

SECTION 10

PRELIMINARY
SITE CHARACTERIZATION
WILDLIFE IMPACT STUDY
TECHNICAL MEMORANDUM

MOLYCORP MINE RI/FS

REVISION 0

Prepared for
Molycorp, Inc.
Questa, New Mexico

April 4, 2005

URS

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Project No. 22236242

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Wildlife Impact Study

The purpose of this Technical Memorandum is to document and summarize the results of the Wildlife Impact Study conducted at the Molycorp tailings facility in Questa, New Mexico (Figure 10-1). This study was completed to meet permitting conditions of the NMED and MMD, and the study report (URS 2004c) was submitted to the agencies on November 22, 2004. The data from the Wildlife Impact Study have been included in the Site Characterization Report at the request of the EPA.

The Wildlife Impact Study is a study of plant uptake of metals required by the State of New Mexico under Condition 43 of NMED Discharge Permit 933, and Condition 29 of MMD Permit Revision 96-1 to Permit No. TA001RE, Section 7. Its goal was “to investigate the toxicity and bioaccumulation potential of molybdenum and other metals to plants and animals (small and large) that come into contact with tailings or consume vegetation growing on covered tailings.” This was to be accomplished by analyzing the current metal concentrations in vegetation and root-zone soils at the tailings facility and a nearby reference area.

Molycorp submitted a Work Plan for this study on June 15, 2001. Comments were received on October 9, 2001, and Revision 1 of the Work Plan was submitted on January 31, 2002 (URS 2002a). The revised Work Plan was approved by MMD on February 13, 2002. Fieldwork was intended to be completed in 2002, but was postponed for one year because of drought. A field reconnaissance and species selection was completed in April 2003 and an FSP was finalized on May 14, 2003 (URS 2003). The FSP provides details on the investigation approach and field activities that are described in the Work Plan, and the results of the field reconnaissance. It also includes updated versions of the SOPs required to complete the field tasks. Sampling of cool season vegetation and their associated soils was completed May 28 to June 5, 2003, and sampling of warm season plants and their associated soils was completed September 7 to 9, 2003.

The Wildlife Impact Study is designed differently than the RI/FS vegetation and soils sampling. Differences and similarities between them are presented below.

| Study Component | Wildlife Impact Study | RI/FS Studies of Tailings Facility |
|------------------------|---|---|
| Reference Area | Cater Ranch | Cater Ranch |
| Study design | Species pre-selected, sites variable | Sites selected through randomization process, species variable |
| Sample site selection | Based on availability of target plant species, used RI/FS sites when suitable | Sites randomly selected, co-located for vegetation, soils and wildlife sample and data collection |
| Number of sample sites | Total – 34 Cater Ranch – 19, 9 at RI/FS sites and 10 at Wildlife Impact Study-only sites Tailings facility – 19, 9 at RI/FS sites and 6 at Wildlife Impact Study-only sites | 20 10 at Cater Ranch 10 at tailings facility |
| Size of sample site | 300 x 300 feet | 300 x 300 feet |
| Soil sample location | Soil from around roots of sampled plants | Center point of sample site |

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| Study Component | Wildlife Impact Study | RI/FS Studies of Tailings Facility |
|------------------------------------|--|--|
| Soil sample depth | Root zone, variable depth, generally 1 to 8 inch interval | Fixed depth (0-24 and 0-6 inch) |
| Number of soil samples | 1 per below ground plant sample, 54 total | 2 per sample site (two depth intervals), 40 total |
| Plant species selection | 9 species planned in advance, mainly reclamation species, 3 replicates per species | Variable, as available at sample sites |
| Number of species sampled per site | 1-4, as available | 1 shrub, 1 forb, 1 grass |
| Washing | Unwashed and washed | Unwashed only |
| Plant parts | Above and below ground | Above and below ground |
| Plant community characterization | All sample sites | All sample sites |
| Wildlife data | Field observations of wildlife sign at each sample site | Small rodent samples, earthworm bioassay, invertebrate population sampling at each sample site |

The Wildlife Impact Study field studies were conducted in three time periods.

| Dates | Activity |
|-----------------------|---|
| April 13 – 17, 2003 | Field reconnaissance to select reference area, species and sample sites for FSP |
| May 28 – June 5, 2003 | Sampling and data collection for shrubs, cool-season grasses, and sand dropseed |
| September 7 – 9, 2003 | Sampling and data collection for blue grama and forbs, update of species lists at spring-sampled sites, collection of replacement sample for sand dropseed (WRSD-1R) because of lab error |

10.1 SAMPLE SITE AND SPECIES SELECTION

The procedures and criteria for selection of plant species are described in the Work Plan (URS 2002a) and FSP (URS 2003). Species to be sampled (Table 10-1) were selected based on three factors: (1) their future role as primary or supplemental revegetation species for the tailings facility, (2) their presence on both the covered tailings and Cater Ranch, and (3) lifeform. Four lifeforms were sampled: (1) two shrubs, (2) two forbs, (3) three cool-season grasses, and (4) two warm-season grasses.

Locations of sample sites in each area are shown on Figure 10-2 (Cater Ranch) and Figure 10-3 (Tailings Facility). The relationship between sample sites and samples collected is shown in Table 10-2. Multiple species (up to four) were sampled at each site when possible. RI/FS sample sites were used where feasible to reduce duplication of effort. Non-RI/FS sites were used to obtain lifeforms and species not observed at the RI/FS sites. One rubber rabbitbrush sample at

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Cater Ranch was collected opportunistically at a Wildlife Impact Study-only site, but could have been collected at any of the Cater Ranch sites.

| Lifeform | Common Name | Species | Abbreviation |
|-------------------|-----------------------|--|--------------|
| Shrub | Big sagebrush | <i>Artemisia tridentata</i> | BS |
| Shrub | Rubber rabbitbrush | <i>Ericameria nauseosa</i> = <i>Chrysothamnus nauseosus</i> | RR |
| Cool-season grass | Crested wheatgrass | <i>Agropyron cristatum</i> | CR |
| Cool-season grass | Western wheatgrass | <i>Elymus smithii</i> = <i>Agropyron smithii</i> | WW |
| Cool-season grass | Sleepy grass | <i>Achnatherum robustum</i> = <i>Stipa robusta</i> | SG |
| Warm-season grass | Blue grama | <i>Bouteloua gracilis</i> | BG |
| Warm-season grass | Sand dropseed | <i>Sporobolus cryptandrus</i> | SD |
| Forb | Golden crownbeard | <i>Verbesina encelioides</i> | AS |
| Forb | Cut-leaf blazing-star | <i>Mentzelia laciniata</i> | FO |

10.2 PLANT COMMUNITY CHARACTERIZATION

Methods for ecological characterization of each sample site are described in SOP 29.1, Terrestrial Plant Community Sampling, which is included in the FSP (URS 2003).

Vegetation data were collected using 100 meters of point-intercept transects. Data were collected at one meter intervals along the transect, and included ground cover, plant species (if any), and height interval. Additional species observed at a site but not recorded on the transect were also recorded to give an overall species list for each site. The sites that were sampled in the spring were revisited in the fall to review and update the species list because the summer rains had brought out many additional species that were not apparent during the initial field work. The difference was especially pronounced at Cater Ranch, much of which was still under drought conditions in May and June. Transects that had been completed in the spring were not re-done, but cover would have been higher in the fall at Cater Ranch, especially for forbs and grasses.

The primary botanical references for plant identification were Allred (1997), Carter (1997), Ivey (1995), Martin and Hutchins (1980), and Weber and Wittman (2001). Because of differences in botanical nomenclature, the most current botanical names were obtained from Allred (2003) and the NRCS plants database (NRCS 2004). Names used in this report follow Allred's (2003) Working Index of New Mexico Vascular Plant Names.

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10.3 SAMPLE COLLECTION

Sample collection procedures are described in SOP No. 4.1, Root-Zone Soil Sampling, and SOP 13.2, Plant Sample Collection, both of which are included in the FSP (URS 2003). Sampling tools were decontaminated following the procedures in SOP 6.0, Decontamination of Sampling Equipment, and sample management followed SOP 910 Sample Management. Additional description of sampling procedures is provided in URS 2004.

Each sample was a composite of at least five individuals of a species at the sample site. Aboveground and below ground tissues were collected from the same individuals. More than five individuals were used where necessary to collect samples with adequate mass either above ground or below ground. Aboveground shrub samples consisted of twigs and leaves from the current year's growth. Aboveground forb and grass samples included stems, leaves, and inflorescences when present, above about 1 inch height. Samples consisted of the current year's growth for forbs, and mainly of the current year's growth for grasses. Below ground samples included fine and coarse roots to a maximum diameter of 0.5 inch.

Composite root-zone soil samples were collected from the first five plants sampled for each species at a site, and were typically collected from the 0.5 to 6 inch below ground surface interval (maximum was 12 inches). Soil samples consisted of whatever soil material was present, typically cover material or a mix of cover material and tailings. Soil cover depth was not recorded.

A total of 216 vegetation samples and 54 root-zone soil samples were collected and analyzed, consisting of 108 vegetation samples and 27 soil samples at each sample area (tailings facility and reference). In the following report, the root-zone soil sample and the four combinations of plant part/washing are referred to as sample media. There are 54 samples for each media, including 27 at the tailings facility and 27 at the reference area. There are 24 vegetation samples and six soil samples for each species, half at each area. About half of the unwashed vegetation samples (52) were dual-purpose samples used for both the Wildlife Impact Study and RI/FS.

10.4 SAMPLE ANALYSIS AND QA

Samples were analyzed for 26 metals, percent solids, and 12 inorganics. Analytical and methods and quality assurance are described in Section 15. Required containers and preservatives are provided in URS (2002b), and in SOPs 4.1 and 13.2.

Soil texture was measured in the laboratory and was classified into the following fractions by particle size, in accordance with USDA methodology (Schoeneberger 1998).

| Size Fraction | Particle Size (mm) |
|------------------------|--------------------|
| Clay | 0 – 0.002 |
| Silt | 0.002 – 0.05 |
| Fine sand | 0.05-0.25 |
| Medium and Coarse sand | 0.25-2.0 |

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The results of chemical analysis of vegetation samples were reported by the laboratory on a wet weight basis. Results on a dry weight basis were calculated from wet weight using percent solids (e.g., weight after drying divided by wet weight). Several below ground samples had insufficient volume to allow measurement of percent solids after other analyses were completed. The percent solids were estimated by comparison with comparable samples (same species, same plant part, same washing treatment). The estimates were based on four or five comparable samples, which were relatively consistent. The following samples have estimated percent solids:

- WRAS-1-T02N-PLTW
- WRAS-2-T02N-PLTW
- WRAS-2-T02N-PLTU
- WTAS-1-T02N-PLTU
- WRFO-1-T02N-PLTW
- WRFO-3-T02N-PLTW
- WRSG-2-T02N-PLTW
- WRSG-s-T02N-PLTU

Section 15.4 describes an evaluation of observed field or laboratory contaminants and provides a list by medium of analytes that are considered as attributable to laboratory or field contamination rather than being related to presence in the medium under evaluation. These compounds are not included in the summary results tables in this section, but results for analysis of these compounds are included in the printout of the RI sample analysis results in Appendix A. In addition, there are compounds such as DDT that may be considered as ubiquitous to the region or phenols whose presence might be attributable to forest fires. If such compounds were detected in the medium being presented in this section, then a discussion of their presence is included within this section. The only analyte identified as a field or laboratory contaminant was ammonia in soils.

10.5 TAILINGS FACILITY REFERENCE – CATER RANCH

10.5.1 Big Sagebrush

10.5.1.1 Sample Collection

The big sagebrush soils and vegetation samples at Cater Ranch were collected at sample locations CR-8, CR-10, and CR-11 (Figure 10-2). All three locations were also used to sample vegetation for the RI/FS, and all of the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. Descriptions of the sample sites are provided in Table 10-3.

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10.5.1.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 30.3 species were observed at these sites, including mostly forbs, grasses, and shrubs. The sites had an average of 15.3 percent vegetation cover, predominantly from shrubs. All sites were sagebrush or open sagebrush communities.

10.5.1.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), and plant samples were analyzed for 26 metals, percent solids, and TKN. Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-8a through 10-8e).

In soils (Table 10-8a), 21 metals were detected in all 3 samples and 3 metals were detected in 2 of 3 samples. Antimony was non-detect in all 3 samples and mercury was detected in 1 of 3 samples. Twelve inorganics were detected in all samples, except fluoride which was detected in 2 of 3 samples.

For aboveground samples, 23 metals were detected in more than half of unwashed samples (Table 10-8b), and 22 metals in more than half of washed samples (Table 10-8d). Antimony, beryllium, mercury, silver, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, thallium was non-detect in all washed samples, but was detected in 2 of 3 unwashed samples.

In below ground tissues, 22 metals were detected in more than half of unwashed samples (Table 10-8c), and 20 in more than half of washed samples (Table 10-8e). Antimony, mercury, and sodium were non-detect in all samples, both unwashed and washed. In addition, molybdenum was detected in less than half of unwashed samples, and beryllium, silver, and thallium in less than half of washed samples.

10.5.2 Rubber Rabbitbrush

10.5.2.1 Sample Collection

The rubber rabbitbrush soils and vegetation samples at Cater Ranch were collected at sample locations CR-4, CR-13, and WR-2 (Figure 10-2). The CR-4 and CR-13 locations were also used to sample vegetation for the RI/FS, and all of the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WR-2 location was chosen to sample crested wheatgrass. Rubber rabbitbrush was sampled at this location but was present at all or nearly all sample locations. Descriptions of the sample sites are provided in Table 10-3.

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10.5.2.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 33.7 species were observed at these sites, including mostly forbs, grasses, and shrubs. The sites had an average of 16.0% vegetation cover, predominantly from shrubs. All sites were rabbitbrush or open rabbitbrush communities.

10.5.2.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-9a through 10-9e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-9a), 20 metals were detected in all 3 samples and 2 metals were detected in 2 of 3 samples. Antimony and mercury were non-detect in all 3 samples and cadmium and molybdenum were detected in less than 50% of samples. The 12 inorganics were detected in all samples.

For aboveground samples, 20 metals were detected in more than half of unwashed samples (Table 10-9b), and washed samples (Table 10-9d). Antimony, beryllium, mercury, silver, sodium, and thallium were detected in less than half of samples of both unwashed and washed vegetation.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-9c), and 21 in more than half of washed samples (Table 10-9e). Antimony, beryllium, and mercury were detected in less than half of samples, both unwashed and washed. In addition, silver and zinc were detected in less than half of washed samples.

10.5.3 Crested Wheatgrass

10.5.3.1 Sample Collection

The crested wheatgrass soils and vegetation samples at Cater Ranch were collected at sample locations CR-10, CR-11, and WR-2 (Figure 10-2). The CR-10 and CR-11 locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples from these sample locations were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WR-2 location was selected specifically to sample crested wheatgrass, because it could not be sampled at the other RI/FS sample locations. Descriptions of the sample sites are provided in Table 10-3.

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10.5.3.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-3 and 10-4. An average of 29.7 species were observed at these sites, including mostly forbs, grasses, and shrubs. The sites had an average of 15.0% vegetation cover, predominantly from shrubs. The sites had sagebrush, rabbitbrush, and sagebrush/rabbitbrush communities.

10.5.3.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-10a through 10-10e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-10a), 22 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Antimony, cadmium, and mercury were non-detect in all 3 samples and cadmium and molybdenum were detected in less than 50% of samples. The twelve inorganics were detected in all samples, except fluoride (non-detect in all samples) and sodium absorption ratio (detected in 2 of 3 samples).

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-10b), and 19 metals in more than half of washed samples (Table 10-10d). Antimony, beryllium, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, nickel, silver, and thallium were detected in less than half of washed samples.

In below ground tissues, 24 metals were detected in more than half of unwashed samples (Table 10-10c), and 22 in more than half of washed samples (Table 10-10e). Mercury was detected in less than half of samples, both unwashed and washed. In addition, selenium was detected in less than half of unwashed samples, and antimony, beryllium, and sodium, were detected in less than half of washed samples.

10.5.4 Sleepy Grass

10.5.4.1 Sample Collection

The sleepy grass soils and vegetation samples at Cater Ranch were collected at sample locations CR-7, WR-1 and WR-3 (Figure 10-2). The CR-7 location was also used to sample vegetation for the RI/FS, and the unwashed vegetation samples from this sample location were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WR-1 and WR-3 locations were selected specifically to sample sleepy grass, which had scattered populations on Cater Ranch.

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10.5.4.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 36.3 species were observed at these sites, including mostly forbs, grasses, and shrubs. The sites had an average of 15.7% vegetation cover, predominantly from shrubs. Sites had sagebrush/rabbitbrush and open rabbitbrush communities.

10.5.4.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-11a through 10-11e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-11a), 21 metals were detected in all 3 samples and 2 metals were detected in 2 of 3 samples. Antimony and molybdenum were non-detect in all 3 samples and mercury was detected in less than 50% of samples. The 12 inorganics were detected in all samples, except chloride, which was detected in 2 of 3 samples.

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-11b), and 20 metals in more than half of washed samples (Table 10-11d). Antimony, beryllium, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, mercury was non-detect in all unwashed samples, and molybdenum, silver, and thallium were non-detect in all washed samples.

In below ground tissues, 24 metals were detected in more than half of unwashed samples (Table 10-11c), and 23 in more than half of washed samples (Table 10-11e). Antimony and mercury were detected in less than half of samples, both unwashed and washed. In addition, beryllium was detected in less than half of washed samples.

10.5.5 Western Wheatgrass

10.5.5.1 Sample Collection

The western wheatgrass soils and vegetation samples at Cater Ranch were collected at sample locations CR-2, CR-4 and CR-7 (Figure 10-2). All three locations were also used to sample vegetation for the RI/FS, and all of the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. Descriptions of the sample sites are provided in Table 10-3.

10.5.5.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 34.3 species were observed at these sites, including mostly forbs and grasses. The

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sites had an average of 21.3% vegetation cover, mostly shrubs and grasses. The sites included rabbitbrush and rabbitbrush/meadow communities.

10.5.5.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-12a through 10-12e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-12a), 21 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Antimony and molybdenum were non-detect in all 3 samples and mercury and sodium were detected in less than 50% of samples. The 12 inorganics were detected in all samples, except nitrate and sulfate, which were detected in 2 of 3 samples.

For aboveground samples, 21 metals were detected in more than half of unwashed samples (Table 10-12b), and 19 metals in more than half of washed samples (Table 10-12d). Antimony, beryllium, mercury, silver, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, cadmium and thallium were detected in less than half of washed samples.

In below ground tissues, 25 metals were detected in more than half of unwashed samples (Table 10-12c), and 22 in more than half of washed samples (Table 10-12e). In below ground tissues, mercury was detected in less than half of samples, both unwashed and washed. In addition, antimony, beryllium, and sodium were detected in less than half of washed samples.

10.5.6 Blue Grama

10.5.6.1 Sample Collection

The blue grama soils and vegetation samples at Cater Ranch were collected at sample locations CR-2, CR-8 and CR-14 (Figure 10-2). All three locations were also used to sample vegetation for the RI/FS, but none of the samples were dual-purpose samples. Descriptions of the sample sites are provided in Table 10-3.

10.5.6.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 33.0 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 13.7% vegetation cover, predominantly from grasses and shrubs. Sites included open rabbitbrush and sagebrush, and grassland (blue grama and meadow).

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10.5.6.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-13a through 10-13e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-13a), 22 metals were detected in all 3 samples. Antimony, molybdenum, and sodium were non-detect in all 3 samples and mercury was detected in less than 50% of samples. The 12 inorganics were detected in all samples, except specific conductance and sulfate, which were detected in 2 of 3 samples.

For aboveground samples, 20 metals were detected in more than half of unwashed samples (Table 10-13b), and 19 metals in more than half of washed samples (Table 10-13d). Antimony, chromium, mercury, silver, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, cadmium was detected in less than half of unwashed samples, and beryllium and thallium in less than half of washed samples.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-13c), and 24 in more than half of washed samples (Table 10-13e). Antimony and mercury were detected in less than half of samples, both unwashed and washed. In addition, sodium was detected in less than half of unwashed samples.

10.5.7 Sand Dropseed

10.5.7.1 Sample Collection

The sand dropseed soils and vegetation samples at Cater Ranch were collected at sample locations CR-5, CR-10 and WR-4 (Figure 10-2). The CR-5 and CR-10 locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WR-4 location was selected specifically to sample sand dropseed, which had scattered populations on Cater Ranch and was abundant at this location. Descriptions of the sample sites are provided in Table 10-3.

10.5.7.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 24.0 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 9.0% vegetation cover, predominantly from shrubs and grasses. Sites were open sagebrush or rabbitbrush communities or barren.

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10.5.7.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-14a through 10-14e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-14a), 22 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Antimony, chloride, molybdenum, and sodium were detected in less than 50% of samples. The 12 inorganics were detected in all samples, except chloride (detected in 1 of 3 samples) and fluoride (1 of 3 samples).

For aboveground samples, 23 metals were detected in more than half of unwashed samples (Table 10-14b), and 21 metals in more than half of washed samples (Table 10-14d). Antimony, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, beryllium and silver were detected in less than half of washed samples.

In below ground tissues, 25 metals were detected in more than half of unwashed samples (Table 10-14c), and 23 in more than half of washed samples (Table 10-14e). Antimony was detected in less than half of samples, both unwashed and washed. In addition, mercury and sodium were detected in less than half of washed samples.

10.5.8 Golden Crownbeard

10.5.8.1 Sample Collection

The golden crownbeard soils and vegetation samples at Cater Ranch were collected at sample locations WR-5, WR-6 and WR-7 (Figure 10-2). All three locations were selected specifically to sample golden crownbeard, which occurred in scattered populations on Cater Ranch. Descriptions of the sample sites are provided in Table 10-3.

10.5.8.2 Vegetation Community Measurement

Vegetation community data were collected in the field in September 2003 and presented in Tables 10-4 and 10-5. An average of 24.3 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 26.7% vegetation cover, including shrubs, forbs, and grasses. Sites included blue grama, rabbitbrush, and barren communities.

10.5.8.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground

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washed and unwashed vegetation (Tables 10-15a through 10-15e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-15a), 22 metals were detected in all 3 samples. Antimony, mercury, molybdenum, and sodium were detected in less than 50% of samples. The 12 inorganics were detected in all samples, except sodium absorption ratio (calculated in 1 of 3 samples).

For aboveground samples, 20 metals were detected in more than half of unwashed samples (Table 10-15b), and washed samples (Table 10-15d). Antimony, beryllium, mercury, silver, sodium, and thallium were detected in less than half of samples of both unwashed and washed vegetation.

In below ground tissues, 24 metals were detected in more than half of unwashed samples (Table 10-15c), and 23 in more than half of washed samples (Table 10-15e). Antimony and mercury were detected in less than half of samples, both unwashed and washed. In addition, beryllium was detected in less than half of washed samples.

10.5.9 Cut-leaf Blazing-star

10.5.9.1 Sample Collection

The cut-leaf blazing-star soils and vegetation samples at Cater Ranch were collected at sample locations WR-8, WR-9 and WR-10 (Figure 10-2). All three locations were selected specifically to sample cut-leaf blazing-star, which occurred mostly in the northwestern part at Cater Ranch. Descriptions of the sample sites are provided in Table 10-3.

10.5.9.2 Vegetation Community Measurement

Vegetation community data were collected in the field in September 2003 and presented in Tables 10-4 and 10-5. An average of 22.7 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 11.7% vegetation cover, from shrubs, forbs and grasses. The sites included rabbitbrush and barren communities.

10.5.9.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-16a through 10-16e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-16a), 23 metals were detected in all 3 samples. Antimony, mercury, and molybdenum were non-detect in all samples. The 12 inorganics were detected in all samples.

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For aboveground samples, 21 metals were detected in more than half of unwashed samples (Table 10-16b), and washed samples (Table 10-16d). Antimony, beryllium, mercury, silver, and sodium were detected in less than half of samples of both unwashed and washed vegetation.

In below ground tissues, 24 metals were detected in more than half of unwashed samples (Table 10-16c), and 23 in more than half of washed samples (Table 10-16e). Antimony and mercury were detected in less than half of samples, both unwashed and washed. In addition, beryllium was detected in less than half of washed samples.

10.6 SOIL AREA 14 – TAILINGS FACILITY

10.6.1 Big Sagebrush

10.6.1.1 Sample Collection

The big sagebrush soils and vegetation samples at the tailings facility were collected at sample locations TSS14-4, TSS14-9, and TSS14-10 (Figure 10-3). All three locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. Descriptions of the sample sites are provided in Table 10-3.

10.6.1.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 35.3 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 22.3% vegetation cover, predominantly from grasses and shrubs. The sample sites were rabbitbrush, open shrubland, and grassland.

10.6.1.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-17a through 10-17e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-17a), 23 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Antimony and mercury were non-detect in all samples. The 12 inorganics were detected in all samples.

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-17b), and 19 metals in more than half of washed samples (Table 10-17d). Antimony, beryllium, mercury, and thallium were detected in less than half of samples of both unwashed and washed vegetation. In addition, lead, silver, and sodium were detected in less than half of washed samples.

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In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-17c), and washed samples (Table 10-17e). Antimony, beryllium, and mercury were detected in less than half of samples, both unwashed and washed.

10.6.2 Rubber Rabbitbrush

10.6.2.1 Sample Collection

The rubber rabbitbrush soils and vegetation samples at the tailings facility were collected at sample locations TSS14-2, TSS14-5, and TSS14-6 (Figure 10-3). All three locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. Descriptions of the sample sites are provided in Table 10-3.

10.6.2.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-3 and 10-4. An average of 40.3 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 21.7% vegetation cover, predominantly from grasses and shrubs. The sites included rabbitbrush, open rabbitbrush, and tailings playa.

10.6.2.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 inorganics (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-18a through 10-18e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-18a), 23 metals were detected in all three samples. Antimony and mercury were non-detect in all samples, and sodium was detected in less than half of samples. The 12 inorganics were detected in all samples, except chloride and nitrate, which were detected in 2 of 3 samples.

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-18b), and 21 metals in more than half of washed samples (Table 10-18d). Antimony, beryllium, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, silver was detected in less than half of washed samples.

In below ground tissues, 25 metals were detected in more than half of unwashed samples (Table 10-18c), and 22 in more than half of washed samples (Table 10-18e). Mercury was detected in less than half of samples, both unwashed and washed. In addition, antimony, beryllium, and sodium were detected in less than half of washed samples.

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10.6.3 Crested Wheatgrass

10.6.3.1 Sample Collection

The crested wheatgrass soils and vegetation samples at the tailings facility were collected at sample locations TSS14-3, TSS14-5, and WT-1 (Figure 10-3). The TSS14-3 and TSS14-5 locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples collected at TSS14-3 were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WT-1 location was selected specifically to sample crested wheatgrass, which had scattered populations on the tailings facility. Descriptions of the sample sites are provided in Table 10-3.

10.6.3.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-3 and 10-4. An average of 34.0 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 17.7 % vegetation cover, predominantly from grasses and shrubs. The sites included rabbitbrush, open rabbitbrush, and sparse grassland communities.

10.6.3.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-19a through 10-19e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-19a), 21 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Mercury and sodium were non-detect in all samples, and antimony and selenium were detected in less than half of samples. The 12 inorganics were detected in all samples, except nitrate (non-detect in all sample) and chloride (detected in 2 of 3 samples).

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-19b), and 21 metals in more than half of washed samples (Table 10-19d). Antimony, beryllium, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, thallium was detected in less than half of washed samples.

In below ground tissues, 25 metals were detected in more than half of unwashed samples (Table 10-19c), and 24 in more than half of washed samples (Table 10-19e). Sodium was detected in less than half of samples, both unwashed and washed. In addition, mercury was detected in less than half of washed samples.

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10.6.4 Sleepy Grass

10.6.4.1 Sample Collection

The sleepy grass soils and vegetation samples at the tailings facility were collected at sample locations TSS14-6, TSS14-9, and WT-2 (Figure 10-3). The TSS14-3 and TSS14-9 locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WT-2 location was selected to sample several species that needed additional sites beyond those associated with the RI/FS sampling. Descriptions of the sample sites are provided in Table 10-3.

10.6.4.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 32.3 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 22.0% vegetation cover, predominantly from grasses. All sites were open shrubland or grassland with scattered shrub communities.

10.6.4.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-20a through 10-20e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-20a), 22 metals were detected in all 3 samples and 2 metals were detected in 2 of 3 samples. Antimony and mercury were non-detect in all samples. The 12 inorganics were detected in all samples.

For aboveground samples, 21 metals were detected in more than half of unwashed samples (Table 10-20b), and 20 metals in more than half of washed samples (Table 10-20d). Antimony, beryllium, mercury, silver, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, thallium was detected in less than half of washed samples.

In below ground tissues, 25 metals were detected in more than half of unwashed samples (Table 10-20c), and 23 in more than half of washed samples (Table 10-20e). Antimony was detected in less than half of unwashed samples, and beryllium, mercury, and sodium in less than half of washed samples.

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10.6.5 Western Wheatgrass

10.6.5.1 Sample Collection

The western wheatgrass soils and vegetation samples at the tailings facility were collected at sample locations TSS14-10, WT-2, and WT-4 (Figure 10-3). The TSS14-10 location was also used to sample vegetation for the RI/FS, and the unwashed vegetation samples from this location were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. The WT-2 location was used to sample several species that needed additional sites beyond those associated with the RI/FS sampling. The WT-4 location was selected specifically to sample western wheatgrass. Descriptions of the sample sites are provided in Table 10-3.

10.6.5.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 39.0 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 25.0% vegetation cover, predominantly from grasses. All sites were open shrubland or grassland with scattered shrubs.

10.6.5.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-21a through 10-21e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-21a), 22 metals were detected in all 3 samples and 1 metal was detected in 2 of 3 samples. Antimony and mercury were non-detect in all samples, and selenium was detected in less than half of samples. The 12 inorganics were detected in all samples, except sodium absorption ratio (calculated for 2 of 3 samples).

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-21b), and 19 metals in more than half of washed samples (Table 10-21d). Antimony, beryllium, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, nickel, silver, and thallium were detected in less than half of washed samples.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-21c), and 23 in more than half of washed samples (Table 10-21e). Antimony and mercury were detected in less than half of both unwashed samples and washed samples. In addition, selenium was detected in less than half of unwashed samples, and sodium in less than half of washed samples.

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10.6.6 Blue Grama

10.6.6.1 Sample Collection

The blue grama soils and vegetation samples at the tailings facility were collected at sample locations TSS14-6, WT-3 and WT-5 (Figure 10-3). The TSS14-6 location was also used to sample vegetation for the RI/FS, but none of the samples were dual-purpose. The WT-3 and WT-5 locations were selected specifically to sample blue grama, which was sparsely distributed at the tailings facility. Descriptions of the sample sites are provided in Table 10-3.

10.6.6.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-3 and 10-4. An average of 30.7 species were observed at these sites, including mostly forbs, grasses, and shrubs. The sites had an average of 23.6% vegetation cover, predominantly from shrubs and grasses. All sites were rabbitbrush or open rabbitbrush communities.

10.6.6.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-22a through 10-22e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-22a), 23 metals were detected in all 3 samples and 2 metals were detected in 2 of 3 samples. Sodium was non-detect in all samples. The 12 inorganics were detected in all samples, except for nitrate (non-detect in all samples), chloride, and sodium absorption ratio (detected in 2 of 3 samples).

For aboveground samples, 23 metals were detected in more than half of unwashed samples (Table 10-22b), and 22 metals in more than half of washed samples (Table 10-22d). Antimony, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, beryllium was detected in less than half of washed samples.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-22c), and 23 in more than half of washed samples (Table 10-22e). Antimony and sodium were detected in less than half of both unwashed samples and washed samples. In addition, selenium was detected in less than half of unwashed samples, and mercury in less than half of washed samples.

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10.6.7 Sand Dropseed

10.6.7.1 Sample Collection

The sand dropseed soils and vegetation samples at the tailings facility were collected at sample locations TSS14-1, TSS14-2, and TSS14-5 (Figure 10-3). All three locations were also used to sample vegetation for the RI/FS, and the unwashed vegetation samples were dual-purpose samples used for both the RI/FS and Wildlife Impact Study. Descriptions of the sample sites are provided in Table 10-3.

10.6.7.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 43.0 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 22.0% vegetation cover, predominantly from grasses and shrubs. All sites were rabbitbrush or grassland communities.

10.6.7.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-23a through 10-23e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-23a), 23 metals were detected in all 3 samples. Antimony and sodium were non-detect in all samples, and chloride, nitrate, and mercury were detected in less than half of samples. The 12 inorganics were detected in all samples, except chloride, nitrate, and sodium absorption ratio, which were all non-detect in 2 of 3 samples.

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-23b), and 23 metals in more than half of washed samples (Table 10-23d). Antimony, beryllium, and sodium were detected in less than half of samples of both unwashed and washed vegetation. In addition, mercury was detected in less than half of unwashed samples.

In below ground tissues, 24 metals were detected in more than half of unwashed samples (Table 10-23c), and washed samples (Table 10-23e). Mercury and sodium were detected in less than half of both unwashed samples and washed samples.

10.6.8 Golden Crownbeard

10.6.8.1 Sample Collection

The golden crownbeard soils and vegetation samples at the tailings facility were collected at sample locations TSS14-5, WT-2, and WT-6 (Figure 10-3). The TSS14-5 location was also used

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to sample vegetation for the RI/FS, but samples were not dual-purpose. The WT-2 location was used to sample several species, and the WT-6 location was selected specifically to sample golden crownbeard, which was present only in portions of the tailings facility. Descriptions of the sample sites are provided in Table 10-3.

10.6.8.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 34.7 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 27.7% vegetation cover, predominantly from grasses and shrubs. The sites were rabbitbrush or grassland communities.

10.6.8.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-24a through 10-24e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-24a), 23 metals were detected in all three samples. Antimony and sodium were non-detect in all samples, and mercury was detected in less than half of samples. The 12 inorganics were detected in all samples, except chloride and nitrate which were detected in 2 of 3 samples.

For aboveground samples, 22 metals were detected in more than half of unwashed samples (Table 10-24b), and of washed samples (Table 10-24d). Antimony, beryllium, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-24c), and 23 in more than half of washed samples (Table 10-24e). Antimony and mercury were detected in less than half of both unwashed samples and washed samples. In addition, sodium was detected in less than half of unwashed samples, and beryllium in less than half of washed samples.

10.6.9 Cut-leaf Blazing-star

10.6.9.1 Sample Collection

The cut-leaf blazing-star soils and vegetation samples at the tailings facility were collected at sample locations TSS14-1, TSS14-8, and WT-2 (Figure 10-3). The TSS14-1 and TSS14-8 locations were also used to sample vegetation for the RI/FS, but none of the samples were dual-purpose for both the RI/FS and Wildlife Impact Study. The WT-2 location was used to sample several species. Descriptions of the sample sites are provided in Table 10-3.

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10.6.9.2 Vegetation Community Measurement

Vegetation community data were collected in the field and presented in Tables 10-4 and 10-5. An average of 34.9 species were observed at these sites, including mostly forbs and grasses. The sites had an average of 17.3% vegetation cover, predominantly from grasses. The sites were grassland communities or revegetation area.

10.6.9.3 Chemical Characteristics

The soil samples were analyzed for 26 metals and 12 other analytes (excluding ammonia), as discussed above, and plant samples were analyzed for 26 metals, percent solids, and TKN. Results are presented in dry weight for root zone soils, and aboveground and below ground washed and unwashed vegetation (Tables 10-25a through 10-25e). Root zone soil samples are described in Table 10-6, and vegetation samples in Table 10-7.

In soils (Table 10-25a), 23 metals were detected in all 3 samples. Antimony, mercury, and sodium were non-detect in all samples. The 12 inorganics were detected in all samples, except chloride and nitrate which were detected in 2 of 3 samples.

For aboveground samples, 23 metals were detected in more than half of unwashed samples (Table 10-25b), and 22 metals in more than half of washed samples (Table 10-25d). Antimony, mercury, and sodium were detected in less than half of samples of both unwashed and washed vegetation, and beryllium was detected in less than half of washed samples.

In below ground tissues, 23 metals were detected in more than half of unwashed samples (Table 10-25c), and 23 in more than half of washed samples (Table 10-25e). Antimony and mercury were detected in less than half of both unwashed samples and washed samples. In addition, sodium was detected in less than half of unwashed samples, and beryllium in less than half of washed samples.

10.7 SUMMARY

10.7.1 Tailings Facility Reference – Cater Ranch

10.7.1.1 Sample Sites and Species

Sampling was conducted at nine RI/RS random sites and 10 sites used only for the Wildlife Impact Study. Samples were collected for three replicates of each of nine species, for five sample media – root-zone soils, unwashed aboveground vegetation, washed aboveground vegetation, unwashed below ground vegetation, and washed below ground vegetation. The nine species include two shrubs, three cool-season grasses, two warm-season grasses, and two forbs.

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10.7.1.2 Vegetation Community Measurement

Plant species cover and species diversity data were collected at each sample site, and are presented in Tables 10-4 and 10-5. A summary is provided below. The dominant vegetation at both areas is shrubs and grasses, although forbs provide the most diversity in terms of numbers of species. There is variability among sites at both Cater Ranch and the tailings facility. In general, the sample sites at the tailings facility had higher vegetation cover and species richness than Cater Ranch, and more grass cover. However, all plant life forms are present at both areas and overall numbers of species and vegetation cover are generally similar.

| | Tailings Facility Reference – Cater Ranch Sample Sites | | Soil Area 14 – Tailings Facility Sample Sites | |
|---------------------|--|-------|---|-------|
| | Mean | Range | Mean | Range |
| Shrub Cover (%) | 9.9 | 1-27 | 6.1 | 0-19 |
| Forb Cover (%) | 2.0 | 0-21 | 0.9 | 0.5 |
| Grass Cover (%) | 4.2 | 0-16 | 15.1 | 1-28 |
| Total Cover (%) | 16.0 | 3-29 | 22.1 | 1-35 |
| Tree Species (No.) | 0.3 | 0-2 | 0.9 | 0-4 |
| Shrub Species (No.) | 4.4 | 1-7 | 3.9 | 2-8 |
| Forb Species (No.) | 16.7 | 8-28 | 18.7 | 8-27 |
| Grass Species (No.) | 8.4 | 5-14 | 10.8 | 7-18 |
| Total Species (No.) | 29.8 | 19-46 | 34.9 | 24-55 |

10.7.1.3 Chemical Characteristics

Root Zone Soils

Twenty metals were detected in all root-zone soil samples - aluminum, arsenic, barium, beryllium, boron, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, silver, thallium, titanium, vanadium, and zinc. Three metals were detected in most samples - cadmium, selenium, and sodium. Three metals were non-detect in most samples – antimony, mercury, and molybdenum.

Mean concentrations of selected metals for each species and area are shown graphically in Figures 10-4 (barium), 10-7 (boron) 10-10 (cadmium), 10-13 (chromium), 10-16 (copper), 10-19 (lead), 10-22 (manganese), 10-25 (molybdenum), 10-28 (nickel), 10-31 (selenium), 10-34 (silver), 10-37 (vanadium), and 10-40 (zinc).

All concentrations of boron, chromium, manganese, and vanadium exceeded the ecological SLCs. No other metal concentrations exceeded their SLCs.

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Six of the 12 inorganics were detected in all samples, and 6 were detected in most samples – fluoride, chloride, nitrate, sulfate, specific conductance, and sodium absorption ratio.

Aboveground Vegetation

Thirteen metals were detected in all aboveground unwashed vegetation samples - aluminum, arsenic, barium, boron, calcium, cobalt, copper, iron, magnesium, manganese, potassium, selenium, titanium, and vanadium. Seven metals were detected in most samples - cadmium, chromium, lead, molybdenum, nickel, thallium, and zinc. Five metals were mostly non-detect - antimony, beryllium, mercury, silver, and sodium.

Eleven metals were detected in all washed aboveground vegetation samples - arsenic, barium, boron, calcium, cobalt, iron, manganese, potassium, selenium, titanium, and vanadium. Eight metals were detected in most samples – aluminum, cadmium, chromium, copper, lead, magnesium, molybdenum, and zinc. Three metals were non-detects in all samples – antimony, beryllium, and sodium, and three metals were non-detects in most samples – mercury, silver, and thallium.

Mean concentrations for selected metals for each species and area are shown graphically in Figures 10-5 (barium), 10-8 (boron) 10-11 (cadmium), 10-14 (chromium), 10-17 (copper), 10-20 (lead), 10-23 (manganese), 10-26 (molybdenum), 10-29 (nickel), 10-32 (selenium), 10-35 (silver), 10-38 (vanadium), and 10-41 (zinc).

Below Ground Vegetation

Eighteen metals were detected in all below ground unwashed vegetation samples - aluminum, arsenic, barium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, titanium, and vanadium. Six metals were detected in most samples – beryllium, molybdenum, silver, sodium, thallium, and zinc. Two metals were non-detect in most samples - antimony and mercury.

Sixteen metals were detected in all washed below ground vegetation samples - aluminum, barium, boron, calcium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, titanium, vanadium, and zinc. Seven metals were detected in most samples – arsenic, chromium, molybdenum, silver, sodium, thallium, and zinc. Three metals were non-detect in most samples – antimony, beryllium, and mercury.

Below ground mean concentrations for selected metals for each species and area are shown graphically in Figures 10-6 (barium), 10-9 (boron) 10-12 (cadmium), 10-15 (chromium), 10-18 (copper), 10-21 (lead), 10-24 (manganese), 10-27 (molybdenum), 10-30 (nickel), 10-33 (selenium), 10-36 (silver), 10-39 (vanadium), and 10-42 (zinc).

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10.7.2 Soil Area 14 – Tailings Facility

10.7.2.1 Sample Sites

Sampling was conducted at nine RI/RS random sites and six sites used only for the Wildlife Impact Study. Samples were collected for three replicates of the same nine species and sample media as in the reference area.

10.7.2.2 Vegetation Community Measurement

Plant species cover and species diversity data were collected at each sample site, and are summarized above in the summary for Cater Ranch.

10.7.2.3 Chemical Characteristics

Root Zone Soils

Twenty-one metals were detected in all root-zone soil samples - aluminum, arsenic, barium, beryllium, boron, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, silver, thallium, titanium, vanadium, and zinc. Three metals were detected in most samples - cadmium, selenium, and sodium. Two metals were non-detect in most samples – antimony and mercury.

Mean concentrations of selected metals for each species and area are shown graphically in Figures 10-4 (barium), 10-7 (boron), 10-10 (cadmium), 10-13 (chromium), 10-16 (copper), 10-19 (lead), 10-22 (manganese), 10-25 (molybdenum), 10-28 (nickel), 10-31 (selenium), 10-34 (silver), 10-37 (vanadium), and 10-40 (zinc).

Similar to the Cater Ranch reference area, all concentrations of boron, chromium, manganese, and vanadium exceeded their ecological SLCs. In addition, all concentrations of molybdenum exceed the SLC, and most (22 of 27) concentrations of lead exceed the SLC. Three barium and 9 cadmium concentrations also exceed the SLC.

Nine of the 12 inorganics were detected in all samples, and 3 were detected in most samples – chloride, nitrate, and sodium absorption ratio.

Aboveground Vegetation

Fifteen metals were detected in all aboveground unwashed vegetation samples - aluminum, barium, boron, cadmium, calcium, cobalt, copper, iron, magnesium, manganese, molybdenum, potassium, thallium, titanium, and vanadium. Seven metals were detected in most samples – arsenic, chromium, lead, nickel, selenium, silver, and zinc. Two metals were non-detects in all samples – antimony and mercury. Sodium was mostly non-detect, and beryllium was about half non-detects.

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Ten metals were detected in all washed aboveground vegetation samples - barium, boron, calcium, cobalt, copper, magnesium, manganese, molybdenum, potassium, and vanadium. Ten metals were detected in most samples – aluminum, arsenic, cadmium, chromium, iron, lead, nickel, selenium, titanium, and zinc. Two metals were non-detects in all samples – antimony and sodium, two were non-detect in most samples – beryllium and mercury, and two were non-detect in about half of samples - silver and thallium.

Mean concentrations for selected metals for each species and area are shown graphically in Figures 10-5 (barium), 10-8 (boron) 10-11 (cadmium), 10-14 (chromium), 10-17 (copper), 10-20 (lead), 10-23 (manganese), 10-26 (molybdenum), 10-29 (nickel), 10-32 (selenium), 10-35 (silver), 10-38 (vanadium), and 10-41 (zinc).

Below Ground Unwashed Vegetation

Nineteen metals were detected in all below ground unwashed vegetation samples - aluminum, arsenic, barium, boron, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, selenium, thallium, titanium, and vanadium. Five metals were detected in most samples – beryllium, cadmium, silver, sodium, and zinc. Two metals were non-detect in most samples - antimony and mercury.

Eighteen metals were detected in all washed below ground vegetation samples - aluminum, barium, boron, cadmium, calcium, chromium, cobalt, copper, iron, magnesium, manganese, molybdenum, nickel, potassium, silver, thallium, titanium, and vanadium. Four metals were detected in most samples – arsenic, lead, selenium, and zinc. Two metals were non-detect in all or most samples – antimony and mercury. Beryllium and sodium were detected in about half of samples.

Below ground mean concentrations for selected metals for each species and area are shown graphically in Figures 10-6 (barium), 10-9 (boron) 10-12 (cadmium), 10-15 (chromium), 10-18 (copper), 10-21 (lead), 10-24 (manganese), 10-27 (molybdenum), 10-30 (nickel), 10-33 (selenium), 10-36 (silver), 10-39 (vanadium), and 10-42 (zinc).

SECTION 10
WILDLIFE IMPACT STUDY
TABLES

**Table 10-1
LIST OF SAMPLES**

| Sample Prefix | Sample Site | Lifeform | Species | Date | Number of Samples ¹ |
|--|-------------|-------------------|----------------------|---------|--------------------------------|
| Tailings Facility Reference - Cater Ranch | | | | | |
| WRBS-1 | CR-11 | Shrub | Big sagebrush | June 5 | 5 |
| WRBS-2 | CR-8 | Shrub | Big sagebrush | May 29 | 5 |
| WRBS-3 | CR-10 | Shrub | Big sagebrush | May 31 | 5 |
| WRRR-1 | CR-4 | Shrub | Rubber rabbitbrush | May 31 | 5 |
| WRRR-2 | WR-2 | Shrub | Rubber rabbitbrush | June 5 | 5 |
| WRRR-3 | CR-13 | Shrub | Rubber rabbitbrush | June 2 | 5 |
| WRCW-1 | CR-10 | Cool-season grass | Crested wheatgrass | June 5 | 5 |
| WRCW-2 | CR-11 | Cool-season grass | Crested wheatgrass | June 5 | 5 |
| WRCW-3 | WR-2 | Cool-season grass | Crested wheatgrass | June 5 | 5 |
| WRSG-1 | WR-1 | Cool-season grass | Sleepy grass | June 2 | 5 |
| WRSG-2 | WR-3 | Cool-season grass | Sleepy grass | May 29 | 5 |
| WRSG-3 | CR-7 | Cool-season grass | Sleepy grass | May 39 | 5 |
| WRWW-1 | CR-2 | Cool-season grass | Western wheatgrass | June 3 | 5 |
| WRWW-2 | CR-13 | Cool-season grass | Western wheatgrass | June 2 | 5 |
| WRWW-3 | CR-4 | Cool-season grass | Western wheatgrass | May 31 | 5 |
| WRBG-1 | CR-2 | Warm-season grass | Blue grama | Sept. 7 | 5 |
| WRBG-3 | CR-14 | Warm-season grass | Blue grama | Sept. 7 | 5 |
| WRBG-4 | CR-8 | Warm-season grass | Blue grama | Sept. 7 | 5 |
| WRSD-1R | CR-5 | Warm-season grass | Sand dropseed | Sept. 7 | 5 |
| WRSD-2 | WR-4 | Warm-season grass | Sand dropseed | June 3 | 5 |
| WRSD-3 | CR-10 | Warm-season grass | Sand dropseed | May 31 | 5 |
| WRAS-1 | WR-6 | Forb | Golden crownbeard | Sept. 9 | 5 |
| WRAS-2 | WR-5 | Forb | Golden crownbeard | Sept. 9 | 5 |
| WRAS-3 | WR-7 | Forb | Golden crownbeard | Sept. 9 | 5 |
| WRFO-1 | WR-8 | Forb | Cut-leaf blazingstar | Sept. 9 | 5 |
| WRFO-2 | WR-9 | Forb | Cut-leaf blazingstar | Sept. 9 | 5 |
| WRFO-3 | WR-10 | Forb | Cut-leaf blazingstar | Sept. 9 | 5 |
| Soil Area 14 - Tailings Facility | | | | | |
| WTBS-1 | TSS14-4 | Shrub | Big sagebrush | June 4 | 5 |
| WTBS-2 | TSS14-9 | Shrub | Big sagebrush | May 28 | 5 |
| WTBS-3 | TSS14-10 | Shrub | Big sagebrush | May 28 | 5 |
| WTRR-1 | TSS14-2 | Shrub | Rubber rabbitbrush | June 3 | 5 |

**Table 10-1
LIST OF SAMPLES**

| Sample Prefix | Sample Site | Lifeform | Species | Date | Number of Samples ¹ |
|---------------|-------------|-------------------|----------------------|---------|--------------------------------|
| WTRR-2 | TSS14-5 | Shrub | Rubber rabbitbrush | June 4 | 5 |
| WTRR-3 | TSS14-6 | Shrub | Rubber rabbitbrush | May 30 | 5 |
| WTCW-1 | TSS14-5 | Cool-season grass | Crested wheatgrass | June 4 | 5 |
| WTCW-2 | TSS14-3 | Cool-season grass | Crested wheatgrass | June 4 | 5 |
| WTCW-3 | WT-1 | Cool-season grass | Crested wheatgrass | May 30 | 5 |
| WTSG-1 | TSS14-6 | Cool-season grass | Sleepy grass | May 30 | 5 |
| WTSG-2 | TSS14-9 | Cool-season grass | Sleepy grass | May 28 | 5 |
| WTSG-3 | WT-2 | Cool-season grass | Sleepy grass | June 4 | 5 |
| WTWW-1 | WT-4 | Cool-season grass | Western wheatgrass | June 5 | 5 |
| WTWW-2 | TSS14-10 | Cool-season grass | Western wheatgrass | May 28 | 5 |
| WTWW-3 | WT-2 | Cool-season grass | Western wheatgrass | June 4 | 5 |
| WTBG-1 | TSS14-6 | Warm-season grass | Blue grama | Sept. 7 | 5 |
| WTBG-2 | WT-5 | Warm-season grass | Blue grama | Sept. 7 | 5 |
| WTBG-3 | WT-3 | Warm-season grass | Blue grama | Sept. 8 | 5 |
| WTSD-1 | TSS14-2 | Warm-season grass | Sand dropseed | June 3 | 5 |
| WTSD-2 | TSS14-5 | Warm-season grass | Sand dropseed | June 4 | 5 |
| WTSD-3 | TSS14-1 | Warm-season grass | Sand dropseed | June 3 | 5 |
| WTAS-1 | TSS14-5 | Forb | Golden crownbeard | Sept. 8 | 5 |
| WTAS-2 | WT-6 | Forb | Golden crownbeard | Sept. 8 | 5 |
| WTAS-3 | WT-2 | Forb | Golden crownbeard | Sept. 8 | 5 |
| WTFO-1 | TSS14-8 | Forb | Cut-leaf blazingstar | Sept. 8 | 5 |
| WTFO-2 | WT-2 | Forb | Cut-leaf blazingstar | Sept. 8 | 5 |
| WTFO-3 | TSS14-1 | Forb | Cut-leaf blazingstar | Sept. 8 | 5 |

¹Each species at each site had 1 composite soil sample, and 4 composite vegetation samples (aboveground unwashed, aboveground washed, belowground unwashed, belowground washed).

**Table 10-2
LOCATIONS OF SAMPLES**

| Site No.* | Number of Samples Collected | Samples Collected** |
|--|-----------------------------|--------------------------------|
| Tailings Facility Reference - Cater Ranch | | |
| CR-2 | 2 | WRWW-1, WRBG-1 |
| CR-4 | 2 | WRRR-1, WRWW-3 |
| CR-5 | 1 | WRSD-1R |
| CR-7 | 1 | WRSG-3 |
| CR-8 | 2 | WRBS-2, WRBG-4 |
| CR-10 | 3 | WRBS-3, WRCW-1, WRSD-3 |
| CR-11 | 2 | WRBS-1, WRCW-2 |
| CR-13 | 2 | WRRR-3, WRWW-2 |
| CR-14 | 1 | WRBG-3 |
| WR-1 | 1 | WRSG-1 |
| WR-2 | 2 | WRRR-2, WRCW-3 |
| WR-3 | 1 | WRSG-2 |
| WR-4 | 1 | WRSD-2 |
| WR-5 | 1 | WRAS-2 |
| WR-6 | 1 | WRAS-1 |
| WR-7 | 1 | WRAS-3 |
| WR-8 | 1 | WRFO-1 |
| WR-9 | 1 | WRFO-2 |
| WR-10 | 1 | WRFO-3 |
| Soil Area 14 - Tailings Facility | | |
| TSS14-1 | 2 | WTSD-3, WTFO-3 |
| TSS14-2 | 2 | WTRR-1, WTSD-1 |
| TSS14-3 | 1 | WTCW-2 |
| TSS14-4 | 1 | WTBS-1 |
| TSS14-5 | 4 | WTRR-2, WTCW-1, WTSD-2, WTAS-1 |
| TSS14-6 | 3 | WTRR-3, WTSG-1, WTBG-1 |
| TSS14-8 | 1 | WTFO-1 |
| TSS14-9 | 2 | WTBS-2, WTSG-2 |
| TSS14-10 | 2 | WRBS-3, WTWW-2 |
| WT-1 | 1 | WTCW-3 |
| WT-2 | 4 | WTSG-3, WTWW-3, WTAS-3, WTFO-2 |
| WT-3 | 1 | WTBG-3 |
| WT-4 | 1 | WTWW-1 |
| WT-5 | 1 | WTBG-2 |
| WT-6 | 1 | WTAS-2 |

* Sites prefixed TSS14 and CR are RI/FS random sample sites; sites prefixed WT and WR are sites used only for the Wildlife Impact Study (tailings facility and reference, respectively).

**WR = reference sample, WT = tailings facility sample. Species abbreviations are shown in Table 10-1.

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|--------------------------------|-------------|------------|--------|-------------------------|------------------------|-------------|------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Reference (Cater Ranch) | | | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | | | |
| WRBS-1 | CR-11 | 3 | W | Gently undulating | 13 | 77 | 6 | 0 | 0 | 1 | 3 | Cobbles 1% of surface, Soil mostly bare, slightly soft. |
| WRBS-2 | CR-8 | 2 | WNW | Slight undulations | 22 | 76 | 2 | 0 | 0 | 0 | 0 | Soil mostly bare, with soft crust |
| WRBS-3 | CR-10 | 0.5 | W | Slightly undulating | 15 | 81 | 0 | 0 | 0 | 1 | 3 | Ground surface soft, irregular surface of raised old grasses bases and microbasins 6 inches to 2 feet wide with soft cracks. |
| Mean | | 1.8 | | | 16.7 | 78.0 | 2.7 | 0.0 | 0.0 | 0.7 | 2.0 | |
| Rubber Rabbitbrush | | | | | | | | | | | | |
| WRRR-1 | CR-4 | 0.5 | W | Gently undulating | 46 | 54 | 0 | 0 | 0 | 0 | 0 | Soil surface very soft and powdery |
| WRRR-2 | WR-2 | 2 | W | Flat, gently undulating | 23 | 74 | 3 | 0 | 0 | 0 | 0 | Surface cobble about 1%, ground surface a mosaic of areas with grass based and litter, and puddled areas with poorly formed polygons |
| WRRR-3 | CR-13 | 0.5 | W | Flat, gently undulating | 18 | 78 | 1 | 0 | 0 | 0 | 3 | Ground surface soft, mosaic of puddle crust and areas of open gravel with lots of microtopography including old grass bases, hoof prints, soil clods. |
| Mean | | 1.0 | | | 29.0 | 68.7 | 1.3 | 0.0 | 0.0 | 0.0 | 1.0 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|--|-------------|------------|--------|-------------------------|------------------------|-------------|------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | |
| Crested Wheatgrass | | | | | | | | | | | | |
| WRCW-1 | CR-10 | 0.5 | W | Slightly undulating | 15 | 81 | 0 | 0 | 0 | 1 | 3 | Ground surface soft, irregular surface of raised old grasses bases and microbasins 6 inches to 2 feet wide with soft cracks. |
| WRCW-2 | CR-11 | 3 | W | Gently undulating | 13 | 77 | 6 | 0 | 0 | 1 | 3 | Cobbles 1% of surface, Soil mostly bare, slightly soft. |
| WRCW-3 | WR-2 | 2 | W | Gently undulating | 23 | 74 | 3 | 0 | 0 | 0 | 0 | Surface cobble about 1%, ground surface a mosaic of areas with grass based and litter, and puddled areas with poorly formed polygons |
| Mean | | 1.8 | | | 17.0 | 77.3 | 3.0 | 0.0 | 0.0 | 0.7 | 2.0 | |
| Sleepy Grass | | | | | | | | | | | | |
| WRSG-1 | WR-1 | 1 | W | Flat, gently undulating | 29 | 66 | 2 | 0 | 0 | 0 | 3 | Ground soft, scattered pebbles and gravel, puddled lumps on surface |
| WRSG-2 | WR-3 | 0.5 | W | Flat | 36 | 63 | 1 | 0 | 0 | 0 | 0 | |
| WRSG-3 | CR-7 | 1 | NNW | Flat | 4 | 92 | 1 | 0 | 0 | 0 | 3 | |
| Mean | | 0.8 | | | 23.0 | 73.7 | 1.3 | 0.0 | 0.0 | 0.0 | 2.0 | |
| Western Wheatgrass | | | | | | | | | | | | |
| WRWW-1 | CR-2 | 0.5 | W | Flat, gently undulating | 59 | 41 | 0 | 0 | 0 | 0 | 0 | Soil loose, but most of soil stabilized by vegetation or litter, exposed areas deflated by wind, some patches of puddled clods. |
| WRWW-2 | CR-13 | 0.5 | W | Flat, gently undulating | 18 | 78 | 1 | 0 | 0 | 0 | 3 | Ground surface soft, mosaic of puddle crust and areas of open gravel with lots of microtopography including old grass bases, hoof prints, soil clods. |
| WRWW-3 | CR-4 | 0.5 | W | Gently undulating | 46 | 54 | 0 | 0 | 0 | 0 | 0 | Soil surface very soft and powdery |
| Mean | | 0.5 | | | 41.0 | 57.7 | 0.3 | 0.0 | 0.0 | 0.0 | 1.0 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|--|-------------|------------|--------|-------------------------|------------------------|-------------|------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | |
| Blue Grama | | | | | | | | | | | | |
| WRBG-1 | CR-2 | 0.5 | W | Flat, gently undulating | 59 | 41 | 0 | 0 | 0 | 0 | 0 | Soil loose, but most of soil stabilized by vegetation or litter, exposed areas deflated by wind, some patches of puddled clods. |
| WRBG-3 | CR-14 | 0.5 | W | Flat, gently undulating | 30 | 66 | 0 | 0 | 0 | 0 | 4 | Old prairie dog mounds have rounded gravel and pebbles. Soil surface pebbly and gravelly along Latir Creek, which does not have a defined bed or banks. |
| WRBG-4 | CR-8 | 2 | WNW | Slight undulations | 22 | 76 | 2 | 0 | 0 | 0 | 0 | Soil mostly bare, with soft crust |
| Mean | | 1.0 | | | 37.0 | 61.0 | 0.7 | 0.0 | 0.0 | 0.0 | 1.3 | |
| Sand Dropseed | | | | | | | | | | | | |
| WRSD-1R | CR-5 | 0.5 | WNW | Very flat | 21 | 78 | 1 | 0 | 0 | 0 | 0 | Soil soft on surface, dusty. |
| WRSD-2 | WR-4 | 1 | W | Flat | 23 | 76 | 0 | 0 | 0 | 0 | 1 | Soft loose soil on surface, every step gives a cloud of dust. |
| WRSD-3 | CR-10 | 0.5 | W | Slightly undulating | 15 | 81 | 0 | 0 | 0 | 1 | 3 | Ground surface soft, irregular surface of raised old grasses bases and microbasins 6 inches to 2 feet wide with soft cracks. |
| Mean | | 0.7 | | | 19.7 | 78.3 | 0.3 | 0.0 | 0.0 | 0.3 | 1.3 | |
| Golden Crownbeard | | | | | | | | | | | | |
| WRAS-1 | WR-6 | 2 | W | Flat, gently undulating | 9 | 90 | 0 | 0 | 0 | 0 | 1 | Soft surface. A slight swale extends through site. |
| WRAS-2 | WR-5 | 2 | W | Flat, gently undulating | 12 | 86 | 0 | 0 | 0 | 0 | 2 | Soil soft on surface. |
| WRAS-3 | WR-7 | 2 | W | Flat, gently undulating | 3 | 96 | 0 | 0 | 0 | 0 | 1 | Soil soft to firm. |
| Mean | | 2.0 | | | 8.0 | 90.7 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|--|-------------|------------|-----------|--------------------------------|------------------------|--------------|-------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | |
| Cut-leaf Blazing-star | | | | | | | | | | | | |
| WRFO-1 | WR-8 | 1 | W | Flat | 8 | 91 | 0 | 0 | 0 | 0 | 1 | Soil surface is soft. |
| WRFO-2 | WR-9 | 1 | W | Flat | 12 | 87 | 0 | 0 | 0 | 0 | 1 | Ground is soft. |
| WRFO-3 | WR-10 | 1 | W | Flat | 6 | 94 | 0 | 0 | 0 | 0 | 0 | Ground is soft. |
| Mean | | 1.0 | | | 8.7 | 90.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | |
| Reference Mean | | 1.2 | | | 22.2 | 75.1 | 1.1 | 0.0 | 0.0 | 0.2 | 1.4 | |
| Range | | | | | 3-59 | 41-96 | 0-6 | 0-0 | 0-0 | 0-1 | 0-4 | |
| Tailings Facility | | | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | | | |
| WTBS-1 | TSS14-4 | 2 | W | gently undulating | 33 | 26 | 40 | 0 | 0 | 0 | 1 | Ground surface has 10% tailings |
| WTBS-2 | TSS14-9 | 2 | SW | irregularly undulating | 13 | 59 | 15 | 0 | 3 | 2 | 8 | About 5% tailings at gopher mounds, rest has thin veneer of small gravel. |
| WTBS-3 | TSS14-10 | 2 | NW | | 26 | 51 | 20 | 0 | 0 | 1 | 2 | Soil surface gravelly pebbly, or sandy from tailings. About 2% of surface is tailings |
| Mean | | 2.0 | | | 24.0 | 45.3 | 25.0 | 0.0 | 1.0 | 1.0 | 3.7 | |
| Rubber Rabbitbrush | | | | | | | | | | | | |
| WTRR-1 | TSS14-2 | 2 | NE | Irregular topography | 20 | 73 | 4 | 0 | 0 | 0 | 3 | Tailing evident in large blowout and in former ponded area. Some oxidized tailing. Surface soil sandy by berm and blowout, loamy further away. Site appears to include some natural ground. |
| WTRR-2 | TSS14-5 | 2 | NE | Gently sloping, undulating | 31 | 45 | 22 | 0 | 0 | 0 | 2 | About 3% of surface is exposed tailings from burrowing animals. |
| WTRR-3 | TSS14-6 | 0.5 | Irregular | Flat, very slightly undulating | 22 | 67 | 9 | 0 | 0 | 0 | 2 | About 1% of surface is tailings brought up by burrowing animals. Surface soils without gravel have a soft crust with cracks. |
| Mean | | 1.5 | | | 24.3 | 61.7 | 11.7 | 0.0 | 0.0 | 0.0 | 2.3 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|----------------------------------|-------------|------------|-----------|--------------------------------|------------------------|-------------|-------------|------------|-------------|------------|------------|--|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Tailings Facility (cont.) | | | | | | | | | | | | |
| Crested Wheatgrass | | | | | | | | | | | | |
| WTCW-1 | TSS14-5 | 2 | NE | Gently sloping, undulating | 31 | 45 | 22 | 0 | 0 | 0 | 2 | About 3% of surface is exposed tailings from burrowing animals. |
| WTCW-2 | TSS14-3 | 2 | SW | Flat, gently undulating | 18 | 23 | 57 | 0 | 0 | 0 | 2 | Soil gravelly and compacted in most areas. No surface tailing. Grasses mostly pedestalled 2-3 inches suggested that wind erosion has occurred. |
| WTCW-3 | WT-1 | 1 | N | Flat | 10 | 87 | 0 | 0 | 0 | 0 | 3 | Ground cracked, soft crust. Tailings on surface in som areas. A couple of piles of tailing 3 feet high. |
| Mean | | 1.7 | | | 19.7 | 51.7 | 26.3 | 0.0 | 0.0 | 0.0 | 2.3 | |
| Sleepy Grass | | | | | | | | | | | | |
| WTSG-1 | TSS14-6 | 0.5 | Irregular | Flat, very slightly undulating | 22 | 67 | 9 | 0 | 0 | 0 | 2 | About 1% of surface is tailings brought up by burrowing animals. Surface soils without gravel have a soft crust with cracks. |
| WTSG-2 | TSS14-9 | 2 | SW | irregularly undulating | 13 | 59 | 15 | 0 | 3 | 2 | 8 | About 5% tailings at gopher mounds, rest has thin veneer of small gravel. |
| WTSG-3 | WT-2 | 2 | SE | Flat, slightly undulating | 18 | 77 | 3 | 0 | 0 | 0 | 2 | About 10% of ground surface is tailing, small patches all over. Ground soft, little gravel. Soft cracks on tailing. |
| Mean | | 1.5 | | | 17.7 | 67.7 | 9.0 | 0.0 | 1.0 | 0.7 | 4.0 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|----------------------------------|-------------|------------|-----------|--------------------------------|------------------------|-------------|-------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Tailings Facility (cont.) | | | | | | | | | | | | |
| Western Wheatgrass | | | | | | | | | | | | |
| WTWW-1 | WT-4 | 0.5 | WSE | Flat, gently undulating | 11 | 72 | 15 | 0 | 0 | 0 | 2 | About 15% surface tailing. Ground mostly slightly rough. |
| WTWW-2 | TSS14-10 | 1 | | Flat | 26 | 51 | 20 | 0 | 0 | 1 | 2 | About 30% of surface is gopher mounds with tailings |
| WTWW-3 | WT-2 | 2 | SE | Flat, slightly undulating | 18 | 77 | 3 | 0 | 0 | 0 | 2 | About 10% of ground surface is tailing, small patches all over. Ground soft, little gravel. Soft cracks on tailing. |
| Mean | | 1.2 | | | 18.3 | 66.7 | 12.7 | 0.0 | 0.0 | 0.3 | 2.0 | |
| Blue Grama | | | | | | | | | | | | |
| WTBG-1 | TSS14-6 | 0.5 | Irregular | Flat, very slightly undulating | 22 | 67 | 9 | 0 | 0 | 0 | 2 | About 1% of surface is tailings brought up by burrowing animals. Surface soils without gravel have a soft crust with cracks. |
| WTBG-2 | WT-5 | 2 | NW | gently sloping and undulating | 11 | 79 | 6 | 0 | 0 | 0 | 4 | About 5% of surface is talings from gopher burrowing |
| WTFG-3 | WT-3 | 0.5 | NA | flat to gently rolling | 9 | 70 | 18 | 0 | 0 | 0 | 3 | Tailing playa east of road. About 10% surface tailing from gopher activity east of pond and about 2% west of road. Some piles of deposited material. Surface soils highly variable brown soil, gravel, sand. Small parts of site may be natural ground. Cryptogamic crust common west of road, did not get on transect. |
| Mean | | 1.0 | | | 14.0 | 72.0 | 11.0 | 0.0 | 0.0 | 0.0 | 3.0 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|----------------------------------|-------------|------------|--------|-------------------------------|------------------------|-------------|-------------|------------|-------------|------------|------------|--|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Tailings Facility (cont.) | | | | | | | | | | | | |
| Sand Dropseed | | | | | | | | | | | | |
| WTSD-1 | TSS14-2 | 2 | NE | Irregular topography | 20 | 73 | 4 | 0 | 0 | 0 | 3 | Tailing evident in large blowout and in former ponded area. Some oxidized tailing. Surface soil sandy by berm and blowout, loamy further away. Site appears to include some natural ground. |
| WTSD-2 | TSS14-5 | 2 | NE | Gently sloping, undulating | 31 | 45 | 22 | 0 | 0 | 0 | 2 | About 3% of surface is exposed tailings from burrowing animals. |
| WTSD-3 | TSS14-1 | 2 | NW | | 29 | 36 | 26 | 0 | 0 | 6 | 3 | Soil surface gravelly pebbly, or sandy from tailings. About 2% of surface is tailings |
| Mean | | 2.0 | | | 26.7 | 51.3 | 17.3 | 0.0 | 0.0 | 2.0 | 2.7 | |
| Golden Crownbeard | | | | | | | | | | | | |
| WTAS-1 | TSS14-5 | 2 | NE | Gently sloping, undulating | 31 | 45 | 22 | 0 | 0 | 0 | 2 | About 3% of surface is exposed tailings from burrowing animals. |
| WTAS-2 | WT-6 | 4 | W | gently sloping and undulating | 9 | 71 | 18 | 0 | 0 | 0 | 2 | About 10% surface tailings, more to west. About 3% of ground surface disturbed by recent excavation. |
| WTAS-3 | WT-2 | 2 | SE | Flat, slightly undulating | 18 | 77 | 3 | 0 | 0 | 0 | 2 | About 10% of ground surface is tailing, small patches all over. Ground soft, little gravel. Soft cracks on tailing. Sample collected from northwest part of site where surface is a mixture of soil, tailing and gravel, on 2 - 8 degree slopes. |
| Mean | | 2.7 | | | 19.3 | 64.3 | 14.3 | 0.0 | 0.0 | 0.0 | 2.0 | |

