Expanded Site Inspection Report for Gilmore Townsite and Surrounding Lands

Lemhi County

State of Idaho
Department of Environmental Quality

and

Alta Science & Engineering, Inc.

November 2022



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List of Acronyms

µg/m^3	micrograms per cubic meter
Alta	Alta Science & Engineering, Inc.
amsl	above mean sea level
APA	Abbreviated Preliminary Assessment
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BLM	Bureau of Land Management
cfs	cubic feet per second
CLP	Contract Laboratory Program
DU	decision unit
DEQ	Idaho Department of Environmental Quality
EPA	United States Environmental Protection Agency
IDHW	Idaho Department of Health and Welfare
IDWR	Idaho Department of Water Resources
IGS	Idaho Geological Survey
ISM	Incremental Sampling Methodology
ITRC	Interstate Technology and Regulatory Council
IVBA	*In Vitro* Bioaccessibility Assay
MCL	Maximum Contaminant Level
MEL	Manchester Environmental Laboratory
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
NPL	National Priorities List
PA	preliminary assessment
PPE	probable point of entry
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RSL	regional screening level
SAP	Sample Analysis Plan
SI	site inspection
SM	Standard Method
SOP	Standard Operating Procedure
SVL	SVL Analytical, Inc.
TAL	Target Analyte List
TDL	target distance limit
XRF	X-ray Fluorescence

1 Introduction

This Expanded Site Inspection (ESI) report presents information gathered during 2016 and 2017 sampling events at the Gilmore townsite and surrounding lands located in Lemhi County, Idaho. The purpose of this ESI is to further investigate potential contaminants identified in the Preliminary Assessment and Site Inspection Report for the Gilmore Townsite Common Use Areas and Surrounding Lands (DEQ 2017), evaluate potential threats to human health and the environment, and determine the need for additional investigations and actions.

Under a cooperative agreement with the United States Environmental Protection Agency (EPA) Region 10, the Idaho Department of Environmental Quality (DEQ) provides technical support for performing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) projects. This includes conducting Preliminary Assessments (PA) and Site Inspections (SI) at various mine and industrial sites located on private, state, or mixed ownership (public and private) lands throughout Idaho.

DEQ initiated the PA/SI program in February 2002 to prioritize and assess potentially contaminated sites. Due to accessibility and funding considerations, priority is given to sites where potential contamination poses the most substantial threat to human health or the environment. In recent years, this priority focuses DEQ's efforts in areas where residential and recreational developments are encroaching on historic mining districts. Priority is also given to mining districts where groups or clusters of sites can be cost-effectively assessed on a watershed basis. Additional information about DEQ's PA/SI program can be found at: *https://www.deq.idaho.gov/waste-management-and-remediation/*.

This report is organized in the following sections:

- Section 2, **Site Background** presents a brief history and background of the Gilmore Mine Waste Piles (Gilmore) and summarizes past investigations of the site, to include sampling completed in 2016 and 2017.
- Section 3, **Migration/Exposure Pathways** discusses the field observations and laboratory results from 2016 and 2017 site visits in the context of migration/exposure pathways and targets.
- Section 4, **Conclusions and Recommendations** summarizes the key outcomes of this expanded site inspection and recommends future actions.
- Appendix A, **Tables**, includes sampling data summary tables and other statistics referenced in the report.
- Appendix B, **2016 Site Visit Photos**, includes photos from 2016 site. Additional photos from 2016 can be found in the Preliminary Assessment and Site Inspection Report for the Gilmore Townsite Common Use Areas and Surrounding Lands (DEQ 2017).
- Appendix C, **2017 Site Visit Photos**, Includes photos taken during the 2017 site visit.

- Appendix D, **Analytical Laboratory Reports 2016**, includes the environmental sample results from the laboratory.
- Appendix E, **Analytical Laboratory Reports 2017**, includes the environmental sample results from the laboratory.

2 Site Background

The Gilmore townsite and surrounding lands are in Lemhi County, Idaho, on the eastern flank of the Lemhi Mountain range (Figure 1). The site is approximately 60 miles south of Salmon, Idaho.

2.1 Site Location

EPA SEMS[1] Site Name:	Gilmore Mine Waste Piles
EPA SEMS[1] Identification Number:	IDN001002156
Location:	Approximately 16 miles south of Leadore, Idaho
County:	Lemhi
Latitude/Longitude:	44°27'33.31"N, 113° 16'11.59"W

2.2 Site Description

For this ESI, the Site consists of the unincorporated Gilmore townsite, land immediately surrounding the townsite (including mine waste piles), and the waterways within and near the townsite. Other related parcels, such as the patented mining claims, are discussed in the Gilmore Patented Claim Abbreviated Preliminary Assessment (DEQ 2010), the Gilmore Division of the Texas Mining District Preliminary Assessment and Site Inspection Report (DEQ 2011), and the Supplemental Site Inspection Report for the Gilmore Division of the Texas Mining District (DEQ 2016).

The Site can be accessed via Meadow Lake Road (formerly Gilmore Road). Meadow Lake Road intersects State Highway 28 approximately 17-miles south of Leadore, Idaho. The Site is approximately 60 miles south of Salmon, Idaho, the Lemhi County seat (Figure 1).

The Site gently slopes to the north and east. Intermittent streams and drainages flow across the Site, originating in the Lemhi Mountains to the west. The townsite itself is located on an alluvial fan and has a relatively low relief, gently sloping to the north. The northern third of the townsite is at a slightly lower elevation then the southern two-thirds. This change in elevation is marked by an intermittent steam originating in Liberty Gulch. Streams generally flow eastward then intersect with Texas Creek which flows north along State Highway 28 (Figure 2).

[1] All sites investigated under DEQ's cooperative agreement with EPA are tracked in EPA's Superfund Enterprise Management System (SEMS) database.

