Collection Date: 1/28/2009 1:10:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	170	10		µg/L	10	2/3/2009 3:49:37 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Methyl tert-butyl ether (MTBE)	39	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2,4-Trimethylbenzene	11	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,3,5-Trimethylbenzene	28	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2-Dichloroethane (EDC)	13	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Naphthalene	15	2.0		µg/L	1	2/3/2009 4:18:00 AM
1-Methylnaphthalene	41	4.0		µg/L	1	2/3/2009 4:18:00 AM
2-Methylnaphthalene	64	4.0		µg/L	1	2/3/2009 4:18:00 AM
Acetone	ND	10		µg/L	1	2/3/2009 4:18:00 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 4:18:00 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 4:18:00 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 4:18:00 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 4:18:00 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 4:18:00 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 4:18:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 11 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-06

Client Sample ID: W-16
Collection Date: 1/28/2009 1:10:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	2.6	1.0		µg/L	1	2/3/2009 4:18:00 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 4:18:00 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 4:18:00 AM
n-Butylbenzene	5.6	1.0		µg/L	1	2/3/2009 4:18:00 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
sec-Butylbenzene	2.1	1.0		µg/L	1	2/3/2009 4:18:00 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 4:18:00 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 4:18:00 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 4:18:00 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 4:18:00 AM
Surr: 1,2-Dichloroethane-d4	81.4	68.1-123		%REC	1	2/3/2009 4:18:00 AM
Surr: 4-Bromofluorobenzene	95.7	53.2-145		%REC	1	2/3/2009 4:18:00 AM
Surr: Dibromofluoromethane	76.5	68.6-119		%REC	1	2/3/2009 4:18:00 AM
Surr: Toluene-d8	88.6	64-131		%REC	1	2/3/2009 4:18:00 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 12 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-07

Client Sample ID: W-9
Collection Date: 1/28/2009 1:45:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	4800	100		µg/L	100	2/3/2009 2:52:10 PM
Toluene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Ethylbenzene	370	10		µg/L	10	2/3/2009 5:14:54 AM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2,4-Trimethylbenzene	470	10		µg/L	10	2/3/2009 5:14:54 AM
1,3,5-Trimethylbenzene	150	10		µg/L	10	2/3/2009 5:14:54 AM
1,2-Dichloroethane (EDC)	580	10		µg/L	10	2/3/2009 5:14:54 AM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Naphthalene	120	20		µg/L	10	2/3/2009 5:14:54 AM
1-Methylnaphthalene	ND	40		µg/L	10	2/3/2009 5:14:54 AM
2-Methylnaphthalene	ND	40		µg/L	10	2/3/2009 5:14:54 AM
Acetone	ND	100		µg/L	10	2/3/2009 5:14:54 AM
Bromobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Bromodichloromethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Bromoform	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Bromomethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
2-Butanone	ND	100		µg/L	10	2/3/2009 5:14:54 AM
Carbon disulfide	ND	100		µg/L	10	2/3/2009 5:14:54 AM
Carbon Tetrachloride	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Chlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Chloroethane	ND	20		µg/L	10	2/3/2009 5:14:54 AM
Chloroform	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Chloromethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
2-Chlorotoluene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
4-Chlorotoluene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
cis-1,2-DCE	ND	10		µg/L	10	2/3/2009 5:14:54 AM
cis-1,3-Dichloropropene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	2/3/2009 5:14:54 AM
Dibromochloromethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Dibromomethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2-Dichlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,3-Dichlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,4-Dichlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Dichlorodifluoromethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1-Dichloroethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1-Dichloroethene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2-Dichloropropane	33	10		µg/L	10	2/3/2009 5:14:54 AM
1,3-Dichloropropane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
2,2-Dichloropropane	ND	20		µg/L	10	2/3/2009 5:14:54 AM
1,1-Dichloropropene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Hexachlorobutadiene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
2-Hexanone	ND	100		µg/L	10	2/3/2009 5:14:54 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 13 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-07

Client Sample ID: W-9
Collection Date: 1/28/2009 1:45:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						
Isopropylbenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
4-Isopropyltoluene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
4-Methyl-2-pentanone	ND	100		µg/L	10	2/3/2009 5:14:54 AM
Methylene Chloride	ND	30		µg/L	10	2/3/2009 5:14:54 AM
n-Butylbenzene	10	10		µg/L	10	2/3/2009 5:14:54 AM
n-Propylbenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
sec-Butylbenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Styrene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
tert-Butylbenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	2/3/2009 5:14:54 AM
Tetrachloroethene (PCE)	ND	10		µg/L	10	2/3/2009 5:14:54 AM
trans-1,2-DCE	ND	10		µg/L	10	2/3/2009 5:14:54 AM
trans-1,3-Dichloropropene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1,1-Trichloroethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,1,2-Trichloroethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Trichloroethene (TCE)	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Trichlorofluoromethane	ND	10		µg/L	10	2/3/2009 5:14:54 AM
1,2,3-Trichloropropane	ND	20		µg/L	10	2/3/2009 5:14:54 AM
Vinyl chloride	ND	10		µg/L	10	2/3/2009 5:14:54 AM
Xylenes, Total	380	15		µg/L	10	2/3/2009 5:14:54 AM
Surr: 1,2-Dichloroethane-d4	71.9	68.1-123		%REC	10	2/3/2009 5:14:54 AM
Surr: 4-Bromofluorobenzene	76.9	53.2-145		%REC	10	2/3/2009 5:14:54 AM
Surr: Dibromofluoromethane	86.3	68.5-119		%REC	100	2/3/2009 2:52:10 PM
Surr: Toluene-d8	86.7	64-131		%REC	10	2/3/2009 5:14:54 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 14 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-08