**Table 10-3
 Topography and Ground Surface**

| Sample No. | Sample Site | Slope | Aspect | Topography | Ground Cover (Percent) | | | | | | | Soil Surface Observations |
|----------------------------------|-------------|------------|--------|--|------------------------|--------------|-------------|------------|-------------|------------|------------|---|
| | | | | | Litter | Bare Ground | Gravel | Wood | Lichen/moss | Rock | Plant Base | |
| Tailings Facility (cont.) | | | | | | | | | | | | |
| Cut-leaf Blazing-star | | | | | | | | | | | | |
| WTFO-1 | TSS14-8 | 2 | SW | Flat slope, low ridges (to 2 ft) from construction equipment | 14 | 75 | 10 | 0 | 0 | 1 | 0 | Surface is mix of tailing and cover material. |
| WTFO-2 | WT-2 | 2 | SE | Flat, slightly undulating | 18 | 77 | 3 | 0 | 0 | 0 | 2 | About 10% of ground surface is tailing, small patches all over. Ground soft, little gravel. Soft cracks on tailing. |
| WTFO-3 | TSS14-1 | 2 | NW | | 29 | 36 | 26 | 0 | 0 | 6 | 3 | Soil surface gravelly pebbly, or sandy from tailings. About 2% of surface is tailings |
| Mean | | 2.0 | | | 20.3 | 62.7 | 13.0 | 0.0 | 0.0 | 2.3 | 1.7 | |
| Tailings Facility Mean | | 1.7 | | | 20.5 | 60.4 | 15.6 | 0.0 | 0.2 | 0.7 | 2.6 | |
| Range | | | | | 9-87 | 23-87 | 0-57 | 0-9 | 0-3 | 0-6 | 0-8 | |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | TSS14-1 | TSS14-2 | TSS14-3 | TSS14-4 | TSS14-5 | TSS14-6 | TSS14-8 | TSS14-9 | TSS14-10 | WT-1 | WT-2 | WT-3 | WT-4 | WT-5 | WT-6 |
|---|--------------------------|------------|------------|------------|-------------|-------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 101 | 100 |
| TREES | | | | | | | | | | | | | | | | |
| <i>Elaeagnus angustifolia</i> | Russian olive | | | | | | | P | | | | | | | | P |
| <i>Juniperus scopulorum</i> | Rocky Mountain juniper | | P | | | | | | | | P | | P | | | P |
| <i>Pinus edulis</i> | Pinon pine | | P | | P | | | | | | | | P | P | | |
| <i>Populus angustifolia</i> | Narrowleaf cottonwood | | P | P | | | | | | | | | | | | P |
| <i>Populus deltoides</i> | Plains cottonwood | | P | | | | | | P | | | | | | | |
| <i>Ulmus pumila</i> | Siberian elm | | | | | | | | | | | P | | | | |
| Subtotal - Number of Tree species | | 0 | 4 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 3 |
| Subtotal - Percent Tree Cover | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SHRUBS | | | | | | | | | | | | | | | | |
| <i>Artemisia frigida</i> | Fringed sage | | P | | | | P | | | | | | P | P | | |
| <i>Artemisia tridentata</i> | Big sagebrush | P | P | | P | P | P | P | P | P | 1 | 1 | P | 4 | P | P |
| <i>Atriplex canescens</i> | Four-wing saltbush | | | | | | | | | | | | 1 | | | |
| <i>Ericameria depressa</i> | Long-flower rabbitbrush | P | | | | | | | | | | | | | | P |
| <i>Ericameria filifolia (Chyrsothamnus greenei)</i> | Greene's rabbitbrush | | P | | | | P | | P | P | | | | P | | |
| <i>Ericameria nauseosa</i> | rubber rabbitbrush | P | 6 | P | 19 | 13 | 6 | P | 3 | 1 | 4 | 2 | 17 | 4 | 7.9 | 2 |
| <i>Gutierrezia sarothrae</i> | Broom snakeweed | P | | | P | | P | | P | P | P | P | P | P | P | P |
| <i>Opuntia polyacantha</i> | Plains prickly pear | | | | | | | | | | P | | P | | | |
| <i>Rhus trilobata</i> | Skunkbush sumac | | P | | | | | | | | | | | | | |
| <i>Ribes aureum</i> | Golden current | | | | | | | | | | | | P | | | |
| <i>Salix exigua</i> | Sandbar willow | | P | P | | | | | | | | | | | | 4 |
| <i>Yucca glauca</i> | Plains yucca | | | | | | | | | | P | | P | | | |
| Subtotal - Number of Shrub Species | | 4 | 6 | 2 | 3 | 2 | 5 | 2 | 4 | 4 | 5 | 3 | 8 | 5 | 3 | 5 |
| Subtotal - Percent Shrub Cover | | 0.0 | 6.0 | 0.0 | 19.0 | 13.0 | 6.0 | 0.0 | 3.0 | 1.0 | 5.0 | 3.0 | 18.0 | 8.0 | 7.9 | 6.0 |
| FORBS | | | | | | | | | | | | | | | | |
| <i>Amaranthus blitoides</i> | Prostrate pigweed | | P | | | | | | | | | P | | | | |
| <i>Amaranthus hybridus</i> | smooth amaranth | | P | P | | P | | | | | | P | P | | | P |
| <i>Artemisia campestris</i> | field sagewort | | | P | P | P | | | P | | | | | | | P |
| <i>Artemisia dracunculus</i> | Tarragon | | | | | | | | | | | | P | | | |
| <i>Asclepias speciosa</i> | Showy milkweed | | | | | | | | | | | P | | | P | |
| <i>Bahia dissecta</i> | Ragged-leaf bahia | P | P | P | P | P | P | P | P | P | P | P | 1 | P | P | P |
| <i>Brickellia eupatorioides</i> | False boneset | | P | | P | | | P | | | | | | | | |
| <i>Chaenactis douglasii</i> | Douglas dustymaiden | | | | | | | | | | | | | | P | |
| <i>Chamaesyce serpyllifolia</i> | Thyme-leaf spurge | | P | P | | P | P | | | P | P | P | P | | | |
| <i>Chenopodium berlandieri</i> | Pitted goosefoot | | P | P | | | | P | | P | | P | | | | |
| <i>Chenopodium cycloides</i> | Sandhills goosefoot | | | P | | | | | | | | | | | | |
| <i>Chenopodium leptophyllum</i> | Narrowleaf goosefoot | | | | | | | | | | | | P | | | P |
| <i>Cirsium arvense</i> | Canada thistle | | | | | | | | | | | | P | | | |
| <i>Cirsium vulgare</i> | Bull thistle | | | | | | | | | | | | | | | |
| <i>Convolvulus arvensis</i> | field bindweed | | | | | | P | | | | | | | | | |
| <i>Conyza canadensis</i> | Canadian horseweed | | | P | | | | | | | | | | | | |
| <i>Cycloloma atriplicifolia</i> | Winged pigweed | | P | | | | | | | | | | | | | |
| <i>Descurainia ramosissima</i> | Villa grove tansymustard | | | P | | | | | P | | P | | | | | |
| <i>Dyssodia papposa</i> | Fetid-marigold | | | P | | | | P | P | P | | | | P | P | P |
| <i>Erigeron divergens</i> | Spreading daisy | P | | P | | | | P | | | P | P | P | | | |
| <i>Erigeron (little)</i> | Erigeron sp. | P | | | | | | | | | | | | | | |
| <i>Eriogonum alatum</i> | Winged wild-buckwheat | | | | | | | | | | | | P | | | |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | TSS14-1 | TSS14-2 | TSS14-3 | TSS14-4 | TSS14-5 | TSS14-6 | TSS14-8 | TSS14-9 | TSS14-10 | WT-1 | WT-2 | WT-3 | WT-4 | WT-5 | WT-6 |
|--|-----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 101 | 100 |
| FORBS | | | | | | | | | | | | | | | | |
| <i>Eriogonum cernuum</i> | Nodding wild-buckwheat | | | | P | | | | | | | | | | | |
| <i>Eriogonum racemosum</i> | Red-root wild-buckwheat | | | | | | | | | | | | P | | | |
| <i>Euphorbia davidii</i> | David's poinsettia | | | | | | P | | | | | | | | | |
| <i>Grindelia squarrosa</i> | Curly-cup gumweed | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P |
| <i>Helianthus annuus</i> | common sunflower | P | P | P | P | P | P | P | P | P | P | P | P | | P | 1 |
| <i>Heterotheca villosa</i> | hairy goldenaster | P | P | | P | 1 | P | | P | P | 1 | P | P | P | | P |
| <i>Hymenopappus filifolius</i> | Fine-leaf woollywhite | | | | P | | | | | | | | | | | |
| <i>Hymenoxys richardsonis</i> | Colorado rubberweed | | | | | | P | | | | | | | | | |
| <i>Ipomopsis aggregata</i> | Scarlet gilia | | | | | | | | | | | P | | | | |
| <i>Kochia scoparia</i> | Mexican fireweed, kochia | P | | P | | | | P | P | P | 1 | P | | P | | |
| <i>Lactuca serriola</i> | Prickly lettuce | P | | P | | | | P | | | | | | | | |
| <i>Lappula occidentalis (redowskii)</i> | Spiny sheepbur | P | P | P | P | P | | P | P | P | P | P | P | | | |
| <i>Lappula squarrosa</i> | Bristly sheepbur | | | | | P | | | | | | | | | | |
| <i>Linum lewisii</i> | prairie flax | P | | | | | | | P | P | | | | P | | |
| <i>Linum arsitatum</i> | Bristle flax | | P | | | | | | | | P | | | | | |
| <i>Lithospermum incisum</i> | Fringed gromwell | | | | | P | | | | | | | | | | |
| <i>Machaeranthera canescens</i> | Hoary tansyaster | 1 | P | P | P | P | P | P | P | P | P | P | P | 1 | P | 1 |
| <i>Machaeranthera pinnatifida (Haplopappus spinulosus)</i> | Perennial goldenweed | P | | | | | | | P | P | P | | | P | P | |
| <i>Medicago lupulina</i> | Black medic | | | | | | | | | | | | | | | 1 |
| <i>Medicago sativa</i> | alfafa | 1 | P | P | P | P | P | | P | 1 | | P | P | 4 | P | |
| <i>Melilotus officinalis</i> | Yellow sweet clover | | | P | | | | P | | | | | | | | P |
| <i>Mentzelia laciniata</i> | Cut-leaf blazing-star | 1 | P | P | P | P | P | P | P | P | P | P | P | P | P | P |
| <i>Mirabilis linearis</i> | Narrow-leaved desert four o'clock | | | | | | | | | | | | P | | | |
| <i>Oenothera coronopifolia</i> | Cut-leaf evening-primrose | | | | | | | | | | | | | | P | |
| <i>Penstemon linarioides</i> | Toadflax beardtongue | | P | | P | | | | | | | P | P | | | |
| <i>Penstemon spp.</i> | Penstemon, beardtongue | | | | | P | | | | | | P | | | | |
| <i>Physalis foetans</i> | New Mexico groundcherry | | P | P | P | | | | | | | P | | | | |
| <i>Physalis hederifolia</i> | Ivyleaf groundcherry | | P | | | | | | | | | | P | | | |
| <i>Physaria ludoviciana</i> | Lousiana bladderpod | | | | | | | | | | P | | | | | |
| <i>Polygonum erectum</i> | Erect knotweed | | | P | | | | | | | | | | | | P |
| <i>Portulaca oleracea</i> | Garden purslane | | P | | | | | | | | | | | | | P |
| <i>Potentilla sp.</i> | cinquefoil | P | | P | | | | | | | | | | | P | |
| <i>Rayjacksonia annua</i> | Camphor-daisy | | | | | | | | | | | | | | | |
| <i>Rumex salicifolius</i> | Willow dock | | | P | | | | | | | | | | | | |
| <i>Salsola collina</i> | Russian thistle | P | P | P | P | | P | P | P | P | | | | | | |
| <i>Salsola tragus (iberica)</i> | Russian thistle | P | P | P | P | P | P | P | P | P | | P | P | P | P | P |
| <i>Salvia reflexa</i> | Lanceleaf sage | | P | | | P | | | | | | P | | | | |
| <i>Senecio spartioides</i> | Broom ragwort | P | P | P | P | P | P | P | P | P | P | P | P | | | P |
| <i>Sisymbrium altissimum</i> | Tall hedgemustard | | P | P | | P | | P | P | | | P | | P | | P |
| <i>Solanum physalifolium</i> | ground cherry nightshade | | | | | | | | | | | | | | | P |
| <i>Solanum rostratum</i> | Buffalo-bur | | | | | | | | | | | | | | | P |
| <i>Solanum triflorum</i> | Cut-leaf nightshade | | | P | | | | | | | | P | P | | | |
| <i>Sphaeralcea coccinea</i> | scarlet globemallow | | | | | | P | | P | P | | | | | | |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | TSS14-1 | TSS14-2 | TSS14-3 | TSS14-4 | TSS14-5 | TSS14-6 | TSS14-8 | TSS14-9 | TSS14-10 | WT-1 | WT-2 | WT-3 | WT-4 | WT-5 | WT-6 |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 101 | 100 |
| FORBS | | | | | | | | | | | | | | | | |
| <i>Symphotrichum fendleri</i> | Fendler's aster | | | P | | | P | | | | | | | | | |
| <i>Symphotrichum sp</i> | Aster | | | | | | | | | | | | | | | P |
| <i>Taraxacum officinale</i> | Common dandelion | | | P | P | | | P | P | | | | P | | P | |
| <i>Tetratea acaulis</i> | Stemless rubberweed | | | | | | | | | | | | P | | | |
| <i>Tragopogon dubius</i> | Yellow salsify | P | | | | | | | | | | | | | | |
| <i>Tragopogon pratensis</i> | Meadow salsify | | | P | | | | P | | | | | | | | |
| <i>Tragopogon spp.</i> | Salsify | | | | P | | P | | | P | | | | | P | |
| <i>Verbascum thapsus</i> | Common mullein | | | | | P | | P | | | | P | | | | |
| <i>Verbena bracteata</i> | Carpet vervain | | | P | | | | | | | | | | | | P |
| <i>Verbena macdougalii</i> | Spike verbena | P | | | P | | | | | | | | | | | |
| <i>Verbesina encelioides</i> | Golden crownbeard | P | P | | P | P | | | | P | | P | | | | P |
| <i>Zinnia grandiflora</i> | Plains zinnia | | P | | | | | | | | | | | | | |
| Unknown | Unknown | P | P | | | P | | | P | | | | | | | |
| Subtotal - Number of Forb Species | | 22 | 27 | 32 | 21 | 22 | 16 | 20 | 21 | 20 | 8 | 16 | 12 | 8 | 9 | 14 |
| Subtotal - Percent Forb Cover | | 3.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 0.0 | 2.0 | 5.0 | 0.0 | 3.0 |
| GRASSES and GRASS-LIKE PLANTS | | | | | | | | | | | | | | | | |
| <i>Achnatherum (Oryzopsis) hymenoides</i> | Indian ricegrass | 8 | 7 | | 9 | 3 | P | P | P | 2 | P | 13 | 7 | 10 | P | 3 |
| <i>Achnatherum lettermannii</i> | Letterman's needlegrass | | P | | | | | | | | | | | | | |
| <i>Achnatherum robustum (Stipa robusta)</i> | sleepy grass | P | P | | P | P | 1 | P | P | 2 | | 1 | P | P | P | |
| <i>Agropyron cristatum</i> | crested wheatgrass | P | | 3 | | P | P | P | 12 | P | 6 | P | P | | | 1 |
| <i>Aristida purpurea</i> | purple threeawn | P | | | P | P | P | | 1 | | | P | | P | P | |
| <i>Bouteloua curtipendula</i> | Sideoats grama | | P | | | | | | | | | | | | | |
| <i>Bouteloua gracilis</i> | Blue grama | P | P | | P | P | 1 | P | P | P | P | | 2 | P | P | P |
| <i>*Numbers for individual species are percent cover obtained from transects. "P" means the</i> | | | | | | | | | | | | | | | | |
| <i>Bromus tectorum</i> | Cheatgrass | P | P | P | 1 | P | P | P | | | P | P | | | | P |
| <i>Elymus elongatus</i> | tall wheatgrass | P | | | | | | | | P | | | P | | | |
| <i>Elymus longifolius</i> | squirreltail | P | P | 2 | 3 | 5 | 9 | P | P | P | | P | 1 | P | 6.9 | P |
| <i>Elymus hispidus (Agropyron intermedium)</i> | Intermediate wheatgrass | 4 | P | | | P | | P | P | 2 | | | P | P | | P |
| <i>Elymus repens</i> | Quackgrass | | P | | | | | P | | | | | | | | |
| <i>Elymus smithii</i> | western wheatgrass | P | P | P | | P | | P | P | 6 | P | 7 | | 4 | | |
| <i>Elymus spicatus</i> | Bluebunch wheatgrass | | | | | | | | | P | | | | | | |
| <i>Elymus trachycaulus.</i> | Slender wheatgrass | P | | | | | | 1 | P | | | | 3 | | | |
| <i>Heterostipa comata</i> | Needle and thread | | | | | P | | | P | P | 1 | | | | | |
| <i>Hordeum jubatum</i> | Foxtail barley | | | P | | | | P | | | | | | | | |
| <i>Leymus ambiguus</i> | Rocky Mountain wildrye | | P | | | | | | | | | P | 1 | | | |
| <i>Munroa squarrosa</i> | False buffalo grass | | | | | | | | | | P | | | | P | P |
| <i>Muhlenbergia torreyi.</i> | Ring muhly | | P | | | | | | | | | | | | P | |
| <i>Phragmites australis</i> | Common reed | | | | | | | | | | | | | | | |
| <i>Pleuraphis jamesii</i> | James's galleta | | P | | | | | | | | | | | | | |
| <i>Poa pratensis</i> | Kentucky bluegrass | | | | | | | P | | | | | | | | |
| <i>Psathyrostachys juncea</i> | Russian wildrye | | | | | P | | | | | 5 | | | | | |
| <i>Schedonnardus paniculatus</i> | tumble grass | | | | P | | P | | P | | | | | P | | |
| <i>Schizachyrium scoparium</i> | little bluestem | | P | | | | | | | | | | | | | |
| <i>Sporobolus airoides</i> | Alkali sacaton | | P | | | | | | | | | | P | | | |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | TSS14-1 | TSS14-2 | TSS14-3 | TSS14-4 | TSS14-5 | TSS14-6 | TSS14-8 | TSS14-9 | TSS14-10 | WT-1 | WT-2 | WT-3 | WT-4 | WT-5 | WT-6 |
|---|---------------|-------------|-------------|------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 101 | 100 |
| GRASSES and GRASS-LIKE PLANTS | | | | | | | | | | | | | | | | |
| <i>Sporobolus cryptandrus</i> | Sand dropseed | 5 | 4 | P | 3 | 7 | 2 | P | P | 2 | P | 7 | P | 1 | 3 | 10 |
| Unknown 1 | Unknown | | P | | | | | | | | | | | | | |
| Subtotal - Number of Grass Species | | 12 | 18 | 7 | 8 | 12 | 9 | 14 | 12 | 11 | 10 | 9 | 11 | 9 | 8 | 8 |
| Subtotal - Percent Grass Cover | | 17.0 | 11.0 | 5.0 | 16.0 | 15.0 | 13.0 | 1.0 | 13.0 | 14.0 | 12.0 | 28.0 | 14.0 | 15.0 | 9.9 | 14.0 |
| Total Number of Species | | | | | | | | | | | | | | | | |
| | | 38 | 55 | 42 | 33 | 36 | 30 | 37 | 38 | 35 | 31 | 39 | 45 | 27 | 25 | 38 |
| Total Percent Cover | | | | | | | | | | | | | | | | |
| | | 20.0 | 17.0 | 5.0 | 35.0 | 29.0 | 19.0 | 1.0 | 16.0 | 16.0 | 19.0 | 31.0 | 24.0 | 28.0 | 17.8 | 23.0 |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | CR-2 | CR-4 | CR-5 | CR-7 | CR-8 | CR-10 | CR-11 | CR-13 | CR-14 | WR-1 | WR-2 | WR-3 | WR-4 | WR-5 | WR-6 | WR-7 | WR-8 | WR-9 | WR-10 |
|---|--------------------------|------------|-------------|------------|------------|------------|------------|-------------|------------|------------|-------------|------------|-------------|------------|-------------|------------|------------|------------|-------------|------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 100 | 100 | 100 |
| TREES | | | | | | | | | | | | | | | | | | | | |
| <i>Juniperus scopulorum</i> | Rocky Mountain juniper | | | | | | | | P | P | P | | | | | | | | | |
| <i>Pinus edulis</i> | Pinon pine | | | | | | | P | | | | | | | | | | | | |
| <i>Ulmus pumila</i> | Siberian Elm | | | | | P | | | | | P | | | | | | | | | |
| Subtotal - Number of Tree Species | | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal - Percent Tree Cover | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SHRUBS | | | | | | | | | | | | | | | | | | | | |
| <i>Artemisia frigida</i> | Fringed sage | | P | | | | | | P | | 1 | P | P | | | | | | | |
| <i>Artemisia tridentata</i> | Big sagebrush | | p | | P | 5 | 4 | 19 | 2 | P | 10 | 2 | 3 | P | 3 | | P | | | |
| <i>Clematis ligusticifolia</i> | Western virgin's bower | | | P | | P | | | P | | P | | | | P | | | | | |
| <i>Ericameria depressa</i> | Long-flower rabbitbrush | | | | | | | | | | | P | P | | | | | | | |
| <i>Ericameria filifolia</i> | Greene's rabbitbrush | | P | | 1 | P | P | P | P | P | 1 | P | P | P | | | P | | | |
| <i>Ericameria nauseosa</i> | rubber rabbitbrush | 9 | 27 | 3 | 4 | 1 | 5 | P | 5 | 1 | 11 | 4 | 10 | 4 | 11 | 4 | 8.1 | 4 | 11 | P |
| <i>Gutierrezia sarothrae</i> | Broom snakeweed | P | P | | P | P | P | P | 1 | P | P | P | P | P | | | P | | | |
| <i>Opuntia polyacantha</i> | Plains prickly pear | | | | | | P | P | P | | | P | | | | | | | | |
| <i>Tetradymia canescens</i> | Spineless horsebrush | | | | P | | | | | | | | | | | | | | | |
| <i>Yucca glauca</i> | Plains yucca | | | | | | | P | | | | | | | | | | | | |
| Subtotal - Number of Shrub Species | | 2 | 5 | 2 | 5 | 5 | 5 | 6 | 7 | 4 | 6 | 7 | 7 | 4 | 3 | 1 | 4 | 1 | 1 | 1 |
| Subtotal - Percent Shrub Cover | | 9.0 | 27.0 | 3.0 | 5.0 | 6.0 | 9.0 | 19.0 | 8.0 | 1.0 | 23.0 | 6.0 | 13.0 | 4.0 | 14.0 | 4.0 | 8.1 | 4.0 | 11.0 | 0.0 |
| FORBS | | | | | | | | | | | | | | | | | | | | |
| <i>Agoseris sp.</i> | Goat chicory | | | | | P | | | | | P | | | | | | | P | | |
| <i>Amaranthus blitoides</i> | Prostrate pigweed | | | P | | | | | | P | | | | P | P | 2 | P | P | | P |
| <i>Amaranthus hybridus</i> | Smooth amaranth | P | | P | | P | | | | | P | | P | | P | P | | | | P |
| <i>Arabis divaricarpa</i> | Spreading rock-cress | | | | | | | P | | | | | | | | | | | | |
| <i>Artemisia campestris</i> | field sagewort | | | | | | | | | | P | P | | | | | | | | |
| <i>Artemisia dracunculus</i> | Tarragon | P | | | | | | | | | | | | | | | | | | |
| <i>Asclepias speciosa</i> | Showy milkweed | | | | | P | | | | | P | | | | | | | | | |
| <i>Astragalus sp.</i> | Milkvetch | P | P | | | | | | | | | | | | | | | | | |
| <i>Bahia dissecta</i> | Ragged-leaf bahia | | | | | | | | | | P | | P | | P | | | | | |
| <i>Brickellia eupatorioides</i> | False boneset | | | | | | | | | P | | | | | | | | | | |
| <i>Chaetopappa ericoides</i> | Sand aster | | | | | | | | P | | | | | | | | | | | |
| <i>Chamaesyce serpyllifolia</i> | Thyme-leaf spurge | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | 1 | P | P |
| <i>Chenopodium berlandieri</i> | Pitted goosefoot | | | | | | P | | P | | P | | P | P | | | | | | P |
| <i>Chenopodium leptophyllum</i> | Narrowleaf goosefoot | | | | | | | | | P | | | | | | | | | | |
| <i>Cirsium arvense</i> | Canada thistle | P | | | | | | | | | | | | | | | | | | |
| <i>Cirsium ochrocentrum</i> | Yellow-spined thistle | | | | | | | | | | | | | P | | | | | | |
| <i>Cleome serrulata</i> | Rocky Mountain beeplant | | | | | | | | | P | | | | P | | P | | | P | |
| <i>Cosmos parviflorus</i> | Southwestern cosmos | | | | | P | | | | | | | | | | | | | | |
| <i>Descurainia ramosissima</i> | Villa grove tansymustard | | | | | | P | P | | | | | | | | | | | | |
| <i>Dyssodia papposa</i> | Fetid-marigold | | | | P | P | | | P | | P | | P | | P | | | | | |
| <i>Erigeron divergens</i> | Spreading fleabane | | | | | | | | P | | P | P | | | | | | | | |
| <i>Eriogonum jamesii</i> | James's buckwheat | | | | | | | | P | | | | | | | | | | | |
| <i>Eriogonum microthecum</i> | Simpson's wild-buckwheat | | | | | | | | P | | | | | | | | | | | |
| <i>Glycyrrhiza lepidota</i> | Licorice | | | | | | | | | | | | | | | | | P | | |
| <i>Helianthus annuus</i> | common sunflower | | P | P | P | P | | | P | P | P | | | | | | P | | | |
| <i>Ipomopsis laxiflora</i> | Blue trumpets | | P | | P | | P | P | P | | | P | | | | | | | | |
| <i>Kochia scoparia</i> | Mexican-fireweed, kochia | P | | P | P | P | | P | P | P | P | P | P | P | P | 1 | | P | P | P |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | CR-2 | CR-4 | CR-5 | CR-7 | CR-8 | CR-10 | CR-11 | CR-13 | CR-14 | WR-1 | WR-2 | WR-3 | WR-4 | WR-5 | WR-6 | WR-7 | WR-8 | WR-9 | WR-10 |
|--|-----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 100 | 100 | 100 |
| FORBS | | | | | | | | | | | | | | | | | | | | |
| <i>Artemisia campestris</i> | field sagewort | | | | | | | | | | P | P | | | | | | | | |
| <i>Lactuca tatarica</i> | Russian blue lettuce | | | | | | | | | | | | | | | | | P | P | P |
| <i>Lappula occidentalis (redowskii)</i> | Spiny sheepbur | | | | | P | 1 | P | P | | P | 1 | | | | | | | | |
| <i>Lepidium montanum</i> | Jone's pepperweed | P | | | | | | | | | | | | | | | | | | |
| <i>Lupinus argenteus</i> | Silvery lupine | | | | 1 | | | | | | | | P | | P | | P | | | |
| <i>Lygodesmia juncea</i> | Rush skeleton plant | | | | | | | P | P | | | | | | | | | | | P |
| <i>Machaeranthera canescens</i> | Hoary tansyaster | | | | | | | P | P | P | P | P | | | | | | | | |
| <i>Machaeranthera pinnatifida</i> | tansyleaf tansyaster | P | | P | | P | P | P | P | P | P | P | | P | P | P | P | P | | |
| <i>Medicago sativa</i> | alfafa | | | | P | | | | | | | | | | | | | | | |
| <i>Mentzelia laciniata</i> | Cut-leaf blazing-star | P | | | | | | | | | | | | | | P | | P | 3 | 4 |
| <i>Mertensia lanceolata</i> | Prairie bluebells | | | | | | | | P | | | | P | P | | | | P | | |
| <i>Mirabilis linearis</i> | Narrow-leaved desert four o'clock | P | | | P | | P | | P | P | P | | P | | | | P | | | |
| <i>Oenothera coronopifolia</i> | Cut-leaf evening primrose | P | P | P | P | P | | | P | P | P | P | P | P | | | | P | P | P |
| <i>Orobanche lucoviciana</i> | Louisiana broomrape | | P | | | | | | | | | | | P | P | | | | P | P |
| <i>Physalis foetans</i> | New Mexico groundcherry | | | | P | | | | P | P | | | P | | P | P | P | | | |
| <i>Picradeniopsis oppositifolia</i> | False bahia | | | | | | | | | | P | | | | | | | | | |
| <i>Portulaca oleracea</i> | Garden purslane | P | P | P | P | P | P | | P | P | P | P | P | P | 5 | 9 | P | P | P | P |
| <i>Potentilla sp.</i> | cinquefoil | | | | | | | | P | | | | | | | | | | | |
| <i>Rumex salicifolius</i> | Willow dock | | | | | | | | | | P | | | | | | | | | |
| <i>Salsola collina</i> | Russian thistle | P | | | | P | | | | | | | | P | P | P | P | P | P | |
| <i>Salsola tragus (iberica)</i> | Russian thistle | P | P | P | P | P | | | P | P | P | P | P | P | 4 | 5 | P | 4 | 1 | P |
| <i>Salvia reflexa</i> | Lanceleaf sage | | | | | P | | | P | P | | | P | | P | | | | | |
| <i>Schkurhia multiflora</i> | New Mexico threadleaf | | | | P | P | P | | P | | P | | | | | | | | | |
| <i>Senecio spartioides</i> | Broom ragwort | | | | | | P | P | | | P | | | | | | | | | |
| <i>Sisymbrium altissimum</i> | Tall hedgemustard | | | | | | | P | | | | | | | | | | | | |
| <i>Solanum rostratum</i> | Buffalo-bur | P | | | | | | | | | P | | | | | | | | | |
| <i>Solanum triflorum</i> | Cut-leaf nightshade | P | | | P | P | P | P | P | P | P | P | | | P | P | P | P | | P |
| <i>Solidago nemoralis</i> | Gray goldenrod | | | | | | | | P | | | | | | | | | | | |
| <i>Sphaeralcea coccinea</i> | scarlet globemallow | P | | | P | P | P | P | P | P | P | P | P | P | P | | | P | | |
| <i>Symphotrichum sp.</i> | Aster | | | | | P | | | | | | | | | | | | | | |
| <i>Taraxacum officinale</i> | Common dandelion | P | | | | | | | | | | | | | | | | | | |
| <i>Tragopogon dubius</i> | Yellow salsify | | | | | | | | | | | | | | | | | | | |
| <i>Tragopogon pratensis</i> | Meadow salsify | P | | | | | | | | | | | | | | | | | | P |
| <i>Verbascum thapsus</i> | Common mullein | | | | | | | | P | | P | | | | P | | | | | |
| <i>Verbena bracteata</i> | Carpet vervain | | | | P | | P | | P | | P | P | P | | P | | | | | |
| <i>Verbena macdougalii</i> | Spike verbena | | | | | P | | | | | | P | | | P | | | | | |
| <i>Verbesina encelioides</i> | Golden crownbeard | | | | P | | P | | P | P | P | | P | P | P | 4 | 4 | | P | P |
| <i>Vicia americana</i> | American vetch | | | | P | | | | | | | | | | | | | | | P |
| unknown | Unknown | | | | | P | | | P | P | | P | P | | | | | | | |
| Subtotal - Number of Forb Species | | 19 | 8 | 9 | 18 | 21 | 15 | 16 | 27 | 18 | 28 | 16 | 18 | 15 | 20 | 13 | 13 | 14 | 13 | 14 |
| Subtotal - Percent Forb Cover | | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 9.0 | 21.0 | 4.0 | 5.0 | 4.0 | 4.0 |

**Table 10-4
PLANT SPECIES COVER AND OCCURRENCE (TAILINGS FACILITY)***

| Scientific Name | Common Name | CR-2 | CR-4 | CR-5 | CR-7 | CR-8 | CR-10 | CR-11 | CR-13 | CR-14 | WR-1 | WR-2 | WR-3 | WR-4 | WR-5 | WR-6 | WR-7 | WR-8 | WR-9 | WR-10 |
|---|---------------------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| Number of Transect Points | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 99 | 100 | 100 | 100 |
| GRASSES and GRASS-LIKE PLANTS | | | | | | | | | | | | | | | | | | | | |
| <i>Achnatherum (Oryzopsis) hymenoides</i> | Indian ricegrass | P | | | | | | | | | | | | | | | | | P | |
| <i>Achnatherum (Stipa) robustum</i> | sleepy grass | P | P | P | 1 | P | | | 1 | P | P | | P | | 1 | | P | | P | |
| <i>Artemisia campestris</i> | field sagewort | | | | | | | | | | P | P | | | | | | | | |
| <i>Agropyron cristatum</i> | crested wheatgrass | | | | P | P | 2 | 2 | P | | P | P | | P | | | 1 | | | |
| <i>Aristida purpurea</i> | Purple threeawn | | | | | | P | P | | | | | | | | | | | | |
| <i>Bouteloua gracilis</i> | Blue grama | P | P | P | P | 3 | 2 | 1 | P | 5 | P | P | P | P | P | 4 | P | P | P | |
| <i>Carex sp.</i> | Sedge | | | P | | P | | | P | | | P | P | | P | | | | | |
| <i>Distichlis spicata</i> | Inland saltgrass | P | P | | | | | | | | | | | | | | | | | |
| <i>Elymus canadensis</i> | Canada wildrye | | | | | | | | | | P | | | | | | | | | |
| <i>Elymus longifolius</i> | squirreltail | P | P | P | P | P | | P | | | 1 | | | P | | | | | | P |
| <i>Elymus smithii</i> | Western wheatgrass | 1 | 1 | P | P | | | | P | P | | P | P | | P | P | P | 1 | 1 | P |
| <i>Juncus arcticus</i> | baltic rush | 9 | | | | | | | | | P | P | | | | | | P | 1 | P |
| <i>Muhlenbergia richardsonis</i> | Mat muhley | P | | P | P | | | | P | P | P | P | P | P | P | P | P | P | P | |
| <i>Muhlenbergia torreyi</i> | Ring muhly | P | P | | | P | P | P | P | | | P | | P | | | | P | | P |
| <i>Munroa squarrosa</i> | False buffalo grass | P | P | P | P | P | P | P | P | P | P | P | P | P | 4 | 2 | 6.1 | 2 | P | P |
| <i>Panicum capillare</i> | Witchgrass | | | | | | | | P | | | | | | | | | | | |
| <i>Pleuraphis jamesii</i> | James's galleta | P | | | | | | | | | | | | | | | | | | |
| <i>Schedonnardus paniculatus</i> | Rumblegrass | P | | | | | | | P | | P | 2 | | P | | | | | | |
| <i>Sporobolus airoides</i> | Alkali sacaton | 6 | P | | | | | | | | | | | | | | | P | 2 | P |
| <i>Sporobolus cryptandrus</i> | Sand dropseed | P | 1 | P | P | 1 | P | P | 1 | P | 2 | P | 1 | 6 | 1 | P | 1 | P | P | P |
| Unknown | Unknown | | | | | | | | | | | | | | | | | | | |
| Subtotal - Number of Grass Species | | 14 | 9 | 8 | 8 | 8 | 6 | 7 | 11 | 6 | 10 | 10 | 7 | 8 | 7 | 5 | 7 | 8 | 9 | 7 |
| Subtotal - Percent Grass Cover | | 16.0 | 2.0 | 0.0 | 1.0 | 4.0 | 4.0 | 3.0 | 2.0 | 5.0 | 3.0 | 2.0 | 1.0 | 6.0 | 6.0 | 6.0 | 8.1 | 3.0 | 4.0 | 0.0 |
| Total Number of Species | | 35 | 22 | 19 | 31 | 35 | 26 | 30 | 46 | 29 | 46 | 33 | 32 | 27 | 30 | 19 | 24 | 23 | 23 | 22 |
| Total Percent Cover | | 25.0 | 29.0 | 3.0 | 7.0 | 10.0 | 14.0 | 22.0 | 10.0 | 6.0 | 26.0 | 9.0 | 14.0 | 10.0 | 29.0 | 31.0 | 20.2 | 12.0 | 19.0 | 4.0 |

*Numbers for individual species are percent cover obtained from transects. "P" means the species was present at the sample site but not recorded on the transect.

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--------------------------------|-------------|--------------------------------|-------------------------|------------------|-------------|------------|------------|-------------|-------------------------|------------|-------------|-------------|-------------|---|---|--|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Reference (Cater Ranch) | | | | | | | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | | | | | | | |
| WRBS-1 | CR-11 | Sagebrush | 6/5/2003, 9/10/2003 | 0 | 19 | 0 | 3 | 22 | 1 | 6 | 16 | 7 | 30 | Sagebrush looks excellent, 1-3 feet high; blue grama in poor condition; Crested wheatgrass good but mostly under shrubs; numerous dead grass clumps | Numerous cattle tracks, few cowpies. Gopher trapping site. | Prickly pear common. |
| WRBS-2 | CR-8 | Open sagebrush | 5/29/2003, 9/7/2003 | 0 | 6 | 0 | 4 | 10 | 1 | 5 | 21 | 8 | 35 | Big sagebrush and rabbitbrush have only 10% of normal foliage; many old rabbitbrush dead but many young ones; blue grama very short | Meadowlark nest. Horned lizard. Harvester ants common. Old cowpies. Rodent holes. | Ditch crosses east-west through site, has atypical vegetation including scattered Siberian elm, western virgin's-bower, and showy milkweed. Annuals common in fall, about 20% cover, mostly false buffalo grass, Chameasyce, and New Mexico threadleaf |
| WRBS-3 | CR-10 | Open sagebrush/ rabbitbrush | 5/31/2003, 9/10/2003 | 0 | 9 | 1 | 4 | 14 | 0 | 5 | 15 | 6 | 26 | Rubber rabbitbrush has about 60% of normal foliage, big sagebrush about 80%, many dead grass clumps | Crested wheatgrass has few flower heads because grazed; Lots of old cowpies, some old horse droppings. Rodent holds, harvested ants. Large horned lizard. | Centerpoint about 35 feet south of property line. Sagebrush more dense close to fence and very dense on property to north. Many annuals in fall. |
| Mean | | | | 0 | 11.3 | 0.3 | 3.7 | 15.3 | 0.7 | 5.3 | 17.3 | 7.0 | 30.3 | | | |
| Rubber Rabbitbrush | | | | | | | | | | | | | | | | |
| WRRR-1 | CR-4 | Rabbitbrush | 5/31/2003, 9/10/2003 | 0 | 27 | 0 | 2 | 29 | 0 | 5 | 8 | 9 | 22 | Mostly healthy, but blue grama and alkali sacaton in large poor condition mats. Rabbitbrush very tall (3-5 feet) with dense foliage and branching. | Harvester ants, cattle tracks and old cowpies | Site probably has groundwater within root depth of rabbitbrush and grasses. |
| WRRR-2 | WR-2 | Open rabbitbrush | 6/5/2003, 9/10/2003 | 0 | 6 | 1 | 2 | 9 | 0 | 7 | 16 | 10 | 33 | Rabbitbrush has about 60% of normal foliage, sagebrush is healthy, many dead grass clumps | Lots of cowpies. Harvester ants. | Presence of Baltic rush and abandoned large canal to east suggest site was once irrigated hay/pasture. Abundant annuals in fall. |
| WRRR-3 | CR-13 | Open rabbitbrush | 6/2/2003, 9/10/03 | 0 | 8 | 0 | 2 | 10 | 1 | 7 | 27 | 11 | 46 | Rabbitbrush as 10% or less of normal foliage, sagebrush about 50%, lots of old dead grass clumps, young rabbitbrush | Cowpies, harvester ants | Site is just south of irrigation ditch |
| Mean | | | | 0 | 13.7 | 0.3 | 2.0 | 16.0 | 0.3 | 6.3 | 17.0 | 10.0 | 33.7 | | | |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--|-------------|--------------------------------|-------------------------|------------------|-------------|------------|------------|-------------|-------------------------|------------|-------------|------------|-------------|---|---|---|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | | | | | |
| Crested Wheatgrass | | | | | | | | | | | | | | | | |
| WRCW-1 | CR-10 | Open sagebrush/ rabbitbrush | 5/31/2003, 9/10/2003 | 0 | 9 | 1 | 4 | 14 | 0 | 5 | 15 | 6 | 26 | Rubber rabbitbrush has about 60% of normal foliage, big sagebrush about 80%, many dead grass clumps | Crested wheatgrass has few flower heads because grazed; Lots of old cowpies, some old horse droppings. Rodent holes, harvester ants. Large horned lizard. | Centerpoint about 35 feet south of property line. Sagebrush more dense close to fence and very dense on property to north. |
| WRCW-2 | CR-11 | Sagebrush | 6/5/2003, 9/10/2003 | 0 | 19 | 0 | 3 | 22 | 1 | 6 | 16 | 7 | 30 | Sagebrush looks excellent, 1-3 feet high; blue grama in poor condition; Crested wheatgrass good but mostly under shrubs; numerous dead grass clumps | Numerous cattle tracks, few cowpies. Gopher trapping site. | Prickly pear common. |
| WRCW-3 | WR-2 | Rabbitbrush | 6/5/2003, 9/10/2003 | 0 | 6 | 1 | 2 | 9 | 0 | 7 | 16 | 10 | 33 | Rabbitbrush has about 60% of normal foliage, sagebrush is healthy, many dead grass clumps | Lots of cowpies. Harvester ants. | Presence of Baltic rush and abandoned large canal to east suggest site was once irrigated hay/pasture |
| Mean | | | | 0 | 11.3 | 0.7 | 3.0 | 15.0 | 0.3 | 6.0 | 15.7 | 7.7 | 29.7 | | | |
| Sleepy Grass | | | | | | | | | | | | | | | | |
| WRSG-1 | WR-1 | Sagebrush- Rabbitbrush | 6/2/2003, 9/10/2003 | 0 | 23 | 0 | 3 | 26 | 2 | 6 | 28 | 10 | 46 | Rabbitbrush mostly defoliated, sagebrush mostly not, grasses healthy | Grazing animals have pulled up and discarded squirreltail. Harvester ants | |
| WRSG-2 | WR-3 | Sagebrush- rabbitbrush | 5/29/2003, 9/10/2003 | 0 | 13 | 0 | 1 | 14 | 0 | 7 | 18 | 7 | 32 | Much of rabbitbrush is dead. | Cottontail, horned lizard, lots of small burrows, horned lark, harvester ants, old cowpies | Shrubs to 4 foot tall. Grass cover higher than measured on transect, 2-3%. Ditch 30 feet from center point. |
| WRSG-3 | CR-7 | Open rabbitbrush | 5/29/2003, 9/10/2003 | 0 | 5 | 1 | 1 | 7 | 0 | 5 | 18 | 8 | 31 | Rabbitbrush mostly dead or killed to base, other plants healthy but small | Old cowpies | Very barren looking in spring. Area is just north of abandoned irrigation pond. Many annuals in September. |
| Mean | | | | 0 | 13.7 | 0.3 | 1.7 | 15.7 | 0.7 | 6.0 | 21.3 | 8.3 | 36.3 | | | |
| Western Wheatgrass | | | | | | | | | | | | | | | | |
| WRWW-1 | CR-2 | Rabbitbrush and meadow | 6/3/2003, 9/7/2003 | 0 | 9 | 0 | 16 | 25 | 0 | 2 | 19 | 14 | 35 | Mostly good, blue grama in poor condition. Rabbitbrush has good foliage. | Many cowpies. | Site probably has groundwater within rooting zone of meadow species such as Sporobolus airoides and Juncus balticus. Annuals relatively sparse on September 7, about 3% cover, mostly common purslane and thymeleaf spurge. |
| WRWW-2 | CR-13 | Open rabbitbrush | 6/2/2003, 9/10/2003 | 0 | 8 | 0 | 2 | 10 | 1 | 7 | 27 | 11 | 46 | Rabbitbrush has 10% or less of normal foliage, sagebrush about 50%, lots of old dead grass clumps, young rabbitbrush | Cowpies, harvester ants | Site is just south of irrigation ditch |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--|-------------|--|-------------------------|------------------|-------------|------------|------------|-------------|-------------------------|------------|-------------|-------------|-------------|--|--|--|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | | | | | |
| WRWW-3 | CR-4 | Rabbitbrush | 5/31/2003, 9/10/2003 | 0 | 27 | 0 | 2 | 29 | 0 | 5 | 8 | 9 | 22 | Mostly healthy, blue grama and alkali sacaton in large poor condition mats. Rabbitbrush very tall (3-5 feet) with dense foliage and branching. | Harvester ants, cattle tracks and old cowpies | Site probably has groundwater within root depth of rabbitbrush and grasses. |
| Mean | | | | 0 | 14.7 | 0.0 | 6.7 | 21.3 | 0.3 | 4.7 | 18.0 | 11.3 | 34.3 | | | |
| Blue Grama | | | | | | | | | | | | | | | | |
| WRBG-1 | CR-2 | Rabbitbrush and meadow | 6/3/2003, 9/7/2003 | 0 | 9 | 0 | 16 | 25 | 0 | 2 | 19 | 14 | 35 | Mostly good, blue grama in poor condition. Rabbitbrush has good foliage. | Many cowpies. | Site probably has groundwater within rooting zone of meadow species such as Sporobolus airoides and Juncus balticus. Annuals relatively sparse on September 7, about 3% cover, mostly common purslane and thymeleaf spurge. |
| WRBG-3 | CR-14 | Open rabbitbrush, blue grama, and "barren" | 6/2/2003, 9/7/2003 | 0 | 1 | 0 | 5 | 6 | 1 | 4 | 18 | 6 | 29 | Rabbitbrush mostly killed to base and sprouting from base, 95% of normal foliage missing, blue grama somewhat sparse | Lots of cowpies. Harvester ants. West side appears to be former prairie dog colony. Cattle bedding occurs under lone juniper, soil deflated around base. Prairie dog colony. | Site heterogeneous. "Barren" is mostly Kochia and cowpies. Latir Creek crosses site, does not have distinct vegetation or topography. |
| WRBG-4 | CR-8 | Open sagebrush | 5/29/2003, 9/7/2003 | 0 | 6 | 0 | 4 | 10 | 1 | 5 | 21 | 8 | 35 | Big sagebrush and rabbitbrush have only 10% of normal foliage; many old rabbitbrush dead but many young ones; blue grama very short | Meadowlark nest. Horned lizard. Harvester ants common. Old cowpies. | Ditch crosses east-west through site, has atypical vegetation including scattered Siberian elm, western virgin's-bower, and showy milkweed. Annuals common in fall, about 20% cover, mostly false buffalo grass, Chameasyce, and New Mexico threadleaf |
| Mean | | | | 0 | 5.3 | 0.0 | 8.3 | 13.7 | 0.7 | 3.7 | 19.3 | 9.3 | 33.0 | | | |
| Sand Dropseed | | | | | | | | | | | | | | | | |
| WRSD-1R | CR-5 | "Barren" | 5/29/2003, 9/7/2003 | 0 | 3 | 0 | 0 | 3 | 0 | 2 | 9 | 8 | 19 | All plants healthy, except spring-germinated kochia was dead, probably from dry conditions | Old cowpies, cattle bedding areas, cattle trails. Harvester ants. Abandoned prairie dog burrows. | Remarkably low cover and diversity. May be abandoned agricultural land. Lots of dead kochia, older plants from previous year, "zillions" of 1/4 inch tall dead kochia germinated earlier in the spring. About 12% cover of annuals on September 7. |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--|-------------|------------------------------------|----------------------|------------------|------------|-------------|------------|-------------|-------------------------|------------|-------------|------------|-------------|--|---|---|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | | | | | |
| WRSD-2 | WR-4 | Open rabbitbrush/grass | 6/4/2004, 9/10/2003 | 0 | 4 | 0 | 6 | 10 | 0 | 4 | 15 | 8 | 27 | Rabbitbrush mostly healthy | Cowpies. One live prairie dog and more abandoned burrows. Several harvester ant mounds | Grassy transition between open rabbitbrush to east and barren at CR-5 |
| WRSD-3 | CR-10 | Open sagebrush/rabbitbrush | 5/31/2003, 9/10/2003 | 0 | 9 | 1 | 4 | 14 | 0 | 5 | 15 | 6 | 26 | Rubber rabbitbrush has about 60% of normal foliage, big sagebrush about 80%, many dead grass clumps | Crested wheatgrass has few flower heads because grazed; Lots of old cowpies, some old horse droppings. Rodent holes, harvester ants. Large horned lizard. | Centerpoint about 35 feet south of property line. Sagebrush more dense close to fence and very dense on property to north. |
| Mean | | | | 0 | 5.3 | 0.3 | 3.3 | 9.0 | 0.0 | 3.7 | 13.0 | 7.3 | 24.0 | | | |
| Golden Crownbeard | | | | | | | | | | | | | | | | |
| WRAS-1 | WR-6 | Blue grama | 9/9/2003 | 0 | 4 | 21 | 6 | 31 | 0 | 1 | 13 | 5 | 19 | Good. High forb cover is due to this being a September sample, with relatively high cover of annual herbs from the monsoon rains | Lots of cattle tracks, grazed plants, numerous burrows and harvester ant mounds. Coyote tracks, jackrabbit. Partly an abandoned prairie dog colony? | High forb cover is due to this being a September sample, with relatively abundant annual herbs after the monsoon rains. 1/3 of grass cover is annuals (false buffalo grass) |
| WRAS-2 | WR-5 | Rabbitbrush, "barren" | 9/9/2003 | 0 | 14 | 9 | 6 | 29 | 0 | 3 | 20 | 7 | 30 | Good | Lots of grazing activity - tracks, cowpies. | Probably former agricultural area, old ditch runs north-south just south of centerpoint. Highest perennial grass cover between old fence and ditch. High forb cover is annual weeds related to late summer monsoon. 2/3 of grass cover is annuals (false buffalo grass) |
| WRAS-3 | WR-7 | Open rabbitbrush | 9/9/2003 | 0 | 8.1 | 4 | 8.1 | 20.2 | 0 | 4 | 13 | 7 | 24 | Good. Rabbitbrush 1 - 3 feet high. | Coyote diggings, tracks, some harvester ant mounds, little evidence of cattle | Old agricultural ditch present. Sampled in fall. 3/4 of grass cover is annuals (false buffalo grass). Annual cover is all golden crownbeard (site selected to sample this species). |
| Mean | | | | 0 | 8.7 | 11.3 | 6.7 | 26.7 | 0.0 | 2.7 | 15.3 | 6.3 | 24.3 | | | |
| Cut-leaf Blazing-star | | | | | | | | | | | | | | | | |
| WRFO-1 | WR-8 | Open rabbitbrush, meadow, "barren" | 9/9/2003 | 0 | 4 | 5 | 3 | 12 | 0 | 1 | 14 | 8 | 23 | Good. Rabbitbrush in bloom. More old blazing-star than present this year. | Some cowpies, small rodent burrows, harvester ants. Blazing-star in weed barren where Russian thistle dominates. | Rabbitbrush are large, rounded, spaced. Large abandoned irrigation ditch on east side. All forb cover is annual, and 2/3 of grass cover is annuals. Barren dominated by Russian thistle |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--|-------------|------------------------------------|---------------------|------------------|------------|------------|-------------|-------------|-------------------------|------------|-------------|-------------|-------------|---|---|---|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Reference (Cater Ranch) (cont.) | | | | | | | | | | | | | | | | |
| WRFO-2 | WR-9 | Rabbitbrush | 9/9/2003 | 0 | 11 | 4 | 4 | 19 | 0 | 1 | 13 | 9 | 23 | Good. Rabbitbrush 3-5 feet tall, very robust, flowering. | Gopher mounds, one harvester ant mound. Some cattle use - tracts and cowpies. | Baltic rush, western wheatgrass, and a barren each occupy about 5% of site. Forb cover mostly cut-leaf blazing-star |
| WRFO-3 | WR-10 | Rabbitbrush, "barren" | 9/9/2003 | 0 | 0 | 4 | 0 | 4 | 0 | 1 | 14 | 7 | 22 | Good. Rabbitbrush 4-5 feet tall, flowering. Many more old dead blazing-star from previous years compared to this year. | Little evidence of cattle use | Large abandoned agricultural ditch on east side. About 1% Baltic rush cover not on transect. |
| Mean | | | | 0 | 5.0 | 4.3 | 2.3 | 11.7 | 0.0 | 1.0 | 13.7 | 8.0 | 22.7 | | | |
| Reference Mean | | | | 0 | 9.9 | 2.0 | 4.2 | 16.0 | 0.3 | 4.4 | 16.7 | 8.4 | 29.8 | | | |
| Tailings Facility | | | | | | | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | | | | | | | |
| WTBS-1 | TSS14-4 | Open to dense rabbitbrush | 6/4/2003, 9/10/2003 | 0 | 19 | 0 | 16 | 35 | 1 | 3 | 21 | 8 | 33 | Mostly good, scattered dead grass clumps | Lots of rodent holes; large den (coyote?) in old pipe, rodent trail between half-buried pipe sections; few harvester ant nests | |
| WTBS-2 | TSS14-9 | Open shrub savanna | 5/28/2003, 9/8/2003 | 0 | 3 | 0 | 13 | 16 | 1 | 4 | 21 | 12 | 38 | Some large alfalfa plants are dead; some sagebrush heavily hedged. Shrubs to 3 feet tall, grasses 4-8 inches, alfalfa about 1 foot, half of final height. | Many elk and deer droppings, elk especially common; one harvester ant colony; rabbit, gophers abundant - 5% of surface. Yellow-headed blackbird at nearby lake. | |
| WTBS-3 | TSS14-10 | Grassland | 5/28/2003, 9/8/2003 | 0 | 1 | 1 | 14 | 16 | 0 | 4 | 20 | 11 | 35 | Good. Grasses mostly 8-10 inches tall, shrubs 3 feet. | Ground squirrel, numerous gopher mounds. | Shrub cover about 1%, not caught on transect. Vegetation somewhat lower on gopher mounds than adjacent gravelly areas. |
| Mean | | | | 0 | 7.7 | 0.3 | 14.3 | 22.3 | 0.7 | 3.7 | 20.7 | 10.3 | 35.3 | | | |
| Rubber Rabbitbrush | | | | | | | | | | | | | | | | |
| WTRR-1 | TSS14-2 | Rabbitbrush, grass, tailings playa | 6/3/2003, 9/10/2003 | 0 | 6 | 0 | 11 | 17 | 4 | 6 | 27 | 18 | 55 | Good, except small cottonwoods and most sandbar willow dead or dying. | Elk sign, lots of burrows | Heterogeneous site. High plant species diversity. Presence of dead sandbar willow, cottonwoods, and other species probably due to moisture from past tailing deposition, now drier. Site appears to include some areas of natural ground. |
| WTRR-2 | TSS14-5 | Rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 13 | 1 | 15 | 29 | 0 | 2 | 22 | 12 | 36 | Some alfalfa and Indian ricegrass are senescent. Rabbitbrush has about 60% of normal foliage, some are dead. Rabbitbrush 2 feet or less tall. | Horse, elk, and cattle droppings. Lots of elk sign. Gophers | Most of plant diversity is south of diagonal road. Tailing partly vegetated. Cover and diversity similar on 9/8/2003 to early June. |
| WTRR-3 | TSS14-6 | Open rabbitbrush | 5/30/2003, 9/7/2003 | 0 | 6 | 0 | 13 | 19 | 0 | 5 | 16 | 9 | 30 | Rabbitbrush has about half of normal foliage, but appears healthy | Mule deer droppings. Some active gopher mounds. | This site looked about the same in early September as in late May. |
| Mean | | | | 0 | 8.3 | 0.3 | 13.0 | 21.7 | 1.3 | 4.3 | 21.7 | 13.0 | 40.3 | | | |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|---------------------------|-------------|-----------------------------|---------------------|------------------|------------|------------|-------------|-------------|-------------------------|------------|-------------|-------------|-------------|---|---|---|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Tailings Facility | | | | | | | | | | | | | | | | |
| Crested Wheatgrass | | | | | | | | | | | | | | | | |
| WTCW-1 | TSS14-5 | Rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 13 | 1 | 15 | 29 | 0 | 2 | 22 | 12 | 36 | Some alfalfa and Indian ricegrass are senescent. Rabbitbrush has about 60% of normal foliage, some are dead. Rabbitbrush 2 feet or less tall. | Horse, elk, and cattle droppings. Lots of elk sign. Gophers | Most of plant diversity is south of diagonal road. Tailing partly vegetated. Cover and diversity similar on 9/8/2003 to early June. |
| WTCW-2 | TSS14-3 | Sparse grassland | 6/4/2003, 9/10/2003 | 0 | 0 | 0 | 5 | 5 | 1 | 2 | 32 | 7 | 42 | About 30% of grass tufts are dead. Much of the community is annuals which were not alive at time of survey. | Elk droppings, meadowlark, horse droppings. | Appears to be recently revegetated. Vegetation growth is irregular distributed. |
| WTCW-3 | WT-1 | Open rabbitbrush | 5/30/2003, 9/8/2003 | 0 | 5 | 2 | 12 | 19 | 1 | 5 | 8 | 10 | 24 | Good. Grass 1-1.5 feet tall in flower, grass foliage mostly 6 inches, rabbitbrush 12-18 inches tall | Rabbit droppings, rodent burrows, harvester ants | Dominant grass species are growing in rows. |
| Mean | | | | 0 | 6.0 | 1.0 | 10.7 | 17.7 | 0.7 | 3.0 | 20.7 | 9.7 | 34.0 | | | |
| Sleepy Grass | | | | | | | | | | | | | | | | |
| WTSG-1 | TSS14-6 | Open rabbitbrush | 5/30/2003, 9/7/2003 | 0 | 6 | 0 | 13 | 19 | 0 | 5 | 16 | 9 | 30 | Rabbitbrush has about half of normal foliage, but appears healthy | Mule deer droppings. Some active gopher mounds. | This site looked about the same in early September as in late May. |
| WTSG-2 | TSS14-9 | Open shrub savanna | 5/28/2003, 9/8/2003 | 0 | 3 | 0 | 13 | 16 | 1 | 4 | 21 | 12 | 38 | Some large alfalfa plants are dead; some sagebrush heavily hedged. Shrubs to 3 feet tall, grasses 4-8 inches, alfalfa about 1 foot, half of final height. | Many elk and deer droppings, elk especially common; one harvester ant colony; rabbit, gophers abundant - 5% of surface. Yellow-headed blackbird at nearby lake. | |
| WTSG-3 | WT-2 | Grassland, some rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 3 | 0 | 28 | 31 | 1 | 3 | 16 | 9 | 29 | Good | Harvester ants | Best grassland observed on tailings facility. Cover and diversity on 9/8/2003 generally similar to early June. |
| Mean | | | | 0 | 4.0 | 0.0 | 18.0 | 22.0 | 0.7 | 4.0 | 17.7 | 10.0 | 32.3 | | | |
| Western Wheatgrass | | | | | | | | | | | | | | | | |
| WTWW-1 | WT-4 | Open sagebrush | 6/5/2003, 9/8/2003 | 0 | 8 | 5 | 15 | 28 | 1 | 5 | 8 | 9 | 23 | Good. Mostly young sagebrush and rabbitbrush 1-2 feet high. | kangaroo rat, cattle and horse droppings, lots of rodent burrows, elk sign | |
| WTWW-2 | TSS14-10 | Open shrub savanna | 5/28/2003, 9/8/2003 | 0 | 1 | 1 | 14 | 16 | 0 | 4 | 20 | 11 | 35 | Good. Grasses mostly 8-10 inches tall, shrubs 3 feet. | Ground squirrel, numerous gopher mounds | Shrub cover about 1%, not caught on transect. Vegetation somewhat lower on gopher mounds than adjacent gravelly areas. |
| WTWW-3 | WT-2 | Grassland, some rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 3 | 0 | 28 | 31 | 1 | 3 | 16 | 9 | 29 | Good | Harvester ants | Best grassland observed on tailings facility. Cover and diversity on 9/8/2003 generally similar to early June. |
| Mean | | | | 0 | 4.0 | 2.0 | 19.0 | 25.0 | 0.7 | 4.0 | 14.7 | 9.7 | 29.0 | | | |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|--------------------------|-------------|---|---------------------|------------------|-------------|------------|-------------|-------------|-------------------------|------------|-------------|-------------|-------------|---|---|---|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Tailings Facility | | | | | | | | | | | | | | | | |
| Blue Grama | | | | | | | | | | | | | | | | |
| WTBG-1 | TSS14-6 | Open rabbitbrush | 5/30/2003, 9/7/2003 | 0 | 6 | 0 | 13 | 19 | 0 | 5 | 16 | 9 | 30 | Rabbitbrush has about half of normal foliage, but appears healthy | Mule deer droppings. Some active gopher mounds. | This site looked about the same in early September as in late May. |
| WTBG-2 | WT-5 | Open rabbitbrush/grass | 9/7/2003 | 0 | 7.9 | 0 | 9.9 | 17.8 | 0 | 3 | 9 | 8 | 29 | Good, very green (September). Sand dropseed, sleepy grass, blue grama in bloom. Sand dropseed very robust. | gopher diggings | |
| WTBG-3 | WT-3 | Rabbitbrush (80%), tailings playa (20%) | 9/8/2003 | 0 | 18 | 2 | 14 | 34 | 2 | 8 | 12 | 11 | 33 | Very robust, green | gopher diggings | High grass cover. |
| Mean | | | | 0 | 10.6 | 0.7 | 12.3 | 23.6 | 0.7 | 5.3 | 12.3 | 9.3 | 30.7 | | | |
| Sand Dropseed | | | | | | | | | | | | | | | | |
| WTSD-1 | TSS14-2 | Rabbitbrush, bare | 6/3/2003, 9/10/2003 | 0 | 6 | 0 | 11 | 17 | 4 | 6 | 27 | 18 | 55 | Good, except small cottonwoods and most sandbar willow dead or dying. | Elk sign, lots of burrows | Heterogeneous site. High plant species diversity. Presence of dead sandbar willow, cottonwoods, and other species probably due to moisture from past tailing deposition, now drier. Site appears to include some areas of natural ground. |
| WTSD-2 | TSS14-5 | Rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 13 | 1 | 15 | 29 | 0 | 2 | 22 | 12 | 36 | Some alfalfa and Indian ricegrass are senescent. Rabbitbrush has about 60% of normal foliage, some are dead. Rabbitbrush 2 feet or less tall. | Horse, elk, and cattle droppings. Lots of elk sign. Gophers | Most of plant diversity is south of diagonal road. Tailing partly vegetated. Cover and diversity similar on 9/8/2003 to early June. |
| WTSD-3 | TSS14-1 | Grassland | 6/3/2003, 9/8/2003 | 0 | 0 | 3 | 17 | 20 | 0 | 4 | 22 | 12 | 38 | Good. Sand dropseed very short. Much standing dead plant material. | Gopher and elk sign | |
| Mean | | | | 0 | 6.3 | 1.3 | 14.3 | 22.0 | 1.3 | 4.0 | 23.7 | 14.0 | 43.0 | | | |
| Golden Crownbeard | | | | | | | | | | | | | | | | |
| WTAS-1 | TSS14-5 | Rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 13 | 1 | 15 | 29 | 0 | 2 | 22 | 12 | 36 | Some alfalfa and Indian ricegrass are senescent. Rabbitbrush has about 60% of normal foliage, some are dead. Rabbitbrush 2 feet or less tall. | Horse, elk, and cattle droppings. Lots of elk sign. Gophers | Most of plant diversity is south of diagonal road. Tailing partly vegetated. Cover and diversity similar on 9/8/2003 to early June. |
| WTAS-2 | WT-6 | Mix of grassland and rabbitbrush | 9/8/2003 | 0 | 6 | 3 | 14 | 23 | 3 | 5 | 14 | 8 | 39 | Good | Gopher workings | Appears to be subsurface moisture based on young sandbar willow, also Russian olive and narrowleaf cottonwood. In same basin as active tailing deposition. |

**Table 10-5
ECOLOGICAL SUMMARY**

| Sample No. | Sample Site | Plant Community | Dates Evaluated | Vegetation Cover | | | | | Number of Plant Species | | | | | Plant Health Observations | Grazing/Wildlife Observations | Other Notes |
|------------------------------|-------------|-----------------------------|---------------------|------------------|------------|------------|-------------|-------------|-------------------------|------------|-------------|-------------|-------------|---|-------------------------------|--|
| | | | | Tree | Shrub | Forb | Grass | Total | Tree | Shrub | Forb | Grass | Total | | | |
| Tailings Facility | | | | | | | | | | | | | | | | |
| WTAS-3 | WT-2 | Grassland, some rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 3 | 0 | 28 | 31 | 1 | 3 | 16 | 9 | 29 | Good | Harvester ants | Best grassland observed on tailings facility. Cover and diversity on 9/8/2003 generally similar to early June. Golden crownbeard sample collected from atypical area on northwest portion of site, moderately dense rabbitbrush on a 2 - 8 degree slope. |
| Mean | | | | 0 | 7.3 | 1.3 | 19.0 | 27.7 | 1.3 | 3.3 | 17.3 | 9.7 | 34.7 | | | |
| Cut-leaf Blazing-star | | | | | | | | | | | | | | | | |
| WTFO-1 | TSS14-8 | Revegetation area | 5/30/2003, 9/8/2003 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 20 | 14 | 37 | Live vegetation healthy. Much standing dead sweetclover and Russian thistle | | Many revegetation species, but not growing in lines - not obviously seeded. Shrubs to 1 foot tall. Overall cover about 1% but up to 10% in localized areas. Cover and diversity on September 8 similar to late May. |
| WTFO-2 | WT-2 | Grassland, some rabbitbrush | 6/4/2003, 9/8/2003 | 0 | 3 | 0 | 28 | 31 | 1 | 3 | 16 | 9 | 29 | Good | Harvester ants | Best grassland observed on tailings facility. Cover and diversity on 9/8/2003 generally similar to early June. |
| WTFO-3 | TSS14-1 | Grassland | 6/3/2003, 9/8/2003 | 0 | 0 | 3 | 17 | 20 | 0 | 4 | 22 | 12 | 38 | Good. Sand dropseed very short. Much standing dead plant material. | Gopher and elk sign | |
| Mean | | | | 0 | 1.0 | 1.0 | 15.3 | 17.3 | 0.7 | 3.0 | 19.3 | 11.7 | 34.7 | | | |
| Tailing Mean | | | | 0 | 6.1 | 0.9 | 15.1 | 22.1 | 0.9 | 3.9 | 18.7 | 10.8 | 34.9 | | | |

**Table 10-6
 Root-Zone Soils Data**

| Sample No. | Site No. | Sampling Depth (inches) | Clay (%) ¹ | Silt (%) | Fine Sand (%) ¹ | Sand (%) ¹ | Field Estimate of Gravel (percent) | USDA Texture ² | Other Field Observations | Soil pH ¹ |
|--------------------------------|----------|-------------------------|-----------------------|-------------|----------------------------|-----------------------|------------------------------------|---------------------------|--------------------------|----------------------|
| Reference (Cater Ranch) | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | |
| WRBS-1 | CR-11 | 4-12 | 6.8 | 27.3 | 32.1 | 33.4 | 20-30 | Gravelly sandy loam | | 6.9 |
| WRBS-2 | CR-8 | 2-8 | 9.3 | 28.7 | 38.2 | 23.8 | 20-40 | Gravelly sandy loam | | 8.1 |
| WRBS-3 | CR-10 | 0-10 | 7 | 22.3 | 39.7 | 31 | 10-15 | Loamy sand | | 7.5 |
| Mean | | | 7.7 | 26.1 | 36.7 | 29.4 | | | | 7.5 |
| Rubber Rabbitbrush | | | | | | | | | | |
| WRRR-1 | CR-4 | 3-8 | 3.4 | 22.9 | 47.9 | 25.8 | 30-40 | Gravelly sandy loam | | 8.6 |
| WRRR-2 | WR-2 | 0-5 | 10 | 24.5 | 36 | 29.5 | 20-25 | Gravelly sandy loam | Very compacted | 6.3 |
| WRRR-3 | CR-13 | 1-8 | 9.7 | 26.3 | 35.1 | 28.9 | 10-20 | Sandy loam | | 7.2 |
| Mean | | | 7.7 | 24.6 | 39.7 | 28.1 | | | | 7.4 |
| Crested Wheatgrass | | | | | | | | | | |
| WRCW-1 | CR-10 | 0-3 | 8.1 | 23.9 | 38 | 30 | 15-20 | Gravelly sandy loam | | 7.2 |
| WRCW-2 | CR-11 | 3-5 | 6.1 | 27.3 | 32.6 | 34 | 10-20 | Sandy loam | | 6.4 |
| WRCW-3 | WR-2 | 0-3 | 11.8 | 29.1 | 32.8 | 26.3 | 20-25 | Gravelly sandy loam | | 6.0 |
| Mean | | | 8.7 | 26.8 | 34.5 | 30.1 | | | | 6.5 |
| Sleepy Grass | | | | | | | | | | |
| WRSG-1 | WR-1 | 0.25-4 | 5.6 | 29.7 | 40 | 24.7 | 20-40 | Gravelly sandy loam | | 7.8 |
| WRSG-2 | WR-3 | 2-8 | 4.5 | 23.3 | 44.5 | 27.7 | 10-15 | Loamy sand | Soil very loose | 8.6 |
| WRSG-3 | CR-7 | 0.25-4 | 7.5 | 41.7 | 33.7 | 17.1 | 20-30 | Gravelly sandy loam | | 8.6 |
| Mean | | | 5.9 | 31.6 | 39.4 | 23.2 | | | | 8.3 |
| Western Wheatgrass | | | | | | | | | | |
| WRWW-1 | CR-2 | 0-4 | 3.5 | 31.7 | 41 | 23.8 | 10-25 | Gravelly sandy loam | | 8.0 |
| WRWW-2 | CR-13 | 1-4 | 8.7 | 27.6 | 37.4 | 26.3 | 10-20 | Sandy loam | | 7.1 |
| WRWW-3 | CR-4 | 1-2 | 4.5 | 26.7 | 51 | 17.8 | <10 | Sandy loam | Upper 1-2 inches powdery | 8.4 |
| Mean | | | 5.6 | 28.7 | 43.1 | 22.6 | | | | 7.8 |

**Table 10-6
 Root-Zone Soils Data**

| Sample No. | Site No. | Sampling Depth (inches) | Clay (%) ¹ | Silt (%) | Fine Sand (%) ¹ | Sand (%) ¹ | Field Estimate of Gravel (percent) | USDA Texture ² | Other Field Observations | Soil pH ¹ |
|--|----------|-------------------------|-----------------------|-------------|----------------------------|-----------------------|------------------------------------|---------------------------|--|----------------------|
| Reference (Cater Ranch) (cont.) | | | | | | | | | | |
| Blue Grama | | | | | | | | | | |
| WRBG-1 | CR-2 | 0-4 | 6.5 | 30.8 | 40.2 | 22.5 | 5-10 | Sandy loam | | 8.5 |
| WRBG-3 | CR-14 | 0-3 | 5.1 | 20.9 | 37.3 | 36.7 | 15-20 | Gravelly sandy loam | | 8.5 |
| WRBG-4 | CR-8 | 0-3 | 10.8 | 27.9 | 36.6 | 24.7 | 5-10 | Sandy loam | | 8.3 |
| Mean | | | 7.5 | 26.5 | 38.0 | 28.0 | | | | 8.4 |
| Sand Dropseed | | | | | | | | | | |
| WRSD-1R | CR-5 | 0-4 | 6.1 | 27.1 | 37.9 | 28.9 | 5-10 | Sandy loam | | 8.5 |
| WRSD-2 | WR-4 | 0.5-4 | 5.1 | 28 | 44.1 | 22.8 | 15-35 | Gravelly sandy loam | | 8.3 |
| WRSD-3 | CR-10 | 1-4 | 9.1 | 26.6 | 36.6 | 27.7 | <10 | Sandy loam | | 6.6 |
| Mean | | | 6.8 | 27.2 | 39.5 | 26.5 | | | | 7.8 |
| Golden Crownbeard | | | | | | | | | | |
| WRAS-1 | WR-6 | 0-4 | 4.1 | 18.4 | 50.2 | 27.3 | 5-10 | Loamy sand | | 8.6 |
| WRAS-2 | WR-5 | 0-4 | 7.1 | 30.7 | 45.5 | 16.7 | 5-10 | Sandy loam | | 8.6 |
| WRAS-3 | WR-7 | 0-4 | 5 | 40.4 | 37.4 | 17.2 | 10-20 | Sandy loam | | 8.7 |
| Mean | | | 5.4 | 29.8 | 44.4 | 20.4 | | | | 8.6 |
| Cut-leaf Blazing-Star | | | | | | | | | | |
| WRFO-1 | WR-8 | 0-6 | 2.3 | 23.4 | 46.6 | 27.7 | 10-20 | Loamy sand | | 8.5 |
| WRFO-2 | WR-9 | 0-6 | 2.7 | 23 | 41.8 | 32.5 | 10-20 | Loam sand | | 8.6 |
| WRFO-3 | WR-10 | 0-3 | 3.3 | 18.9 | 47.3 | 30.5 | 10-15 | Loamy sand | | 8.6 |
| Mean | | | 2.8 | 21.8 | 45.2 | 30.2 | | | | 8.6 |
| Tailings Facility | | | | | | | | | | |
| Big Sagebrush | | | | | | | | | | |
| WTBS-1 | TSS14-4 | 3-8 | 11.6 | 21.9 | 32.7 | 33.8 | 60 | Very gravelly sandy loam | Soils mixed with tailings, one subsample mostly tailings | 7.9 |
| WTBS-2 | TSS14-9 | 0.5-5 | 10.6 | 27 | 36.2 | 26.2 | 30-50 | Very gravelly sandy loam | Soils mixed with tailings | 8.2 |
| WTBS-3 | TSS14-10 | 0-4 | 7.7 | 18.4 | 34.1 | 39.8 | 30 | Gravelly sandy loam | Mixed with tailings | 8.1 |
| Mean | | | 10.0 | 22.4 | 34.3 | 33.3 | | | | 8.1 |

**Table 10-6
 Root-Zone Soils Data**

| Sample No. | Site No. | Sampling Depth (inches) | Clay (%) ¹ | Silt (%) | Fine Sand (%) ¹ | Sand (%) ¹ | Field Estimate of Gravel (percent) | USDA Texture ² | Other Field Observations | Soil pH ¹ |
|----------------------------------|----------|-------------------------|-----------------------|-------------|----------------------------|-----------------------|------------------------------------|---------------------------|---|----------------------|
| Tailings Facility (cont.) | | | | | | | | | | |
| Rubber Rabbitbrush | | | | | | | | | | |
| WTRR-1 | TSS14-2 | 3- | 4.8 | 6 | 45 | 44.2 | 10-25 | Gravelly sand | Mixed with tailings | 7.6 |
| WTRR-2 | TSS14-5 | 0-5 | 13.3 | 19.2 | 23.5 | 44 | 30-35 | Gravelly sandy loam | Some tailings in 2 of 5 subsamples | 7.7 |
| WTRR-3 | TSS14-6 | 1-8 | 11.9 | 32.1 | 29.8 | 26.2 | 40-60 | Very gravelly sandy loam | Very little tailings material. Proportion of gravel very variable | 8.5 |
| Mean | | | 10.0 | 19.1 | 32.8 | 38.1 | | | | 7.9 |
| Crested Wheatgrass | | | | | | | | | | |
| WTCW-1 | TSS14-5 | 0-4 | 9.2 | 39.3 | 25.4 | 26.1 | 30-50 | Very gravelly sandy loam | Mixed with tailings | 8.1 |
| WTCW-2 | TSS14-3 | 0.25-4 | 20.2 | 16.2 | 21.9 | 41.7 | 25-35 | Gravelly sandy clay loam | | 7.5 |
| WTCW-3 | WT-1 | 0.25-3 | 9.8 | 33.8 | 39.7 | 16.7 | 15-25 | Gravelly sandy loam | 3 of 5 subsamples mostly tailings | 7.9 |
| Mean | | | 13.1 | 29.8 | 29.0 | 28.2 | | | | 7.8 |
| Sleepy Grass | | | | | | | | | | |
| WTSG-1 | TSS14-6 | 0-4 | 11.8 | 33.3 | 28.6 | 26.3 | 40-60 | Very gravelly sandy loam | | 8.3 |
| WTSG-2 | TSS14-9 | 0.5-5 | 8.9 | 26.8 | 40.5 | 23.8 | 30-50 | Very gravelly sandy loam | Mixed with tailing. 3 of 5 subsamples had greyish/light brown horizon 2-3 inches below ground surface | 7.9 |
| WTSG-3 | WT-2 | 0-6 | 13.7 | 39.9 | 29.9 | 16.5 | 30-50 | Very gravelly loam | 3 of 5 subsamples had tailing at/below 4 inches | 7.7 |
| Mean | | | 11.5 | 33.3 | 33.0 | 22.2 | | | | 8.0 |

**Table 10-6
 Root-Zone Soils Data**

| Sample No. | Site No. | Sampling Depth (inches) | Clay (%) ¹ | Silt (%) | Fine Sand (%) ¹ | Sand (%) ¹ | Field Estimate of Gravel (percent) | USDA Texture ² | Other Field Observations | Soil pH ¹ |
|----------------------------------|----------|-------------------------|-----------------------|-------------|----------------------------|-----------------------|------------------------------------|--------------------------------------|---|----------------------|
| Tailings Facility (cont.) | | | | | | | | | | |
| Western Wheatgrass | | | | | | | | | | |
| WTWW-1 | WT-4 | 0-3 | 8.1 | 10.7 | 25.8 | 55.4 | 20-50 | Gravelly to very gravelly loamy sand | 3 of 5 subsamples mixed with tailings | 7.5 |
| WTWW-2 | TSS14-10 | 0.5-2 | 10.2 | 24.8 | 30 | 35 | 40 | Very gravelly sandy loam | Mixed with tailings, much tailings on surface from gophers | 8.1 |
| WTWW-3 | WT-2 | 0-4 | 15.1 | 37.8 | 29.8 | 17.3 | 15-25 | Gravelly loam | Grey tailings in two of 5 subsamples | 7.8 |
| Mean | | | 11.1 | 24.4 | 28.5 | 35.9 | | | | 7.8 |
| Blue Grama | | | | | | | | | | |
| WTBG-1 | TSS14-6 | 1-4 | 13.5 | 38 | 23.2 | 25.3 | 15-20 | Gravelly sandy loam | | 8.8 |
| WTBG-2 | WT-5 | 0-5 | 8.1 | 37.1 | 27 | 27.8 | 30 | Gravelly sandy loam | | 8.5 |
| WTBG-3 | WT-3 | 3-6 | 7.2 | 16.3 | 36.6 | 39.8 | 15-40 | Gravelly sandy loam | all sub-samples contained tailing, one almost exclusively tailing | 8.7 |
| Mean | | | 9.6 | 30.5 | 28.9 | 31.0 | | | | 8.7 |
| Sand Dropseed | | | | | | | | | | |
| WTSD-1 | TSS14-2 | 0.25-2 | 6.2 | 11 | 40.4 | 42.4 | 10-20 | Loamy sand | | 8.2 |
| WTSD-2 | TSS14-5 | 3-6 | 14.2 | 21.8 | 25.2 | 38.8 | 50 | Very gravelly sandy loam | Two sub-samples had a lot of tailings | 7.8 |
| WTSD-3 | TSS14-1 | 0.25-2 | 6.5 | 13.2 | 42.9 | 37.4 | 20-25 | Gravelly loamy sand | 2 of 5 sub-samples mostly tailings | 7.9 |
| Mean | | | 9.0 | 15.3 | 36.2 | 39.5 | | | | 8.0 |
| Golden Crownbeard | | | | | | | | | | |
| WTAS-1 | TSS14-5 | 0-5 | 8.9 | 45.6 | 29.6 | 15.9 | 10 | Loam | 1 of 12 sub-samples had tailings mixed with soils | 8.7 |
| WTAS-2 | WT-6 | 0-4 | 9.6 | 21.5 | 33.3 | 35.6 | 30-40 | Gravelly sandy loam | 4 of 5 samples had tailings mixed with soil | 7.9 |
| WTAS-3 | WT-2 | 0-4 | 9.5 | 35 | 27.2 | 28.3 | 30 | Gravelly sandy loam | | 8.4 |
| Mean | | | 9.3 | 34.0 | 30.0 | 26.6 | | | | 8.3 |

**Table 10-6
 Root-Zone Soils Data**

| Sample No. | Site No. | Sampling Depth (inches) | Clay (%) ¹ | Silt (%) | Fine Sand (%) ¹ | Sand (%) ¹ | Field Estimate of Gravel (percent) | USDA Texture ² | Other Field Observations | Soil pH ¹ |
|----------------------------------|----------|-------------------------|-----------------------|-------------|----------------------------|-----------------------|------------------------------------|---------------------------|--|----------------------|
| Tailings Facility (cont.) | | | | | | | | | | |
| Cut-leaf Blazing-Star | | | | | | | | Sandy loam | | |
| WTFO-1 | TSS14-8 | 0-4 | 11 | 18.6 | 45.9 | 24.5 | 20 | Gravelly sandy loam | 3 of 7 sub-samples had tailings mixed with soils | 8.1 |
| WTFO-2 | WT-2 | 0-5 | 13.9 | 42.8 | 28.4 | 14.9 | 30 | Gravelly loam | | 8.6 |
| WTFO-3 | TSS14-1 | 1-4 | 9.2 | 15.3 | 35.7 | 39.8 | 30-60 | Very gravelly sandy loam | 2 of 5 sub-samples mixed with tailing | 8.2 |
| Mean | | | 11.4 | 25.6 | 36.7 | 26.4 | | | | 8.3 |

¹Laboratory Analysis

²USDA soil textures determined from soil texture pyramid Field Book for Describing and Sampling Soils. NRCS 1998.

**Table 10-7
 PLANT SAMPLE DESCRIPTION**

| Sample No. | Species | No. of Plants Sampled | Plant Size/Health | Above Ground Sample | Below Ground Sample |
|--------------------------------|--------------------|-----------------------|--|------------------------------------|--|
| Reference (Cater Ranch) | | | | | |
| WRBS-1 | Big sagebrush | 5 | 2-3 feet tall, 1-3 feet diameter, some herbivory | Includes twigs and leaves | Depth 4-12 inches mostly woody roots, some fibrous, 2-12 mm diameter, dark brown |
| WRBS-2 | Big sagebrush | 5 | 3 foot by 1 foot, looked somewhat bare | Includes twigs and leaves | Depth 1-10 inches, woody and fibrous roots, <1 - 8 mm diameter, brown |
| WRBS-3 | Big sagebrush | 5 | 2-3 feet tall, 1-4 feet diameter, moderate browse | Includes twigs and leaves | Depth 3-8 inches, woody and fibrous 2-10 mm, pale brown to brown |
| WRRR-1 | Rubber rabbitbrush | 5 | 3 feet by 4 feet , insect galls on all plants, slight visible dust | Includes twigs and leaves | Depth <1-8 inches, woody and fibrous roots, <2-12 mm diameter, light brown |
| WRRR-2 | Rubber rabbitbrush | 5 | 2 – 3 feet tall, 1-3 feet diameter, mild to moderate browse | Includes twigs and leaves | Depth 4-12 inches, woody, 2 –5 mm diameter, light brown |
| WRRR-3 | Rubber rabbitbrush | 5 | Plants 1.5 by 2.5 feet. Slight visible dust, sparse foliage (10-15% of canopy), insect galls on all plants | Includes twigs and leaves | 0.5-1.5 inches, woody and fibrous roots <2 to 12 mm diameter, light brown to brown |
| WRCW-1 | Crested wheatgrass | 5 above, 12 below | 3 inches x 5 inches, some grazing evident on all plants, slight to moderate visible dust | All leaves | Depth 0-3 inches, fibrous, < 2 mm, light brown |
| WRCW-2 | Crested wheatgrass | 8 | Plants 4 to 12 inches tall. All in flower. Half had been grazed by cattle, mostly growing in or near sagebrush | Includes leaves and inflorescences | Depth 3-5 inches, fibrous roots < 1 mm diameter, light brown |
| WRCW-3 | Crested wheatgrass | 8 above, 13 below | Plants 3 – 8 inches tall, all plants grazed | All leaves | Depth 3-5 inches, fibrous, <1 mm, light brown |
| WRSO-1 | Sleepy grass | 5 | 3-7 inches tall, slight visible dust | All leaves | Depth 0.25-2.5 inches, fibrous <2-3 mm diameter, |
| WRSO-2 | Sleepy grass | 5 | 2-4 inches x 6 inches | Includes leaves and inflorescences | Depth 0.5-5 inches, fibrous, < 2 mm, light tan |

**Table 10-7
 PLANT SAMPLE DESCRIPTION**

| Sample No. | Species | No. of Plants Sampled | Plant Size/Health | Above Ground Sample | Below Ground Sample |
|--|--------------------|-----------------------|--|---|---|
| Reference (Cater Ranch) (cont.) | | | | | |
| WRSG-3 | Sleepy grass | 5 | 4-8 inches tall, 4-6 inches diameter, slightly dusty | All leaves | Depth 2-6 inches, fibrous roots <2 mm diameter, pale brown to grayish brown |
| WRWW-1 | Western wheatgrass | 5 | 3-5 inches tall, minor herbivory | All leaves | Depth 3-5 inches, mostly rhizomes, some fibrous roots, <2 mm diameter |
| WRWW-2 | Western wheatgrass | 5 patches | 4-6 inches tall, patch 2-3 feet diameter, moderate dust | All leaves | Depth 2-4 inches, rhizomes and fibrous roots, pale brown to brown |
| WRWW-3 | Western wheatgrass | 7 above, 4 below | 3-5 inches tall, plants small | Only leaves | Depth 2-4 inches, rhizomes and fibrous roots, <2 mm diameter, light brown |
| WRBG-1 | Blue grama | 5 | 3-6 inches tall, slight grazing on one plant, slight visible dust | Includes leaves and inflorescences | Depth 0-3 inches, fibrous roots .2-.5 mm diameter, light brown |
| WRBG-3 | Blue grama | 15 | 5-7 inches tall, foliage 1-3 inches tall, plants 4-8 inch diameter | About 40% inflorescences, 60% foliage | Depth 2-6 inches, fibrous roots and short rhizomes <2 mm diameter, light to grayish brown |
| WRBG-4 | Blue grama | 5 | 4 inches tall, 1.5 feet diameter rings, foliage 1-2 inches tall, moderately grazed, visible dust near base | Most of weight is inflorescences, also leaves | Depth 2-6 inches, fibrous roots, <2 mm diameter, light brown to grayish brown |
| WRSD-1R | Sand dropseed | 8 | 3-5 inches tall, slight to moderate visible dust | Includes leaves and inflorescences | Depth 0-4 inches, fibrous roots, .1-.5 mm diameter, light brown |
| WRSD-2 | Sand dropseed | 15 | 3 x 6 inches, slight visible dust | All leaves | Fibrous, < 2-4 mm, brown |
| WRSD-3 | Sand dropseed | 15 | 3-6 inches tall, minor herbivory, more noticeable on non-sampled plants. Numerous seedlings. | Includes mostly leaves, few inflorescences | Depth 2-5 inches, fibrous roots, <1 mm diameter, light brown, fragile |
| WRAS-1 | Golden crownbeard | NA | 5 inches tall, 8 plants had flowers removed by grazing | Includes stems, leaves, flowers | Depth 0-3 inches, taproot with fibrous laterals 0.5-5 mm diameter |
| WRAS-2 | Golden crownbeard | 27 | 6 inches tall | Includes stems, leaves, flowers | Depth 0-2 inches, small taproots with fibrous laterals, .2-5 mm diameter |

**Table 10-7
 PLANT SAMPLE DESCRIPTION**

| Sample No. | Species | No. of Plants Sampled | Plant Size/Health | Above Ground Sample | Below Ground Sample |
|--|----------------------|-----------------------|--|---|--|
| Reference (Cater Ranch) (cont.) | | | | | |
| WRAS-3 | Golden crownbeard | 35 | 8-12 inches tall, some plants heavily grazed and re-flowering | Includes stems, leaves, flowers | Depth 0-4 inches, taproot with fibrous laterals, taproot <2-5 mm diameter, pale tan |
| WRFO-1 | Cut-leaf blazingstar | 6 | 1.5 feet tall for flowering plants, 1-foot diameter. Rosettes <1 inch. Some visible dust | Includes stems, leaves, flowers, fruits | Depth 0-6 inches, taproot <1 cm diameter, a few fibrous roots, brown to pale tan |
| WRFO-2 | Cut-leaf blazingstar | 5 | Flowering plants 1.5 feet tall, 8-10 inches diameter. Rosettes <1 inch. Moderate dust on leaves. Flowering/fruited plants near senescence. | Includes stems, leaves, flowers, fruits | Depth 0-6 inches, taproot and fibrous, <2-<12 mm diameter, brown to pale tan |
| WRFO-3 | Cut-leaf blazingstar | 11 | 7 inches tall, plants near senescence, slight to moderate visible dust | Includes stems, leaves, flowers, fruits | Depth 1-3 inches, taproot 2-10 mm diameter, light brown |
| Tailings Facility | | | | | |
| WTBS-1 | Big sagebrush | 5 | 1.5 to 3 feet tall | Includes twigs and leaves | Depth 3-8 inches, woody roots, <0.5 inch, brown |
| WTBS-2 | Big sagebrush | 5 | 10 to 20 inches tall | Includes twigs and leaves | Depth <1-6 inches, woody and fibrous roots, 3-8 mm diameter, brown |
| WTBS-3 | Big sagebrush | 5 | 12-14 inches | Includes twigs and leaves | Depth 2-8 inches, woody roots 0.1-0.5 inch diameter, fibrous roots <0.1 inch diameter, fibrous 1 mm, brown |
| WTRR-1 | Rubber rabbitbrush | 5 | 3 feet tall, 1-3 feet diameter, some insect galls, minor to moderate browse | Includes twigs and leaves | Depth 3-12 inches, woody and fibrous <1 – 9 mm diameter, pale brown to brown |
| WTRR-2 | Rubber rabbitbrush | 5 | 6 inches by 18 inches, insect galls on all plants, two caterpillars on one, slight visible dust | Includes twigs and leaves | Depth <0.25-8 inches, woody and fibrous roots, <2 mm – 12 mm diameter, brown |

**Table 10-7
 PLANT SAMPLE DESCRIPTION**

| Sample No. | Species | No. of Plants Sampled | Plant Size/Health | Above Ground Sample | Below Ground Sample |
|----------------------------------|--------------------|-----------------------|---|------------------------------------|--|
| Tailings Facility (cont.) | | | | | |
| WTRR-3 | Rubber rabbitbrush | 5 | 18 – 36 inches tall, numerous galls, caterpillars on plants with sparse foliage | Includes twigs and leaves | Depth 3-8 inches, woody and fibrous roots, 1- 12 mm diameter, brown |
| WTCW-1 | Crested wheatgrass | 5 | 6 – 8 inches tall, 4-8 inches diameter | Includes leaves and inflorescences | Depth 2-5 inches, fibrous, < 2mm, light brown |
| WTCW-2 | Crested wheatgrass | 7 | 4-8 inches tall, 4-5 inches diameter, about 20% of leaves had brown tips | Includes leaves and inflorescences | Depth 0.5-4 inches, fibrous roots, <2 mm diameter, light brown |
| WTCW-3 | Crested wheatgrass | 5 | 5 – 8 inches tall, all plants flowering/fruitletting | Includes leaves and inflorescences | Depth 3-8 inches, fibrous, < 1mm diameter, brown |
| WTSG-1 | Sleepy grass | 5 | 6-12 inches tall, 8 inches diameter | All leaves | Depth 0-5 inches, fibrous roots < 2 mm diameter, pale tan to tan |
| WTSG-2 | Sleepy grass | 5 above, 9 below | 6 to 36 inches tall | Mostly leaves, 1 inflorescence | Depth 0-4 inches, fibrous roots < 2mm diameter, pale brown |
| WTSG-3 | Sleepy grass | 5 | 8-24 inches tall, robust | Mostly leaves, one inflorescence | Depth 3-8 inches, fibrous, <1 mm, light brown |
| WTWW-1 | Western wheatgrass | 5 patches | 4 – 10 inches tall, all plants flowering | Includes leaves and inflorescences | Depth 3-5 inches, mostly fibrous, some rhizomes, 1-2 mm, light brown to pale |
| WTWW-2 | Western wheatgrass | 5 | 4-8 inches tall, 3 foot diameter patch | Mostly leaves | Depth 0.5-4 inches, Rhizomes and fibrous roots 1-3 mm, pale tan to brown |
| WTWW-3 | Western wheatgrass | 5 | 4-6 inches tall | All leaves | Depth 3-5 inches, mostly rhizomes, some fibrous, 0.5-2 mm, light brown |
| WTBG-1 | Blue grama | 5 | 8-12 inches tall. Several plants robust with numerous seed heads | Includes leaves and inflorescences | Depth 0-6 inches, fibrous roots, 1-2 mm diameter, light brown, lots of adhering soil due to rain |
| WTBG-2 | Blue grama | 5 | 2 inches tall, slight to moderate visible dust | Includes leaves and inflorescences | Depth 1-3 inches, fibrous roots, <1 mm diameter, light brown |
| WTBG-3 | Blue grama | 5 | 8-10 inches tall | Includes leaves and inflorescences | Depth 3-5 inches, fibrous roots, 1-2 mm diameter, light brown |

**Table 10-7
 PLANT SAMPLE DESCRIPTION**

| Sample No. | Species | No. of Plants Sampled | Plant Size/Health | Above Ground Sample | Below Ground Sample |
|----------------------------------|----------------------|-----------------------|--|--|---|
| Tailings Facility (cont.) | | | | | |
| WTSD-1 | Sand dropseed | 5 above, 8 below | 3-8 inches tall | All leaves | Depth 3-8 inches, fibrous roots, <1 mm diameter, light brown |
| WTSD-2 | Sand dropseed | 8 above, 11 below | 5-10 inches tall, plants robust and healthy | All leaves | Depth 3-6 inches, fibrous roots <1 mm diameter, light brown |
| WTSD-3 | Sand dropseed | 15 above, 10 below | 1-3 inches tall, new growth very short | All leaves | Depth 3-6 inches, fibrous roots, <1 mm diameter, light brown |
| WTAS-1 | Golden crownbeard | 70 above, 85 below | 5-16 inches tall, all plants in flower | Includes stems, leaves, flowers | Depth 0-5 inches, fleshy taproot 1-2 mm diameter, pale tan |
| WTAS-2 | Golden crownbeard | 6 | 10 inches tall, slight visible dust | Includes stems, leaves, flowers | Depth 0-4 inches, taproot with fibrous laterals, 0.5-5 mm diameter, light brown |
| WTAS-3 | Golden crownbeard | 15 above, 40 below | 8 to 18 inches tall, robust and healthy, mostly in fruit | Includes stems, leaves, flowers, fruits | Depth 0.25-3 inches, fleshy taproot 0.1-0.5 inch diameter, light brown |
| WTFO-1 | Cut-leaf blazingstar | 11 above, 26 below | Up to 24 inches tall, includes both non-flowering rosettes and plants near seed production | Includes stems, leaves, flowers and fruits. Collected greenest leaves. | Depth 1-5 inches, 0.25-0.75 inch diameter taproots with some laterals, light brown to white |
| WTFO-2 | Cut-leaf blazingstar | 8 | 9 inches tall, mostly in fruit, moderate dust | Includes stems, leaves, flowers and fruits | Depth 1-3 inches, taproot 3-5 mm diameter, white |
| WTFO-3 | Cut-leaf blazingstar | 7 | About 7 inches tall, mostly in fruit, moderate visible dust | Includes stems, leaves, flowers, fruits | Depth 0-6 inches, taproot 2 to 10 mm diameter, white |

Table 10-8a

Wildlife Impact Study - Root Zone Soils - Big Sagebrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 17 | 22 | 19 | 18.1 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3.3 | 6.1 | 5.1 | 5.9 |
| Fluoride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 0.11 | 0.11 | ND | 0.2 | 0.13 | 0.13 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3.3 | 5.9 | 4.4 | 4.1 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3 | 3.5 | 3.2 | 3.1 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 6.9 | 8.1 | 7.5 | 7.5 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 56.2 | 773 | 529 | 759 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.06 | 0.043 | 0.04 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 95.6 | 97.1 | 96.5 | 96.7 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 94.5 | 205 | 147 | 141 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4.2 | 6.7 | 5.6 | 6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 597 | 885 | 758 | 793 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8220 | 14400 | 10800 | 9720 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.042 | 0.051 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.6 | 2.2 | 1.9 | 1.8 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 76.4 | 125 | 92.8 | 77 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.62 | 0.71 | 0.68 | 0.7 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.2 | 8.5 | 5.3 | 4.1 |
| Cadmium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.017 | 0.017 | ND | 0.035 | 0.025 | 0.032 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3280 | 4250 | 3850 | 4030 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 14 | 22.8 | 17.7 | 16.2 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.2 | 9 | 7.8 | 7.3 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 13.1 | 16.5 | 15.3 | 16.4 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 11000 | 18400 | 14200 | 13200 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8.5 | 10.3 | 9.3 | 9 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3260 | 4430 | 3820 | 3780 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 276 | 523 | 375 | 326 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.017 | 0.017 | ND | 0.03 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.47 | 0.47 | ND | 0.88 | 0.54 | 0.51 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.2 | 14.3 | 12.2 | 11.2 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2150 | 2750 | 2450 | 2450 |
| Selenium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.068 | 0.068 | ND | 0.34 | 0.23 | 0.33 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

T = Total Fraction

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

ND = Non-Detected Value

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

Table 10-8a

**Wildlife Impact Study - Root Zone Soils - Big Sagebrush
RI/FS Tailings Facility Reference - Cater Ranch**

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.046 | 0.063 | 0.052 | 0.048 |
| Sodium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 259 | 389 | 344 | 383 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.15 | 0.13 | 0.13 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 545 | 1010 | 710 | 576 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19.5 | 35.9 | 25.8 | 22.1 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 40 | 56.3 | 46.6 | 43.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-8b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Big Sagebrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 30.8 | 40.7 | 34.5 | 32 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20100 | 28100 | 24000 | 23700 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 261 | 991 | 661 | 732 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.031 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.076 | 0.18 | 0.12 | 0.1 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.8 | 16.1 | 12.7 | 15.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.032 | 0.11 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21.5 | 31 | 27.8 | 30.9 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.21 | 0.19 | 0.18 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5050 | 8310 | 6960 | 7520 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.41 | 4.2 | 2.1 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.37 | 0.28 | 0.35 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.2 | 16.2 | 13 | 12.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 268 | 1140 | 769 | 900 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.65 | 0.5 | 0.63 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1420 | 2160 | 1730 | 1610 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 44.6 | 70.6 | 59.8 | 64.2 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.047 | 0.048 | ND | 0.041 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.73 | 0.73 | ND | 1.4 | 0.86 | 0.81 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 1.7 | 1.6 | 1.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17400 | 23400 | 20600 | 21000 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.28 | 1.1 | 0.56 | 0.29 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0046 | 0.0063 | ND | 0.0065 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 106 | 119 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0046 | 0.0046 | ND | 0.0075 | 0.0055 | 0.0068 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10 | 43.4 | 31 | 39.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.49 | 1.4 | 1 | 1.2 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 37.3 | 37.3 | ND | 30.6 | 26.2 | 29.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-8c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Big Sagebrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 65.6 | 67.2 | 66.3 | 66.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3970 | 5830 | 4630 | 4090 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1400 | 3470 | 2300 | 2030 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.014 | 0.042 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.65 | 0.4 | 0.3 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.7 | 36.5 | 32.8 | 33.2 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.09 | 0.21 | 0.15 | 0.14 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.1 | 10.3 | 9.9 | 10.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.99 | 0.57 | 0.41 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5470 | 7590 | 6680 | 6970 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.7 | 6.4 | 5 | 5.8 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.6 | 1.5 | 1 | 0.98 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.8 | 11.8 | 10.5 | 10.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1730 | 4290 | 2850 | 2530 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.9 | 2.3 | 1.6 | 1.5 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1290 | 1860 | 1510 | 1390 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 80.2 | 102 | 93.8 | 99.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.022 | 0.024 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.5 | 0.75 | ND | 0.64 | | |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 4.2 | 2.8 | 2.9 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3470 | 5760 | 4630 | 4670 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.48 | 0.27 | 0.17 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0067 | 0.012 | 0.0088 | 0.0076 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 132 | 191 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.015 | 0.029 | 0.023 | 0.024 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 89 | 218 | 149 | 139 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 8.3 | 5.7 | 6.4 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 22.5 | 22.5 | ND | 20.6 | 17.5 | 20.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-8d