The approximately 90-acre townsite was platted by the Gilmore Townsite Company in 1922. The plat consisted of approximately 560 lots, ranging from roughly 3,300 sq. ft. to 12,000 sq. ft. These lots are now privately owned parcels. There are 25, 20-acre patented mining claims located on the hillside west of the townsite. The claims are also privately owned. Separating the townsite form the mining claims is a thin strip of land owned by the Bureau of Land Management (BLM). The BLM also owns an expanse of property north and south of the townsite. Immediately east of the townsite is privately owned range land.

The Site population is mostly transient and varies greatly depending on the season. Site accessibility is limited during winter months by the amount of snow and road conditions. A few landowners may live at the Site year-round. Many landowners at the Site use their properties during summer months as a weekend recreation destination. There are no public utilities available at the site. Lodging is primarily off-grid cabins, camping, or RVs. Other transient populations also pass through the site while recreating. Outdoor recreation activities are the primary draw to the Site. Activities may include but are not limited to all-terrain vehicle (ATV) riding, biking, driving, horseback riding, and walking. Meadow Lake Road is the primary access to the Meadow Lake Campground, a popular summer destination within the Salmon-Challis National Forest.

Cattle grazing occurs on land surrounding the townsite, which is partially located within the Bureau of Land Management's (BLM) Spring Canyon grazing allotment (DEQ 2011).

Although waste rock can be found littered throughout the mining claims, four tailings piles are located west of the townsite on the claim closest to the townsite and lowest in elevation (the Katie claim). There is one large gray pile, one large tan pile, and two other smaller piles. Areas of discolored soil are also located between the tailings piles and the townsite. The discolored soil could be tailings which eroded downslope by wind or water or was dispersed while ore was transported from the mines to the railroad loading station located on the east side of the townsite. The piles and eroded soil are considered a primary source of contamination and are further discussed ins Section 2.4.1.

2.3 Ownership History

Land surrounding the Gilmore site includes a mix of private, state, and federal ownership. The townsite parcels are privately owned. The four mine waste piles discussed in this report are primarily located on a single 20-acre, privately owned parcel (Figure 3).

Additional information regarding ownership is discussed in previous investigations.

2.4 Operations and Waste Characteristics

Mining took place in the Gilmore Division of the Texas Mining District from the 1880s through the 1930s. The Gilmore townsite was platted and recorded by Lemhi County in 1922. A railroad spur from Leadore, Idaho, the Gilmore-Pittsburgh line, terminated at an ore loading station located within the northeastern portion of the townsite. Ore was transported from the mines to the loading station via half-mile long tramway that divide the north and south halves of the townsite. The mines were shut down in the late 1920s following a power plant fire that eliminated needed electricity. The railroad shutdown soon after. Small scale mining operations

continued until approximately 1965, at which the town of Gilmore was mostly abandoned. Mined commodities included lead, silver, copper, zinc, and gold. Ore processing was likely limited to milling prior to shipment A smelter was never built at the site.

Site geology, climatology, and history of past mining activities are further discussed in the previous investigations listed in Section 2.5.

2.4.1 Sources

Potential contamination sources at the Site include the mine waste piles located west of the townsite, mine waste used on roads, townsite impoundment, mine waste distributed across townsite by tramway and railroad ore loading process. These sources are further discussed in the following subsections. Other smaller tailings or waste rock piles are located up-gradient, near the historic mine sites. These smaller piles are not a subject of this investigation.

The contaminants-of-concern (COC) at the Site are metals associated with historical mining, primarily arsenic and lead. Based on DEQ's 2016 sampling (DEQ 2017), other COCs include antimony, cadmium, manganese, and zinc. Volume estimates are presented in the following sub-sections. However, pile sizes and potential migration paths and mechanisms will need to be further investigated prior to planning future actions.

2.4.1.1 West/Gray Mine Waste Pile

Based on aerial photographs, this pile is approximately 300 feet by 200 feet. Based on previous information gathered by Idaho Geological Survey (IGS) (Mitchell 1997), a maximum thickness of 80 feet is estimated. Given these measurements, the estimated volume is 4,800,000 cubic feet, or 177,778 cubic yards. This source has no containment and shows evidence of migration toward the townsite, located approximately 1,100 feet to the east. Aerial photographs indicate potential off-road vehicle or heavy equipment use on-top this source. This source pile may have been used by locals as a gravel source for road maintenance within the townsite.

2.4.1.2 East/Tan Mine Waste Pile

Based on aerial photographs, this pile is approximately 130 feet by 190 feet with an estimated thickness of 15 to 20 feet. Using an estimated thickness of 15 feet, the estimated volume is 370,500 cubic feet, or 13,722 cubic yards. This source has no containment and shows evidence of migration toward the townsite, located approximately 920 feet to the east. Aerial photographs indicate potential off-road vehicle or equipment use on-top this source. Based on sample results of discolored soil that had eroded downslope (collected during DEQ's previous PA/SI [DEQ 2017]), lead is present from 40,400 to 45,100 milligrams per kilogram (mg/kg).

2.4.1.3 Mine Waste Piles West and Southwest of the East/Tan and West/Gray Tailings Piles

Two additional piles are located immediately west and southwest of the west/gray pile and east/tan pile discussed above. The volumes of these two piles are not known. These source piles also have no containment.

2.4.1.4 Discolored Soil Between Mine Waste Piles

Two areas of discolored soil exist between and adjacent to the mine waste piles: an area of between the west/gray and east/tan tailings piles and the two tailings piles immediately west and southwest of them, and an area of soil to the north of the west/gray and east/tan tailings piles that is between these tailings piles and BLM property. The total area of discolored soil is unknown.

2.4.1.5 Townsite Roads

Given their proximity, it is possible that mine waste has been used for repairing or maintaining dirt roads within the townsite. The material on some townsite roads appears to be like the mine waste.