Client Sample ID: W-8
Collection Date: 1/28/2009 2:20:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	19000	400		µg/L	400	2/3/2009 6:43:22 AM
Toluene	26000	400		µg/L	400	2/3/2009 6:43:22 AM
Ethylbenzene	2500	100		µg/L	100	2/3/2009 6:11:54 AM
Methyl tert-butyl ether (MTBE)	9800	100		µg/L	100	2/3/2009 6:11:54 AM
1,2,4-Trimethylbenzene	2000	100		µg/L	100	2/3/2009 6:11:54 AM
1,3,5-Trimethylbenzene	510	100		µg/L	100	2/3/2009 6:11:54 AM
1,2-Dichloroethane (EDC)	3000	100		µg/L	100	2/3/2009 6:11:54 AM
1,2-Dibromoethane (EDB)	290	100		µg/L	100	2/3/2009 6:11:54 AM
Naphthalene	570	200		µg/L	100	2/3/2009 6:11:54 AM
1-Methylnaphthalene	ND	400		µg/L	100	2/3/2009 6:11:54 AM
2-Methylnaphthalene	ND	400		µg/L	100	2/3/2009 6:11:54 AM
Acetone	ND	1000		µg/L	100	2/3/2009 6:11:54 AM
Bromobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Bromodichloromethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Bromoform	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Bromomethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
2-Butanone	ND	1000		µg/L	100	2/3/2009 6:11:54 AM
Carbon disulfide	ND	1000		µg/L	100	2/3/2009 6:11:54 AM
Carbon Tetrachloride	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Chlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Chloroethane	ND	200		µg/L	100	2/3/2009 6:11:54 AM
Chloroform	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Chloromethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
2-Chlorotoluene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
4-Chlorotoluene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
cis-1,2-DCE	ND	100		µg/L	100	2/3/2009 6:11:54 AM
cis-1,3-Dichloropropene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	2/3/2009 6:11:54 AM
Dibromochloromethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Dibromomethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,3-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,4-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Dichlorodifluoromethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1-Dichloroethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1-Dichloroethene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2-Dichloropropane	110	100		µg/L	100	2/3/2009 6:11:54 AM
1,3-Dichloropropane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
2,2-Dichloropropane	ND	200		µg/L	100	2/3/2009 6:11:54 AM
1,1-Dichloropropene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Hexachlorobutadiene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
2-Hexanone	ND	1000		µg/L	100	2/3/2009 6:11:54 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 15 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
 Lab Order: 0901398
 Project: Lovington 66
 Lab ID: 0901398-08

Client Sample ID: W-8
 Collection Date: 1/28/2009 2:20:00 PM
 Date Received: 1/29/2009
 Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
4-Isopropyltoluene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
4-Methyl-2-pentanone	ND	1000		µg/L	100	2/3/2009 6:11:54 AM
Methylene Chloride	ND	300		µg/L	100	2/3/2009 6:11:54 AM
n-Butylbenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
n-Propylbenzene	200	100		µg/L	100	2/3/2009 6:11:54 AM
sec-Butylbenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Styrene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
tert-Butylbenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1,2,2-Tetrachloroethane	ND	200		µg/L	100	2/3/2009 6:11:54 AM
Tetrachloroethane (PCE)	ND	100		µg/L	100	2/3/2009 6:11:54 AM
trans-1,2-DCE	ND	100		µg/L	100	2/3/2009 6:11:54 AM
trans-1,3-Dichloropropene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2,3-Trichlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2,4-Trichlorobenzene	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1,1-Trichloroethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,1,2-Trichloroethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Trichloroethene (TCE)	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Trichlorofluoromethane	ND	100		µg/L	100	2/3/2009 6:11:54 AM
1,2,3-Trichloropropane	ND	200		µg/L	100	2/3/2009 6:11:54 AM
Vinyl chloride	ND	100		µg/L	100	2/3/2009 6:11:54 AM
Xylenes, Total	11000	150		µg/L	100	2/3/2009 6:11:54 AM
Surr: 1,2-Dichloroethane-d4	84.3	68.1-123		%REC	100	2/3/2009 6:11:54 AM
Surr: 4-Bromofluorobenzene	74.7	53.2-145		%REC	100	2/3/2009 6:11:54 AM
Surr: Dibromofluoromethane	72.0	68.5-119		%REC	100	2/3/2009 6:11:54 AM
Surr: Toluene-d8	91.2	64-131		%REC	100	2/3/2009 6:11:54 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
 E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 MCL Maximum Contaminant Level
 RL Reporting Limit

Page 16 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-09

Client Sample ID: W-14
Collection Date: 1/28/2009 3:55:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	24000	400		µg/L	400	2/3/2009 6:40:24 AM
Toluene	19000	400		µg/L	400	2/3/2009 6:40:24 AM
Ethylbenzene	2200	100		µg/L	100	2/3/2009 7:09:02 AM
Methyl tert-butyl ether (MTBE)	3200	100		µg/L	100	2/3/2009 7:09:02 AM
1,2,4-Trimethylbenzene	1500	100		µg/L	100	2/3/2009 7:09:02 AM
1,3,5-Trimethylbenzene	410	100		µg/L	100	2/3/2009 7:09:02 AM
1,2-Dichloroethane (EDC)	150	100		µg/L	100	2/3/2009 7:09:02 AM
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Naphthalene	640	200		µg/L	100	2/3/2009 7:09:02 AM
1-Methylnaphthalene	ND	400		µg/L	100	2/3/2009 7:09:02 AM
2-Methylnaphthalene	ND	400		µg/L	100	2/3/2009 7:09:02 AM
Acetone	ND	1000		µg/L	100	2/3/2009 7:09:02 AM
Bromobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Bromodichloromethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Bromoform	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Bromomethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
2-Butanone	ND	1000		µg/L	100	2/3/2009 7:09:02 AM
Carbon disulfide	ND	1000		µg/L	100	2/3/2009 7:09:02 AM
Carbon Tetrachloride	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Chlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Chloroethane	ND	200		µg/L	100	2/3/2009 7:09:02 AM
Chloroform	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Chloromethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
2-Chlorotoluene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
4-Chlorotoluene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
cis-1,2-DCE	ND	100		µg/L	100	2/3/2009 7:09:02 AM
cis-1,3-Dichloropropene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	2/3/2009 7:09:02 AM
Dibromochloromethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Dibromomethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,3-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,4-Dichlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Dichlorodifluoromethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1-Dichloroethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1-Dichloroethene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2-Dichloropropane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,3-Dichloropropane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
2,2-Dichloropropane	ND	200		µg/L	100	2/3/2009 7:09:02 AM
1,1-Dichloropropene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Hexachlorobutadiene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
2-Hexanone	ND	1000		µg/L	100	2/3/2009 7:09:02 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-09

Client Sample ID: W-14
Collection Date: 1/28/2009 3:55:00 PM
Date Received: 1/29/2009
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
4-Isopropyltoluene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
4-Methyl-2-pentanone	ND	1000		µg/L	100	2/3/2009 7:09:02 AM
Methylene Chloride	ND	300		µg/L	100	2/3/2009 7:09:02 AM
n-Butylbenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
n-Propylbenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
sec-Butylbenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Styrene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
tert-Butylbenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1,2,2-Tetrachloroethane	ND	200		µg/L	100	2/3/2009 7:09:02 AM
Tetrachloroethene (PCE)	ND	100		µg/L	100	2/3/2009 7:09:02 AM
trans-1,2-DCE	ND	100		µg/L	100	2/3/2009 7:09:02 AM
trans-1,3-Dichloropropene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2,3-Trichlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2,4-Trichlorobenzene	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1,1-Trichloroethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,1,2-Trichloroethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Trichloroethene (TCE)	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Trichlorofluoromethane	ND	100		µg/L	100	2/3/2009 7:09:02 AM
1,2,3-Trichloropropane	ND	200		µg/L	100	2/3/2009 7:09:02 AM
Vinyl chloride	ND	100		µg/L	100	2/3/2009 7:09:02 AM
Xylenes, Total	8700	150		µg/L	100	2/3/2009 7:09:02 AM
Surr: 1,2-Dichloroethane-d4	76.4	68.1-123		%REC	100	2/3/2009 7:09:02 AM
Surr: 4-Bromofluorobenzene	73.6	53.2-145		%REC	100	2/3/2009 7:09:02 AM
Surr: Dibromofluoromethane	85.0	68.5-119		%REC	400	2/3/2009 6:40:24 AM
Surr: Toluene-d8	90.9	64-131		%REC	100	2/3/2009 7:09:02 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 18 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
 Lab Order: 0901398
 Project: Lovington 66
 Lab ID: 0901398-10