Wildlife Impact Study - Washed Vegetation Aboveground - Big Sagebrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 23.9 | 35.6 | 28.4 | 25.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16000 | 23000 | 19300 | 19000 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 255 | 360 | 292 | 260 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.041 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.065 | 0.075 | 0.072 | 0.075 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.9 | 12.7 | 10.4 | 11.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.033 | 0.062 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24.4 | 34.2 | 30.8 | 33.8 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.2 | 0.17 | 0.16 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5640 | 9540 | 7450 | 7170 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 2.6 | 1.4 | 1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.17 | 0.14 | 0.13 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.3 | 16.9 | 13.6 | 13.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 278 | 412 | 338 | 325 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.29 | 0.23 | 0.21 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1550 | 2220 | 1780 | 1570 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.4 | 65.8 | 56.5 | 54.2 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.044 | 0.067 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.78 | 0.78 | ND | 1 | 0.8 | 1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.85 | 1.6 | 1.2 | 1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16300 | 26700 | 22300 | 24000 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.28 | 0.85 | 0.48 | 0.3 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0053 | 0.0083 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 78.1 | 127 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0053 | 0.0083 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10 | 16.5 | 13.3 | 13.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.47 | 0.54 | 0.52 | 0.54 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 34.7 | 34.7 | ND | 34.6 | 28.6 | 33.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-8e

Wildlife Impact Study - Washed Vegetation Below Ground - Big Sagebrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 56 | 64.1 | 59.7 | 59 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4080 | 4780 | 4470 | 4540 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 142 | 467 | 357 | 462 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.015 | 0.02 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.027 | 0.11 | 0.078 | 0.096 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18.7 | 33.3 | 25.2 | 23.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.017 | 0.044 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.3 | 10.9 | 10.1 | 10.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.77 | 0.44 | 0.3 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5920 | 8030 | 6770 | 6360 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 1.6 | 1.3 | 1.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.097 | 0.28 | 0.18 | 0.17 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.5 | 11.2 | 10.9 | 10.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 162 | 575 | 410 | 494 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.31 | 0.21 | 0.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 771 | 1140 | 945 | 925 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26.3 | 69.2 | 42.5 | 32.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.03 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.72 | 0.72 | ND | 0.27 | 0.28 | 0.27 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.63 | 1.1 | 0.88 | 0.92 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3460 | 4330 | 3970 | 4110 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.042 | 0.27 | 0.15 | 0.14 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.003 | 0.0034 | ND | 0.0036 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 94.2 | 142 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0034 | 0.0034 | ND | 0.0056 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.5 | 25.4 | 18.9 | 22.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.97 | 1.6 | 1.3 | 1.2 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.7 | 28.3 | 19.5 | 16.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-9a

Wildlife Impact Study - Root Zone Soils - Rubber Rabbitbrush

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 22 | 28.9 | 24.6 | 22.9 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4.2 | 4.6 | 4.4 | 4.5 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.1 | 1.6 | 0.64 | 0.22 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.2 | 7.5 | 5.1 | 5.5 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1 | 11.3 | 5.6 | 4.4 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 6.3 | 8.6 | 7.4 | 7.2 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 39 | 1670 | 1090 | 1560 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.08 | 0.047 | 0.03 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 89.8 | 96.7 | 94.1 | 95.8 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 196 | 272 | 226 | 209 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5.9 | 7.7 | 6.9 | 7.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 947 | 1750 | 1260 | 1090 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8920 | 15200 | 12700 | 13900 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.045 | 0.053 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.6 | 2.2 | 1.9 | 1.8 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 85.1 | 140 | 109 | 101 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.5 | 0.75 | 0.65 | 0.7 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.6 | 13.9 | 9.2 | 9.1 |
| Cadmium | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.018 | 0.019 | ND | 0.11 | | |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4590 | 57000 | 22300 | 5230 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.7 | 25.3 | 19.4 | 21.2 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.4 | 8.8 | 7.4 | 8 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 15.8 | 33 | 22.6 | 19 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 9610 | 18500 | 14600 | 15800 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.9 | 9.6 | 8 | 8.5 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4240 | 19400 | 9590 | 5140 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 313 | 381 | 344 | 338 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.017 | 0.019 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.37 | 0.39 | ND | 0.46 | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 9.3 | 15.5 | 12.2 | 11.7 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2840 | 3620 | 3180 | 3080 |
| Selenium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.072 | 0.072 | ND | 0.68 | 0.35 | 0.32 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

T = Total Fraction

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

ND = Non-Detected Value

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

Table 10-9a
Wildlife Impact Study - Root Zone Soils - Rubber Rabbitbrush
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.052 | 0.059 | 0.055 | 0.054 |
| Sodium | T | mg/Kg-dry | 3 | 66.70 | No SLC | 44.6 | 44.6 | ND | 517 | 268 | 265 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.14 | 0.13 | 0.14 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 458 | 1050 | 767 | 792 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.2 | 35.3 | 28.1 | 30.7 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 45.1 | 55.8 | 50.4 | 50.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-9b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Rubber Rabbitbrush
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 33.6 | 40.1 | 37.1 | 37.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18700 | 25200 | 21100 | 19500 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 198 | 1350 | 644 | 385 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.029 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.063 | 0.14 | 0.11 | 0.13 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.3 | 21.3 | 15.8 | 14.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.029 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 41 | 79.5 | 66.5 | 79.1 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.87 | 0.41 | 0.18 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6530 | 9230 | 7590 | 7000 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.65 | 5 | 2.6 | 2.2 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.52 | 0.26 | 0.16 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.1 | 15.3 | 12.8 | 12 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 251 | 1440 | 697 | 400 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.9 | 0.45 | 0.26 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1590 | 1960 | 1810 | 1880 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 54.7 | 80.3 | 71.4 | 79.3 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.037 | 0.047 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.62 | 0.62 | ND | 1 | 0.61 | 0.53 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.6 | 2.9 | 2.1 | 1.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11400 | 18700 | 16100 | 18200 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.91 | 0.59 | 0.63 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0053 | 0.0059 | ND | 0.0082 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 111 | 145 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0053 | 0.0059 | ND | 0.017 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.3 | 75.7 | 34.9 | 18.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.42 | 1.9 | 0.99 | 0.65 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 42.1 | 42.1 | ND | 32.5 | 28.4 | 31.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-9c

**Wildlife Impact Study - Unwashed Vegetation Below Ground - Rubber Rabbitbrush
RI/FS Tailings Facility Reference - Cater Ranch**

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 41.3 | 56.1 | 47.9 | 46.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5540 | 8460 | 7030 | 7090 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1310 | 4050 | 2910 | 3370 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.022 | 0.032 | ND | 0.027 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.34 | 0.29 | 0.28 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 33.4 | 38.5 | 35.3 | 33.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.061 | 0.18 | ND | 0.2 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.3 | 27.1 | 18.6 | 16.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.32 | 0.26 | 0.3 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4410 | 13000 | 8230 | 7290 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.2 | 7.4 | 5.9 | 7.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.68 | 1.3 | 1.1 | 1.2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.1 | 20.5 | 17.8 | 18.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1420 | 4160 | 3200 | 4020 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.8 | 2 | 1.5 | 1.7 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1950 | 4830 | 3190 | 2780 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 65.9 | 90 | 77 | 75 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.027 | 0.039 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.3 | 0.3 | ND | 0.66 | 0.41 | 0.41 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.4 | 3.7 | 3.2 | 3.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4320 | 15700 | 10100 | 10400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.23 | 0.39 | 0.34 | 0.39 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.009 | 0.023 | 0.016 | 0.016 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 145 | 145 | ND | 405 | 255 | 288 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.015 | 0.037 | 0.027 | 0.03 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 76.8 | 224 | 171 | 211 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.1 | 8 | 7.3 | 7.8 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 31.3 | 31.3 | ND | 29.3 | 24.6 | 28.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-9d
Wildlife Impact Study - Washed Vegetation Aboveground - Rubber Rabbitbrush
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 29.9 | 40.7 | 35.3 | 35.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12000 | 24100 | 18700 | 20000 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 141 | 395 | 234 | 167 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.033 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.056 | 0.09 | 0.07 | 0.063 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.7 | 11.2 | 10.4 | 10.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.032 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.5 | 90 | 69.4 | 68.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.97 | 0.44 | 0.19 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6090 | 6680 | 6460 | 6600 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.37 | 4.3 | 1.8 | 0.73 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.087 | 0.14 | 0.12 | 0.14 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.7 | 15.7 | 12.7 | 12.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 185 | 390 | 255 | 190 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.27 | 0.19 | 0.16 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1440 | 1770 | 1550 | 1440 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 50 | 87.1 | 70.1 | 73.2 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.05 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.63 | 0.63 | ND | 0.54 | 0.45 | 0.49 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 3.1 | 1.9 | 1.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11400 | 19000 | 16400 | 18900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.7 | 0.48 | 0.51 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0049 | 0.0067 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 44.9 | 129 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0057 | 0.0067 | ND | 0.008 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.9 | 19.5 | 11.4 | 7.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.37 | 0.56 | 0.44 | 0.4 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 43.7 | 43.7 | ND | 33.7 | 28.5 | 30 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-9e
Wildlife Impact Study - Washed Vegetation Below Ground - Rubber Rabbitbrush
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 33.9 | 50 | 40.7 | 38.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5840 | 10400 | 7860 | 7340 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 180 | 576 | 353 | 304 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.02 | 0.029 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.046 | 0.12 | 0.08 | 0.074 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.2 | 23.7 | 20.8 | 22.4 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.02 | 0.066 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.2 | 27.1 | 19.3 | 17.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.35 | 0.29 | 0.34 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4290 | 8460 | 6890 | 7910 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.86 | 2.4 | 1.7 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.32 | 0.23 | 0.19 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.5 | 18.7 | 16.9 | 18.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 205 | 616 | 368 | 284 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.39 | 0.29 | 0.29 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1040 | 2800 | 1960 | 2050 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.2 | 30.6 | 24.5 | 25.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.034 | 0.044 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.34 | 0.34 | ND | 0.59 | 0.41 | 0.46 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.74 | 1.3 | 1 | 1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4120 | 13100 | 9110 | 10100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.39 | 0.3 | 0.34 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0055 | 0.0096 | 0.0072 | 0.0065 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 147 | 259 | ND | 697 | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0056 | 0.0056 | ND | 0.014 | 0.0093 | 0.011 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.9 | 30 | 16.7 | 12.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 3.5 | 2.1 | 1.7 |
| Zinc | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 14.7 | 21.1 | ND | 20 | | |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-10a
Wildlife Impact Study - Root Zone Soils - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 15.9 | 22.2 | 18.9 | 18.5 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3.4 | 5.1 | 4.3 | 4.4 |
| Fluoride | T | mg/Kg-dry | 3 | 0.00 | No SLC | 0.11 | 0.11 | ND | ND | | |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.2 | 11.9 | 6.6 | 5.6 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.1 | 4.8 | 3.8 | 3.4 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 6 | 7.2 | 6.5 | 6.4 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 56.4 | 1150 | 775 | 1120 |
| Sodium Absorption Ratio | T | ratio | 3 | 66.70 | No SLC | 0.03 | 0.03 | ND | 0.04 | 0.028 | 0.03 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 96.7 | 97.4 | 97 | 97 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 87.9 | 230 | 153 | 141 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.4 | 7.8 | 4.9 | 4.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 734 | 1390 | 976 | 803 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 13300 | 15800 | 14200 | 13500 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.045 | 0.046 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2 | 2.6 | 2.2 | 2.1 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 97.3 | 119 | 106 | 103 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.69 | 0.8 | 0.74 | 0.74 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.6 | 9.4 | 8.2 | 7.7 |
| Cadmium | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.018 | 0.018 | ND | 0.067 | | |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3870 | 5450 | 4620 | 4530 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19.9 | 26.3 | 22.8 | 22.1 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8 | 8.7 | 8.4 | 8.4 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.3 | 19.4 | 17.5 | 16.9 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 16700 | 18900 | 17900 | 18100 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8.4 | 10.9 | 9.9 | 10.4 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3780 | 5200 | 4580 | 4750 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 364 | 508 | 417 | 380 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.015 | 0.017 | ND | 0.034 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.54 | 1.2 | 0.77 | 0.56 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 12.6 | 15.9 | 14 | 13.6 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2840 | 3130 | 3000 | 3040 |
| Selenium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.074 | 0.074 | ND | 0.081 | 0.066 | 0.079 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-10a
Wildlife Impact Study - Root Zone Soils - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.044 | 0.055 | 0.051 | 0.055 |
| Sodium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 241 | 262 | 253 | 256 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.16 | 0.16 | 0.16 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 904 | 1020 | 952 | 931 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 32.6 | 35.4 | 34.2 | 34.5 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 54.4 | 57.7 | 55.6 | 54.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-10b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 29.9 | 41.8 | 34 | 30.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27400 | 35700 | 30600 | 28800 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 360 | 1280 | 806 | 777 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.033 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.083 | 0.19 | 0.14 | 0.15 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15.5 | 39 | 29.4 | 33.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.1 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 7 | 5.3 | 5.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.043 | 0.08 | 0.063 | 0.067 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3520 | 6770 | 5120 | 5070 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.7 | 2.7 | 2.3 | 2.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.6 | 0.44 | 0.53 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.7 | 11.3 | 8.8 | 9.3 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 462 | 1530 | 986 | 967 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.87 | 0.65 | 0.77 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 910 | 2350 | 1820 | 2200 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.9 | 77.7 | 54.6 | 48.3 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.038 | 0.053 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.7 | 1.7 | ND | 2.4 | 1.5 | 1.2 |
| Nickel | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.67 | 0.67 | ND | 1.6 | 1 | 1.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18000 | 21100 | 19500 | 19400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.26 | 0.63 | 0.42 | 0.37 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0045 | 0.0045 | ND | 0.008 | 0.0059 | 0.0073 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 77.1 | 261 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0062 | 0.018 | 0.013 | 0.015 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.9 | 77.3 | 49.3 | 47.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.69 | 2.8 | 1.9 | 2.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.6 | 56.3 | 36.2 | 28.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-10c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 86.3 | 89.8 | 88 | 87.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3160 | 4550 | 3730 | 3490 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6870 | 10400 | 8370 | 7840 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.017 | 0.017 | ND | 0.044 | 0.025 | 0.022 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.84 | 1.1 | 0.93 | 0.86 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 56.4 | 77.8 | 69.7 | 74.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.47 | 0.58 | 0.53 | 0.53 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 4 | 3.6 | 3.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.091 | 0.2 | 0.15 | 0.15 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3220 | 4340 | 3780 | 3770 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.9 | 16.9 | 13.2 | 11.8 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 2.4 | 2.4 | 2.4 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.3 | 16 | 14 | 13.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8500 | 12100 | 10000 | 9480 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.7 | 6.8 | 6 | 6.5 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2350 | 3200 | 2660 | 2440 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 200 | 281 | 244 | 252 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.022 | 0.034 | ND | 0.023 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.37 | 0.37 | ND | 1.6 | 0.82 | 0.66 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.8 | 9.9 | 9 | 9.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2860 | 3490 | 3100 | 2960 |
| Selenium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.018 | 0.018 | ND | 0.24 | | |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.027 | 0.036 | 0.033 | 0.036 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 25.2 | 25.2 | ND | 329 | 223 | 326 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.092 | 0.11 | 0.098 | 0.093 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 399 | 591 | 474 | 431 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15 | 20.9 | 17.5 | 16.6 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 44.1 | 46.2 | 45 | 44.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-10d
Wildlife Impact Study - Washed Vegetation Aboveground - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 27 | 41.1 | 31.8 | 27.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22800 | 34100 | 29100 | 30500 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 69.8 | 94.1 | 83.9 | 87.8 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.036 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.041 | 0.067 | 0.057 | 0.063 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.4 | 33 | 23.5 | 23 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.022 | 0.044 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.1 | 5.6 | 5 | 5.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.039 | 0.067 | 0.055 | 0.059 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3830 | 5700 | 4870 | 5070 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.41 | 0.67 | 0.55 | 0.56 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.041 | 0.067 | 0.058 | 0.067 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.9 | 8.9 | 7.4 | 8.5 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 105 | 158 | 139 | 153 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.093 | 0.093 | ND | 0.1 | 0.076 | 0.08 |
| Magnesium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 963 | 963 | ND | 1890 | 1300 | 1540 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.6 | 44.1 | 37.6 | 41.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.037 | 0.056 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.6 | 1.6 | ND | 3.4 | 2.2 | 2.4 |
| Nickel | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.22 | 0.23 | ND | 0.22 | | |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15800 | 24600 | 19600 | 18500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 1 | 0.57 | 0.36 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0046 | 0.0074 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 57.3 | 160 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0046 | 0.0074 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 5.2 | 4.8 | 5.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 0.29 | 0.26 | 0.29 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 46.7 | 46.7 | ND | 28.5 | 24.9 | 23.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-10e
Wildlife Impact Study - Washed Vegetation Below Ground - Crested Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 42.9 | 60.6 | 52.1 | 52.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4770 | 11800 | 8160 | 7920 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1030 | 3660 | 2100 | 1600 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.016 | 0.023 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.36 | 0.26 | 0.26 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.2 | 37 | 26.7 | 25.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.094 | 0.14 | ND | 0.23 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 2.8 | 2.5 | 2.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.26 | 0.56 | 0.39 | 0.36 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3050 | 3390 | 3180 | 3090 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 6.6 | 4.1 | 3.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.91 | 1.4 | 1.1 | 1.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7 | 10.5 | 9.2 | 10.2 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1290 | 4110 | 2400 | 1810 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.6 | 2.5 | 1.4 | 1.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 670 | 1310 | 930 | 809 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 48.3 | 128 | 84.4 | 77 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.037 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.8 | 0.8 | ND | 2 | 1.1 | 0.81 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 4.6 | 3.7 | 4.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2490 | 2840 | 2690 | 2740 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.23 | 0.2 | 0.21 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.013 | 0.033 | 0.021 | 0.017 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 61.6 | 143 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.011 | 0.034 | 0.022 | 0.021 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 66.6 | 218 | 123 | 84 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.6 | 7.9 | 4.5 | 3 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.8 | 36.2 | 29.7 | 33 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-11a
Wildlife Impact Study - Root Zone Soils - Sleepy Grass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 21.8 | 23.4 | 22.6 | 22.5 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.1 | 2.1 | ND | 2.8 | 2.1 | 2.4 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.41 | 0.9 | 0.71 | 0.81 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3.9 | 13.7 | 9.9 | 12.2 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.2 | 6.9 | 5.3 | 5.8 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.8 | 8.6 | 8.3 | 8.6 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 51.8 | 1160 | 771 | 1100 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.13 | 0.07 | 0.05 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 94.9 | 96.1 | 95.5 | 95.4 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 232 | 277 | 249 | 237 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4.3 | 39.9 | 17 | 6.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 966 | 1650 | 1290 | 1240 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 7890 | 14000 | 10500 | 9670 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.05 | 0.052 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.6 | 2.3 | 2 | 2 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 99.7 | 142 | 114 | 101 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.5 | 0.68 | 0.6 | 0.63 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.8 | 6.7 | 6.1 | 5.9 |
| Cadmium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.021 | 0.021 | ND | 0.067 | 0.046 | 0.059 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 6510 | 39700 | 21400 | 18000 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 12.2 | 21.9 | 15.5 | 12.4 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.1 | 8.9 | 7.8 | 7.5 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.1 | 18.7 | 17.3 | 17.2 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 11400 | 17100 | 13700 | 12600 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.9 | 8.6 | 7.1 | 6.8 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5000 | 6590 | 5790 | 5790 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 309 | 426 | 366 | 363 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.017 | 0.018 | ND | 0.019 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.29 | 0.43 | ND | ND | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 10.8 | 13.8 | 12.1 | 11.8 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2460 | 3590 | 2980 | 2880 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.28 | 0.67 | 0.42 | 0.31 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-11a
Wildlife Impact Study - Root Zone Soils - Sleepy Grass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.041 | 0.067 | 0.056 | 0.059 |
| Sodium | T | mg/Kg-dry | 3 | 66.70 | No SLC | 48.4 | 48.4 | ND | 456 | 286 | 379 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.14 | 0.15 | 0.14 | 0.14 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 537 | 868 | 651 | 547 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 20.8 | 34.6 | 27.1 | 25.9 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 40.4 | 55.3 | 45.9 | 42.1 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-11b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Sleepy Grass

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 37.6 | 41.4 | 40 | 41 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6930 | 30700 | 22000 | 28400 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 245 | 590 | 440 | 485 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.026 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.088 | 0.27 | 0.15 | 0.095 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.6 | 20.5 | 12 | 9 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.027 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.8 | 29 | 14.6 | 8 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.01 | 0.029 | 0.02 | 0.02 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4220 | 4680 | 4460 | 4490 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.4 | 1.7 | 1.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.29 | 0.25 | 0.27 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.7 | 13.2 | 11.3 | 12 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 345 | 741 | 564 | 607 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.56 | 0.56 | ND | 0.37 | 0.29 | 0.28 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1400 | 2240 | 1770 | 1670 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 64.4 | 88.8 | 75.8 | 74.2 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.045 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 14.4 | 7.6 | 5.5 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 5 | 3.9 | 3.9 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8040 | 19400 | 14700 | 16600 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.79 | 0.47 | 0.39 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0053 | 0.0053 | ND | 0.0056 | 0.0044 | 0.0049 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 23.7 | 69.5 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0053 | 0.0053 | ND | 0.011 | 0.0068 | 0.0068 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.1 | 29.8 | 23.2 | 27.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.63 | 1.2 | 0.88 | 0.8 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.6 | 23.2 | 20.1 | 20.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-11c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Sleepy Grass

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 2 | 100.00 | No SLC | | | 85.6 | 86.7 | 86.1 | 86.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5930 | 10300 | 7570 | 6470 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5020 | 5470 | 5230 | 5190 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.037 | 0.041 | ND | 0.025 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.37 | 0.73 | 0.53 | 0.5 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 45.2 | 75.6 | 59.8 | 58.5 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.28 | 0.32 | 0.3 | 0.3 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.4 | 5.9 | 5.6 | 5.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.035 | 0.094 | 0.073 | 0.089 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4180 | 21400 | 12200 | 10900 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.7 | 10.8 | 8.6 | 8.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.9 | 1.9 | 1.7 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.9 | 15.8 | 14.2 | 13.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6440 | 6800 | 6580 | 6510 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.4 | 3.4 | 3.4 | 3.4 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2080 | 3520 | 3040 | 3520 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 145 | 170 | 162 | 170 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.019 | 0.021 | ND | 0.029 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 3 | 2.3 | 2.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 7.9 | 4.9 | 3.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2420 | 4550 | 3400 | 3240 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.064 | 0.3 | 0.18 | 0.17 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.013 | 0.018 | 0.016 | 0.016 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 258 | 272 | 266 | 268 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.029 | 0.062 | 0.041 | 0.033 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 259 | 334 | 301 | 311 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.6 | 16 | 13.8 | 12.9 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.7 | 28.9 | 25.9 | 25 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-11d

Wildlife Impact Study - Washed Vegetation Aboveground - Sleepy Grass

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 31.6 | 36.4 | 34.4 | 35.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24400 | 34200 | 30500 | 32800 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 92.2 | 92.2 | ND | 204 | 143 | 180 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.027 | 0.031 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.064 | 0.2 | 0.11 | 0.075 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5 | 14.6 | 8.5 | 5.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.16 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.6 | 15.1 | 10.2 | 10 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.031 | 0.02 | 0.025 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3170 | 3880 | 3610 | 3770 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.83 | 1.4 | 1.1 | 1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.15 | 0.13 | 0.13 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.7 | 12 | 10.2 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 157 | 243 | 213 | 239 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.081 | 0.23 | 0.15 | 0.13 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1370 | 2070 | 1660 | 1530 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 70 | 80.3 | 75.9 | 77.4 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.043 | 0.053 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.4 | 12 | 7.5 | 6.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 5.3 | 4.5 | 4.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6930 | 20800 | 13700 | 13500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.78 | 0.55 | 0.53 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0053 | 0.0063 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 41.6 | 87.4 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0053 | 0.0063 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.7 | 9.7 | 7.5 | 8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.28 | 0.4 | 0.34 | 0.34 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20 | 23.3 | 21.9 | 22.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-11e

Wildlife Impact Study - Washed Vegetation Below Ground - Sleepy Grass

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 2 | 100.00 | No SLC | | | 45.1 | 50.5 | 47.8 | 47.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4180 | 9490 | 6580 | 6070 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 640 | 3120 | 1600 | 1040 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.051 | 0.075 | ND | 0.029 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.69 | 0.32 | 0.15 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.2 | 54.3 | 27.9 | 15.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.02 | 0.036 | ND | 0.22 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.4 | 6.3 | 5.5 | 5.8 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.055 | 0.16 | 0.11 | 0.12 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3130 | 14700 | 7510 | 4710 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 4.9 | 3.4 | 3.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.78 | 2.7 | 1.5 | 0.87 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.9 | 16.5 | 11.4 | 8.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 878 | 4000 | 2030 | 1210 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.42 | 2 | 1 | 0.6 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 689 | 2470 | 1290 | 718 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40.2 | 98 | 62.6 | 49.6 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.033 | 0.038 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 4.1 | 4.1 | ND | 3.8 | 2.9 | 2.9 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.9 | 4.7 | 2.8 | 1.9 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2180 | 3670 | 3080 | 3400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.24 | 0.23 | 0.24 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0098 | 0.0098 | ND | 0.027 | 0.015 | 0.013 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 106 | 106 | ND | 298 | 167 | 150 |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0098 | 0.0098 | ND | 0.035 | 0.017 | 0.01 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.1 | 169 | 95.1 | 67.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.7 | 13.3 | 6.4 | 3.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.6 | 23.8 | 18.7 | 20.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-12a

Wildlife Impact Study - Root Zone Soils - Western Wheatgrass

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 22.1 | 49.7 | 35.7 | 35.2 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.9 | 8.1 | 4.8 | 3.3 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.67 | 2.1 | 1.3 | 1.1 |
| Nitrate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 0.86 | 0.86 | ND | 38.9 | 15 | 5.7 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 2.9 | 13.9 | 9.5 | 11.8 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.1 | 8.4 | 7.8 | 8 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 44.1 | 2040 | 712 | 51.2 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.29 | 0.13 | 0.07 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 90.6 | 96.7 | 93.5 | 93.1 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 179 | 477 | 317 | 295 |
| Sulfate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 0.86 | 0.86 | ND | 31.8 | 12 | 3.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 2 | 100.00 | No SLC | | | 856 | 1710 | 1280 | 1280 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8870 | 14200 | 12200 | 13600 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.049 | 0.063 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.7 | 2 | 1.8 | 1.7 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 87.5 | 198 | 144 | 145 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.52 | 0.69 | 0.62 | 0.66 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.4 | 13.1 | 10 | 12.5 |
| Cadmium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.019 | 0.019 | ND | 0.15 | 0.1 | 0.15 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4460 | 62400 | 41000 | 56200 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 12 | 21.3 | 17.4 | 18.9 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6 | 8 | 7 | 7.1 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.3 | 26.3 | 20.3 | 18.2 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 9880 | 17600 | 14500 | 16000 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.6 | 8.5 | 7.6 | 7.7 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4200 | 21900 | 14900 | 18700 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 318 | 572 | 432 | 406 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.016 | 0.016 | ND | 0.027 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.32 | 0.41 | ND | ND | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 9.8 | 17 | 13 | 12.3 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2710 | 4170 | 3430 | 3410 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.14 | 0.74 | 0.39 | 0.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

T = Total Fraction

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

ND = Non-Detected Value

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

Table 10-12a
Wildlife Impact Study - Root Zone Soils - Western Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.049 | 0.063 | 0.054 | 0.051 |
| Sodium | T | mg/Kg-dry | 3 | 33.30 | No SLC | 45.3 | 501 | ND | 475 | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.14 | 0.13 | 0.13 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 461 | 791 | 616 | 596 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.6 | 31.8 | 27.2 | 31.2 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 45.6 | 60.3 | 52 | 50 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-12b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Western Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 39.1 | 62.5 | 48 | 42.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 11400 | 11800 | 11600 | 11600 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 437 | 693 | 594 | 651 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.043 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.088 | 0.14 | 0.11 | 0.11 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.8 | 29.7 | 23.4 | 25.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.027 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 8.3 | 6.6 | 8.1 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0063 | 0.0063 | ND | 0.017 | 0.011 | 0.012 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3790 | 7560 | 5140 | 4080 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.9 | 1.8 | 1.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.24 | 0.2 | 0.19 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.3 | 10 | 7.2 | 7.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 494 | 781 | 676 | 754 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.45 | 0.38 | 0.36 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1350 | 1920 | 1560 | 1410 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40.7 | 58.7 | 49.4 | 48.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.041 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 1.7 | 1.6 | 1.7 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.49 | 0.9 | 0.76 | 0.9 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7320 | 21600 | 14900 | 15900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.25 | 2.3 | 0.96 | 0.33 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0032 | 0.0049 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 37.8 | 92.3 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0046 | 0.011 | 0.0077 | 0.0074 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21.7 | 41.4 | 31 | 30 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.84 | 0.93 | 0.9 | 0.92 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 11.1 | 11.1 | ND | 23.1 | 15 | 16.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-12c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Western Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 70.3 | 80.7 | 77.1 | 80.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 3710 | 5250 | 4480 | 4480 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2480 | 7600 | 4370 | 3020 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.057 | 0.057 | ND | 0.05 | 0.037 | 0.031 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.61 | 0.44 | 0.39 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 48.6 | 56.8 | 53.1 | 53.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.08 | 0.46 | 0.23 | 0.16 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 12.7 | 7.7 | 6.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.053 | 0.13 | 0.082 | 0.064 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4210 | 22200 | 14600 | 17500 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.2 | 14.4 | 8.5 | 8 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 1.7 | 1.5 | 1.7 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12 | 13.4 | 12.6 | 12.3 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2700 | 8570 | 4840 | 3260 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 4.3 | 2.5 | 1.9 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2390 | 6120 | 4190 | 4060 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 108 | 163 | 138 | 143 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.02 | 0.024 | ND | 0.03 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.7 | 1.7 | ND | 1.1 | 0.88 | 0.85 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.4 | 5.4 | 4.7 | 4.4 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4190 | 4520 | 4310 | 4230 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.21 | 1.4 | 0.66 | 0.37 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.011 | 0.019 | 0.016 | 0.019 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 201 | 201 | ND | 356 | 240 | 264 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.034 | 0.056 | 0.042 | 0.037 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 112 | 436 | 239 | 169 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.9 | 15.6 | 12.7 | 11.5 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.4 | 32.3 | 25.1 | 23.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-12d
Wildlife Impact Study - Washed Vegetation Aboveground - Western Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 33.6 | 37 | 35.6 | 36.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 10500 | 16000 | 13300 | 13300 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 54.4 | 144 | 93.1 | 80.8 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.029 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.035 | 0.11 | 0.078 | 0.089 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.2 | 20.5 | 17.3 | 17.1 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.029 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.3 | 7.2 | 6.2 | 6.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.011 | 0.011 | ND | 0.014 | | |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3270 | 4320 | 3950 | 4250 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.62 | 1.6 | 0.96 | 0.67 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.026 | 0.075 | 0.044 | 0.032 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.2 | 7.6 | 6.9 | 6.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 94.4 | 192 | 136 | 121 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.056 | 0.16 | 0.1 | 0.084 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1110 | 1390 | 1230 | 1180 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25.1 | 59.7 | 44.8 | 49.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.042 | 0.044 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.5 | 1.5 | ND | 2.4 | 1.4 | 1.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.42 | 0.35 | 0.32 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6210 | 25700 | 19000 | 25100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 1.8 | 0.8 | 0.33 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0054 | 0.0059 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 31.8 | 39.5 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0054 | 0.0059 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 7.5 | 4.9 | 4.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.36 | 0.23 | 0.16 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 12.8 | 12.8 | ND | 27.1 | 16.4 | 15.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-12e
Wildlife Impact Study - Washed Vegetation Below Ground - Western Wheatgrass
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 36.8 | 50.8 | 43.3 | 42.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 6020 | 10700 | 8360 | 8360 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 649 | 939 | 771 | 726 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.037 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.19 | 0.16 | 0.19 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.4 | 28.6 | 22.6 | 22.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.047 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 10.4 | 6 | 4.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.096 | 0.17 | 0.13 | 0.11 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2790 | 14700 | 8490 | 7970 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 18.4 | 7.2 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.57 | 1.2 | 0.84 | 0.76 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.3 | 11.9 | 9.7 | 9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 746 | 1170 | 889 | 750 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.35 | 0.84 | 0.54 | 0.43 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 660 | 2330 | 1420 | 1270 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 41.4 | 79.8 | 59 | 55.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.041 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.3 | 1.3 | ND | 2 | 1.2 | 0.9 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.5 | 5.3 | 3.3 | 3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3860 | 6330 | 4920 | 4570 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 2 | 0.83 | 0.31 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0051 | 0.0051 | ND | 0.011 | 0.007 | 0.0074 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 113 | 132 | ND | 319 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.011 | 0.032 | 0.019 | 0.015 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.1 | 54.1 | 39.6 | 36.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.6 | 8.1 | 5.3 | 6.3 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19 | 21.9 | 20.9 | 21.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-13a
Wildlife Impact Study - Root Zone Soils - Blue Grama
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 21.2 | 51.4 | 31.4 | 21.5 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3.1 | 5.5 | 4.3 | 4.4 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.12 | 1.3 | 0.53 | 0.16 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 6.9 | 27.3 | 18.3 | 20.8 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.2 | 13.2 | 6.7 | 3.6 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 8.3 | 8.5 | 8.4 | 8.5 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1060 | 1810 | 1310 | 1070 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.13 | 0.063 | 0.03 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 85.1 | 95.4 | 90.9 | 92.3 |
| Specific Conductance | T | umhos/cm | 3 | 66.70 | No SLC | 306 | 306 | ND | 248 | 159 | 153 |
| Sulfate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.2 | 2.2 | ND | 9.1 | 4.2 | 2.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1880 | 2970 | 2240 | 1880 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12700 | 17600 | 15100 | 15100 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.052 | 0.058 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.1 | 2.3 | 2.2 | 2.3 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 93.3 | 188 | 126 | 97.8 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.66 | 0.8 | 0.74 | 0.75 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.9 | 14 | 8.8 | 6.4 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.046 | 0.23 | 0.13 | 0.099 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5290 | 51300 | 21200 | 7140 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.7 | 21.8 | 20.2 | 21.1 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.9 | 8.6 | 8.2 | 8 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.1 | 29.8 | 21.6 | 18 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 16500 | 20300 | 18300 | 18100 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8.5 | 9.6 | 8.9 | 8.5 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5050 | 18000 | 9540 | 5580 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 320 | 475 | 388 | 370 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.015 | 0.017 | ND | 0.019 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.38 | 0.45 | ND | ND | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.6 | 17.1 | 14 | 13.3 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2810 | 4450 | 3530 | 3340 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.24 | 0.5 | 0.33 | 0.26 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-13a
Wildlife Impact Study - Root Zone Soils - Blue Grama
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.044 | 0.07 | 0.054 | 0.047 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 44.5 | 210 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.14 | 0.13 | 0.13 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 637 | 856 | 733 | 707 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 28.3 | 33.9 | 31.5 | 32.3 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 52.3 | 69.7 | 58.5 | 53.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-13b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Blue Grama

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 31.7 | 47.6 | 40.9 | 43.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14000 | 15200 | 14500 | 14200 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 534 | 1920 | 1150 | 1000 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.021 | 0.031 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.077 | 0.17 | 0.13 | 0.15 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26.6 | 45.4 | 35.6 | 34.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.045 | 0.045 | ND | 0.092 | 0.058 | 0.059 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15 | 35 | 21.8 | 15.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0091 | 0.013 | ND | 0.017 | | |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7750 | 9730 | 8570 | 8220 |
| Chromium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 1.6 | 3.4 | ND | 6.7 | | |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.21 | 0.78 | 0.57 | 0.73 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.4 | 7.7 | 6.9 | 6.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 686 | 2420 | 1490 | 1350 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 1.3 | 0.78 | 0.78 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2130 | 2640 | 2470 | 2630 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 57.5 | 96.7 | 74.8 | 70.2 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.033 | 0.05 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2 | 3.4 | 2.8 | 3.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.7 | 2.1 | 2.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7190 | 11000 | 9090 | 9080 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.21 | 0.35 | 0.29 | 0.3 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0045 | 0.0063 | ND | 0.01 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 84.5 | 111 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0048 | 0.021 | 0.011 | 0.0072 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.4 | 106 | 68.1 | 75 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.89 | 2.9 | 2.2 | 2.7 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21.7 | 33.2 | 29.2 | 32.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-13c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Blue Grama

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 72.8 | 78.2 | 76.1 | 77.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2490 | 6320 | 4300 | 4090 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7260 | 12000 | 10100 | 10900 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.04 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.74 | 0.59 | 0.69 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 73.7 | 89.4 | 80 | 76.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.54 | 0.46 | 0.51 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 4.2 | 3.1 | 3.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.044 | 0.091 | 0.073 | 0.085 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4710 | 21800 | 11300 | 7400 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.9 | 18.6 | 14.8 | 16 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.9 | 2.2 | 2.4 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16 | 17.3 | 16.6 | 16.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8450 | 14400 | 12100 | 13300 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.8 | 8.6 | 6.8 | 8.1 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4090 | 7620 | 5530 | 4880 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 177 | 308 | 247 | 257 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.021 | 0.022 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.44 | 0.56 | 0.48 | 0.45 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.9 | 10.5 | 7.9 | 8.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2970 | 4350 | 3640 | 3590 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.096 | 0.16 | 0.13 | 0.14 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.015 | 0.035 | 0.028 | 0.033 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 27.9 | 86 | ND | 455 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.036 | 0.11 | 0.082 | 0.099 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 282 | 665 | 510 | 583 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.9 | 23.8 | 20.3 | 22.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.9 | 48.5 | 44.3 | 46.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-13d

Wildlife Impact Study - Washed Vegetation Aboveground - Blue Grama

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 32.2 | 38.8 | 36 | 37.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13800 | 16500 | 15000 | 14600 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 197 | 481 | 360 | 403 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.031 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.038 | 0.066 | 0.052 | 0.051 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15.4 | 30.6 | 25.4 | 30.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.051 | 0.059 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.3 | 30.6 | 19.9 | 17.8 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.013 | 0.013 | ND | 0.016 | 0.013 | 0.016 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5900 | 7130 | 6680 | 7000 |
| Chromium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 1.1 | 1.2 | ND | 1.7 | | |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.087 | 0.22 | 0.17 | 0.21 |
| Copper | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 6.8 | 6.8 | ND | 6.7 | 5.6 | 6.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 274 | 603 | 456 | 491 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.32 | 0.23 | 0.25 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1830 | 1940 | 1890 | 1900 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.5 | 64.9 | 56.1 | 53.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.041 | 0.053 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 3.4 | 2.8 | 2.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.78 | 1.3 | 1 | 1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8780 | 12300 | 11000 | 12000 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.26 | 0.36 | 0.31 | 0.3 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0051 | 0.0063 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 118 | 145 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0051 | 0.0063 | ND | 0.0068 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.7 | 25.7 | 17.7 | 18.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.36 | 0.76 | 0.57 | 0.59 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.1 | 51.6 | 42.5 | 46.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-13e

Wildlife Impact Study - Washed Vegetation Below Ground - Blue Grama

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 27.6 | 46 | 36.1 | 34.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5370 | 7040 | 6310 | 6520 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2350 | 3400 | 2730 | 2450 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.034 | 0.039 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.23 | 0.23 | ND | 0.31 | 0.22 | 0.24 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.7 | 37.9 | 28.5 | 27.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.089 | 0.16 | 0.12 | 0.11 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.4 | 3.9 | 3.4 | 3.9 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.23 | 0.19 | 0.2 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2480 | 9330 | 5790 | 5570 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.1 | 6.8 | 5.3 | 4.9 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 1.9 | 1.6 | 1.6 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.1 | 11.4 | 10.5 | 10.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2860 | 4250 | 3360 | 2980 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.4 | 1.7 | 1.7 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1140 | 2720 | 1950 | 1980 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 75.9 | 136 | 99.5 | 86.6 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.033 | 0.046 | ND | 0.25 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.86 | 1.2 | 1.1 | 1.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.3 | 5.9 | 4.8 | 4.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2520 | 4500 | 3240 | 2690 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.23 | 0.19 | 0.21 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.054 | 0.031 | 0.024 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 162 | 162 | ND | 422 | 218 | 151 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.022 | 0.039 | 0.028 | 0.023 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 94.1 | 191 | 143 | 143 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.1 | 8.5 | 6.4 | 5.7 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.1 | 50 | 35.7 | 30 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-14a
Wildlife Impact Study - Root Zone Soils - Sand Dropseed
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 18.7 | 33.4 | 26.2 | 26.6 |
| Chloride | T | mg/Kg-dry | 3 | 33.30 | No SLC | 2.1 | 2.2 | ND | 3.6 | | |
| Fluoride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 0.11 | 0.11 | ND | 1.2 | 0.55 | 0.39 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12 | 54.8 | 28 | 17.1 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.2 | 7.1 | 5.4 | 5.9 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 6.6 | 8.5 | 7.8 | 8.3 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 50.5 | 1080 | 634 | 770 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.08 | 0.06 | 0.07 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 89.3 | 96.1 | 92.8 | 92.9 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 105 | 416 | 290 | 349 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 13.3 | 39.9 | 23.9 | 18.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 2 | 100.00 | No SLC | | | 835 | 2840 | 1840 | 1840 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8980 | 13300 | 11500 | 12100 |
| Antimony | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.048 | 0.053 | ND | 0.077 | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.7 | 1.9 | 1.8 | 1.8 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 79.4 | 142 | 112 | 116 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.63 | 0.69 | 0.66 | 0.67 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.6 | 9.4 | 6.7 | 8.2 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.048 | 0.098 | 0.076 | 0.083 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3070 | 36900 | 21900 | 25700 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 15.2 | 19.7 | 17.8 | 18.4 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.6 | 7.8 | 7.3 | 7.4 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 14.4 | 21.2 | 18.8 | 20.9 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12100 | 16200 | 14600 | 15600 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.7 | 8.7 | 8.1 | 7.9 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3350 | 9690 | 6930 | 7750 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 320 | 378 | 346 | 341 |
| Mercury | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.015 | 0.015 | ND | 0.019 | 0.015 | 0.017 |
| Molybdenum | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.3 | 0.33 | ND | 0.51 | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 10.9 | 13.1 | 12.4 | 13.1 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2330 | 3670 | 3130 | 3390 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.2 | 0.39 | 0.31 | 0.33 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-14a
Wildlife Impact Study - Root Zone Soils - Sand Dropseed
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.051 | 0.053 | 0.052 | 0.052 |
| Sodium | T | mg/Kg-dry | 3 | 33.30 | No SLC | 42 | 258 | ND | 356 | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.15 | 0.13 | 0.12 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 562 | 745 | 658 | 667 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.1 | 31.3 | 27.1 | 29 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 44.1 | 60.2 | 52.3 | 52.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-14b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Sand Dropseed

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 38.9 | 50.9 | 44.3 | 43.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 16100 | 21100 | 18600 | 18600 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1670 | 2780 | 2340 | 2580 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.025 | 0.026 | ND | 0.022 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.24 | 0.2 | 0.22 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.7 | 40.8 | 38.8 | 37.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.17 | 0.17 | ND | 0.12 | 0.095 | 0.085 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.7 | 10.8 | 9.4 | 10.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.054 | 0.079 | 0.069 | 0.075 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5120 | 9080 | 7120 | 7150 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 11.4 | 7 | 6.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.64 | 1.3 | 0.95 | 0.92 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.5 | 13.1 | 12.1 | 12.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2050 | 3280 | 2850 | 3220 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.97 | 2.1 | 1.5 | 1.5 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2030 | 2880 | 2560 | 2770 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 73.1 | 115 | 97.4 | 104 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.041 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 2.8 | 2.8 | ND | 5.3 | 3.3 | 3.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 4.2 | 3.1 | 2.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11700 | 15200 | 13700 | 14100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.33 | 1.6 | 0.8 | 0.46 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0069 | 0.022 | 0.013 | 0.011 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 127 | 196 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.021 | 0.028 | 0.024 | 0.022 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 88.7 | 174 | 141 | 159 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.6 | 4.7 | 3.7 | 3.9 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.8 | 35.3 | 32.2 | 31.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-14c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Sand Dropseed

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 74.3 | 98.8 | 87.6 | 89.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 2840 | 4180 | 3510 | 3510 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2960 | 13500 | 7640 | 6460 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.02 | 0.033 | ND | 0.028 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.69 | 0.45 | 0.34 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 34.4 | 111 | 67.2 | 56.2 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.66 | 0.42 | 0.45 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2 | 6.3 | 3.8 | 3.1 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.035 | 0.14 | 0.08 | 0.064 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3160 | 23200 | 11600 | 8400 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.3 | 20.3 | 11.8 | 10.9 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 2.7 | 2 | 2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12 | 22.8 | 15.8 | 12.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3280 | 16200 | 9130 | 7920 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.7 | 8.4 | 5 | 4.9 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2060 | 7680 | 3950 | 2120 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 92.7 | 297 | 201 | 213 |
| Mercury | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.031 | 0.038 | 0.034 | 0.032 |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.84 | 0.84 | ND | 4.7 | 1.8 | 0.42 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 12.2 | 7 | 5.8 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2330 | 4380 | 3180 | 2840 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.074 | 1.4 | 0.56 | 0.2 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.012 | 0.043 | 0.025 | 0.021 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 30.7 | 30.7 | ND | 294 | 159 | 168 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.023 | 0.14 | 0.074 | 0.06 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 148 | 739 | 428 | 398 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.7 | 29.1 | 18 | 15.2 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.6 | 58 | 40.6 | 41.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-14d

Wildlife Impact Study - Washed Vegetation Aboveground - Sand Dropseed

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 30.7 | 33.7 | 32.3 | 32.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 15100 | 19100 | 17100 | 17100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 335 | 555 | 460 | 491 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.032 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.045 | 0.097 | 0.07 | 0.067 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.6 | 35.8 | 26.2 | 22.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.028 | 0.055 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.8 | 11 | 8.7 | 9.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.033 | 0.071 | 0.05 | 0.047 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4580 | 5260 | 4850 | 4710 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.3 | 1.3 | ND | 3.5 | 1.8 | 1.2 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.24 | 0.22 | 0.22 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.4 | 10.6 | 10 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 429 | 676 | 562 | 582 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.35 | 0.33 | 0.33 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1680 | 2010 | 1850 | 1870 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32.6 | 51.5 | 42 | 41.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.045 | 0.052 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 6.2 | 3.7 | 2.5 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.85 | 1.2 | 1 | 1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10800 | 22000 | 17000 | 18300 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.26 | 2 | 0.89 | 0.42 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0056 | 0.0058 | ND | 0.01 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 54.7 | 123 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0065 | 0.0065 | ND | 0.011 | 0.0075 | 0.0082 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18.7 | 27.4 | 24.2 | 26.4 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.68 | 0.91 | 0.82 | 0.88 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.5 | 34.2 | 28.1 | 26.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-14e

Wildlife Impact Study - Washed Vegetation Below Ground - Sand Dropseed

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 28.3 | 55.6 | 44.4 | 49.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 6390 | 8790 | 7590 | 7590 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 592 | 2380 | 1660 | 2020 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.02 | 0.075 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.31 | 0.21 | 0.21 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.9 | 37.9 | 26.8 | 28.6 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.02 | 0.02 | ND | 0.16 | 0.1 | 0.13 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 6.4 | 4.7 | 4.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.29 | 0.22 | 0.25 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3480 | 8360 | 5330 | 4140 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 4.3 | 4.3 | ND | 8 | 3.8 | 2.2 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.92 | 2.2 | 1.4 | 0.93 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9 | 15.7 | 11.6 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 629 | 2820 | 1900 | 2250 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.35 | 1.2 | 0.88 | 1.1 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 653 | 1840 | 1120 | 857 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35.1 | 91.4 | 72.2 | 90 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.03 | 0.057 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 2.7 | 2.7 | ND | 6.7 | 3.7 | 3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 5.7 | 3.8 | 4.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1870 | 4140 | 2670 | 1990 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 1.4 | 0.67 | 0.32 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0061 | 0.086 | 0.037 | 0.018 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 118 | 158 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0061 | 0.026 | 0.015 | 0.014 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.2 | 121 | 82.8 | 98.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.5 | 6.8 | 6.1 | 5.9 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.7 | 55.7 | 31.9 | 26.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-15a

Wildlife Impact Study - Root Zone Soils - Golden Crownbeard

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 24.3 | 29.7 | 26.3 | 24.8 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.6 | 4.1 | 3.2 | 2.9 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.23 | 0.53 | 0.36 | 0.32 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8.6 | 19.5 | 14.2 | 14.5 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 4.9 | 6.8 | 5.7 | 5.3 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 8.6 | 8.7 | 8.6 | 8.6 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1880 | 2590 | 2200 | 2120 |
| Sodium Absorption Ratio | T | ratio | 3 | 33.30 | No SLC | 0.02 | 0.03 | ND | 0.03 | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 90 | 92.3 | 90.9 | 90.5 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 187 | 309 | 247 | 246 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3 | 9.5 | 6.3 | 6.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1200 | 2070 | 1580 | 1470 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12700 | 15100 | 14100 | 14500 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.051 | 0.054 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.8 | 2.1 | 2 | 2.1 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 107 | 183 | 141 | 132 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.66 | 0.75 | 0.71 | 0.72 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.8 | 11 | 8.9 | 7.9 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.17 | 0.16 | 0.16 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 14800 | 29500 | 22000 | 21800 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.6 | 19 | 17.5 | 16.8 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.1 | 10.1 | 8.5 | 8.3 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17 | 23.5 | 20.8 | 22 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 15000 | 17600 | 16700 | 17400 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8.6 | 9.5 | 9.2 | 9.4 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 6990 | 7970 | 7330 | 7040 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 348 | 706 | 493 | 426 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.017 | 0.018 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.3 | 0.45 | ND | ND | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.1 | 14 | 12.6 | 12.8 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3590 | 4470 | 4040 | 4050 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.28 | 0.35 | 0.31 | 0.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

T = Total Fraction

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

ND = Non-Detected Value

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

Table 10-15a
Wildlife Impact Study - Root Zone Soils - Golden Crownbeard
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.055 | 0.069 | 0.061 | 0.06 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 44.7 | 92.8 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.15 | 0.13 | 0.13 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 658 | 722 | 696 | 707 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 25.9 | 31.5 | 28.9 | 29.4 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 51.5 | 61.8 | 56.8 | 57.1 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-15b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Golden Crownbeard
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 14.4 | 15.8 | 14.9 | 14.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30100 | 33700 | 32200 | 32900 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 644 | 1670 | 990 | 655 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.062 | 0.071 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.079 | 0.16 | 0.13 | 0.15 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 36.3 | 67.9 | 47.4 | 37.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.088 | 0.11 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.9 | 41.4 | 32.9 | 29.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.28 | 0.17 | 0.13 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19400 | 36400 | 26700 | 24400 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.1 | 1.6 | 1.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.64 | 0.44 | 0.35 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.1 | 18.1 | 12 | 10.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 786 | 2030 | 1210 | 806 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 0.93 | 0.66 | 0.54 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4880 | 6760 | 6080 | 6600 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35 | 75 | 52.4 | 47.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.1 | 0.11 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 2.1 | 1.7 | 1.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.79 | 1.4 | 1.1 | 1.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 54800 | 86900 | 68000 | 62300 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.21 | 0.47 | 0.33 | 0.31 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.013 | 0.014 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 169 | 177 | ND | 167 | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.013 | 0.014 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35.7 | 99.3 | 57.1 | 36.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.4 | 1.6 | 1.4 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.3 | 49.3 | 38.1 | 35.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-15c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Golden Crownbeard
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 2 | 100.00 | No SLC | | | 37.1 | 39.8 | 38.4 | 38.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3550 | 5380 | 4630 | 4970 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3680 | 16800 | 9720 | 8680 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.027 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 0.68 | 0.51 | 0.57 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 38 | 189 | 101 | 77 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.85 | 0.46 | 0.38 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.5 | 18.3 | 11.4 | 9.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.037 | 0.081 | 0.054 | 0.045 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6780 | 37500 | 18400 | 10900 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 24 | 14.2 | 14.6 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.8 | 2.2 | 2.6 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.8 | 42.2 | 20.4 | 12.2 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4550 | 20100 | 11700 | 10500 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.2 | 13 | 7.1 | 6.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2480 | 9780 | 5710 | 4860 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 103 | 540 | 290 | 227 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.037 | 0.041 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.85 | 1.3 | 1 | 0.86 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 7.3 | 5.9 | 7.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8030 | 38000 | 19500 | 12500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.21 | 0.18 | 0.19 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.016 | 0.04 | 0.031 | 0.038 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 237 | 693 | 462 | 457 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.03 | 0.088 | 0.067 | 0.084 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 231 | 750 | 499 | 516 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.7 | 33 | 19.5 | 17.8 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.5 | 88 | 50.2 | 42.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-15d

Wildlife Impact Study - Washed Vegetation Aboveground - Golden Crownbeard

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 12.8 | 14 | 13.5 | 13.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26200 | 45100 | 35500 | 35200 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 275 | 381 | 321 | 307 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.069 | 0.075 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.041 | 0.11 | 0.079 | 0.085 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30.7 | 71.5 | 48.4 | 42.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.1 | 0.12 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.6 | 52.3 | 36 | 32.1 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.34 | 0.22 | 0.21 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17200 | 34700 | 25700 | 25300 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.86 | 4.7 | 2.5 | 1.9 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.24 | 0.21 | 0.21 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.9 | 12.1 | 10.2 | 11.5 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 377 | 512 | 430 | 401 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.25 | 0.35 | 0.3 | 0.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4160 | 7250 | 5540 | 5200 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.3 | 46.9 | 37.1 | 35 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.11 | 0.12 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 2.5 | 1.9 | 1.7 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.54 | 1.7 | 1.1 | 1.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30800 | 37500 | 33800 | 33100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.39 | 0.3 | 0.38 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.014 | 0.015 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 168 | 193 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.014 | 0.015 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15 | 18.5 | 16.2 | 15 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.51 | 0.68 | 0.57 | 0.53 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24.6 | 82.1 | 44.9 | 27.9 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-15e
Wildlife Impact Study - Washed Vegetation Below Ground - Golden Crownbeard
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 1 | 100.00 | No SLC | | | 20.1 | 20.1 | 20.1 | 20.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6670 | 9760 | 8230 | 8250 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 323 | 1460 | 805 | 633 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.047 | 0.049 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.19 | 0.16 | 0.16 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19 | 30.5 | 24.1 | 22.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.062 | 0.075 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11 | 13.8 | 12.7 | 13.3 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.22 | 0.14 | 0.1 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4630 | 5860 | 5200 | 5100 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 5.2 | 2.9 | 2.5 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.49 | 0.86 | 0.67 | 0.67 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.1 | 11.5 | 9.5 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 381 | 1780 | 1000 | 843 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.48 | 1.1 | 0.8 | 0.81 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1360 | 2270 | 1800 | 1770 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20 | 52.4 | 34.9 | 32.4 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.071 | 0.075 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.71 | 1.4 | 1.1 | 1.2 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.7 | 3.5 | 1.9 | 1.4 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20600 | 36400 | 26300 | 22000 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.16 | 0.14 | 0.14 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.01 | 0.01 | ND | 0.01 | 0.0082 | 0.0095 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 113 | 113 | ND | 285 | 192 | 234 |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.01 | 0.01 | ND | 0.017 | 0.011 | 0.0095 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15.5 | 87.1 | 44.8 | 31.9 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 3.1 | 2.5 | 2.2 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.6 | 23 | 20 | 19.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-16a

Wildlife Impact Study - Root Zone Soils - Cut-Leaf Blazing-star

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 34.1 | 35.8 | 34.8 | 34.5 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 9.6 | 15.1 | 11.7 | 10.5 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1.3 | 1.5 | 1.4 | 1.4 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 17.2 | 35.6 | 28.7 | 33.4 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 13.5 | 14.2 | 13.8 | 13.7 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 8.5 | 8.6 | 8.6 | 8.6 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2120 | 2470 | 2290 | 2270 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.18 | 0.64 | 0.47 | 0.58 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 84.4 | 84.9 | 84.6 | 84.5 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 328 | 465 | 415 | 451 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 25.6 | 29.7 | 27 | 25.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2040 | 2290 | 2190 | 2230 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12900 | 13900 | 13400 | 13300 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.054 | 0.057 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.2 | 2.7 | 2.5 | 2.5 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 211 | 227 | 221 | 226 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.5 | 0.56 | 0.53 | 0.54 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.1 | 17.7 | 17.1 | 17.6 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.25 | 0.17 | 0.15 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 108000 | 116000 | 113000 | 114000 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 14.9 | 16.2 | 15.3 | 14.9 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.5 | 7 | 6.2 | 6 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.3 | 25.7 | 23.6 | 23.8 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12700 | 14000 | 13400 | 13600 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.5 | 6.5 | 6 | 6 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 22700 | 26000 | 23900 | 23000 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 358 | 405 | 377 | 368 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.018 | 0.019 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.27 | 0.36 | ND | ND | | |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 9.6 | 12.5 | 11.1 | 11.3 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4320 | 4500 | 4410 | 4410 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.42 | 0.46 | 0.44 | 0.43 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-16a
Wildlife Impact Study - Root Zone Soils - Cut-Leaf Blazing-star
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.049 | 0.052 | 0.051 | 0.052 |
| Sodium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 438 | 595 | 505 | 483 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.11 | 0.11 | 0.11 | 0.11 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 601 | 682 | 637 | 628 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 25.6 | 31.3 | 27.7 | 26.1 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 54.6 | 60.1 | 56.9 | 56 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-16b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Cut-Leaf Blazing-star
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 18.2 | 19.7 | 18.9 | 18.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22300 | 34000 | 28500 | 29100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 567 | 1610 | 947 | 663 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.049 | 0.053 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 0.43 | 0.36 | 0.37 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 43.9 | 68 | 58.5 | 63.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.07 | 0.079 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 33.9 | 63.2 | 45.5 | 39.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.072 | 0.14 | 0.097 | 0.079 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24800 | 31200 | 27900 | 27700 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 2.2 | 1.7 | 1.8 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 0.6 | 0.38 | 0.28 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.2 | 7.4 | 6.4 | 6.5 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 678 | 1930 | 1140 | 826 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.38 | 0.9 | 0.56 | 0.39 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7060 | 10500 | 8340 | 7470 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 58.9 | 111 | 87 | 91.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.08 | 0.094 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 2.9 | 1.9 | 1.7 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 3.6 | 2.6 | 2.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17400 | 21500 | 19200 | 18800 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 2.1 | 1.6 | 1.6 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0095 | 0.011 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 118 | 130 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.018 | 0.012 | 0.012 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.8 | 88 | 49.1 | 31.6 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.8 | 1.9 | 1.7 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27 | 52.1 | 38.4 | 36.1 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-16c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Cut-Leaf Blazing-star

RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 21.6 | 32.4 | 27.6 | 28.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7590 | 18000 | 11200 | 8100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2370 | 3660 | 2930 | 2770 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.045 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.5 | 0.41 | 0.41 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 68.2 | 85.3 | 76.7 | 76.6 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.059 | 0.059 | ND | 0.13 | 0.093 | 0.12 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.5 | 14.5 | 13.4 | 13.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.23 | 0.38 | 0.31 | 0.31 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30900 | 37800 | 34400 | 34400 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.1 | 5.6 | 4.3 | 4.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.83 | 1.2 | 0.99 | 0.95 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.2 | 15 | 11.1 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2670 | 3970 | 3310 | 3280 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 1.8 | 1.4 | 1.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7560 | 8050 | 7880 | 8030 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 95.5 | 121 | 104 | 96.9 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.05 | 0.055 | ND | 0.068 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.59 | 0.83 | 0.72 | 0.75 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.7 | 3.8 | 3.3 | 3.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9880 | 12600 | 11200 | 11100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.47 | 0.77 | 0.59 | 0.52 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.021 | 0.016 | 0.014 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 603 | 1180 | 928 | 1000 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.037 | 0.069 | 0.057 | 0.066 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 117 | 214 | 164 | 160 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.9 | 9.7 | 7.4 | 6.6 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30 | 40.5 | 35.6 | 36.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-16d
Wildlife Impact Study - Washed Vegetation Aboveground - Cut-Leaf Blazing-star
RI/FS Tailings Facility Reference - Cater Ranch

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 13 | 16 | 15 | 16 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16100 | 29600 | 23700 | 25300 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 217 | 271 | 242 | 237 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.059 | 0.075 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.37 | 0.47 | 0.41 | 0.4 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 42.5 | 57.7 | 50.9 | 52.5 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.094 | 0.11 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.5 | 52.3 | 46.4 | 49.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.075 | 0.32 | 0.19 | 0.17 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22500 | 28800 | 25900 | 26500 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.85 | 2.6 | 1.5 | 1.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.22 | 0.18 | 0.16 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.1 | 6.9 | 6.4 | 6.1 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 301 | 386 | 346 | 352 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.25 | 0.34 | 0.31 | 0.33 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6030 | 10000 | 7570 | 6690 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 55 | 105 | 81 | 83.1 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.094 | 0.12 | ND | 0.11 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 2.3 | 1.8 | 1.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.5 | 2 | 2.4 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16200 | 26200 | 19800 | 16900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 2.6 | 2.1 | 1.9 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.012 | 0.015 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 152 | 176 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.015 | 0.015 | ND | 0.039 | 0.021 | 0.016 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10 | 12.5 | 11.1 | 10.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.54 | 0.81 | 0.69 | 0.71 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.2 | 54.4 | 41.6 | 41.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-16e
Wildlife Impact Study - Washed Vegetation Below Ground - Cut-Leaf Blazing-star
RI/FS Tailings Facility Reference - Cater Ranch
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 1 | 100.00 | No SLC | | | 18.9 | 18.9 | 18.9 | 18.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4430 | 11900 | 8840 | 10200 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 122 | 195 | 163 | 172 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.049 | 0.052 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.18 | 0.15 | 0.14 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28 | 35 | 30.8 | 29.5 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.07 | 0.074 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.5 | 12.5 | 11.4 | 11.1 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 1.2 | 0.67 | 0.48 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10400 | 13200 | 12200 | 13100 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.65 | 1.7 | 1.3 | 1.6 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.18 | 0.16 | 0.15 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.8 | 12.5 | 9.8 | 10 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 165 | 257 | 210 | 209 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 0.39 | 0.32 | 0.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3160 | 4130 | 3560 | 3380 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.5 | 21.5 | 20.8 | 20.5 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.075 | 0.084 | ND | 0.09 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.74 | 1.1 | 0.98 | 1.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 2.5 | 1.7 | 1.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10400 | 12100 | 11200 | 11100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 0.8 | 0.63 | 0.58 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.01 | 0.01 | ND | 0.014 | 0.011 | 0.013 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 443 | 3960 | 1940 | 1420 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.033 | 0.12 | 0.069 | 0.055 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.5 | 9 | 7.5 | 7.9 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.79 | 1.2 | 0.93 | 0.8 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26 | 38.5 | 30.8 | 27.9 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-17a
Wildlife Impact Study - Root Zone Soils - Big Sagebrush
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 15.5 | 23.9 | 20.4 | 21.9 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.2 | 3.8 | 3.1 | 3.4 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1.5 | 2.1 | 1.8 | 1.7 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1.4 | 3.2 | 2.5 | 2.9 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.1 | 4.8 | 4.2 | 4.7 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.9 | 8.2 | 8.1 | 8.1 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 41.6 | 797 | 439 | 479 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 0.05 | 0.04 | 0.04 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 93.3 | 96.4 | 95.2 | 95.8 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 298 | 595 | 420 | 367 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 33.3 | 268 | 117 | 49 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 265 | 436 | 363 | 388 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 10400 | 15900 | 13600 | 14500 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.047 | 0.05 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.4 | 4.5 | 4.4 | 4.4 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 135 | 262 | 192 | 179 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.86 | 0.93 | 0.89 | 0.88 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4 | 6.5 | 5.2 | 5.1 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.079 | 0.34 | 0.22 | 0.23 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 17000 | 49200 | 33400 | 33900 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 15.1 | 27.2 | 21.9 | 23.5 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.6 | 9.2 | 8 | 8.2 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 39.7 | 112 | 64.9 | 43 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12000 | 18500 | 15300 | 15400 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.5 | 31.4 | 25.3 | 26.1 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5540 | 7670 | 6490 | 6270 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 353 | 454 | 410 | 423 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.015 | 0.017 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 24.2 | 61.4 | 48 | 58.5 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 12.9 | 23 | 19 | 21.2 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2120 | 3300 | 2530 | 2180 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.096 | 0.28 | 0.18 | 0.17 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-17a
Wildlife Impact Study - Root Zone Soils - Big Sagebrush
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.17 | 0.26 | 0.21 | 0.19 |
| Sodium | T | mg/Kg-dry | 3 | 66.70 | No SLC | 183 | 183 | ND | 331 | 219 | 233 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.16 | 0.22 | 0.18 | 0.16 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 324 | 504 | 439 | 488 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 27.2 | 35.1 | 32.5 | 35.1 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 68.6 | 78.7 | 73.1 | 72.1 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-17b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Big Sagebrush

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 33.5 | 37.9 | 35.6 | 35.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15100 | 44200 | 25900 | 18300 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 297 | 426 | 361 | 361 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.025 | 0.028 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.26 | 0.2 | 0.17 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.8 | 14.3 | 12.8 | 12.4 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.028 | 0.029 | ND | 0.029 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.5 | 30.9 | 26.2 | 24.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.38 | 0.66 | 0.49 | 0.42 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7820 | 9390 | 8520 | 8340 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.97 | 0.97 | 0.97 | 0.97 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.26 | 0.21 | 0.23 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.5 | 41.8 | 32.4 | 36 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 332 | 540 | 426 | 405 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.76 | 0.76 | ND | 2.1 | 1.1 | 0.84 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1930 | 2280 | 2100 | 2090 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 57.9 | 109 | 76.3 | 62.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.042 | 0.049 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25.3 | 85.6 | 65.1 | 84.3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 2.2 | 1.7 | 1.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15900 | 27600 | 23600 | 27400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.71 | 0.4 | 0.37 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.012 | 0.013 | 0.012 | 0.012 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 30.9 | 405 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0057 | 0.0092 | 0.0078 | 0.0085 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.6 | 16.3 | 13.4 | 13.4 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.65 | 0.94 | 0.82 | 0.87 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 64.7 | 123 | 86.7 | 72.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-17c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Big Sagebrush

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 53.6 | 56.5 | 55.5 | 56.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3090 | 8460 | 4890 | 3110 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 954 | 4500 | 2550 | 2210 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.017 | 0.11 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.59 | 1.4 | 0.92 | 0.77 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.8 | 142 | 68.2 | 33.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.068 | 0.24 | ND | 0.13 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.7 | 13 | 9.1 | 8.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 0.56 | 0.46 | 0.54 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6070 | 23000 | 11800 | 6390 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 5.7 | 3.9 | 3.6 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.91 | 1.3 | 1.1 | 1.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.1 | 26.3 | 20.9 | 20.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1090 | 4590 | 2600 | 2110 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 6.5 | 3.6 | 2.5 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1020 | 3690 | 2040 | 1410 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 33.9 | 142 | 78.2 | 58.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.027 | 0.03 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.6 | 81.7 | 43.5 | 29.3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 3.5 | 3.2 | 3.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4840 | 8700 | 6600 | 6250 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.056 | 0.13 | 0.099 | 0.11 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.039 | 0.068 | 0.049 | 0.041 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 153 | 711 | 471 | 548 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.032 | 0.059 | 0.045 | 0.043 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35 | 123 | 72.7 | 60.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.8 | 25 | 11.5 | 4.8 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 23.8 | 23.8 | ND | 46.7 | 25 | 16.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-17d

Wildlife Impact Study - Washed Vegetation Aboveground - Big Sagebrush

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 24.4 | 30.7 | 27.6 | 27.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13300 | 53500 | 27100 | 14500 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 105 | 195 | 136 | 109 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.032 | 0.041 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.23 | 0.15 | 0.13 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.4 | 14.6 | 10.5 | 9.6 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.039 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.3 | 31.1 | 25.9 | 24.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.28 | 0.58 | 0.43 | 0.43 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7290 | 8140 | 7710 | 7710 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.32 | 0.71 | 0.56 | 0.64 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.083 | 0.13 | 0.1 | 0.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.4 | 34.3 | 27.2 | 30 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 132 | 253 | 172 | 132 |
| Lead | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.54 | 1 | ND | 0.24 | | |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1660 | 2090 | 1860 | 1830 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40.6 | 96.8 | 64.7 | 56.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.052 | 0.067 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.1 | 110 | 65.6 | 69.6 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.96 | 2.3 | 1.6 | 1.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16000 | 27500 | 23000 | 25600 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.67 | 0.41 | 0.45 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0065 | 0.0083 | ND | 0.0096 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 35.4 | 275 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0065 | 0.0068 | ND | 0.019 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.5 | 7.1 | 4.8 | 3.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.43 | 0.35 | 0.32 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 58.1 | 109 | 81.1 | 76.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-17e

Wildlife Impact Study - Washed Vegetation Below Ground - Big Sagebrush

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 46.7 | 52 | 48.9 | 48.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3680 | 8230 | 5210 | 3730 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 90.4 | 283 | 191 | 201 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.019 | 0.062 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.45 | 0.29 | 0.23 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21.5 | 51.7 | 31.7 | 21.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.018 | 0.03 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.6 | 11.3 | 10.2 | 9.8 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 0.68 | 0.59 | 0.58 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5060 | 7850 | 6260 | 5880 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.96 | 2.3 | 1.7 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.23 | 0.49 | 0.38 | 0.42 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.3 | 53 | 34.4 | 32.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 110 | 317 | 241 | 296 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.64 | 0.64 | ND | 1.1 | 0.57 | 0.32 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1020 | 1460 | 1200 | 1110 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.7 | 44.7 | 33.8 | 33.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.036 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24 | 64.3 | 48 | 55.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.94 | 1.5 | 1.2 | 1.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6980 | 7870 | 7480 | 7580 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.064 | 0.12 | 0.086 | 0.075 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.018 | 0.029 | 0.024 | 0.026 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 340 | 758 | 488 | 366 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.012 | 0.019 | 0.016 | 0.018 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 7.9 | 5.8 | 7.5 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 11.1 | 5.6 | 3.5 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25.2 | 38.7 | 32.6 | 34 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-18a
Wildlife Impact Study - Root Zone Soils - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 12.4 | 27.9 | 19.4 | 17.8 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.1 | 2.1 | ND | 5.7 | 3.2 | 3 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.22 | 0.84 | 0.52 | 0.5 |
| Nitrate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.1 | 2.1 | ND | 7.3 | 3.6 | 2.5 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1.2 | 6.3 | 3.3 | 2.3 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.6 | 8.5 | 7.9 | 7.7 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 26 | 641 | 245 | 67.7 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.02 | 0.07 | 0.043 | 0.04 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 91.6 | 97.4 | 95.2 | 96.7 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 319 | 1170 | 827 | 991 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 15.5 | 664 | 277 | 150 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 2 | 100.00 | No SLC | | | 359 | 671 | 515 | 515 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8100 | 14600 | 11600 | 12000 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.044 | 0.049 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.7 | 5 | 3.8 | 3.6 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 56.5 | 262 | 148 | 124 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.55 | 0.98 | 0.74 | 0.69 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1.9 | 6.8 | 4 | 3.4 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.044 | 1 | 0.41 | 0.19 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8590 | 44800 | 20900 | 9190 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 13.2 | 29.1 | 20.9 | 20.5 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.7 | 14.3 | 9.3 | 7 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21 | 102 | 58.5 | 52.4 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 11600 | 19700 | 14800 | 13000 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.3 | 106 | 46.6 | 22.5 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4460 | 6190 | 5540 | 5960 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 288 | 588 | 461 | 507 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.015 | 0.018 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 9.1 | 152 | 75.8 | 66.3 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 13.3 | 25.5 | 18.6 | 17.1 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1990 | 2780 | 2310 | 2160 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.18 | 0.17 | 0.18 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-18a
Wildlife Impact Study - Root Zone Soils - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.16 | 0.34 | 0.23 | 0.2 |
| Sodium | T | mg/Kg-dry | 3 | 33.30 | No SLC | 158 | 169 | ND | 239 | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.13 | 0.22 | 0.18 | 0.18 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 325 | 517 | 402 | 363 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.5 | 33.9 | 28 | 28.6 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 40.9 | 240 | 122 | 84.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-18b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 31.1 | 39 | 34.3 | 32.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 17000 | 26700 | 21900 | 21900 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 194 | 651 | 353 | 213 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.031 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.41 | 0.23 | 0.18 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.2 | 14.2 | 9 | 8.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.028 | 0.031 | ND | 0.041 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.9 | 75.8 | 46.3 | 35.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.42 | 1.2 | 0.84 | 0.9 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7450 | 7870 | 7720 | 7840 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.58 | 6.4 | 2.7 | 1.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.33 | 0.2 | 0.16 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.4 | 30.3 | 27.3 | 29.2 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 225 | 767 | 413 | 246 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.33 | 1 | 0.7 | 0.77 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1980 | 2160 | 2060 | 2030 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 71 | 167 | 105 | 76.4 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.041 | 0.052 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 97.4 | 230 | 144 | 106 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2 | 3.6 | 2.6 | 2.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19200 | 32900 | 24300 | 20900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 1.5 | 0.68 | 0.39 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0061 | 0.0061 | ND | 0.013 | 0.0076 | 0.0067 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 33.5 | 60.5 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0076 | 0.016 | 0.012 | 0.011 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.4 | 23.3 | 12.6 | 8.1 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.45 | 1.2 | 0.71 | 0.48 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 106 | 106 | ND | 205 | 141 | 165 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-18c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 47.4 | 49.8 | 48.4 | 47.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 4810 | 9660 | 7240 | 7240 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1140 | 3500 | 2070 | 1570 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.022 | 0.022 | ND | 0.081 | 0.038 | 0.023 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.44 | 1.5 | 0.82 | 0.51 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.1 | 94.6 | 43 | 22.2 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.021 | 0.021 | ND | 0.17 | 0.1 | 0.13 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.9 | 13.5 | 12.8 | 13 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.27 | 2.6 | 1.3 | 0.96 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6740 | 17100 | 10400 | 7300 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 5.2 | 4.5 | 4.4 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.96 | 1.7 | 1.4 | 1.5 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37 | 41 | 39.4 | 40.2 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2000 | 3250 | 2480 | 2200 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.6 | 20 | 9.7 | 4.6 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1410 | 3150 | 2190 | 2020 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 78.1 | 116 | 91.2 | 79.6 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.034 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 51.3 | 202 | 116 | 93.6 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.4 | 7.7 | 5.3 | 4.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6690 | 8510 | 7460 | 7180 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.065 | 1.2 | 0.46 | 0.12 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.048 | 0.13 | 0.083 | 0.072 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 144 | 144 | ND | 700 | 329 | 214 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.038 | 0.067 | 0.051 | 0.048 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 55.5 | 95.6 | 73.7 | 70 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 9.8 | 5.4 | 3.4 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 40.4 | 40.4 | ND | 109 | 64.2 | 63.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-18d
Wildlife Impact Study - Washed Vegetation Aboveground - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 27.7 | 33.7 | 31.6 | 33.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 23000 | 23700 | 23400 | 23400 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 112 | 394 | 211 | 127 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.028 | 0.035 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.44 | 0.24 | 0.18 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 8.8 | 5.9 | 6.5 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.033 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 31.8 | 66.8 | 44.5 | 35 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.38 | 1.3 | 0.83 | 0.82 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5680 | 7240 | 6270 | 5880 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.91 | 0.91 | ND | 0.79 | 0.6 | 0.56 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.082 | 0.17 | 0.12 | 0.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.3 | 23.6 | 22.3 | 22.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 142 | 403 | 229 | 143 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.56 | 0.41 | 0.43 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1500 | 1890 | 1670 | 1610 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 77.1 | 149 | 105 | 88.5 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.044 | 0.057 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 70 | 157 | 112 | 109 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.9 | 2.1 | 2 | 2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14300 | 29200 | 21600 | 21400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 1.8 | 0.78 | 0.41 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0059 | 0.0068 | ND | 0.0082 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 35.4 | 87.6 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0059 | 0.0059 | ND | 0.013 | 0.0081 | 0.0082 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.5 | 12.6 | 6.9 | 4.6 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 0.71 | 0.44 | 0.32 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 135 | 135 | ND | 190 | 132 | 138 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-18e
Wildlife Impact Study - Washed Vegetation Below Ground - Rubber Rabbitbrush
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 35.5 | 46.5 | 40.6 | 39.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 2 | 100.00 | No SLC | | | 6170 | 8780 | 7480 | 7480 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 235 | 458 | 367 | 409 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.021 | 0.028 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.23 | 0.23 | ND | 0.3 | 0.17 | 0.12 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.6 | 45.7 | 22.2 | 16.4 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.024 | 0.028 | ND | 0.034 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.4 | 17.5 | 14.9 | 13.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 1.8 | 1 | 0.98 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6190 | 6370 | 6300 | 6330 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.95 | 1.2 | 1 | 0.97 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.3 | 0.51 | 0.39 | 0.35 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.5 | 29.6 | 24.7 | 28 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 389 | 440 | 416 | 418 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.43 | 5.4 | 2.3 | 1 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1130 | 2380 | 1630 | 1370 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24 | 68 | 42.7 | 36 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.032 | 0.049 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 64.5 | 143 | 95.7 | 79.7 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.9 | 1.7 | 1.2 | 1.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6910 | 10100 | 8810 | 9430 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.2 | 1.2 | ND | 0.16 | 0.28 | 0.16 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0065 | 0.069 | 0.031 | 0.019 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 78.1 | 126 | ND | 328 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.024 | 0.043 | 0.031 | 0.026 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.3 | 13.4 | 11.1 | 11.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.54 | 4 | 1.8 | 0.81 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 39.2 | 39.2 | ND | 79.7 | 48.3 | 45.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19a
Wildlife Impact Study - Root Zone Soils - Crested Wheatgrass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 22.9 | 28.1 | 24.7 | 23.2 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.1 | 2.1 | ND | 9.4 | 5.8 | 7.1 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.36 | 3.4 | 1.9 | 2 |
| Nitrate | T | mg/Kg-dry | 3 | 0.00 | No SLC | 0.84 | 2.2 | ND | ND | | |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 2.8 | 5.4 | 3.7 | 2.8 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.5 | 8.1 | 7.8 | 7.9 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 27.5 | 841 | 303 | 39.5 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.05 | 0.39 | 0.2 | 0.16 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 93.9 | 96.3 | 95.1 | 95 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 327 | 1660 | 889 | 681 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 11.1 | 185 | 119 | 161 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 328 | 477 | 426 | 473 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 16500 | 18100 | 17300 | 17300 |
| Antimony | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.051 | 0.082 | ND | 0.078 | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.8 | 5.8 | 4.7 | 4.5 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 90.4 | 304 | 185 | 160 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.84 | 1.1 | 0.98 | 1 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3 | 7.3 | 5.4 | 6 |
| Cadmium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.019 | 0.019 | ND | 0.14 | 0.068 | 0.054 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4580 | 46100 | 21500 | 13800 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.6 | 39.2 | 28.8 | 28.5 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.8 | 10.9 | 9.3 | 9.3 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.5 | 72 | 41.3 | 34.5 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 18000 | 21300 | 19500 | 19100 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 14.1 | 41.3 | 25.5 | 21.1 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5590 | 8300 | 7040 | 7220 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 441 | 619 | 515 | 486 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.017 | 0.018 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.7 | 101 | 40.4 | 17.6 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.1 | 25 | 22.2 | 24.5 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2080 | 3730 | 2680 | 2240 |
| Selenium | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.078 | 0.082 | ND | 0.69 | | |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19a
Wildlife Impact Study - Root Zone Soils - Crested Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.11 | 0.29 | 0.18 | 0.15 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 42.9 | 287 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.14 | 0.28 | 0.2 | 0.19 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 409 | 733 | 536 | 466 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 31.7 | 46.5 | 39 | 38.7 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 54.4 | 101 | 77.9 | 78.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Crested Wheatgrass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 42.7 | 45 | 43.8 | 43.8 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10800 | 20800 | 14200 | 11000 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 313 | 639 | 518 | 602 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.022 | 0.023 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.43 | 0.35 | 0.4 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.2 | 18.4 | 12.1 | 9.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.021 | 0.035 | ND | 0.034 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.7 | 5.6 | 5.3 | 5.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.029 | 0.053 | 0.038 | 0.032 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3340 | 4330 | 3800 | 3740 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.71 | 2 | 1.5 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.35 | 0.23 | 0.23 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.3 | 9.1 | 7.1 | 7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 304 | 716 | 548 | 625 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 1.7 | 0.91 | 0.82 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 814 | 1240 | 1030 | 1050 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 41.6 | 74.4 | 62.5 | 71.4 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.035 | 0.036 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24.3 | 116 | 57.2 | 31.3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.36 | 1.3 | 0.87 | 0.95 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15400 | 17400 | 16700 | 17400 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.036 | 0.036 | ND | 0.33 | 0.21 | 0.29 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0051 | 0.023 | 0.014 | 0.013 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 26.5 | 53.2 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0066 | 0.016 | 0.013 | 0.015 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.9 | 27 | 19.6 | 20.9 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.51 | 1.4 | 0.94 | 0.91 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 41.6 | 41.6 | ND | 29.8 | 25.4 | 25.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Crested Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 84.1 | 89.3 | 86.3 | 85.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2190 | 5000 | 3350 | 2860 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10700 | 13300 | 12300 | 12900 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.06 | 0.06 | ND | 0.071 | 0.051 | 0.052 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 3.1 | 2.9 | 2.8 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 78.2 | 128 | 107 | 115 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.58 | 0.83 | 0.72 | 0.75 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.7 | 4.8 | 3.4 | 3.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.069 | 0.31 | 0.16 | 0.099 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4000 | 13200 | 9370 | 10900 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.6 | 21.7 | 17.1 | 18.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 3.6 | 3.1 | 2.9 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15.9 | 44.9 | 32.2 | 35.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10200 | 13600 | 12300 | 13200 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.1 | 27 | 17.4 | 16.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3470 | 4560 | 3860 | 3540 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 244 | 416 | 353 | 398 |
| Mercury | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.026 | 0.04 | 0.032 | 0.029 |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.4 | 70.2 | 36 | 28.3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.9 | 16.1 | 13.2 | 14.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2580 | 2900 | 2740 | 2740 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.79 | 0.38 | 0.18 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.056 | 0.13 | 0.095 | 0.1 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 26.5 | 27.4 | ND | 292 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.082 | 0.13 | 0.1 | 0.087 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 244 | 402 | 306 | 271 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.4 | 25.2 | 21.5 | 20 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40 | 82.4 | 60 | 57.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19d