2.4.1.6 Townsite Impoundment

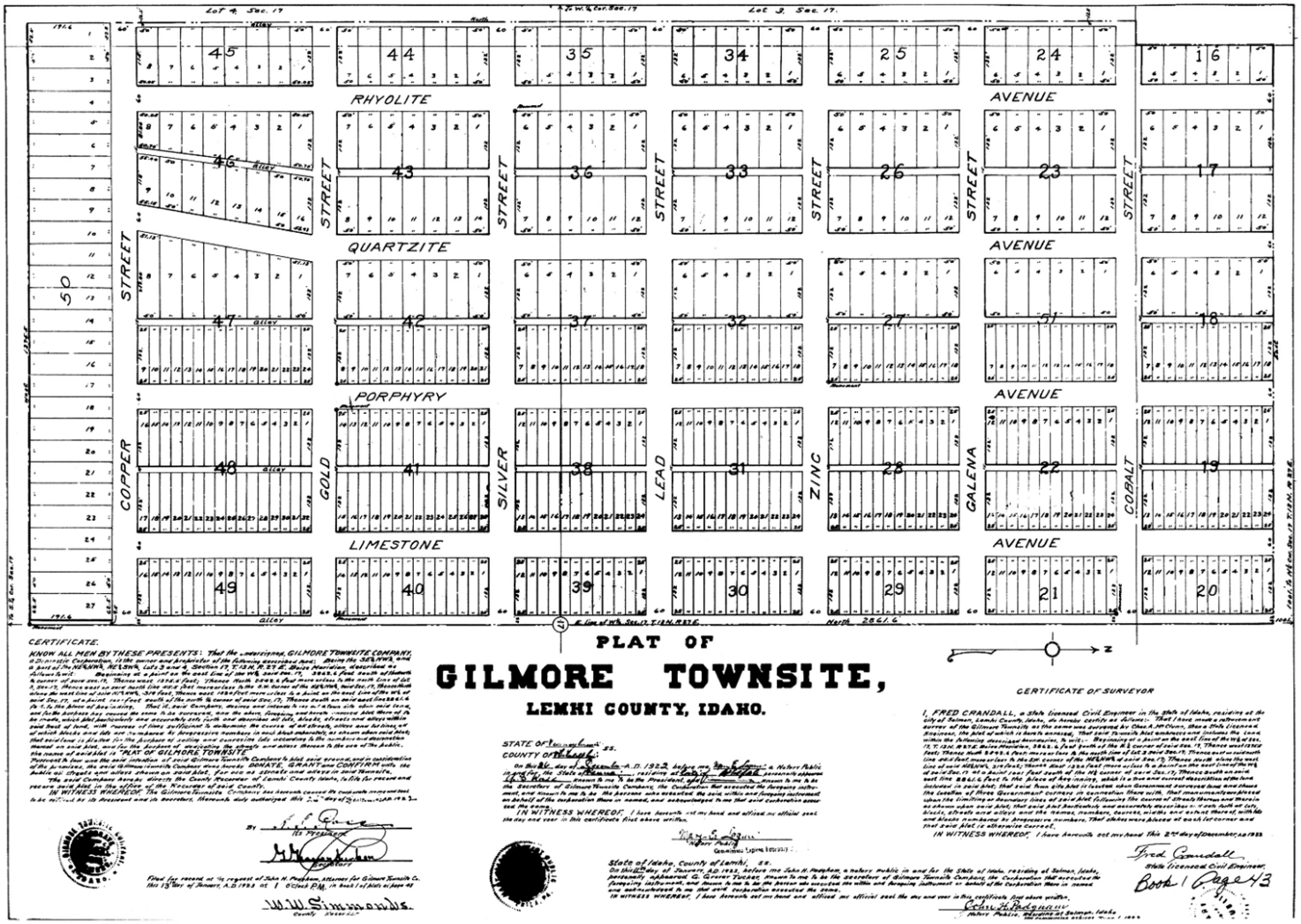
The northern portion of the townsite is at a slightly lower elevation then the southern portion. On the eastern side of the townsite, an earthen embankment extends from the higher elevation north across the lower elevation. This embankment may have dammed Liberty Gulch or held water coming from the Meadow Creek diversion. The embankment may have also been and extension of the railroad where ore cars waited before being pulled forward for loading. Soil within the area behind the embankment appears to be tan in color like the East/Tan mine waste pile. It is possible the embankment was made from mine waste.

2.4.1.7 Tramway and Railroad Loading Station

Ore was transported from the mines to the railroad via a tramway that crossed the townsite east/west. The two-car, gravity operated tramway was approximately ½ mile long extending from the mines uphill to waiting railcars at the unloading terminal in the townsite below. The tramway, railroad, and unloading station no longer exist.



View looking northwest over the southern portion of the Gilmore townsite, circa 1910. The Gilmore townsite was not officially platted until 1922.Tramway and railroad ore loading trestle located on eastern side of townsite can be seen in upper right corner of photo. (Lemhi County Historical Society 2022)



Gilmore townsite plat, recorded with Lemhi County in 1922.