Client Sample ID: TRIP BLANK
 Collection Date:
 Date Received: 1/29/2009
 Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Benzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Toluene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Ethylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Naphthalene	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 7:37:41 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	2/3/2009 7:37:41 AM
Acetone	ND	10		µg/L	1	2/3/2009 7:37:41 AM
Bromobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Bromodichloromethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Bromoform	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Bromomethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
2-Butanone	ND	10		µg/L	1	2/3/2009 7:37:41 AM
Carbon disulfide	ND	10		µg/L	1	2/3/2009 7:37:41 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Chlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Chloroethane	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
Chloroform	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Chloromethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
2-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
4-Chlorotoluene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
cis-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
Dibromochloromethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Dibromomethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
2-Hexanone	ND	10		µg/L	1	2/3/2009 7:37:41 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
 E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 MCL Maximum Contaminant Level
 RL Reporting Limit

Page 19 of 20

Hall Environmental Analysis Laboratory, Inc.

Date: 05-Feb-09

CLIENT: Golder Associates
Lab Order: 0901398
Project: Lovington 66
Lab ID: 0901398-10

Client Sample ID: TRIP BLANK
Collection Date:
Date Received: 1/29/2009
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: HL
Isopropylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	2/3/2009 7:37:41 AM
Methylene Chloride	ND	3.0		µg/L	1	2/3/2009 7:37:41 AM
n-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
n-Propylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
sec-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Styrene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
tert-Butylbenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
trans-1,2-DCE	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/3/2009 7:37:41 AM
Vinyl chloride	ND	1.0		µg/L	1	2/3/2009 7:37:41 AM
Xylenes, Total	ND	1.5		µg/L	1	2/3/2009 7:37:41 AM
Surr: 1,2-Dichloroethane-d4	76.7	68.1-123		%REC	1	2/3/2009 7:37:41 AM
Surr: 4-Bromofluorobenzene	89.7	53.2-145		%REC	1	2/3/2009 7:37:41 AM
Surr: Dibromofluoromethane	80.6	68.5-119		%REC	1	2/3/2009 7:37:41 AM
Surr: Toluene-d8	88.7	64-131		%REC	1	2/3/2009 7:37:41 AM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit

Page 20 of 20

QA/QC SUMMARY REPORT

Client: Golder Associates
Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: 0901398-01a MSD

MSD

Batch ID: R32254 Analysis Date: 2/3/2009 12:59:16 AM

Benzene	17.60	µg/L	1.0	88.0	84.9	122	2.84	15	
Toluene	17.48	µg/L	1.0	87.4	80.3	114	0.674	15	
Chlorobenzene	18.82	µg/L	1.0	94.1	71.9	134	0.692	15	
1,1-Dichloroethene	18.76	µg/L	1.0	93.8	88	144	2.30	17.8	
Trichloroethene (TCE)	17.30	µg/L	1.0	86.5	87.1	114	2.35	19.8	S

Sample ID: 6ml rb

MBLK

Batch ID: R32254 Analysis Date: 2/2/2009 8:35:52 AM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
1,2-Dichloroethane (EDC)	ND	µg/L	1.0
1,2-Dibromoethane (EDB)	ND	µg/L	1.0
Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	4.0
2-Methylnaphthalene	ND	µg/L	4.0
Acetone	ND	µg/L	10
Bromobenzene	ND	µg/L	1.0
Bromodichloromethane	ND	µg/L	1.0
Bromoform	ND	µg/L	1.0
Bromomethane	ND	µg/L	1.0
2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

Page 1

QA/QC SUMMARY REPORT

Client: Golder Associates
Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: 5ml rb MBLK

Batch ID: R32264 Analysis Date: 2/2/2009 8:35:52 AM

2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0
Trichloroethene (TCE)	ND	µg/L	1.0
Trichlorofluoromethane	ND	µg/L	1.0
1,2,3-Trichloropropane	ND	µg/L	2.0
Vinyl chloride	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	1.5

Sample ID: b5 MBLK

Batch ID: R32264 Analysis Date: 2/2/2009 9:08:34 PM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
1,2-Dichloroethane (EDC)	ND	µg/L	1.0
1,2-Dibromoethane (EDB)	ND	µg/L	1.0
Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	4.0
2-Methylnaphthalene	ND	µg/L	4.0
Acetone	ND	µg/L	10
Bromobenzene	ND	µg/L	1.0
Bromodichloromethane	ND	µg/L	1.0
Bromoform	ND	µg/L	1.0
Bromomethane	ND	µg/L	1.0

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

Page 2

QA/QC SUMMARY REPORT

Client: Golder Associates

Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: b5

MBLK

Batch ID: R32254 Analysis Date: 2/2/2009 9:08:34 PM

2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0
2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Golder Associates
Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: b5 MBLK

Batch ID: R32254 Analysis Date: 2/2/2009 9:08:34 PM

Trichloroethene (TCE) ND µg/L 1.0
Trichlorofluoromethane ND µg/L 1.0
1,2,3-Trichloropropane ND µg/L 2.0
Vinyl chloride ND µg/L 1.0
Kylenes, Total ND µg/L 1.5