Wildlife Impact Study - Washed Vegetation Aboveground - Crested Wheatgrass

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 34.4 | 37.6 | 36.1 | 36.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10800 | 18200 | 13900 | 12700 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 96.7 | 332 | 251 | 324 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.029 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.35 | 0.35 | ND | 0.72 | 0.34 | 0.17 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.2 | 12.2 | 8.4 | 6.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.029 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.4 | 7.5 | 5.5 | 4.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.076 | 0.036 | 0.026 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2860 | 3610 | 3290 | 3410 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.76 | 0.76 | ND | 1.3 | 0.65 | 0.38 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.05 | 0.22 | 0.14 | 0.14 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.3 | 8.2 | 6.6 | 6.2 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 105 | 408 | 282 | 332 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 1.5 | 0.67 | 0.41 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 695 | 1000 | 893 | 983 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 31.8 | 60.6 | 48.4 | 52.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.047 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18.2 | 114 | 55.3 | 33.6 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.39 | 0.87 | 0.64 | 0.65 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17300 | 19600 | 18800 | 19500 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.047 | 0.047 | ND | 0.5 | 0.24 | 0.19 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0056 | 0.0056 | ND | 0.013 | 0.0076 | 0.0071 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 42.9 | 67.4 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0056 | 0.0059 | ND | 0.0097 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 15.5 | 10 | 11.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.89 | 0.56 | 0.56 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 51.6 | 51.6 | ND | 28.5 | 26 | 25.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-19e
Wildlife Impact Study - Washed Vegetation Below Ground - Crested Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 45 | 53.1 | 50.1 | 52.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3710 | 6850 | 4850 | 4000 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1850 | 7400 | 3890 | 2420 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.028 | 0.028 | ND | 0.083 | 0.054 | 0.064 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.7 | 1.3 | 0.92 | 0.76 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.8 | 101 | 67.7 | 79.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.46 | 0.23 | 0.12 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 4.8 | 3.6 | 4.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.071 | 0.27 | 0.2 | 0.26 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2550 | 12400 | 8090 | 9310 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 14.4 | 6.7 | 2.9 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.6 | 4 | 2.9 | 3.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.6 | 50.6 | 25.3 | 13.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1700 | 8020 | 3950 | 2130 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 11.9 | 5.2 | 2.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 708 | 2960 | 1690 | 1410 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 81.8 | 281 | 200 | 237 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.036 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.7 | 93.8 | 41.7 | 18.7 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.6 | 9.4 | 5.5 | 3.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2800 | 3020 | 2930 | 2980 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.031 | 0.031 | ND | 0.18 | 0.087 | 0.064 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.029 | 0.13 | 0.068 | 0.045 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 44.5 | 57.8 | ND | 237 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.019 | 0.1 | 0.049 | 0.027 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 47.5 | 285 | 134 | 69.1 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 16.9 | 8.9 | 7.8 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 48.8 | 48.8 | ND | 24.9 | 23.8 | 24.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-20a
Wildlife Impact Study - Root Zone Soils - Sleepy Grass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 16.7 | 30.3 | 24.7 | 27 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.3 | 5.3 | 3.7 | 3.6 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.47 | 2 | 1.2 | 1 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4 | 7.5 | 5.3 | 4.5 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 3.5 | 6.7 | 4.7 | 3.8 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.7 | 8.3 | 8 | 7.9 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 33.4 | 980 | 644 | 918 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.05 | 0.07 | 0.06 | 0.06 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 91 | 95.4 | 93.8 | 95.1 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 241 | 658 | 414 | 342 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 26.2 | 182 | 78.2 | 26.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 454 | 587 | 521 | 522 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12000 | 18800 | 15000 | 14300 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.049 | 0.05 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.4 | 6.4 | 4.8 | 4.5 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 172 | 375 | 248 | 198 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.82 | 0.95 | 0.9 | 0.93 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.1 | 8.4 | 6.6 | 6.3 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.055 | 0.46 | 0.22 | 0.13 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 13800 | 61300 | 35600 | 31600 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.3 | 28.9 | 23.4 | 24.9 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8 | 9.3 | 8.6 | 8.5 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 29.9 | 146 | 71.6 | 39 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 14100 | 19100 | 16200 | 15400 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 12 | 38.5 | 26.5 | 28.9 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5600 | 8450 | 7130 | 7330 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 329 | 512 | 412 | 394 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.016 | 0.017 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 10.8 | 83.2 | 48.2 | 50.5 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16.2 | 23.5 | 19.3 | 18.3 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2470 | 3670 | 3000 | 2850 |
| Selenium | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.079 | 0.079 | ND | 0.32 | 0.19 | 0.21 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-20a
Wildlife Impact Study - Root Zone Soils - Sleepy Grass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.58 | 0.32 | 0.23 |
| Sodium | T | mg/Kg-dry | 3 | 66.70 | No SLC | 199 | 199 | ND | 372 | 254 | 289 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.2 | 0.25 | 0.22 | 0.21 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 384 | 545 | 483 | 519 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 35.9 | 38 | 36.8 | 36.6 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 52.2 | 90.2 | 71.9 | 73.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-20b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Sleepy Grass

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 41 | 43.3 | 42.2 | 42.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16600 | 22900 | 20100 | 20700 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 190 | 273 | 224 | 208 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.024 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.26 | 0.26 | ND | 0.3 | 0.2 | 0.16 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.3 | 10.2 | 7.6 | 9.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.024 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 14.6 | 10.1 | 11.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.034 | 0.05 | 0.04 | 0.037 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3100 | 3930 | 3490 | 3440 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.48 | 0.48 | ND | 2.9 | 1.5 | 1.5 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.071 | 0.21 | 0.15 | 0.16 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.9 | 19.3 | 12.1 | 9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 205 | 354 | 259 | 219 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.2 | 1.2 | ND | 0.26 | 0.37 | 0.26 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1010 | 1420 | 1170 | 1090 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 31.9 | 107 | 72.4 | 78.3 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.035 | 0.039 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 116 | 207 | 154 | 139 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.5 | 7.2 | 4.2 | 3.9 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17400 | 37900 | 25300 | 20500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.23 | 0.44 | 0.34 | 0.36 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0047 | 0.0048 | ND | 0.011 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 26.6 | 53.3 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0047 | 0.015 | 0.0093 | 0.0083 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.3 | 11.2 | 7.7 | 6.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.38 | 0.56 | 0.46 | 0.44 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 24.9 | 24.9 | ND | 51.9 | 35.5 | 42 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-20c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Sleepy Grass
 RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 75.7 | 83.8 | 79.5 | 79 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3940 | 5810 | 5000 | 5250 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7880 | 14600 | 10300 | 8560 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.063 | 0.08 | ND | 0.11 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 3.6 | 2.3 | 2.2 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 134 | 243 | 176 | 150 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.44 | 0.67 | 0.54 | 0.5 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.3 | 7.1 | 5.8 | 5.9 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0046 | 0.0046 | ND | 0.22 | 0.14 | 0.19 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8660 | 31400 | 21600 | 24700 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.3 | 15.8 | 12.4 | 13.2 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 3.2 | 2.3 | 2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.3 | 111 | 51.8 | 30.1 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7240 | 12400 | 9260 | 8140 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5 | 22 | 13.8 | 14.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3410 | 4240 | 3850 | 3910 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 146 | 277 | 201 | 179 |
| Mercury | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.021 | 0.021 | ND | 0.035 | 0.024 | 0.025 |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30.5 | 100 | 68.5 | 75.1 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.4 | 9.2 | 7.4 | 6.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2510 | 3240 | 2980 | 3200 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.034 | 0.86 | 0.35 | 0.16 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.051 | 0.13 | 0.084 | 0.071 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 92.2 | 243 | 166 | 164 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.062 | 0.11 | 0.082 | 0.075 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 200 | 392 | 275 | 234 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.4 | 26.7 | 23.2 | 22.4 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 26 | 26 | ND | 58.7 | 42.9 | 57 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-20d

Wildlife Impact Study - Washed Vegetation Aboveground - Sleepy Grass

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 37.3 | 43.2 | 39.4 | 37.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14500 | 19400 | 16600 | 15900 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 78.9 | 119 | 105 | 118 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.027 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.34 | 0.26 | 0.26 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.6 | 9.5 | 6.3 | 6.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.026 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 14.6 | 9.6 | 11.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.017 | 0.05 | 0.033 | 0.032 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2920 | 3620 | 3250 | 3210 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.53 | 0.53 | ND | 1.4 | 0.75 | 0.58 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.061 | 0.21 | 0.12 | 0.1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.6 | 12.2 | 10.4 | 10.3 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 120 | 143 | 130 | 127 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.41 | 0.41 | ND | 0.18 | 0.18 | 0.18 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1040 | 1350 | 1140 | 1040 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.2 | 102 | 74.9 | 93.5 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.035 | 0.042 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 129 | 198 | 155 | 139 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.5 | 7.7 | 4.5 | 4.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16500 | 19900 | 17800 | 16900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.41 | 0.37 | 0.35 |
| Silver | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0047 | 0.0054 | ND | ND | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 25.1 | 61.3 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0047 | 0.0054 | ND | 0.012 | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.7 | 3.7 | 3.2 | 3.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.23 | 0.33 | 0.26 | 0.23 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 20 | 20 | ND | 53.4 | 32.9 | 35.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-20e

Wildlife Impact Study - Washed Vegetation Below Ground - Sleepy Grass

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 41.5 | 45.3 | 43.8 | 44.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3980 | 8640 | 6130 | 5760 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 902 | 1470 | 1160 | 1100 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.022 | 0.022 | ND | 0.062 | 0.04 | 0.046 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.64 | 0.5 | 0.51 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.4 | 61.6 | 39 | 32.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.064 | 0.073 | ND | 0.08 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.4 | 4.7 | 3.6 | 3.7 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.064 | 0.31 | 0.21 | 0.27 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3730 | 7530 | 5570 | 5460 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 2.9 | 2.1 | 2 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.62 | 3.1 | 1.7 | 1.5 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.4 | 45.6 | 25.3 | 18 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1020 | 1350 | 1180 | 1160 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.84 | 3.2 | 2.2 | 2.7 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 673 | 969 | 822 | 824 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 43.1 | 44.9 | 44.1 | 44.4 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.033 | 0.039 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 65.6 | 150 | 98.9 | 81 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 4.9 | 3.5 | 3.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2380 | 2950 | 2750 | 2910 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.16 | 0.14 | 0.14 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.036 | 0.095 | 0.059 | 0.047 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 105 | 149 | ND | 75.9 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.029 | 0.02 | 0.016 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.4 | 45.1 | 36 | 34.4 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.7 | 8.9 | 5.7 | 5.4 |
| Zinc | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 13.1 | 13.1 | ND | 40.4 | 27.9 | 36.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-21a
Wildlife Impact Study - Root Zone Soils - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 8.1 | 28.8 | 17.9 | 16.8 |
| Chloride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2.1 | 6.4 | 4 | 3.6 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.77 | 1.5 | 1.1 | 1.1 |
| Nitrate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1.6 | 3.7 | 2.7 | 2.8 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1.8 | 4.2 | 3.1 | 3.3 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.5 | 8.1 | 7.8 | 7.8 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 31.7 | 1270 | 616 | 545 |
| Sodium Absorption Ratio | T | ratio | 3 | 66.70 | No SLC | 0.03 | 0.03 | ND | 0.12 | 0.055 | 0.03 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 95.6 | 98.2 | 96.6 | 95.9 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 454 | 1000 | 677 | 576 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 116 | 324 | 221 | 223 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 107 | 469 | 306 | 342 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 10100 | 19800 | 13500 | 10500 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.043 | 0.05 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.2 | 4.7 | 4.5 | 4.5 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 72.3 | 215 | 131 | 107 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.76 | 1 | 0.86 | 0.83 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.8 | 7 | 5.6 | 6.1 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.093 | 0.44 | 0.22 | 0.12 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 9190 | 23500 | 16000 | 15200 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.6 | 25.7 | 24.3 | 25.5 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.9 | 8.3 | 7.4 | 7.1 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 37.6 | 52.5 | 44.5 | 43.4 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 14000 | 19600 | 16900 | 17200 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19.9 | 29.5 | 26.2 | 29.3 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5710 | 6530 | 6020 | 5820 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 390 | 479 | 439 | 449 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.016 | 0.017 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19.1 | 46.4 | 33 | 33.6 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 16 | 20.7 | 18.7 | 19.3 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2320 | 2810 | 2500 | 2370 |
| Selenium | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.069 | 0.081 | ND | 0.26 | | |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-21a
Wildlife Impact Study - Root Zone Soils - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.17 | 0.3 | 0.24 | 0.24 |
| Sodium | T | mg/Kg-dry | 3 | 66.70 | No SLC | 213 | 213 | ND | 257 | 176 | 163 |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.14 | 0.22 | 0.19 | 0.21 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 404 | 518 | 466 | 476 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 31 | 40.1 | 35.7 | 35.9 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 70 | 87.2 | 76.8 | 73.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-21b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 34.9 | 41.5 | 39.3 | 41.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14800 | 28300 | 21300 | 20800 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 187 | 732 | 371 | 194 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.028 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.49 | 0.24 | 0.12 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12 | 17.1 | 14 | 12.9 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.028 | 0.044 | ND | 0.039 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.1 | 6.3 | 5.9 | 6.3 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.032 | 0.1 | 0.057 | 0.039 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2780 | 5410 | 4060 | 4000 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 1.9 | 1.7 | 1.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.091 | 0.24 | 0.18 | 0.22 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.3 | 10 | 7.5 | 6.3 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 320 | 756 | 467 | 326 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.54 | 1.2 | 0.84 | 0.78 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 898 | 1270 | 1080 | 1070 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 42.9 | 60.5 | 51.2 | 50.3 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.037 | 0.043 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 88 | 129 | 104 | 96 |
| Nickel | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.76 | 0.76 | ND | 0.76 | 0.52 | 0.43 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17000 | 24800 | 21400 | 22300 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.049 | 0.59 | 0.24 | 0.095 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0073 | 0.011 | 0.0098 | 0.011 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 30.6 | 90.7 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.006 | 0.0085 | 0.0075 | 0.008 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.3 | 27.6 | 16.9 | 12.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.43 | 1.1 | 0.76 | 0.76 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32.2 | 69.4 | 45.7 | 35.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-12c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 70.6 | 79.7 | 73.7 | 70.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4690 | 4960 | 4800 | 4750 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9590 | 11900 | 10600 | 10400 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.051 | 0.092 | ND | 0.072 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 3.8 | 3.5 | 3.8 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 71.3 | 131 | 111 | 130 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.63 | 0.65 | 0.64 | 0.63 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.8 | 5.8 | 4.6 | 4.3 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.14 | 0.32 | 0.22 | 0.2 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12000 | 23500 | 16400 | 13700 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.4 | 16.7 | 15.2 | 16.5 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 3.4 | 2.7 | 3.2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 34.7 | 39.4 | 36.9 | 36.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10800 | 13000 | 12000 | 12200 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.6 | 26.3 | 19 | 17 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3420 | 4940 | 4190 | 4200 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 266 | 335 | 290 | 268 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.023 | 0.035 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 27.2 | 68.2 | 45.5 | 41 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.4 | 13.8 | 9.6 | 9.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3450 | 4990 | 4260 | 4340 |
| Selenium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.02 | 0.021 | ND | 0.18 | | |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.085 | 0.13 | 0.1 | 0.1 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 103 | 261 | 174 | 158 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.076 | 0.14 | 0.1 | 0.088 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 252 | 320 | 282 | 275 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.2 | 26.5 | 24.6 | 24.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 67.6 | 80.7 | 72.7 | 69.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-21d
Wildlife Impact Study - Washed Vegetation Aboveground - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 30.5 | 40.6 | 37.2 | 40.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13400 | 24600 | 19100 | 19200 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 56.1 | 154 | 102 | 95 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.033 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.29 | 0.29 | ND | 0.077 | 0.094 | 0.077 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9 | 10 | 9.6 | 9.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.024 | 0.029 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.1 | 6.3 | 5.8 | 5.9 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.013 | 0.15 | 0.065 | 0.032 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2400 | 4460 | 3600 | 3930 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.63 | 0.63 | ND | 1.1 | 0.61 | 0.41 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.043 | 0.049 | 0.045 | 0.044 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.9 | 10.7 | 6.8 | 4.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 97.3 | 175 | 149 | 175 |
| Lead | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.47 | 0.47 | ND | 0.32 | 0.24 | 0.23 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 680 | 1090 | 947 | 1070 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.3 | 48.7 | 35.2 | 28.5 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.053 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 62.2 | 170 | 120 | 129 |
| Nickel | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.27 | 0.29 | ND | 0.4 | | |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16100 | 25500 | 21100 | 21800 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.054 | 0.54 | 0.23 | 0.083 |
| Silver | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0046 | 0.0049 | ND | 0.0067 | | |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 32 | 60 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.0046 | 0.0067 | ND | ND | | |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 6.3 | 4.7 | 5 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.27 | 0.24 | 0.24 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32.4 | 70.7 | 45.5 | 33.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-21e
Wildlife Impact Study - Washed Vegetation Below Ground - Western Wheatgrass
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 32.4 | 40.6 | 35.6 | 33.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5380 | 16700 | 9710 | 7050 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2600 | 2930 | 2800 | 2860 |
| Antimony | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.034 | 0.082 | ND | 0.031 | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.65 | 1.1 | 0.82 | 0.72 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 36.8 | 49.3 | 41.4 | 38.1 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.27 | 0.27 | ND | 0.29 | 0.19 | 0.16 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.1 | 4.4 | 3.6 | 3.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.97 | 0.52 | 0.41 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7510 | 10300 | 8840 | 8710 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 7.2 | 5.5 | 5.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.8 | 1.9 | 1.8 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.3 | 59.4 | 44.4 | 57.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2710 | 4180 | 3620 | 3970 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 9.4 | 6.3 | 7.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1230 | 2020 | 1670 | 1770 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 104 | 213 | 150 | 132 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.037 | 0.05 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 59.4 | 94.6 | 79.1 | 83.2 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.3 | 5.6 | 4.2 | 4.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4250 | 6730 | 5270 | 4820 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.088 | 0.23 | 0.15 | 0.12 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.034 | 0.2 | 0.12 | 0.14 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 75.9 | 204 | ND | 81.5 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.037 | 0.091 | 0.069 | 0.079 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 88.8 | 137 | 114 | 115 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 10.9 | 8.4 | 10.3 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 55.4 | 76.8 | 66.3 | 66.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22a
Wildlife Impact Study - Root Zone Soils - Blue Grama
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 10.1 | 26.4 | 19.8 | 22.8 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.4 | 2.4 | ND | 3.6 | 2.7 | 3.3 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.64 | 2.5 | 1.8 | 2.2 |
| Nitrate | T | mg/Kg-dry | 3 | 0.00 | No SLC | 2.2 | 2.4 | ND | ND | | |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1.7 | 6 | 4.6 | 6 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 8.5 | 8.8 | 8.7 | 8.7 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 888 | 1530 | 1180 | 1120 |
| Sodium Absorption Ratio | T | ratio | 3 | 66.70 | No SLC | 0.04 | 0.04 | ND | 0.08 | 0.05 | 0.05 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 83.6 | 92.1 | 86.9 | 85 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 142 | 243 | 178 | 149 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 11.9 | 64.7 | 35.1 | 28.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 237 | 584 | 462 | 564 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12700 | 20000 | 16900 | 17900 |
| Antimony | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.052 | 0.052 | ND | 0.098 | 0.068 | 0.08 |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.2 | 6.7 | 5.4 | 6.2 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 85.7 | 457 | 298 | 352 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.79 | 0.84 | 0.82 | 0.83 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.7 | 10.9 | 8.1 | 9.7 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.057 | 0.83 | 0.32 | 0.069 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 10900 | 63000 | 45300 | 62100 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.6 | 27.9 | 21.8 | 19 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.8 | 8.5 | 8.1 | 8.1 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19.8 | 77.9 | 43.3 | 32.2 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 15200 | 17900 | 16800 | 17200 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.5 | 73.8 | 32.7 | 12.9 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5720 | 9250 | 8050 | 9190 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 323 | 505 | 388 | 336 |
| Mercury | T | mg/Kg-dry | 3 | 66.70 | ECO Soil | 0.017 | 0.017 | ND | 0.021 | 0.016 | 0.018 |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 6.9 | 97.5 | 39.8 | 14.9 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 15.5 | 20.3 | 17.4 | 16.5 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2610 | 2760 | 2660 | 2620 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.22 | 0.28 | 0.26 | 0.27 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22a
Wildlife Impact Study - Root Zone Soils - Blue Grama
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.11 | 0.33 | 0.22 | 0.23 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 83.4 | 142 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.18 | 0.18 | 0.18 | 0.18 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 452 | 476 | 466 | 471 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 31.8 | 44.6 | 39.3 | 41.5 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 50.1 | 166 | 90.1 | 54.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Blue Grama

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 29.3 | 48.2 | 41.9 | 48.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10400 | 14100 | 11800 | 10800 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 741 | 2710 | 2030 | 2630 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.037 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.83 | 0.58 | 0.77 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 22.4 | 91.9 | 68.4 | 91 |
| Beryllium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.066 | 0.066 | ND | 0.1 | 0.078 | 0.1 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.8 | 27.1 | 22 | 25 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.011 | 0.052 | 0.027 | 0.019 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5900 | 14600 | 10400 | 10700 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 6.5 | 4.9 | 5.6 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.55 | 1.1 | 0.88 | 1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.9 | 12.4 | 10.7 | 11.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1270 | 2790 | 2160 | 2420 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 5.5 | 4.1 | 4.4 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1560 | 2810 | 2210 | 2250 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 81.7 | 120 | 102 | 104 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.031 | 0.052 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 50.8 | 74.8 | 61.7 | 59.6 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 3.7 | 3.2 | 3.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7790 | 9280 | 8290 | 7810 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.35 | 0.26 | 0.31 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.021 | 0.033 | 0.028 | 0.031 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 87.7 | 137 | ND | 60.8 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.031 | 0.025 | 0.029 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 39.7 | 81.9 | 65.3 | 74.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 6.9 | 5 | 5.2 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 30 | 89 | 57.2 | 52.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Blue Grama

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 70.2 | 75.8 | 73.1 | 73.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1280 | 1790 | 1530 | 1530 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13400 | 18800 | 16200 | 16300 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.09 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3 | 5.8 | 4.7 | 5.4 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 98 | 364 | 252 | 293 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.69 | 0.89 | 0.78 | 0.77 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.4 | 7.8 | 5.6 | 5.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0055 | 0.0055 | ND | 0.58 | 0.2 | 0.014 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12000 | 68700 | 49700 | 68500 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.7 | 34.5 | 23.2 | 18.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.1 | 3.6 | 3.3 | 3.3 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25.3 | 109 | 58.1 | 39.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15000 | 17100 | 16300 | 16800 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.4 | 64.9 | 31.5 | 15.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6640 | 7840 | 7380 | 7660 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 266 | 507 | 361 | 311 |
| Mercury | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.021 | 0.021 | ND | 0.064 | 0.033 | 0.024 |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.6 | 104 | 45 | 22.4 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13 | 23.7 | 16.6 | 13.2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2900 | 3690 | 3350 | 3470 |
| Selenium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.0082 | 0.0084 | ND | 0.12 | | |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.28 | 0.16 | 0.11 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 28.9 | 89.7 | ND | 360 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.18 | 0.15 | 0.16 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 438 | 547 | 476 | 444 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35.1 | 39.6 | 37.3 | 37.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.9 | 138 | 85.7 | 69.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22d

Wildlife Impact Study - Washed Vegetation Aboveground - Blue Grama

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 32.6 | 37 | 34.4 | 33.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10200 | 13100 | 12000 | 12800 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 190 | 497 | 339 | 330 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.027 | 0.059 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.076 | 0.39 | 0.23 | 0.23 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.6 | 47.3 | 31.4 | 34.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.042 | 0.059 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14.1 | 20.8 | 18.3 | 20 |
| Cadmium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.035 | 0.02 | 0.02 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5030 | 5970 | 5420 | 5270 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 4.1 | 2.6 | 2.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.42 | 0.3 | 0.25 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7 | 12.9 | 9.2 | 7.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 338 | 542 | 430 | 409 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.35 | 1.8 | 1.1 | 1.2 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1100 | 1740 | 1430 | 1450 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 63.2 | 70.3 | 67.7 | 69.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.041 | 0.045 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.1 | 90.9 | 65 | 54.9 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.5 | 2.4 | 2 | 2.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8820 | 9700 | 9400 | 9680 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.61 | 0.35 | 0.32 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.0059 | 0.024 | 0.013 | 0.0076 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 71.8 | 174 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.0054 | 0.0054 | ND | 0.014 | 0.0085 | 0.0088 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.4 | 14.5 | 11.5 | 11.5 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.7 | 1.6 | 1.2 | 1.4 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35.2 | 141 | 74.7 | 47.8 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-22e

Wildlife Impact Study - Washed Vegetation Below Ground - Blue Grama

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 23.2 | 31 | 27.3 | 27.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5000 | 5910 | 5340 | 5100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2400 | 4260 | 3410 | 3560 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.065 | 0.11 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.48 | 1.2 | 0.96 | 1.2 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 31.3 | 112 | 79.7 | 95.7 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.13 | 0.26 | 0.19 | 0.19 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 4.3 | 4.1 | 4.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.042 | 4 | 1.4 | 0.071 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7570 | 15200 | 11900 | 13000 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.9 | 10.4 | 7 | 6.8 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.9 | 4.6 | 3.9 | 4.2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.2 | 130 | 53.5 | 17.4 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3340 | 5350 | 4130 | 3710 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 73.5 | 26.7 | 3.9 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1730 | 2260 | 2000 | 2010 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 93.6 | 267 | 152 | 96.5 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.048 | 0.065 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.2 | 113 | 50.1 | 24.2 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.5 | 8.7 | 8.1 | 8.1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2860 | 3170 | 2970 | 2870 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.18 | 0.23 | 0.21 | 0.21 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.052 | 0.37 | 0.16 | 0.054 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 183 | 198 | ND | 105 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.043 | 0.091 | 0.062 | 0.052 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 93.2 | 125 | 109 | 110 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.1 | 11.9 | 10.9 | 11.8 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.6 | 276 | 117 | 50.3 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23a
Wildlife Impact Study - Root Zone Soils - Sand Dropseed
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 10.2 | 21.5 | 15.7 | 15.3 |
| Chloride | T | mg/Kg-dry | 3 | 33.30 | No SLC | 2.1 | 2.1 | ND | 2.2 | | |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.55 | 1 | 0.78 | 0.79 |
| Nitrate | T | mg/Kg-dry | 3 | 33.30 | No SLC | 2.1 | 2.1 | ND | 3.6 | | |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1.5 | 3.2 | 2.2 | 1.9 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.8 | 8.2 | 8 | 7.9 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 29.7 | 32.7 | 31.1 | 30.8 |
| Sodium Absorption Ratio | T | ratio | 3 | 33.30 | No SLC | 0.02 | 0.03 | ND | 0.03 | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 96.2 | 97.9 | 97.2 | 97.4 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 183 | 671 | 470 | 557 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 51.8 | 652 | 280 | 136 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 1 | 100.00 | No SLC | | | 423 | 423 | 423 | 423 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 10200 | 13600 | 11700 | 11200 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.048 | 0.051 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 3.4 | 5 | 4.3 | 4.4 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 66.7 | 123 | 101 | 113 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.66 | 0.88 | 0.76 | 0.75 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 2.6 | 3.8 | 3.2 | 3.2 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.091 | 0.68 | 0.46 | 0.61 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 8200 | 17200 | 13700 | 15800 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.6 | 31.9 | 25.5 | 23.1 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 7.3 | 9.4 | 8.1 | 7.6 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 25 | 85.7 | 64.1 | 81.5 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 14800 | 18500 | 17200 | 18300 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 19 | 108 | 52.4 | 30.3 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 4710 | 7430 | 5870 | 5480 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 396 | 722 | 526 | 459 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.015 | 0.017 | ND | 0.017 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 11.9 | 126 | 75.1 | 87.3 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 18.2 | 24.7 | 20.9 | 19.7 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1770 | 3160 | 2350 | 2110 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.12 | 0.19 | 0.16 | 0.16 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23a
Wildlife Impact Study - Root Zone Soils - Sand Dropseed
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.44 | 0.33 | 0.4 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 156 | 215 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.13 | 0.17 | 0.15 | 0.14 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 357 | 587 | 441 | 378 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 24.7 | 38 | 31.9 | 32.9 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 70.3 | 177 | 118 | 106 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23b

Wildlife Impact Study - Unwashed Vegetation Aboveground - Sand Dropseed

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 37.7 | 46.1 | 41 | 39.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 1 | 100.00 | No SLC | | | 26700 | 26700 | 26700 | 26700 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 263 | 902 | 540 | 454 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.021 | 0.026 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.066 | 0.41 | 0.21 | 0.16 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.3 | 13.9 | 11.6 | 10.5 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.022 | 0.026 | ND | 0.044 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.5 | 8.5 | 7.6 | 7.9 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.056 | 0.2 | 0.15 | 0.19 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4240 | 5520 | 4720 | 4410 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 2.8 | 1.9 | 1.9 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.76 | 0.38 | 0.21 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.1 | 19.8 | 15 | 13.1 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 418 | 1480 | 809 | 528 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.74 | 3.7 | 2.3 | 2.6 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1120 | 1420 | 1260 | 1230 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32.3 | 77.6 | 52 | 46.1 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.035 | 0.042 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 38.5 | 105 | 67.6 | 59.2 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.66 | 2.4 | 1.4 | 1 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10500 | 20500 | 14500 | 12500 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1 | 1 | ND | 1.6 | 0.78 | 0.5 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.024 | 0.067 | 0.043 | 0.039 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 28.9 | 148 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.026 | 0.054 | 0.035 | 0.026 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15.3 | 48.7 | 27.2 | 17.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.53 | 2.4 | 1.3 | 0.95 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40.5 | 120 | 76 | 67.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23c

Wildlife Impact Study - Unwashed Vegetation Below Ground - Sand Dropseed

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 82.2 | 87.1 | 85.2 | 86.3 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 1 | 100.00 | No SLC | | | 4510 | 4510 | 4510 | 4510 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2960 | 9190 | 6840 | 8370 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.072 | 0.072 | ND | 0.11 | 0.067 | 0.054 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.78 | 3 | 1.9 | 2 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.4 | 117 | 77.5 | 87.2 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 0.52 | 0.41 | 0.51 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.8 | 5.5 | 4.3 | 4.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 1.7 | 0.77 | 0.44 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5550 | 17000 | 11300 | 11200 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.1 | 15.5 | 11.2 | 11 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.3 | 2.5 | 2 | 2.3 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 19.3 | 78.6 | 51.5 | 56.5 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3350 | 9360 | 7170 | 8800 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.5 | 31.1 | 18.9 | 16 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1320 | 3690 | 2590 | 2770 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 146 | 248 | 196 | 195 |
| Mercury | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.018 | 0.02 | ND | 0.042 | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 71.2 | 94.6 | 79.9 | 73.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.9 | 10.2 | 7.9 | 8.6 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2650 | 2870 | 2730 | 2670 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 1.2 | 0.84 | 1.1 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.086 | 0.18 | 0.14 | 0.15 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 33.3 | 35.7 | ND | 193 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.037 | 0.078 | 0.063 | 0.073 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 105 | 286 | 196 | 198 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.8 | 22.9 | 15.9 | 18 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 74.2 | 118 | 103 | 117 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23d

Wildlife Impact Study - Washed Vegetation Aboveground - Sand Dropseed

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 32.7 | 36.7 | 35.3 | 36.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 1 | 100.00 | No SLC | | | 32100 | 32100 | 32100 | 32100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 98.9 | 359 | 188 | 107 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.039 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.035 | 0.14 | 0.088 | 0.088 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.5 | 9.7 | 7.7 | 7.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.026 | 0.028 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.9 | 8.9 | 7.5 | 7.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.061 | 0.2 | 0.14 | 0.15 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4080 | 4570 | 4270 | 4150 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.7 | 1.2 | 0.89 | 0.76 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.07 | 0.24 | 0.13 | 0.091 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.8 | 15.9 | 12.8 | 11.8 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 140 | 527 | 276 | 162 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 1.2 | 0.8 | 1 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 924 | 1280 | 1150 | 1240 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25.5 | 43.5 | 36.5 | 40.5 |
| Mercury | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.045 | 0.045 | ND | 0.089 | 0.062 | 0.073 |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 40.5 | 119 | 75.5 | 67 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.41 | 0.89 | 0.66 | 0.67 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12200 | 19400 | 15000 | 13400 |
| Selenium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.4 | 1.4 | ND | 1.5 | 0.8 | 0.7 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.022 | 0.032 | 0.028 | 0.03 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 42.4 | 108 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.079 | 0.039 | 0.025 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.6 | 17.3 | 8.4 | 4.3 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.76 | 0.43 | 0.3 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 44.6 | 59.2 | 53.8 | 57.6 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-23e

Wildlife Impact Study - Washed Vegetation Below Ground - Sand Dropseed

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 47.8 | 53.5 | 51.1 | 52.1 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 1 | 100.00 | No SLC | | | 11400 | 11400 | 11400 | 11400 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 556 | 2020 | 1270 | 1220 |
| Antimony | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.021 | 0.021 | ND | 0.081 | 0.047 | 0.048 |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.76 | 0.47 | 0.35 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.5 | 34.1 | 21 | 15.4 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.06 | 0.14 | 0.1 | 0.11 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.9 | 3.3 | 2.5 | 2.3 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.35 | 5.2 | 2.1 | 0.61 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3000 | 6060 | 4960 | 5810 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 3.3 | 2.5 | 2.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 1.9 | 1.3 | 1 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.5 | 102 | 63.5 | 75.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1010 | 2910 | 1860 | 1670 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 43.7 | 17.1 | 6.5 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 535 | 1090 | 755 | 640 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 44.4 | 131 | 95.8 | 112 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.029 | 0.031 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 58.5 | 146 | 98.1 | 89.8 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 5 | 3.4 | 3.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2000 | 2750 | 2420 | 2500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.081 | 1.6 | 1.1 | 1.5 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.029 | 0.31 | 0.17 | 0.17 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 20.8 | 132 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.023 | 0.033 | 0.028 | 0.027 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21 | 80.4 | 48.4 | 43.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 8 | 4.1 | 2.5 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 58.3 | 265 | 150 | 126 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-24a
Wildlife Impact Study - Root Zone Soils - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 13.3 | 34 | 25.6 | 29.4 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.4 | 2.4 | ND | 4.5 | 3.4 | 4.5 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.41 | 1.9 | 1 | 0.76 |
| Nitrate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.2 | 2.2 | ND | 24.2 | 12.6 | 12.6 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 2 | 6 | 4.5 | 5.6 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 7.9 | 8.7 | 8.3 | 8.4 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 850 | 2260 | 1700 | 1990 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.04 | 0.08 | 0.06 | 0.06 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 84.7 | 92.8 | 88.3 | 87.5 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 10.6 | 1630 | 621 | 221 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 6.4 | 1240 | 423 | 22 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 207 | 1200 | 709 | 720 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 17000 | 24800 | 21100 | 21400 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.047 | 0.056 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.4 | 5.5 | 5 | 5.2 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 134 | 293 | 209 | 199 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 1 | 1.2 | 1.1 | 1.1 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 5.4 | 11.6 | 8.7 | 9.1 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.044 | 0.48 | 0.26 | 0.26 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 15600 | 37300 | 27400 | 29200 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 23.5 | 41 | 29.4 | 23.8 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 8.3 | 11.5 | 9.7 | 9.3 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 27.8 | 131 | 66.2 | 39.9 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 19200 | 21900 | 20800 | 21400 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.3 | 38.5 | 28.6 | 29.9 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 6130 | 8670 | 7630 | 8100 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 443 | 552 | 494 | 486 |
| Mercury | T | mg/Kg-dry | 3 | 33.30 | ECO Soil | 0.017 | 0.018 | ND | 0.02 | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 15.6 | 138 | 58.6 | 22.1 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17.9 | 30.8 | 22.4 | 18.4 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 3230 | 4400 | 3740 | 3580 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.27 | 0.3 | 0.28 | 0.28 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-24a
Wildlife Impact Study - Root Zone Soils - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.16 | 0.48 | 0.29 | 0.22 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 47.6 | 94.7 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.17 | 0.23 | 0.19 | 0.18 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 475 | 714 | 592 | 586 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 37.2 | 50.6 | 44.2 | 44.9 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 67.4 | 125 | 88.5 | 73 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-24b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 17.9 | 22.1 | 19.5 | 18.4 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 14900 | 44700 | 32200 | 37100 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 513 | 2590 | 1430 | 1200 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.044 | 0.054 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.34 | 0.61 | 0.44 | 0.36 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18.6 | 124 | 64.9 | 52.2 |
| Beryllium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 0.11 | 0.11 | ND | 0.095 | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 29.4 | 41.1 | 35.2 | 35 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.22 | 0.86 | 0.49 | 0.4 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24300 | 33400 | 28300 | 27300 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.2 | 6.8 | 3.9 | 3.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 0.91 | 0.7 | 0.89 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16.7 | 24.5 | 20 | 18.9 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 594 | 2590 | 1630 | 1700 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 3.8 | 2.5 | 1.9 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5360 | 9720 | 7060 | 6090 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 43.9 | 105 | 84.3 | 104 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.068 | 0.083 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 90.6 | 155 | 120 | 115 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.67 | 3.5 | 2.1 | 2 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 36000 | 48100 | 40200 | 36600 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 0.78 | 0.67 | 0.72 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.035 | 0.019 | 0.018 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 170 | 263 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.038 | 0.11 | 0.073 | 0.072 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15 | 78.3 | 50.5 | 58.2 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 6.1 | 4.3 | 5 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 108 | 153 | 130 | 128 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-24c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 2 | 100.00 | No SLC | | | 34.6 | 47.2 | 40.9 | 40.9 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3430 | 7000 | 5140 | 4980 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9020 | 13100 | 10800 | 10200 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.055 | 0.063 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.8 | 2.3 | 2 | 2 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 72.6 | 174 | 121 | 117 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.51 | 0.65 | 0.57 | 0.55 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.9 | 12 | 11.5 | 11.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.063 | 0.34 | 0.18 | 0.15 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11200 | 22900 | 16500 | 15400 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.1 | 21.9 | 17.1 | 16.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.4 | 3.8 | 3.7 | 3.8 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 24.5 | 49.6 | 33.6 | 26.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10600 | 13500 | 11800 | 11200 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10.8 | 22.6 | 16.6 | 16.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4060 | 5880 | 4990 | 5040 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 241 | 313 | 284 | 298 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.034 | 0.046 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 35.7 | 113 | 66.3 | 50.3 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.1 | 16 | 12.2 | 11.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10200 | 13900 | 12400 | 13200 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.22 | 0.2 | 0.21 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.21 | 0.14 | 0.11 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 84.3 | 163 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.11 | 0.16 | 0.14 | 0.14 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 261 | 357 | 323 | 350 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.6 | 28.8 | 24.8 | 25.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 53.2 | 74.7 | 61.3 | 56 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-24d

**Wildlife Impact Study - Washed Vegetation Aboveground - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility**

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 13.5 | 17.6 | 15.1 | 14.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 25700 | 34100 | 29000 | 27200 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 82.9 | 82.9 | ND | 411 | 273 | 366 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.056 | 0.071 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 0.79 | 0.44 | 0.33 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.3 | 55 | 34 | 38.6 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.083 | 0.1 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 28.6 | 37.1 | 33.4 | 34.4 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.51 | 0.67 | 0.6 | 0.61 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20300 | 24700 | 22200 | 21600 |
| Chromium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.66 | 0.66 | ND | 1.6 | 1.1 | 1.3 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.093 | 1.4 | 0.61 | 0.34 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 13.6 | 15 | 14.3 | 14.3 |
| Iron | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 116 | 116 | ND | 508 | 316 | 382 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.5 | 3 | 1.5 | 0.94 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3640 | 7860 | 5510 | 5040 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.1 | 67.1 | 55.7 | 62.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.089 | 0.11 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 85 | 166 | 134 | 151 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 4.6 | 2.1 | 1.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26900 | 47600 | 35400 | 31600 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.29 | 1 | 0.59 | 0.47 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.014 | 0.014 | ND | 0.064 | 0.028 | 0.012 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 139 | 171 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.014 | 0.014 | ND | 0.072 | 0.038 | 0.036 |
| Titanium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 1.7 | 1.7 | ND | 15.6 | 9.1 | 10.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 4.1 | 1.7 | 0.89 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 82.1 | 92.1 | 88.6 | 91.7 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-24e
Wildlife Impact Study - Washed Vegetation Below Ground - Golden Crownbeard
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 17.1 | 29.4 | 21.4 | 17.7 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6070 | 8890 | 7870 | 8650 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 693 | 1410 | 971 | 811 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.034 | 0.088 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.21 | 0.71 | 0.4 | 0.27 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11 | 50.6 | 34.8 | 42.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.048 | 0.078 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12.4 | 15 | 13.6 | 13.5 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.24 | 0.48 | 0.32 | 0.24 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5310 | 6530 | 6110 | 6500 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.1 | 4.7 | 4.2 | 4.7 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.26 | 1.4 | 0.83 | 0.83 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 17.6 | 21.1 | 18.8 | 17.6 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 852 | 1600 | 1110 | 889 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.37 | 2.4 | 1.4 | 1.3 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1560 | 3130 | 2390 | 2470 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 34.4 | 61.2 | 45.8 | 41.7 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.055 | 0.094 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 54.4 | 149 | 97.8 | 90 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.61 | 11.2 | 4.5 | 1.7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 15100 | 30400 | 23200 | 24100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.15 | 0.52 | 0.3 | 0.22 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.011 | 0.011 | ND | 0.042 | 0.028 | 0.038 |
| Sodium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 107 | 665 | 411 | 461 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.054 | 0.1 | 0.071 | 0.058 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 23.8 | 81.1 | 49.5 | 43.5 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.61 | 5.4 | 2.7 | 2.1 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.1 | 44.1 | 39.5 | 37.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
 "ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
 Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
 Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
 ND = Non-Detected Value

Table 10-25a

Wildlife Impact Study - Root Zone Soils - Cut-Leaf Blazing-star

RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|--------------------------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Cation-Exchange Capacity | T | meq/100g | 3 | 100.00 | No SLC | | | 10.8 | 30.5 | 18.5 | 14.2 |
| Chloride | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.2 | 2.2 | ND | 8.7 | 5.1 | 5.6 |
| Fluoride | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 0.73 | 1.1 | 0.93 | 0.97 |
| Nitrate | T | mg/Kg-dry | 3 | 66.70 | No SLC | 2.3 | 2.3 | ND | 10.1 | 6.3 | 7.7 |
| Organic Soils | T | % | 3 | 100.00 | No SLC | | | 1.6 | 3.5 | 2.5 | 2.3 |
| pH | T | SU | 3 | 100.00 | No SLC | | | 8.1 | 8.6 | 8.3 | 8.2 |
| Phosphorus | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 1350 | 2370 | 1800 | 1670 |
| Sodium Absorption Ratio | T | ratio | 3 | 100.00 | No SLC | | | 0.03 | 1.2 | 0.44 | 0.08 |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 88.9 | 92.9 | 90.6 | 90.1 |
| Specific Conductance | T | umhos/cm | 3 | 100.00 | No SLC | | | 163 | 996 | 622 | 706 |
| Sulfate | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 12.7 | 683 | 365 | 400 |
| Total Kjeldahl Nitrogen | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 88.7 | 516 | 282 | 240 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 14000 | 23400 | 17700 | 15800 |
| Antimony | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.049 | 0.055 | ND | ND | | |
| Arsenic | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.4 | 4.8 | 4.6 | 4.6 |
| Barium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 99.3 | 224 | 153 | 135 |
| Beryllium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.85 | 1.2 | 1 | 1 |
| Boron | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 4.6 | 9.1 | 6.6 | 6.1 |
| Cadmium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.13 | 0.58 | 0.39 | 0.46 |
| Calcium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 9410 | 19600 | 13300 | 11000 |
| Chromium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 22.9 | 30.1 | 26.9 | 27.6 |
| Cobalt | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 9.8 | 10.4 | 10.1 | 10.1 |
| Copper | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 29.2 | 94.3 | 67.4 | 78.6 |
| Iron | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 20100 | 21000 | 20600 | 20800 |
| Lead | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 21.8 | 35.3 | 29.8 | 32.3 |
| Magnesium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 5380 | 7460 | 6340 | 6170 |
| Manganese | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 501 | 658 | 566 | 538 |
| Mercury | T | mg/Kg-dry | 3 | 0.00 | ECO Soil | 0.017 | 0.018 | ND | ND | | |
| Molybdenum | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 14.3 | 87.7 | 55.8 | 65.4 |
| Nickel | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 17 | 25.4 | 21.6 | 22.5 |
| Potassium | T | mg/Kg-dry | 3 | 100.00 | No SLC | | | 2760 | 3170 | 3030 | 3150 |
| Selenium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.26 | 0.35 | 0.3 | 0.29 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

T = Total Fraction

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

ND = Non-Detected Value

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

Table 10-25a
Wildlife Impact Study - Root Zone Soils - Cut-Leaf Blazing-star
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|----------|-----------------|-----------|-------------------------|---------------------|----------|---------------|---------------|-----------|-----------|------------|--------------|
| Silver | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.15 | 0.36 | 0.28 | 0.32 |
| Sodium | T | mg/Kg-dry | 3 | 0.00 | No SLC | 48.6 | 192 | ND | ND | | |
| Thallium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 0.19 | 0.24 | 0.21 | 0.2 |
| Titanium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 480 | 562 | 529 | 546 |
| Vanadium | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 35.9 | 40.8 | 39.1 | 40.6 |
| Zinc | T | mg/Kg-dry | 3 | 100.00 | ECO Soil | | | 67.1 | 122 | 102 | 118 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-25b
Wildlife Impact Study - Unwashed Vegetation Aboveground - Cut-Leaf Blazing-star
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 20.7 | 25.5 | 23.6 | 24.5 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16200 | 27700 | 22800 | 24600 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1170 | 5460 | 3090 | 2650 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.039 | 0.046 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.52 | 1.4 | 0.92 | 0.84 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32.4 | 74 | 50.1 | 43.8 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.12 | 0.42 | 0.22 | 0.13 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 44.2 | 52.9 | 49.4 | 51.2 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.076 | 0.27 | 0.18 | 0.2 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 21000 | 38600 | 27800 | 23900 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.2 | 9.2 | 5.6 | 4.5 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.1 | 3.5 | 1.9 | 1.2 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.8 | 27.3 | 18.7 | 20 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2520 | 7960 | 4350 | 2580 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3.4 | 19.2 | 9.4 | 5.7 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5080 | 7430 | 6270 | 6310 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 134 | 283 | 229 | 270 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.06 | 0.071 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 32 | 192 | 105 | 92.4 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.5 | 8.1 | 4.7 | 3.5 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11600 | 19000 | 15600 | 16100 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 1.5 | 0.82 | 0.77 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.02 | 0.11 | 0.066 | 0.067 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 96.5 | 166 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.064 | 0.096 | 0.079 | 0.076 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 61.4 | 155 | 95.1 | 68.8 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4.8 | 13.5 | 7.8 | 5.2 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 34 | 96.2 | 69.4 | 78.1 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-25c
Wildlife Impact Study - Unwashed Vegetation Below Ground - Cut-Leaf Blazing-star
RI/FS Soil Area 14 - Tailings Facility

Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 19.7 | 32.7 | 25.7 | 24.6 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3360 | 10600 | 7670 | 9040 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 3500 | 6330 | 4650 | 4120 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.04 | 0.052 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.84 | 1.3 | 1.1 | 1.2 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 42.1 | 67.2 | 53.8 | 52 |
| Beryllium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.2 | 0.48 | 0.3 | 0.23 |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 11.2 | 14.4 | 13.2 | 14 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.34 | 0.25 | 0.25 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 12000 | 17600 | 14900 | 15000 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.4 | 18.8 | 12.1 | 11 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.5 | 3 | 2.4 | 2.6 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.6 | 36.1 | 23.6 | 25 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4120 | 9420 | 6350 | 5500 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 12.4 | 8.1 | 8 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4520 | 5060 | 4810 | 4850 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 117 | 269 | 202 | 221 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.045 | 0.075 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.6 | 63 | 31.7 | 24.5 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 4 | 9.7 | 6.9 | 7 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8210 | 13600 | 11700 | 13400 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.64 | 0.33 | 0.19 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.028 | 0.14 | 0.099 | 0.13 |
| Sodium | T | mg/Kg-Dry | 3 | 33.30 | No SLC | 358 | 460 | ND | 800 | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.08 | 0.14 | 0.11 | 0.12 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 116 | 196 | 150 | 138 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 7.6 | 15.5 | 11.4 | 11 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 36 | 121 | 81.1 | 86.4 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

Table 10-25d
Wildlife Impact Study - Washed Vegetation Aboveground - Cut-Leaf Blazing-star
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 15.2 | 17.1 | 15.8 | 15.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 18300 | 25100 | 22200 | 23300 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 138 | 408 | 311 | 386 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.058 | 0.067 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.17 | 0.51 | 0.34 | 0.33 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9.4 | 44.7 | 21.8 | 11.3 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.087 | 0.093 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 49.4 | 64 | 57.6 | 59.3 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.073 | 0.14 | 0.096 | 0.076 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 26400 | 29300 | 27400 | 26500 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1 | 1.2 | 1.1 | 1.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 0.38 | 0.27 | 0.24 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.5 | 8.8 | 7.7 | 8.7 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 287 | 517 | 393 | 375 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.53 | 1.4 | 0.88 | 0.71 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5490 | 7000 | 6220 | 6180 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 78.7 | 168 | 132 | 149 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.1 | 0.11 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 37.6 | 341 | 140 | 40 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.4 | 1.8 | 1.7 | 1.8 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 16900 | 22000 | 19600 | 19900 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.19 | 1.7 | 0.77 | 0.41 |
| Silver | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 0.013 | 0.013 | ND | 0.043 | 0.024 | 0.021 |
| Sodium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 145 | 159 | ND | ND | | |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.033 | 0.11 | 0.062 | 0.042 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.2 | 9.3 | 7.7 | 8.7 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.4 | 1 | 0.69 | 0.67 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 20.7 | 83.3 | 54.1 | 58.2 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.
"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.
Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction
ND = Non-Detected Value

Table 10-25e
Wildlife Impact Study - Washed Vegetation Below Ground - Cut-Leaf Blazing-star
RI/FS Soil Area 14 - Tailings Facility
Summary of Results

| Analyte | Sample Fraction | Units | Total Number of Samples | Percent Detects (%) | SLC | Min RL for ND | Max RL for ND | Min Value | Max Value | Mean Value | Median Value |
|-------------------------|-----------------|-----------|-------------------------|---------------------|--------|---------------|---------------|-----------|-----------|------------|--------------|
| Inorganics | | | | | | | | | | | |
| Solids, Percent | T | % | 3 | 100.00 | No SLC | | | 16.7 | 26 | 20.6 | 19.2 |
| Total Kjeldahl Nitrogen | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6040 | 11600 | 9710 | 11500 |
| Metals | | | | | | | | | | | |
| Aluminum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 221 | 356 | 310 | 354 |
| Antimony | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.038 | 0.058 | ND | ND | | |
| Arsenic | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.1 | 0.28 | 0.18 | 0.15 |
| Barium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.8 | 33.7 | 17.3 | 9.4 |
| Beryllium | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.058 | 0.082 | ND | ND | | |
| Boron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 8.5 | 12.1 | 10.4 | 10.6 |
| Cadmium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.21 | 0.18 | 0.18 |
| Calcium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 9350 | 18700 | 14100 | 14100 |
| Chromium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2.1 | 4.8 | 3 | 2.1 |
| Cobalt | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.16 | 0.41 | 0.24 | 0.16 |
| Copper | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6.9 | 11.2 | 9.2 | 9.5 |
| Iron | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 298 | 588 | 406 | 333 |
| Lead | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.46 | 1.5 | 0.85 | 0.58 |
| Magnesium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 2530 | 4020 | 3360 | 3540 |
| Manganese | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 36.5 | 52.9 | 42.1 | 36.8 |
| Mercury | T | mg/Kg-Dry | 3 | 0.00 | No SLC | 0.058 | 0.094 | ND | ND | | |
| Molybdenum | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 10 | 78.1 | 33.5 | 12.4 |
| Nickel | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 1.6 | 4.5 | 3.5 | 4.3 |
| Potassium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 6500 | 16600 | 13200 | 16500 |
| Selenium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.047 | 0.63 | 0.25 | 0.081 |
| Silver | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.014 | 0.054 | 0.035 | 0.038 |
| Sodium | T | mg/Kg-Dry | 3 | 66.70 | No SLC | 141 | 141 | ND | 596 | 294 | 215 |
| Thallium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.046 | 0.19 | 0.094 | 0.047 |
| Titanium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 5.8 | 11.2 | 8.3 | 7.9 |
| Vanadium | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 0.31 | 0.76 | 0.5 | 0.42 |
| Zinc | T | mg/Kg-Dry | 3 | 100.00 | No SLC | | | 43.7 | 90 | 63.4 | 56.5 |

"No SLC" indicates that there is not a Screening Level Criterion for this medium specified for the RI/FS.

"ECO Soil" EPA Region 6 Tier 1-3 RBSLs Ecological Soil

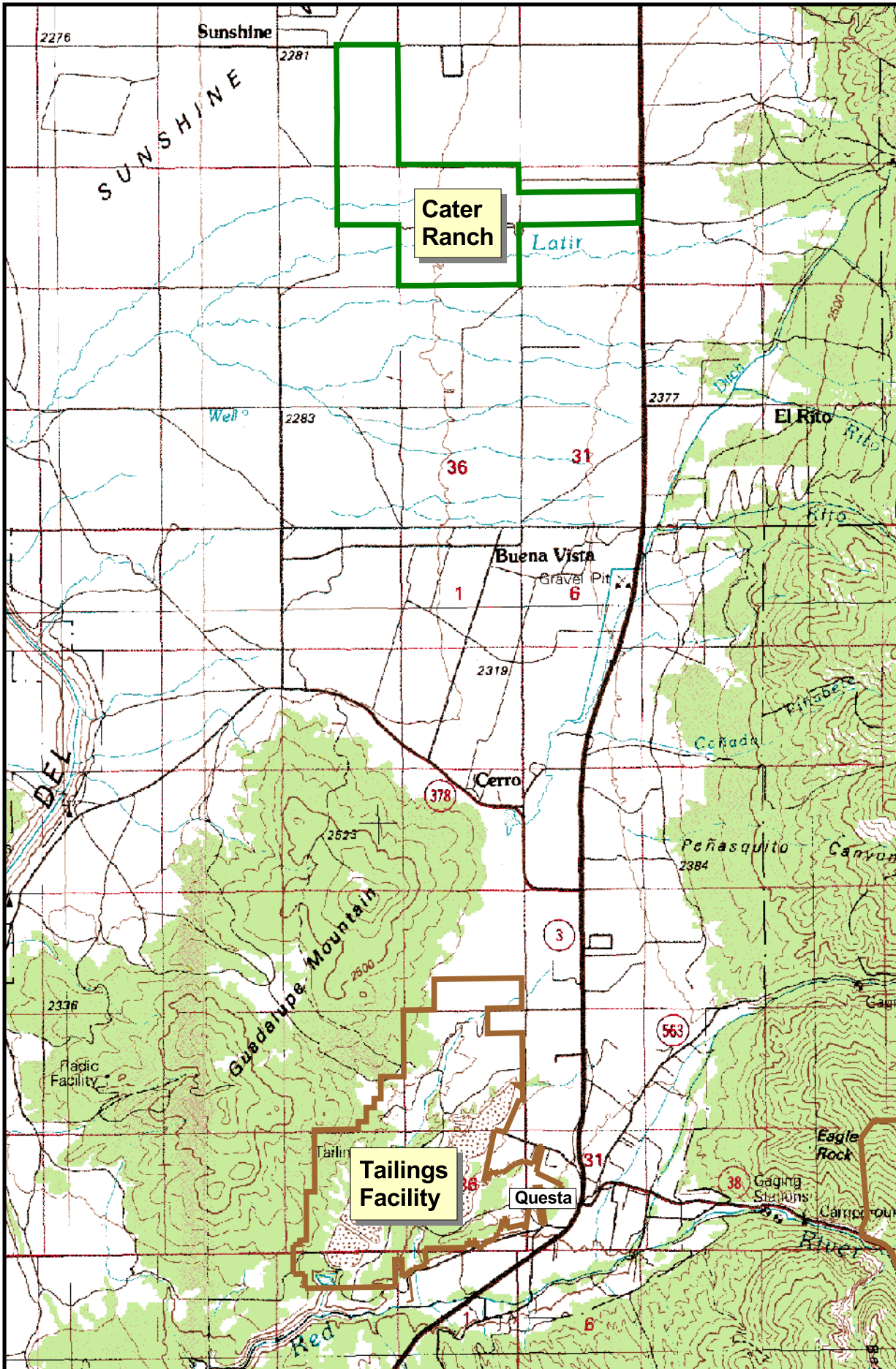
Median Value determined using 1/2 the Reporting Limit value for Non-Detects if greater than 50% of the values were detected.

Mean Value calculated using 1/2 the Reporting Limit for Non-Detects if greater than 50% of the values were detected.

T = Total Fraction

ND = Non-Detected Value

SECTION 10
WILDLIFE IMPACT STUDY
FIGURES



- Cater Ranch
- MolyCorp Property Lines Easement
- Property Boundary



2000 0 2000 Feet
Scale 1:74000

URS

URS Center
8181 East Tufts Avenue
Denver, CO 80237-2637
(303) 694-2770

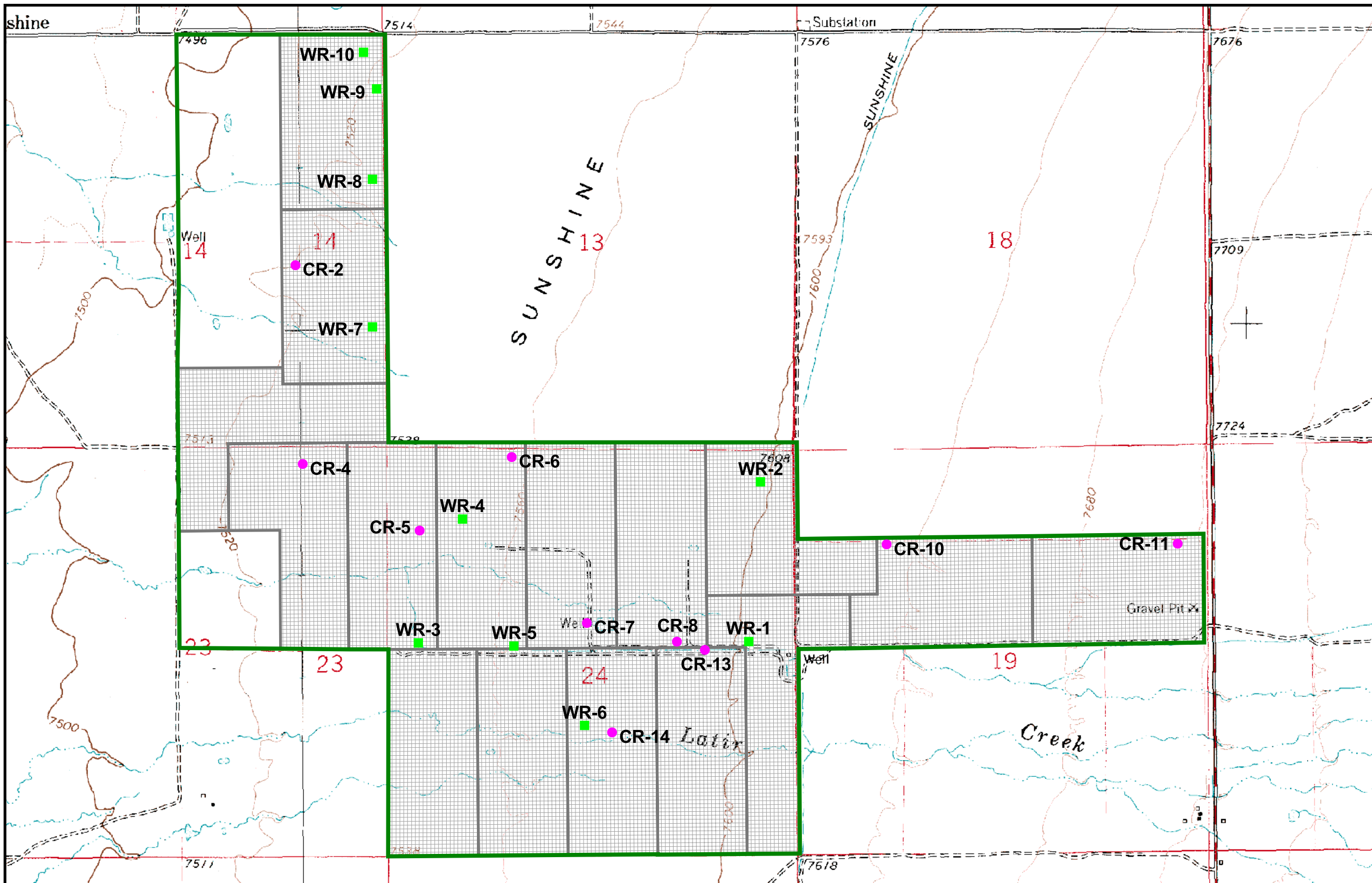
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| FILE NAME | veg_techmemo.apr |
| DRAWN BY | GCK - Denver |
| DATE | 3/3/2005 |

MOLYCORP - QUESTA MINE

**WILDLIFE IMPACT STUDY LOCATION OF
TAILINGS FACILITY AND CATER RANCH REFERENCE AREA**

| | |
|----------|---------------|
| REVISION | |
| PROJECT | 2223682.00200 |

Figure 10-1



● Random Sample Location
■ Non-random Sample Location
 50' x 50' Grid used in RI/FS Sample Site Selection
 Sampling Area
 Reference Soil at Cater Ranch

TYPICAL GRID CELL

N

1000 0 1000 Feet
 Scale 1:16000

URS
 URS Center
 8181 East Tufts Avenue
 Denver, CO 80237-2637
 (303) 694-2770

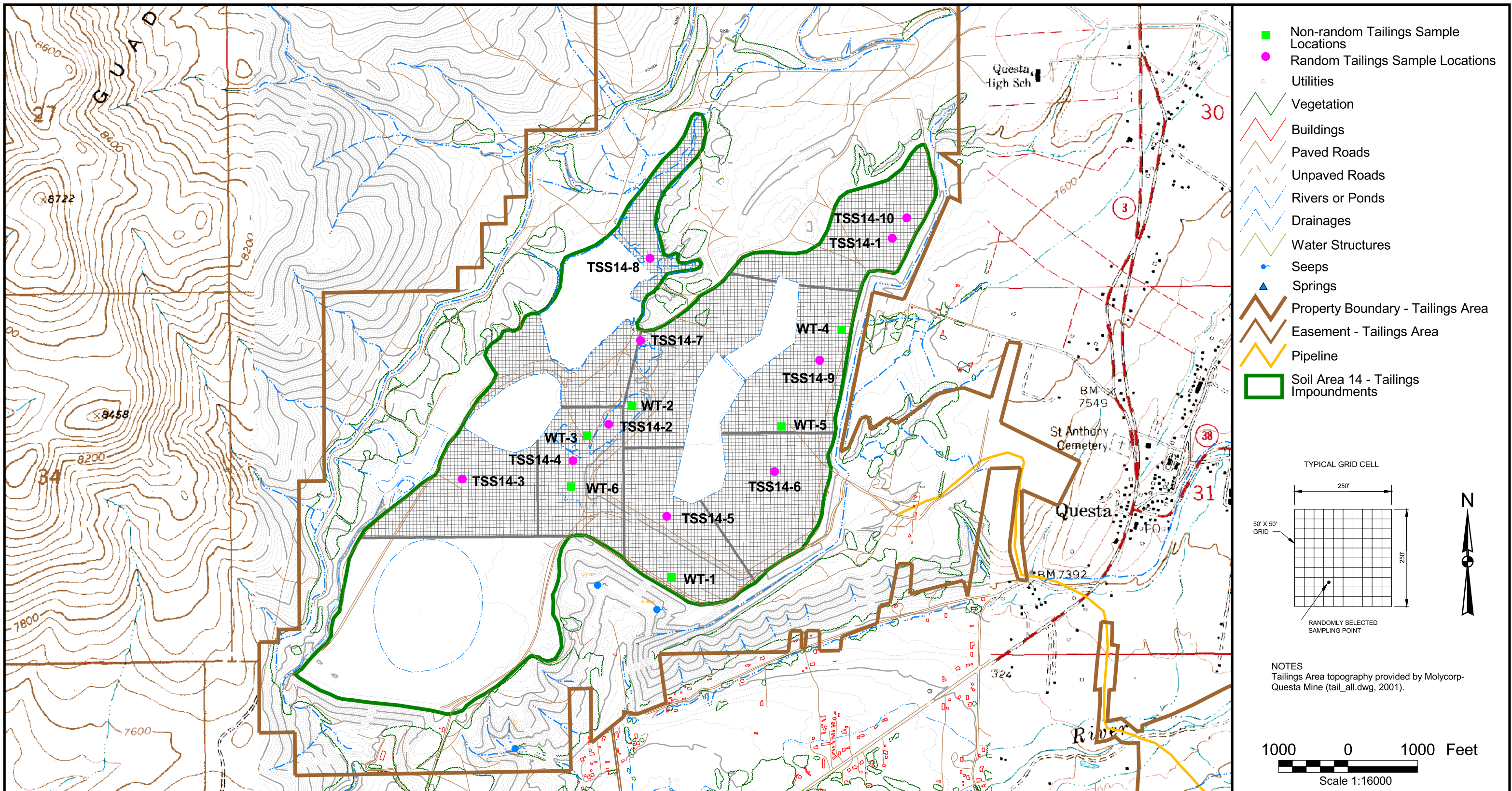
| | |
|-------------|------------------|
| APPLICATION | ArcView GIS |
| FILE NAME | veg_techmemo.apr |
| DRAWN BY | GIS/Denver |
| DATE | 3/14/2005 |

MOLYCORP - QUESTA MINE RI/FS

PROJECT 22236244

**WILDLIFE IMPACT STUDY SAMPLING LOCATIONS
 AT CATER RANCH REFERENCE AREA**

Figure 10-2
*Preliminary Site
 Characterization Report*



URS
 URS Center
 8181 East Tufts Avenue
 Denver, CO 80237-2637
 (303) 694-2770

| | |
|-------------|------------------|
| APPLICATION | ArcView GIS |
| FILE NAME | veg_techmemo.apr |
| DRAWN BY | GIS/Denver |
| DATE | 3/14/2005 |

MOLYCORP - QUESTA MINE RI/FS

WILDLIFE IMPACT STUDY SAMPLING LOCATIONS AT TAILINGS FACILITY

PROJECT **22236244**

Figure 10-3

Preliminary Site Characterization Report

Figure 10-4
Barium Concentrations in Root Zone Soils

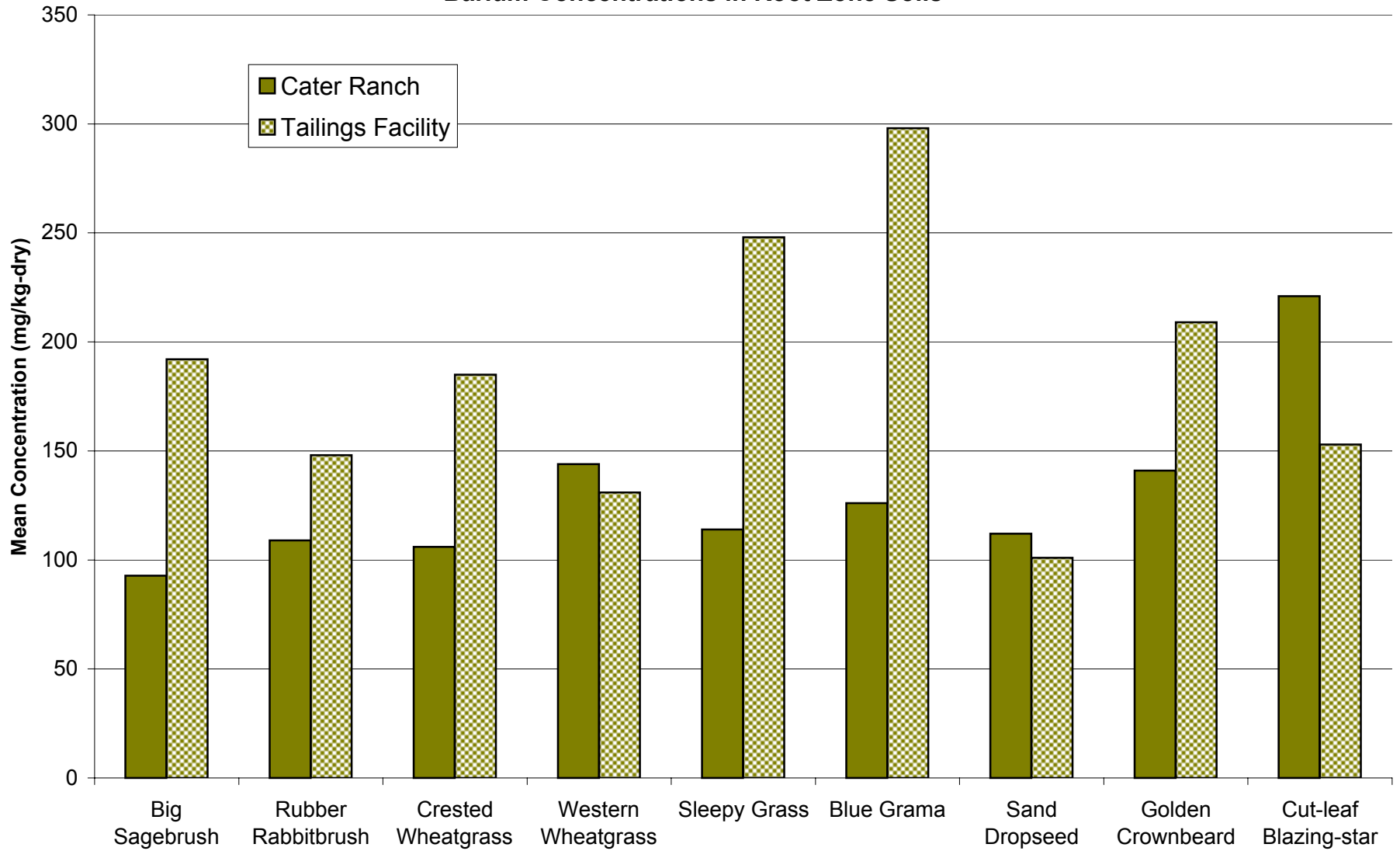


Figure 10-5
Barium Concentrations in Aboveground Plant Tissue

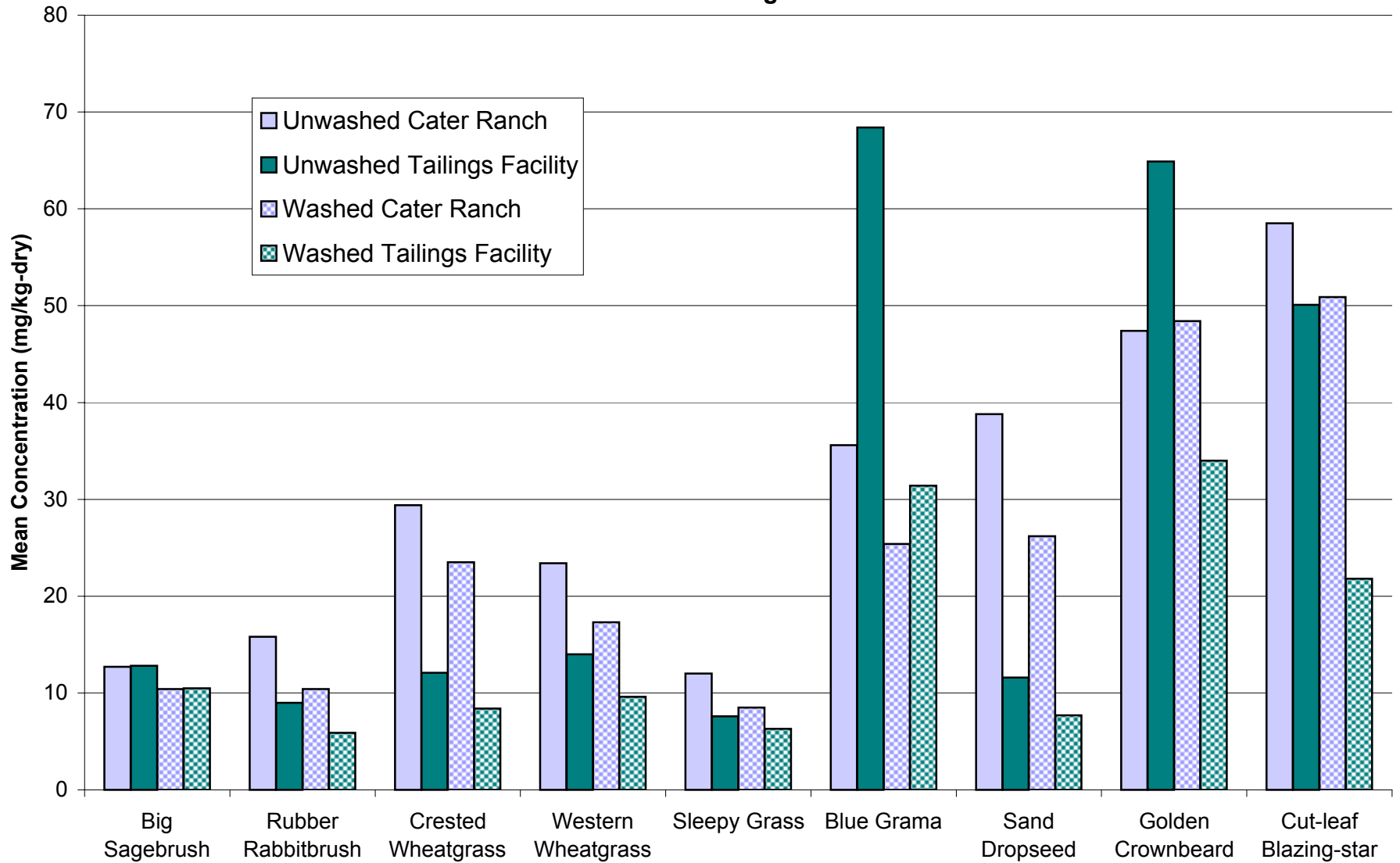


Figure 10-6
Barium Concentrations in Below Ground Plant Tissue

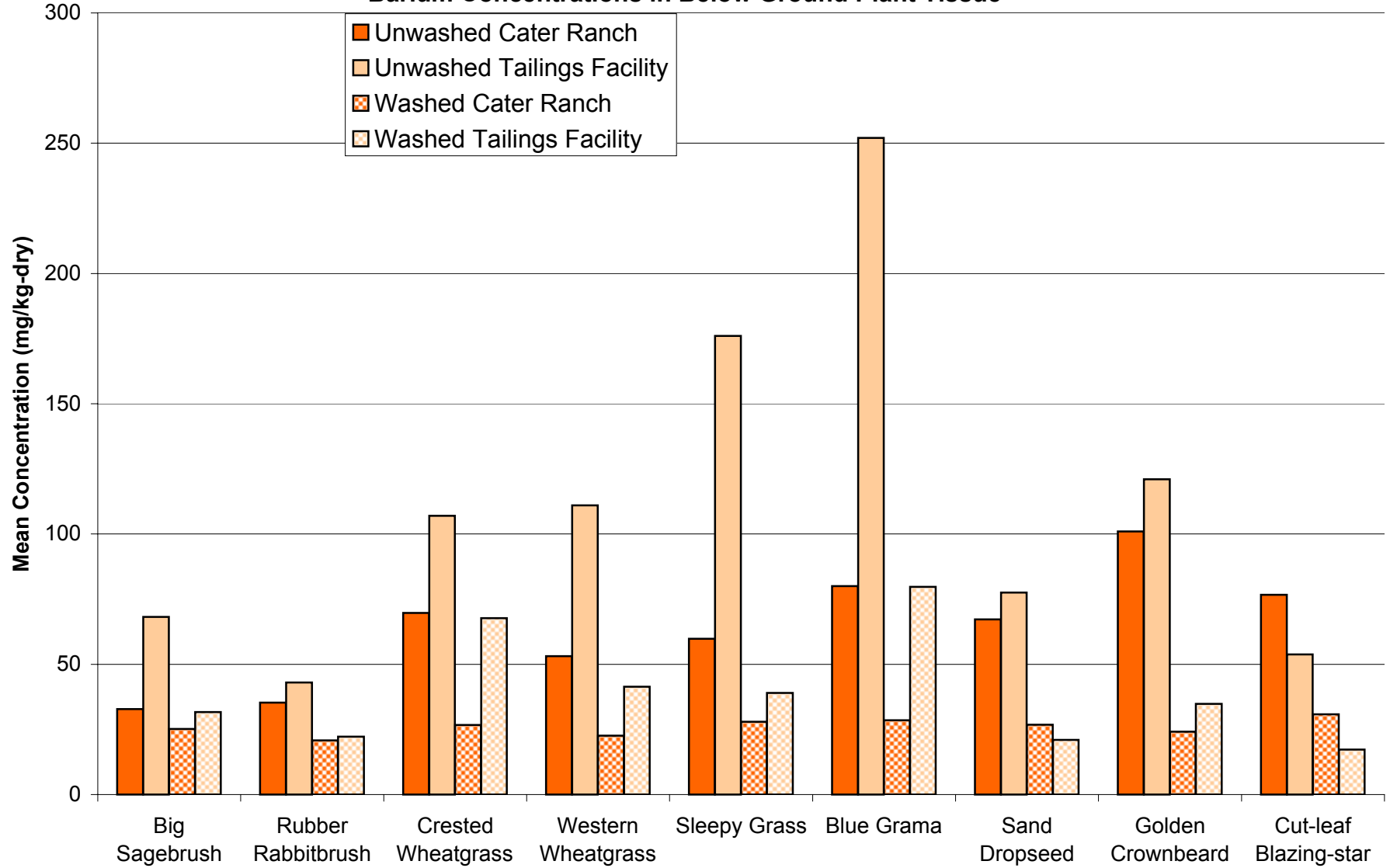


Figure 10-7
Boron Concentrations in Root Zone Soils

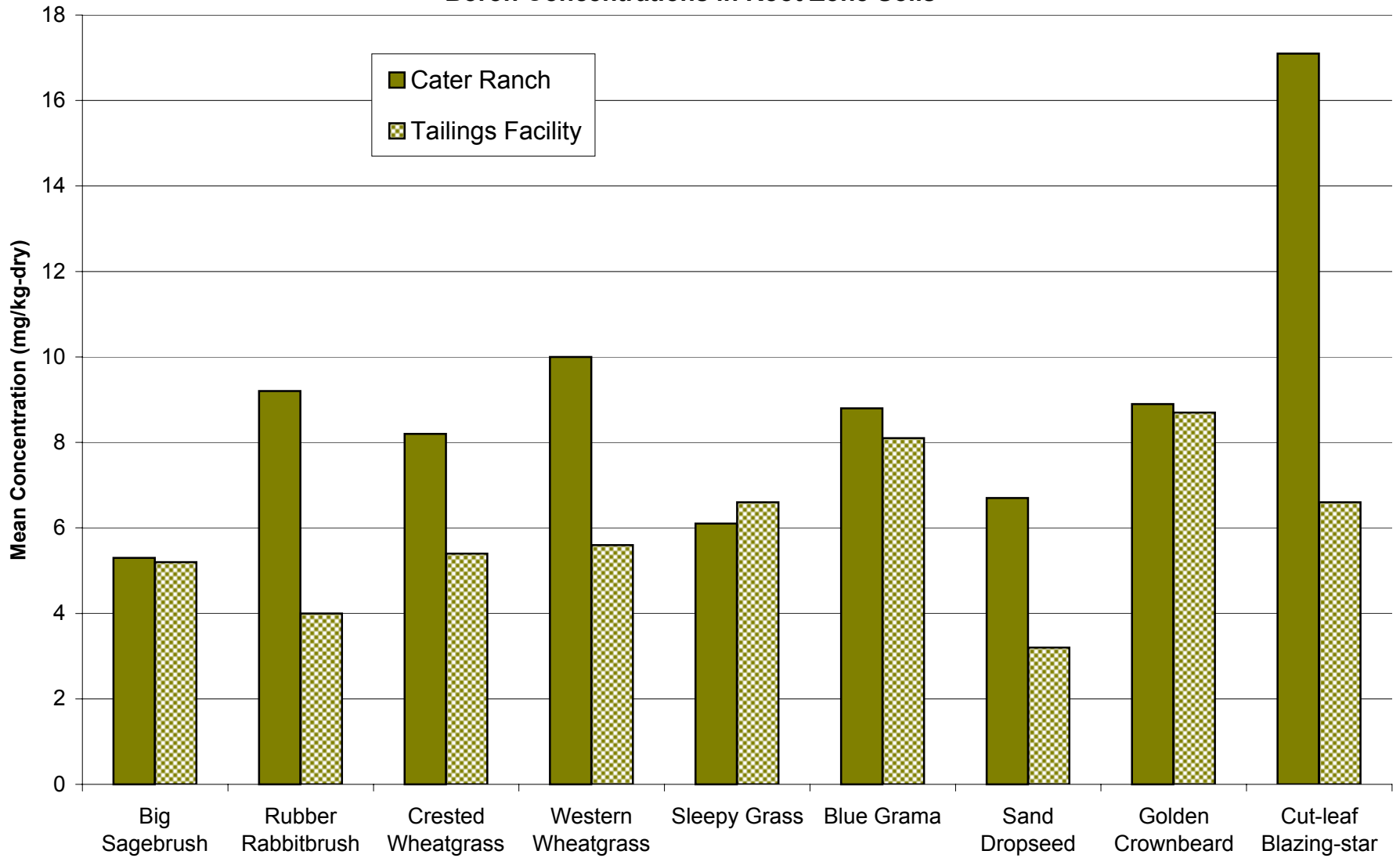


Figure 10-8
Boron Concentrations in Aboveground Plant Tissue

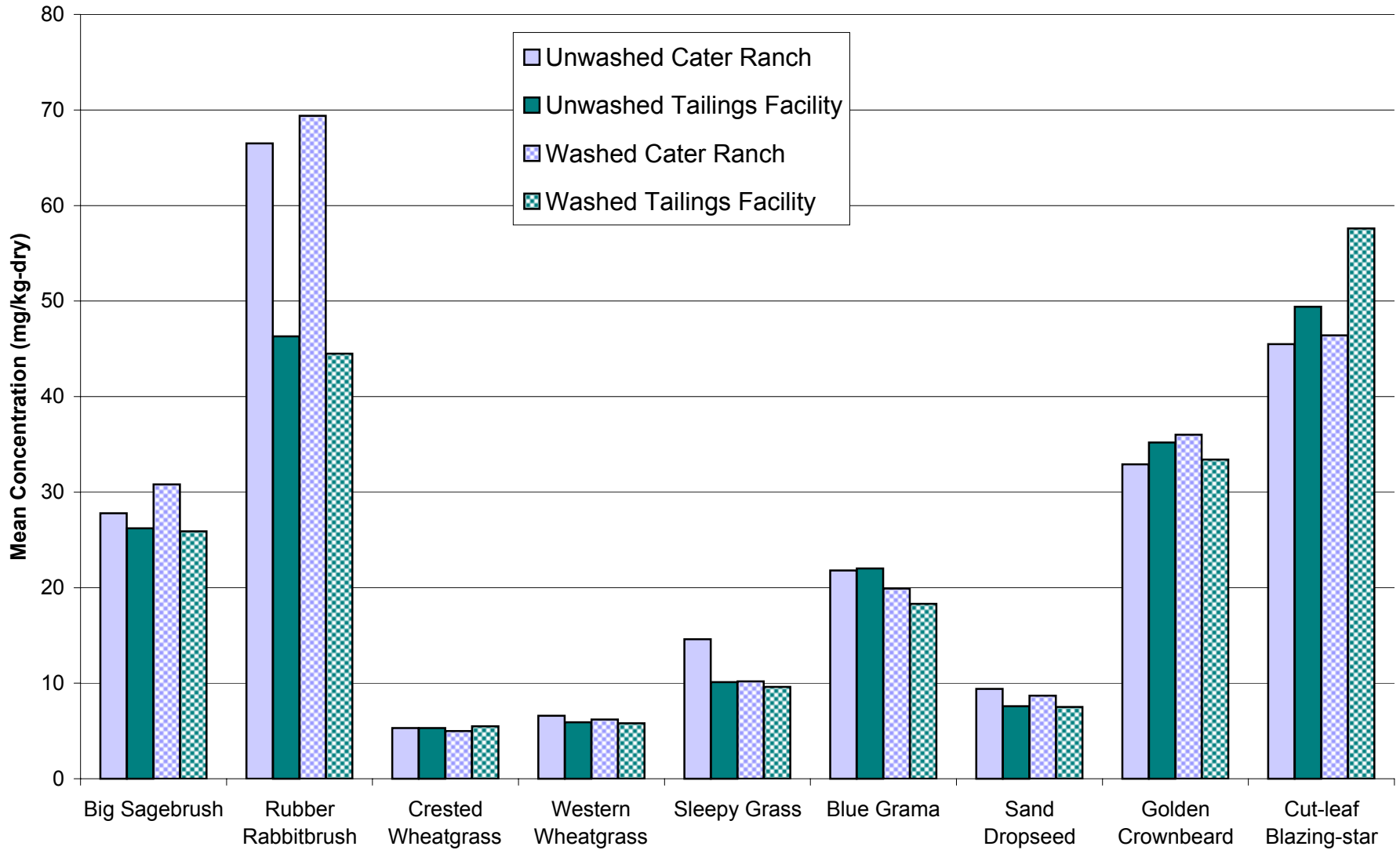


Figure 10-9
Boron Concentrations in Below Ground Plant Tissue

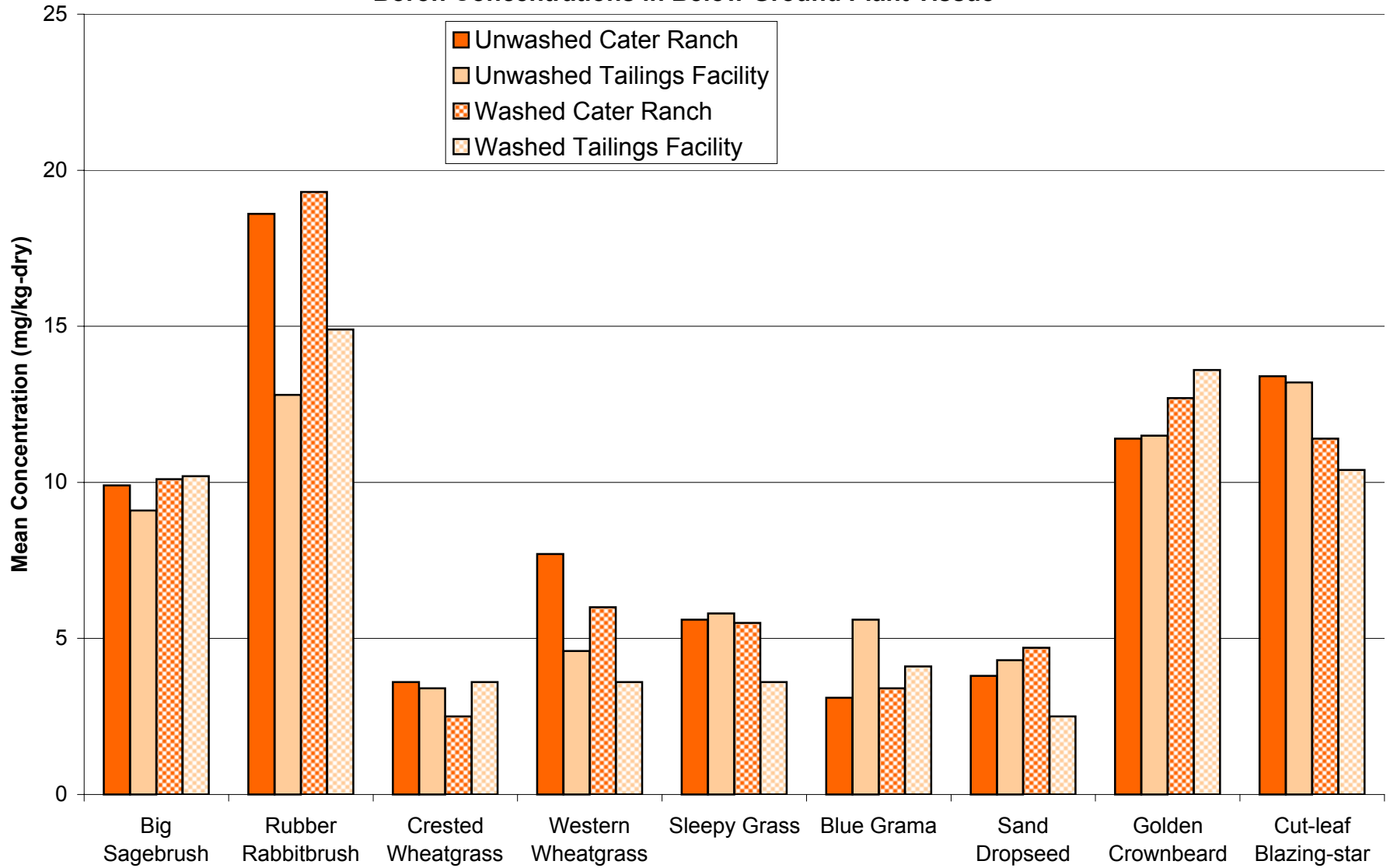
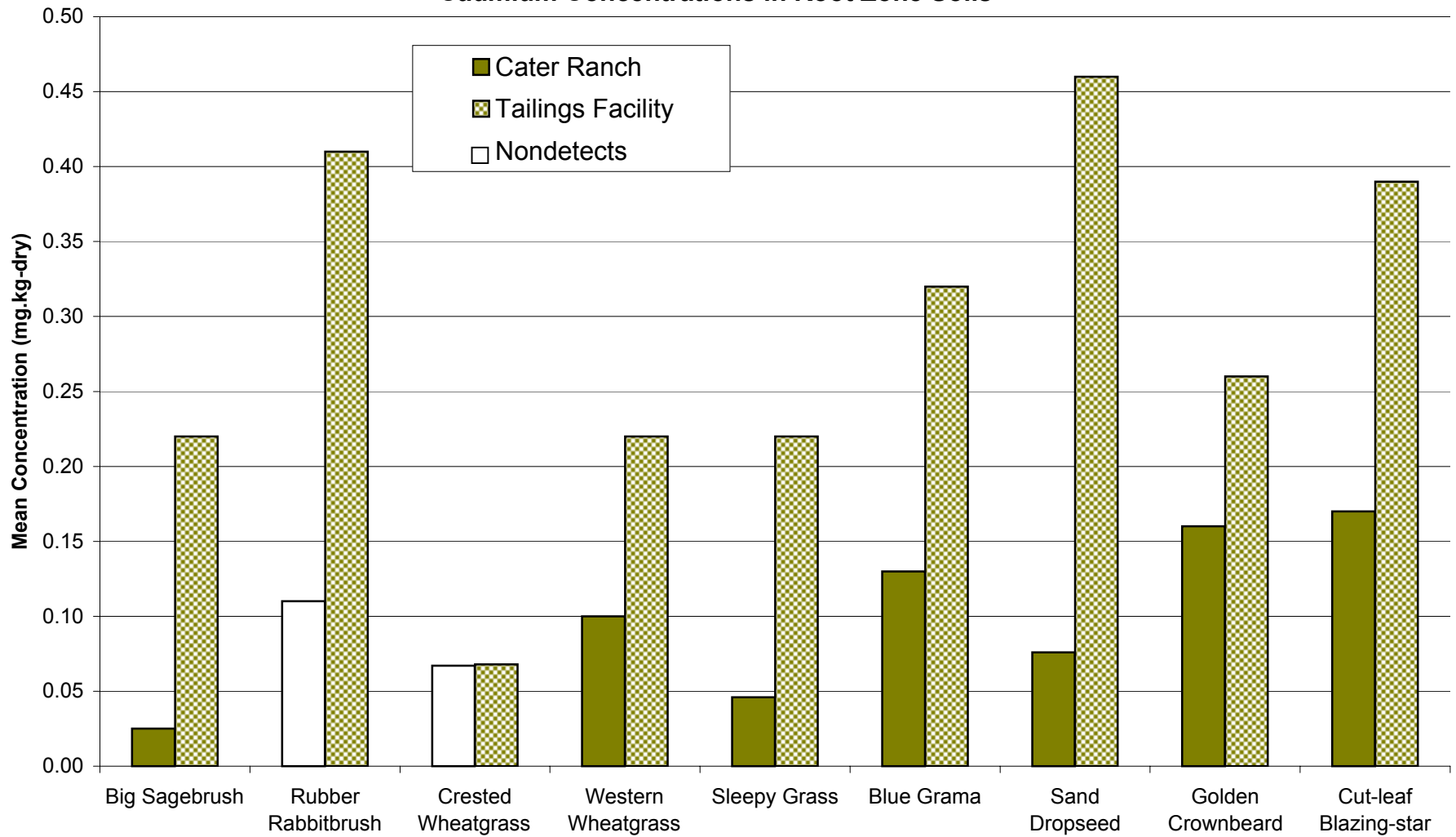
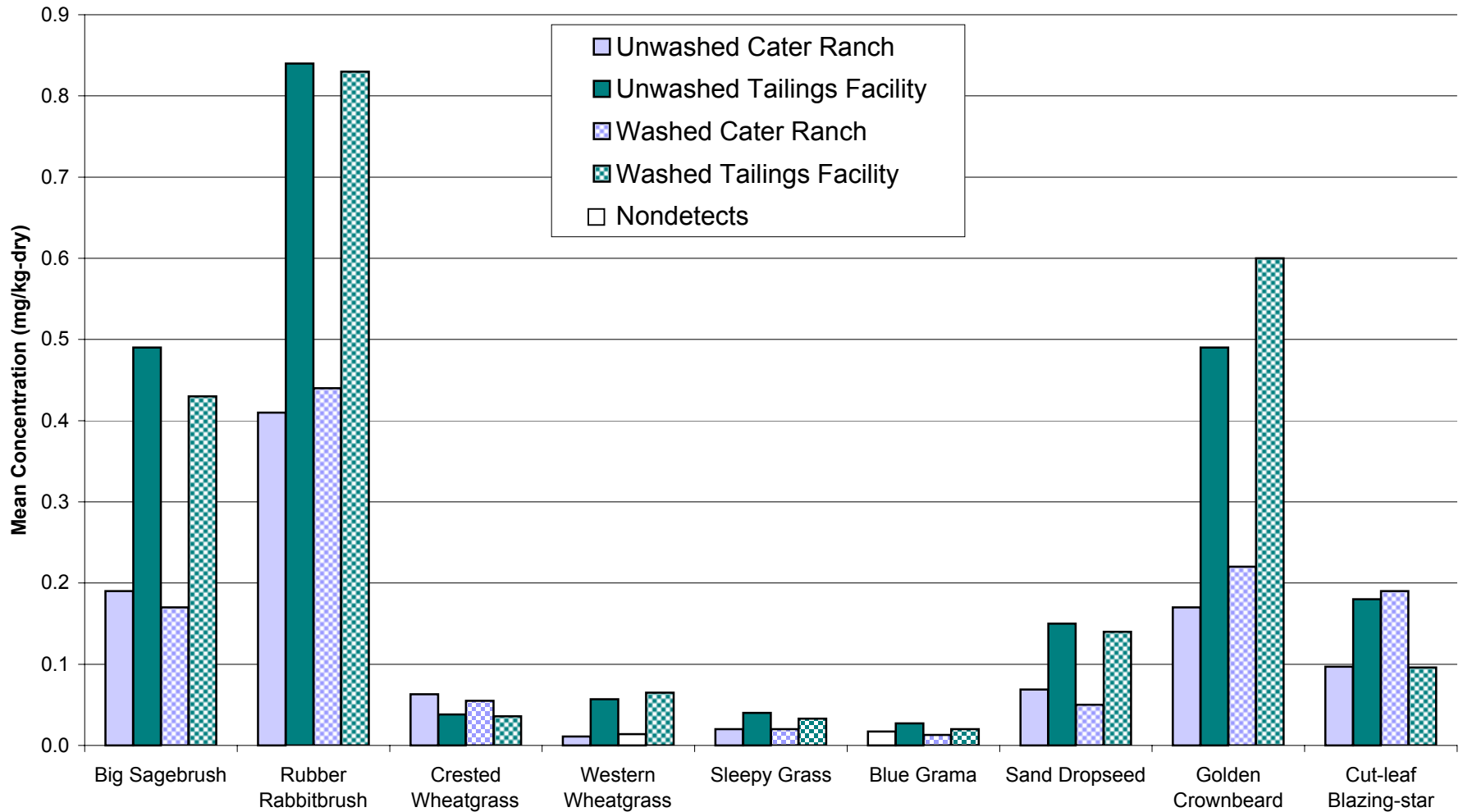