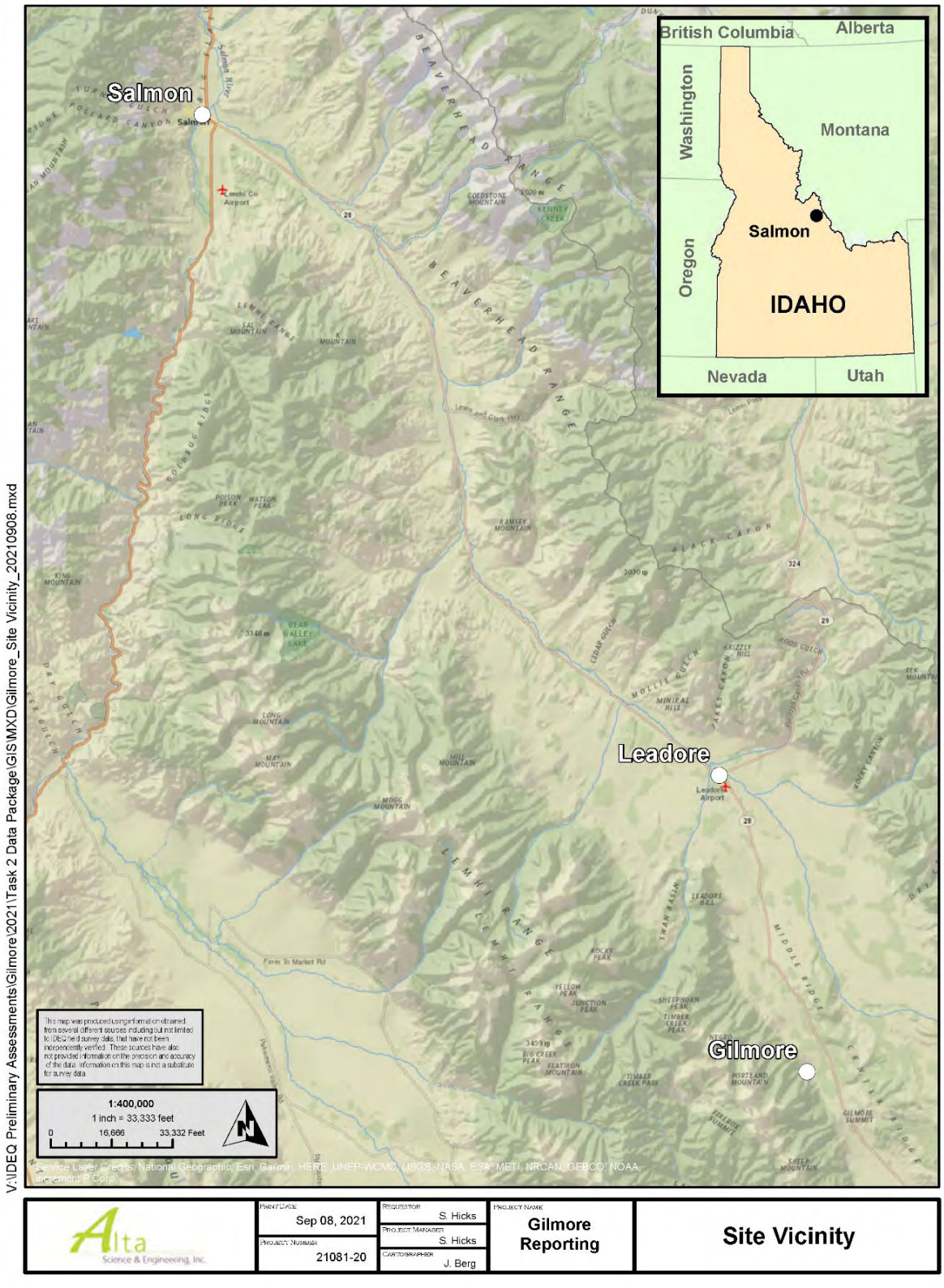


Figure 1. Site Vicinity

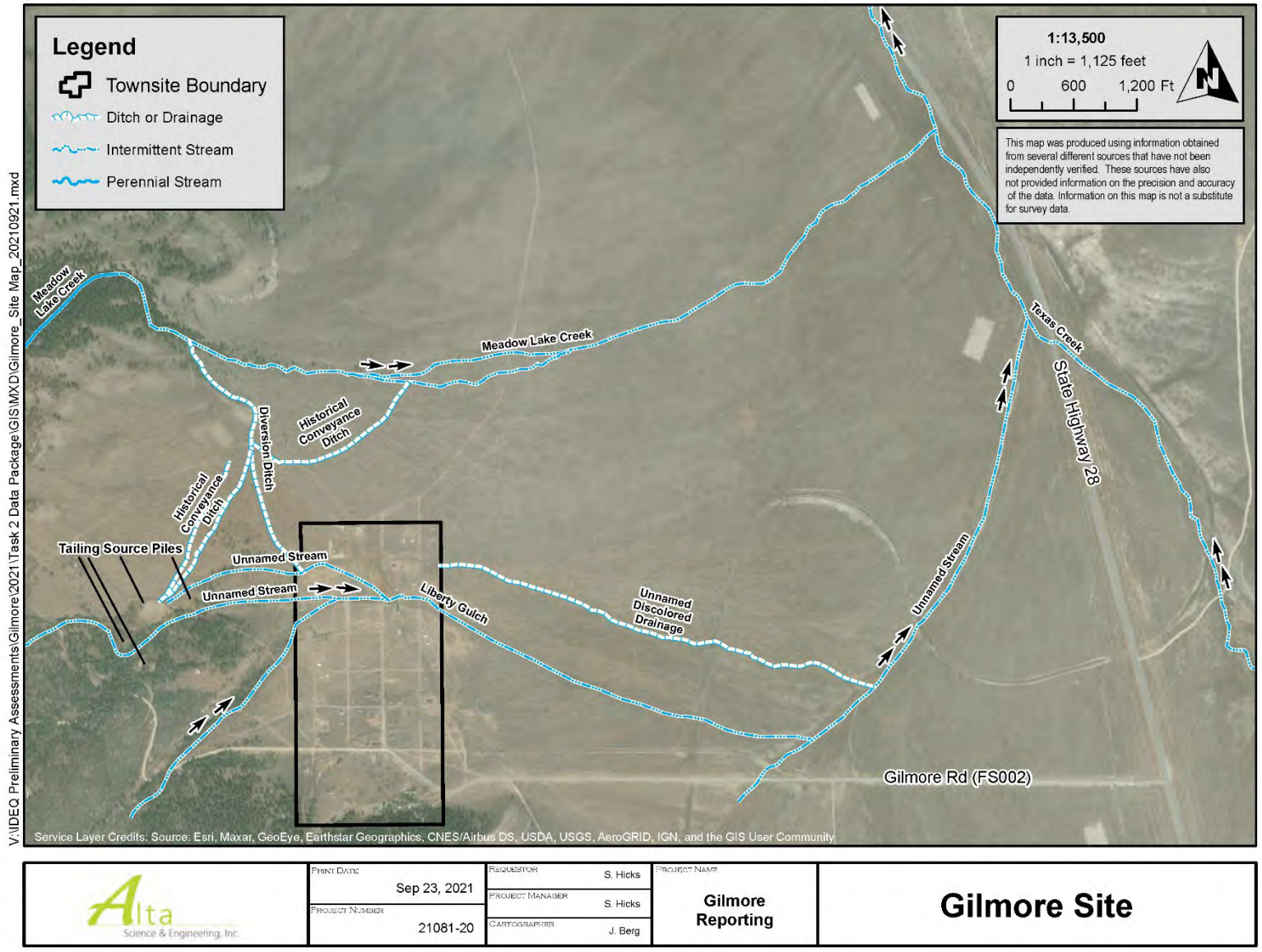


Figure 2. Gilmore Site

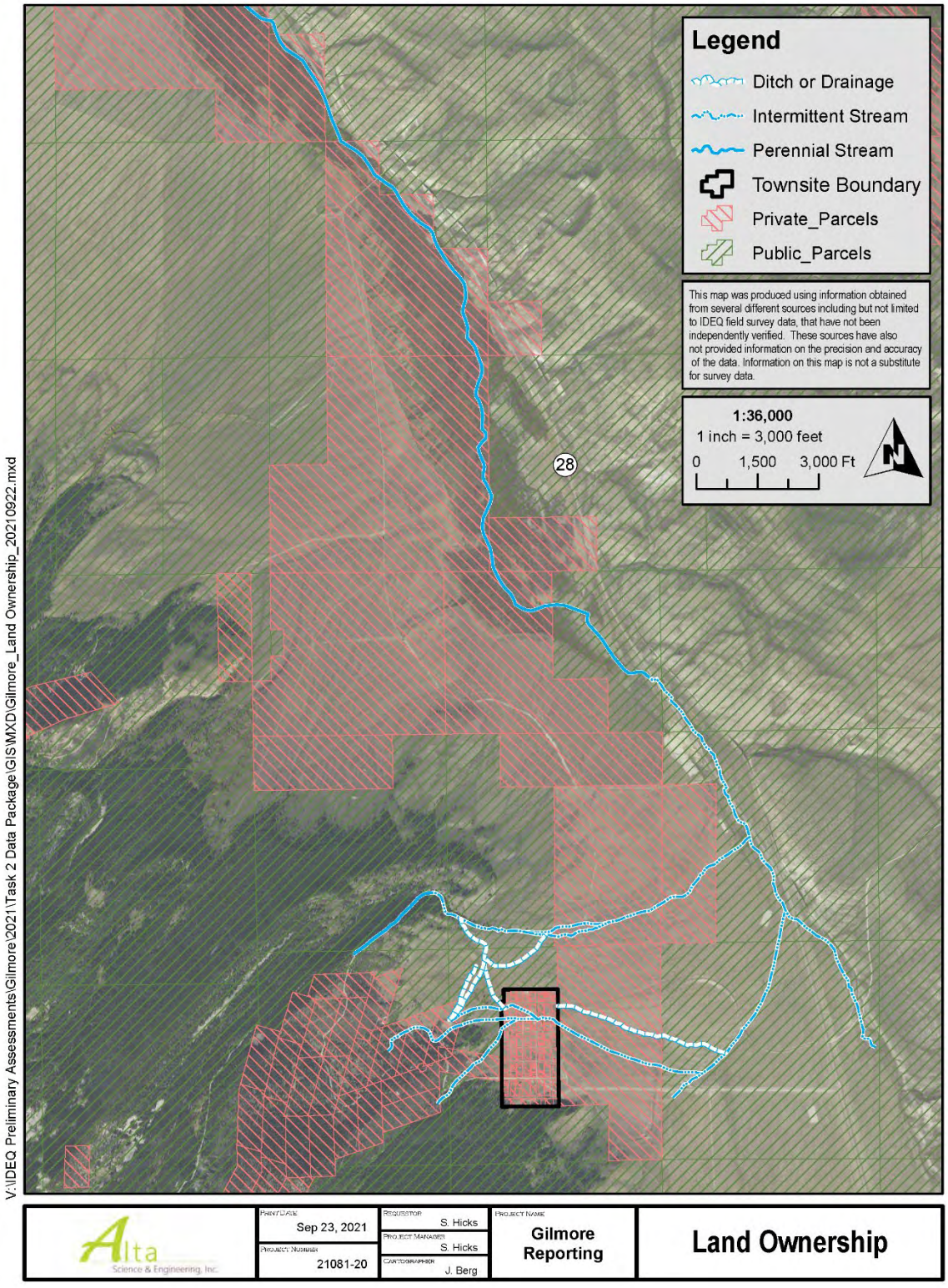


Figure 3. Property Ownership in the Vicinity of Gilmore, Idaho

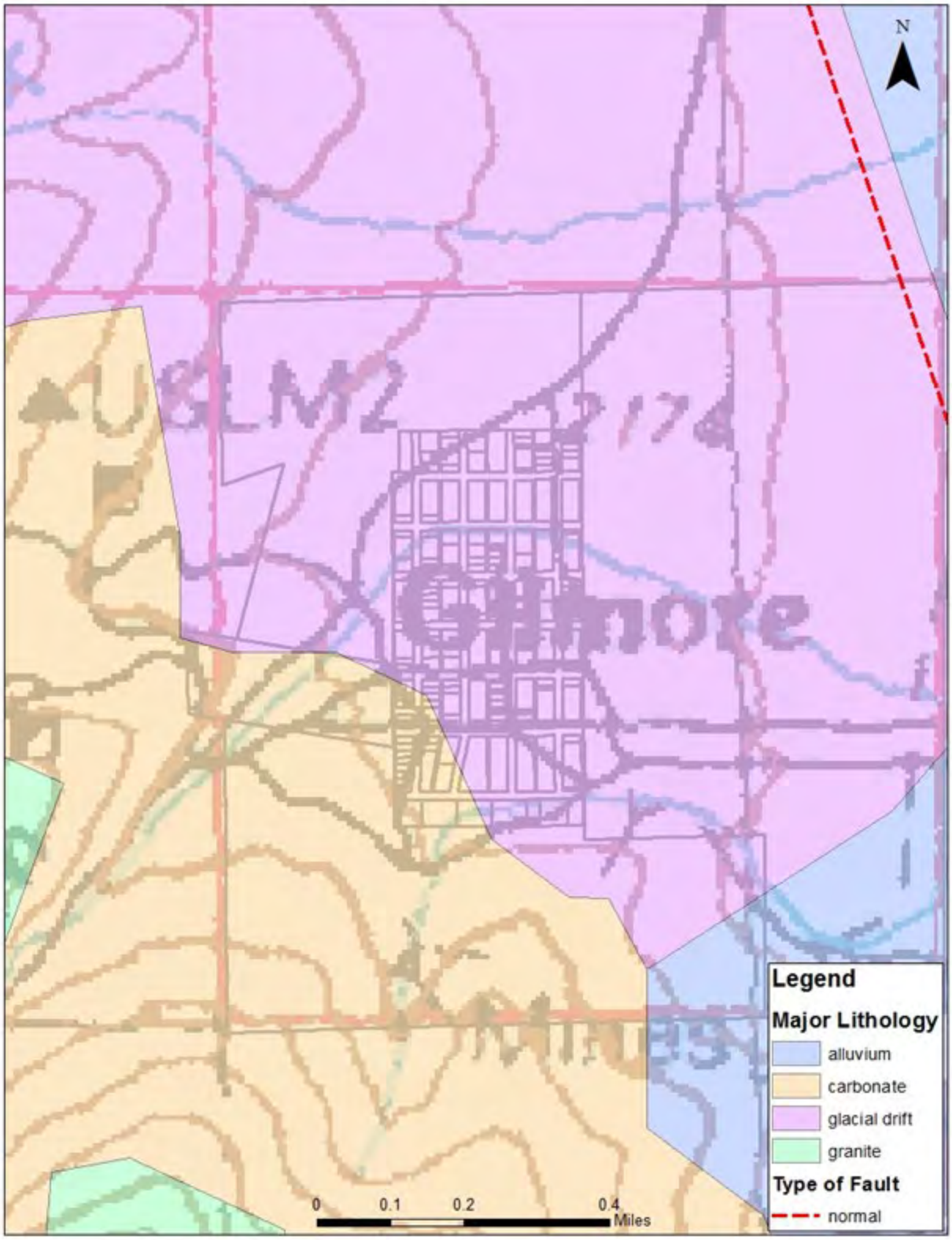


Figure 4. Lithology in the vicinity of Gilmore, Idaho.

2.5 Previous Investigations

The following sections discuss previous investigations conducted at the Site and within the greater Gilmore Division of the Texas Mining District, which provides information on the general environmental conditions of the mines.

2.5.1 Preliminary Assessment and Site Inspection Report for the Gilmore Townsite Common Use Areas and Surrounding Lands (DEQ 2017)

In August 2016, DEQ and its contractor completed field work for a PA/SI for the townsite and surrounding area. BLM assisted with field work for sampling conducted on BLM property. The purpose of the PA/SI was to assess the potential threat posed to human health and the environment at the townsite and determine the need for additional investigation. Full discussion, data tables, and figures showing sample locations are presented in the Gilmore Townsite Common Use Areas and Surrounding Lands PA/SI (DEQ 2017).