Sample ID: 5ml rb MBLK

Batch ID: R32272 Analysis Date: 2/3/2009 9:02:03 AM

Benzene ND µg/L 1.0
Toluene ND µg/L 1.0
Ethylbenzene ND µg/L 1.0
Methyl tert-butyl ether (MTBE) ND µg/L 1.0
1,2,4-Trimethylbenzene ND µg/L 1.0
1,3,5-Trimethylbenzene ND µg/L 1.0
1,2-Dichloroethane (EDC) ND µg/L 1.0
1,2-Dibromoethane (EDB) ND µg/L 1.0
Naphthalene ND µg/L 2.0
1-Methylnaphthalene ND µg/L 4.0
2-Methylnaphthalene ND µg/L 4.0
Acetone ND µg/L 10
Bromobenzene ND µg/L 1.0
Bromodichloromethane ND µg/L 1.0
Bromoform ND µg/L 1.0
Bromomethane ND µg/L 1.0
2-Butanone ND µg/L 10
Carbon disulfide ND µg/L 10
Carbon Tetrachloride ND µg/L 1.0
Chlorobenzene ND µg/L 1.0
Chloroethane ND µg/L 2.0
Chloroform ND µg/L 1.0
Chloromethane ND µg/L 1.0
2-Chlorotoluene ND µg/L 1.0
4-Chlorotoluene ND µg/L 1.0
cis-1,2-DCE ND µg/L 1.0
cis-1,3-Dichloropropene ND µg/L 1.0
1,2-Dibromo-3-chloropropane ND µg/L 2.0
Dibromochloromethane ND µg/L 1.0
Dibromomethane ND µg/L 1.0
1,2-Dichlorobenzene ND µg/L 1.0
1,3-Dichlorobenzene ND µg/L 1.0
1,4-Dichlorobenzene ND µg/L 1.0
Dichlorodifluoromethane ND µg/L 1.0
1,1-Dichloroethane ND µg/L 1.0
1,1-Dichloroethene ND µg/L 1.0
1,2-Dichloropropane ND µg/L 1.0
1,3-Dichloropropane ND µg/L 1.0

Qualifiers:

E Estimated value
J Analyte detected below quantitation limits
R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

Page 4

QA/QC SUMMARY REPORT

Client: Golder Associates
Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: 5ml rb

MBLK

Batch ID: R32272 Analysis Date: 2/3/2009 9:02:03 AM

2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0
Trichloroethene (TCE)	ND	µg/L	1.0
Trichlorofluoromethane	ND	µg/L	1.0
1,2,3-Trichloropropane	ND	µg/L	2.0
Vinyl chloride	ND	µg/L	1.0
Xylenes, Total	ND	µg/L	1.5

Sample ID: b3

MBLK

Batch ID: R32272 Analysis Date: 2/3/2009 9:42:30 PM

Benzene	ND	µg/L	1.0
Toluene	ND	µg/L	1.0
Ethylbenzene	ND	µg/L	1.0
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0
1,2,4-Trimethylbenzene	ND	µg/L	1.0
1,3,5-Trimethylbenzene	ND	µg/L	1.0
1,2-Dichloroethane (EDC)	ND	µg/L	1.0
1,2-Dibromoethane (EDB)	ND	µg/L	1.0
Naphthalene	ND	µg/L	2.0
1-Methylnaphthalene	ND	µg/L	4.0
2-Methylnaphthalene	ND	µg/L	4.0
Acetone	ND	µg/L	10
Bromobenzene	ND	µg/L	1.0
Bromodichloromethane	ND	µg/L	1.0
Bromoform	ND	µg/L	1.0
Bromomethane	ND	µg/L	1.0

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Golder Associates

Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: b3

MBLK

Batch ID: R32272 Analysis Date: 2/3/2009 9:42:30 PM

2-Butanone	ND	µg/L	10
Carbon disulfide	ND	µg/L	10
Carbon Tetrachloride	ND	µg/L	1.0
Chlorobenzene	ND	µg/L	1.0
Chloroethane	ND	µg/L	2.0
Chloroform	ND	µg/L	1.0
Chloromethane	ND	µg/L	1.0
2-Chlorotoluene	ND	µg/L	1.0
4-Chlorotoluene	ND	µg/L	1.0
cis-1,2-DCE	ND	µg/L	1.0
cis-1,3-Dichloropropene	ND	µg/L	1.0
1,2-Dibromo-3-chloropropane	ND	µg/L	2.0
Dibromochloromethane	ND	µg/L	1.0
Dibromomethane	ND	µg/L	1.0
1,2-Dichlorobenzene	ND	µg/L	1.0
1,3-Dichlorobenzene	ND	µg/L	1.0
1,4-Dichlorobenzene	ND	µg/L	1.0
Dichlorodifluoromethane	ND	µg/L	1.0
1,1-Dichloroethane	ND	µg/L	1.0
1,1-Dichloroethene	ND	µg/L	1.0
1,2-Dichloropropane	ND	µg/L	1.0
1,3-Dichloropropane	ND	µg/L	1.0
2,2-Dichloropropane	ND	µg/L	2.0
1,1-Dichloropropene	ND	µg/L	1.0
Hexachlorobutadiene	ND	µg/L	1.0
2-Hexanone	ND	µg/L	10
Isopropylbenzene	ND	µg/L	1.0
4-Isopropyltoluene	ND	µg/L	1.0
4-Methyl-2-pentanone	ND	µg/L	10
Methylene Chloride	ND	µg/L	3.0
n-Butylbenzene	ND	µg/L	1.0
n-Propylbenzene	ND	µg/L	1.0
sec-Butylbenzene	ND	µg/L	1.0
Styrene	ND	µg/L	1.0
tert-Butylbenzene	ND	µg/L	1.0
1,1,1,2-Tetrachloroethane	ND	µg/L	1.0
1,1,2,2-Tetrachloroethane	ND	µg/L	2.0
Tetrachloroethene (PCE)	ND	µg/L	1.0
trans-1,2-DCE	ND	µg/L	1.0
trans-1,3-Dichloropropene	ND	µg/L	1.0
1,2,3-Trichlorobenzene	ND	µg/L	1.0
1,2,4-Trichlorobenzene	ND	µg/L	1.0
1,1,1-Trichloroethane	ND	µg/L	1.0
1,1,2-Trichloroethane	ND	µg/L	1.0

Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Golder Associates

Project: Lovington 66

Work Order: 0901398

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: EPA Method 8260B: VOLATILES

Sample ID: b3

MBLK

Batch ID: R32272 Analysis Date: 2/3/2009 9:42:30 PM

Trichloroethene (TCE) ND µg/L 1.0
 Trichlorofluoromethane ND µg/L 1.0
 1,2,3-Trichloropropane ND µg/L 2.0
 Vinyl chloride ND µg/L 1.0
 Xylenes, Total ND µg/L 1.5

Sample ID: 100ng lcs

LCS

Batch ID: R32264 Analysis Date: 2/2/2009 3:49:44 PM

Benzene 19.27 µg/L 1.0 96.4 88 116
 Toluene 18.54 µg/L 1.0 92.7 82.9 112
 Chlorobenzene 19.96 µg/L 1.0 99.8 71.4 133
 1,1-Dichloroethene 19.78 µg/L 1.0 98.9 97.9 140
 Trichloroethene (TCE) 18.59 µg/L 1.0 93.0 90.5 112