Figure 10-10
Cadmium Concentrations in Root Zone Soils



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-11
Cadmium Concentrations in Aboveground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-12
Cadmium Concentrations in Below Ground Plant Tissue

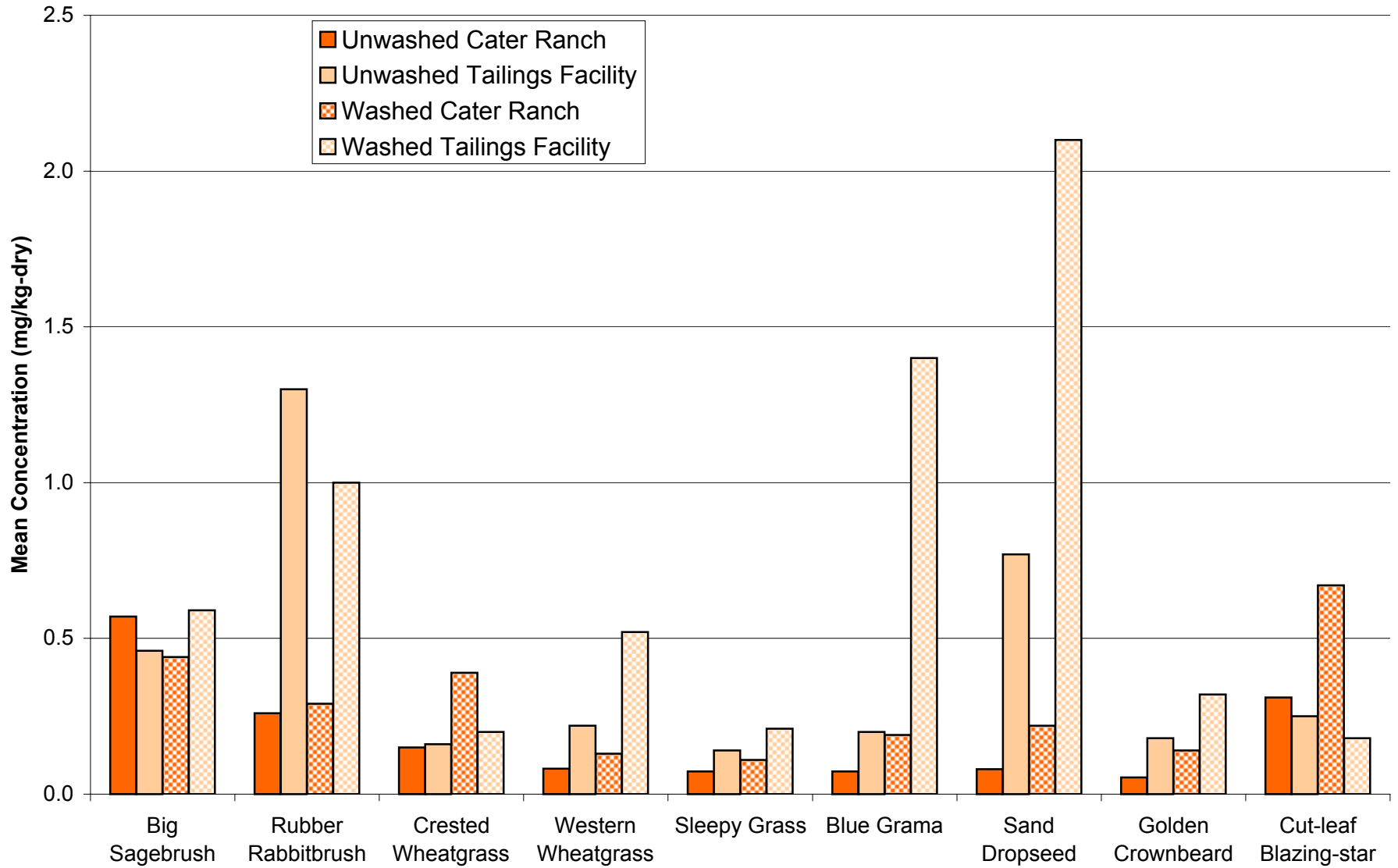


Figure 10-13
Chromium Concentrations in Root Zone Soils

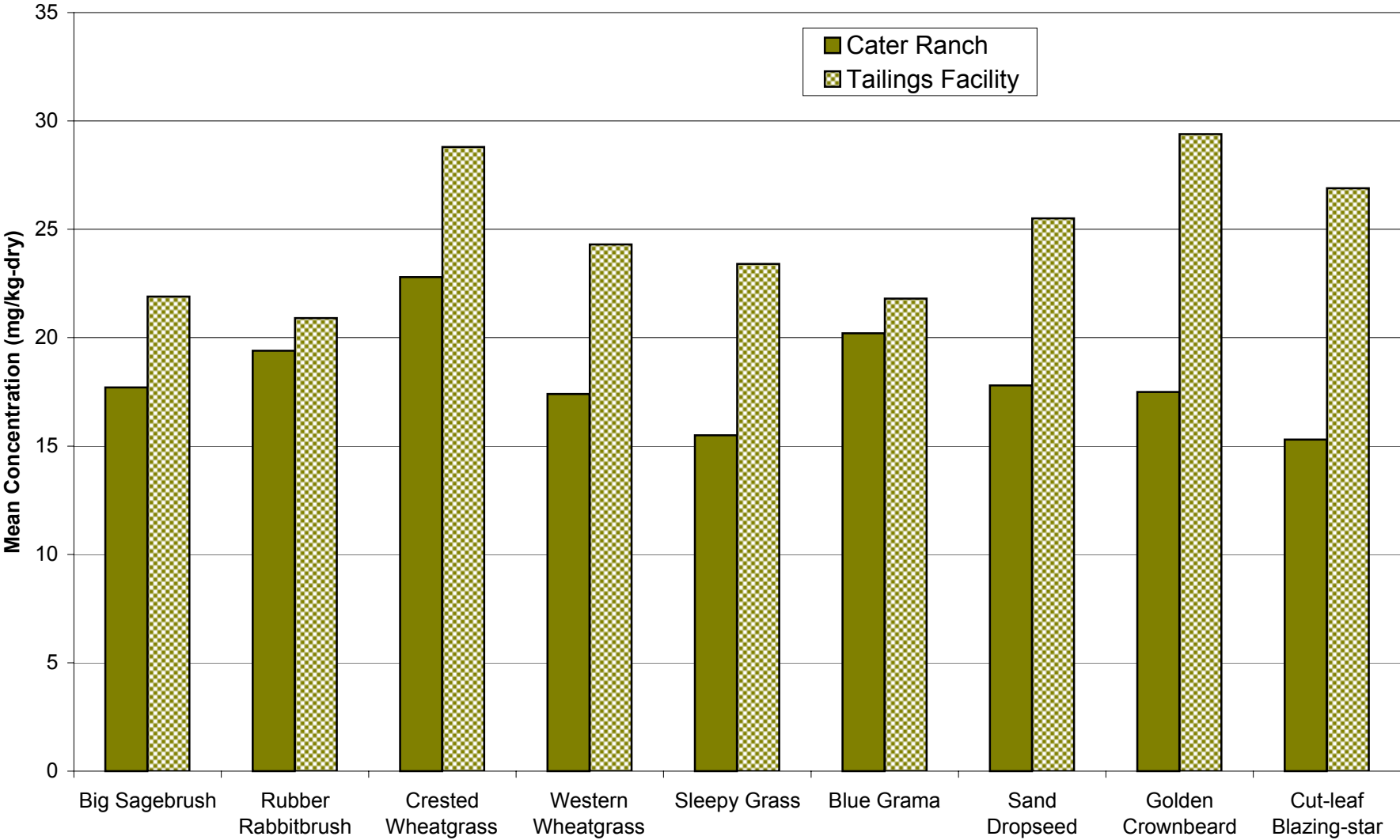
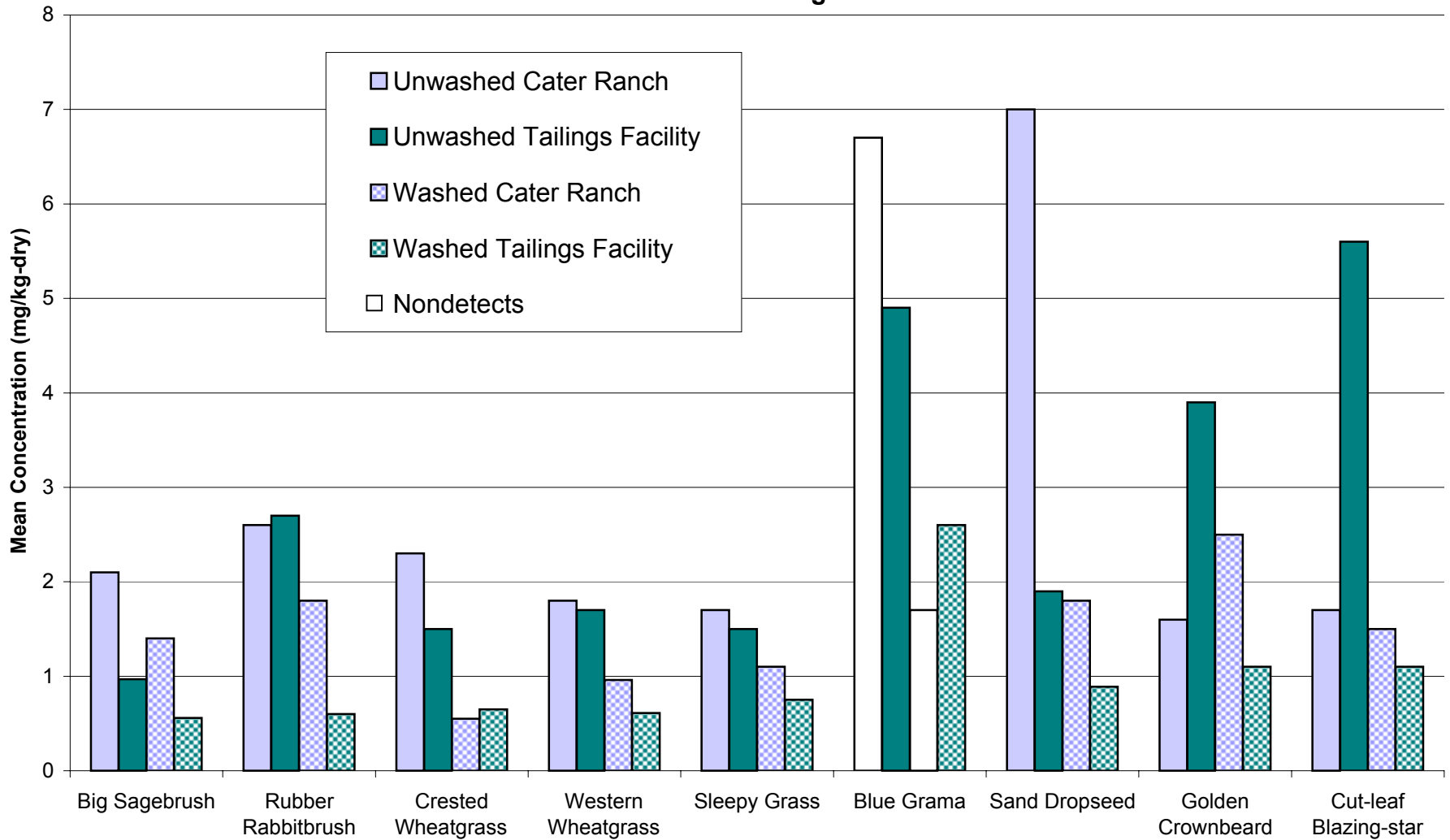


Figure 10-14
Chromium Concentrations in Aboveground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-15
Chromium Concentrations in Below Ground Plant Tissue

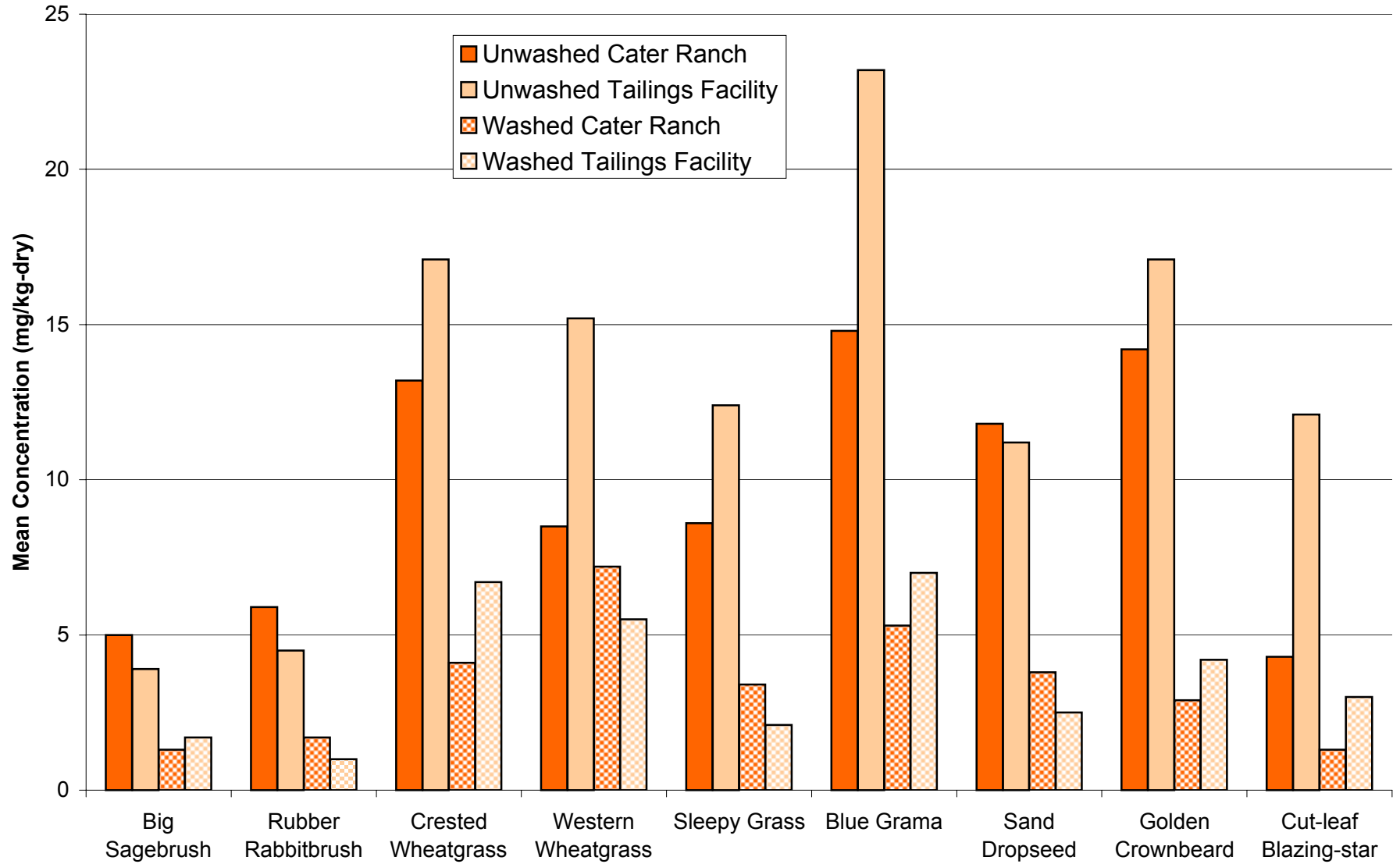


Figure 10-16
Copper Concentrations in Root Zone Soils

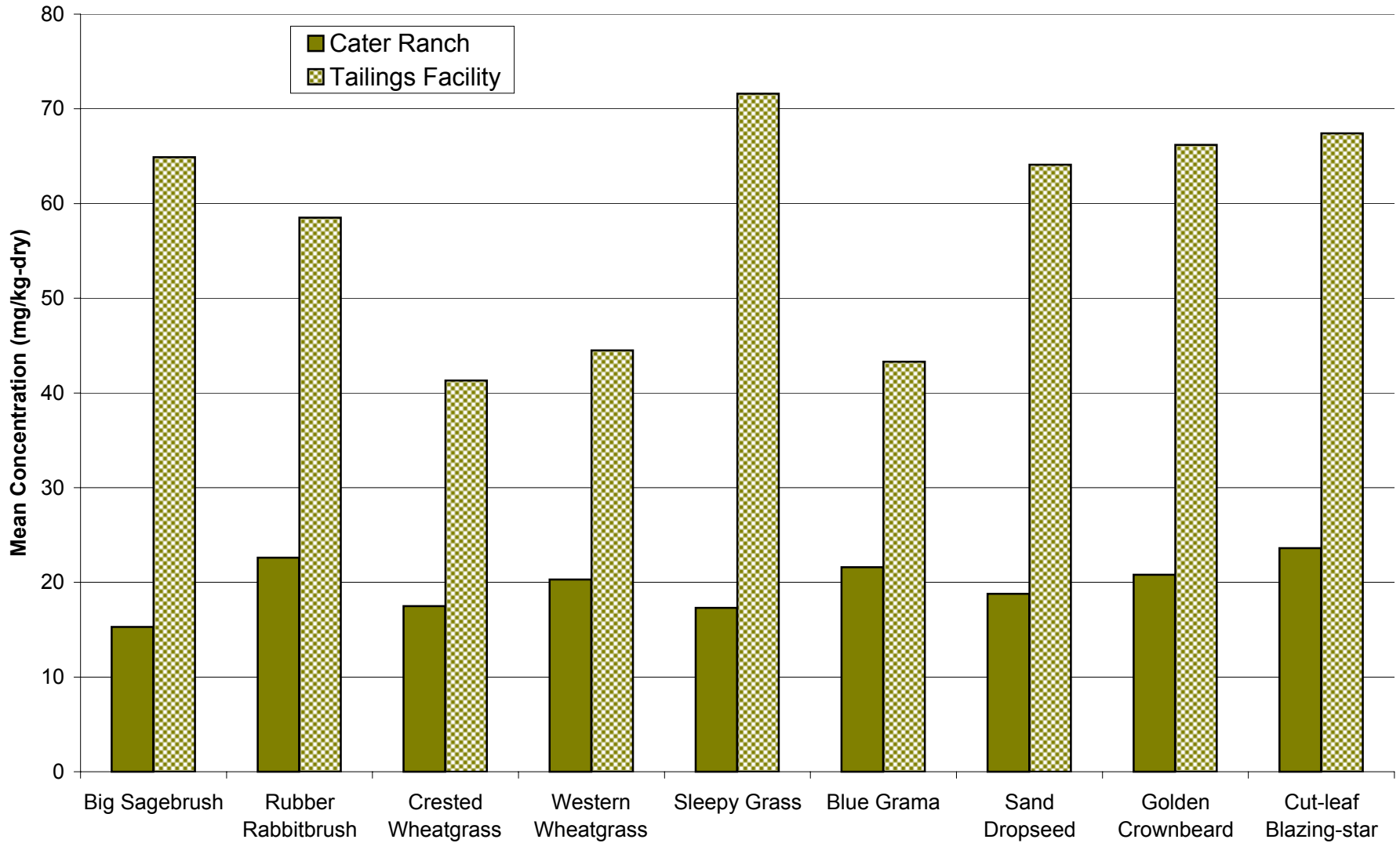


Figure 10-17
Copper Concentrations in Aboveground Plant Tissue

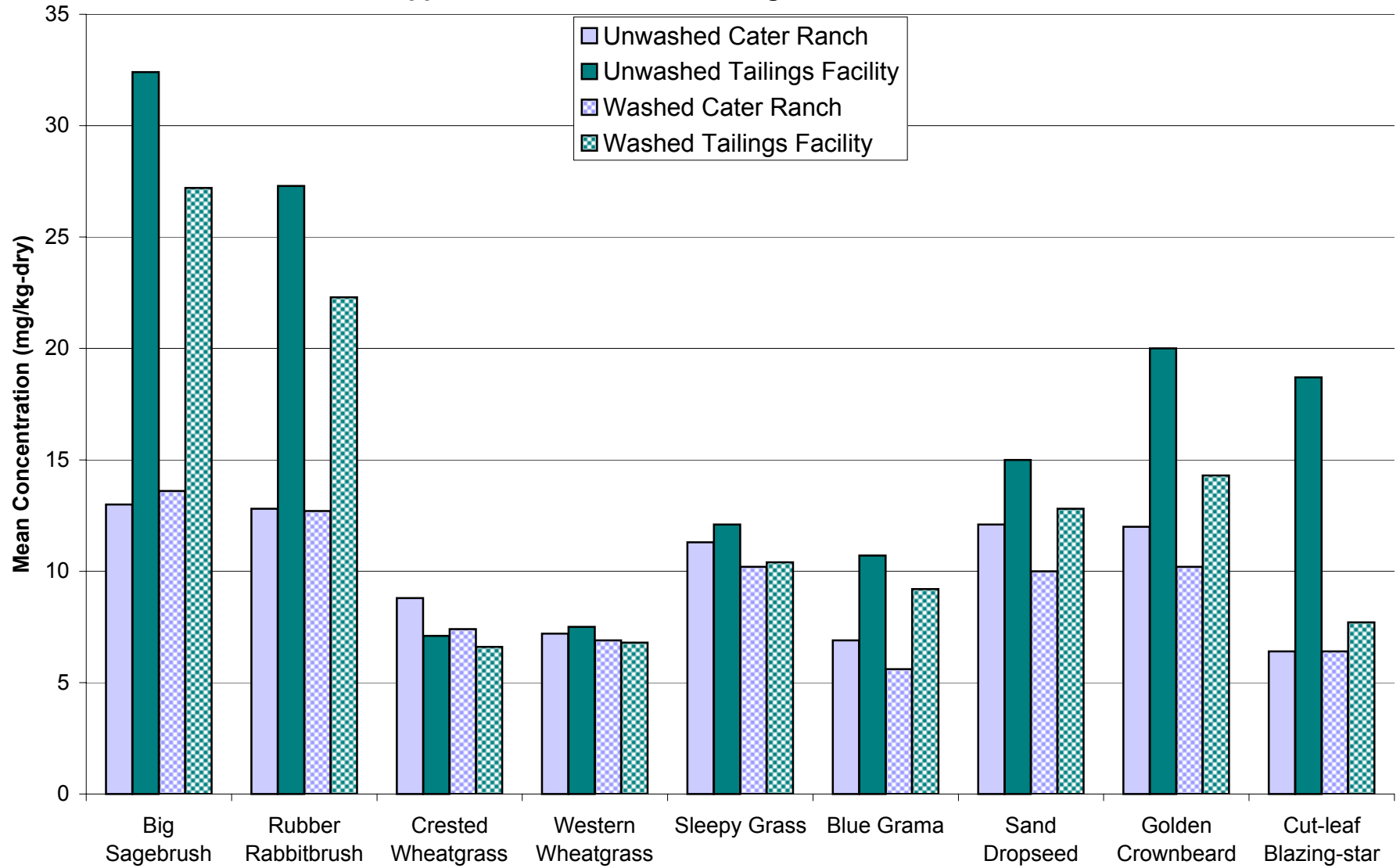


Figure 10-18
Copper Concentrations in Below Ground Plant Tissue

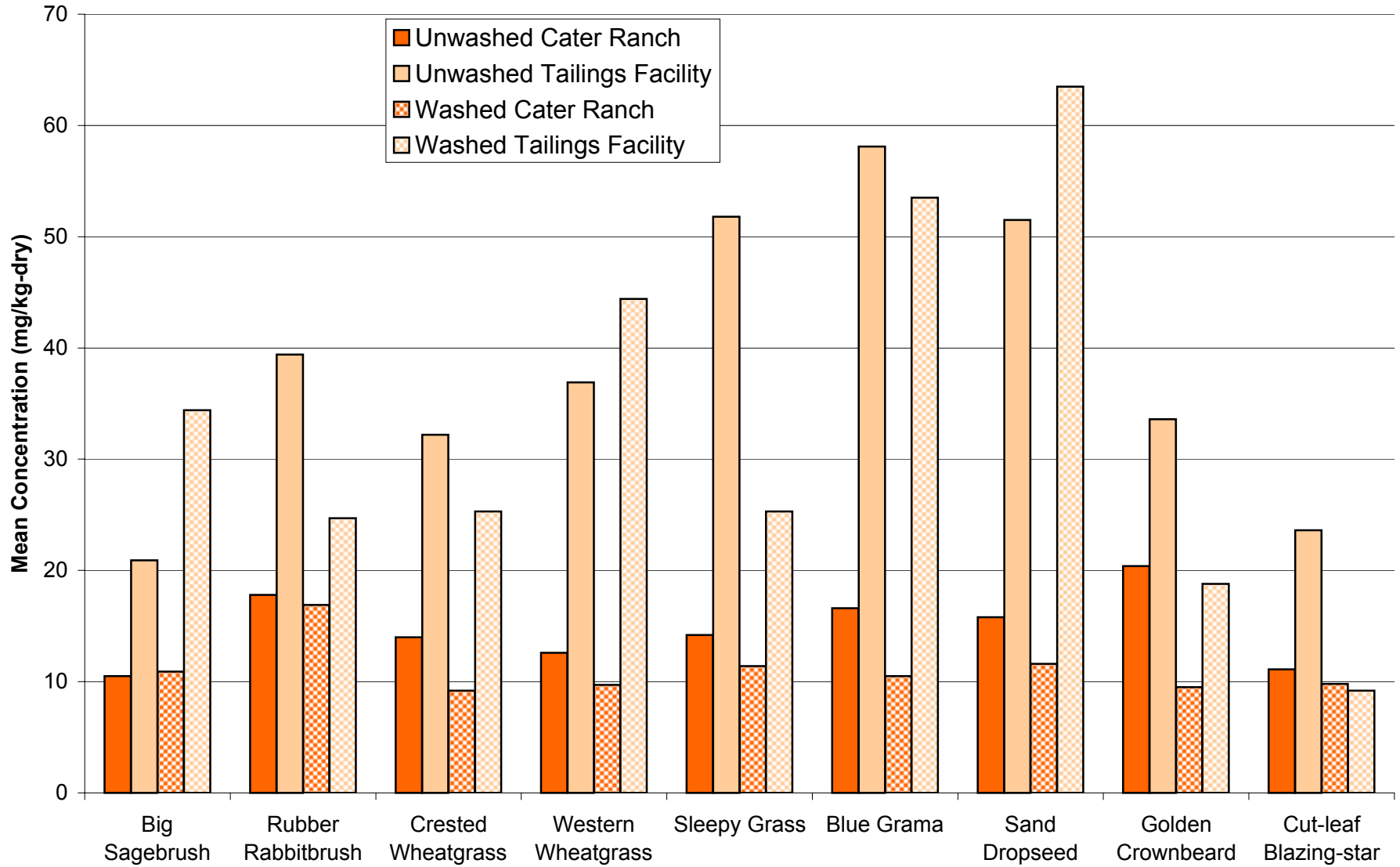


Figure 10-19
Lead Concentrations in Root Zone Soils

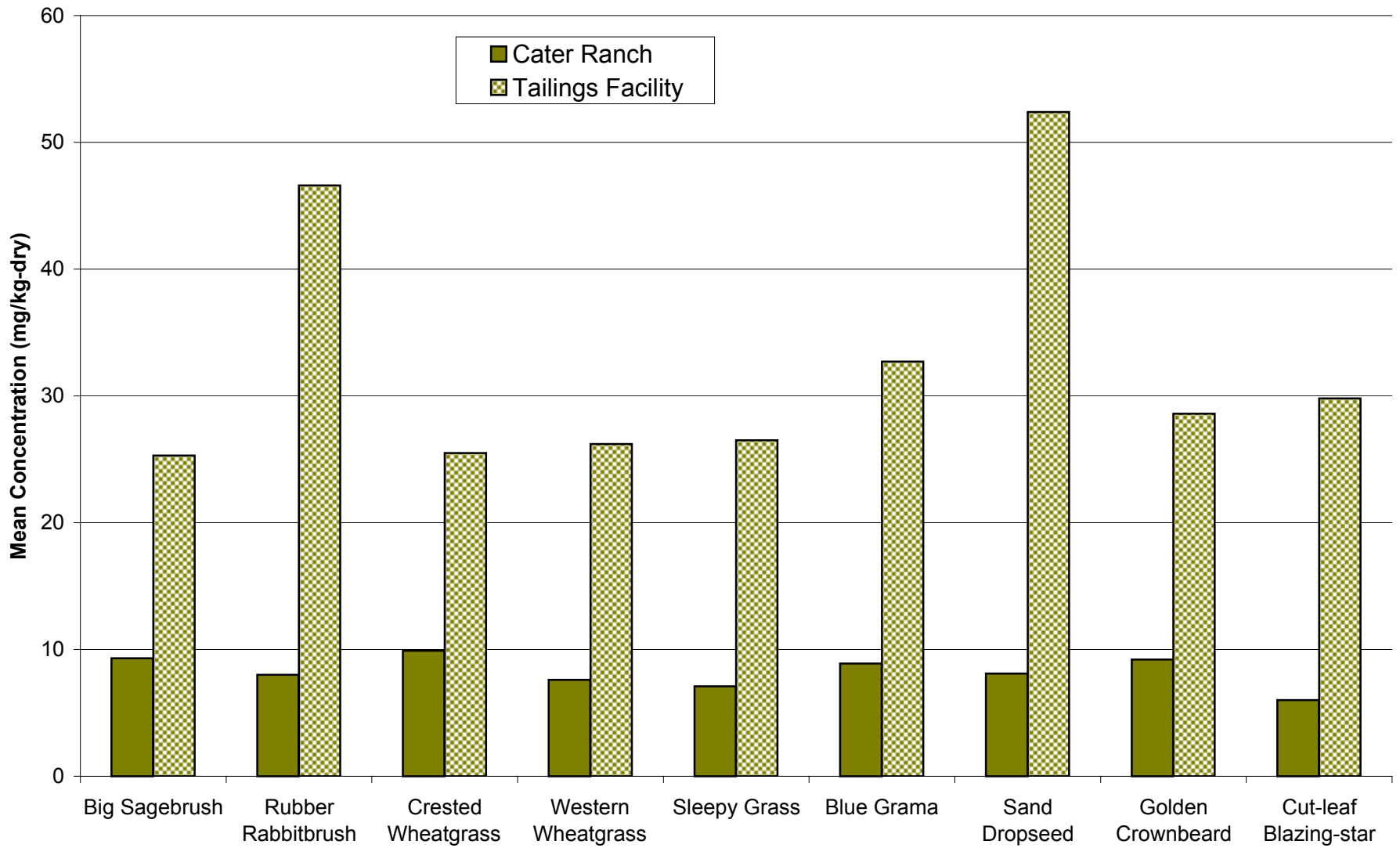
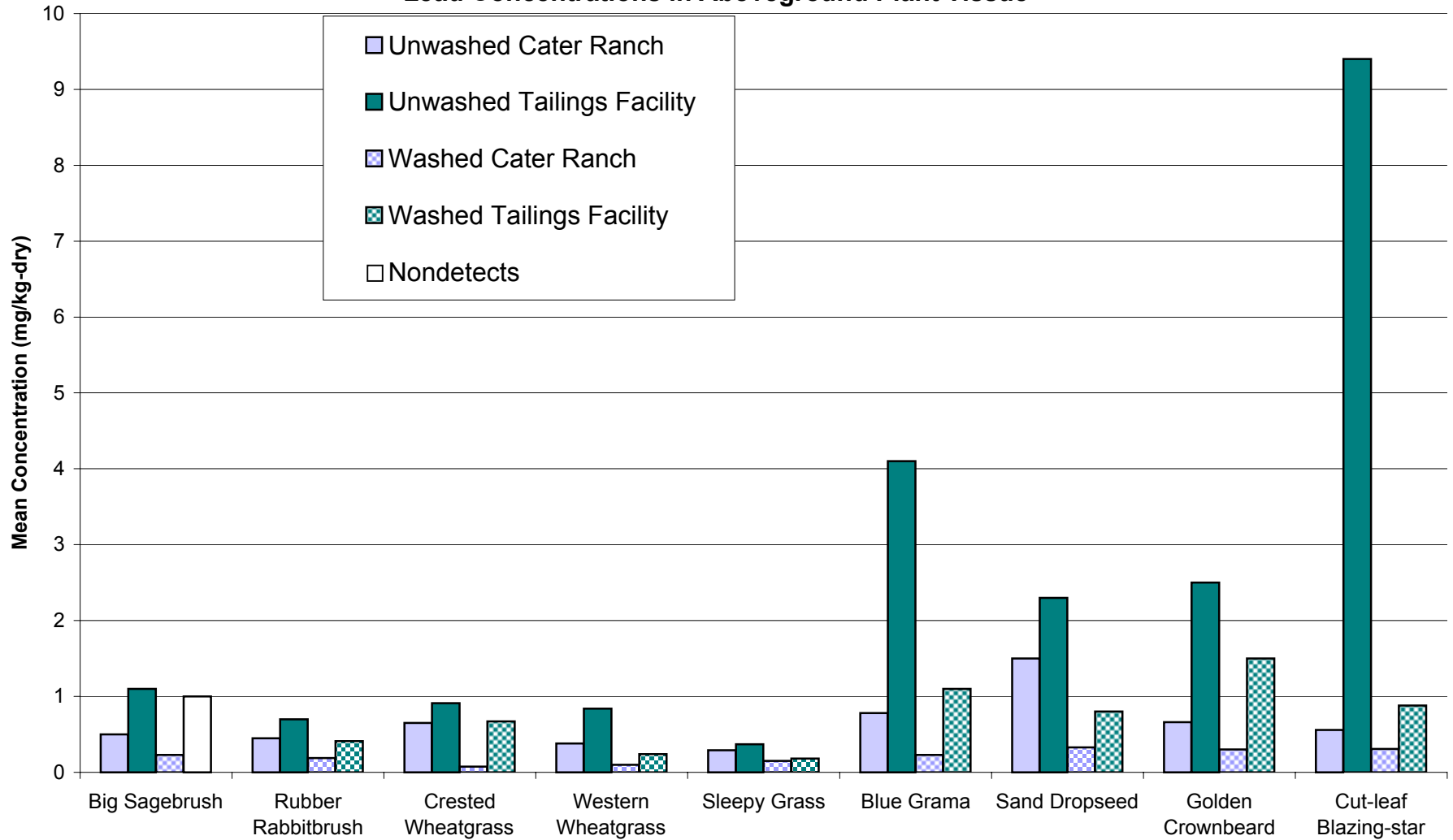


Figure 10-20
Lead Concentrations in Aboveground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-21
Lead Concentrations in Below Ground Plant Tissues

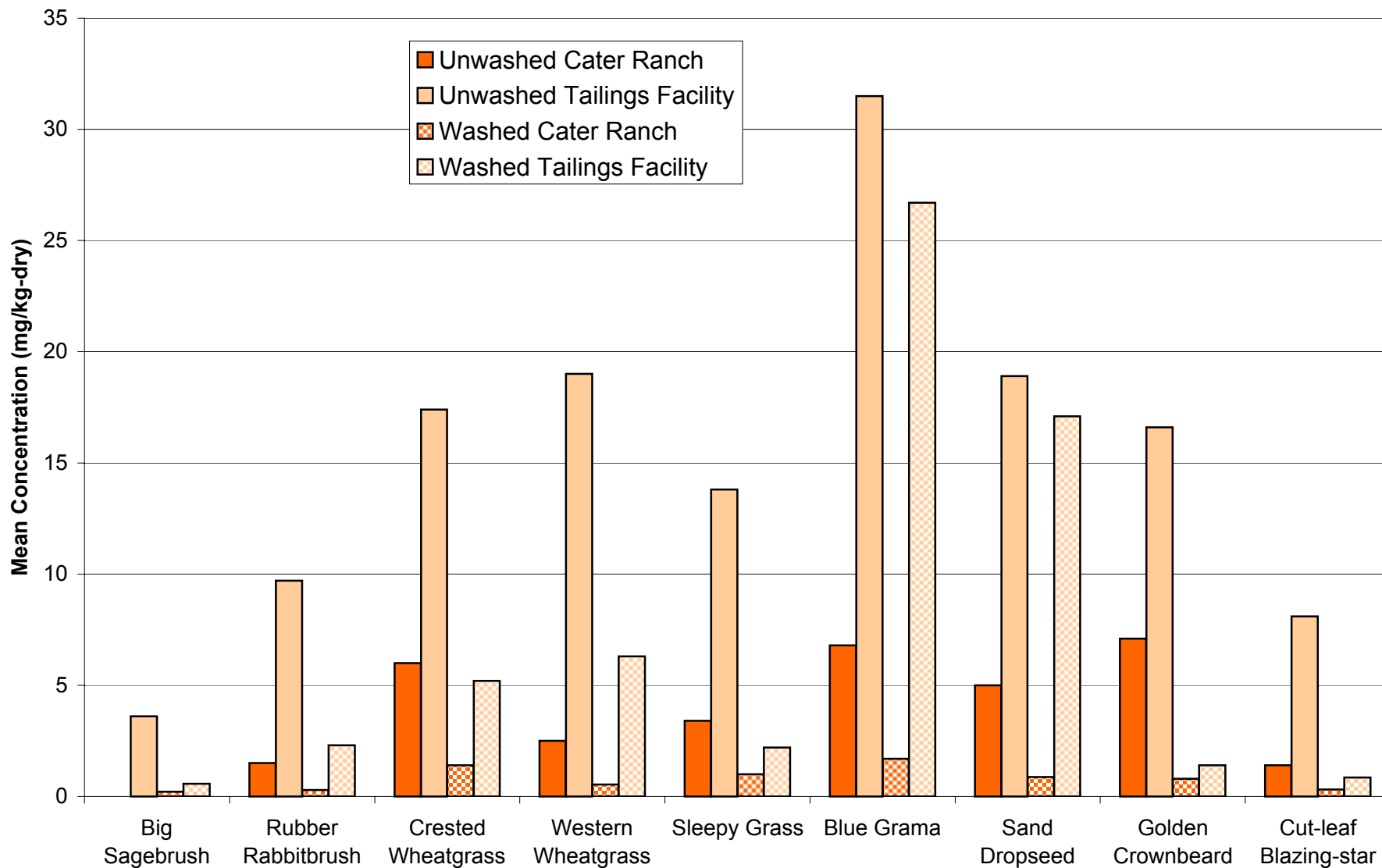


Figure 10-22
Manganese Concentrations in Root Zone Soils

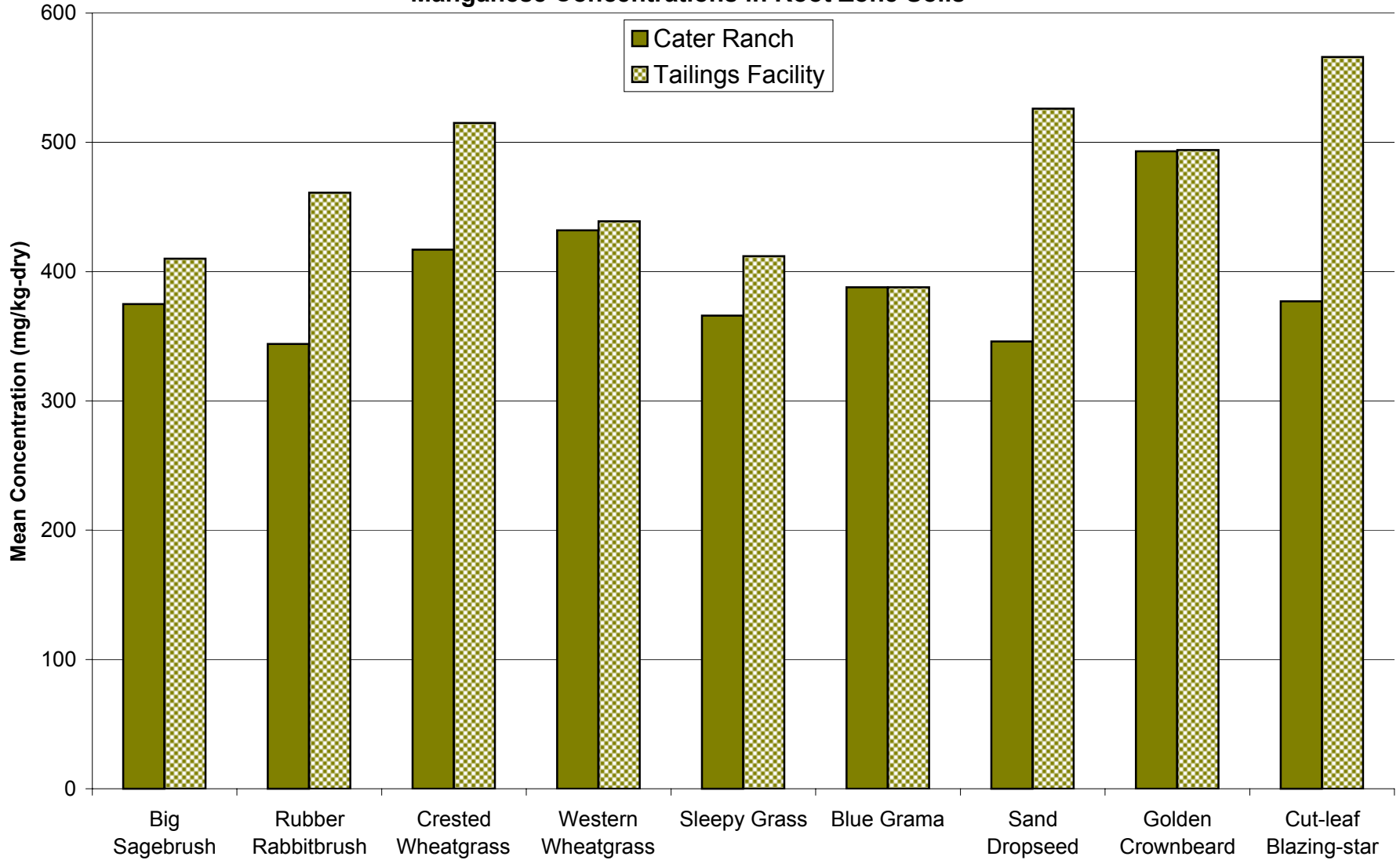


Figure 10-23
Manganese Concentrations in Aboveground Plant Tissue

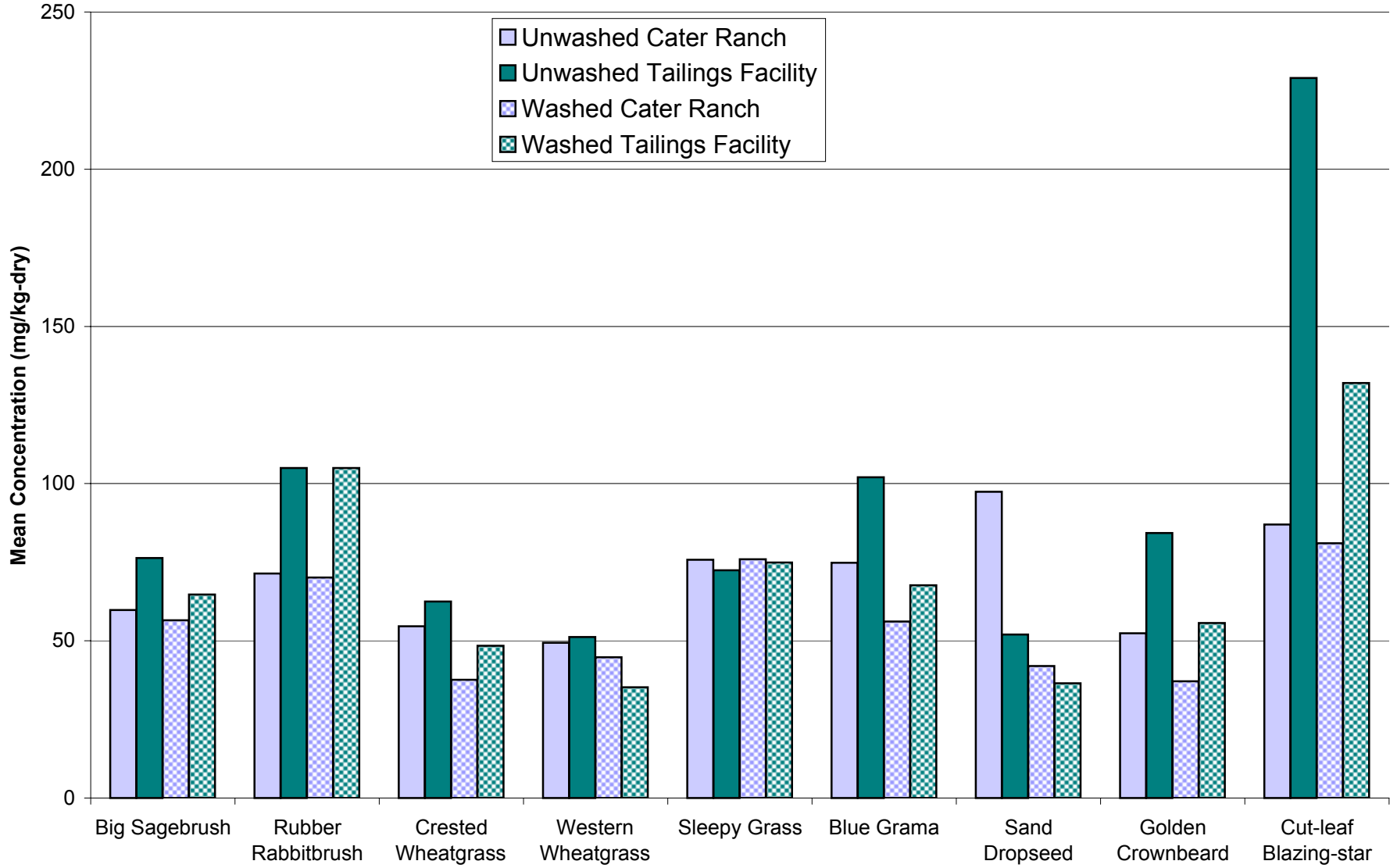


Figure 10-24
Manganese Concentrations in Below Ground Plant Tissue

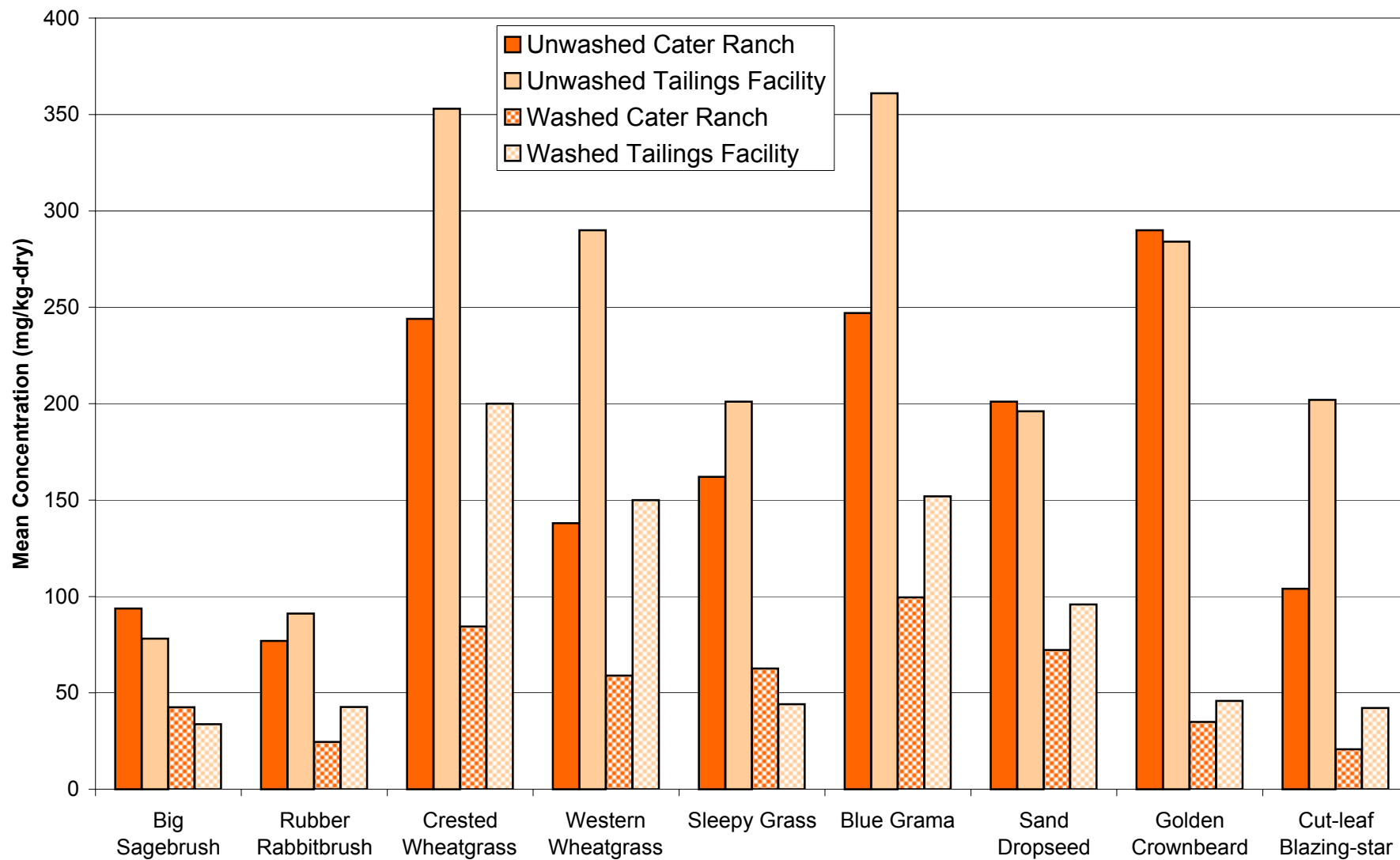
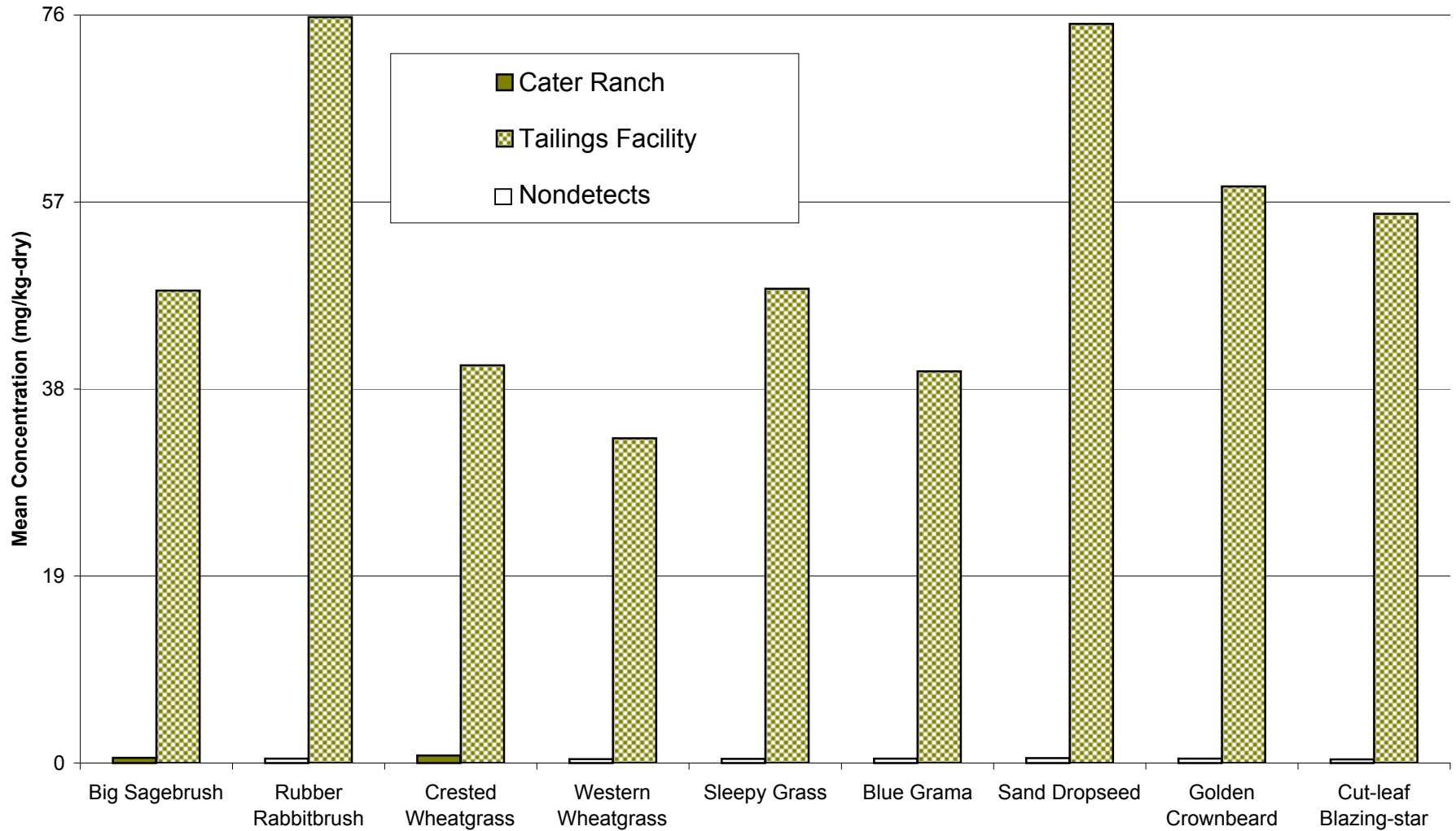


Figure 10-25
Molybdenum Concentrations in Root Zone Soils



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-26
Molybdenum Concentrations in Aboveground Plant Tissue

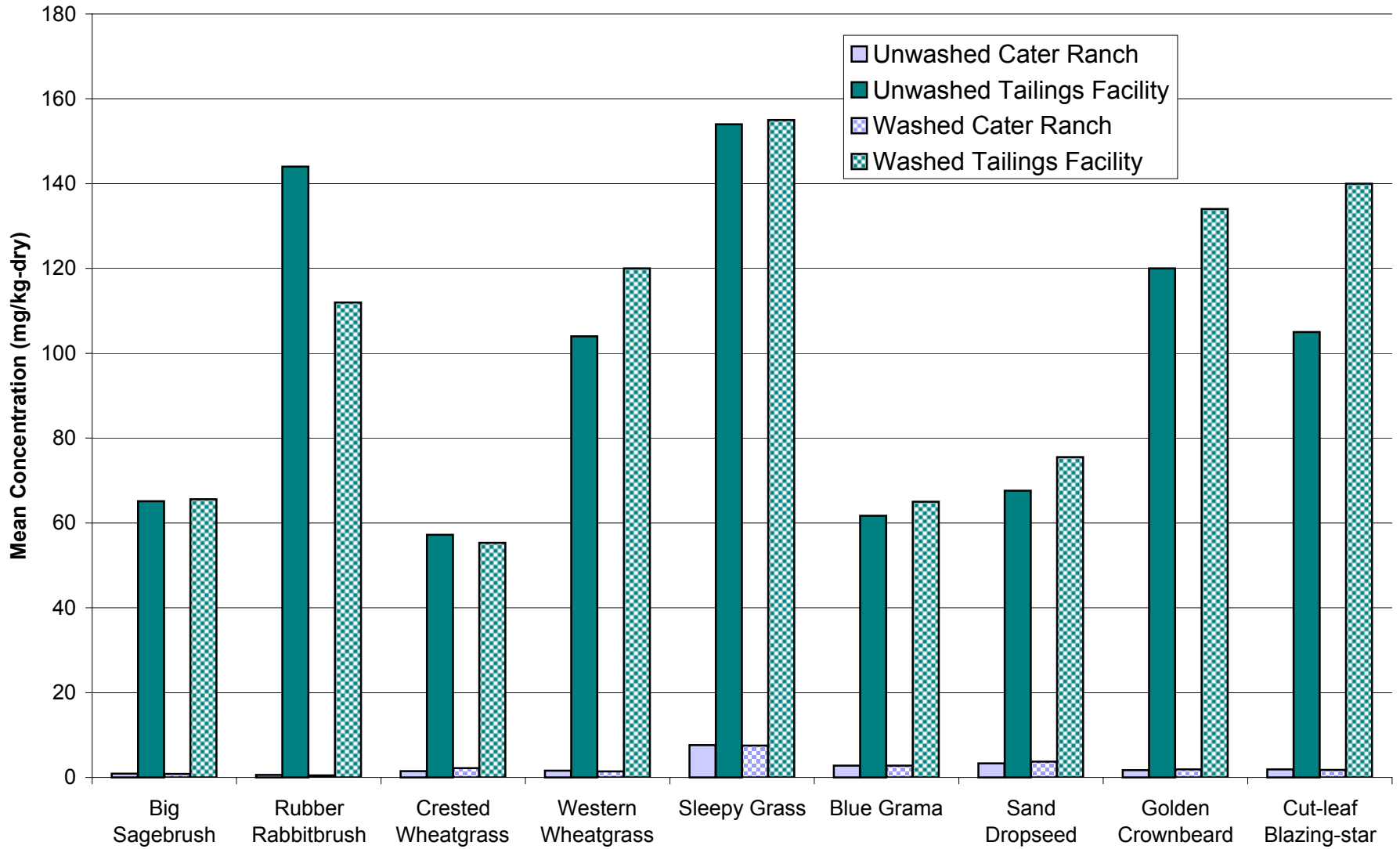
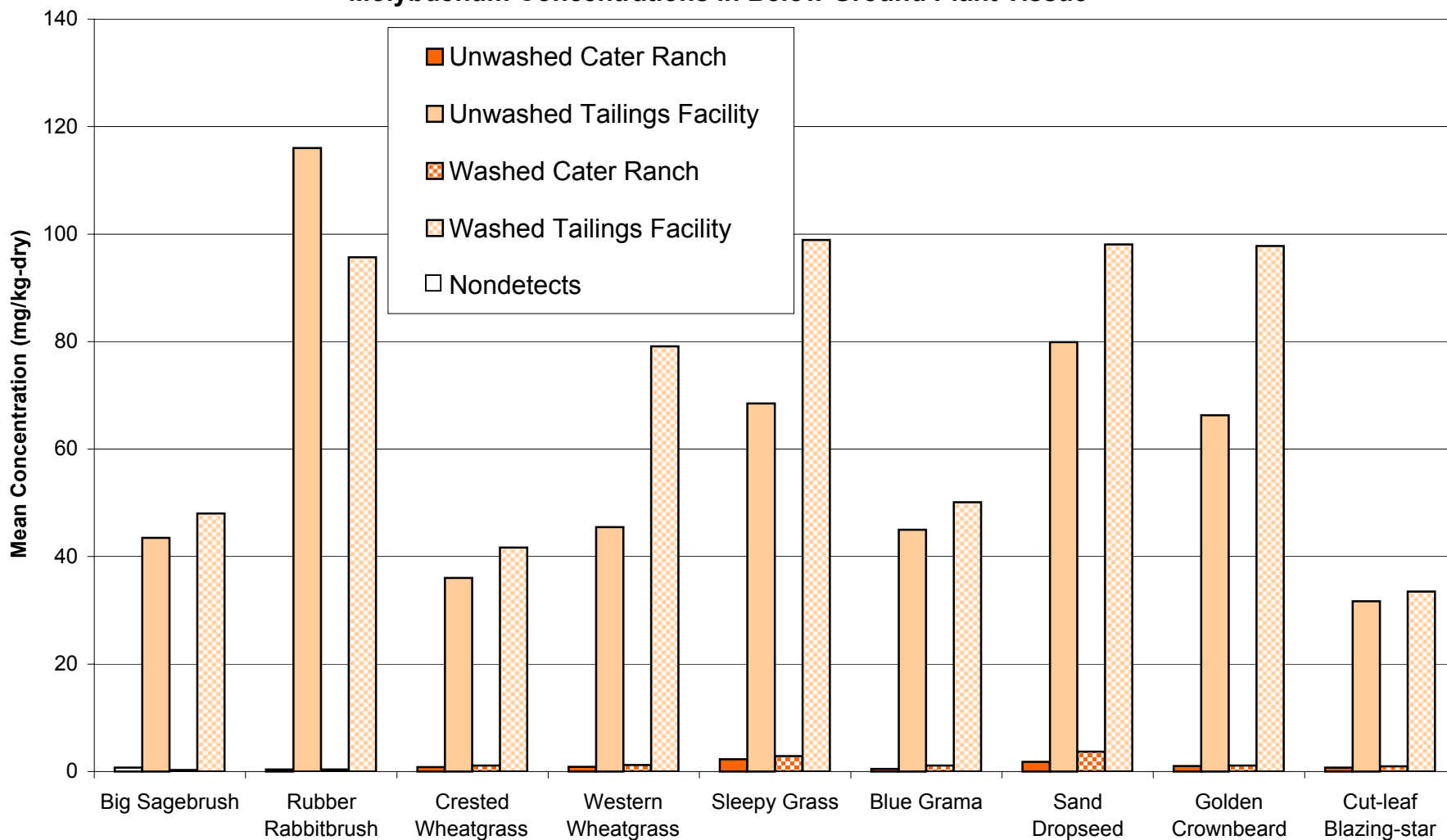


Figure 10-27
Molybdenum Concentrations in Below Ground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-28
Nickel Concentrations in Root Zone Soils

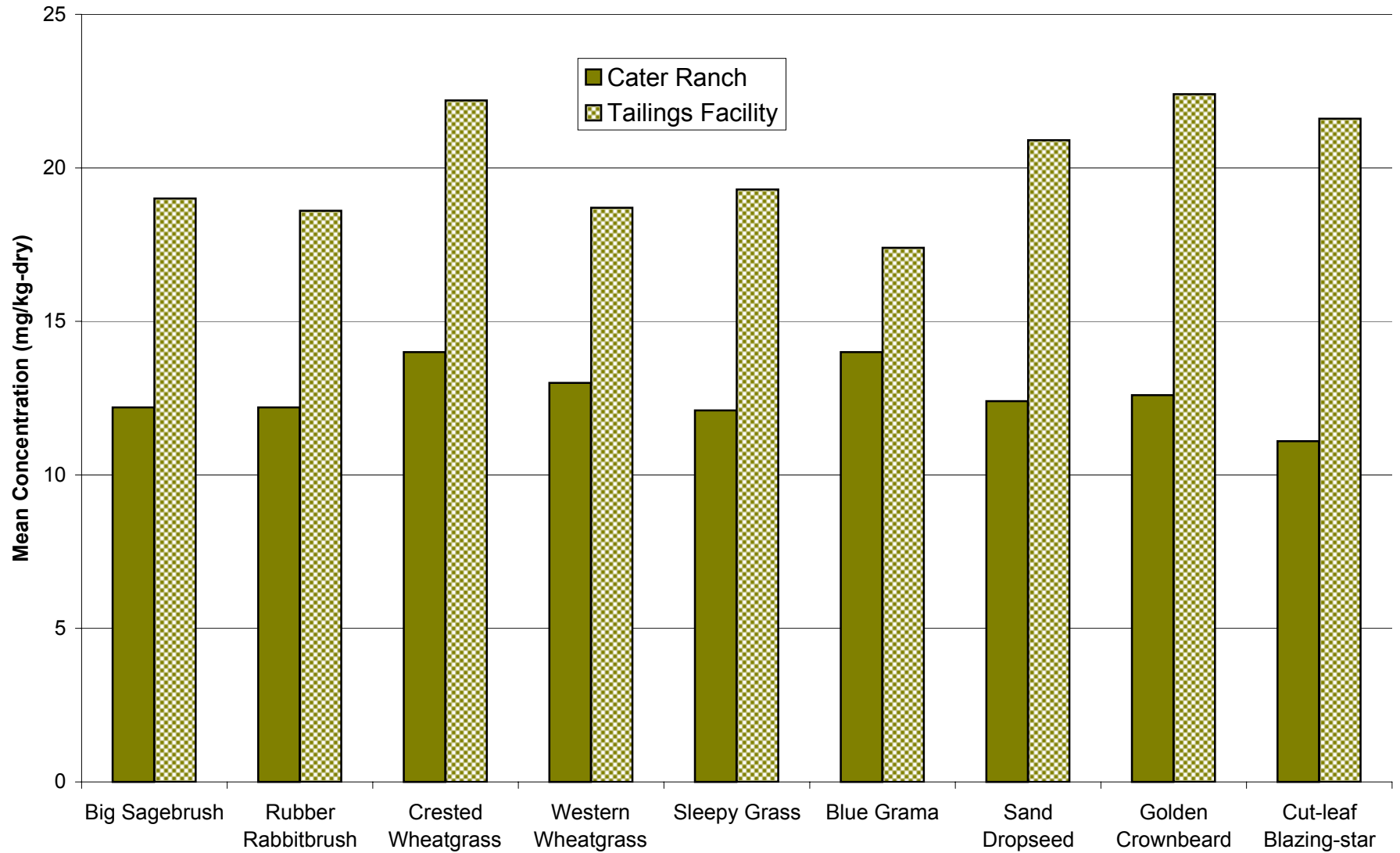
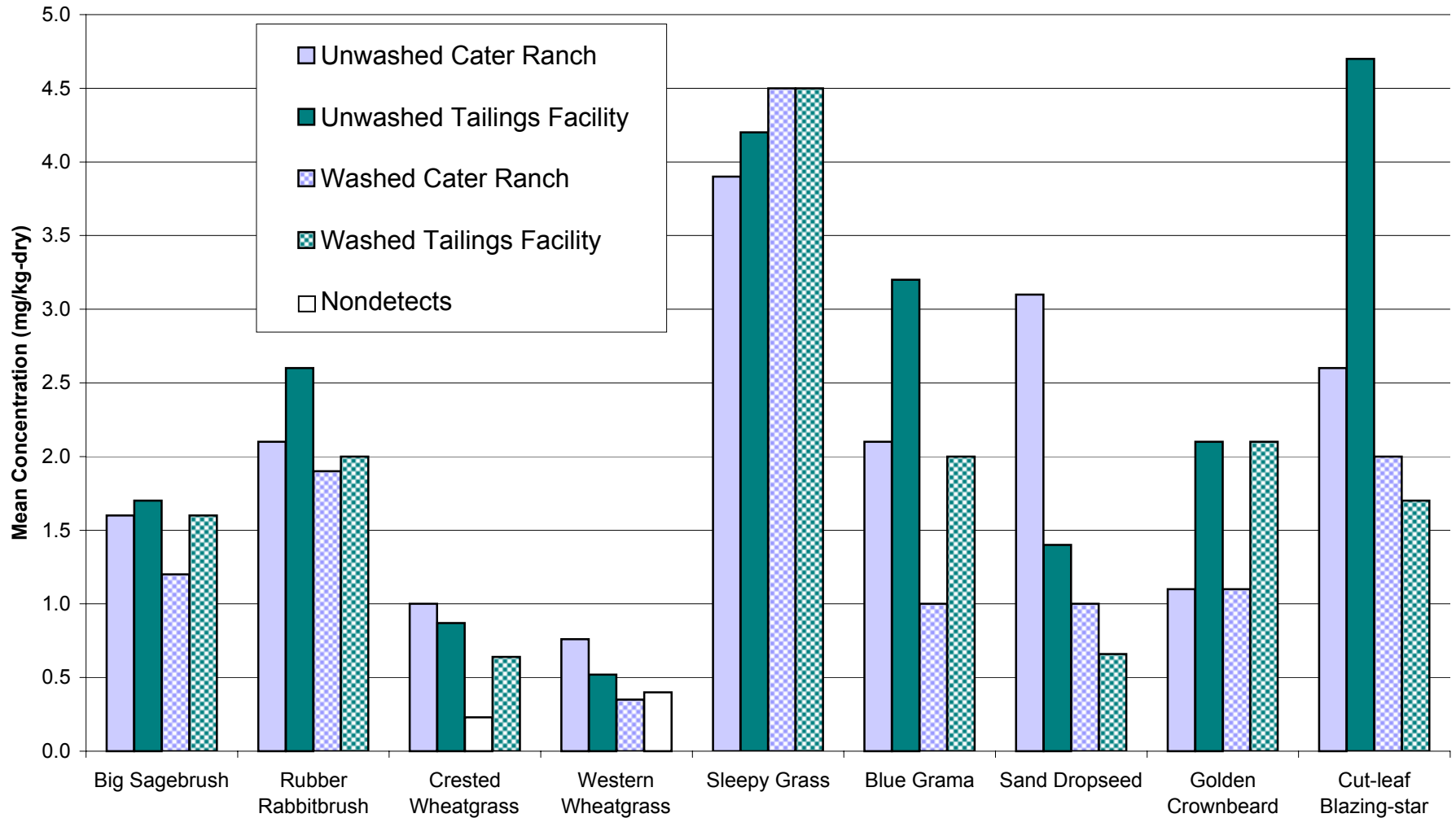


Figure 10-29
Nickel Concentrations in Aboveground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-30
Nickel Concentrations in Below Ground Plant Tissue

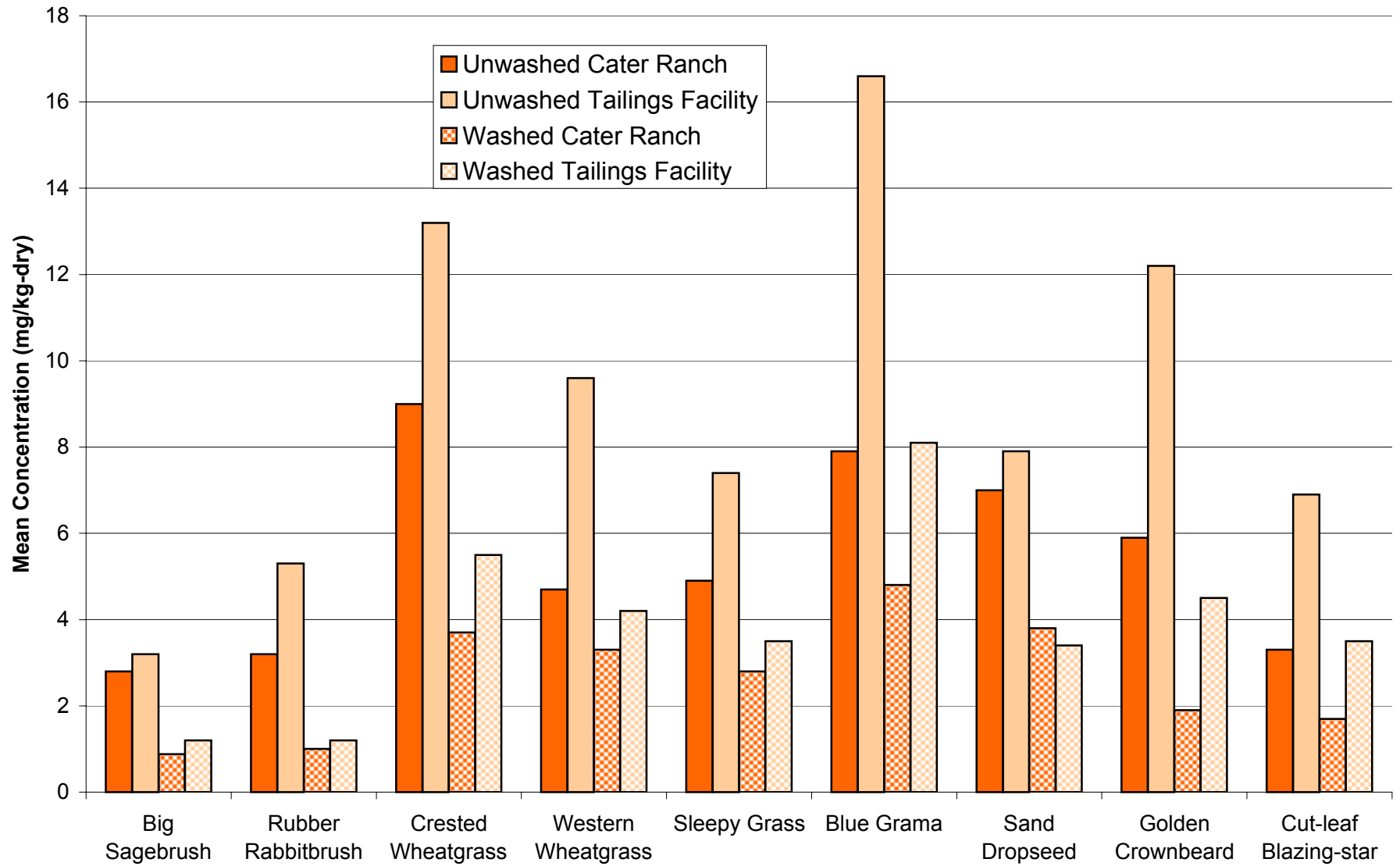
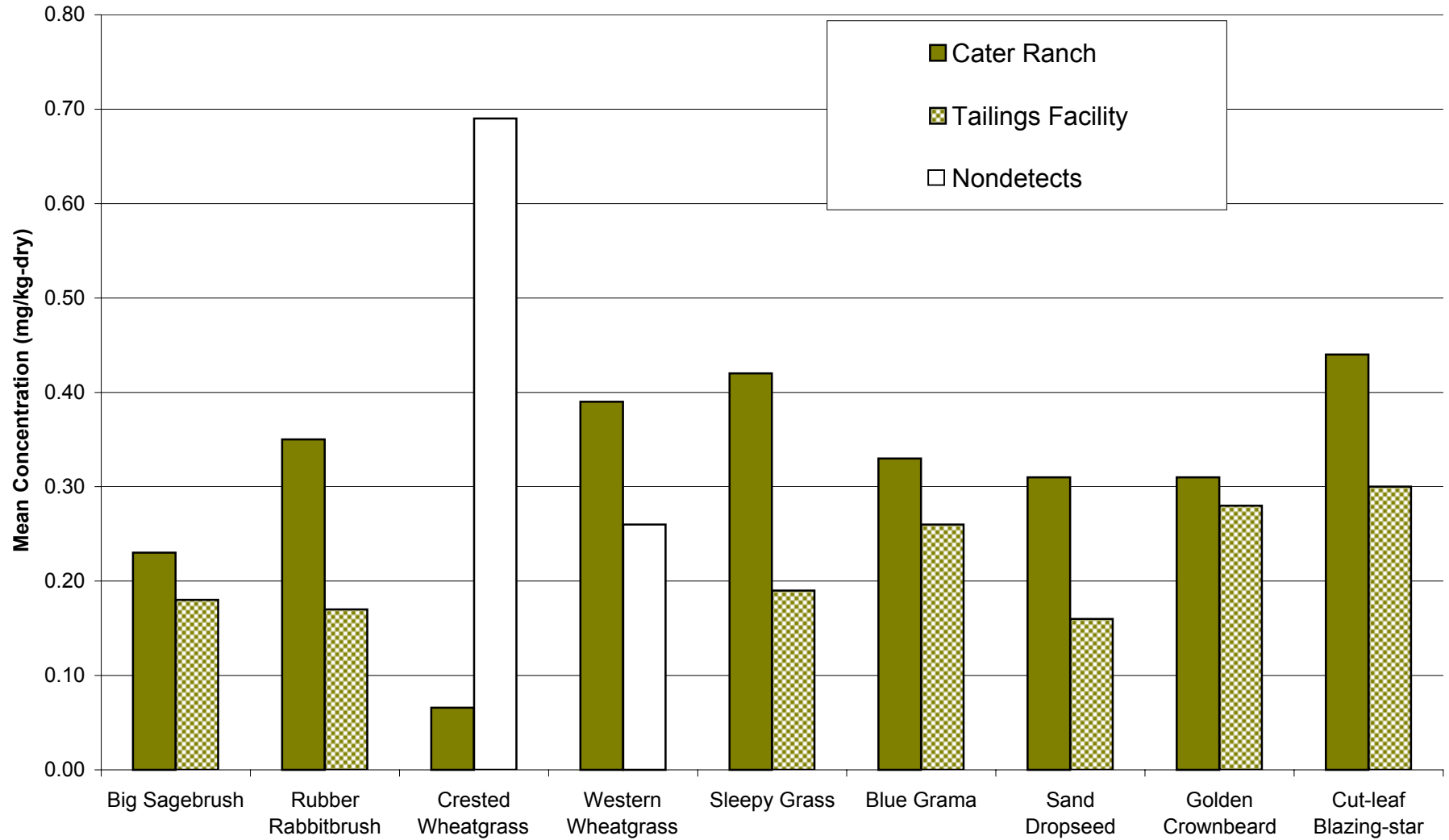