In summary, a combination of composite soil samples, grab soil and sediment samples, and subsurface soil samples were collected as part of the PA/SI. Composite soil samples were collected from townsite common use areas (e.g., townsite roadways) to a depth of 24 inches below ground surface (bgs). Two composite soil samples were collected from BLM land along the west and north boundary of the townsite, one composite soil sample was collected where tailings from a tailings pile located on adjacent private property had eroded onto BLM land, three grab sediment samples were collected from a drainage ditch and dry creek bed, and one composite soil sample was collected from an area of discolored soil north of the townsite. One background soil sample was also collected (DEQ 2017).

Results for samples collected from the common use areas and BLM land indicate that metals concentrations were highest in the samples collected where tailings had dispersed eastward, downgradient into the northern portion of the townsite. Several metals were detected at elevated concentrations with respect to background concentrations; notably, arsenic was detected at concentrations ranging from 8.04 to 546 mg/kg, and lead was detected at concentrations ranging from 65.7 to 45,100 mg/kg.

Sampling of privately owned townsite parcels was also completed as part of the same 2016 sampling event. However, the analytical results for these samples were not discussed in the PA/SI report (DEQ 2017). The 2016 parcel sampling effort is discussed in Section 2.6 of this report and results are presented in Table 1.

2.5.2 Supplemental Site Inspection Report for the Gilmore Division of the Texas Mining District (DEQ 2016)

DEQ completed a supplemental SI report for mine sites within the Gilmore Division of the Texas Mining District that were accessed by DEQ in August 2015. Full discussion, data tables, and figures showing sample locations are presented in the Supplemental Site Inspection Report for the Gilmore Division of the Texas Mining District (DEQ 2016). As part of this supplemental SI, DEQ collected three soil samples from the Silver Dollar Mine site. The sample locations included a nearby area suspected to be used recreationally (e.g., for camping and campfires). Samples were collected from an orange-colored waste rock pile, a tan-colored waste rock pile,

and a background location. Sample results indicate that concentrations of several metals were elevated with respect to background concentrations. Notably, arsenic concentrations ranged from 101 to 690 mg/kg and lead concentrations ranged from 10,500 to 78,400 mg/kg (DEQ 2016).