Sample ID: 100ng lcs_b

LCS

Batch ID: R32264 Analysis Date: 2/2/2009 10:05:28 PM

Benzene 18.75 µg/L 1.0 93.7 88 116
 Toluene 18.77 µg/L 1.0 93.8 82.9 112
 Chlorobenzene 20.54 µg/L 1.0 103 71.4 133
 1,1-Dichloroethene 18.43 µg/L 1.0 92.1 97.9 140
 Trichloroethene (TCE) 18.68 µg/L 1.0 93.4 90.5 112

S

Sample ID: 100ng lcs

LCS

Batch ID: R32272 Analysis Date: 2/3/2009 9:58:52 AM

Benzene 18.40 µg/L 1.0 97.0 88 116
 Toluene 18.79 µg/L 1.0 94.0 82.9 112
 Chlorobenzene 20.17 µg/L 1.0 101 71.4 133
 1,1-Dichloroethene 20.69 µg/L 1.0 103 97.9 140
 Trichloroethene (TCE) 18.97 µg/L 1.0 94.9 90.5 112

Sample ID: 100ng lcs_b

LCS

Batch ID: R32272 Analysis Date: 2/3/2009 10:39:21 PM

Benzene 20.02 µg/L 1.0 100 88 116
 Toluene 19.08 µg/L 1.0 95.4 82.9 112
 Chlorobenzene 21.28 µg/L 1.0 106 71.4 133
 1,1-Dichloroethene 20.84 µg/L 1.0 104 97.9 140
 Trichloroethene (TCE) 19.19 µg/L 1.0 95.9 90.5 112

Sample ID: 0901398-01a MS

MS

Batch ID: R32264 Analysis Date: 2/3/2009 12:30:52 AM

Benzene 18.11 µg/L 1.0 90.5 84.9 122
 Toluene 17.60 µg/L 1.0 88.0 80.3 114
 Chlorobenzene 18.95 µg/L 1.0 94.7 71.9 134
 1,1-Dichloroethene 19.20 µg/L 1.0 96.0 88 144
 Trichloroethene (TCE) 17.71 µg/L 1.0 88.6 87.1 114

Qualifiers:

E Estimated value
 J Analyte detected below quantitation limits
 R RPD outside accepted recovery limits
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits

Page 7

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **GOLDER ASSOC**

Date Received:

1/29/2009

Work Order Number **0901398**

Received by: **AT**

Sample ID labels checked by:

Initials

Checklist completed by:

Signature

Date

Matrix:

Carrier name Client drop-off

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Not Shipped ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

N/A ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Water - VOA vials have zero headspace?

No VOA vials submitted ☐

Yes ☒

No ☐

Water - Preservation labels on bottle and cap match?

Yes ☐

No ☐

N/A ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

Container/Temp Blank temperature?

2°

<6° C Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

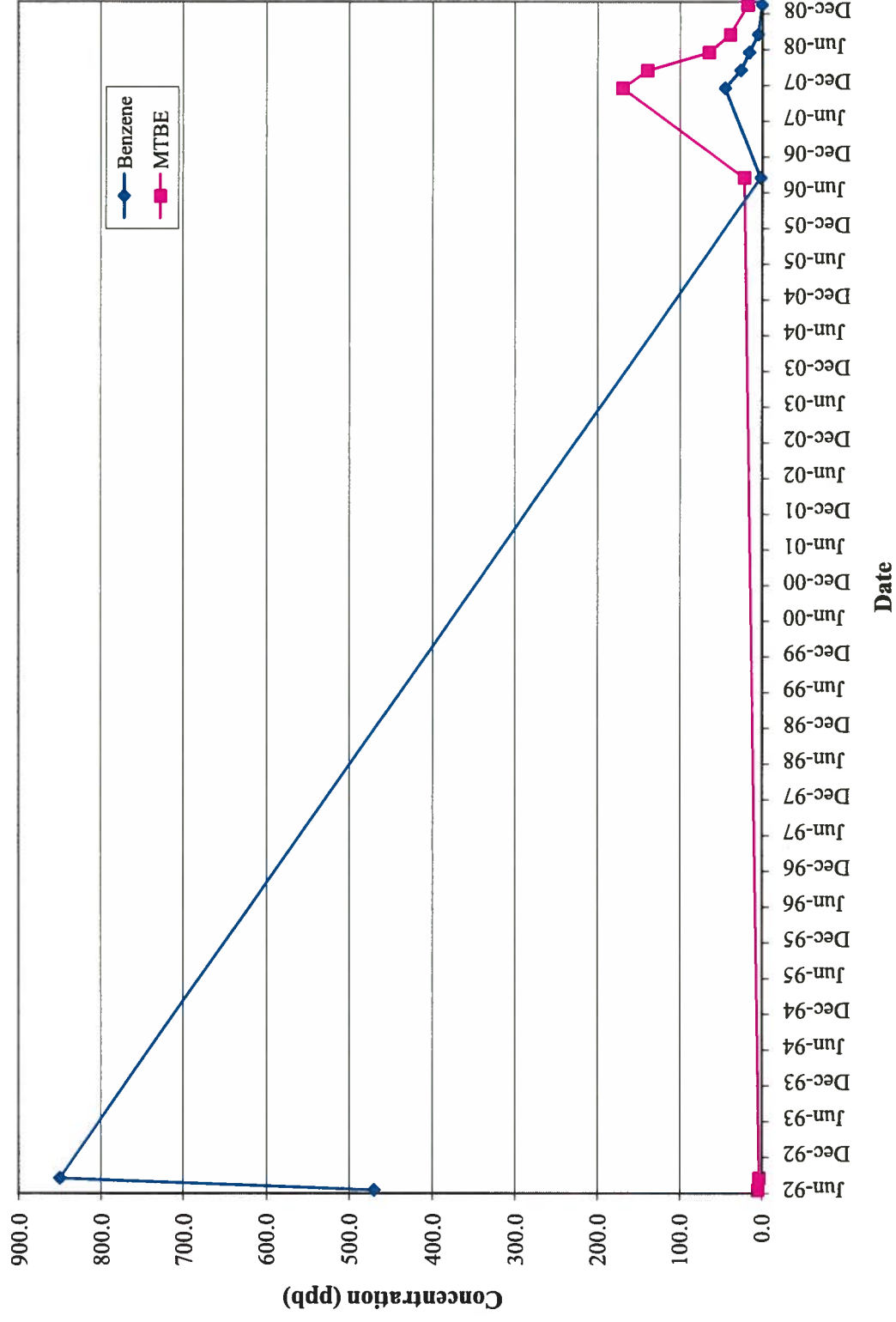
Comments:

Corrective Action

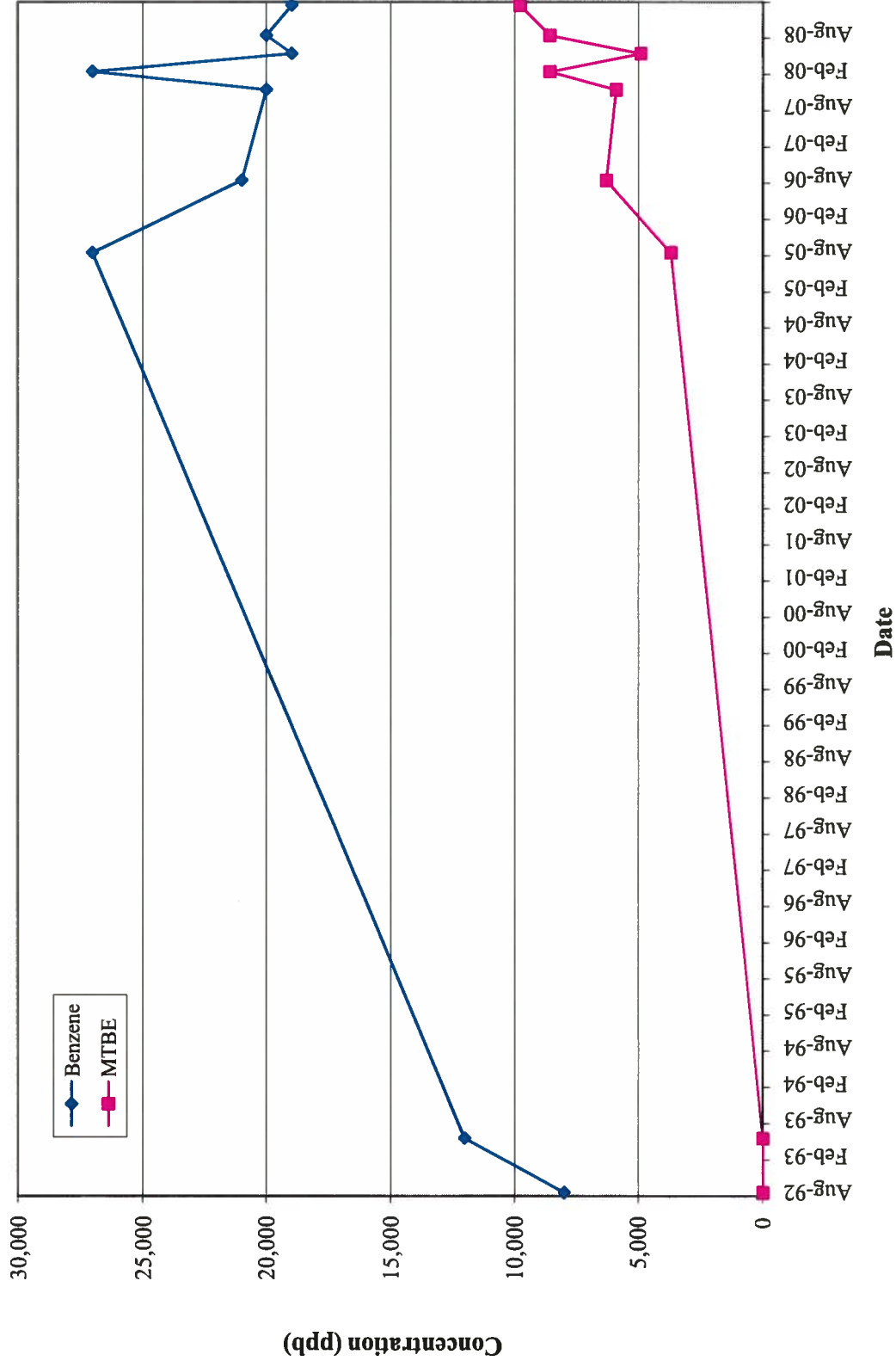
APPENDIX D

CONCENTRATION TRENDS

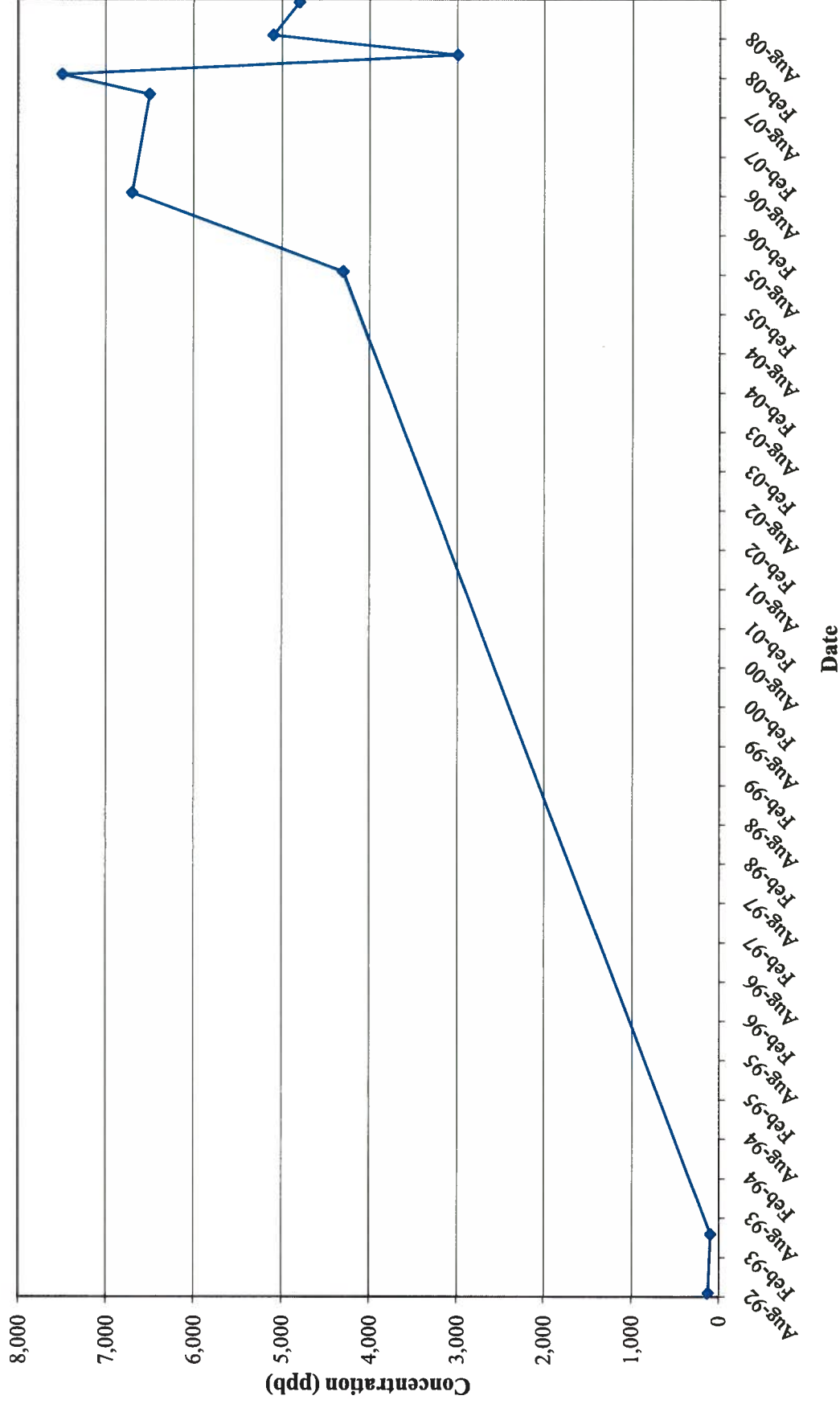
BENZENE AND MTBE TRENDS FOR W-5



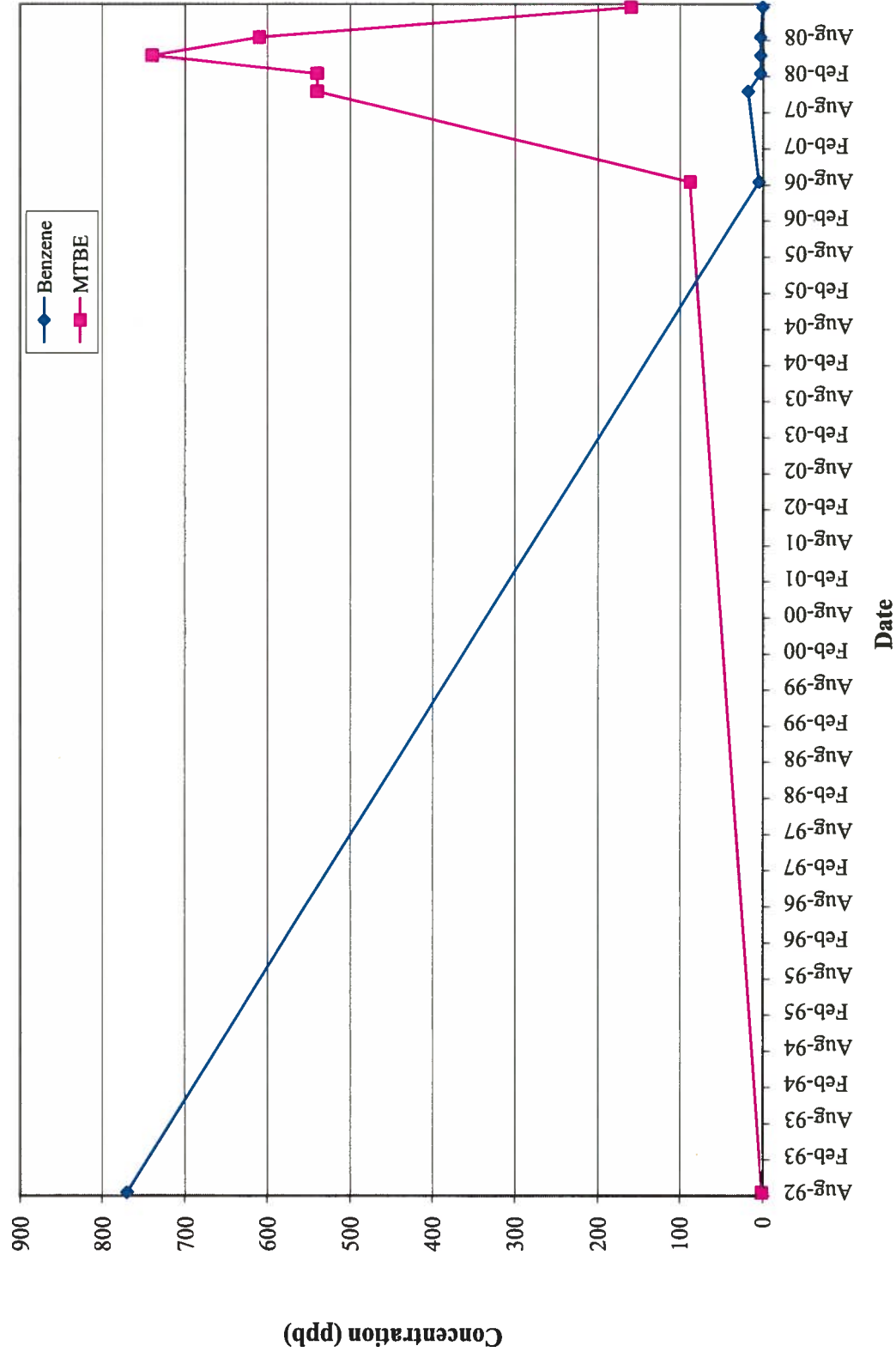
BENZENE AND MTBE TRENDS FOR W-8



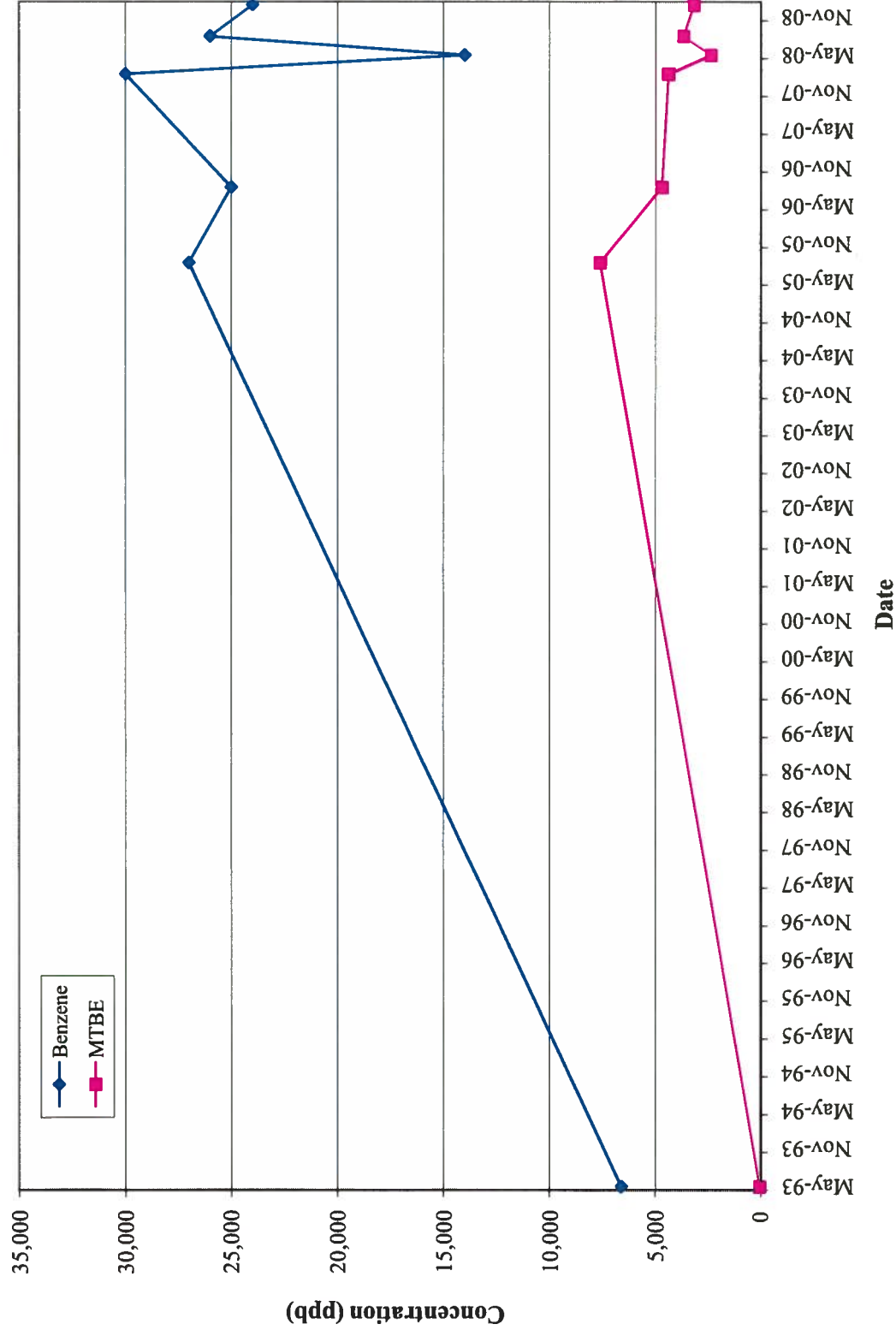
BENZENE TREND FOR W-9



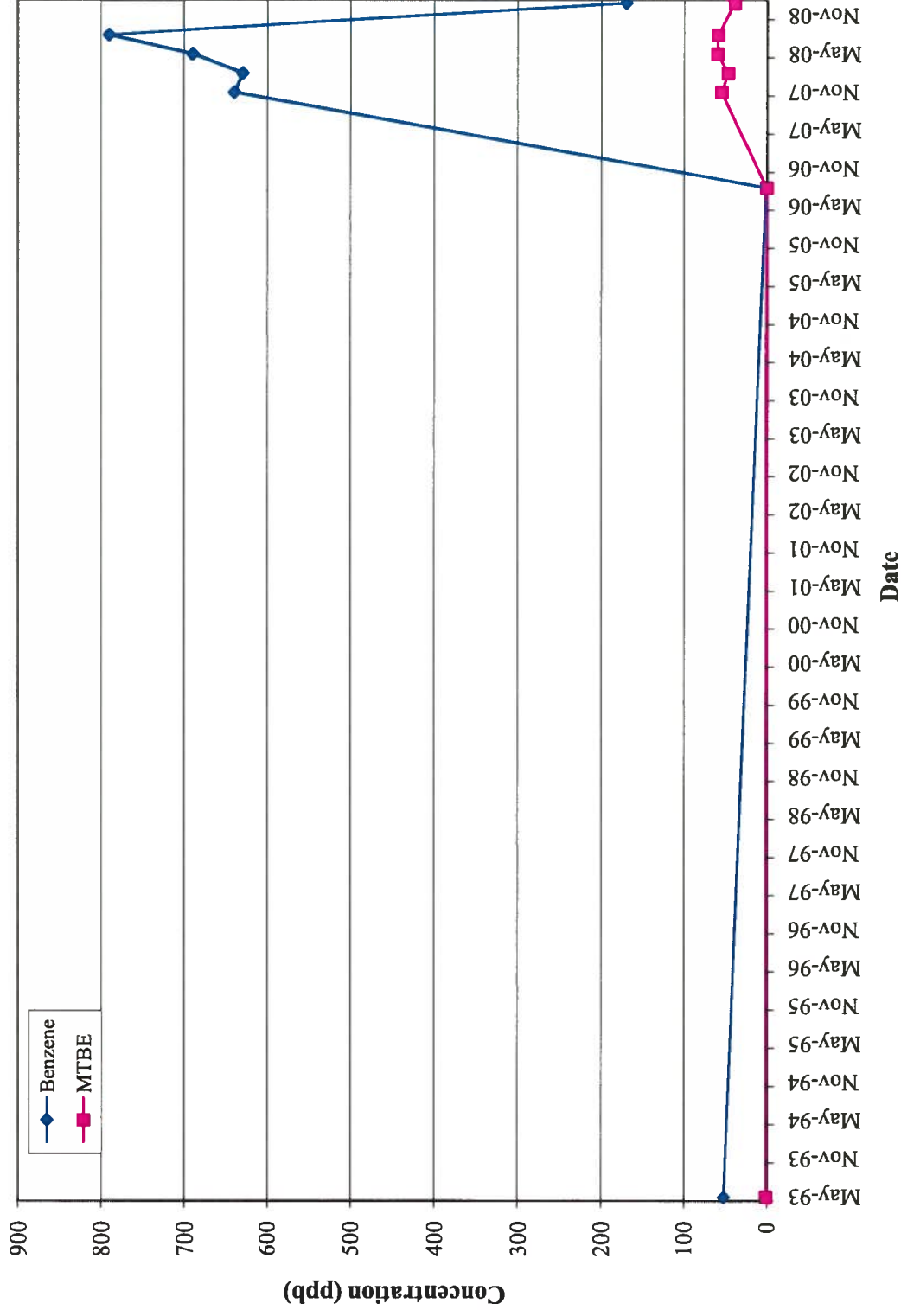
BENZENE AND MTBE TRENDS FOR W-11



BENZENE AND MTBE TRENDS FOR W-14



BENZENE AND MTBE TRENDS FOR W-16





Golder Associates Inc.

5200 Pasadena N.E., Suite C
Albuquerque, NM USA 87113
Telephone (505) 821-3043
Fax (505) 821-5273
www.golder.com



February 26, 2009

Mr. TC Shapard
NMED PSTB District 4
1914 West Second
Roswell, New Mexico 88201

**RE: FIRST BIENNIAL GROUNDWATER MONITORING REPORT,
LOVINGTON 66, PTSB FACILITY #890
LOVINGTON, NEW MEXICO**

Dear Mr. Shapard:

Golder Associates Inc. is pleased to submit one copy of the First Biannual Groundwater Monitoring Report for the Lovington 66 site located in Lovington, New Mexico. This report is associated with deliverable ID 15275-2.

If you should have any questions, please feel free to contact me at (505) 821-3043.

Sincerely,

GOLDER ASSOCIATES INC.

Todd Stein, PG
Senior Hydrogeologist

cc: Jim Maddox, Maddox, Holloman & Kirksey P.C.