Figure 10-31
Selenium Concentrations in Root Zone Soils



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-32
Selenium Concentrations in Aboveground Plant Tissue

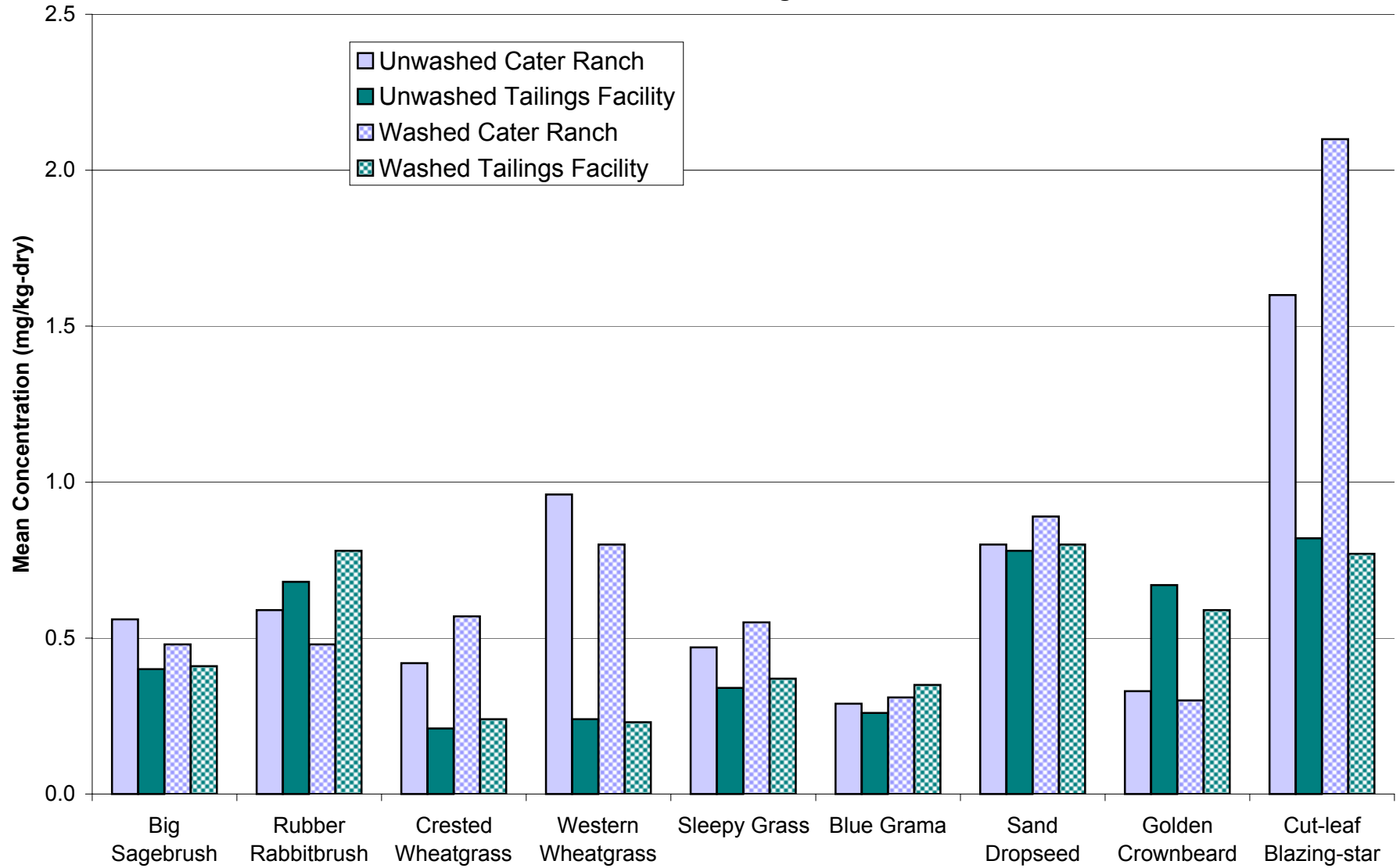
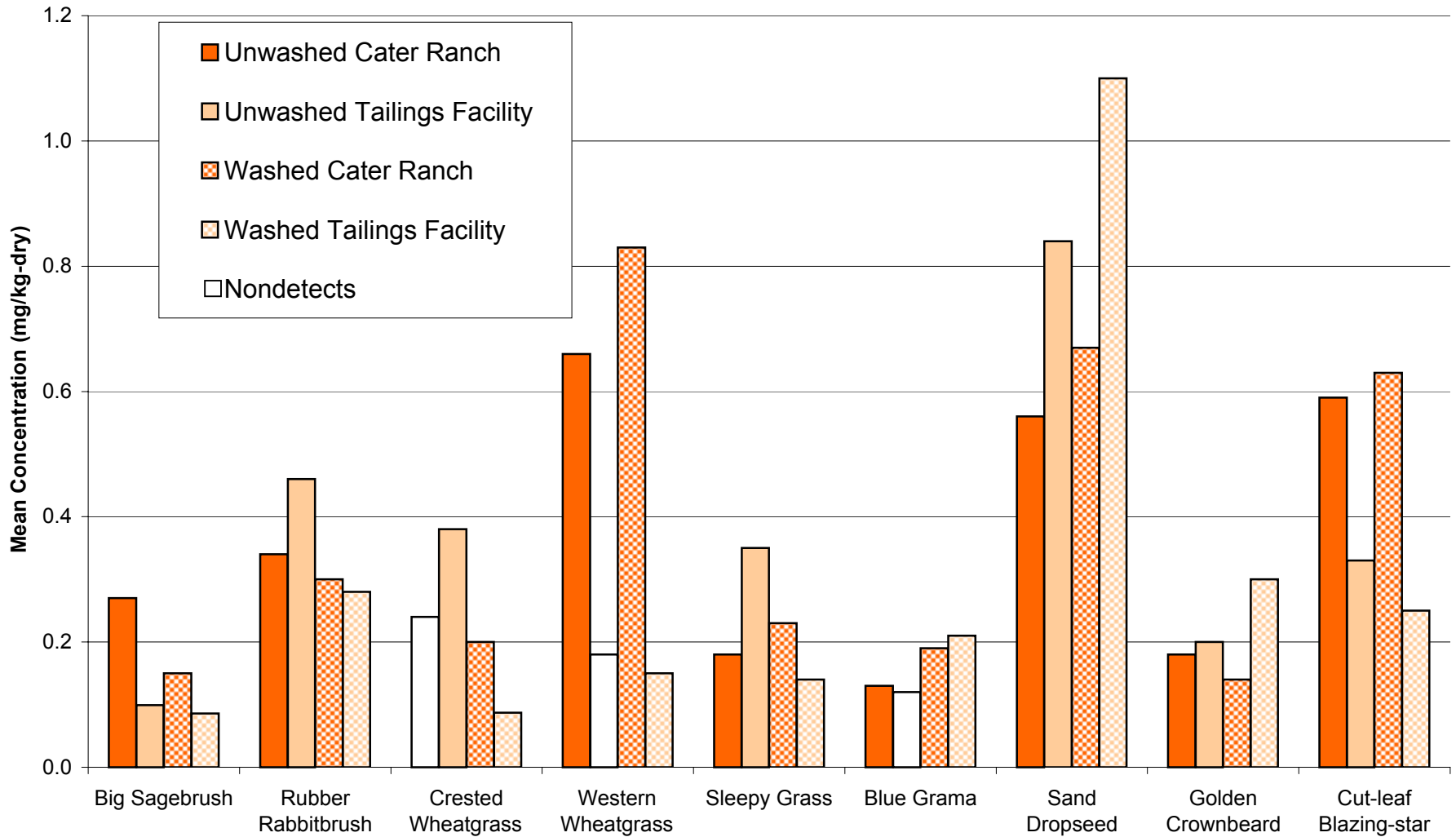


Figure 10-33
Selenium Concentrations in Below Ground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-34
Silver Concentrations in Root Zone Soils

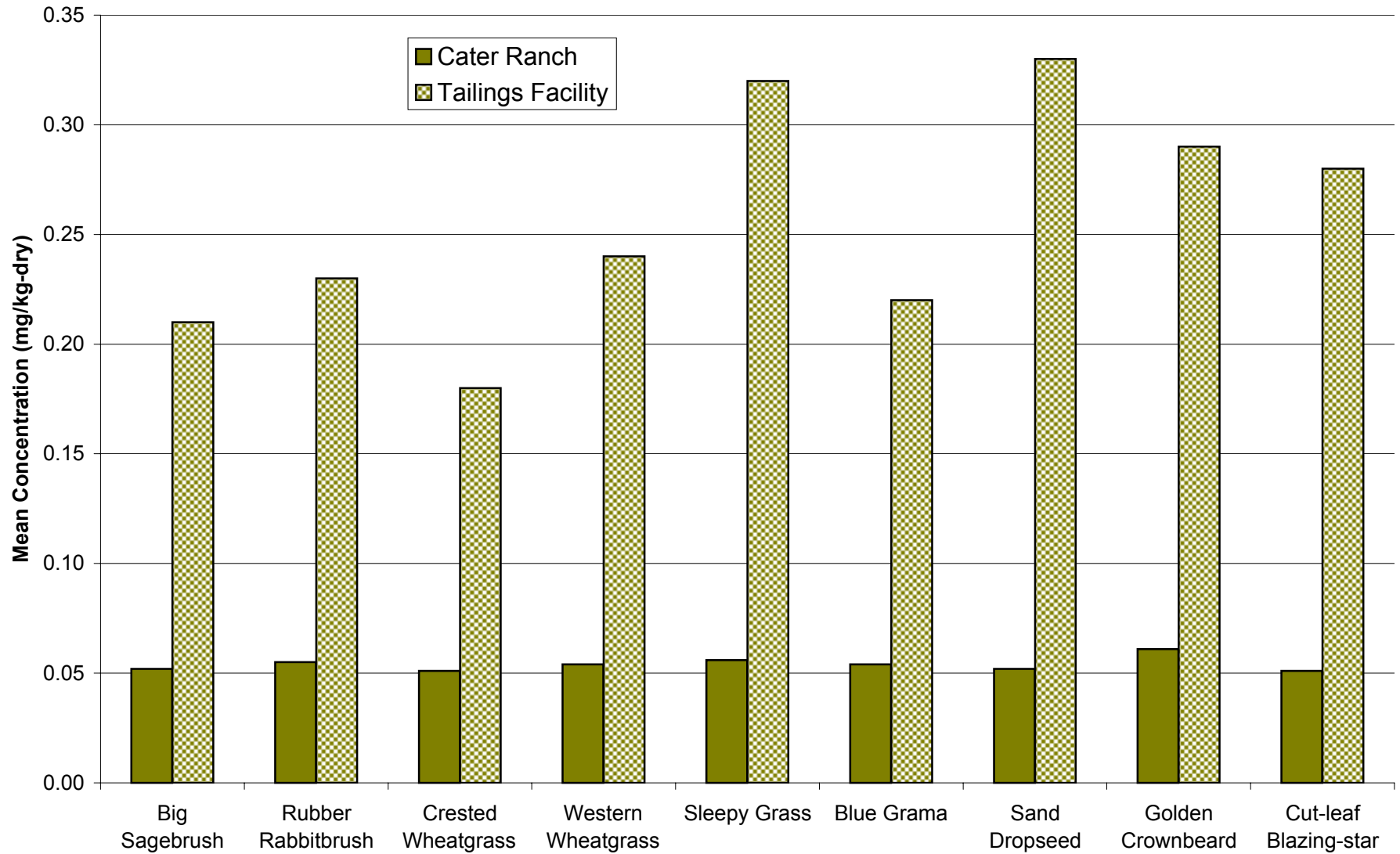
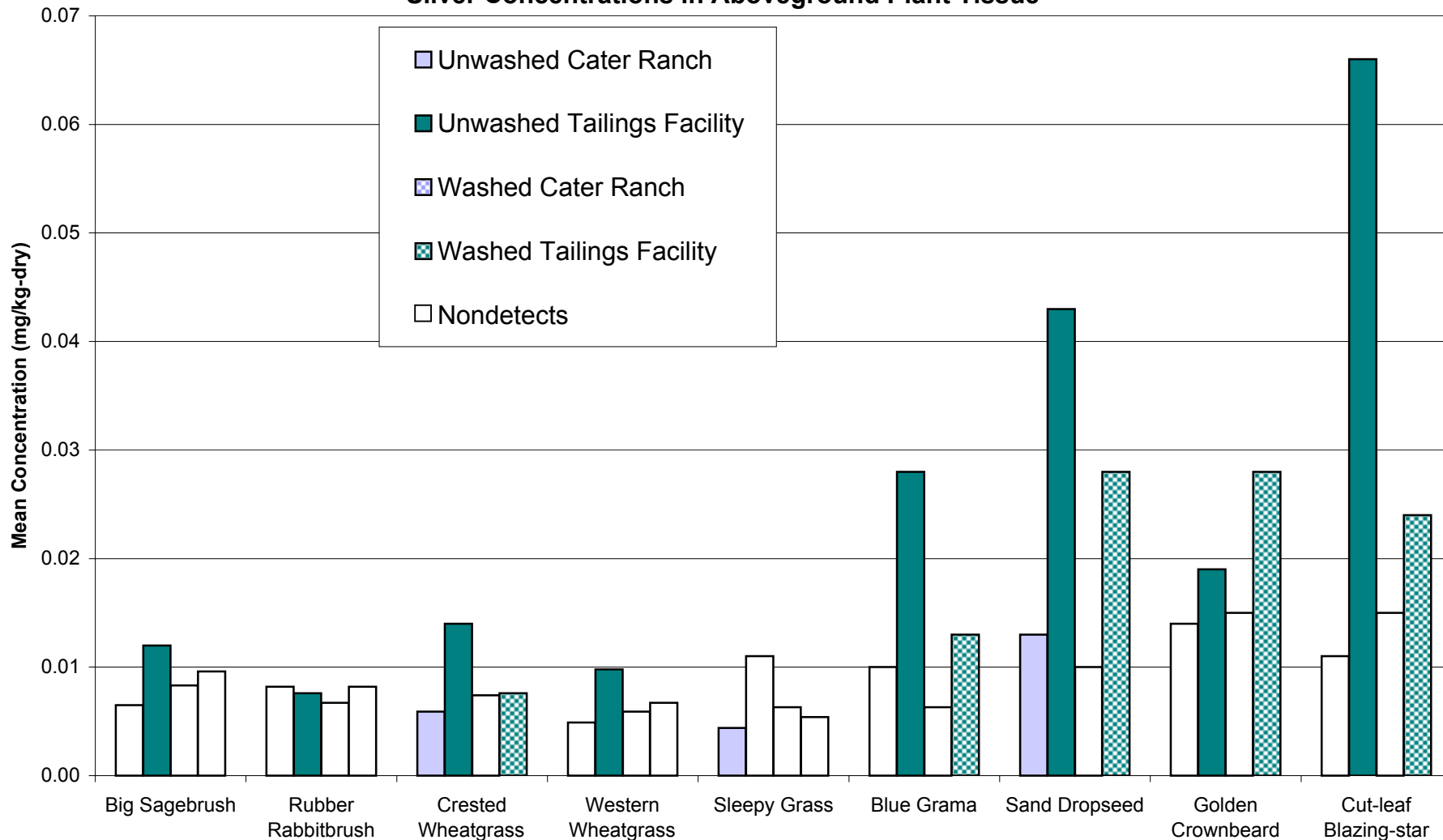
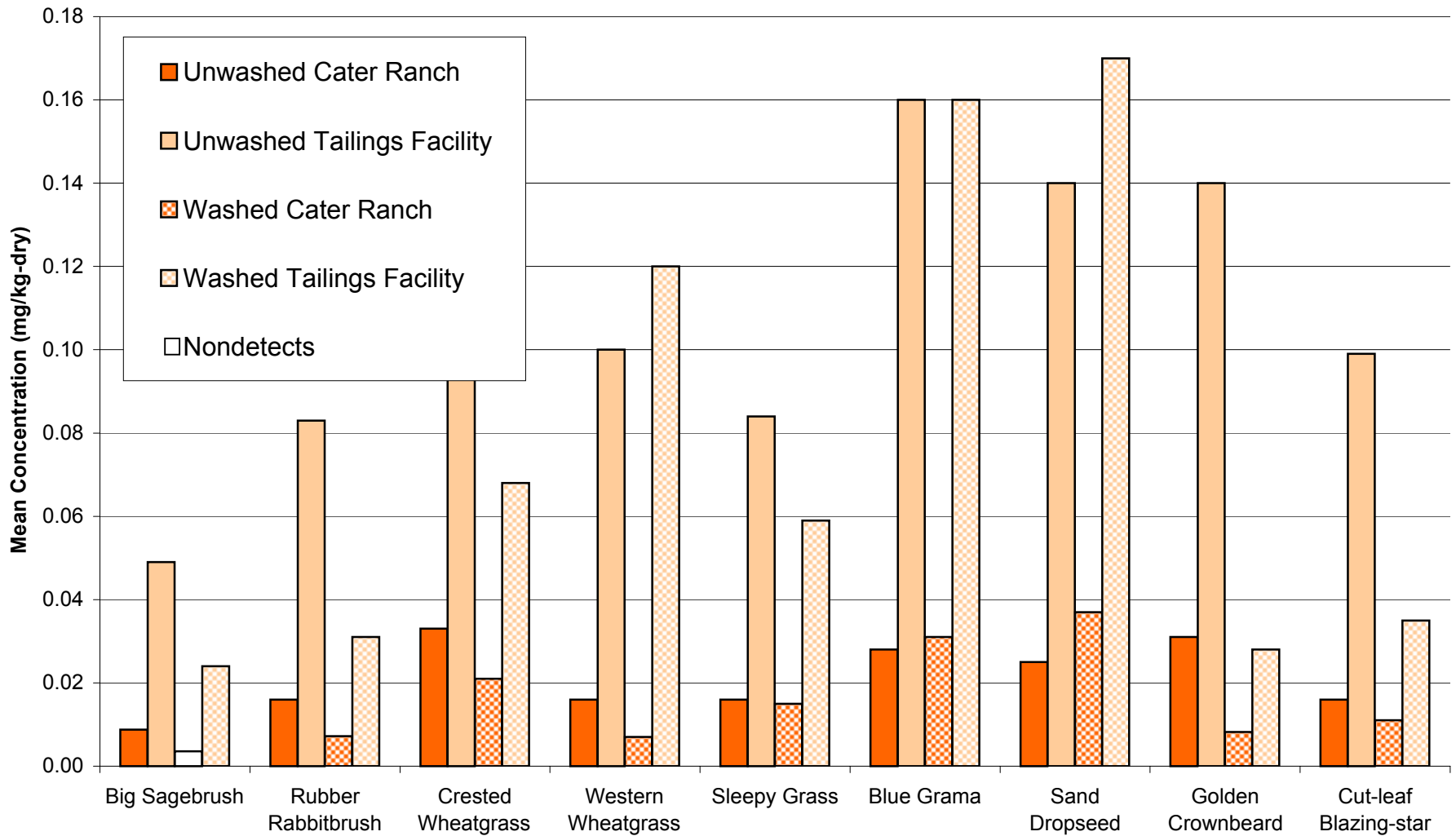


Figure 10-35
Silver Concentrations in Aboveground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-36
Silver Concentrations in Below Ground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

Figure 10-37
Vanadium Concentrations in Root Zone Soils

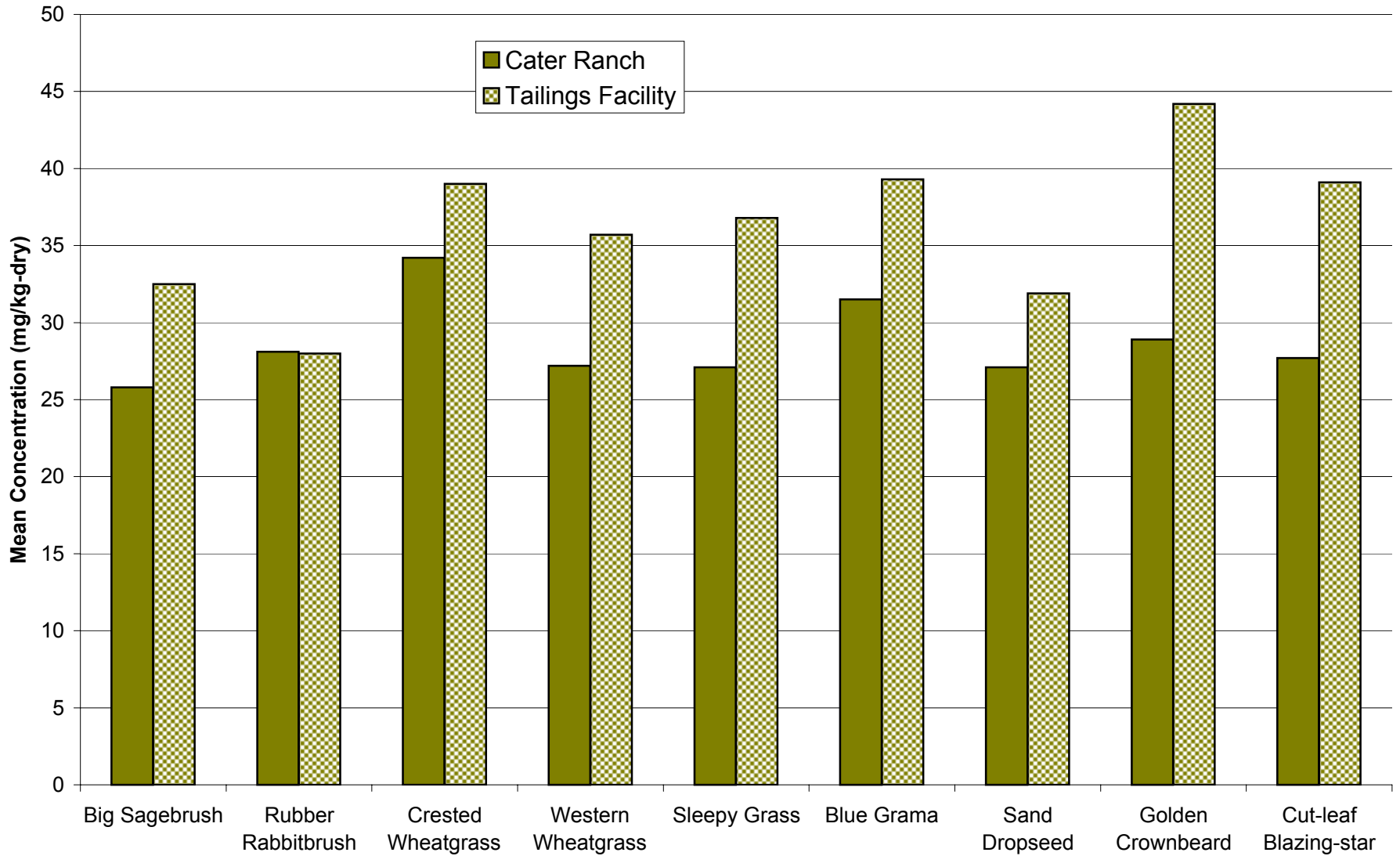


Figure 10-38
Vanadium Concentrations in Aboveground Plant Tissue

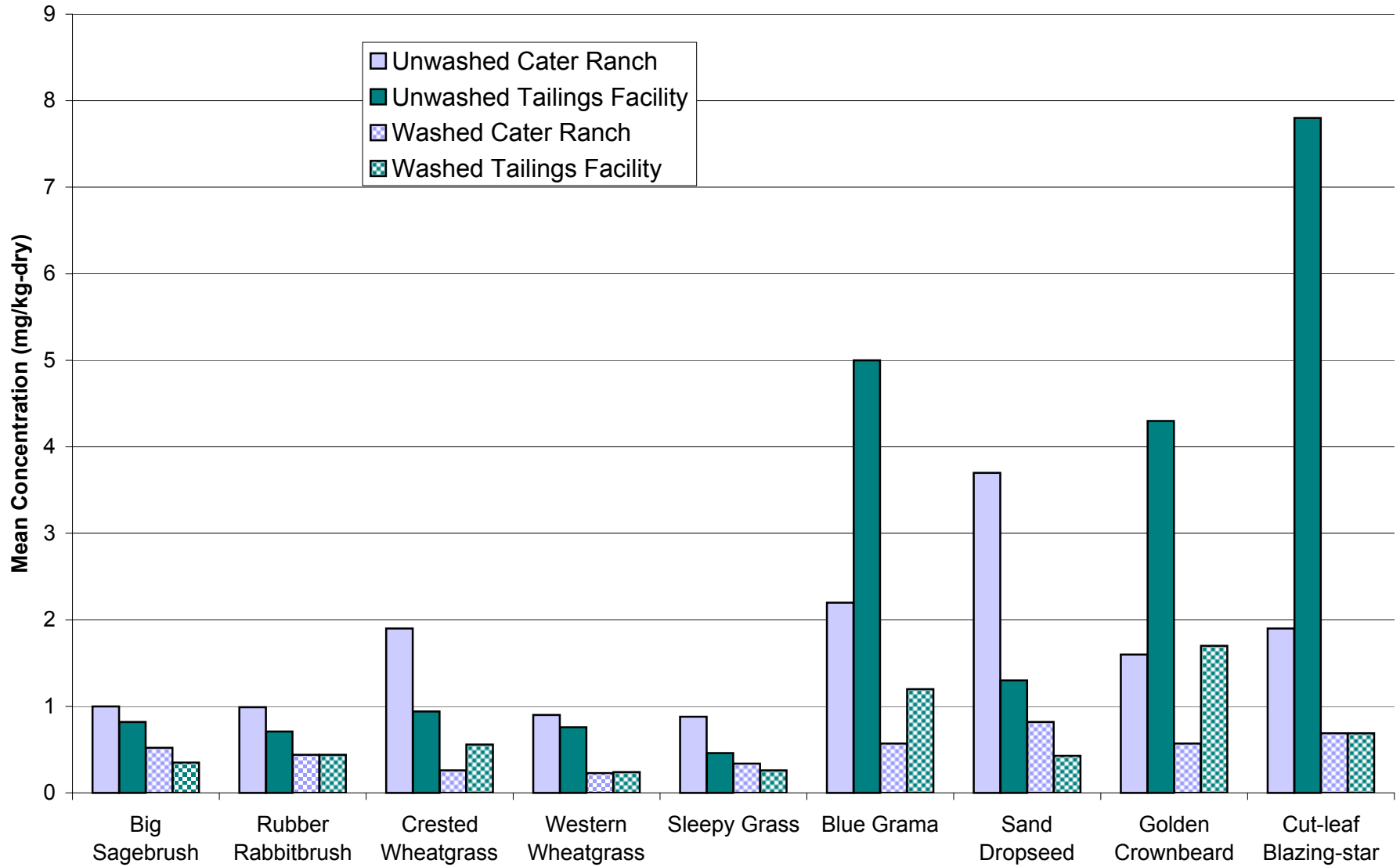


Figure 10-39
Vanadium Concentrations in Below Ground Plant Tissue

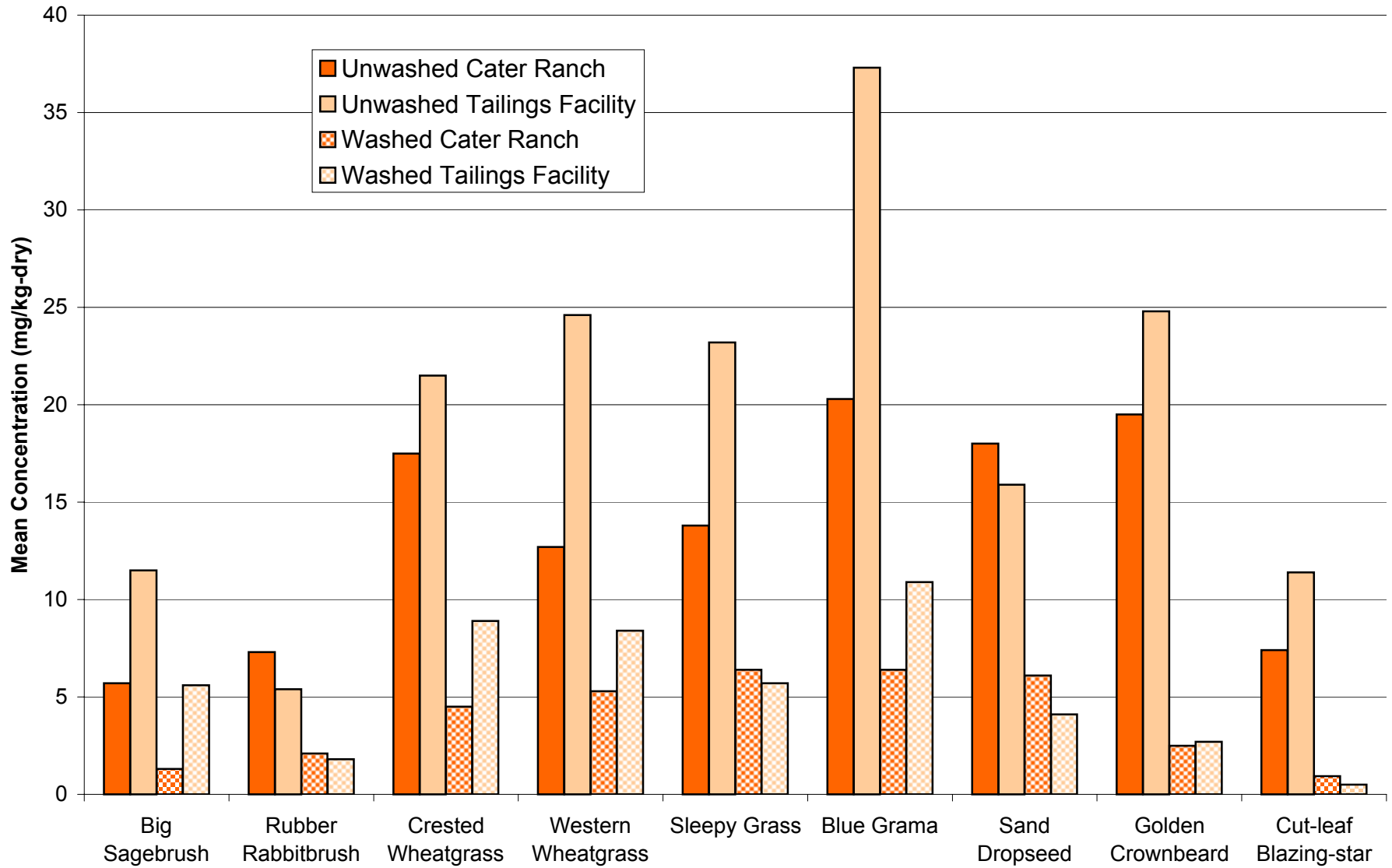


Figure 10-40
Zinc Concentrations in Root Zone Soils

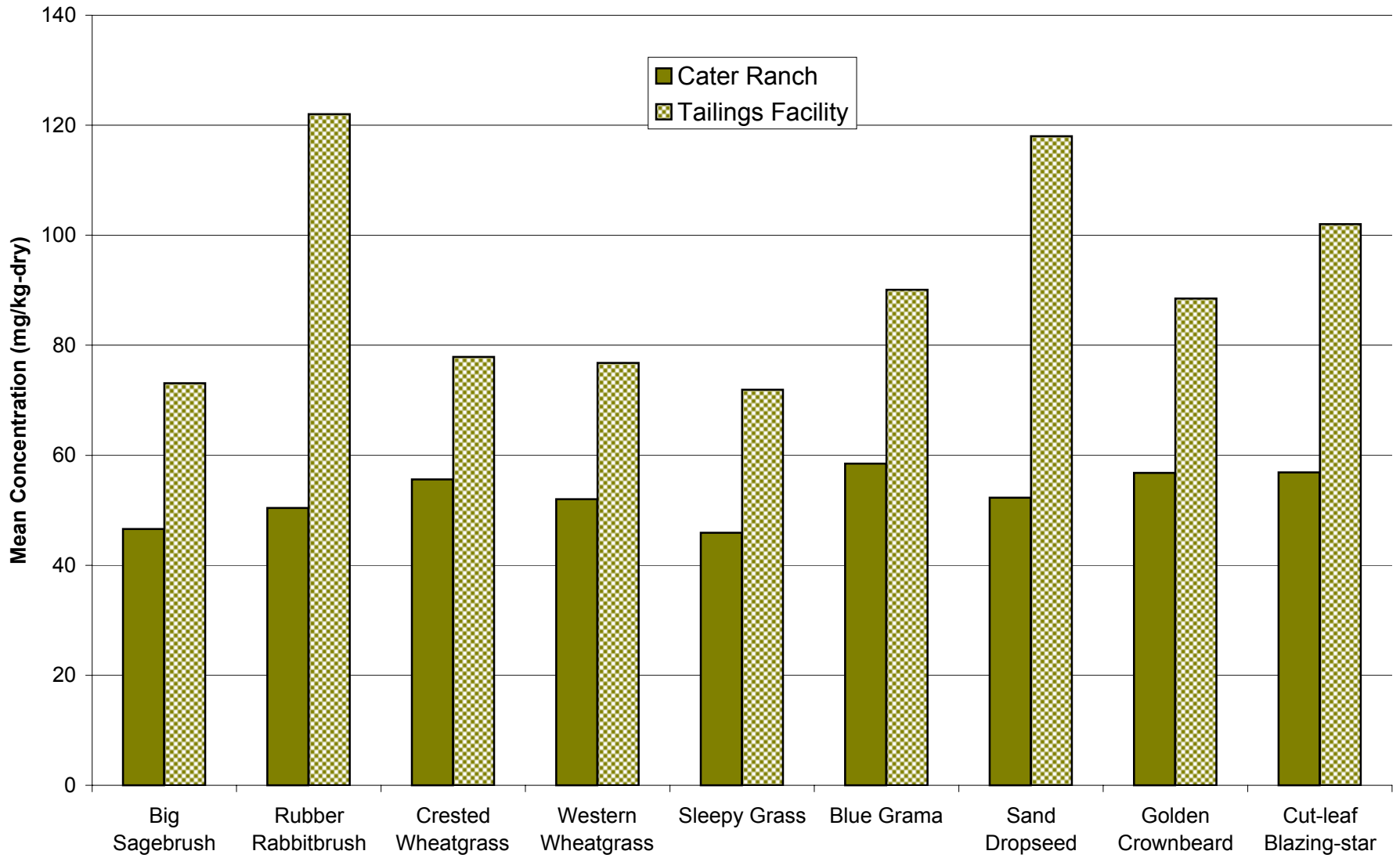


Figure 10-41
Zinc Concentrations in Aboveground Plant Tissues

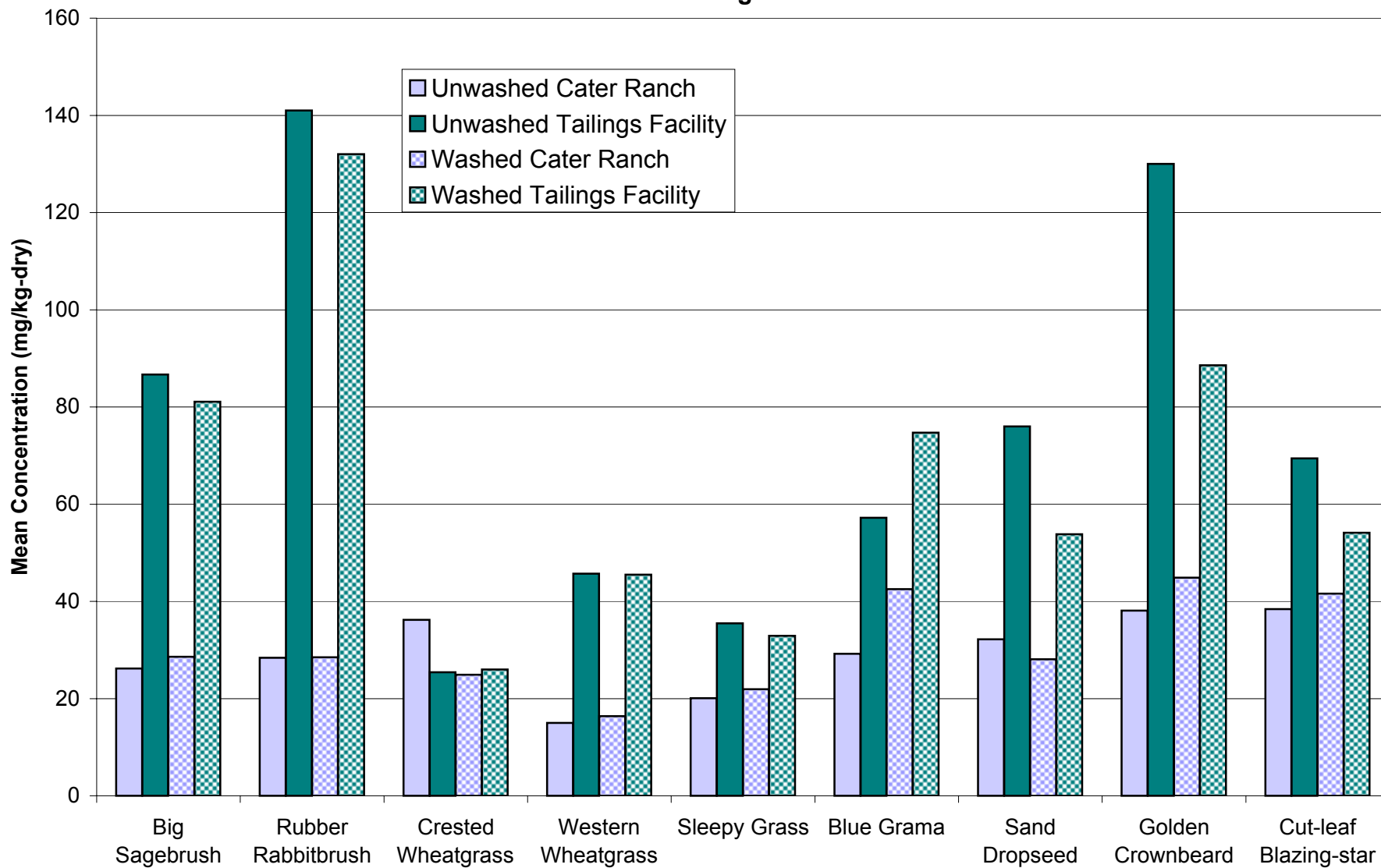
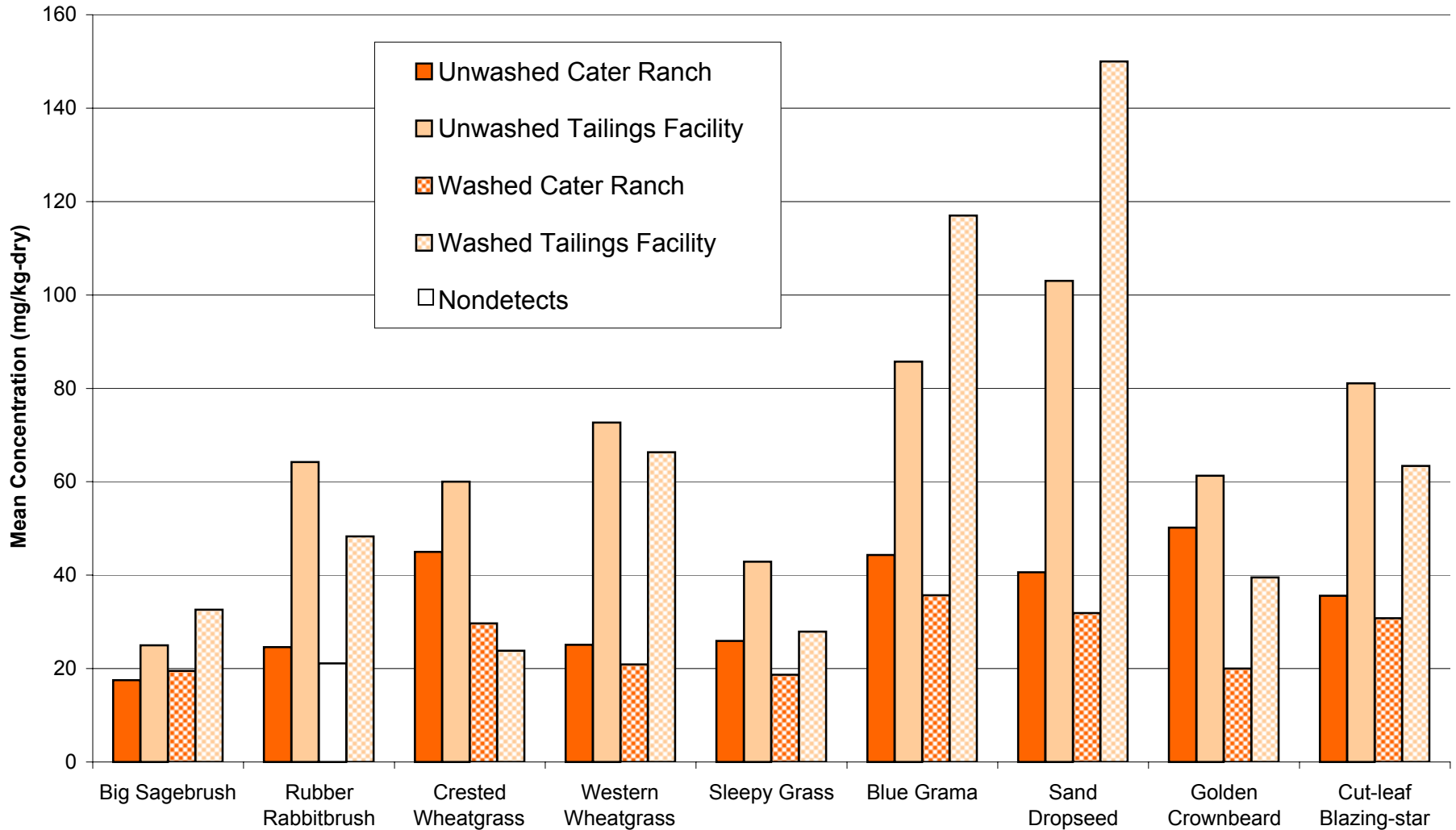


Figure 10-42
Zinc Concentrations in Below Ground Plant Tissue



Note: A white bar indicates that 50% or more of the values were not detected, and a mean was not calculated. In these cases, the maximum detected value or the maximum reporting limit, whichever was greater, was plotted.

APPENDIX A-10
WILDLIFE IMPACT STUDY
VALIDATED ANALYTICAL RESULTS

Appendix A-10a
Wildlife Impact Study - Golden Crownbeard Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-5 | WR-5 | WR-6 | WR-7 | WT-2 | WT-6 |
|------------------------------|-----------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | | 9/8/2003 WTAS-1-T01N-SOL TL | 9/9/2003 WRAS-2-T01N-SOL CR | 9/9/2003 WRAS-1-T01N-SOL CR | 9/9/2003 WRAS-3-T01N-SOL CR | 9/8/2003 WTAS-3-T01N-SOL TL | 9/8/2003 WTAS-2-T01N-SOL TL |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 46.2 : | 73.3 : | 54.2 : | 45.9 : | 77.3 : | 16.5 : |
| Chloride | mg/Kg-dry | T | <2.4 : | 2.6 : | 2.9 : | 4.1 : | 4.5 : | 4.5 : |
| Fluoride | mg/Kg-dry | T | 0.76 : | 0.23 : | 0.53 : | 0.32 : | 0.41 : | 1.9 : |
| Nitrate | mg/Kg-dry | T | 12.6 J | 19.5 J | 14.5 J | 8.6 J | 24.2 J | <2.2 J |
| Phosphorus | mg/Kg-dry | T | 1990. J | 2590. J | 1880. J | 2120. J | 850. J | 2260. J |
| Sulfate | mg/Kg-dry | T | 6.4 : | 3. : | 6.4 : | 9.5 : | 22. : | 1240. J |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 720. : | 2070. : | 1470. : | 1200. : | 1200. : | 207. : |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 8.7 J | 8.6 J | 8.6 J | 8.7 J | 8.4 J | 7.9 J |
| Solids, Percent | % | T | 84.7 : | 90.5 : | 92.3 : | 90. : | 87.5 : | 92.8 : |
| Specific Conductance | umhos/cm | T | 10.6 J | 309. J | 246. J | 187. J | 221. J | 1630. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 5.6 : | 6.8 : | 4.9 : | 5.3 : | 6. : | 2. : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 34. : | 29.7 : | 24.8 : | 24.3 : | 29.4 : | 13.3 : |
| Sodium Absorption Ratio | ratio | T | 0.08 : | <0.02 : | 0.03 : | <0.03 : | 0.04 : | 0.06 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 24800. : | 15100. : | 12700. : | 14500. : | 21400. : | 17000. : |
| Antimony | mg/Kg-dry | T | <0.056 J | <0.051 J | <0.051 J | <0.054 J | <0.049 J | <0.047 J |
| Arsenic | mg/Kg-dry | T | 5.5 : | 2.1 : | 1.8 : | 2.1 : | 5.2 : | 4.4 : |
| Barium | mg/Kg-dry | T | 293. : | 132. : | 107. : | 183. : | 199. : | 134. : |
| Beryllium | mg/Kg-dry | T | 1.1 : | 0.75 : | 0.66 : | 0.72 : | 1. : | 1.2 : |
| Boron | mg/Kg-dry | T | 11.6 : | 11. : | 7.8 : | 7.9 : | 9.1 : | 5.4 J |
| Cadmium | mg/Kg-dry | T | 0.044 : | 0.17 : | 0.16 : | 0.15 : | 0.26 : | 0.48 : |
| Calcium | mg/Kg-dry | T | 37300. : | 21800. : | 14800. : | 29500. : | 29200. : | 15600. : |
| Chromium | mg/Kg-dry | T | 23.5 : | 19. : | 16.8 : | 16.6 : | 23.8 : | 41. : |
| Cobalt | mg/Kg-dry | T | 9.3 : | 8.3 : | 7.1 : | 10.1 : | 8.3 : | 11.5 : |
| Copper | mg/Kg-dry | T | 27.8 : | 22. : | 17. : | 23.5 : | 39.9 : | 131. : |
| Iron | mg/Kg-dry | T | 21400. : | 17600. : | 15000. : | 17400. : | 19200. : | 21900. : |
| Lead | mg/Kg-dry | T | 17.3 J | 9.5 J | 8.6 J | 9.4 J | 29.9 J | 38.5 J |
| Magnesium | mg/Kg-dry | T | 8100. : | 7970. : | 6990. : | 7040. : | 6130. : | 8670. : |
| Manganese | mg/Kg-dry | T | 486. : | 426. : | 348. : | 706. : | 443. : | 552. : |
| Mercury | mg/Kg-dry | T | <0.018 : | <0.018 : | <0.017 : | <0.017 : | 0.02 : | <0.017 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10a
Wildlife Impact Study - Golden Crownbeard Soils
Validated Analytical Results

| Parameter | Site ID | | TSS14-5 | WR-5 | WR-6 | WR-7 | WT-2 | WT-6 |
|------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 9/8/2003 | 9/9/2003 | 9/9/2003 | 9/9/2003 | 9/8/2003 | 9/8/2003 |
| | Sample ID | | WTAS-1-T01N-SOL | WRAS-2-T01N-SOL | WRAS-1-T01N-SOL | WRAS-3-T01N-SOL | WTAS-3-T01N-SOL | WTAS-2-T01N-SOL |
| | Exposure Area | | TL | CR | CR | CR | TL | TL |
| Units | Fraction | | | | | | | |
| Molybdenum | mg/Kg-dry | T | 15.6 : | <0.45 : | <0.43 : | <0.3 : | 22.1 : | 138. : |
| Nickel | mg/Kg-dry | T | 17.9 : | 12.8 : | 11.1 : | 14. : | 18.4 : | 30.8 : |
| Potassium | mg/Kg-dry | T | 3580. J | 4470. J | 3590. J | 4050. J | 3230. J | 4400. J |
| Selenium | mg/Kg-dry | T | 0.28 J | 0.35 J | 0.3 J | 0.28 J | 0.27 J | 0.3 J |
| Silver | mg/Kg-dry | T | 0.16 J | 0.06 J | 0.055 J | 0.069 J | 0.22 J | 0.48 J |
| Sodium | mg/Kg-dry | T | <94.7 : | <48.2 : | <44.7 : | <92.8 : | <47.6 : | <74.2 : |
| Thallium | mg/Kg-dry | T | 0.23 : | 0.13 : | 0.12 : | 0.15 : | 0.18 : | 0.17 J |
| Titanium | mg/Kg-dry | T | 586. : | 722. : | 658. : | 707. : | 475. : | 714. : |
| Vanadium | mg/Kg-dry | T | 44.9 : | 29.4 : | 25.9 : | 31.5 : | 37.2 : | 50.6 : |
| Zinc | mg/Kg-dry | T | 67.4 : | 61.8 : | 51.5 : | 57.1 : | 73. : | 125. : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10b
Wildlife Impact Study - Blue Grama Soils
Validated Analytical Results

| Parameter | Site ID | | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------------------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | Sample ID | | WRBG-3-T01N-SOL | WRBG-1-T01N-SOL | WRBG-4-T01N-SOL | WTBG-1-T01N-SOL | WTBG-3-T01N-SOL | WTBG-2-T01N-SOL |
| | Exposure Area | | CR | CR | CR | TL | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 54.3 : | 133. : | 45.9 : | 34.2 : | 14. J | 35.2 : |
| Chloride | mg/Kg-dry | T | 4.4 : | 5.5 : | 3.1 : | <2.4 : | 3.6 : | 3.3 : |
| Fluoride | mg/Kg-dry | T | 0.12 : | 1.3 : | 0.16 : | 2.5 : | 0.64 : | 2.2 : |
| Nitrate | mg/Kg-dry | T | 20.8 J | 27.3 J | 6.9 J | <2.4 J | <2.2 J | <2.4 J |
| Phosphorus | mg/Kg-dry | T | 1060. J | 1810. J | 1070. J | 888. J | 1530. J | 1120. J |
| Sulfate | mg/Kg-dry | T | 2.3 : | 9.1 : | <2.2 : | 11.9 : | 64.7 J | 28.7 : |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 1880. : | 2970. : | 1880. : | 584. : | 237. : | 564. : |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 8.5 J | 8.5 J | 8.3 J | 8.8 J | 8.7 : | 8.5 J |
| Solids, Percent | % | T | 95.4 : | 85.1 : | 92.3 : | 83.6 : | 92.1 : | 85. : |
| Specific Conductance | umhos/cm | T | 248. J | <306. J | 74.5 J | 149. J | 142. J | 243. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 3.6 : | 13.2 : | 3.2 : | 6. : | 1.7 : | 6. : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 21.2 : | 51.4 : | 21.5 : | 26.4 : | 10.1 : | 22.8 : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 0.13 : | 0.03 : | 0.08 : | <0.04 : | 0.05 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 12700. : | 17600. : | 15100. : | 20000. : | 12700. : | 17900. : |
| Antimony | mg/Kg-dry | T | <0.052 J | <0.058 J | <0.054 J | 0.08 J | <0.052 J | 0.098 J |
| Arsenic | mg/Kg-dry | T | 2.3 : | 2.1 : | 2.3 : | 6.7 : | 3.2 : | 6.2 : |
| Barium | mg/Kg-dry | T | 97.8 : | 188. : | 93.3 : | 457. : | 85.7 : | 352. : |
| Beryllium | mg/Kg-dry | T | 0.66 : | 0.8 : | 0.75 : | 0.84 : | 0.83 : | 0.79 : |
| Boron | mg/Kg-dry | T | 6.4 : | 14. : | 5.9 : | 10.9 : | 3.7 : | 9.7 : |
| Cadmium | mg/Kg-dry | T | 0.099 : | 0.23 : | 0.046 : | 0.057 : | 0.83 : | 0.069 : |
| Calcium | mg/Kg-dry | T | 7140. : | 51300. : | 5290. : | 62100. : | 10900. : | 63000. : |
| Chromium | mg/Kg-dry | T | 17.7 : | 21.1 : | 21.8 : | 18.6 : | 27.9 : | 19. : |
| Cobalt | mg/Kg-dry | T | 7.9 : | 8. : | 8.6 : | 7.8 : | 8.1 : | 8.5 : |
| Copper | mg/Kg-dry | T | 17.1 : | 29.8 : | 18. : | 19.8 : | 77.9 J | 32.2 : |
| Iron | mg/Kg-dry | T | 16500. : | 20300. : | 18100. : | 17900. : | 15200. J | 17200. : |
| Lead | mg/Kg-dry | T | 8.5 J | 8.5 J | 9.6 J | 11.5 J | 73.8 J | 12.9 J |
| Magnesium | mg/Kg-dry | T | 5580. : | 18000. : | 5050. : | 9190. : | 5720. : | 9250. : |
| Manganese | mg/Kg-dry | T | 370. : | 475. : | 320. : | 336. : | 505. J | 323. : |
| Mercury | mg/Kg-dry | T | <0.015 : | 0.019 : | <0.017 : | 0.018 : | <0.017 : | 0.021 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10b
Wildlife Impact Study - Blue Grama Soils
Validated Analytical Results

| Parameter | Site ID | | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | Sample ID | | WRBG-3-T01N-SOL | WRBG-1-T01N-SOL | WRBG-4-T01N-SOL | WTBG-1-T01N-SOL | WTBG-3-T01N-SOL | WTBG-2-T01N-SOL |
| | Exposure Area | | CR | CR | CR | TL | TL | TL |
| Units | Fraction | | | | | | | |
| Molybdenum | mg/Kg-dry | T | <0.45 : | <0.45 : | <0.38 : | 6.9 : | 97.5 J | 14.9 : |
| Nickel | mg/Kg-dry | T | 11.6 : | 17.1 : | 13.3 : | 15.5 : | 20.3 J | 16.5 : |
| Potassium | mg/Kg-dry | T | 3340. J | 4450. J | 2810. J | 2610. J | 2760. J | 2620. J |
| Selenium | mg/Kg-dry | T | 0.26 J | 0.5 J | 0.24 J | 0.27 J | 0.28 : | 0.22 J |
| Silver | mg/Kg-dry | T | 0.047 J | 0.07 J | 0.044 J | 0.11 J | 0.33 : | 0.23 J |
| Sodium | mg/Kg-dry | T | <44.5 : | <210. : | <47.7 : | <142. : | <83.4 : | <121. : |
| Thallium | mg/Kg-dry | T | 0.12 : | 0.14 : | 0.13 : | 0.18 : | 0.18 : | 0.18 : |
| Titanium | mg/Kg-dry | T | 707. : | 637. : | 856. : | 452. : | 476. J | 471. : |
| Vanadium | mg/Kg-dry | T | 28.3 : | 33.9 : | 32.3 : | 44.6 : | 31.8 : | 41.5 : |
| Zinc | mg/Kg-dry | T | 52.3 : | 69.7 : | 53.6 : | 50.1 : | 166. J | 54.2 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10c
Wildlife Impact Study - Big Sagebrush Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 |
|------------------------------|-----------|--|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| | | | 5/31/2003 WRBS-3-T01N-SOL CR | 6/5/2003 WRBS-1-T01N-SOL CR | 5/29/2003 WRBS-2-T01N-SOL CR | 5/28/2003 WTBS-3-T01N-SOL TL | 6/4/2003 WTBS-1-T01N-SOL TL | 5/28/2003 WTBS-2-T01N-SOL TL |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 68.9 : | 55.1 : | 77.8 : | 22.4 : | 34.8 : | 55.1 : |
| Chloride | mg/Kg-dry | T | 6.1 : | 5.9 J | 3.3 : | 3.8 : | 2.2 : | 3.4 : |
| Fluoride | mg/Kg-dry | T | 0.13 : | <0.11 : | 0.2 : | 1.7 : | 2.1 : | 1.5 : |
| Nitrate | mg/Kg-dry | T | 3.3 J | 5.9 J | 4.1 J | 1.4 J | 2.9 J | 3.2 J |
| Phosphorus | mg/Kg-dry | T | 773. J | 56.2 J | 759. J | 479. J | 41.6 J | 797. J |
| Sulfate | mg/Kg-dry | T | 6. : | 4.2 J | 6.7 J | 268. : | 33.3 : | 49. : |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 793. : | 597. J | 885. : | 265. : | 388. J | 436. : |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 7.5 : | 6.9 J | 8.1 J | 8.1 J | 7.9 J | 8.2 J |
| Solids, Percent | % | T | 96.7 : | 97.1 : | 95.6 : | 95.8 : | 96.4 : | 93.3 : |
| Specific Conductance | umhos/cm | T | 141. J | 94.5 J | 205. J | 595. J | 367. J | 298. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 3. : | 3.1 : | 3.5 : | 4.7 : | 3.1 : | 4.8 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 18.1 : | 17. : | 22. : | 15.5 : | 23.9 : | 21.9 : |
| Sodium Absorption Ratio | ratio | T | 0.04 : | 0.06 : | 0.03 : | 0.05 : | 0.04 : | 0.03 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 8220. : | 14400. : | 9720. J | 10400. : | 15900. : | 14500. : |
| Antimony | mg/Kg-dry | T | <0.051 J | <0.042 J | <0.048 J | <0.05 J | <0.05 J | <0.047 J |
| Arsenic | mg/Kg-dry | T | 1.8 : | 2.2 : | 1.6 : | 4.5 : | 4.4 : | 4.4 : |
| Barium | mg/Kg-dry | T | 77. : | 125. : | 76.4 J | 179. : | 135. : | 262. : |
| Beryllium | mg/Kg-dry | T | 0.62 : | 0.71 : | 0.7 : | 0.86 : | 0.88 : | 0.93 : |
| Boron | mg/Kg-dry | T | 3.2 : | 8.5 : | 4.1 : | 5.1 : | 4. : | 6.5 : |
| Cadmium | mg/Kg-dry | T | 0.035 : | <0.017 : | 0.032 : | 0.34 : | 0.079 : | 0.23 : |
| Calcium | mg/Kg-dry | T | 3280. : | 4250. : | 4030. J | 33900. : | 17000. : | 49200. : |
| Chromium | mg/Kg-dry | T | 14. : | 22.8 : | 16.2 J | 15.1 : | 27.2 : | 23.5 : |
| Cobalt | mg/Kg-dry | T | 7.2 : | 9. : | 7.3 : | 6.6 : | 8.2 : | 9.2 : |
| Copper | mg/Kg-dry | T | 13.1 : | 16.5 : | 16.4 J | 43. : | 39.7 : | 112. : |
| Iron | mg/Kg-dry | T | 11000. : | 18400. : | 13200. J | 12000. : | 18500. : | 15400. : |
| Lead | mg/Kg-dry | T | 9. J | 10.3 J | 8.5 J | 26.1 J | 18.5 J | 31.4 J |
| Magnesium | mg/Kg-dry | T | 3260. : | 4430. : | 3780. J | 5540. : | 6270. : | 7670. : |
| Manganese | mg/Kg-dry | T | 326. : | 523. : | 276. J | 454. : | 423. : | 353. : |
| Mercury | mg/Kg-dry | T | 0.03 : | <0.017 J | <0.017 : | <0.015 : | <0.017 J | <0.017 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10c
Wildlife Impact Study - Big Sagebrush Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 |
|------------|-----------|--|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| | | | 5/31/2003 WRBS-3-T01N-SOL CR | 6/5/2003 WRBS-1-T01N-SOL CR | 5/29/2003 WRBS-2-T01N-SOL CR | 5/28/2003 WTBS-3-T01N-SOL TL | 6/4/2003 WTBS-1-T01N-SOL TL | 5/28/2003 WTBS-2-T01N-SOL TL |
| Molybdenum | mg/Kg-dry | T | 0.51 : | 0.88 : | <0.47 : | 61.4 : | 24.2 : | 58.5 : |
| Nickel | mg/Kg-dry | T | 11.2 : | 14.3 : | 11.2 J | 12.9 : | 23. : | 21.2 : |
| Potassium | mg/Kg-dry | T | 2150. J | 2750. J | 2450. J | 2180. J | 2120. J | 3300. J |
| Selenium | mg/Kg-dry | T | 0.33 J | <0.068 J | 0.34 J | 0.28 J | 0.096 J | 0.17 J |
| Silver | mg/Kg-dry | T | 0.063 J | 0.046 J | 0.048 J | 0.19 J | 0.17 : | 0.26 J |
| Sodium | mg/Kg-dry | T | 383. : | 259. : | 389. : | 233. : | <183. : | 331. : |
| Thallium | mg/Kg-dry | T | 0.12 : | 0.15 : | 0.13 : | 0.16 : | 0.16 : | 0.22 : |
| Titanium | mg/Kg-dry | T | 545. : | 1010. : | 576. J | 324. : | 504. : | 488. : |
| Vanadium | mg/Kg-dry | T | 19.5 : | 35.9 : | 22.1 : | 27.2 : | 35.1 : | 35.1 : |
| Zinc | mg/Kg-dry | T | 40. : | 56.3 J | 43.5 J | 72.1 : | 68.6 : | 78.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10d
Wildlife Impact Study - Crested Wheatgrass Soils
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------------------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 6/5/2003 | 6/5/2003 | 6/4/2003 | 6/4/2003 | 6/5/2003 | 5/30/2003 |
| | Sample ID | | WRCW-1-T01N-SOL | WRCW-2-T01N-SOL | WTCW-2-T01N-SOL | WTCW-1-T01N-SOL | WRCW-3-T01N-SOL | WTCW-3-T01N-SOL |
| | Exposure Area | | CR | CR | TL | TL | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 171. : | 53.1 : | 45.8 : | 54.4 : | 164. : | 91.8 : |
| Chloride | mg/Kg-dry | T | 4.4 J | 3.4 J | 9.4 : | 7.1 : | 5.1 J | <2.1 : |
| Fluoride | mg/Kg-dry | T | <0.11 : | <0.11 : | 3.4 : | 2. : | <0.11 : | 0.36 : |
| Nitrate | mg/Kg-dry | T | 5.6 J | 2.2 J | <2.2 J | <2.2 J | 11.9 J | <0.84 J |
| Phosphorus | mg/Kg-dry | T | 1120. J | 56.4 J | 39.5 J | 27.5 J | 1150. J | 841. J |
| Sulfate | mg/Kg-dry | T | 4.4 J | 2.4 J | 185. : | 11.1 : | 7.8 J | 161. J |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 803. J | 734. J | 328. J | 473. J | 1390. J | 477. : |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 7.2 J | 6.4 : | 7.5 J | 8.1 J | 6. J | 7.9 : |
| Solids, Percent | % | T | 96.7 : | 97.4 J | 95. : | 93.9 : | 97. : | 96.3 : |
| Specific Conductance | umhos/cm | T | 141. J | 87.9 J | 681. J | 327. J | 230. J | 1660. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 3.4 : | 3.1 : | 2.8 : | 5.4 : | 4.8 : | 2.8 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 18.5 : | 15.9 : | 22.9 : | 28.1 : | 22.2 : | 23.2 : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 0.04 : | 0.16 : | 0.39 : | <0.03 : | 0.05 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 13500. : | 13300. : | 16500. : | 17300. : | 15800. : | 18100. : |
| Antimony | mg/Kg-dry | T | <0.045 J | <0.045 J | <0.051 J | <0.082 J | <0.046 J | 0.078 J |
| Arsenic | mg/Kg-dry | T | 2.1 : | 2.6 : | 4.5 : | 5.8 : | 2. : | 3.8 : |
| Barium | mg/Kg-dry | T | 97.3 : | 119. : | 90.4 : | 304. : | 103. : | 160. : |
| Beryllium | mg/Kg-dry | T | 0.74 : | 0.69 : | 1.1 : | 0.84 : | 0.8 : | 1. : |
| Boron | mg/Kg-dry | T | 7.7 : | 7.6 : | 3. J | 7.3 : | 9.4 : | 6. : |
| Cadmium | mg/Kg-dry | T | <0.018 : | 0.067 : | 0.054 : | <0.019 : | <0.018 : | 0.14 : |
| Calcium | mg/Kg-dry | T | 4530. : | 3870. : | 4580. : | 46100. : | 5450. : | 13800. : |
| Chromium | mg/Kg-dry | T | 22.1 : | 19.9 : | 28.5 : | 18.6 : | 26.3 : | 39.2 : |
| Cobalt | mg/Kg-dry | T | 8. : | 8.4 : | 9.3 : | 7.8 : | 8.7 : | 10.9 : |
| Copper | mg/Kg-dry | T | 16.9 : | 16.3 : | 34.5 : | 17.5 : | 19.4 : | 72. : |
| Iron | mg/Kg-dry | T | 18100. : | 16700. : | 21300. : | 18000. : | 18900. : | 19100. J |
| Lead | mg/Kg-dry | T | 8.4 J | 10.9 J | 21.1 J | 14.1 J | 10.4 J | 41.3 J |
| Magnesium | mg/Kg-dry | T | 4750. : | 3780. : | 5590. : | 8300. : | 5200. : | 7220. : |
| Manganese | mg/Kg-dry | T | 380. : | 508. : | 486. : | 441. : | 364. : | 619. J |
| Mercury | mg/Kg-dry | T | <0.015 : | 0.034 : | <0.017 J | <0.018 J | <0.017 : | <0.017 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10d
Wildlife Impact Study - Crested Wheatgrass Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------|-----------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| | | | 6/5/2003 WRCW-1-T01N-SOL CR | 6/5/2003 WRCW-2-T01N-SOL CR | 6/4/2003 WTCW-2-T01N-SOL TL | 6/4/2003 WTCW-1-T01N-SOL TL | 6/5/2003 WRCW-3-T01N-SOL CR | 5/30/2003 WTCW-3-T01N-SOL TL |
| Molybdenum | mg/Kg-dry | T | 0.54 : | 1.2 : | 17.6 : | 2.7 : | 0.56 : | 101. : |
| Nickel | mg/Kg-dry | T | 13.6 : | 12.6 : | 24.5 : | 17.1 : | 15.9 : | 25. J |
| Potassium | mg/Kg-dry | T | 3130. : | 2840. : | 2080. : | 2240. J | 3040. : | 3730. J |
| Selenium | mg/Kg-dry | T | 0.081 J | 0.079 J | <0.082 J | <0.078 J | <0.074 J | 0.69 J |
| Silver | mg/Kg-dry | T | 0.055 J | 0.044 J | 0.15 J | 0.11 J | 0.055 J | 0.29 J |
| Sodium | mg/Kg-dry | T | 256. : | 241. : | <157. : | <287. : | 262. : | <42.9 : |
| Thallium | mg/Kg-dry | T | 0.16 : | 0.16 : | 0.14 : | 0.19 : | 0.15 : | 0.28 : |
| Titanium | mg/Kg-dry | T | 931. : | 904. : | 409. : | 466. : | 1020. : | 733. : |
| Vanadium | mg/Kg-dry | T | 34.5 : | 32.6 : | 31.7 : | 38.7 : | 35.4 : | 46.5 : |
| Zinc | mg/Kg-dry | T | 54.7 J | 54.4 J | 78.3 : | 54.4 : | 57.7 J | 101. : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10e

Wildlife Impact Study - Cut-Leaf Blazingstar Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------------------------|-----------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | | 9/8/2003 WTFO-3-T01N-SOL TL | 9/8/2003 WTFO-1-T01N-SOL TL | 9/9/2003 WRFO-3-T01N-SOL CR | 9/9/2003 WRFO-1-T01N-SOL CR | 9/9/2003 WRFO-2-T01N-SOL CR | 9/8/2003 WTFO-2-T01N-SOL TL |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 15.7 : | 9.9 : | 77.8 : | 90.7 : | 82. : | 35.5 : |
| Chloride | mg/Kg-dry | T | <2.2 : | 8.7 : | 10.5 : | 9.6 : | 15.1 : | 5.6 : |
| Fluoride | mg/Kg-dry | T | 1.1 : | 0.97 : | 1.4 : | 1.3 : | 1.5 : | 0.73 : |
| Nitrate | mg/Kg-dry | T | 7.7 J | <2.3 J | 33.4 J | 35.6 J | 17.2 J | 10.1 J |
| Phosphorus | mg/Kg-dry | T | 1670. J | 2370. J | 2270. J | 2120. J | 2470. J | 1350. J |
| Sulfate | mg/Kg-dry | T | 400. J | 683. J | 29.7 : | 25.6 : | 25.8 : | 12.7 : |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 240. : | 88.7 : | 2040. : | 2230. : | 2290. : | 516. : |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 8.2 J | 8.1 J | 8.6 J | 8.5 J | 8.6 J | 8.6 J |
| Solids, Percent | % | T | 92.9 : | 90.1 : | 84.4 : | 84.9 : | 84.5 : | 88.9 : |
| Specific Conductance | umhos/cm | T | 706. J | 996. J | 451. J | 465. J | 328. J | 163. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 2.3 : | 1.6 : | 13.7 : | 13.5 : | 14.2 : | 3.5 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 10.8 : | 14.2 : | 34.5 : | 34.1 : | 35.8 : | 30.5 : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 1.22 : | 0.64 : | 0.18 : | 0.58 : | 0.08 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 14000. : | 15800. : | 12900. : | 13900. : | 13300. : | 23400. : |
| Antimony | mg/Kg-dry | T | <0.052 J | <0.049 J | <0.056 J | <0.054 J | <0.057 J | <0.055 J |
| Arsenic | mg/Kg-dry | T | 4.8 : | 4.6 : | 2.2 : | 2.7 : | 2.5 : | 4.4 : |
| Barium | mg/Kg-dry | T | 135. : | 99.3 : | 211. : | 227. : | 226. : | 224. : |
| Beryllium | mg/Kg-dry | T | 0.85 : | 1.2 : | 0.5 : | 0.56 : | 0.54 : | 1. : |
| Boron | mg/Kg-dry | T | 6.1 : | 4.6 : | 17.6 : | 17.7 : | 16.1 : | 9.1 : |
| Cadmium | mg/Kg-dry | T | 0.58 : | 0.46 : | 0.15 : | 0.12 : | 0.25 : | 0.13 : |
| Calcium | mg/Kg-dry | T | 19600. : | 9410. : | 108000. : | 116000. : | 114000. : | 11000. : |
| Chromium | mg/Kg-dry | T | 30.1 : | 27.6 : | 14.9 : | 16.2 : | 14.9 : | 22.9 : |
| Cobalt | mg/Kg-dry | T | 9.8 : | 10.4 : | 5.5 : | 7. : | 6. : | 10.1 : |
| Copper | mg/Kg-dry | T | 78.6 : | 94.3 : | 21.3 : | 23.8 : | 25.7 : | 29.2 : |
| Iron | mg/Kg-dry | T | 20100. : | 20800. : | 12700. : | 14000. : | 13600. : | 21000. : |
| Lead | mg/Kg-dry | T | 32.3 : | 35.3 J | 5.5 J | 6.5 J | 6. J | 21.8 J |
| Magnesium | mg/Kg-dry | T | 7460. : | 6170. : | 26000. : | 22700. : | 23000. : | 5380. : |
| Manganese | mg/Kg-dry | T | 658. J | 501. : | 368. : | 405. : | 358. : | 538. : |
| Mercury | mg/Kg-dry | T | <0.017 : | <0.017 : | <0.019 : | <0.018 : | <0.018 : | <0.018 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10e
Wildlife Impact Study - Cut-Leaf Blazingstar Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------|-----------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | | | 9/8/2003 WTFO-3-T01N-SOL TL | 9/8/2003 WTFO-1-T01N-SOL TL | 9/9/2003 WRFO-3-T01N-SOL CR | 9/9/2003 WRFO-1-T01N-SOL CR | 9/9/2003 WRFO-2-T01N-SOL CR | 9/8/2003 WTFO-2-T01N-SOL TL |
| Molybdenum | mg/Kg-dry | T | 87.7 : | 65.4 : | <0.27 : | <0.36 : | <0.35 : | 14.3 : |
| Nickel | mg/Kg-dry | T | 22.5 : | 25.4 : | 9.6 : | 12.5 : | 11.3 : | 17. : |
| Potassium | mg/Kg-dry | T | 3170. J | 3150. J | 4410. J | 4500. J | 4320. J | 2760. J |
| Selenium | mg/Kg-dry | T | 0.29 J | 0.35 J | 0.43 J | 0.42 J | 0.46 J | 0.26 J |
| Silver | mg/Kg-dry | T | 0.32 J | 0.36 J | 0.049 J | 0.052 J | 0.052 J | 0.15 J |
| Sodium | mg/Kg-dry | T | <192. : | <141. : | 595. : | 438. : | 483. : | <48.6 : |
| Thallium | mg/Kg-dry | T | 0.19 : | 0.24 : | 0.11 : | 0.11 : | 0.11 : | 0.2 : |
| Titanium | mg/Kg-dry | T | 546. : | 480. : | 601. : | 682. : | 628. : | 562. : |
| Vanadium | mg/Kg-dry | T | 40.8 : | 35.9 : | 25.6 : | 31.3 : | 26.1 : | 40.6 : |
| Zinc | mg/Kg-dry | T | 118. : | 122. : | 54.6 : | 56. : | 60.1 : | 67.1 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10f
Wildlife Impact Study - Rubber Rabbitbrush Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------------------------|-----------|--|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| | | | 6/2/2003 WRRR-3-T01N-SOL CR | 5/31/2003 WRRR-1-T01N-SOL CR | 6/3/2003 WTRR-1-T01N-SOL TL | 6/4/2003 WTRR-2-T01N-SOL TL | 5/30/2003 WTRR-3-T01N-SOL TL | 6/5/2003 WRRR-2-T01N-SOL CR |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 114. : | 54.7 : | 74.1 : | 65.2 : | 118. : | 104. : |
| Chloride | mg/Kg-dry | T | 4.2 : | 4.6 : | 3. : | <2.1 : | 5.7 : | 4.5 J |
| Fluoride | mg/Kg-dry | T | 0.22 : | 1.6 : | 0.84 : | 0.22 : | 0.5 : | 0.1 : |
| Nitrate | mg/Kg-dry | T | 7.5 J | 2.2 J | <2.1 J | 2.5 J | 7.3 J | 5.5 J |
| Phosphorus | mg/Kg-dry | T | 39. J | 1560. J | 26. J | 67.7 J | 641. J | 1670. J |
| Sulfate | mg/Kg-dry | T | 5.9 : | 7.7 : | 664. J | 150. J | 15.5 : | 7.1 J |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 947. : | 1750. : | - | 359. J | 671. : | 1090. J |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 7.2 J | 8.6 : | 7.6 J | 7.7 J | 8.5 : | 6.3 J |
| Solids, Percent | % | T | 95.8 : | 89.8 : | 97.4 : | 96.7 : | 91.6 : | 96.7 : |
| Specific Conductance | umhos/cm | T | 209. J | 272. J | 1170. J | 991. J | 319. J | 196. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 1. : | 11.3 : | 1.2 : | 2.3 : | 6.3 : | 4.4 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 22.9 : | 28.9 : | 12.4 : | 17.8 : | 27.9 : | 22. : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 0.08 : | 0.02 : | 0.04 : | 0.07 : | 0.03 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 13900. : | 8920. : | 8100. : | 14600. : | 12000. : | 15200. : |
| Antimony | mg/Kg-dry | T | <0.048 J | <0.053 J | <0.044 J | <0.047 J | <0.049 J | <0.045 J |
| Arsenic | mg/Kg-dry | T | 1.6 : | 1.8 : | 2.7 : | 3.6 : | 5. : | 2.2 : |
| Barium | mg/Kg-dry | T | 85.1 : | 140. : | 56.5 : | 124. : | 262. : | 101. : |
| Beryllium | mg/Kg-dry | T | 0.7 : | 0.5 : | 0.55 : | 0.98 : | 0.69 : | 0.75 : |
| Boron | mg/Kg-dry | T | 4.6 : | 13.9 : | 1.9 : | 3.4 J | 6.8 : | 9.1 : |
| Cadmium | mg/Kg-dry | T | <0.019 : | 0.11 : | 1. : | 0.19 : | 0.044 : | <0.018 : |
| Calcium | mg/Kg-dry | T | 4590. : | 57000. : | 9190. : | 8590. : | 44800. : | 5230. : |
| Chromium | mg/Kg-dry | T | 21.2 : | 11.7 : | 20.5 : | 29.1 : | 13.2 : | 25.3 : |
| Cobalt | mg/Kg-dry | T | 8. : | 5.4 : | 7. : | 14.3 : | 6.7 : | 8.8 : |
| Copper | mg/Kg-dry | T | 15.8 : | 33. : | 102. : | 52.4 : | 21. : | 19. : |
| Iron | mg/Kg-dry | T | 15800. : | 9610. : | 13000. : | 19700. : | 11600. : | 18500. : |
| Lead | mg/Kg-dry | T | 8.5 J | 5.9 J | 106. J | 22.5 J | 11.3 J | 9.6 J |
| Magnesium | mg/Kg-dry | T | 4240. : | 19400. : | 4460. : | 5960. : | 6190. : | 5140. : |
| Manganese | mg/Kg-dry | T | 313. : | 338. : | 507. : | 588. : | 288. : | 381. : |
| Mercury | mg/Kg-dry | T | <0.017 : | <0.019 : | <0.015 J | <0.017 J | <0.018 : | <0.017 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10f