2.5.3 Preliminary Assessment and Site Inspection Report for the Gilmore Division of the Texas Mining District (DEQ 2011)

In May 2011, DEQ completed a PA/SI at the Gilmore Division of the Texas Mining District. Full discussion, data tables, and figures showing sample locations are presented in the Gilmore Division of the Texas Mining District PA/SI (DEQ 2011). As part of the assessment and inspection, DEQ collected a total of three soil samples: one from a waste dump near the Glenn Tunnel, one from a waste dump that has encroached on Forest Service Road 002, and one background sample upslope of the mining district. All three samples were collected from the right-of-way of Forest Service Road 002. No samples were collected from private property (DEQ 2011).

Sample results indicated that concentrations of arsenic, barium, cadmium, lead, manganese, mercury, silver, and zinc in both waste dump samples were elevated with respect to background sample concentrations. Notably, lead was detected in the Glenn Tunnel waste dump at 14,800 mg/kg and in the waste dump that encroaches on Forest Service Road 002 at 2,590 mg/kg (DEQ 2011).

2.5.4 Abbreviated Preliminary Assessments (DEQ 2010)

In August of 2010, DEQ completed Abbreviated Preliminary Assessments (APAs) for twenty-one mines within the Texas Mining District in effort to prioritize further investigations.

Permission to access the property was obtained from thirteen of the twenty-one mine owners, including the Andy Patented Claim, Edie Patented Claim, G.A.P. Patented Claim, Gilmore Patented Claim, Glenn Tunnel, Hatton Patented Claim, La Porte Patented Claim, Latest Out Mine, Never Sweat Mine, Silver Dollar Extension Patented Claim, Sixteen-to-One Patented Claim, Texas Patented Claim, and W.H. Cannon Patented Claim. Each of these mines was visited to determine if significant wastes or exposure pathways were present. For the remaining eight mines, of which access was not granted -- the Dorothy Patented Claim, Cook Claim, Martha Patented Claim, Olive Patented Claim, Roy Launder Claim, Ruth Patented Claim, Silver Dollar Mine, and Vick Patented Claim – observations with regards to mining development were made via public vantage points and existing maps and aerial photographs.

Based on the APAs, DEQ recommended that further assessment occur at the following mine sites: Ruth and Olive Patented Claims (due to the size of the dumps observed), the Vick Claim (because no observations of the site could be made), the Silver Dollar Claim (due to the area being developed for recreational and/or residential uses), and the Dorothy and Martha Patented Claims (due to waste dumps located adjacent to public roadways). DEQ determined that no further action was required for the remaining mines due to a lack of mine waste and/or exposure pathways. The 2010 APAs can be found at the DEQ Preliminary Assessment website: *https://www.deq.idaho.gov/preliminary-assessment-program.*

2.6 Site Inspections

2.6.1 2016 Site Inspection Activities – Townsite Parcel Soil Samples

During the week of August 15, 2016, DEQ, BLM, and DEQ's contractor, Alta Science & Engineering, Inc. (Alta), visited the Gilmore area and collected various environmental samples, including soil samples from common areas and privately owned townsite parcels. Discussion related to the collection of soil samples within common areas at the Site (e.g., townsite roadways) and the related analytical results can be found in the Gilmore Townsite Common Use Areas and Surrounding Lands PA/SI report (DEQ 2017). Details related to the collection of soil samples on privately owned townsite parcels are discussed in this section. Related analytical data is discussed in Section 3.3.4. The field crew did not purposely or knowingly trespass on any private holdings during field work.

Sampling and laboratory analysis was conducted in accordance with the Sampling Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for Gilmore Townsite Preliminary Assessment Activities (TerraGraphics 2016). All samples were collected, handled, and stored in accordance with the SAP/QAPP and submitted to SVL Analytical, Inc. (SVL) in Kellogg, Idaho. All soil samples were analyzed for total metals (antimony, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, and zinc) by EPA 6010B, 6020, and 7471.

Composite soil samples were collected from each townsite parcel where access had been granted. In some cases, a composite was comprised of soil from multiple parcels based on ownership and use. Composite samples consisted of collecting equal volumes of soil from a depth of 0 to 2 inches from 30 subsample locations randomly distributed over an area. Subsamples were composited by placing scooped soil into double, resealable plastic bags. Grab samples were also collected from some townsite parcels at greater sample depths (e.g., up to 18" bgs). Grab samples locations were selected based on site-specific conditions (e.g., topography or visual evidence of contamination) and field screening using a handheld XRF. XRF analysis was also used to prioritize samples for laboratory analysis. QA/QC samples included field replicates, field duplicates, and a rinsate blank collected from a decontaminated sampling tool.

Forty-nine composite samples (including QA/QC samples) and six grab samples were collected from 36 sample areas. Seven composite samples were sieved to -10 mesh and -60 mesh prior to analysis.

A summary of soil sample location descriptions and laboratory analytical results are presented in Appendix A, Table 1. Sample locations are shown in Figure 6. See Appendix C for related laboratory data reports.

2.6.2 2017 Site Inspection Activities

From July 31, 2017 through August 8, 2017, DEQ, EPA, and Alta staff visited the Gilmore area and collected various environmental samples. *Ex-situ* XRF analysis, compositing of samples for *In Vitro* Bioaccessibility Assay (IVBA) for lead, and field collection of soil, sediment, surface water, and groundwater samples was conducted by Alta's staff. Sample collection information, field parameters, stream discharge, and analytical results are presented in this section.