Wildlife Impact Study - Rubber Rabbitbrush Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------|-----------|--|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| | | | 6/2/2003 WRRR-3-T01N-SOL CR | 5/31/2003 WRRR-1-T01N-SOL CR | 6/3/2003 WTRR-1-T01N-SOL TL | 6/4/2003 WTRR-2-T01N-SOL TL | 5/30/2003 WTRR-3-T01N-SOL TL | 6/5/2003 WRRR-2-T01N-SOL CR |
| Molybdenum | mg/Kg-dry | T | <0.37 : | <0.39 : | 152. : | 66.3 : | 9.1 : | 0.46 : |
| Nickel | mg/Kg-dry | T | 11.7 : | 9.3 : | 17.1 : | 25.5 : | 13.3 : | 15.5 : |
| Potassium | mg/Kg-dry | T | 2840. J | 3620. J | 2160. J | 2780. J | 1990. J | 3080. : |
| Selenium | mg/Kg-dry | T | 0.68 J | 0.32 J | 0.18 J | 0.18 J | 0.15 J | <0.072 J |
| Silver | mg/Kg-dry | T | 0.059 J | 0.054 J | 0.34 J | 0.2 J | 0.16 J | 0.052 J |
| Sodium | mg/Kg-dry | T | <44.6 : | 517. : | <158. : | <169. : | 239. : | 265. : |
| Thallium | mg/Kg-dry | T | 0.14 : | 0.12 : | 0.13 : | 0.18 : | 0.22 : | 0.14 : |
| Titanium | mg/Kg-dry | T | 792. : | 458. : | 363. : | 517. : | 325. : | 1050. : |
| Vanadium | mg/Kg-dry | T | 30.7 : | 18.2 : | 21.5 : | 33.9 : | 28.6 : | 35.3 : |
| Zinc | mg/Kg-dry | T | 50.4 : | 45.1 : | 240. : | 84.7 : | 40.9 : | 55.8 J |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10g
Wildlife Impact Study - Sand Dropseed Soils
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------------------------|---------------|---|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 5/31/2003 | 9/7/2003 | 6/3/2003 | 6/3/2003 | 6/4/2003 | 6/3/2003 |
| | Sample ID | | WRSD-3-T01N-SOL | WRSD-1R-T01N-SOL | WTSD-3-T01N-SOL | WTSD-1-T01N-SOL | WTSD-2-T01N-SOL | WRSD-2-T01N-SOL |
| | Exposure Area | | CR | CR | TL | TL | TL | CR |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 87.5 : | 78.1 : | 71.3 : | 66.3 : | 58.8 : | 93.8 : |
| Chloride | mg/Kg-dry | T | <2.1 : | 3.6 : | <2.1 : | <2.1 : | 2.2 : | <2.2 : |
| Fluoride | mg/Kg-dry | T | <0.11 : | 0.39 : | 1. : | 0.55 : | 0.79 : | 1.2 : |
| Nitrate | mg/Kg-dry | T | 12. J | 54.8 J | <2.1 J | <2.1 J | 3.6 J | 17.1 J |
| Phosphorus | mg/Kg-dry | T | 770. J | 1080. J | 32.7 J | 29.7 J | 30.8 J | 50.5 J |
| Sulfate | mg/Kg-dry | T | 39.9 : | 18.5 : | 652. J | 51.8 J | 136. : | 13.3 J |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 835. : | 2840. : | - | - | 423. J | - |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 6.6 : | 8.5 J | 7.9 J | 8.2 J | 7.8 J | 8.3 J |
| Solids, Percent | % | T | 96.1 : | 89.3 : | 97.4 : | 97.9 : | 96.2 : | 92.9 : |
| Specific Conductance | umhos/cm | T | 105. J | 416. J | 671. J | 183. J | 557. J | 349. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 3.2 : | 5.9 : | 1.9 : | 1.5 : | 3.2 : | 7.1 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 18.7 : | 26.6 : | 10.2 : | 15.3 : | 21.5 : | 33.4 : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 0.08 : | <0.02 : | <0.03 : | 0.03 : | 0.07 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 8980. : | 13300. : | 11200. : | 10200. : | 13600. : | 12100. : |
| Antimony | mg/Kg-dry | T | <0.048 J | 0.077 J | <0.048 J | <0.049 J | <0.051 J | <0.053 J |
| Arsenic | mg/Kg-dry | T | 1.9 : | 1.8 : | 4.4 : | 3.4 : | 5. : | 1.7 : |
| Barium | mg/Kg-dry | T | 79.4 : | 116. : | 123. : | 66.7 : | 113. : | 142. : |
| Beryllium | mg/Kg-dry | T | 0.69 : | 0.67 : | 0.75 : | 0.66 : | 0.88 : | 0.63 : |
| Boron | mg/Kg-dry | T | 2.6 : | 8.2 : | 3.2 : | 2.6 : | 3.8 : | 9.4 : |
| Cadmium | mg/Kg-dry | T | 0.048 : | 0.083 : | 0.61 : | 0.68 : | 0.091 : | 0.098 : |
| Calcium | mg/Kg-dry | T | 3070. : | 25700. : | 17200. : | 8200. : | 15800. : | 36900. : |
| Chromium | mg/Kg-dry | T | 15.2 : | 19.7 : | 31.9 : | 21.6 : | 23.1 : | 18.4 : |
| Cobalt | mg/Kg-dry | T | 7.4 : | 7.8 : | 9.4 : | 7.6 : | 7.3 : | 6.6 : |
| Copper | mg/Kg-dry | T | 14.4 : | 20.9 : | 85.7 : | 81.5 : | 25. : | 21.2 : |
| Iron | mg/Kg-dry | T | 12100. : | 16200. : | 18500. : | 14800. : | 18300. : | 15600. : |
| Lead | mg/Kg-dry | T | 8.7 J | 7.7 J | 30.3 J | 108. J | 19. J | 7.9 J |
| Magnesium | mg/Kg-dry | T | 3350. : | 7750. : | 7430. : | 4710. : | 5480. : | 9690. : |
| Manganese | mg/Kg-dry | T | 341. : | 320. : | 722. : | 459. : | 396. : | 378. : |
| Mercury | mg/Kg-dry | T | <0.015 : | 0.017 : | <0.015 J | 0.017 J | <0.017 J | 0.019 J |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10g
Wildlife Impact Study - Sand Dropseed Soils
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------|---------------|-----------|------------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Sample Date | Sample ID | 5/31/2003 WRSD-3-T01N-SOL | 9/7/2003 WRSD-1R-T01N-SOL | 6/3/2003 WTSD-3-T01N-SOL | 6/3/2003 WTSD-1-T01N-SOL | 6/4/2003 WTSD-2-T01N-SOL | 6/3/2003 WRSD-2-T01N-SOL |
| | Exposure Area | Units | Fraction | CR | CR | TL | TL | TL |
| Molybdenum | mg/Kg-dry | T | 0.51 : | <0.33 : | 126. : | 87.3 : | 11.9 : | <0.3 : |
| Nickel | mg/Kg-dry | T | 10.9 : | 13.1 : | 24.7 : | 18.2 : | 19.7 : | 13.1 : |
| Potassium | mg/Kg-dry | T | 2330. J | 3390. J | 3160. J | 2110. J | 1770. J | 3670. J |
| Selenium | mg/Kg-dry | T | 0.39 J | 0.33 J | 0.19 J | 0.16 J | 0.12 J | 0.2 J |
| Silver | mg/Kg-dry | T | 0.052 J | 0.051 J | 0.44 J | 0.4 J | 0.15 J | 0.053 J |
| Sodium | mg/Kg-dry | T | 356. : | <42. : | <215. : | <186. : | <156. : | <258. : |
| Thallium | mg/Kg-dry | T | 0.15 : | 0.12 : | 0.17 J | 0.14 : | 0.13 : | 0.12 : |
| Titanium | mg/Kg-dry | T | 562. : | 745. : | 587. : | 378. : | 357. : | 667. : |
| Vanadium | mg/Kg-dry | T | 21.1 : | 31.3 : | 38. : | 24.7 : | 32.9 : | 29. : |
| Zinc | mg/Kg-dry | T | 44.1 : | 52.7 : | 106. : | 177. : | 70.3 : | 60.2 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10h
Wildlife Impact Study - Sleepy Grass Soils
Validated Analytical Results

| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------------------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T01N-SOL | WTSG-1-T01N-SOL | WTSG-2-T01N-SOL | WRSG-1-T01N-SOL | WRSG-2-T01N-SOL | WTSG-3-T01N-SOL |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 23.9 : | 67. : | 32.7 : | 80.9 : | 52.7 : | 55.7 : |
| Chloride | mg/Kg-dry | T | 2.8 : | 5.3 : | 2.3 : | <2.1 : | 2.4 : | 3.6 : |
| Fluoride | mg/Kg-dry | T | 0.9 : | 2. : | 1. : | 0.41 : | 0.81 : | 0.47 : |
| Nitrate | mg/Kg-dry | T | 3.9 J | 7.5 J | 4. J | 12.2 J | 13.7 J | 4.5 J |
| Phosphorus | mg/Kg-dry | T | 1160. J | 980. J | 918. J | 51.8 J | 1100. J | 33.4 J |
| Sulfate | mg/Kg-dry | T | 4.3 : | 26.2 : | 26.3 : | 39.9 : | 6.8 : | 182. : |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 1650. J | 522. : | 454. : | 966. : | 1240. : | 587. J |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 8.6 J | 8.3 : | 7.9 J | 7.8 J | 8.6 J | 7.7 J |
| Solids, Percent | % | T | 94.9 : | 91. : | 95.4 : | 95.4 : | 96.1 : | 95.1 : |
| Specific Conductance | umhos/cm | T | 277. J | 342. J | 241. J | 237. J | 232. J | 658. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 6.9 : | 6.7 : | 3.5 : | 3.2 : | 5.8 : | 3.8 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 21.8 : | 27. : | 16.7 : | 22.5 : | 23.4 : | 30.3 : |
| Sodium Absorption Ratio | ratio | T | 0.13 : | 0.07 : | 0.05 : | 0.05 : | 0.03 : | 0.06 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 9670. : | 14300. : | 12000. : | 14000. : | 7890. : | 18800. : |
| Antimony | mg/Kg-dry | T | <0.051 J | <0.05 J | <0.049 J | <0.052 J | <0.05 J | <0.049 J |
| Arsenic | mg/Kg-dry | T | 2.3 : | 6.4 : | 3.4 : | 2. : | 1.6 : | 4.5 : |
| Barium | mg/Kg-dry | T | 142. : | 375. : | 172. : | 101. : | 99.7 : | 198. : |
| Beryllium | mg/Kg-dry | T | 0.63 : | 0.82 : | 0.95 : | 0.68 : | 0.5 : | 0.93 : |
| Boron | mg/Kg-dry | T | 5.9 : | 8.4 : | 5.1 : | 6.7 : | 5.8 : | 6.3 : |
| Cadmium | mg/Kg-dry | T | 0.059 : | 0.055 : | 0.46 : | <0.021 : | 0.067 : | 0.13 : |
| Calcium | mg/Kg-dry | T | 39700. : | 61300. : | 31600. : | 6510. : | 18000. : | 13800. J |
| Chromium | mg/Kg-dry | T | 12.2 : | 16.3 : | 28.9 : | 21.9 : | 12.4 : | 24.9 : |
| Cobalt | mg/Kg-dry | T | 7.1 : | 8. : | 9.3 : | 8.9 : | 7.5 : | 8.5 : |
| Copper | mg/Kg-dry | T | 17.2 : | 29.9 : | 146. : | 18.7 : | 16.1 : | 39. : |
| Iron | mg/Kg-dry | T | 12600. : | 14100. : | 15400. : | 17100. : | 11400. : | 19100. : |
| Lead | mg/Kg-dry | T | 6.8 J | 12. J | 38.5 J | 8.6 J | 5.9 J | 28.9 J |
| Magnesium | mg/Kg-dry | T | 6590. : | 8450. : | 7330. : | 5000. : | 5790. : | 5600. : |
| Manganese | mg/Kg-dry | T | 309. : | 329. : | 394. : | 426. : | 363. : | 512. : |
| Mercury | mg/Kg-dry | T | 0.019 : | <0.017 : | <0.017 : | <0.018 : | <0.017 : | <0.016 J |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10h
Wildlife Impact Study - Sleepy Grass Soils
Validated Analytical Results

| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------|---------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T01N-SOL | WTSG-1-T01N-SOL | WTSG-2-T01N-SOL | WRSG-1-T01N-SOL | WRSG-2-T01N-SOL | WTSG-3-T01N-SOL |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| Molybdenum | mg/Kg-dry | T | <0.29 : | 10.8 J | 83.2 : | <0.43 : | <0.41 : | 50.5 : |
| Nickel | mg/Kg-dry | T | 10.8 : | 16.2 : | 23.5 : | 13.8 : | 11.8 : | 18.3 : |
| Potassium | mg/Kg-dry | T | 2460. J | 2470. J | 3670. J | 3590. J | 2880. J | 2850. J |
| Selenium | mg/Kg-dry | T | 0.28 J | 0.21 J | 0.32 J | 0.67 J | 0.31 J | <0.079 J |
| Silver | mg/Kg-dry | T | 0.059 J | 0.15 J | 0.58 J | 0.067 J | 0.041 J | 0.23 J |
| Sodium | mg/Kg-dry | T | 456. : | 289. : | 372. : | <48.4 : | 379. : | <199. : |
| Thallium | mg/Kg-dry | T | 0.15 : | 0.2 : | 0.25 : | 0.14 : | 0.14 : | 0.21 : |
| Titanium | mg/Kg-dry | T | 547. : | 384. : | 545. : | 868. : | 537. : | 519. : |
| Vanadium | mg/Kg-dry | T | 25.9 : | 36.6 : | 35.9 : | 34.6 : | 20.8 : | 38. : |
| Zinc | mg/Kg-dry | T | 42.1 : | 52.2 : | 90.2 : | 55.3 : | 40.4 : | 73.3 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10i
Wildlife Impact Study - Western Wheatgrass Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------------------------|-----------|--|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| | | | 6/2/2003 WRWW-2-T01N-SOL CR | 6/3/2003 WRWW-1-T01N-SOL CR | 5/31/2003 WRWW-3-T01N-SOL CR | 5/28/2003 WTWW-2-T01N-SOL TL | 6/4/2003 WTWW-3-T01N-SOL TL | 6/5/2003 WTWW-1-T01N-SOL TL |
| General Chemistry | | | | | | | | |
| Ammonia | mg/Kg-dry | T | 112. : | 134. : | 97.6 : | 23.5 : | 57.6 : | 22.2 : |
| Chloride | mg/Kg-dry | T | 2.9 : | 8.1 : | 3.3 : | 2.1 : | 6.4 : | 3.6 J |
| Fluoride | mg/Kg-dry | T | 0.67 : | 2.1 : | 1.1 : | 1.5 : | 0.77 : | 1.1 : |
| Nitrate | mg/Kg-dry | T | 5.7 J | 38.9 J | <0.86 J | 3.7 J | 2.8 J | 1.6 J |
| Phosphorus | mg/Kg-dry | T | 44.1 J | 51.2 J | 2040. J | 545. J | 31.7 J | 1270. J |
| Sulfate | mg/Kg-dry | T | 3.9 : | 31.8 J | <0.86 : | 116. : | 324. J | 223. J |
| Total Kjeldahl Nitrogen | mg/Kg-dry | T | 856. : | - | 1710. : | 342. : | 469. J | 107. J |
| Laboratory Parameters | | | | | | | | |
| pH | SU | T | 7.1 J | 8. J | 8.4 : | 8.1 J | 7.8 J | 7.5 J |
| Solids, Percent | % | T | 96.7 : | 90.6 : | 93.1 : | 95.9 : | 95.6 : | 98.2 : |
| Specific Conductance | umhos/cm | T | 179. J | 477. J | 295. J | 454. J | 1000. J | 576. J |
| Geotechnical | | | | | | | | |
| Organic Soils | % | T | 2.9 : | 13.9 : | 11.8 : | 4.2 : | 3.3 : | 1.8 : |
| Physical Properties | | | | | | | | |
| Cation-Exchange Capacity | meq/100g | T | 22.1 : | 49.7 : | 35.2 : | 16.8 : | 28.8 : | 8.1 : |
| Sodium Absorption Ratio | ratio | T | 0.03 : | 0.29 : | 0.07 : | 0.03 : | 0.12 : | <0.03 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-dry | T | 13600. : | 14200. : | 8870. : | 10100. : | 19800. : | 10500. : |
| Antimony | mg/Kg-dry | T | <0.049 J | <0.063 J | <0.052 J | <0.049 J | <0.05 J | <0.043 J |
| Arsenic | mg/Kg-dry | T | 1.7 : | 2. : | 1.7 : | 4.7 : | 4.5 : | 4.2 : |
| Barium | mg/Kg-dry | T | 87.5 : | 198. : | 145. : | 107. : | 215. : | 72.3 : |
| Beryllium | mg/Kg-dry | T | 0.66 : | 0.69 : | 0.52 : | 0.83 : | 1. : | 0.76 : |
| Boron | mg/Kg-dry | T | 4.4 : | 13.1 : | 12.5 : | 3.8 : | 6.1 : | 7. : |
| Cadmium | mg/Kg-dry | T | <0.019 : | 0.15 : | 0.15 : | 0.44 : | 0.12 : | 0.093 : |
| Calcium | mg/Kg-dry | T | 4460. : | 62400. : | 56200. : | 23500. : | 15200. : | 9190. : |
| Chromium | mg/Kg-dry | T | 21.3 : | 18.9 : | 12. : | 21.6 : | 25.7 : | 25.5 : |
| Cobalt | mg/Kg-dry | T | 8. : | 7.1 : | 6. : | 6.9 : | 8.3 : | 7.1 : |
| Copper | mg/Kg-dry | T | 16.3 : | 26.3 : | 18.2 : | 52.5 : | 43.4 : | 37.6 : |
| Iron | mg/Kg-dry | T | 16000. : | 17600. : | 9880. : | 14000. : | 19600. : | 17200. : |
| Lead | mg/Kg-dry | T | 8.5 J | 7.7 J | 6.6 J | 29.3 J | 29.5 J | 19.9 J |
| Magnesium | mg/Kg-dry | T | 4200. : | 21900. : | 18700. : | 5820. : | 5710. : | 6530. : |
| Manganese | mg/Kg-dry | T | 318. : | 572. : | 406. : | 449. : | 479. : | 390. : |
| Mercury | mg/Kg-dry | T | <0.016 : | 0.027 J | <0.016 : | <0.017 : | <0.017 J | <0.016 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10i
Wildlife Impact Study - Western Wheatgrass Soils
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------|-----------|--|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| | | | 6/2/2003 WRWW-2-T01N-SOL CR | 6/3/2003 WRWW-1-T01N-SOL CR | 5/31/2003 WRWW-3-T01N-SOL CR | 5/28/2003 WTWW-2-T01N-SOL TL | 6/4/2003 WTWW-3-T01N-SOL TL | 6/5/2003 WTWW-1-T01N-SOL TL |
| Molybdenum | mg/Kg-dry | T | <0.41 : | <0.32 : | <0.41 : | 46.4 : | 33.6 : | 19.1 : |
| Nickel | mg/Kg-dry | T | 12.3 : | 17. : | 9.8 : | 16. : | 19.3 : | 20.7 : |
| Potassium | mg/Kg-dry | T | 2710. J | 4170. J | 3410. : | 2370. J | 2810. J | 2320. : |
| Selenium | mg/Kg-dry | T | 0.74 J | 0.14 J | 0.3 J | 0.26 J | <0.081 J | <0.069 J |
| Silver | mg/Kg-dry | T | 0.063 J | 0.049 J | 0.051 : | 0.3 J | 0.24 J | 0.17 J |
| Sodium | mg/Kg-dry | T | <45.3 : | <501. : | 475. : | 257. : | <213. : | 163. : |
| Thallium | mg/Kg-dry | T | 0.14 : | 0.13 : | 0.12 : | 0.21 : | 0.22 : | 0.14 : |
| Titanium | mg/Kg-dry | T | 791. : | 596. : | 461. : | 404. : | 518. : | 476. : |
| Vanadium | mg/Kg-dry | T | 31.2 : | 31.8 : | 18.6 : | 31. : | 40.1 : | 35.9 : |
| Zinc | mg/Kg-dry | T | 50. : | 60.3 : | 45.6 : | 87.2 : | 73.3 : | 70. J |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

Appendix A-10j

Wildlife Impact Study - Golden Crownbeard Unwashed Aboveground
Validated Analytical Results

| Parameter | Units | Exposure Area Fraction | Site ID Sample Date Sample ID | TSS14-5 9/8/2003 WTAS-1-T01N-PLTU | WR-5 9/9/2003 WRAS-2-T01N-PLTU | WR-6 9/9/2003 WRAS-1-T01N-PLTU | WR-7 9/9/2003 WRAS-3-T01N-PLTU | WT-2 9/8/2003 WTAS-3-T01N-PLTU | WT-6 9/8/2003 WTAS-2-T01N-PLTU |
|------------------------------|-----------|---------------------------|-------------------------------------|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | TL | CR | CR | CR | TL | TL | |
| General Chemistry | | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | | 37100. : | 32900. : | 30100. : | 33700. : | 44700. : | 14900. : |
| Laboratory Parameters | | | | | | | | | |
| Solids, Percent | % | T | | 17.9 : | 14.4 : | 14.5 : | 15.8 : | 18.4 : | 22.1 : |
| Metals | | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | | 2590. : | 1670. : | 655. : | 644. : | 513. : | 1200. : |
| Antimony | mg/Kg-Dry | T | | <0.054 : | <0.07 : | <0.071 : | <0.062 : | <0.054 : | <0.044 : |
| Arsenic | mg/Kg-Dry | T | | 0.61 : | 0.15 J : | 0.079 J : | 0.16 : | 0.36 : | 0.34 : |
| Barium | mg/Kg-Dry | T | | 124. : | 67.9 : | 37.9 : | 36.3 : | 52.2 : | 18.6 : |
| Beryllium | mg/Kg-Dry | T | | <0.11 : | <0.11 J : | <0.1 J : | <0.088 : | <0.11 : | 0.095 : |
| Boron | mg/Kg-Dry | T | | 41.1 : | 41.4 : | 27.9 : | 29.4 : | 29.4 : | 35. : |
| Cadmium | mg/Kg-Dry | T | | 0.22 : | 0.13 : | 0.28 : | 0.11 : | 0.4 : | 0.86 : |
| Calcium | mg/Kg-Dry | T | | 33400. : | 36400. : | 24400. : | 19400. : | 24300. : | 27300. : |
| Chromium | mg/Kg-Dry | T | | 3.7 : | 2.1 : | 1.3 : | 1.4 : | 1.2 : | 6.8 : |
| Cobalt | mg/Kg-Dry | T | | 0.89 J : | 0.64 J : | 0.34 J : | 0.35 J : | 0.29 J : | 0.91 J : |
| Copper | mg/Kg-Dry | T | | 16.7 : | 10.7 : | 7.1 : | 18.1 : | 18.9 : | 24.5 : |
| Iron | mg/Kg-Dry | T | | 2590. : | 2030. : | 786. : | 806. : | 594. : | 1700. : |
| Lead | mg/Kg-Dry | T | | 1.8 : | 0.93 : | 0.54 : | 0.5 : | 1.9 : | 3.8 : |
| Magnesium | mg/Kg-Dry | T | | 9720. : | 6760. : | 6600. : | 4880. : | 5360. : | 6090. : |
| Manganese | mg/Kg-Dry | T | | 105. : | 75. : | 47.1 : | 35. : | 43.9 : | 104. : |
| Mercury | mg/Kg-Dry | T | | <0.083 : | <0.11 : | <0.11 : | <0.1 : | <0.083 : | <0.068 : |
| Molybdenum | mg/Kg-Dry | T | | 115. : | 2.1 : | 1.2 : | 1.8 : | 90.6 : | 155. : |
| Nickel | mg/Kg-Dry | T | | 2. : | 1.4 : | 0.79 : | 1.2 : | 0.67 : | 3.5 : |
| Potassium | mg/Kg-Dry | T | | 36600. J : | 62300. J : | 54800. J : | 86900. J : | 48100. J : | 36000. J : |
| Selenium | mg/Kg-Dry | T | | 0.72 J : | 0.31 J : | 0.21 J : | 0.47 J : | 0.78 J : | 0.5 J : |
| Silver | mg/Kg-Dry | T | | 0.018 J : | <0.014 J : | <0.014 J : | <0.013 J : | <0.011 J : | 0.035 J : |
| Sodium | mg/Kg-Dry | T | | <191. : | <177. : | <169. : | 167. : | <263. : | <170. : |
| Thallium | mg/Kg-Dry | T | | 0.072 : | <0.014 : | <0.014 : | <0.013 : | 0.038 : | 0.11 : |
| Titanium | mg/Kg-Dry | T | | 78.3 : | 99.3 : | 35.7 : | 36.3 : | 15. : | 58.2 : |
| Vanadium | mg/Kg-Dry | T | | 6.1 : | 2.4 : | 1.1 : | 1.4 : | 1.8 : | 5. : |
| Zinc | mg/Kg-Dry | T | | 108. : | 49.3 : | 29.3 : | 35.6 : | 128. : | 153. : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10k

Wildlife Impact Study - Blue Grama Unwashed Aboveground

Validated Analytical Results

| Parameter | Site ID | | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 9/6/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | Sample ID | | WRBG-3-T01N-PLTU | WRBG-1-T01N-PLTU | WRBG-4-T01N-PLTU | WTBG-1-T01N-PLTU | WTBG-3-T01N-PLTU | WTBG-2-T01N-PLTU |
| | Exposure Area | | CR | CR | CR | TL | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 14000. J | 14200. J | 15200. J | 10400. J | 14100. : | 10800. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 47.6 : | 43.5 : | 31.7 : | 48.2 : | 29.3 : | 48.2 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 1920. : | 534. : | 1000. : | 2630. : | 741. : | 2710. : |
| Antimony | mg/Kg-Dry | T | <0.021 : | <0.022 : | <0.031 : | <0.031 : | <0.034 : | <0.037 : |
| Arsenic | mg/Kg-Dry | T | 0.17 : | 0.077 : | 0.15 : | 0.77 J | 0.15 : | 0.83 : |
| Barium | mg/Kg-Dry | T | 45.4 : | 26.6 : | 34.7 : | 91. : | 22.4 : | 91.9 : |
| Beryllium | mg/Kg-Dry | T | 0.092 : | <0.045 : | 0.059 : | 0.1 : | <0.066 : | 0.1 : |
| Boron | mg/Kg-Dry | T | 15.4 : | 15. : | 35. : | 25. : | 13.8 : | 27.1 : |
| Cadmium | mg/Kg-Dry | T | 0.017 : | <0.0091 : | <0.013 : | 0.011 : | 0.052 : | 0.019 : |
| Calcium | mg/Kg-Dry | T | 7750. : | 9730. : | 8220. : | 10700. : | 5900. : | 14600. : |
| Chromium | mg/Kg-Dry | T | 6.7 : | <1.6 : | <3.4 : | 5.6 : | 2.5 : | 6.5 : |
| Cobalt | mg/Kg-Dry | T | 0.73 J | 0.21 J | 0.78 J | 1. J | 0.55 J | 1.1 J |
| Copper | mg/Kg-Dry | T | 7.7 : | 6.4 : | 6.6 : | 7.9 : | 12.4 : | 11.9 : |
| Iron | mg/Kg-Dry | T | 2420. : | 686. : | 1350. : | 2420. : | 1270. : | 2790. : |
| Lead | mg/Kg-Dry | T | 1.3 : | 0.27 : | 0.78 : | 2.5 : | 5.5 : | 4.4 : |
| Magnesium | mg/Kg-Dry | T | 2630. : | 2640. : | 2130. : | 2250. : | 1560. : | 2810. : |
| Manganese | mg/Kg-Dry | T | 96.7 : | 70.2 : | 57.5 : | 104. : | 81.7 : | 120. : |
| Mercury | mg/Kg-Dry | T | <0.033 : | <0.036 : | <0.05 : | <0.031 : | <0.052 : | <0.033 : |
| Molybdenum | mg/Kg-Dry | T | 2. : | 3.4 : | 3.1 : | 50.8 : | 74.8 : | 59.6 : |
| Nickel | mg/Kg-Dry | T | 2.3 : | 1.3 : | 2.7 : | 3.7 : | 2.5 : | 3.5 : |
| Potassium | mg/Kg-Dry | T | 9080. J | 11000. J | 7190. J | 7790. J | 9280. J | 7810. J |
| Selenium | mg/Kg-Dry | T | 0.35 J | 0.21 J | 0.3 J | 0.35 J | 0.13 J | 0.31 J |
| Silver | mg/Kg-Dry | T | 0.01 J | <0.0045 J | <0.0063 J | 0.021 J | 0.033 J | 0.031 J |
| Sodium | mg/Kg-Dry | T | <111. : | <84.5 : | <98.4 : | 60.8 : | <137. : | <87.7 : |
| Thallium | mg/Kg-Dry | T | 0.021 : | 0.0048 : | 0.0072 : | 0.029 : | 0.014 : | 0.031 : |
| Titanium | mg/Kg-Dry | T | 106. : | 23.4 : | 75. : | 74.2 : | 39.7 : | 81.9 : |
| Vanadium | mg/Kg-Dry | T | 2.9 : | 0.89 : | 2.7 : | 5.2 : | 3. : | 6.9 : |
| Zinc | mg/Kg-Dry | T | 21.7 : | 33.2 : | 32.8 : | 30. : | 89. : | 52.5 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10I

Wildlife Impact Study - Big Sagebrush Unwashed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 |
|------------------------------|-------------|----|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/31/2003 | 6/5/2003 | 5/29/2003 | 5/28/2003 | 6/4/2003 | 5/28/2003 |
| | Sample ID | | WRBS-3-T01N-PLTU | WRBS-1-T01N-PLTU | WRBS-2-T01N-PLTU | WTBS-3-T01N-PLTU | WTBS-1-T01N-PLTU | WTBS-2-T01N-PLTU |
| Exposure Area | | CR | CR | CR | TL | TL | TL | |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 28100. : | 20100. J | 23700. : | 18300. : | 44200. J | 15100. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 30.8 : | 40.7 : | 32. : | 35.5 : | 37.9 : | 33.5 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 732. J | 261. : | 991. J | 426. : | 361. : | 297. : |
| Antimony | mg/Kg-Dry | T | <0.031 : | <0.023 J | <0.031 : | <0.028 : | <0.025 J | <0.028 : |
| Arsenic | mg/Kg-Dry | T | 0.1 : | 0.076 : | 0.18 : | 0.17 : | 0.17 : | 0.26 : |
| Barium | mg/Kg-Dry | T | 16.1 : | 6.8 : | 15.3 : | 14.3 : | 11.8 : | 12.4 : |
| Beryllium | mg/Kg-Dry | T | <0.032 : | <0.032 : | <0.11 : | <0.028 J | 0.029 : | <0.029 J |
| Boron | mg/Kg-Dry | T | 31. : | 21.5 : | 30.9 : | 30.9 : | 24.2 : | 23.5 : |
| Cadmium | mg/Kg-Dry | T | 0.21 J | 0.17 : | 0.18 : | 0.66 : | 0.42 : | 0.38 : |
| Calcium | mg/Kg-Dry | T | 7520. : | 5050. : | 8310. : | 8340. : | 9390. : | 7820. : |
| Chromium | mg/Kg-Dry | T | 4.2 : | 0.41 : | 1.7 : | 0.97 : | 0.97 : | 0.97 : |
| Cobalt | mg/Kg-Dry | T | 0.35 J | 0.13 J | 0.37 J | 0.23 J | 0.26 J | 0.15 J |
| Copper | mg/Kg-Dry | T | 12.6 : | 10.2 : | 16.2 : | 36. : | 19.5 : | 41.8 : |
| Iron | mg/Kg-Dry | T | 900. : | 268. : | 1140. : | 540. : | 405. : | 332. : |
| Lead | mg/Kg-Dry | T | 0.65 : | 0.22 : | 0.63 : | 2.1 : | 0.84 : | <0.76 : |
| Magnesium | mg/Kg-Dry | T | 1610. : | 1420. : | 2160. : | 2280. : | 2090. : | 1930. : |
| Manganese | mg/Kg-Dry | T | 64.2 : | 44.6 : | 70.6 : | 109. : | 57.9 : | 62.1 : |
| Mercury | mg/Kg-Dry | T | <0.048 : | 0.041 : | <0.047 : | <0.049 : | <0.042 : | <0.047 : |
| Molybdenum | mg/Kg-Dry | T | 0.81 : | <0.73 : | 1.4 : | 84.3 : | 25.3 : | 85.6 : |
| Nickel | mg/Kg-Dry | T | 1.7 : | 1.3 : | 1.7 : | 1.4 : | 2.2 : | 1.5 : |
| Potassium | mg/Kg-Dry | T | 23400. J | 17400. J | 21000. J | 27600. J | 15900. J | 27400. J |
| Selenium | mg/Kg-Dry | T | 0.28 J | 0.29 J | 1.1 J | 0.12 J | 0.37 J | 0.71 J |
| Silver | mg/Kg-Dry | T | 0.0065 J | <0.0046 J | <0.0063 J | 0.012 J | 0.013 J | 0.012 J |
| Sodium | mg/Kg-Dry | T | <114. : | <119. : | <106. : | <30.9 J | <405. : | <31.8 J |
| Thallium | mg/Kg-Dry | T | 0.0068 : | <0.0046 : | 0.0075 : | 0.0057 : | 0.0092 : | 0.0085 : |
| Titanium | mg/Kg-Dry | T | 39.7 : | 10. : | 43.4 : | 16.3 : | 13.4 : | 10.6 : |
| Vanadium | mg/Kg-Dry | T | 1.2 J | 0.49 : | 1.4 : | 0.94 : | 0.87 : | 0.65 : |
| Zinc | mg/Kg-Dry | T | 29.4 : | <37.3 : | 30.6 : | 123. : | 64.7 : | 72.4 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10m

Wildlife Impact Study - Crested Wheatgrass Unwashed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 6/5/2003 | 6/5/2003 | 6/4/2003 | 6/4/2003 | 6/5/2003 | 5/30/2003 |
| | Sample ID | | WRCW-1-T01N-PLTU | WRCW-2-T01N-PLTU | WTCW-2-T01N-PLTU | WTCW-1-T01N-PLTU | WRCW-3-T01N-PLTU | WTCW-3-T01N-PLTU |
| | Exposure Area | | CR | U CR | TL | TL | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 28800. J | 27400. J | 20800. J | 10800. J | 35700. J | 11000. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 29.9 : | 41.8 : | 43.8 : | 45. : | 30.3 : | 42.7 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 777. : | 360. : | 639. : | 313. : | 1280. : | 602. : |
| Antimony | mg/Kg-Dry | T | <0.033 : | <0.023 : | <0.022 : | <0.022 : | <0.033 J | <0.023 : |
| Arsenic | mg/Kg-Dry | T | 0.15 : | 0.083 : | 0.43 J | 0.4 J | 0.19 : | 0.22 : |
| Barium | mg/Kg-Dry | T | 33.7 : | 15.5 : | 8.2 : | 18.4 : | 39. : | 9.8 : |
| Beryllium | mg/Kg-Dry | T | <0.09 : | <0.031 : | 0.034 : | <0.021 : | <0.1 : | <0.035 : |
| Boron | mg/Kg-Dry | T | 3.3 : | 5.7 : | 5.5 : | 5.6 : | 7. : | 4.7 : |
| Cadmium | mg/Kg-Dry | T | 0.08 : | 0.043 : | 0.032 : | 0.029 : | 0.067 : | 0.053 : |
| Calcium | mg/Kg-Dry | T | 5070. : | 3520. : | 3340. : | 4330. : | 6770. : | 3740. : |
| Chromium | mg/Kg-Dry | T | 1.7 : | 2.4 : | 1.7 : | 0.71 J | 2.7 : | 2. : |
| Cobalt | mg/Kg-Dry | T | 0.53 J | 0.19 J | 0.23 J | 0.1 J | 0.6 J | 0.35 J |
| Copper | mg/Kg-Dry | T | 9.3 : | 5.7 : | 7. : | 5.3 : | 11.3 : | 9.1 : |
| Iron | mg/Kg-Dry | T | 967. : | 462. : | 625. : | 304. : | 1530. : | 716. : |
| Lead | mg/Kg-Dry | T | 0.77 : | 0.31 : | 0.82 : | 0.22 : | 0.87 : | 1.7 : |
| Magnesium | mg/Kg-Dry | T | 2200. : | 910. : | 1050. : | 1240. : | 2350. : | 814. : |
| Manganese | mg/Kg-Dry | T | 48.3 : | 37.9 : | 71.4 : | 74.4 : | 77.7 : | 41.6 : |
| Mercury | mg/Kg-Dry | T | <0.053 : | <0.038 : | <0.036 : | <0.036 : | <0.053 : | <0.035 : |
| Molybdenum | mg/Kg-Dry | T | 1.2 : | 2.4 : | 24.3 : | 31.3 : | <1.7 : | 116. : |
| Nickel | mg/Kg-Dry | T | 1.1 J | <0.67 J | 0.95 : | 0.36 J | 1.6 : | 1.3 : |
| Potassium | mg/Kg-Dry | T | 21100. J | 18000. J | 17400. J | 17400. J | 19400. J | 15400. J |
| Selenium | mg/Kg-Dry | T | 0.63 J | 0.26 J | <0.036 J | 0.29 J | 0.37 J | 0.33 J |
| Silver | mg/Kg-Dry | T | 0.0073 J | <0.0045 J | 0.013 J | 0.0051 J | 0.008 J | 0.023 J |
| Sodium | mg/Kg-Dry | T | <261. : | <77.1 : | <53.2 J | <50.4 J | <162. : | <26.5 : |
| Thallium | mg/Kg-Dry | T | 0.018 : | 0.0062 : | 0.0066 : | 0.016 : | 0.015 : | 0.015 : |
| Titanium | mg/Kg-Dry | T | 47.7 : | 22.9 : | 20.9 : | 10.9 : | 77.3 : | 27. : |
| Vanadium | mg/Kg-Dry | T | 2.1 : | 0.69 : | 0.91 : | 0.51 : | 2.8 : | 1.4 : |
| Zinc | mg/Kg-Dry | T | 28.7 : | 23.6 : | 25.7 : | 29.8 : | 56.3 : | <41.6 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10n

**Wildlife Impact Study - Cut-Leaf Blazing-star Unwashed Aboveground
Validated Analytical Results**

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------------------------|-----------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | 9/8/2003 WTFO-3-T01N-PLTU TL | 9/8/2003 WTFO-1-T01N-PLTU TL | 9/9/2003 WRFO-3-T01N-PLTU CR | 9/9/2003 WRFO-1-T01N-PLTU CR | 9/9/2003 WRFO-2-T01N-PLTU CR | 9/8/2003 WTFO-2-T01N-PLTU TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 27700. : | 16200. : | 34000. : | 22300. : | 29100. : | 24600. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 20.7 : | 25.5 : | 19.7 : | 18.7 : | 18.2 : | 24.5 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 1170. : | 5460. : | 1610. : | 663. : | 567. : | 2650. : |
| Antimony | mg/Kg-Dry | T | <0.046 : | <0.046 J | <0.049 : | <0.052 : | <0.053 : | <0.039 : |
| Arsenic | mg/Kg-Dry | T | 0.52 : | 1.4 : | 0.37 J | 0.29 : | 0.43 J | 0.84 : |
| Barium | mg/Kg-Dry | T | 32.4 : | 43.8 : | 68. : | 63.7 : | 43.9 : | 74. : |
| Beryllium | mg/Kg-Dry | T | 0.12 : | 0.42 : | <0.07 J | <0.079 : | <0.072 J | 0.13 : |
| Boron | mg/Kg-Dry | T | 52.9 : | 44.2 : | 39.5 : | 63.2 : | 33.9 : | 51.2 : |
| Cadmium | mg/Kg-Dry | T | 0.27 : | 0.2 : | 0.14 : | 0.079 : | 0.072 : | 0.076 : |
| Calcium | mg/Kg-Dry | T | 38600. : | 21000. J | 31200. : | 27700. : | 24800. : | 23900. : |
| Chromium | mg/Kg-Dry | T | 4.5 : | 9.2 : | 2.2 : | 1.8 : | 1.2 : | 3.2 : |
| Cobalt | mg/Kg-Dry | T | 1.1 J | 3.5 J | 0.6 J | 0.28 J | 0.27 J | 1.2 J |
| Copper | mg/Kg-Dry | T | 20. : | 27.3 J | 6.5 : | 7.4 : | 5.2 : | 8.8 : |
| Iron | mg/Kg-Dry | T | 2580. : | 7960. : | 1930. : | 826. : | 678. : | 2520. : |
| Lead | mg/Kg-Dry | T | 5.7 : | 19.2 : | 0.9 : | 0.38 : | 0.39 : | 3.4 : |
| Magnesium | mg/Kg-Dry | T | 7430. : | 6310. : | 10500. : | 7470. : | 7060. : | 5080. : |
| Manganese | mg/Kg-Dry | T | 270. : | 283. J | 111. : | 91.1 : | 58.9 : | 134. : |
| Mercury | mg/Kg-Dry | T | <0.071 : | <0.062 : | <0.08 : | <0.084 : | <0.094 : | <0.06 : |
| Molybdenum | mg/Kg-Dry | T | 92.4 : | 192. : | 1. : | 2.9 : | 1.7 : | 32. : |
| Nickel | mg/Kg-Dry | T | 3.5 : | 8.1 : | 2.1 : | 3.6 : | 2.1 : | 2.5 : |
| Potassium | mg/Kg-Dry | T | 19000. J | 11600. J | 21500. J | 17400. J | 18800. J | 16100. J |
| Selenium | mg/Kg-Dry | T | 0.2 J | 0.77 J | 1.6 J | 1.2 J | 2.1 J | 1.5 J |
| Silver | mg/Kg-Dry | T | 0.067 J | 0.11 J | <0.0095 J | <0.011 J | <0.011 J | 0.02 J |
| Sodium | mg/Kg-Dry | T | <166. : | <96.5 : | <118. : | <130. : | <124. : | <134. : |
| Thallium | mg/Kg-Dry | T | 0.076 : | 0.096 : | 0.018 : | <0.011 : | 0.012 : | 0.064 : |
| Titanium | mg/Kg-Dry | T | 61.4 : | 155. J | 88. : | 31.6 : | 27.8 : | 68.8 : |
| Vanadium | mg/Kg-Dry | T | 5.2 : | 13.5 : | 2.8 : | 1.7 : | 1.1 : | 4.8 : |
| Zinc | mg/Kg-Dry | T | 96.2 : | 78.1 : | 27. : | 52.1 : | 36.1 : | 34. : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10o

Wildlife Impact Study - Rubber Rabbitbrush Unwashed Aboveground

Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------------------------|-----------|--|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|
| | | | 6/2/2003 WRRR-3-T01N-PLTU CR | 5/31/2003 WRRR-1-T01N-PLTU CR | 6/3/2003 WTRR-1-T01N-PLTU TL | 6/4/2003 WTRR-2-T01N-PLTU TL | 5/30/2003 WTRR-3-T01N-PLTU TL | 6/5/2003 WRRR-2-T01N-PLTU CR |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 19500. J | 18700. : | - | 26700. J | 17000. : | 25200. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 40.1 : | 37.6 : | 31.1 : | 39. : | 32.7 : | 33.6 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 1350. : | 198. : | 213. J | 651. : | 194. : | 385. : |
| Antimony | mg/Kg-Dry | T | <0.025 : | <0.026 : | <0.031 : | <0.026 : | <0.03 : | <0.029 J |
| Arsenic | mg/Kg-Dry | T | 0.14 : | 0.063 : | 0.11 : | 0.41 J | 0.18 : | 0.13 : |
| Barium | mg/Kg-Dry | T | 21.3 : | 11.3 : | 4.2 : | 8.7 : | 14.2 : | 14.7 : |
| Beryllium | mg/Kg-Dry | T | <0.025 J | <0.026 : | <0.031 J | 0.041 : | <0.028 : | <0.029 : |
| Boron | mg/Kg-Dry | T | 41. : | 79.5 : | 35.2 : | 27.9 : | 75.8 : | 79.1 : |
| Cadmium | mg/Kg-Dry | T | 0.18 : | 0.87 : | 1.2 J | 0.9 : | 0.42 : | 0.18 : |
| Calcium | mg/Kg-Dry | T | 9230. : | 6530. : | 7840. : | 7870. : | 7450. : | 7000. : |
| Chromium | mg/Kg-Dry | T | 2.2 : | 5. : | 1.1 : | 6.4 : | 0.58 : | 0.65 : |
| Cobalt | mg/Kg-Dry | T | 0.52 J | 0.11 J | 0.16 J | 0.33 J | 0.11 J | 0.16 J |
| Copper | mg/Kg-Dry | T | 12. : | 11.1 : | 30.3 : | 29.2 : | 22.4 : | 15.3 : |
| Iron | mg/Kg-Dry | T | 1440. : | 251. : | 246. : | 767. : | 225. : | 400. : |
| Lead | mg/Kg-Dry | T | 0.9 : | 0.19 : | 0.77 : | 1. : | 0.33 : | 0.26 : |
| Magnesium | mg/Kg-Dry | T | 1590. : | 1880. : | 2030. : | 1980. : | 2160. : | 1960. : |
| Manganese | mg/Kg-Dry | T | 79.3 : | 80.3 : | 167. : | 71. : | 76.4 : | 54.7 : |
| Mercury | mg/Kg-Dry | T | <0.037 : | <0.042 : | <0.052 : | <0.041 : | <0.045 : | <0.047 : |
| Molybdenum | mg/Kg-Dry | T | 1. : | 0.53 : | 97.4 : | 230. : | 106. : | <0.62 : |
| Nickel | mg/Kg-Dry | T | 1.7 : | 2.9 : | 2.1 : | 3.6 : | 2. : | 1.6 : |
| Potassium | mg/Kg-Dry | T | 11400. J | 18700. J | 32900. J | 20900. J | 19200. J | 18200. J |
| Selenium | mg/Kg-Dry | T | 0.63 J | 0.22 J | 1.5 J | 0.15 J | 0.39 J | 0.91 J |
| Silver | mg/Kg-Dry | T | 0.0082 J | <0.0053 J | <0.0061 J | 0.013 J | 0.0067 J | <0.0059 J |
| Sodium | mg/Kg-Dry | T | <119. : | <111. : | <33.5 : | <60.5 J | <46.1 : | <145. : |
| Thallium | mg/Kg-Dry | T | 0.017 : | <0.0053 : | 0.016 : | 0.011 : | 0.0076 : | <0.0059 : |
| Titanium | mg/Kg-Dry | T | 75.7 : | 10.3 : | 8.1 : | 23.3 : | 6.4 : | 18.8 : |
| Vanadium | mg/Kg-Dry | T | 1.9 : | 0.42 : | 0.48 : | 1.2 : | 0.45 : | 0.65 : |
| Zinc | mg/Kg-Dry | T | 32.5 : | 31.8 : | 205. : | 165. : | <106. : | <42.1 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10p

Wildlife Impact Study - Sand Dropseed Unwashed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------------------------|---------------|---|------------------|-----------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/31/2003 | 9/7/2003 | 6/3/2003 | 6/3/2003 | 6/4/2003 | 6/3/2003 |
| | Sample ID | | WRSD-3-T01N-PLTU | WRSD-1R-T01N-PLT U | WTSD-3-T01N-PLTU | WTSD-1-T01N-PLTU | WTSD-2-T01N-PLTU | WRSD-2-T01N-PLTU |
| | Exposure Area | | CR | CR | TL | TL | TL | CR |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 21100. | 16100. J | - | - | 26700. J | - |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 43.2 | 38.9 | 46.1 | 37.7 | 39.3 | 50.9 |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 2580. | 1670. | 902. | 263. | 454. | 2780. |
| Antimony | mg/Kg-Dry | T | <0.026 | <0.025 | <0.021 | <0.026 | <0.025 J | 0.022 |
| Arsenic | mg/Kg-Dry | T | 0.22 | 0.15 | 0.41 | 0.066 | 0.16 | 0.24 |
| Barium | mg/Kg-Dry | T | 37.7 | 40.8 | 13.9 | 10.5 | 10.3 | 37.8 |
| Beryllium | mg/Kg-Dry | T | <0.17 | 0.079 | <0.022 J | <0.026 J | 0.044 | 0.12 J |
| Boron | mg/Kg-Dry | T | 10.7 | 6.7 | 6.5 | 7.9 | 8.5 | 10.8 |
| Cadmium | mg/Kg-Dry | T | 0.079 | 0.054 | 0.2 | 0.19 | 0.056 | 0.075 |
| Calcium | mg/Kg-Dry | T | 5120. | 7150. | 5520. | 4240. | 4410. | 9080. |
| Chromium | mg/Kg-Dry | T | 11.4 | 6.4 | 2.8 | 1.1 | 1.9 | 3.3 |
| Cobalt | mg/Kg-Dry | T | 1.3 J | 0.64 J | 0.76 J | 0.17 J | 0.21 J | 0.92 J |
| Copper | mg/Kg-Dry | T | 10.5 | 13.1 | 19.8 | 12.1 | 13.1 | 12.7 |
| Iron | mg/Kg-Dry | T | 3280. | 2050. | 1480. | 418. | 528. | 3220. |
| Lead | mg/Kg-Dry | T | 2.1 | 0.97 | 3.7 | 2.6 | 0.74 | 1.5 |
| Magnesium | mg/Kg-Dry | T | 2030. | 2770. | 1120. | 1230. | 1420. | 2880. |
| Manganese | mg/Kg-Dry | T | 104. | 73.1 | 77.6 | 46.1 | 32.3 | 115. |
| Mercury | mg/Kg-Dry | T | <0.037 | <0.041 | <0.035 | <0.042 | <0.038 | <0.031 |
| Molybdenum | mg/Kg-Dry | T | <2.8 | 3.1 | 38.5 | 59.2 | 105. | 5.3 |
| Nickel | mg/Kg-Dry | T | 4.2 | 2.5 | 2.4 | 0.66 | 1. | 2.5 |
| Potassium | mg/Kg-Dry | T | 14100. J | 11700. J | 10500. J | 20500. J | 12500. J | 15200. J |
| Selenium | mg/Kg-Dry | T | 0.33 J | 0.46 J | <1. | 1.6 | 0.24 J | 1.6 |
| Silver | mg/Kg-Dry | T | 0.022 J | 0.0069 J | 0.067 J | 0.039 J | 0.024 J | 0.011 J |
| Sodium | mg/Kg-Dry | T | <196. | <127. | <28.9 | <45.3 | <148. | <151. |
| Thallium | mg/Kg-Dry | T | 0.028 | 0.021 | 0.026 | 0.026 | 0.054 | 0.022 |
| Titanium | mg/Kg-Dry | T | 174. | 88.7 | 48.7 | 15.3 | 17.7 | 159. |
| Vanadium | mg/Kg-Dry | T | 4.7 | 2.6 | 2.4 | 0.53 | 0.95 | 3.9 |
| Zinc | mg/Kg-Dry | T | 35.3 | 31.5 | 67.6 | 40.5 | 120. | 29.8 |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10q

Wildlife Impact Study - Sleepy Grass Unwashed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T01N-PLTU | WTSG-1-T01N-PLTU | WTSG-2-T01N-PLTU | WRSG-1-T01N-PLTU | WRSG-2-T01N-PLTU | WTSG-3-T01N-PLTU |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 6930. : | 20700. : | 16600. : | 30700. J | 28400. : | 22900. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 41.4 : | 43.3 : | 41. : | 41. : | 37.6 : | 42.3 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 590. : | 190. J | 273. : | 485. J | 245. : | 208. : |
| Antimony | mg/Kg-Dry | T | <0.024 : | <0.023 : | <0.024 : | <0.024 : | <0.026 : | <0.024 : |
| Arsenic | mg/Kg-Dry | T | 0.27 : | 0.3 : | 0.16 : | 0.088 : | 0.095 : | <0.26 J |
| Barium | mg/Kg-Dry | T | 20.5 : | 10.2 : | 9.3 : | 9. : | 6.6 : | 3.3 : |
| Beryllium | mg/Kg-Dry | T | <0.027 J | <0.023 : | <0.024 J | <0.024 J | <0.024 : | <0.023 : |
| Boron | mg/Kg-Dry | T | 29. : | 11.6 : | 14.6 : | 8. : | 6.8 : | 4. : |
| Cadmium | mg/Kg-Dry | T | 0.01 : | 0.037 : | 0.034 : | 0.029 : | 0.02 : | 0.05 : |
| Calcium | mg/Kg-Dry | T | 4490. : | 3440. : | 3930. : | 4220. : | 4680. : | 3100. : |
| Chromium | mg/Kg-Dry | T | 1.3 : | 1.5 : | 2.9 : | 2.4 : | 1.3 : | <0.48 J |
| Cobalt | mg/Kg-Dry | T | 0.29 J | 0.21 J | 0.16 J | 0.27 J | 0.18 J | 0.071 J |
| Copper | mg/Kg-Dry | T | 12. : | 7.9 : | 19.3 : | 13.2 : | 8.7 : | 9. : |
| Iron | mg/Kg-Dry | T | 741. : | 219. : | 354. : | 607. : | 345. : | 205. : |
| Lead | mg/Kg-Dry | T | <0.56 : | 0.26 : | <1.2 : | 0.37 : | 0.21 : | 0.26 : |
| Magnesium | mg/Kg-Dry | T | 2240. : | 1420. : | 1090. : | 1400. : | 1670. : | 1010. : |
| Manganese | mg/Kg-Dry | T | 88.8 : | 107. : | 78.3 : | 64.4 : | 74.2 : | 31.9 : |
| Mercury | mg/Kg-Dry | T | <0.039 : | <0.035 : | <0.039 : | <0.039 : | <0.045 : | <0.036 : |
| Molybdenum | mg/Kg-Dry | T | 14.4 : | 139. : | 116. : | 2.9 : | 5.5 : | 207. : |
| Nickel | mg/Kg-Dry | T | 3.9 : | 7.2 : | 3.9 : | 2.9 : | 5. : | 1.5 : |
| Potassium | mg/Kg-dry | T | 16600. J | 17400. J | 20500. J | 8040. J | 19400. J | 37900. J |
| Selenium | mg/Kg-Dry | T | 0.24 J | 0.44 J | 0.23 J | 0.39 J | 0.79 J | 0.36 J |
| Silver | mg/Kg-Dry | T | 0.0049 J | <0.0047 J | 0.011 J | 0.0056 J | <0.0053 J | <0.0048 J |
| Sodium | mg/Kg-Dry | T | <23.7 J | <27.9 : | <26.6 J | <69.5 : | <50.5 : | <53.3 J |
| Thallium | mg/Kg-Dry | T | 0.0068 : | 0.0047 : | 0.0083 : | 0.011 : | <0.0053 : | 0.015 : |
| Titanium | mg/Kg-Dry | T | 29.8 : | 5.3 : | 11.2 : | 27.8 : | 12.1 : | 6.7 : |
| Vanadium | mg/Kg-Dry | T | 1.2 : | 0.44 : | 0.56 : | 0.8 : | 0.63 : | 0.38 : |
| Zinc | mg/Kg-Dry | T | 16.6 : | <24.9 : | 42. : | 23.2 : | 20.5 : | 51.9 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10r

Wildlife Impact Study - Western Wheatgrass Unwashed Aboveground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------------------------|-----------|--|--|--|---|---|--|--|
| | | | 6/2/2003 WRWW-2-T01N-PLT U CR | 6/3/2003 WRWW-1-T01N-PLT U CR | 5/31/2003 WRWW-3-T01N-PLT U CR | 5/28/2003 WTWW-2-T01N-PLT U TL | 6/4/2003 WTWW-3-T01N-PLT U TL | 6/5/2003 WTWW-1-T01N-PLT U TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 11800. J | - | 11400. : | 20800. : | 14800. J | 28300. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 42.3 : | 39.1 : | 62.5 : | 34.9 : | 41.5 : | 41.4 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 693. : | 651. : | 437. J | 194. : | 732. : | 187. : |
| Antimony | mg/Kg-Dry | T | <0.023 : | <0.025 : | <0.043 : | <0.028 : | <0.023 : | <0.023 : |
| Arsenic | mg/Kg-Dry | T | 0.088 : | 0.14 : | 0.11 : | 0.12 : | 0.49 J | 0.12 : |
| Barium | mg/Kg-Dry | T | 25.7 : | 29.7 : | 14.8 : | 12.9 : | 17.1 : | 12. : |
| Beryllium | mg/Kg-Dry | T | <0.024 J | <0.025 J | <0.027 : | <0.028 J | 0.039 : | <0.044 : |
| Boron | mg/Kg-Dry | T | 8.3 : | 3.3 : | 8.1 : | 6.3 : | 6.3 : | 5.1 : |
| Cadmium | mg/Kg-Dry | T | 0.012 : | 0.017 : | <0.0063 : | 0.1 : | 0.039 : | 0.032 : |
| Calcium | mg/Kg-Dry | T | 3790. : | 7560. : | 4080. : | 4000. : | 5410. : | 2780. : |
| Chromium | mg/Kg-Dry | T | 2.9 : | 1.3 : | 1.1 : | 1.7 : | 1.9 : | 1.4 : |
| Cobalt | mg/Kg-Dry | T | 0.24 J | 0.19 J | 0.16 J | 0.091 J | 0.24 J | 0.22 J |
| Copper | mg/Kg-Dry | T | 7.4 : | 10. : | 4.3 : | 10. : | 6.3 : | 6.3 : |
| Iron | mg/Kg-Dry | T | 781. : | 754. : | 494. : | 326. J | 756. : | 320. : |
| Lead | mg/Kg-Dry | T | 0.45 : | 0.36 : | 0.32 J | 1.2 : | 0.78 : | 0.54 : |
| Magnesium | mg/Kg-Dry | T | 1350. : | 1920. : | 1410. : | 1070. : | 1270. : | 898. : |
| Manganese | mg/Kg-Dry | T | 40.7 : | 58.7 : | 48.7 : | 50.3 : | 60.5 : | 42.9 : |
| Mercury | mg/Kg-Dry | T | <0.04 : | <0.041 : | <0.024 : | <0.043 : | <0.037 : | <0.039 : |
| Molybdenum | mg/Kg-Dry | T | 1.3 : | 1.7 : | 1.7 : | 96. : | 129. : | 88. : |
| Nickel | mg/Kg-Dry | T | 0.9 : | 0.9 : | 0.49 : | 0.43 : | 0.76 : | <0.76 J |
| Potassium | mg/Kg-dry | T | 7320. J | 21600. J | 15900. J | 24800. J | 22300. J | 17000. J |
| Selenium | mg/Kg-Dry | T | 0.33 J | 2.3 : | 0.25 J | 0.049 J | 0.59 J | 0.095 J |
| Silver | mg/Kg-Dry | T | <0.0048 J | <0.0049 J | <0.0032 J | 0.011 J | 0.0073 J | 0.011 J |
| Sodium | mg/Kg-Dry | T | <70.7 : | <92.3 : | <37.8 : | <30.6 : | <55.4 J | <90.7 : |
| Thallium | mg/Kg-Dry | T | 0.0074 : | 0.011 : | 0.0046 : | 0.006 : | 0.008 : | 0.0085 : |
| Titanium | mg/Kg-Dry | T | 41.4 : | 30. : | 21.7 : | 10.3 : | 27.6 : | 12.7 : |
| Vanadium | mg/Kg-Dry | T | 0.93 : | 0.92 : | 0.84 : | 0.43 : | 1.1 : | 0.76 : |
| Zinc | mg/Kg-Dry | T | 16.4 : | 23.1 : | <11.1 : | 69.4 : | 35.4 : | 32.2 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10s

Appendix A

Wildlife Impact Study - Golden Crownbeard Unwashed Below Ground

Revision No. 0

Validated Analytical Results

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| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-5 | WR-5 | WR-6 | WR-7 | WT-2 | WT-6 |
|------------------------------|-----------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | 9/8/2003 WTAS-1-T02N-PLTU TL | 9/9/2003 WRAS-2-T02N-PLTU CR | 9/9/2003 WRAS-1-T02N-PLTU CR | 9/9/2003 WRAS-3-T02N-PLTU CR | 9/8/2003 WTAS-3-T02N-PLTU TL | 9/8/2003 WTAS-2-T02N-PLTU TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4980. | 3550. | 4970. | 5380. | 7000. | 3430. |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | - | - | 37.1 | 39.8 | 34.6 | 47.2 |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 13100. | 3680. | 8680. | 16800. | 10200. | 9020. |
| Antimony | mg/Kg-Dry | T | <0.063 | <0.025 | <0.027 | <0.025 | <0.063 | <0.055 |
| Arsenic | mg/Kg-Dry | T | 2.3 | 0.27 | 0.57 | 0.68 | 2. | 1.8 |
| Barium | mg/Kg-Dry | T | 174. | 38. | 77. | 189. | 117. | 72.6 |
| Beryllium | mg/Kg-Dry | T | 0.65 | 0.16 | 0.38 | 0.85 | 0.51 | 0.55 |
| Boron | mg/Kg-Dry | T | 11.5 | 6.5 | 9.5 | 18.3 | 12. | 10.9 |
| Cadmium | mg/Kg-Dry | T | 0.063 | 0.037 | 0.081 | 0.045 | 0.15 | 0.34 |
| Calcium | mg/Kg-Dry | T | 22900. | 6780. | 10900. | 37500. | 15400. | 11200. |
| Chromium | mg/Kg-Dry | T | 16.3 | 4. | 14.6 | 24. | 13.1 | 21.9 |
| Cobalt | mg/Kg-Dry | T | 3.8 | 1.3 | 2.6 | 2.8 | 3.4 | 3.8 |
| Copper | mg/Kg-Dry | T | 24.5 | 6.8 | 12.2 | 42.2 | 26.6 | 49.6 |
| Iron | mg/Kg-Dry | T | 13500. | 4550. | 10500. | 20100. | 10600. | 11200. |
| Lead | mg/Kg-Dry | T | 10.8 | 2.2 | 6.2 | 13. | 16.3 | 22.6 |
| Magnesium | mg/Kg-Dry | T | 5880. | 2480. | 4860. | 9780. | 4060. | 5040. |
| Manganese | mg/Kg-Dry | T | 298. | 103. | 227. | 540. | 241. | 313. |
| Mercury | mg/Kg-Dry | T | <0.04 | <0.037 | <0.041 | <0.037 | <0.046 | <0.034 |
| Molybdenum | mg/Kg-Dry | T | 50.3 | 0.85 | 0.86 | 1.3 | 35.7 | 113. |
| Nickel | mg/Kg-Dry | T | 11.5 | 3. | 7.3 | 7.3 | 9.1 | 16. |
| Potassium | mg/Kg-Dry | T | 10200. | 8030. | 12500. | 38000. | 13900. | 13200. |
| Selenium | mg/Kg-Dry | T | 0.21 | 0.13 | 0.21 | 0.19 | 0.22 | 0.16 |
| Silver | mg/Kg-Dry | T | 0.1 | 0.016 | 0.038 | 0.04 | 0.11 | 0.21 |
| Sodium | mg/Kg-Dry | T | <149. | 237. | 457. | 693. | <163. | <84.3 |
| Thallium | mg/Kg-Dry | T | 0.14 | 0.03 | 0.084 | 0.088 | 0.11 | 0.16 |
| Titanium | mg/Kg-Dry | T | 350. | 231. | 516. | 750. | 261. | 357. |
| Vanadium | mg/Kg-Dry | T | 28.8 | 7.7 | 17.8 | 33. | 20.6 | 25.1 |
| Zinc | mg/Kg-Dry | T | 53.2 | 20.5 | 42.2 | 88. | 56. | 74.7 |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10t

Wildlife Impact Study - Blue Grama Unwashed Below Ground

Validated Analytical Results

| Parameter | Site ID | | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 9/6/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | Sample ID | | WRBG-3-T02N-PLTU | WRBG-1-T02N-PLTU | WRBG-4-T02N-PLTU | WTBG-1-T02N-PLTU | WTBG-3-T02N-PLTU | WTBG-2-T02N-PLTU |
| | Exposure Area | | CR | CR | CR | TL | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4090. J | 6320. J | 2490. J | 1280. J | 1530. J | 1790. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 78.2 : | 72.8 : | 77.4 : | 73.4 : | 75.8 : | 70.2 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 10900. : | 7260. : | 12000. J | 18800. : | 13400. J | 16300. J |
| Antimony | mg/Kg-Dry | T | <0.04 J | <0.03 : | <0.029 J | <0.042 J | <0.039 J | <0.09 J |
| Arsenic | mg/Kg-Dry | T | 0.69 J | 0.34 : | 0.74 J | 5.8 : | 3. : | 5.4 : |
| Barium | mg/Kg-Dry | T | 89.4 : | 73.7 : | 76.8 J | 364. : | 98. J | 293. J |
| Beryllium | mg/Kg-Dry | T | 0.54 : | 0.32 : | 0.51 : | 0.77 : | 0.89 : | 0.69 : |
| Boron | mg/Kg-Dry | T | 1.8 J | 4.2 : | 3.2 : | 7.8 : | 5.5 : | 3.4 J |
| Cadmium | mg/Kg-Dry | T | 0.091 : | 0.085 : | 0.044 J | <0.0055 : | 0.58 J | 0.014 : |
| Calcium | mg/Kg-Dry | T | 7400. : | 21800. : | 4710. J | 68500. : | 12000. J | 68700. : |
| Chromium | mg/Kg-Dry | T | 16. : | 9.9 : | 18.6 J | 16.7 : | 34.5 J | 18.3 J |
| Cobalt | mg/Kg-Dry | T | 2.4 J | 1.3 J | 2.9 J | 3.3 J | 3.6 J | 3.1 J |
| Copper | mg/Kg-Dry | T | 17.3 : | 16.4 : | 16. J | 25.3 : | 109. J | 39.9 : |
| Iron | mg/Kg-Dry | T | 13300. : | 8450. : | 14400. J | 16800. : | 17100. J | 15000. J |
| Lead | mg/Kg-Dry | T | 8.6 : | 3.8 : | 8.1 : | 14.4 : | 64.9 J | 15.3 J |
| Magnesium | mg/Kg-Dry | T | 4880. : | 7620. : | 4090. J | 7660. : | 6640. J | 7840. J |
| Manganese | mg/Kg-Dry | T | 308. : | 177. : | 257. J | 311. : | 507. J | 266. J |
| Mercury | mg/Kg-Dry | T | <0.021 : | <0.022 : | <0.021 : | <0.021 : | 0.064 : | 0.024 : |
| Molybdenum | mg/Kg-Dry | T | 0.44 J | 0.56 : | 0.45 J | 8.6 : | 104. J | 22.4 J |
| Nickel | mg/Kg-Dry | T | 8.2 : | 4.9 : | 10.5 J | 13.2 : | 23.7 J | 13. J |
| Potassium | mg/Kg-Dry | T | 4350. J | 3590. J | 2970. J | 2900. J | 3470. J | 3690. J |
| Selenium | mg/Kg-Dry | T | 0.14 J | 0.16 J | 0.096 J | <0.0082 J | 0.12 J | <0.0084 J |
| Silver | mg/Kg-Dry | T | 0.033 J | 0.015 J | 0.035 J | 0.1 J | 0.28 J | 0.11 J |
| Sodium | mg/Kg-Dry | T | <27.9 : | <86. : | 455. : | 360. : | <28.9 : | <89.7 : |
| Thallium | mg/Kg-Dry | T | 0.099 : | 0.036 : | 0.11 : | 0.18 : | 0.12 J | 0.16 J |
| Titanium | mg/Kg-Dry | T | 583. : | 282. : | 665. J | 438. : | 547. J | 444. : |
| Vanadium | mg/Kg-Dry | T | 22.1 : | 14.9 : | 23.8 J | 39.6 : | 35.1 J | 37.1 J |
| Zinc | mg/Kg-Dry | T | 48.5 : | 37.9 : | 46.4 J | 49.9 : | 138. J | 69.3 J |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10u

Appendix A

Wildlife Impact Study - Big Sagebrush Unwashed Below Ground

Revision No. 0

Validated Analytical Results

April 4, 2005

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| Parameter | Site ID | | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 | | |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|--|--|
| | Sample Date | | 5/31/2003 | 6/5/2003 | 5/29/2003 | 5/28/2003 | 6/4/2003 | 5/28/2003 | | |
| | Sample ID | | WRBS-3-T02N-PLTU | WRBS-1-T02N-PLTU | WRBS-2-T02N-PLTU | WTBS-3-T02N-PLTU | WTBS-1-T02N-PLTU | WTBS-2-T02N-PLTU | | |
| | Exposure Area | | CR | CR | CR | TL | TL | TL | | |
| Units | Fraction | | | | | | | | | |
| General Chemistry | | | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 5830. | 3970. J | 4090. | 3090. | 8460. J | 3110. | | |
| Laboratory Parameters | | | | | | | | | | |
| Solids, Percent | % | T | 65.6 | 67.2 | 66.2 | 53.6 | 56.4 | 56.5 | | |
| Metals | | | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 2030. | 1400. | 3470. | 4500. | 2210. | 954. | | |
| Antimony | mg/Kg-Dry | T | <0.042 | <0.014 J | <0.027 | <0.11 | <0.017 J | <0.057 | | |
| Arsenic | mg/Kg-Dry | T | 0.3 | 0.24 | 0.65 | 1.4 | 0.59 | 0.77 | | |
| Barium | mg/Kg-Dry | T | 33.2 | 28.7 | 36.5 | 142. | 28.8 | 33.7 | | |
| Beryllium | mg/Kg-Dry | T | 0.14 | 0.09 | 0.21 | <0.24 | 0.13 | <0.068 J | | |
| Boron | mg/Kg-Dry | T | 10.2 | 9.1 | 10.3 | 13. | 8.6 | 5.7 | | |
| Cadmium | mg/Kg-Dry | T | 0.41 | 0.99 | 0.32 | 0.56 | 0.29 | 0.54 | | |
| Calcium | mg/Kg-Dry | T | 5470. | 6970. | 7590. | 23000. | 6390. | 6070. | | |
| Chromium | mg/Kg-Dry | T | 5.8 | 2.7 | 6.4 | 5.7 | 3.6 | 2.5 | | |
| Cobalt | mg/Kg-Dry | T | 0.98 J | 0.6 J | 1.5 J | 1.3 J | 0.91 J | 1.1 J | | |
| Copper | mg/Kg-Dry | T | 11.8 | 8.8 | 10.9 | 26.3 | 16.1 | 20.4 | | |
| Iron | mg/Kg-Dry | T | 2530. | 1730. | 4290. | 4590. | 2110. | 1090. | | |
| Lead | mg/Kg-Dry | T | 1.5 | 0.9 | 2.3 | 6.5 | 1.8 | 2.5 | | |
| Magnesium | mg/Kg-Dry | T | 1290. | 1390. | 1860. | 3690. | 1410. | 1020. | | |
| Manganese | mg/Kg-Dry | T | 80.2 | 102. | 99.1 | 142. | 58.8 | 33.9 | | |
| Mercury | mg/Kg-Dry | T | <0.024 | <0.022 | <0.024 | <0.03 | <0.027 | <0.03 | | |
| Molybdenum | mg/Kg-Dry | T | 0.64 | <0.75 | <0.5 | 81.7 | 19.6 | 29.3 | | |
| Nickel | mg/Kg-Dry | T | 2.9 | 1.4 | 4.2 | 3.5 | 2.9 | 3.2 | | |
| Potassium | mg/Kg-Dry | T | 4670. J | 5760. J | 3470. J | 8700. J | 6250. J | 4840. J | | |
| Selenium | mg/Kg-Dry | T | 0.17 J | 0.16 J | 0.48 J | 0.056 J | 0.13 J | 0.11 J | | |
| Silver | mg/Kg-Dry | T | 0.012 J | 0.0076 J | 0.0067 J | 0.041 J | 0.039 J | 0.068 J | | |
| Sodium | mg/Kg-Dry | T | <189. | <132. | <191. | 548. | 711. | 153. J | | |
| Thallium | mg/Kg-Dry | T | 0.024 | 0.015 | 0.029 | 0.059 | 0.032 | 0.043 | | |
| Titanium | mg/Kg-Dry | T | 139. | 89. | 218. | 123. | 60.2 | 35. | | |
| Vanadium | mg/Kg-Dry | T | 6.4 | 2.5 | 8.3 | 25. | 4.8 | 4.8 | | |
| Zinc | mg/Kg-Dry | T | 20.5 | <22.5 | 20.6 | 46.7 | <23.8 | 16.3 | | |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10v

Appendix A

Wildlife Impact Study - Crested Wheatgrass Unwashed Below Ground

Revision No. 0

Validated Analytical Results

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| Parameter | Site ID | | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------------------------|---------------|---|------------------|----------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 6/5/2003 | 6/5/2003 | 6/4/2003 | 6/4/2003 | 6/5/2003 | 5/30/2003 |
| | Sample ID | | WRCW-1-T02N-PLTU | WRCW-2-T02N-PLT U | WTCW-2-T02N-PLTU | WTCW-1-T02N-PLTU | WRCW-3-T02N-PLTU | WTCW-3-T02N-PLTU |
| | Exposure Area | | CR | CR | TL | TL | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 3490. J | 3160. J | 5000. J | 2860. J | 4550. J | 2190. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 89.8 : | 87.8 : | 84.1 : | 85.4 : | 86.3 : | 89.3 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 6870. : | 7840. : | 13300. : | 10700. : | 10400. : | 12900. : |
| Antimony | mg/Kg-Dry | T | 0.022 J | 0.044 J | <0.06 J | 0.071 : | <0.017 J | 0.052 J |
| Arsenic | mg/Kg-Dry | T | 0.84 : | 1.1 : | 3.1 : | 2.8 : | 0.86 J | 2.8 : |
| Barium | mg/Kg-Dry | T | 56.4 : | 77.8 : | 78.2 : | 115. : | 74.9 : | 128. : |
| Beryllium | mg/Kg-Dry | T | 0.47 : | 0.53 : | 0.83 : | 0.58 : | 0.58 : | 0.75 : |
| Boron | mg/Kg-Dry | T | 3.3 : | 3.6 : | 1.7 : | 3.6 : | 4. : | 4.8 : |
| Cadmium | mg/Kg-Dry | T | 0.091 J | 0.2 J | 0.099 J | 0.069 : | 0.15 J | 0.31 : |
| Calcium | mg/Kg-Dry | T | 3770. : | 3220. : | 4000. : | 13200. : | 4340. : | 10900. : |
| Chromium | mg/Kg-Dry | T | 10.9 : | 11.8 : | 18.1 : | 11.6 : | 16.9 : | 21.7 : |
| Cobalt | mg/Kg-Dry | T | 2.4 J | 2.4 J | 2.9 J | 2.8 J | 2.3 J | 3.6 J |
| Copper | mg/Kg-Dry | T | 12.3 : | 13.6 : | 35.7 : | 15.9 : | 16. : | 44.9 : |
| Iron | mg/Kg-Dry | T | 8500. : | 9480. : | 13200. : | 10200. : | 12100. : | 13600. : |
| Lead | mg/Kg-Dry | T | 4.7 : | 6.8 : | 16.2 : | 9.1 : | 6.5 : | 27. : |
| Magnesium | mg/Kg-Dry | T | 2440. : | 2350. : | 3540. : | 3470. : | 3200. : | 4560. : |
| Manganese | mg/Kg-Dry | T | 200. : | 281. : | 398. : | 244. : | 252. : | 416. : |
| Mercury | mg/Kg-Dry | T | <0.022 J | <0.034 : | 0.029 : | 0.026 : | 0.023 J | 0.04 : |
| Molybdenum | mg/Kg-Dry | T | 0.66 : | 1.6 : | 28.3 : | 9.4 : | <0.37 : | 70.2 : |
| Nickel | mg/Kg-Dry | T | 9.9 : | 7.8 : | 14.6 : | 8.9 J | 9.3 : | 16.1 : |
| Potassium | mg/Kg-Dry | T | 2960. J | 3490. J | 2740. J | 2580. J | 2860. J | 2900. J |
| Selenium | mg/Kg-Dry | T | <0.018 J | <0.018 J | 0.18 J | 0.18 J | 0.24 J | 0.79 J |
| Silver | mg/Kg-Dry | T | 0.036 J | 0.027 J | 0.1 J | 0.056 J | 0.036 J | 0.13 J |
| Sodium | mg/Kg-Dry | T | 329. : | 326. : | <26.5 J | <27.4 J | <25.2 : | 292. : |
| Thallium | mg/Kg-Dry | T | 0.11 : | 0.093 : | 0.082 : | 0.087 : | 0.092 : | 0.13 : |
| Titanium | mg/Kg-Dry | T | 399. : | 431. : | 271. : | 244. : | 591. : | 402. : |
| Vanadium | mg/Kg-Dry | T | 15. : | 16.6 : | 20. : | 19.4 : | 20.9 : | 25.2 : |
| Zinc | mg/Kg-Dry | T | 44.1 : | 44.7 : | 57.5 : | 40. : | 46.2 : | 82.4 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10w

Appendix A

Wildlife Impact Study - Cut-Leaf Blazing-star Unwashed Below Ground

Revision No. 0

Validated Analytical Results

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| Parameter | Units | Exposure Area Fraction | Site ID | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------------------------|-----------|---------------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | Sample Date | 9/8/2003 | 9/8/2003 | 9/9/2003 | 9/9/2003 | 9/9/2003 | 9/8/2003 |
| | | | Sample ID | WTFO-3-T02N-PLTU | WTFO-1-T02N-PLTU | WRFO-3-T02N-PLTU | WRFO-1-T02N-PLTU | WRFO-2-T02N-PLTU | WTFO-2-T02N-PLTU |
| | | | | TL | TL | CR | CR | CR | TL |
| General Chemistry | | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | | 10600. : | 3360. : | 18000. : | 7590. J | 8100. J | 9040. : |
| Laboratory Parameters | | | | | | | | | |
| Solids, Percent | % | T | | 19.7 : | 32.7 : | 21.6 : | 32.4 : | 28.7 : | 24.6 : |
| Metals | | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | | 3500. : | 6330. : | 2370. : | 3660. : | 2770. : | 4120. : |
| Antimony | mg/Kg-Dry | T | | <0.048 : | <0.052 : | <0.045 : | <0.031 : | <0.034 : | <0.04 : |
| Arsenic | mg/Kg-Dry | T | | 1.3 : | 1.2 : | 0.31 J | 0.5 : | 0.41 : | 0.84 : |
| Barium | mg/Kg-Dry | T | | 52. : | 42.1 : | 68.2 : | 85.3 : | 76.6 : | 67.2 : |
| Beryllium | mg/Kg-Dry | T | | 0.23 : | 0.48 : | <0.059 J | 0.13 : | 0.12 : | 0.2 : |
| Boron | mg/Kg-Dry | T | | 14. : | 11.2 : | 13.2 : | 12.5 : | 14.5 : | 14.4 : |
| Cadmium | mg/Kg-Dry | T | | 0.34 : | 0.25 : | 0.23 : | 0.31 : | 0.38 : | 0.17 : |
| Calcium | mg/Kg-Dry | T | | 17600. : | 12000. : | 30900. : | 37800. : | 34400. : | 15000. : |
| Chromium | mg/Kg-Dry | T | | 11. : | 18.8 : | 3.1 : | 5.6 : | 4.1 : | 6.4 : |
| Cobalt | mg/Kg-Dry | T | | 2.6 J | 3. J | 0.95 J | 1.2 J | 0.83 J | 1.5 J |
| Copper | mg/Kg-Dry | T | | 25. : | 36.1 : | 8.2 : | 15. : | 10. : | 9.6 : |
| Iron | mg/Kg-Dry | T | | 5500. : | 9420. : | 2670. : | 3970. : | 3280. : | 4120. : |
| Lead | mg/Kg-Dry | T | | 8. : | 12.4 : | 1.3 : | 1.8 : | 1.2 : | 4. : |
| Magnesium | mg/Kg-Dry | T | | 4850. : | 5060. : | 8050. : | 7560. : | 8030. : | 4520. : |
| Manganese | mg/Kg-Dry | T | | 221. : | 269. : | 95.5 : | 121. : | 96.9 : | 117. : |
| Mercury | mg/Kg-Dry | T | | <0.075 : | <0.045 : | 0.068 : | <0.05 : | <0.055 : | <0.06 : |
| Molybdenum | mg/Kg-Dry | T | | 24.5 : | 63. : | 0.59 : | 0.75 : | 0.83 : | 7.6 : |
| Nickel | mg/Kg-Dry | T | | 7. : | 9.7 : | 3.3 : | 3.8 : | 2.7 : | 4. : |
| Potassium | mg/Kg-Dry | T | | 13600. J | 8210. J | 12600. J | 9880. J | 11100. J | 13400. J |
| Selenium | mg/Kg-Dry | T | | 0.16 J | 0.19 J | 0.77 J | 0.47 J | 0.52 J | 0.64 J |
| Silver | mg/Kg-Dry | T | | 0.14 J | 0.13 J | 0.014 J | 0.021 J | 0.014 J | 0.028 J |
| Sodium | mg/Kg-Dry | T | | <358. : | 800. : | 1000. : | 603. : | 1180. : | <460. : |
| Thallium | mg/Kg-Dry | T | | 0.12 : | 0.14 : | 0.037 : | 0.066 : | 0.069 : | 0.08 : |
| Titanium | mg/Kg-Dry | T | | 138. : | 196. : | 117. : | 214. : | 160. : | 116. : |
| Vanadium | mg/Kg-Dry | T | | 11. : | 15.5 : | 5.9 : | 9.7 : | 6.6 : | 7.6 : |
| Zinc | mg/Kg-Dry | T | | 121. : | 86.4 : | 40.5 : | 30. : | 36.2 J | 36. : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10x

**Wildlife Impact Study - Rubber Rabbitbrush Unwashed Below Ground
Validated Analytical Results**

| Parameter | Site ID | | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 6/2/2003 | 5/31/2003 | 6/3/2003 | 6/4/2003 | 5/30/2003 | 6/5/2003 |
| | Sample ID | | WRRR-3-T02N-PLTU | WRRR-1-T02N-PLTU | WTRR-1-T02N-PLTU | WTRR-2-T02N-PLTU | WTRR-3-T02N-PLTU | WRRR-2-T02N-PLTU |
| | Exposure Area | | CR | CR | TL | TL | TL | CR |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 5540. J | 8460. J | - | 9660. J | 4810. : | 7090. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 56.1 : | 41.3 : | 47.4 : | 49.8 : | 47.9 : | 46.4 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 4050. : | 1310. J | 1140. : | 1570. : | 3500. : | 3370. : |
| Antimony | mg/Kg-Dry | T | 0.027 : | <0.032 : | 0.023 : | <0.022 : | 0.081 : | <0.022 J |
| Arsenic | mg/Kg-Dry | T | 0.34 : | 0.24 : | 0.51 : | 0.44 J | 1.5 : | 0.28 : |
| Barium | mg/Kg-Dry | T | 33.4 : | 33.9 : | 12.1 : | 22.2 : | 94.6 : | 38.5 : |
| Beryllium | mg/Kg-Dry | T | <0.18 : | <0.061 : | <0.021 J | 0.13 : | 0.17 : | 0.2 : |
| Boron | mg/Kg-Dry | T | 12.3 : | 27.1 : | 11.9 : | 13. : | 13.5 : | 16.5 : |
| Cadmium | mg/Kg-Dry | T | 0.15 : | 0.32 : | 2.6 : | 0.96 : | 0.27 : | 0.3 : |
| Calcium | mg/Kg-Dry | T | 7290. : | 13000. : | 6740. : | 7300. : | 17100. : | 4410. : |
| Chromium | mg/Kg-Dry | T | 7.1 : | 3.2 J | 4. : | 4.4 : | 5.2 : | 7.4 : |
| Cobalt | mg/Kg-Dry | T | 1.3 J | 0.68 J | 1.5 J | 0.96 J | 1.7 J | 1.2 J |
| Copper | mg/Kg-Dry | T | 20.5 : | 14.1 : | 40.2 : | 37. : | 41. : | 18.9 : |
| Iron | mg/Kg-Dry | T | 4160. : | 1420. J | 2000. : | 2200. : | 3250. : | 4020. : |
| Lead | mg/Kg-Dry | T | 2. : | 0.8 : | 20. : | 4.6 : | 4.6 : | 1.7 : |
| Magnesium | mg/Kg-Dry | T | 1950. : | 4830. : | 1410. : | 2020. : | 3150. : | 2780. : |
| Manganese | mg/Kg-Dry | T | 75. : | 65.9 J | 116. : | 79.6 : | 78.1 : | 90. : |
| Mercury | mg/Kg-Dry | T | <0.027 : | <0.039 : | <0.034 : | <0.034 : | <0.031 : | <0.035 : |
| Molybdenum | mg/Kg-Dry | T | 0.66 : | 0.41 J | 93.6 : | 202. : | 51.3 : | <0.3 : |
| Nickel | mg/Kg-Dry | T | 3.7 : | 2.4 : | 4.7 : | 3.4 : | 7.7 : | 3.5 : |
| Potassium | mg/Kg-Dry | T | 4320. J | 15700. J | 8510. J | 7180. J | 6690. J | 10400. J |
| Selenium | mg/Kg-Dry | T | 0.39 J | 0.23 J | 1.2 : | 0.12 J | 0.065 J | 0.39 J |
| Silver | mg/Kg-Dry | T | 0.023 J | 0.009 J | 0.13 J | 0.072 J | 0.048 J | 0.016 J |
| Sodium | mg/Kg-Dry | T | 288. : | 405. J | <144. : | 214. J | 700. : | <145. : |
| Thallium | mg/Kg-Dry | T | 0.037 : | 0.015 : | 0.038 : | 0.048 : | 0.067 : | 0.03 : |
| Titanium | mg/Kg-Dry | T | 211. : | 76.8 : | 55.5 : | 70. : | 95.6 : | 224. : |
| Vanadium | mg/Kg-Dry | T | 8. : | 6.1 : | 3.4 : | 3. : | 9.8 : | 7.8 : |
| Zinc | mg/Kg-Dry | T | 29.3 : | 28.8 : | 109. : | 63.4 : | <40.4 : | <31.3 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10y

Appendix A

Wildlife Impact Study - Sand Dropseed Unwashed Below Ground

Revision No. 0

Validated Analytical Results

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| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------------------------|-----------|--|-------------------------------------|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | 5/31/2003 WRSD-3-T02N-PLTU CR | 9/7/2003 WRSD-1R-T02N-PLT U CR | 6/3/2003 WTSD-3-T02N-PLTU TL | 6/3/2003 WTSD-1-T02N-PLTU TL | 6/4/2003 WTSD-2-T02N-PLTU TL | 6/3/2003 WRSD-2-T02N-PLTU CR |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4180. | 2840. J | - | - | 4510. J | - |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 98.8 | 74.3 | 87.1 | 82.2 | 86.3 | 89.8 |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 6460. | 13500. | 8370. | 2960. | 9190. | 2960. |
| Antimony | mg/Kg-Dry | T | <0.033 | <0.02 J | 0.11 | 0.054 | <0.072 J | 0.028 |
| Arsenic | mg/Kg-Dry | T | 0.34 | 0.69 J | 3. | 0.78 | 2. | 0.31 |
| Barium | mg/Kg-Dry | T | 56.2 | 111. | 117. | 28.4 | 87.2 | 34.4 |
| Beryllium | mg/Kg-Dry | T | 0.45 | 0.66 | 0.52 | 0.2 | 0.51 | 0.14 J |
| Boron | mg/Kg-Dry | T | 3.1 | 2. J | 5.5 | 2.8 | 4.5 | 6.3 |
| Cadmium | mg/Kg-Dry | T | 0.064 | 0.035 | 0.44 | 1.7 | 0.17 J | 0.14 |
| Calcium | mg/Kg-Dry | T | 3160. | 23200. | 17000. | 5550. | 11200. | 8400. |
| Chromium | mg/Kg-Dry | T | 10.9 | 20.3 | 15.5 | 7.1 | 11. | 4.3 |
| Cobalt | mg/Kg-Dry | T | 2. J | 2.7 J | 2.5 J | 1.3 J | 2.3 J | 1.2 J |
| Copper | mg/Kg-Dry | T | 12.6 | 22.8 | 78.6 | 56.5 | 19.3 | 12. |
| Iron | mg/Kg-Dry | T | 7920. | 16200. | 9360. | 3350. | 8800. | 3280. |
| Lead | mg/Kg-Dry | T | 4.9 | 8.4 | 16. | 31.1 | 9.5 | 1.7 |
| Magnesium | mg/Kg-Dry | T | 2120. | 7680. | 3690. | 1320. | 2770. | 2060. |
| Manganese | mg/Kg-Dry | T | 213. | 297. | 248. | 146. | 195. | 92.7 |
| Mercury | mg/Kg-Dry | T | 0.032 | 0.038 | <0.018 | <0.02 | 0.042 | 0.031 |
| Molybdenum | mg/Kg-Dry | T | <0.84 | 0.35 J | 94.6 | 73.8 | 71.2 | 4.7 |
| Nickel | mg/Kg-Dry | T | 5.8 | 12.2 | 10.2 | 4.9 | 8.6 | 3. |
| Potassium | mg/Kg-Dry | T | 2330. J | 4380. J | 2870. J | 2670. J | 2650. J | 2840. J |
| Selenium | mg/Kg-Dry | T | 0.2 J | 0.074 J | 1.1 | 1.2 | 0.22 J | 1.4 |
| Silver | mg/Kg-Dry | T | 0.021 J | 0.043 J | 0.18 J | 0.15 J | 0.086 J | 0.012 J |
| Sodium | mg/Kg-Dry | T | 294. | <30.7 | 193. | <33.3 | <35.7 | 168. |
| Thallium | mg/Kg-Dry | T | 0.06 | 0.14 | 0.078 J | 0.037 | 0.073 | 0.023 |
| Titanium | mg/Kg-Dry | T | 398. | 739. | 286. | 105. | 198. | 148. |
| Vanadium | mg/Kg-Dry | T | 15.2 | 29.1 | 22.9 | 6.8 | 18. | 9.7 |
| Zinc | mg/Kg-Dry | T | 41.3 | 58. | 118. | 117. | 74.2 | 22.6 |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10z

Wildlife Impact Study - Sleepy Grass Unwashed Below Ground
Validated Analytical Results

Appendix A

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| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T02N-PLTU | WTSG-1-T02N-PLTU | WTSG-2-T02N-PLTU | WRSG-1-T02N-PLTU | WRSG-2-T02N-PLTU | WTSG-3-T02N-PLTU |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 10300. : | 5810. : | 5250. : | 6470. J | 5930. : | 3940. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 85.6 : | 83.8 : | 75.7 : | 86.7 : | - | 79. : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 5190. : | 8560. : | 7880. : | 5470. : | 5020. : | 14600. : |
| Antimony | mg/Kg-Dry | T | <0.041 : | 0.11 J | <0.08 : | 0.025 J | <0.037 : | <0.063 : |
| Arsenic | mg/Kg-Dry | T | 0.5 : | 3.6 : | 1.1 : | 0.37 : | 0.73 : | 2.2 : |
| Barium | mg/Kg-Dry | T | 75.6 : | 243. : | 150. : | 45.2 : | 58.5 : | 134. : |
| Beryllium | mg/Kg-Dry | T | 0.3 : | 0.44 : | 0.5 : | 0.32 : | 0.28 : | 0.67 : |
| Boron | mg/Kg-Dry | T | 5.9 : | 7.1 : | 5.9 : | 5.6 : | 5.4 : | 4.3 : |
| Cadmium | mg/Kg-Dry | T | 0.035 : | <0.0046 : | 0.22 : | 0.089 J | 0.094 : | 0.19 : |
| Calcium | mg/Kg-Dry | T | 21400. : | 31400. : | 24700. : | 4180. : | 10900. : | 8660. : |
| Chromium | mg/Kg-Dry | T | 6.7 : | 8.3 : | 13.2 : | 10.8 : | 8.4 : | 15.8 : |
| Cobalt | mg/Kg-Dry | T | 1.7 J | 3.2 J | 2. J | 1.1 J | 2.9 J | 1.8 J |
| Copper | mg/Kg-Dry | T | 15.8 : | 14.3 : | 111. : | 12.9 : | 13.9 : | 30.1 : |
| Iron | mg/Kg-Dry | T | 6440. : | 7240. : | 8140. : | 6510. : | 6800. : | 12400. : |
| Lead | mg/Kg-Dry | T | 3.4 : | 5. : | 22. : | 3.4 : | 3.4 : | 14.3 : |
| Magnesium | mg/Kg-Dry | T | 3520. : | 4240. : | 3910. : | 2080. : | 3520. : | 3410. : |
| Manganese | mg/Kg-Dry | T | 145. : | 146. : | 179. : | 170. : | 170. : | 277. : |
| Mercury | mg/Kg-Dry | T | <0.019 : | 0.025 : | <0.021 : | 0.029 : | <0.021 : | 0.035 : |
| Molybdenum | mg/Kg-Dry | T | 3. : | 30.5 : | 75.1 : | 2.1 : | 1.8 : | 100. : |
| Nickel | mg/Kg-Dry | T | 3.3 : | 9.2 : | 6.4 : | 3.6 : | 7.9 : | 6.6 : |
| Potassium | mg/Kg-Dry | T | 2420. J | 2510. J | 3200. J | 3240. J | 4550. J | 3240. J |
| Selenium | mg/Kg-Dry | T | 0.064 J | 0.86 J | 0.034 J | 0.17 J | 0.3 J | 0.16 J |
| Silver | mg/Kg-Dry | T | 0.016 J | 0.051 J | 0.13 J | 0.013 J | 0.018 J | 0.071 J |
| Sodium | mg/Kg-Dry | T | 258. : | 243. : | 164. : | 272. : | 268. : | 92.2 J |
| Thallium | mg/Kg-Dry | T | 0.033 : | 0.11 : | 0.062 : | 0.029 : | 0.062 : | 0.075 : |
| Titanium | mg/Kg-Dry | T | 259. : | 200. : | 234. : | 334. : | 311. : | 392. : |
| Vanadium | mg/Kg-Dry | T | 16. : | 22.4 : | 20.4 : | 12.6 : | 12.9 : | 26.7 : |
| Zinc | mg/Kg-Dry | T | 23.7 : | <26. : | 57. : | 28.9 : | 25. : | 58.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10aa

Wildlife Impact Study - Western Wheatgrass Unwashed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------------------------|-----------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | | | 6/2/2003 | 6/3/2003 | 5/31/2003 | 5/28/2003 | 6/4/2003 | 6/5/2003 |
| | | | WRWW-2-T02N-PLT | WRWW-1-T02N-PLT | WRWW-3-T02N-PLT | WTWW-2-T02N-PLT | WTWW-3-T02N-PLT | WTWW-1-T02N-PLT |
| | | | U CR | U CR | U CR | U TL | U TL | U TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 3710. J | - | 5250. : | 4750. J | 4960. J | 4690. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 70.3 : | 80.3 : | 80.7 : | 70.9 : | 70.6 : | 79.7 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 7600. : | 2480. : | 3020. : | 10400. : | 11900. : | 9590. : |
| Antimony | mg/Kg-Dry | T | 0.031 J | 0.05 : | <0.057 : | <0.092 : | <0.051 : | 0.072 : |
| Arsenic | mg/Kg-Dry | T | 0.61 : | 0.39 : | 0.32 : | 3.8 : | 2.8 : | 3.8 : |
| Barium | mg/Kg-Dry | T | 53.9 : | 48.6 : | 56.8 : | 130. : | 131. : | 71.3 : |
| Beryllium | mg/Kg-Dry | T | 0.46 : | 0.08 J | 0.16 : | 0.63 : | 0.63 : | 0.65 : |
| Boron | mg/Kg-Dry | T | 4. : | 6.4 : | 12.7 : | 5.8 : | 3.8 : | 4.3 : |
| Cadmium | mg/Kg-Dry | T | 0.064 J | 0.13 : | 0.053 : | 0.32 : | 0.14 : | 0.2 : |
| Calcium | mg/Kg-Dry | T | 4210. : | 17500. : | 22200. : | 23500. : | 13700. : | 12000. : |
| Chromium | mg/Kg-Dry | T | 14.4 : | 3.2 : | 8. : | 12.4 : | 16.5 : | 16.7 : |
| Cobalt | mg/Kg-Dry | T | 1.7 J | 1.2 J | 1.7 J | 3.4 J | 1.4 J | 3.2 J |
| Copper | mg/Kg-Dry | T | 13.4 : | 12.3 : | 12. : | 36.6 : | 39.4 : | 34.7 : |
| Iron | mg/Kg-Dry | T | 8570. : | 2700. : | 3260. : | 12200. : | 10800. : | 13000. : |
| Lead | mg/Kg-Dry | T | 4.3 : | 1.2 : | 1.9 : | 26.3 : | 17. : | 13.6 : |
| Magnesium | mg/Kg-Dry | T | 2390. : | 4060. : | 6120. : | 4200. : | 3420. : | 4940. : |
| Manganese | mg/Kg-Dry | T | 163. : | 108. : | 143. : | 335. : | 266. : | 268. : |
| Mercury | mg/Kg-Dry | T | <0.024 : | <0.02 : | 0.03 : | <0.023 : | <0.023 : | <0.035 : |
| Molybdenum | mg/Kg-Dry | T | 0.69 : | 1.1 : | <1.7 : | 41. : | 68.2 : | 27.2 : |
| Nickel | mg/Kg-Dry | T | 5.4 : | 4.4 : | 4.4 : | 9.7 : | 5.4 : | 13.8 : |
| Potassium | mg/Kg-Dry | T | 4230. J | 4190. J | 4520. J | 3450. J | 4990. J | 4340. J |
| Selenium | mg/Kg-Dry | T | 0.21 J | 1.4 : | 0.37 J | <0.021 J | 0.18 J | <0.02 J |
| Silver | mg/Kg-Dry | T | 0.019 J | 0.011 J | 0.019 J | 0.1 J | 0.085 J | 0.13 J |
| Sodium | mg/Kg-Dry | T | 356. : | 264. : | <201. : | 158. : | 103. J | 261. : |
| Thallium | mg/Kg-Dry | T | 0.056 : | 0.034 : | 0.037 : | 0.14 : | 0.076 : | 0.088 : |
| Titanium | mg/Kg-Dry | T | 436. : | 112. : | 169. : | 252. : | 320. : | 275. : |
| Vanadium | mg/Kg-Dry | T | 15.6 : | 11.5 : | 10.9 : | 24.1 : | 23.2 : | 26.5 : |
| Zinc | mg/Kg-Dry | T | 32.3 : | 23.6 : | 19.4 : | 80.7 : | 67.6 : | 69.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10bb

Wildlife Impact Study - Golden Crownbeard Washed Aboveground
Validated Analytical Results

| Parameter | Site ID | | TSS14-5 | WR-5 | WR-6 | WR-7 | WT-2 | WT-6 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 9/8/2003 | 9/9/2003 | 9/9/2003 | 9/9/2003 | 9/8/2003 | 9/8/2003 |
| | Sample ID | | WTAS-1-T01N-PLTW | WRAS-2-T01N-PLTW | WRAS-1-T01N-PLTW | WRAS-3-T01N-PLTW | WTAS-3-T01N-PLTW | WTAS-2-T01N-PLTW |
| | Exposure Area | | TL | CR | CR | CR | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 34100. : | 35200. : | 45100. : | 26200. J | 27200. : | 25700. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 14.2 : | 12.8 : | 14. : | 13.6 : | 13.5 : | 17.6 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 366. : | 381. : | 275. : | 307. : | <82.9 : | 411. : |
| Antimony | mg/Kg-Dry | T | <0.069 : | <0.075 : | <0.071 : | <0.069 : | <0.071 : | <0.056 : |
| Arsenic | mg/Kg-Dry | T | 0.33 J | 0.085 J | 0.041 J | 0.11 J | 0.79 : | 0.2 J |
| Barium | mg/Kg-Dry | T | 55. : | 71.5 : | 42.9 : | 30.7 : | 38.6 : | 8.3 : |
| Beryllium | mg/Kg-Dry | T | <0.093 : | <0.12 J | <0.11 J | <0.1 J | <0.1 : | <0.083 : |
| Boron | mg/Kg-Dry | T | 37.1 : | 52.3 : | 32.1 : | 23.6 : | 28.6 : | 34.4 : |
| Cadmium | mg/Kg-Dry | T | 0.51 : | 0.21 : | 0.34 : | 0.12 : | 0.67 : | 0.61 : |
| Calcium | mg/Kg-Dry | T | 24700. : | 34700. : | 25300. : | 17200. : | 21600. : | 20300. : |
| Chromium | mg/Kg-Dry | T | 1.3 : | 4.7 : | 0.86 : | 1.9 : | <0.66 : | 1.6 : |
| Cobalt | mg/Kg-Dry | T | 0.093 J | 0.24 J | 0.19 J | 0.21 J | 1.4 J | 0.34 J |
| Copper | mg/Kg-Dry | T | 14.3 : | 11.5 : | 6.9 : | 12.1 : | 13.6 : | 15. : |
| Iron | mg/Kg-Dry | T | 382. : | 512. : | 377. : | 401. : | <116. : | 508. : |
| Lead | mg/Kg-Dry | T | 0.5 : | 0.35 : | 0.25 : | 0.3 : | 3. : | 0.94 : |
| Magnesium | mg/Kg-Dry | T | 7860. : | 7250. : | 5200. : | 4160. : | 3640. : | 5040. : |
| Manganese | mg/Kg-Dry | T | 67.1 : | 46.9 : | 35. : | 29.3 : | 37.1 : | 62.8 : |
| Mercury | mg/Kg-Dry | T | <0.11 : | <0.12 : | <0.11 : | <0.11 : | <0.11 : | <0.089 : |
| Molybdenum | mg/Kg-Dry | T | 151. : | 2.5 : | 1.4 : | 1.7 : | 166. : | 85. : |
| Nickel | mg/Kg-Dry | T | 0.24 : | 1.7 : | 0.54 : | 1.2 : | 4.6 : | 1.5 : |
| Potassium | mg/Kg-Dry | T | 31600. J | 37500. J | 33100. J | 30800. J | 47600. J | 26900. J |
| Selenium | mg/Kg-Dry | T | 1. J | 0.38 J | 0.12 J | 0.39 J | 0.29 J | 0.47 J |
| Silver | mg/Kg-Dry | T | <0.014 J | <0.015 J | <0.014 J | <0.014 J | 0.064 J | 0.012 J |
| Sodium | mg/Kg-Dry | T | <161. : | <193. : | <176. : | <168. : | <171. : | <139. : |
| Thallium | mg/Kg-Dry | T | <0.014 : | <0.015 : | <0.014 : | <0.014 : | 0.036 : | 0.072 : |
| Titanium | mg/Kg-Dry | T | 10.7 : | 18.5 : | 15. : | 15. : | <1.7 : | 15.6 : |
| Vanadium | mg/Kg-Dry | T | 0.17 : | 0.68 : | 0.53 : | 0.51 : | 4.1 : | 0.89 : |
| Zinc | mg/Kg-Dry | T | 82.1 : | 24.6 : | 27.9 : | 82.1 : | 92.1 : | 91.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10cc
Wildlife Impact Study - Blue Grama Washed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------------------------|---------------|---|------------------|----------------------------|----------------------------|------------------|------------------|------------------|
| | Sample Date | | 9/6/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | Sample ID | | WRBG-3-T01N-PLTW | WRBG-1-T01N-PLT W CR | WRBG-4-T01N-PLT W CR | WTBG-1-T01N-PLTW | WTBG-3-T01N-PLTW | WTBG-2-T01N-PLTW |
| | Exposure Area | | CR | | | TL | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 16500. J | 14600. J | 13800. J | 13100. J | 12800. : | 10200. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 37.1 : | 38.8 : | 32.2 : | 32.6 : | 33.7 : | 37. : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 481. : | 197. : | 403. : | 497. : | 190. : | 330. : |
| Antimony | mg/Kg-Dry | T | <0.027 : | <0.025 : | <0.031 : | <0.03 : | <0.059 : | <0.027 : |
| Arsenic | mg/Kg-Dry | T | 0.051 : | 0.038 : | 0.066 : | 0.39 J | 0.076 : | 0.23 : |
| Barium | mg/Kg-Dry | T | 30.3 : | 15.4 : | 30.6 : | 47.3 : | 12.6 : | 34.3 : |
| Beryllium | mg/Kg-Dry | T | <0.054 : | <0.051 : | <0.059 : | <0.042 : | <0.059 : | <0.054 : |
| Boron | mg/Kg-Dry | T | 17.8 : | 11.3 : | 30.6 : | 20. : | 14.1 : | 20.8 : |
| Cadmium | mg/Kg-Dry | T | 0.016 : | 0.016 : | <0.013 : | 0.02 : | 0.035 : | <0.011 : |
| Calcium | mg/Kg-Dry | T | 7000. : | 5900. : | 7130. : | 5270. : | 5970. : | 5030. : |
| Chromium | mg/Kg-Dry | T | 1.7 : | <1.1 : | <1.2 : | 1.4 : | 2.3 : | 4.1 : |
| Cobalt | mg/Kg-Dry | T | 0.21 J | 0.087 J | 0.22 J | 0.42 J | 0.24 J | 0.25 J |
| Copper | mg/Kg-Dry | T | <6.8 : | 6.7 : | 6.6 : | 7. : | 12.9 : | 7.6 : |
| Iron | mg/Kg-Dry | T | 603. : | 274. : | 491. : | 542. : | 409. : | 338. : |
| Lead | mg/Kg-Dry | T | 0.32 : | 0.11 : | 0.25 : | 1.2 : | 1.8 : | 0.35 : |
| Magnesium | mg/Kg-Dry | T | 1940. : | 1900. : | 1830. : | 1740. : | 1100. : | 1450. : |
| Manganese | mg/Kg-Dry | T | 64.9 : | 49.5 : | 53.8 : | 70.3 : | 69.7 : | 63.2 : |
| Mercury | mg/Kg-Dry | T | <0.041 : | <0.041 : | <0.053 : | <0.045 : | <0.044 : | <0.041 : |
| Molybdenum | mg/Kg-Dry | T | 2.1 : | 2.8 : | 3.4 : | 49.1 : | 90.9 : | 54.9 : |
| Nickel | mg/Kg-Dry | T | 1. : | 1.3 : | 0.78 : | 1.5 : | 2.4 : | 2.1 : |
| Potassium | mg/Kg-Dry | T | 12300. J | 12000. J | 8780. J | 8820. J | 9680. J | 9700. J |
| Selenium | mg/Kg-Dry | T | 0.3 J | 0.36 J | 0.26 J | 0.61 J | 0.12 J | 0.32 J |
| Silver | mg/Kg-Dry | T | <0.0054 J | <0.0051 J | <0.0063 J | 0.0076 J | 0.024 J | 0.0059 J |
| Sodium | mg/Kg-Dry | T | <145. : | <118. : | <122. : | <71.8 : | <174. : | <116. : |
| Thallium | mg/Kg-Dry | T | 0.0068 : | <0.0051 : | <0.0063 : | 0.0088 : | 0.014 : | <0.0054 : |
| Titanium | mg/Kg-Dry | T | 25.7 : | 8.7 : | 18.8 : | 14.5 : | 11.5 : | 8.4 : |
| Vanadium | mg/Kg-Dry | T | 0.76 : | 0.36 : | 0.59 : | 1.4 : | 1.6 : | 0.7 : |
| Zinc | mg/Kg-Dry | T | 51.6 : | 46.7 : | 29.1 : | 35.2 : | 141. : | 47.8 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10dd
Wildlife Impact Study - Big Sagebrush Washed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/31/2003 | 6/5/2003 | 5/29/2003 | 5/28/2003 | 6/4/2003 | 5/28/2003 |
| | Sample ID | | WRBS-3-T01N-PLTW | WRBS-1-T01N-PLTW | WRBS-2-T01N-PLTW | WTBS-3-T01N-PLTW | WTBS-1-T01N-PLTW | WTBS-2-T01N-PLTW |
| | Exposure Area | | CR | CR | CR | TL | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 19000. : | 16000. J | 23000. : | 13300. : | 53500. J | 14500. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 23.9 : | 35.6 : | 25.8 : | 27.6 : | 30.7 : | 24.4 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 255. J | 260. : | 360. : | 195. : | 105. : | 109. : |
| Antimony | mg/Kg-Dry | T | <0.041 : | <0.026 J | <0.038 : | <0.035 : | <0.032 J | <0.041 : |
| Arsenic | mg/Kg-Dry | T | 0.075 : | 0.075 : | 0.065 : | 0.1 : | 0.13 : | 0.23 : |
| Barium | mg/Kg-Dry | T | 11.7 : | 6.9 : | 12.7 : | 14.6 : | 7.4 : | 9.6 : |
| Beryllium | mg/Kg-Dry | T | <0.042 : | <0.033 : | <0.062 : | <0.033 J | <0.029 : | <0.039 J |
| Boron | mg/Kg-Dry | T | 34.2 : | 24.4 : | 33.8 : | 31.1 : | 22.3 : | 24.2 : |
| Cadmium | mg/Kg-Dry | T | 0.2 : | 0.16 : | 0.14 : | 0.43 : | 0.28 : | 0.58 : |
| Calcium | mg/Kg-Dry | T | 7170. : | 5640. : | 9540. : | 8140. : | 7710. : | 7290. : |
| Chromium | mg/Kg-Dry | T | 2.6 : | 0.5 : | 1. : | 0.64 : | 0.32 : | 0.71 : |
| Cobalt | mg/Kg-Dry | T | 0.17 J | 0.13 J | 0.13 J | 0.13 J | 0.1 J | 0.083 J |
| Copper | mg/Kg-Dry | T | 13.7 : | 10.3 : | 16.9 : | 34.3 : | 17.4 : | 30. : |
| Iron | mg/Kg-Dry | T | 325. : | 278. : | 412. : | 253. : | 132. : | 132. : |
| Lead | mg/Kg-Dry | T | 0.29 : | 0.21 : | 0.19 : | <1. : | 0.24 : | <0.54 : |
| Magnesium | mg/Kg-Dry | T | 1570. : | 1550. : | 2220. : | 2090. : | 1830. : | 1660. : |
| Manganese | mg/Kg-Dry | T | 54.2 : | 49.4 : | 65.8 : | 96.8 : | 40.6 : | 56.7 : |
| Mercury | mg/Kg-Dry | T | <0.067 : | <0.044 : | <0.062 : | <0.057 : | <0.052 : | <0.067 : |
| Molybdenum | mg/Kg-Dry | T | 1. : | <0.78 : | 1. : | 69.6 : | 17.1 : | 110. : |
| Nickel | mg/Kg-Dry | T | 1.6 : | 1. : | 0.85 : | 0.96 : | 2.3 : | 1.6 : |
| Potassium | mg/Kg-Dry | T | 26700. J | 16300. J | 24000. J | 25600. J | 16000. J | 27500. J |
| Selenium | mg/Kg-Dry | T | 0.3 J | 0.28 J | 0.85 J | 0.11 J | 0.45 J | 0.67 J |
| Silver | mg/Kg-Dry | T | <0.0083 J | <0.0053 J | <0.0077 J | 0.0096 J | <0.0065 J | <0.0083 J |
| Sodium | mg/Kg-Dry | T | <111. : | <127. : | <78.1 : | <35.4 J | <275. : | <42.9 J |
| Thallium | mg/Kg-Dry | T | <0.0083 : | <0.0053 : | <0.0077 : | <0.0068 : | <0.0065 : | 0.019 : |
| Titanium | mg/Kg-Dry | T | 13.3 : | 10. : | 16.5 : | 7.1 : | 3.5 : | 3.7 : |
| Vanadium | mg/Kg-Dry | T | 0.54 : | 0.47 : | 0.54 : | 0.43 : | 0.32 : | 0.31 : |
| Zinc | mg/Kg-Dry | T | 34.6 J | <34.7 : | 33.8 : | 109. : | 58.1 : | 76.2 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10ee

Wildlife Impact Study - Crested Wheatgrass Washed Aboveground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------------------------|-----------|--|--|--|--|--|--|---|
| | | | 6/5/2003 WRCW-1-T01N-PLT W CR | 6/5/2003 WRCW-2-T01N-PLT W CR | 6/4/2003 WTCW-2-T01N-PLT W TL | 6/4/2003 WTCW-1-T01N-PLT W TL | 6/5/2003 WRCW-3-T01N-PLT W CR | 5/30/2003 WTCW-3-T01N-PLT W TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 22800. J | 34100. J | 18200. J | 12700. J | 30500. J | 10800. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 27. : | 41.1 : | 34.4 : | 36.2 : | 27.2 : | 37.6 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 94.1 : | 69.8 : | 324. : | 96.7 : | 87.8 : | 332. : |
| Antimony | mg/Kg-Dry | T | <0.036 : | <0.023 : | <0.029 : | <0.027 : | <0.036 J | <0.026 : |
| Arsenic | mg/Kg-Dry | T | 0.063 : | 0.041 : | <0.35 J | 0.72 J | 0.067 : | 0.13 : |
| Barium | mg/Kg-Dry | T | 33. : | 14.4 : | 6.2 : | 12.2 : | 23. : | 6.8 : |
| Beryllium | mg/Kg-Dry | T | <0.034 : | <0.022 : | <0.029 : | <0.027 : | <0.044 : | <0.026 : |
| Boron | mg/Kg-Dry | T | 4.1 : | 5.6 : | 4.4 : | 7.5 : | 5.2 : | 4.7 : |
| Cadmium | mg/Kg-Dry | T | 0.059 : | 0.039 : | 0.026 : | <0.011 : | 0.067 : | 0.076 : |
| Calcium | mg/Kg-Dry | T | 5700. : | 3830. : | 3410. : | 2860. : | 5070. : | 3610. : |
| Chromium | mg/Kg-Dry | T | 0.67 : | 0.41 : | <0.76 J | 0.26 J | 0.56 : | 1.3 : |
| Cobalt | mg/Kg-Dry | T | 0.067 J | 0.041 J | 0.14 J | 0.05 J | 0.067 J | 0.22 J |
| Copper | mg/Kg-Dry | T | 8.9 : | 4.9 : | 6.2 : | 5.3 : | 8.5 : | 8.2 : |
| Iron | mg/Kg-Dry | T | 158. : | 105. : | 332. : | 105. : | 153. : | 408. : |
| Lead | mg/Kg-Dry | T | <0.093 : | 0.08 : | 0.41 : | 0.11 : | 0.1 : | 1.5 : |
| Magnesium | mg/Kg-Dry | T | 1890. : | <963. : | 1000. : | 983. : | 1540. : | 695. : |
| Manganese | mg/Kg-Dry | T | 44.1 : | 27.6 : | 60.6 : | 52.8 : | 41.1 : | 31.8 : |
| Mercury | mg/Kg-Dry | T | <0.056 : | <0.037 : | <0.047 : | <0.044 : | <0.056 : | <0.039 : |
| Molybdenum | mg/Kg-Dry | T | 2.4 : | 3.4 : | 18.2 : | 33.6 : | <1.6 : | 114. : |
| Nickel | mg/Kg-Dry | T | <0.23 J | <0.22 J | 0.65 : | 0.39 J | 0.22 : | 0.87 : |
| Potassium | mg/Kg-Dry | T | 24600. J | 15800. J | 19600. J | 19500. J | 18500. J | 17300. J |
| Selenium | mg/Kg-Dry | T | 1. J | 0.34 J | <0.047 J | 0.5 J | 0.36 J | 0.19 J |
| Silver | mg/Kg-Dry | T | <0.007 J | <0.0046 J | 0.0071 J | <0.0056 J | <0.0074 J | 0.013 J |
| Sodium | mg/Kg-Dry | T | <138. : | <57.3 : | <67.4 J | <63.3 J | <160. : | <42.9 : |
| Thallium | mg/Kg-Dry | T | <0.007 : | <0.0046 : | <0.0059 : | <0.0056 : | <0.0074 : | 0.0097 : |
| Titanium | mg/Kg-Dry | T | 5.2 : | 3.9 : | 11.2 : | 3.3 : | 5.2 : | 15.5 : |
| Vanadium | mg/Kg-Dry | T | 0.29 : | 0.2 : | 0.56 : | 0.24 : | 0.29 : | 0.89 : |
| Zinc | mg/Kg-Dry | T | 28.5 : | 22.7 : | 28.5 : | 23.6 : | <46.7 : | <51.6 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10ff

Wildlife Impact Study - Cut-Leaf Blazing-star Washed Aboveground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------------------------|-----------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | 9/8/2003 WTFO-3-T01N-PLTW TL | 9/8/2003 WTFO-1-T01N-PLTW TL | 9/9/2003 WRFO-3-T01N-PLTW CR | 9/9/2003 WRFO-1-T01N-PLTW CR | 9/9/2003 WRFO-2-T01N-PLTW CR | 9/8/2003 WTFO-2-T01N-PLTW TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 25100. : | 18300. : | 29600. J | 16100. : | 25300. : | 23300. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 17.1 : | 15.2 : | 13. : | 16. : | 16. : | 15.2 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 138. : | 408. : | 237. : | 217. : | 271. : | 386. : |
| Antimony | mg/Kg-Dry | T | <0.058 : | <0.067 : | <0.075 : | <0.061 : | <0.059 : | <0.065 : |
| Arsenic | mg/Kg-Dry | T | 0.17 J | 0.33 J | 0.47 J | 0.37 J | 0.4 J | 0.51 J |
| Barium | mg/Kg-Dry | T | 9.4 : | 11.3 : | 57.7 : | 52.5 : | 42.5 : | 44.7 : |
| Beryllium | mg/Kg-Dry | T | <0.088 : | <0.093 : | <0.11 J | <0.094 J | <0.094 J | <0.087 : |
| Boron | mg/Kg-Dry | T | 49.4 : | 59.3 : | 52.3 : | 49.4 : | 37.5 : | 64. : |
| Cadmium | mg/Kg-Dry | T | 0.076 : | 0.14 : | 0.32 : | 0.17 : | 0.075 : | 0.073 : |
| Calcium | mg/Kg-Dry | T | 26400. : | 29300. : | 28800. : | 22500. : | 26500. : | 26500. : |
| Chromium | mg/Kg-Dry | T | 1. : | 1.2 : | 0.85 : | 1.1 : | 2.6 J | 1.1 : |
| Cobalt | mg/Kg-Dry | T | 0.24 J | 0.38 J | 0.15 J | 0.22 J | 0.16 J | 0.19 J |
| Copper | mg/Kg-Dry | T | 8.8 : | 8.7 : | 6.9 : | 6.1 : | 6.1 : | 5.5 : |
| Iron | mg/Kg-Dry | T | 287. : | 517. : | 352. : | 301. : | 386. : | 375. : |
| Lead | mg/Kg-Dry | T | 0.71 : | 1.4 : | 0.25 : | 0.34 : | 0.33 : | 0.53 : |
| Magnesium | mg/Kg-Dry | T | 6180. : | 7000. : | 10000. : | 6690. : | 6030. J | 5490. : |
| Manganese | mg/Kg-Dry | T | 168. : | 149. : | 105. : | 83.1 : | 55. : | 78.7 : |
| Mercury | mg/Kg-Dry | T | <0.1 : | <0.1 : | <0.12 : | 0.11 : | <0.094 : | <0.11 : |
| Molybdenum | mg/Kg-Dry | T | 37.6 : | 341. : | 1.8 : | 2.3 : | 1.4 : | 40. : |
| Nickel | mg/Kg-Dry | T | 1.8 : | 1.8 : | 1.1 : | 2.5 : | 2.4 : | 1.4 : |
| Potassium | mg/Kg-Dry | T | 22000. J | 16900. J | 26200. J | 16200. J | 16900. J | 19900. J |
| Selenium | mg/Kg-Dry | T | 0.19 J | 0.41 J | 2.6 J | 1.8 J | 1.9 J | 1.7 J |
| Silver | mg/Kg-Dry | T | 0.021 J | 0.043 J | <0.015 J | <0.013 J | <0.012 J | <0.013 J |
| Sodium | mg/Kg-Dry | T | <145. : | <159. : | <176. : | <153. : | <152. : | <149. : |
| Thallium | mg/Kg-Dry | T | 0.042 : | 0.11 : | <0.015 : | 0.016 : | 0.039 : | 0.033 : |
| Titanium | mg/Kg-Dry | T | 5.2 : | 9.3 : | 10.8 : | 10. : | 12.5 : | 8.7 : |
| Vanadium | mg/Kg-Dry | T | 0.4 : | 1. : | 0.71 : | 0.81 : | 0.54 : | 0.67 : |
| Zinc | mg/Kg-Dry | T | 58.2 : | 83.3 : | 29.2 : | 41.2 : | 54.4 J | 20.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10gg

Wildlife Impact Study - Rubber Rabbitbrush Washed Aboveground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------------------------|-----------|--|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | 6/2/2003 | 5/31/2003 | 6/3/2003 | 6/4/2003 | 5/30/2003 | 6/5/2003 |
| | | | WRRR-3-T01N-PLTW | WRRR-1-T01N-PLTW | WTRR-1-T01N-PLTW | WTRR-2-T01N-PLTW | WTRR-3-T01N-PLTW | WRRR-2-T01N-PLTW |
| | | | CR | W CR | TL | TL | TL | CR |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 12000. J | 20000. J | - | 23700. J | 23000. J | 24100. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 40.7 : | 35.2 : | 27.7 : | 33.5 : | 33.7 : | 29.9 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 395. : | 141. : | 127. : | 394. : | 112. : | 167. : |
| Antimony | mg/Kg-Dry | T | <0.024 : | <0.028 : | <0.035 : | <0.028 : | <0.029 : | <0.033 J |
| Arsenic | mg/Kg-Dry | T | 0.056 : | 0.063 : | 0.11 : | 0.44 J | 0.18 : | 0.09 : |
| Barium | mg/Kg-Dry | T | 11.2 : | 9.7 : | 2.5 : | 6.5 : | 8.8 : | 10.3 : |
| Beryllium | mg/Kg-Dry | T | <0.024 J | <0.029 : | <0.033 J | <0.029 : | <0.029 : | <0.032 : |
| Boron | mg/Kg-Dry | T | 49.5 : | 68.6 : | 35. : | 31.8 : | 66.8 : | 90. : |
| Cadmium | mg/Kg-Dry | T | 0.16 : | 0.97 : | 1.3 : | 0.82 : | 0.38 : | 0.19 : |
| Calcium | mg/Kg-Dry | T | 6680. : | 6090. : | 5680. : | 7240. : | 5880. : | 6600. : |
| Chromium | mg/Kg-Dry | T | 0.73 J | 4.3 : | 0.79 : | <0.91 J | 0.56 : | 0.37 : |
| Cobalt | mg/Kg-Dry | T | 0.14 J | 0.14 J | 0.1 J | 0.17 J | 0.082 J | 0.087 J |
| Copper | mg/Kg-Dry | T | 12.7 : | 9.7 : | 23.6 : | 20.3 : | 22.9 : | 15.7 : |
| Iron | mg/Kg-Dry | T | 390. : | 185. : | 143. : | 403. : | 142. J | 190. : |
| Lead | mg/Kg-Dry | T | 0.27 : | 0.16 : | 0.43 : | 0.56 : | 0.24 : | 0.15 : |
| Magnesium | mg/Kg-Dry | T | 1440. : | 1440. : | 1500. : | 1610. : | 1890. : | 1770. : |
| Manganese | mg/Kg-Dry | T | 73.2 : | 87.1 : | 149. : | 88.5 : | 77.1 : | 50. : |
| Mercury | mg/Kg-Dry | T | <0.039 : | <0.049 : | <0.057 : | <0.044 : | <0.044 : | <0.05 : |
| Molybdenum | mg/Kg-Dry | T | 0.49 : | 0.54 : | 70. : | 157. : | 109. J | <0.63 : |
| Nickel | mg/Kg-Dry | T | 1. : | 3.1 : | 2. : | 1.9 : | 2.1 : | 1.6 : |
| Potassium | mg/Kg-Dry | T | 11400. J | 19000. J | 29200. J | 21400. J | 14300. J | 18900. J |
| Selenium | mg/Kg-Dry | T | 0.51 J | 0.24 J | 1.8 : | 0.13 J | 0.41 J | 0.7 J |
| Silver | mg/Kg-Dry | T | <0.0049 J | <0.0057 J | <0.0068 J | 0.0082 J | <0.0059 J | <0.0067 J |
| Sodium | mg/Kg-Dry | T | <76.6 : | <44.9 : | <35.4 : | <69.1 J | <87.6 : | <129. : |
| Thallium | mg/Kg-Dry | T | 0.008 : | <0.0057 : | 0.013 : | 0.0082 : | <0.0059 : | <0.0067 : |
| Titanium | mg/Kg-Dry | T | 19.5 : | 6.9 : | 4.6 : | 12.6 : | 3.5 : | 7.7 : |
| Vanadium | mg/Kg-Dry | T | 0.56 : | 0.37 : | 0.29 : | 0.71 : | 0.32 : | 0.4 : |
| Zinc | mg/Kg-Dry | T | 30. : | 33.7 : | 190. : | 138. : | <135. : | <43.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10hh
Wildlife Impact Study - Sand Dropseed Washed Aboveground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------------------------|---------------|---|------------------|-----------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/31/2003 | 9/7/2003 | 6/3/2003 | 6/3/2003 | 6/4/2003 | 6/3/2003 |
| | Sample ID | | WRSD-3-T01N-PLTW | WRSD-1R-T01N-PLT W | WTSD-3-T01N-PLTW | WTSD-1-T01N-PLTW | WTSD-2-T01N-PLTW | WRSD-2-T01N-PLTW |
| | Exposure Area | | CR | CR | TL | TL | TL | CR |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 19100. : | 15100. J | - | - | 32100. J | - |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 30.7 : | 32.5 : | 36.6 : | 36.7 : | 32.7 : | 33.7 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 335. : | 555. : | 359. : | 98.9 : | 107. : | 491. : |
| Antimony | mg/Kg-Dry | T | <0.032 : | <0.029 : | <0.026 : | <0.027 : | <0.039 J | <0.029 : |
| Arsenic | mg/Kg-Dry | T | 0.045 : | 0.067 : | 0.14 : | 0.035 : | 0.088 : | 0.097 : |
| Barium | mg/Kg-Dry | T | 22.3 : | 35.8 : | 7.8 : | 9.7 : | 5.5 : | 20.6 : |
| Beryllium | mg/Kg-Dry | T | <0.03 : | <0.055 : | <0.027 J | <0.026 J | <0.028 : | <0.028 J |
| Boron | mg/Kg-Dry | T | 11. : | 5.8 : | 5.9 : | 8.9 : | 7.6 : | 9.4 : |
| Cadmium | mg/Kg-Dry | T | 0.071 : | 0.033 : | 0.15 : | 0.2 : | 0.061 : | 0.047 : |
| Calcium | mg/Kg-Dry | T | 4710. : | 4580. : | 4080. : | 4570. : | 4150. : | 5260. : |
| Chromium | mg/Kg-Dry | T | 3.5 : | <1.3 : | 1.2 : | 0.76 : | 0.7 : | 1.2 : |
| Cobalt | mg/Kg-Dry | T | 0.19 J | 0.24 J | 0.24 J | 0.07 J | 0.091 J | 0.22 J |
| Copper | mg/Kg-Dry | T | 9.4 : | 10. : | 15.9 : | 10.8 : | 11.8 : | 10.6 : |
| Iron | mg/Kg-Dry | T | 429. : | 676. : | 527. : | 162. : | 140. : | 582. : |
| Lead | mg/Kg-Dry | T | 0.35 : | 0.33 : | 1.2 : | 1. : | 0.2 : | 0.32 : |
| Magnesium | mg/Kg-Dry | T | 1680. : | 1870. : | 924. : | 1240. : | 1280. : | 2010. : |
| Manganese | mg/Kg-Dry | T | 32.6 : | 41.8 : | 43.5 : | 40.5 : | 25.5 : | 51.5 : |
| Mercury | mg/Kg-Dry | T | <0.052 : | <0.045 : | 0.089 : | 0.073 : | <0.045 : | <0.047 : |
| Molybdenum | mg/Kg-Dry | T | 2.3 : | 2.5 : | 40.5 : | 67. : | 119. : | 6.2 : |
| Nickel | mg/Kg-Dry | T | 1.2 : | 1. : | 0.89 : | 0.41 : | 0.67 : | 0.85 : |
| Potassium | mg/Kg-Dry | T | 18300. J | 10800. J | 12200. J | 19400. J | 13400. J | 22000. J |
| Selenium | mg/Kg-Dry | T | 0.26 J | 0.42 J | 1.5 : | <1.4 : | 0.19 J | 2. : |
| Silver | mg/Kg-Dry | T | 0.01 J | <0.0058 J | 0.032 J | 0.03 J | 0.022 J | <0.0056 J |
| Sodium | mg/Kg-Dry | T | <98.1 : | <123. : | <44.1 : | <42.4 : | <108. : | <54.7 : |
| Thallium | mg/Kg-Dry | T | <0.0065 : | 0.011 : | 0.014 : | 0.025 : | 0.079 : | 0.0082 : |
| Titanium | mg/Kg-Dry | T | 18.7 : | 26.4 : | 17.3 : | 4.3 : | 3.6 : | 27.4 : |
| Vanadium | mg/Kg-Dry | T | 0.68 : | 0.91 : | 0.76 : | 0.24 : | 0.3 : | 0.88 : |
| Zinc | mg/Kg-Dry | T | 34.2 : | 26.7 : | 59.2 : | 44.6 : | 57.6 : | 23.5 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10ii

Appendix A

Wildlife Impact Study - Sleepy Grass Washed Aboveground

Revision No. 0

Validated Analytical Results

April 4, 2005

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| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T01N-PLTW | WTSG-1-T01N-PLTW | WTSG-2-T01N-PLTW | WRSG-1-T01N-PLTW | WRSG-2-T01N-PLTW | WTSG-3-T01N-PLTW |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 24400. : | 19400. : | 15900. : | 34200. : | 32800. : | 14500. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 35.2 : | 43.2 : | 37.3 : | 36.4 : | 31.6 : | 37.7 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 204. : | 118. : | 78.9 : | 180. : | <92.2 : | 119. : |
| Antimony | mg/Kg-Dry | T | <0.029 : | <0.023 : | <0.027 : | <0.027 : | <0.031 : | <0.026 : |
| Arsenic | mg/Kg-Dry | T | 0.2 : | 0.26 : | 0.17 : | 0.064 : | 0.075 : | 0.34 J |
| Barium | mg/Kg-Dry | T | 14.6 : | 9.5 : | 6.8 : | 5.8 : | 5. : | 2.6 : |
| Beryllium | mg/Kg-Dry | T | <0.066 : | <0.023 : | <0.026 J | <0.026 J | <0.16 : | <0.026 : |
| Boron | mg/Kg-Dry | T | 15.1 : | 11.2 : | 14.6 : | 10. : | 5.6 : | 2.9 : |
| Cadmium | mg/Kg-Dry | T | <0.011 : | 0.017 : | 0.032 : | 0.031 : | 0.025 : | 0.05 : |
| Calcium | mg/Kg-Dry | T | 3770. : | 3210. : | 3620. : | 3170. : | 3880. : | 2920. : |
| Chromium | mg/Kg-Dry | T | 0.83 : | 0.58 : | 1.4 : | 1.4 : | 1. : | <0.53 J |
| Cobalt | mg/Kg-Dry | T | 0.15 J | 0.21 J | 0.1 J | 0.13 J | 0.11 J | 0.061 J |
| Copper | mg/Kg-Dry | T | 12. : | 8.6 : | 12.2 : | 10. : | 8.7 : | 10.3 : |
| Iron | mg/Kg-Dry | T | 239. : | 143. : | 120. : | 243. : | 157. : | 127. : |
| Lead | mg/Kg-Dry | T | 0.23 : | 0.16 : | <0.41 : | 0.13 : | 0.081 : | 0.18 : |
| Magnesium | mg/Kg-Dry | T | 2070. : | 1350. : | 1040. : | 1370. : | 1530. : | 1040. : |
| Manganese | mg/Kg-Dry | T | 77.4 : | 102. : | 93.5 : | 80.3 : | 70. : | 29.2 : |
| Mercury | mg/Kg-Dry | T | <0.043 : | <0.035 : | <0.041 : | <0.047 : | <0.053 : | <0.042 : |
| Molybdenum | mg/Kg-Dry | T | 12. : | 129. : | 139. : | 6.1 : | 4.4 : | 198. : |
| Nickel | mg/Kg-Dry | T | 4.3 : | 7.7 : | 4.3 : | 3.9 : | 5.3 : | 1.5 : |
| Potassium | mg/Kg-dry | T | 13500. J | 16900. J | 19900. J | 6930. J | 20800. J | 16500. J |
| Selenium | mg/Kg-Dry | T | 0.34 J | 0.35 J | 0.41 J | 0.53 J | 0.78 J | 0.34 J |
| Silver | mg/Kg-Dry | T | <0.0057 J | <0.0047 J | <0.0054 J | <0.0053 J | <0.0063 J | <0.0053 J |
| Sodium | mg/Kg-Dry | T | <87.4 : | <25.1 : | <28.9 J | <51.1 : | <41.6 : | <61.3 J |
| Thallium | mg/Kg-Dry | T | <0.0057 : | <0.0047 : | <0.0054 : | <0.0053 : | <0.0063 : | 0.012 : |
| Titanium | mg/Kg-Dry | T | 8. : | 3.3 : | 2.7 : | 9.7 : | 4.7 : | 3.7 : |
| Vanadium | mg/Kg-Dry | T | 0.4 : | 0.33 : | 0.23 : | 0.28 : | 0.34 : | 0.23 : |
| Zinc | mg/Kg-Dry | T | 20. : | <20. : | 35.4 : | 23.3 : | 22.5 : | 53.4 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10jj

Wildlife Impact Study - Western Wheatgrass Washed Aboveground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------------------------|-----------|--|--|--|---|---|--|--|
| | | | 6/2/2003 WRWW-2-T01N-PLT W CR | 6/3/2003 WRWW-1-T01N-PLT W CR | 5/31/2003 WRWW-3-T01N-PLT W CR | 5/28/2003 WTWW-2-T01N-PLT W TL | 6/4/2003 WTWW-3-T01N-PLT W TL | 6/5/2003 WTWW-1-T01N-PLT W TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 10500. J | - | 16000. J | 19200. : | 13400. J | 24600. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 37. : | 33.6 : | 36.3 : | 30.5 : | 40.6 : | 40.5 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 80.8 : | 54.4 : | 144. : | 95. : | 154. : | 56.1 : |
| Antimony | mg/Kg-Dry | T | <0.026 : | <0.029 : | <0.028 : | <0.033 : | <0.024 : | <0.024 : |
| Arsenic | mg/Kg-Dry | T | 0.035 : | 0.11 : | 0.089 : | 0.077 : | <0.29 J | 0.059 : |
| Barium | mg/Kg-Dry | T | 20.5 : | 17.1 : | 14.2 : | 10. : | 9.8 : | 9. : |
| Beryllium | mg/Kg-Dry | T | <0.025 J | <0.029 J | <0.026 : | <0.029 J | <0.024 : | <0.024 : |
| Boron | mg/Kg-Dry | T | 6.2 : | 5.3 : | 7.2 : | 6.3 : | 5.9 : | 5.1 : |
| Cadmium | mg/Kg-Dry | T | <0.011 : | 0.014 : | <0.011 : | 0.15 : | 0.032 : | 0.013 : |
| Calcium | mg/Kg-Dry | T | 3270. : | 4320. : | 4250. : | 3930. : | 4460. : | 2400. : |
| Chromium | mg/Kg-Dry | T | 1.6 : | 0.62 : | 0.67 : | 1.1 : | <0.63 J | 0.41 : |
| Cobalt | mg/Kg-Dry | T | 0.032 J | 0.026 J | 0.075 J | 0.043 J | 0.044 J | 0.049 J |
| Copper | mg/Kg-Dry | T | 6.2 : | 7.6 : | 6.9 : | 10.7 : | 4.9 : | 4.9 : |
| Iron | mg/Kg-Dry | T | 121. : | 94.4 : | 192. : | 175. : | 175. : | 97.3 : |
| Lead | mg/Kg-Dry | T | 0.084 : | 0.056 : | 0.16 : | <0.47 : | 0.32 : | 0.16 : |
| Magnesium | mg/Kg-Dry | T | 1110. : | 1180. : | 1390. : | 1090. : | 1070. : | 680. : |
| Manganese | mg/Kg-Dry | T | 25.1 : | 59.7 : | 49.7 : | 48.7 : | 28.5 : | 28.3 : |
| Mercury | mg/Kg-Dry | T | <0.043 : | <0.044 : | <0.042 : | <0.053 : | <0.039 : | <0.039 : |
| Molybdenum | mg/Kg-Dry | T | 1.1 : | <1.5 : | 2.4 : | 129. : | 170. : | 62.2 : |
| Nickel | mg/Kg-Dry | T | 0.32 : | 0.32 : | 0.42 : | 0.4 : | <0.27 : | <0.29 J |
| Potassium | mg/Kg-dry | T | 6210. J | 25700. J | 25100. J | 25500. J | 21800. J | 16100. J |
| Selenium | mg/Kg-Dry | T | 0.27 J | 1.8 : | 0.33 J | 0.083 J | 0.54 J | 0.054 J |
| Silver | mg/Kg-Dry | T | <0.0054 J | <0.0059 J | <0.0056 J | 0.0067 J | <0.0049 J | <0.0046 J |
| Sodium | mg/Kg-Dry | T | <39.5 : | <31.8 : | <35.8 : | <32. : | <57.6 J | <60. : |
| Thallium | mg/Kg-Dry | T | <0.0054 : | <0.0059 : | <0.0056 : | <0.0067 : | <0.0049 : | <0.0046 : |
| Titanium | mg/Kg-Dry | T | 4.3 : | 2.8 : | 7.5 : | 5. : | 6.3 : | 2.9 : |
| Vanadium | mg/Kg-Dry | T | 0.16 : | 0.16 : | 0.36 : | 0.22 : | 0.27 : | 0.24 : |
| Zinc | mg/Kg-Dry | T | 15.7 : | 27.1 : | <12.8 : | 70.7 : | 33.4 : | 32.4 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10kk
Wildlife Impact Study - Golden Crownbeard Washed Below Ground
Validated Analytical Results

| Parameter | Site ID | | TSS14-5 | WR-5 | WR-6 | WR-7 | WT-2 | WT-6 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 9/8/2003 | 9/9/2003 | 9/9/2003 | 9/9/2003 | 9/8/2003 | 9/8/2003 |
| | Sample ID | | WTAS-1-T02N-PLTW | WRAS-2-T02N-PLTW | WRAS-1-T02N-PLTW | WRAS-3-T02N-PLTW | WTAS-3-T02N-PLTW | WTAS-2-T02N-PLTW |
| | Exposure Area | | TL | CR | CR | CR | TL | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 8650. : | 6670. J | 9760. : | 8250. J | 8890. : | 6070. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 17.1 : | - | - | 20.1 : | 17.7 : | 29.4 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 1410. : | 633. : | 1460. : | 323. : | 811. : | 693. : |
| Antimony | mg/Kg-Dry | T | <0.088 : | <0.047 : | <0.047 : | <0.049 : | <0.054 : | <0.034 : |
| Arsenic | mg/Kg-Dry | T | 0.71 : | 0.16 J | 0.19 J | 0.14 J | 0.21 J | 0.27 J |
| Barium | mg/Kg-Dry | T | 50.6 : | 22.9 : | 30.5 : | 19. : | 42.8 : | 11. : |
| Beryllium | mg/Kg-Dry | T | <0.054 : | <0.067 J | <0.062 J | <0.075 J | <0.078 : | <0.048 : |
| Boron | mg/Kg-Dry | T | 13.5 : | 13.3 : | 13.8 : | 11. : | 15. : | 12.4 : |
| Cadmium | mg/Kg-Dry | T | 0.24 : | 0.1 : | 0.22 : | 0.1 : | 0.24 : | 0.48 : |
| Calcium | mg/Kg-Dry | T | 6530. : | 5100. : | 5860. : | 4630. : | 6500. : | 5310. : |
| Chromium | mg/Kg-Dry | T | 4.7 : | 5.2 : | 2.5 : | 1. J | 4.7 : | 3.1 : |
| Cobalt | mg/Kg-Dry | T | 1.4 J | 0.67 J | 0.86 J | 0.49 J | 0.26 J | 0.83 J |
| Copper | mg/Kg-Dry | T | 17.6 : | 10. : | 7.1 : | 11.5 : | 21.1 : | 17.6 : |
| Iron | mg/Kg-Dry | T | 1600. : | 843. : | 1780. : | 381. : | 889. : | 852. : |
| Lead | mg/Kg-Dry | T | 2.4 : | 0.81 : | 1.1 : | 0.48 : | 0.37 : | 1.3 : |
| Magnesium | mg/Kg-Dry | T | 3130. : | 1770. : | 2270. : | 1360. : | 2470. : | 1560. : |
| Manganese | mg/Kg-Dry | T | 61.2 : | 32.4 : | 52.4 : | 20. : | 34.4 : | 41.7 : |
| Mercury | mg/Kg-Dry | T | <0.094 : | <0.071 : | <0.071 : | <0.075 : | <0.089 : | <0.055 : |
| Molybdenum | mg/Kg-Dry | T | 149. : | 1.4 : | 0.71 : | 1.2 : | 54.4 : | 90. : |
| Nickel | mg/Kg-Dry | T | 11.2 : | 3.5 : | 1.4 : | 0.7 : | 0.61 : | 1.7 : |
| Potassium | mg/Kg-Dry | T | 30400. J | 22000. J | 36400. J | 20600. J | 24100. J | 15100. J |
| Selenium | mg/Kg-Dry | T | 0.22 J | 0.14 J | 0.11 J | 0.16 J | 0.52 J | 0.15 J |
| Silver | mg/Kg-Dry | T | 0.042 J | 0.0095 J | 0.01 J | <0.01 J | <0.011 J | 0.038 J |
| Sodium | mg/Kg-Dry | T | 665. : | <113. : | 285. : | 234. : | 461. : | 107. : |
| Thallium | mg/Kg-Dry | T | 0.058 : | 0.0095 : | 0.017 : | <0.01 : | 0.054 : | 0.1 : |
| Titanium | mg/Kg-Dry | T | 43.5 : | 31.9 : | 87.1 : | 15.5 : | 81.1 : | 23.8 : |
| Vanadium | mg/Kg-Dry | T | 5.4 : | 2.1 : | 3.1 : | 2.2 J | 0.61 : | 2.1 : |
| Zinc | mg/Kg-Dry | T | 37.1 : | 17.6 : | 19.5 : | 23. : | 37.2 : | 44.1 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10II

Wildlife Impact Study - Blue Grama Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-14 | CR-2 | CR-8 | TSS14-6 | WT-3 | WT-5 |
|------------------------------|-----------|--|------------------|----------------------------|----------------------------|------------------|------------------|------------------|
| | | | 9/6/2003 | 9/7/2003 | 9/7/2003 | 9/7/2003 | 9/8/2003 | 9/7/2003 |
| | | | WRBG-3-T02N-PLTW | WRBG-1-T02N-PLT W CR | WRBG-4-T02N-PLT W CR | WTBG-1-T02N-PLTW | WTBG-3-T02N-PLTW | WTBG-2-T02N-PLTW |
| | | | CR | CR | CR | TL | TL | TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 7040. J | 6520. J | 5370. J | 5000. J | 5910. J | 5100. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 27.6 : | 46. : | 34.6 : | 27.6 : | 23.2 : | 31. : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 3400. : | 2350. : | 2450. : | 3560. : | 2400. : | 4260. : |
| Antimony | mg/Kg-Dry | T | <0.039 : | <0.039 : | <0.034 : | <0.1 : | <0.065 : | <0.11 : |
| Arsenic | mg/Kg-Dry | T | 0.31 : | 0.24 : | <0.23 J | 1.2 J | 0.48 : | 1.2 J |
| Barium | mg/Kg-Dry | T | 37.9 : | 27.8 : | 19.7 : | 95.7 : | 31.3 : | 112. : |
| Beryllium | mg/Kg-Dry | T | 0.16 : | 0.11 : | 0.089 : | 0.13 : | 0.26 : | 0.19 : |
| Boron | mg/Kg-Dry | T | 3.9 : | 3.9 : | 2.4 : | 3.9 : | 4.3 : | 4.2 J |
| Cadmium | mg/Kg-Dry | T | 0.23 : | 0.15 : | 0.2 : | 0.071 : | 4. : | 0.042 : |
| Calcium | mg/Kg-Dry | T | 5570. : | 9330. : | 2480. : | 13000. : | 7570. : | 15200. : |
| Chromium | mg/Kg-Dry | T | 6.8 : | 4.1 : | 4.9 : | 3.9 : | 10.4 : | 6.8 : |
| Cobalt | mg/Kg-Dry | T | 1.9 J | 1.4 J | 1.6 J | 4.6 J | 2.9 J | 4.2 J |
| Copper | mg/Kg-Dry | T | 11.4 : | 10.9 : | 9.1 : | 13.2 : | 130. : | 17.4 : |
| Iron | mg/Kg-Dry | T | 4250. : | 2980. : | 2860. : | 3340. : | 5350. : | 3710. : |
| Lead | mg/Kg-Dry | T | 2.4 : | 1.1 : | 1.7 : | 3.9 : | 73.5 : | 2.8 : |
| Magnesium | mg/Kg-Dry | T | 1980. : | 2720. : | 1140. : | 2010. : | 1730. : | 2260. : |
| Manganese | mg/Kg-Dry | T | 136. : | 75.9 : | 86.6 : | 93.6 : | 267. : | 96.5 : |
| Mercury | mg/Kg-Dry | T | 0.25 : | <0.033 : | <0.046 : | <0.061 : | <0.065 : | <0.048 : |
| Molybdenum | mg/Kg-Dry | T | 1.2 : | 1.1 : | 0.86 : | 13.2 : | 113. : | 24.2 : |
| Nickel | mg/Kg-Dry | T | 4.3 : | 5.9 : | 4.3 : | 7.5 : | 8.7 : | 8.1 : |
| Potassium | mg/Kg-Dry | T | 4500. J | 2520. J | 2690. J | 2870. J | 3170. J | 2860. J |
| Selenium | mg/Kg-Dry | T | 0.23 J | 0.21 J | 0.14 J | 0.21 J | 0.23 J | 0.18 J |
| Silver | mg/Kg-Dry | T | 0.024 J | 0.014 J | 0.054 J | 0.054 J | 0.37 J | 0.052 J |
| Sodium | mg/Kg-Dry | T | <162. : | 422. : | 151. : | 105. : | <183. : | <198. : |
| Thallium | mg/Kg-Dry | T | 0.039 : | 0.022 : | 0.023 : | 0.043 : | 0.091 : | 0.052 : |
| Titanium | mg/Kg-Dry | T | 191. : | 94.1 : | 143. : | 93.2 : | 125. : | 110. : |
| Vanadium | mg/Kg-Dry | T | 5.7 J | 8.5 : | 5.1 : | 11.8 : | 9.1 : | 11.9 : |
| Zinc | mg/Kg-Dry | T | 30. : | 50. : | 27.1 : | 23.6 : | 276. : | 50.3 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10mm

Wildlife Impact Study - Big Sagebrush Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | CR-8 | TSS14-10 | TSS14-4 | TSS14-9 |
|------------------------------|-----------|--|-------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|
| | | | 5/31/2003 WRBS-3-T02N-PLTW CR | 6/5/2003 WRBS-1-T02N-PLTW CR | 5/29/2003 WRBS-2-T02N-PLTW CR | 5/28/2003 WTBS-3-T02N-PLTW TL | 6/4/2003 WTBS-1-T02N-PLTW TL | 5/28/2003 WTBS-2-T02N-PLTW TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4080. J | 4780. J | 4540. : | 3680. : | 8230. J | 3730. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 59. : | 64.1 : | 56. : | 46.7 : | 52. : | 48.1 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 142. : | 467. : | 462. : | 283. : | 90.4 : | 201. : |
| Antimony | mg/Kg-Dry | T | <0.017 : | <0.015 J | <0.02 : | <0.062 : | <0.019 J | <0.021 : |
| Arsenic | mg/Kg-Dry | T | 0.027 : | 0.11 : | 0.096 : | 0.45 : | 0.18 : | 0.23 : |
| Barium | mg/Kg-Dry | T | 23.7 : | 33.3 : | 18.7 : | 51.7 : | 21.5 : | 21.9 : |
| Beryllium | mg/Kg-Dry | T | <0.017 : | <0.044 : | <0.041 : | <0.03 J | <0.018 : | <0.021 J |
| Boron | mg/Kg-Dry | T | 9.3 : | 10.2 : | 10.9 : | 11.3 : | 9.8 : | 9.6 : |
| Cadmium | mg/Kg-Dry | T | 0.24 : | 0.77 : | 0.3 : | 0.68 : | 0.5 : | 0.58 : |
| Calcium | mg/Kg-Dry | T | 5920. : | 8030. : | 6360. : | 7850. : | 5880. : | 5060. : |
| Chromium | mg/Kg-Dry | T | 1.4 : | 1. : | 1.6 : | 0.96 : | 2.3 : | 1.7 : |
| Cobalt | mg/Kg-Dry | T | 0.097 J | 0.28 J | 0.17 J | 0.49 J | 0.23 J | 0.42 J |
| Copper | mg/Kg-Dry | T | 10.5 : | 11.2 : | 10.9 : | 53. : | 17.3 : | 32.9 : |
| Iron | mg/Kg-Dry | T | 162. : | 494. : | 575. : | 317. : | 110. : | 296. : |
| Lead | mg/Kg-Dry | T | 0.11 : | 0.31 : | 0.2 : | <0.64 : | 0.29 : | 1.1 : |
| Magnesium | mg/Kg-Dry | T | 771. : | 1140. : | 925. : | 1460. : | 1020. : | 1110. : |
| Manganese | mg/Kg-Dry | T | 26.3 : | 69.2 : | 32.1 : | 44.7 : | 23.7 : | 33.1 : |
| Mercury | mg/Kg-Dry | T | <0.029 : | <0.025 : | <0.03 : | <0.036 : | <0.029 : | <0.031 : |
| Molybdenum | mg/Kg-Dry | T | 0.27 : | <0.72 : | 0.21 : | 64.3 : | 24. : | 55.8 : |
| Nickel | mg/Kg-Dry | T | 0.63 : | 0.92 : | 1.1 : | 0.94 : | 1.1 : | 1.5 : |
| Potassium | mg/Kg-Dry | T | 3460. J | 4330. J | 4110. J | 7870. J | 6980. J | 7580. J |
| Selenium | mg/Kg-Dry | T | 0.042 J | 0.14 J | 0.27 J | 0.064 J | 0.12 J | 0.075 J |
| Silver | mg/Kg-Dry | T | 0.0036 J | <0.003 J | <0.0034 J | 0.026 J | 0.018 J | 0.029 J |
| Sodium | mg/Kg-Dry | T | <94.2 : | <105. : | <142. : | 366. : | 758. : | 340. : |
| Thallium | mg/Kg-Dry | T | <0.0034 : | 0.0056 : | <0.0034 : | 0.019 : | 0.012 : | 0.018 : |
| Titanium | mg/Kg-Dry | T | 8.5 : | 22.8 : | 25.4 : | 7.9 : | 2.1 : | 7.5 : |
| Vanadium | mg/Kg-Dry | T | 0.97 : | 1.2 : | 1.6 : | 11.1 : | 2.1 : | 3.5 : |
| Zinc | mg/Kg-Dry | T | 16.4 : | 28.3 : | 13.7 : | 34. : | 38.7 : | 25.2 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10nn

Wildlife Impact Study - Crested Wheatgrass Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-10 | CR-11 | TSS14-3 | TSS14-5 | WR-2 | WT-1 |
|------------------------------|-----------|--|--|--|--|--|--|---|
| | | | 6/5/2003 WRCW-1-T02N-PLT W CR | 6/5/2003 WRCW-2-T02N-PLT W CR | 6/4/2003 WTCW-2-T02N-PLT W TL | 6/4/2003 WTCW-1-T02N-PLT W TL | 6/5/2003 WRCW-3-T02N-PLT W CR | 5/30/2003 WTCW-3-T02N-PLT W TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4770. J | 11800. J | 6850. J | 4000. J | 7920. J | 3710. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 52.7 : | 42.9 : | 53.1 : | 45. : | 60.6 : | 52.3 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 1030. : | 1600. : | 1850. : | 2420. : | 3660. : | 7400. : |
| Antimony | mg/Kg-Dry | T | <0.019 : | <0.023 : | <0.028 : | 0.064 : | <0.016 J | 0.083 : |
| Arsenic | mg/Kg-Dry | T | 0.15 : | 0.26 : | 0.7 J | 0.76 : | 0.36 : | 1.3 : |
| Barium | mg/Kg-Dry | T | 17.2 : | 25.8 : | 22.8 : | 79.3 : | 37. : | 101. : |
| Beryllium | mg/Kg-Dry | T | <0.094 : | <0.14 : | 0.12 : | 0.12 : | 0.23 : | 0.46 : |
| Boron | mg/Kg-Dry | T | 2.1 : | 2.6 : | 1.8 : | 4.2 : | 2.8 : | 4.8 : |
| Cadmium | mg/Kg-Dry | T | 0.36 : | 0.56 : | 0.26 : | 0.071 : | 0.26 : | 0.27 : |
| Calcium | mg/Kg-Dry | T | 3090. : | 3050. : | 2550. : | 9310. : | 3390. : | 12400. : |
| Chromium | mg/Kg-Dry | T | 2.3 : | 3.3 : | 2.8 : | 2.9 : | 6.6 : | 14.4 : |
| Cobalt | mg/Kg-Dry | T | 1.1 J | 0.91 J | 1.6 J | 3.1 J | 1.4 J | 4. J |
| Copper | mg/Kg-Dry | T | 7. : | 10.5 : | 13.6 : | 11.6 : | 10.2 : | 50.6 : |
| Iron | mg/Kg-Dry | T | 1290. : | 1810. : | 1700. : | 2130. : | 4110. : | 8020. : |
| Lead | mg/Kg-Dry | T | 0.6 : | 1.2 : | 2.3 : | 1.3 : | 2.5 : | 11.9 : |
| Magnesium | mg/Kg-Dry | T | 670. : | 809. : | 708. : | 1410. : | 1310. : | 2960. : |
| Manganese | mg/Kg-Dry | T | 48.3 : | 77. : | 281. : | 81.8 : | 128. : | 237. : |
| Mercury | mg/Kg-Dry | T | <0.028 : | <0.037 : | <0.03 : | <0.036 : | <0.026 : | <0.029 : |
| Molybdenum | mg/Kg-Dry | T | 0.81 : | 2. : | 18.7 : | 12.7 : | <0.8 : | 93.8 : |
| Nickel | mg/Kg-Dry | T | 2.3 : | 4.2 : | 3.6 : | 3.6 J | 4.6 : | 9.4 : |
| Potassium | mg/Kg-Dry | T | 2490. J | 2740. J | 2980. J | 2800. J | 2840. J | 3020. J |
| Selenium | mg/Kg-Dry | T | 0.21 J | 0.17 J | 0.064 J | 0.18 J | 0.23 J | <0.031 J |
| Silver | mg/Kg-Dry | T | 0.013 J | 0.017 J | 0.045 J | 0.029 J | 0.033 J | 0.13 J |
| Sodium | mg/Kg-Dry | T | <142. : | <143. : | <44.5 J | <57.8 J | <61.6 : | 237. : |
| Thallium | mg/Kg-Dry | T | 0.011 : | 0.021 : | 0.019 : | 0.027 : | 0.034 : | 0.1 : |
| Titanium | mg/Kg-Dry | T | 66.6 : | 84. : | 47.5 : | 69.1 : | 218. : | 285. : |
| Vanadium | mg/Kg-Dry | T | 2.6 : | 3. : | 2.1 : | 7.8 : | 7.9 : | 16.9 : |
| Zinc | mg/Kg-Dry | T | 19.8 : | 33. : | 22.1 : | 24.9 : | 36.2 : | <48.8 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-1000

Wildlife Impact Study - Cut-Leaf Blazing-star Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | TSS14-1 | TSS14-8 | WR-10 | WR-8 | WR-9 | WT-2 |
|------------------------------|-----------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | | | 9/8/2003 WTFO-3-T02N-PLTW TL | 9/8/2003 WTFO-1-T02N-PLTW TL | 9/9/2003 WRFO-3-T02N-PLTW CR | 9/9/2003 WRFO-1-T02N-PLTW CR | 9/9/2003 WRFO-2-T02N-PLTW CR | 9/8/2003 WTFO-2-T02N-PLTW TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 11500. : | 6040. : | 4430. J | 11900. : | 10200. : | 11600. : |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 16.7 : | 26. : | - | - | 18.9 : | 19.2 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 356. : | 221. : | 122. : | 195. : | 172. : | 354. : |
| Antimony | mg/Kg-Dry | T | <0.058 : | <0.038 : | <0.049 : | <0.05 : | <0.052 : | <0.051 : |
| Arsenic | mg/Kg-Dry | T | 0.15 J | 0.1 J | 0.14 J | 0.14 J | 0.18 J | 0.28 J |
| Barium | mg/Kg-Dry | T | 9.4 : | 8.8 : | 28. : | 35. : | 29.5 : | 33.7 : |
| Beryllium | mg/Kg-Dry | T | <0.082 : | <0.058 : | <0.07 J | <0.07 J | <0.074 J | <0.079 : |
| Boron | mg/Kg-Dry | T | 10.6 : | 8.5 : | 12.5 : | 10.5 : | 11.1 : | 12.1 : |
| Cadmium | mg/Kg-Dry | T | 0.16 : | 0.18 : | 1.2 : | 0.32 : | 0.48 : | 0.21 : |
| Calcium | mg/Kg-Dry | T | 9350. : | 14100. : | 10400. : | 13100. : | 13200. : | 18700. : |
| Chromium | mg/Kg-Dry | T | 4.8 : | 2.1 : | 0.65 : | 1.7 : | 1.6 : | 2.1 : |
| Cobalt | mg/Kg-Dry | T | 0.41 J | 0.16 J | 0.15 J | 0.18 J | 0.14 J | 0.16 J |
| Copper | mg/Kg-Dry | T | 11.2 : | 6.9 : | 12.5 : | 10. : | 6.8 : | 9.5 : |
| Iron | mg/Kg-Dry | T | 588. : | 298. : | 165. : | 257. : | 209. : | 333. : |
| Lead | mg/Kg-Dry | T | 1.5 : | 0.46 : | 0.27 : | 0.39 : | 0.3 : | 0.58 : |
| Magnesium | mg/Kg-Dry | T | 4020. : | 2530. : | 3160. : | 3380. : | 4130. : | 3540. : |
| Manganese | mg/Kg-Dry | T | 52.9 : | 36.5 : | 20.5 : | 21.5 : | 20.5 : | 36.8 : |
| Mercury | mg/Kg-Dry | T | <0.094 : | <0.058 : | 0.09 : | <0.075 : | <0.084 : | <0.079 : |
| Molybdenum | mg/Kg-Dry | T | 12.4 : | 78.1 : | 1.1 : | 1.1 : | 0.74 : | 10. : |
| Nickel | mg/Kg-Dry | T | 4.5 : | 1.6 : | 1.5 : | 1. : | 2.5 : | 4.3 : |
| Potassium | mg/Kg-Dry | T | 16600. J | 6500. J | 11100. J | 10400. J | 12100. J | 16500. J |
| Selenium | mg/Kg-Dry | T | 0.047 J | 0.081 J | 0.8 J | 0.5 J | 0.58 J | 0.63 J |
| Silver | mg/Kg-Dry | T | 0.038 J | 0.054 J | 0.014 J | <0.01 J | 0.013 J | 0.014 J |
| Sodium | mg/Kg-Dry | T | <141. : | 596. : | 3960. : | 443. : | 1420. : | 215. : |
| Thallium | mg/Kg-Dry | T | 0.046 : | 0.19 : | 0.055 : | 0.033 : | 0.12 : | 0.047 : |
| Titanium | mg/Kg-Dry | T | 11.2 : | 5.8 : | 5.5 : | 9. : | 7.9 : | 7.9 : |
| Vanadium | mg/Kg-Dry | T | 0.76 : | 0.31 : | 0.8 : | 1.2 : | 0.79 : | 0.42 : |
| Zinc | mg/Kg-Dry | T | 90. : | 56.5 : | 38.5 : | 26. : | 27.9 : | 43.7 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10pp
Wildlife Impact Study - Rubber Rabbitbrush Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-4 | TSS14-2 | TSS14-5 | TSS14-6 | WR-2 |
|------------------------------|-----------|--|------------------------------------|---|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|
| | | | 6/2/2003 WRRR-3-T02N-PLTW CR | 5/31/2003 WRRR-1-T02N-PLT W CR | 6/3/2003 WTRR-1-T02N-PLTW TL | 6/4/2003 WTRR-2-T02N-PLTW TL | 5/30/2003 WTRR-3-T02N-PLTW TL | 6/5/2003 WRRR-2-T02N-PLTW CR |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 5840. J | 10400. J | - | 6170. J | 8780. J | 7340. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 50. : | 33.9 : | 35.5 : | 46.5 : | 39.7 : | 38.3 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 304. : | 180. : | 235. : | 409. : | 458. : | 576. : |
| Antimony | mg/Kg-Dry | T | <0.02 : | <0.029 : | <0.028 : | <0.021 : | <0.025 : | <0.026 J |
| Arsenic | mg/Kg-Dry | T | 0.046 : | 0.12 : | 0.091 : | <0.23 J | 0.3 : | 0.074 : |
| Barium | mg/Kg-Dry | T | 16.2 : | 22.4 : | 4.6 : | 16.4 : | 45.7 : | 23.7 : |
| Beryllium | mg/Kg-Dry | T | <0.02 J | <0.028 : | <0.028 J | 0.034 : | <0.024 : | <0.066 : |
| Boron | mg/Kg-Dry | T | 13.2 : | 27.1 : | 13.7 : | 13.4 : | 17.5 : | 17.6 : |
| Cadmium | mg/Kg-Dry | T | 0.18 : | 0.35 : | 1.8 : | 0.98 : | 0.24 : | 0.34 : |
| Calcium | mg/Kg-Dry | T | 8460. : | 7910. : | 6370. : | 6190. : | 6330. : | 4290. : |
| Chromium | mg/Kg-Dry | T | 0.86 J | 2.4 : | 0.97 : | 1.2 : | 0.95 : | 1.7 : |
| Cobalt | mg/Kg-Dry | T | 0.17 J | 0.19 J | 0.51 J | 0.3 J | 0.35 J | 0.32 J |
| Copper | mg/Kg-Dry | T | 18.4 : | 13.5 : | 28. : | 29.6 : | 16.5 : | 18.7 : |
| Iron | mg/Kg-Dry | T | 284. : | 205. : | 389. : | 440. : | 418. : | 616. : |
| Lead | mg/Kg-Dry | T | 0.19 : | 0.29 : | 5.4 : | 1. : | 0.43 : | 0.39 : |
| Magnesium | mg/Kg-Dry | T | 1040. : | 2800. : | 1130. : | 1370. : | 2380. : | 2050. : |
| Manganese | mg/Kg-Dry | T | 17.2 : | 30.6 : | 68. : | 36. : | 24. : | 25.8 : |
| Mercury | mg/Kg-Dry | T | <0.034 : | <0.044 : | <0.049 : | <0.032 : | <0.037 : | <0.039 : |
| Molybdenum | mg/Kg-Dry | T | 0.46 : | 0.59 : | 79.7 : | 143. : | 64.5 : | <0.34 : |
| Nickel | mg/Kg-Dry | T | 0.74 : | 1. : | 1.7 : | 1.1 : | 0.9 : | 1.3 : |
| Potassium | mg/Kg-Dry | T | 4120. J | 13100. J | 10100. J | 6910. J | 9430. J | 10100. J |
| Selenium | mg/Kg-Dry | T | 0.34 J | 0.16 J | <1.2 : | 0.066 J | 0.16 J | 0.39 J |
| Silver | mg/Kg-Dry | T | 0.0096 J | 0.0065 J | 0.069 J | 0.019 J | 0.0065 J | 0.0055 J |
| Sodium | mg/Kg-Dry | T | <147. : | 697. : | <126. : | <78.1 J | 328. : | <259. : |
| Thallium | mg/Kg-Dry | T | 0.011 : | <0.0056 : | 0.024 : | 0.026 : | 0.043 : | 0.014 : |
| Titanium | mg/Kg-Dry | T | 12.2 : | 7.9 : | 8.3 : | 13.4 : | 11.7 : | 30. : |
| Vanadium | mg/Kg-Dry | T | 1.1 : | 3.5 : | 0.54 : | 0.81 : | 4. : | 1.7 : |
| Zinc | mg/Kg-Dry | T | 20. : | <14.7 : | 79.7 : | 45.7 : | <39.2 : | <21.1 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10qq

Wildlife Impact Study - Sand Dropseed Washed Below Ground
Validated Analytical Results

| Parameter | Site ID | | CR-10 | CR-5 | TSS14-1 | TSS14-2 | TSS14-5 | WR-4 |
|------------------------------|---------------|---|------------------|-----------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/31/2003 | 9/7/2003 | 6/3/2003 | 6/3/2003 | 6/4/2003 | 6/3/2003 |
| | Sample ID | | WRSD-3-T02N-PLTW | WRSD-1R-T02N-PLT W | WTSD-3-T02N-PLTW | WTSD-1-T02N-PLTW | WTSD-2-T02N-PLTW | WRSD-2-T02N-PLTW |
| | Exposure Area | | CR | CR | TL | TL | TL | CR |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 8790. | 6390. J | - | - | 11400. J | - |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 55.6 | 28.3 | 53.5 | 52.1 | 47.8 | 49.2 |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 2020. | 2380. | 2020. | 1220. | 556. | 592. |
| Antimony | mg/Kg-Dry | T | <0.034 | <0.075 | 0.081 | 0.048 | <0.021 J | <0.02 |
| Arsenic | mg/Kg-Dry | T | 0.21 | 0.31 | 0.76 | 0.35 | 0.31 | 0.12 |
| Barium | mg/Kg-Dry | T | 28.6 | 37.9 | 34.1 | 13.5 | 15.4 | 13.9 |
| Beryllium | mg/Kg-Dry | T | 0.16 | 0.13 | 0.14 J | 0.11 J | 0.06 | <0.02 J |
| Boron | mg/Kg-Dry | T | 3. | 6.4 | 3.3 | 1.9 | 2.3 | 4.7 |
| Cadmium | mg/Kg-Dry | T | 0.25 | 0.29 | 0.61 | 5.2 | 0.35 | 0.13 |
| Calcium | mg/Kg-Dry | T | 3480. | 8360. | 6060. | 5810. | 3000. | 4140. |
| Chromium | mg/Kg-Dry | T | 8. | <4.3 | 3.3 | 2.3 | 1.8 | 1.3 |
| Cobalt | mg/Kg-Dry | T | 0.93 J | 2.2 J | 1.9 J | 1. J | 1. J | 0.92 J |
| Copper | mg/Kg-Dry | T | 10. | 15.7 | 75.9 | 102. | 12.5 | 9. |
| Iron | mg/Kg-Dry | T | 2250. | 2820. | 2910. | 1670. | 1010. | 629. |
| Lead | mg/Kg-Dry | T | 1.1 | 1.2 | 6.5 | 43.7 | 1.1 | 0.35 |
| Magnesium | mg/Kg-Dry | T | 857. | 1840. | 1090. | 640. | 535. | 653. |
| Manganese | mg/Kg-Dry | T | 90. | 91.4 | 112. | 131. | 44.4 | 35.1 |
| Mercury | mg/Kg-Dry | T | <0.03 | <0.057 | <0.03 | <0.029 | <0.031 | <0.033 |
| Molybdenum | mg/Kg-Dry | T | <2.7 | 3. | 58.5 | 89.8 | 146. | 6.7 |
| Nickel | mg/Kg-Dry | T | 4.3 | 5.7 | 5. | 3.3 | 1.8 | 1.4 |
| Potassium | mg/Kg-Dry | T | 1870. J | 4140. J | 2000. J | 2750. J | 2500. J | 1990. J |
| Selenium | mg/Kg-Dry | T | 0.29 J | 0.32 J | 1.5 | 1.6 | 0.081 J | 1.4 |
| Silver | mg/Kg-Dry | T | 0.086 J | 0.018 J | 0.17 J | 0.31 J | 0.029 J | 0.0061 J |
| Sodium | mg/Kg-Dry | T | <118. | <158. | <73.9 | <20.8 | <132. | <122. |
| Thallium | mg/Kg-Dry | T | 0.014 | 0.026 | 0.033 | 0.023 | 0.027 | 0.0061 |
| Titanium | mg/Kg-Dry | T | 98.2 | 121. | 80.4 | 43.8 | 21. | 29.2 |
| Vanadium | mg/Kg-Dry | T | 5.5 | 6.8 J | 8. | 1.8 | 2.5 | 5.9 |
| Zinc | mg/Kg-Dry | T | 55.7 | 26.4 | 58.3 | 265. | 126. | 13.7 |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10rr
Wildlife Impact Study - Sleepy Grass Washed Below Ground
Validated Analytical Results

| Parameter | Site ID | | CR-7 | TSS14-6 | TSS14-9 | WR-1 | WR-3 | WT-2 |
|------------------------------|---------------|---|------------------|------------------|------------------|------------------|------------------|------------------|
| | Sample Date | | 5/29/2003 | 5/30/2003 | 5/28/2003 | 6/2/2003 | 5/29/2003 | 6/4/2003 |
| | Sample ID | | WRSG-3-T02N-PLTW | WTSG-1-T02N-PLTW | WTSG-2-T02N-PLTW | WRSG-1-T02N-PLTW | WRSG-2-T02N-PLTW | WTSG-3-T02N-PLTW |
| | Exposure Area | | CR | TL | TL | CR | CR | TL |
| Units | Fraction | | | | | | | |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 4180. : | 8640. : | 5760. : | 9490. J | 6070. : | 3980. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 50.5 : | 45.3 : | 41.5 : | 45.1 : | - | 44.5 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 3120. : | 1100. : | 902. : | 1040. : | 640. : | 1470. : |
| Antimony | mg/Kg-Dry | T | <0.075 : | 0.062 : | 0.046 : | 0.029 : | <0.051 : | <0.022 : |
| Arsenic | mg/Kg-Dry | T | 0.69 : | 0.64 : | 0.34 : | 0.13 : | 0.15 : | 0.51 J |
| Barium | mg/Kg-Dry | T | 54.3 : | 61.6 : | 32.9 : | 14.2 : | 15.3 : | 22.4 : |
| Beryllium | mg/Kg-Dry | T | 0.22 : | <0.064 : | <0.073 J | <0.036 J | <0.02 : | 0.08 : |
| Boron | mg/Kg-Dry | T | 6.3 : | 4.7 : | 3.7 : | 4.4 : | 5.8 : | 2.4 : |
| Cadmium | mg/Kg-Dry | T | 0.055 : | 0.064 : | 0.27 : | 0.16 : | 0.12 : | 0.31 : |
| Calcium | mg/Kg-Dry | T | 14700. : | 7530. : | 5460. : | 3130. : | 4710. : | 3730. : |
| Chromium | mg/Kg-Dry | T | 4.9 : | 1.4 : | 2. : | 3.1 : | 2.1 : | 2.9 : |
| Cobalt | mg/Kg-Dry | T | 2.7 J | 3.1 J | 1.5 J | 0.87 J | 0.78 J | 0.62 J |
| Copper | mg/Kg-Dry | T | 16.5 : | 12.4 : | 45.6 : | 8.9 : | 8.9 : | 18. : |
| Iron | mg/Kg-Dry | T | 4000. : | 1020. : | 1160. : | 1210. : | 878. : | 1350. : |
| Lead | mg/Kg-Dry | T | 2. : | 0.84 : | 3.2 : | 0.6 : | 0.42 : | 2.7 : |
| Magnesium | mg/Kg-Dry | T | 2470. : | 969. : | 824. : | 689. : | 718. : | 673. : |
| Manganese | mg/Kg-Dry | T | 98. : | 43.1 : | 44.4 : | 49.6 : | 40.2 : | 44.9 : |
| Mercury | mg/Kg-Dry | T | <0.033 : | <0.033 : | <0.039 : | <0.038 : | <0.038 : | <0.033 : |
| Molybdenum | mg/Kg-Dry | T | <4.1 : | 65.6 : | 81. : | 2.9 : | 3.8 : | 150. : |
| Nickel | mg/Kg-Dry | T | 4.7 : | 4.9 : | 3.7 : | 1.9 : | 1.9 : | 1.8 : |
| Potassium | mg/Kg-Dry | T | 2180. J | 2380. J | 2950. J | 3400. J | 3670. J | 2910. J |
| Selenium | mg/Kg-Dry | T | 0.24 J | 0.14 J | 0.11 J | 0.24 J | 0.22 J | 0.16 J |
| Silver | mg/Kg-Dry | T | 0.027 J | 0.036 J | 0.095 J | 0.013 J | <0.0098 J | 0.047 J |
| Sodium | mg/Kg-Dry | T | 298. : | <149. : | 75.9 J | <106. : | 150. : | <105. J |
| Thallium | mg/Kg-Dry | T | 0.035 : | 0.014 : | 0.016 : | 0.01 : | <0.0098 : | 0.029 : |
| Titanium | mg/Kg-Dry | T | 169. : | 28.4 : | 34.4 : | 67.3 : | 49.1 : | 45.1 : |
| Vanadium | mg/Kg-Dry | T | 13.3 : | 8.9 : | 5.4 : | 2.7 : | 3.1 : | 2.7 : |
| Zinc | mg/Kg-Dry | T | 20.8 : | <13.1 : | 36.6 : | 23.8 : | 11.6 : | 40.4 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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Appendix A-10ss

Wildlife Impact Study - Western Wheatgrass Washed Below Ground
Validated Analytical Results

| Parameter | Units | Site ID Sample Date Sample ID Exposure Area Fraction | CR-13 | CR-2 | CR-4 | TSS14-10 | WT-2 | WT-4 |
|------------------------------|-----------|--|--|--|---|---|--|--|
| | | | 6/2/2003 WRWW-2-T02N-PLT W CR | 6/3/2003 WRWW-1-T02N-PLT W CR | 5/31/2003 WRWW-3-T02N-PLT W CR | 5/28/2003 WTWW-2-T02N-PLT W TL | 6/4/2003 WTWW-3-T02N-PLT W TL | 6/5/2003 WTWW-1-T02N-PLT W TL |
| General Chemistry | | | | | | | | |
| Total Kjeldahl Nitrogen | mg/Kg-Dry | T | 6020. J | - | 10700. : | 5380. : | 7050. J | 16700. J |
| Laboratory Parameters | | | | | | | | |
| Solids, Percent | % | T | 42.4 : | 36.8 : | 50.8 : | 33.9 : | 40.6 : | 32.4 : |
| Metals | | | | | | | | |
| Aluminum | mg/Kg-Dry | T | 726. : | 649. : | 939. : | 2860. : | 2930. : | 2600. : |
| Antimony | mg/Kg-Dry | T | <0.023 : | <0.026 : | <0.037 : | <0.082 : | <0.034 : | 0.031 : |
| Arsenic | mg/Kg-Dry | T | 0.11 : | 0.19 : | 0.19 : | 0.65 : | 1.1 J | 0.72 : |
| Barium | mg/Kg-Dry | T | 16.4 : | 22.7 : | 28.6 : | 36.8 : | 49.3 : | 38.1 : |
| Beryllium | mg/Kg-Dry | T | <0.024 J | <0.025 J | <0.047 : | 0.29 : | 0.16 : | <0.27 : |
| Boron | mg/Kg-Dry | T | 2.9 : | 4.6 : | 10.4 : | 4.4 : | 3.2 : | 3.1 : |
| Cadmium | mg/Kg-Dry | T | 0.11 : | 0.17 : | 0.096 : | 0.97 : | 0.18 : | 0.41 : |
| Calcium | mg/Kg-Dry | T | 2790. : | 7970. : | 14700. : | 8710. : | 7510. : | 10300. : |
| Chromium | mg/Kg-Dry | T | 1.7 : | 1.4 : | 18.4 : | 5.3 : | 3.9 : | 7.2 : |
| Cobalt | mg/Kg-Dry | T | 0.57 J | 0.76 J | 1.2 J | 1.8 J | 1.1 J | 2.8 J |
| Copper | mg/Kg-Dry | T | 8.3 : | 11.9 : | 9. : | 57.4 : | 16.3 : | 59.4 : |
| Iron | mg/Kg-Dry | T | 750. : | 746. : | 1170. : | 4180. : | 2710. : | 3970. : |
| Lead | mg/Kg-Dry | T | 0.43 : | 0.35 : | 0.84 : | 9.4 : | 2.3 : | 7.2 : |
| Magnesium | mg/Kg-Dry | T | 660. : | 1270. : | 2330. : | 2020. : | 1230. : | 1770. : |
| Manganese | mg/Kg-Dry | T | 41.4 : | 55.7 : | 79.8 : | 213. : | 104. : | 132. : |
| Mercury | mg/Kg-Dry | T | <0.038 : | <0.041 : | <0.031 : | <0.044 : | <0.037 : | <0.05 : |
| Molybdenum | mg/Kg-Dry | T | 0.9 : | <1.3 : | 2. : | 83.2 : | 94.6 : | 59.4 : |
| Nickel | mg/Kg-Dry | T | 1.5 : | 3. : | 5.3 : | 4.7 : | 2.3 : | 5.6 : |
| Potassium | mg/Kg-Dry | T | 6330. J | 4570. J | 3860. J | 4820. J | 6730. J | 4250. J |
| Selenium | mg/Kg-Dry | T | 0.19 J | 2. : | 0.31 J | 0.12 J | 0.23 J | 0.088 J |
| Silver | mg/Kg-Dry | T | 0.0074 J | <0.0051 J | 0.011 J | 0.14 J | 0.034 J | 0.2 J |
| Sodium | mg/Kg-Dry | T | <113. : | 319. : | <132. : | 81.5 : | <75.9 J | <204. : |
| Thallium | mg/Kg-Dry | T | 0.011 : | 0.032 : | 0.015 : | 0.079 : | 0.037 : | 0.091 : |
| Titanium | mg/Kg-Dry | T | 36.7 : | 28.1 : | 54.1 : | 137. : | 88.8 : | 115. : |
| Vanadium | mg/Kg-Dry | T | 1.6 : | 8.1 : | 6.3 : | 10.9 : | 3.9 : | 10.3 : |
| Zinc | mg/Kg-Dry | T | 21.7 : | 21.9 : | 19. : | 76.8 : | 55.4 : | 66.6 : |

J = Qualified as estimated during data validation

R = Qualified as rejected value from data validation and results are considered unusable for any purpose

T = Total Fraction

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