Photographs are presented in Appendix B. The field crew did not purposely or knowingly trespass on any private holdings during field work.

Sampling and laboratory analysis was conducted in accordance with the Sampling Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for Gilmore Mine Waste Piles Site (TerraGraphics 2017). All samples were collected, handled, and stored in accordance with the SAP/QAPP. At the time of sampling, site-specific conditions (e.g., topography or visual evidence of contamination) and field screening using a handheld XRF were used to assist with determining sample locations and samples for laboratory analysis. Soil samples collected via the Incremental Sampling Methodology (ISM) method were submitted to EPA's Manchester Environmental Laboratory (MEL) for preparation and analysis, and water samples, sediment samples, and grab soil samples were submitted to a Contract Laboratory Program (CLP) laboratory for analysis.

Sample data summary tables are presented in Appendix A, Tables 2 through 6. See Appendix E for related laboratory data reports.

2.6.2.1 Soil Sampling

ISM and grab soil samples were collected and analyzed for Target Analyte List (TAL) metals: aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, selenium, silver, thallium, vanadium, and zinc. A summary of all soil sample location descriptions and laboratory analytical results are presented in Appendix A, Table 2. Sample locations are shown in Figures 7 and 8.

2.6.2.1.1 ISM Soil Sampling

ISM samples were collected following the Interstate Technology and Regulatory Council (ITRC) ISM guidance document (ITRC 2012). ISM soil samples consisted of collecting equal volumes of soil from a depth of 0 to 3 inches from 30 subsample (e.g., waste piles, Townsite parcels, and roads) or 100 subsample locations (e.g., BLM property) randomly distributed over the sample area. Subsamples were composited by placing scooped soil into double, resealable plastic bags. QA/QC samples included field replicates in triplicate, laboratory preparation triplicates, processed and unprocessed silica sand blanks, and rinsate blanks collected from a decontaminated sampling tool. ISM soil samples were submitted to MEL for drying, homogenizing, and sieving (using a No. 80 mesh) according to ITRC guidance methods and MEL's standard operating procedure (SOP), analysis of Target Analyte List (TAL) metals by EPA method 3050B and 6010 B/C, and calculation of percent solids by Standard Method (SM) 2540G.

A total of 53 DUs were sampled: 6 DUs from the source area (DUs 1 through 6), 7 DUs from BLM property around the northern portion of the Townsite (DUs 7 through 13), 12 DUs from roadways within the Townsite (DUs 14 through 25), 10 DUs from assumed vacation or residential townsite parcels (DUs A1 through A10), 15 DUs from assumed non-residential townsite parcels (DUs B1 through B15), 2 DUs from the Gilmore Land Trust Parcel (DUs A11 and A12), and one DU (DU26) from a background sample location. A summary of soil

laboratory analytical results is presented in Appendix A, Table 2. Sample locations are shown as approximate centroids in Figures 7 and 8.

2.6.2.1.2 Grab Surface Soil Sampling

Grab soil samples were collected from 0 to 3 inches bgs using a stainless-steel trowel. Two or three scoops were collected from each sample location and placed in an 8-ounce glass jar. Organic litter and debris was removed from the surface prior to sample collection. QA/QC requirements included the collection of field duplicates and rinsate blanks. Grab soil samples were submitted to a CLP laboratory for analysis of TAL metals by method EPA 3050B and 6010B/C.

Grab soil samples were also collected at two background soil sample locations (BKD-SS66 and BKD-SS68). A summary of soil laboratory analytical results is presented in Appendix A, Table 2. Sample locations are shown as approximate centroids in Figures 7 and 8.

2.6.2.2 Sediment Sampling

Sediment samples were collected from a depth of 0 to 6 inches bgs using dedicated plastic scoops. Collected material was homogenized thoroughly in dedicated plastic bowls and placed into doubled, resealable bags. Unsalable material, such as rocks and vegetation, was removed during homogenization. Although samples were placed in doubled, resealable bags, during field sample collection, samples were transferred to 8-ounce glass jars in Alta's Kellogg office to meet CLP laboratory requirements for sediment sample containers. Duplicate samples were collected as part of the QA/QC requirements. No rinsate blanks were collected because dedicated sampling equipment was used. Samples were shipped to a CLP laboratory for analysis of TAL metals by method EPA 3050B and 6010B/D or CLP SOW ISM02.4.

A total of 32 sediment samples (excluding QA/QC) were collected: 28 samples from dry streams, conveyance ditches, and other overland flow paths, three (3) samples co-located with surface water samples within the 15-mile target distance limit (TDL), and one (1) sample (BKD-SD34) from a background location upstream of the Site and historic mining district. Sediment sample location descriptions and laboratory analytical results are presented in Appendix A, Table 3. Sample locations are shown in Figure 9 and 10.

2.6.2.3 Surface Water Sampling

Surface water samples were collected using the dip sampling method from the *Techniques of Water-Resources Investigations (TWRI), Book 9, Chapter A4, Collection of Water Samples* (USGS 2006) and is described in the project QAPP (TerraGraphics 2017). QA/QC samples included duplicates, field blanks, and rinsate blanks. Samples were shipped to a CLP laboratory for analysis of TAL metals by method EPA 3050B and 6010B/D or CLP SOW ISM02.4.

Three surface water samples were collected from locations within the 15-mile TDL near the first occurrence of water in Texas Creek that was accessible from public land. These samples included 2 samples within the flowing portion of Texas Creek and one sample from standing water in the adjacent wetlands (Figure 11). One background sample (BKD-SW6) was also collected from Meadow Lake Creek, upstream of the townsite and upgradient of the mining

district. Surface water sample location descriptions and laboratory analytical results are presented in Appendix A, Table 4. Sample locations are shown in Figure 11.

2.6.2.4 Groundwater Sampling

Groundwater samples were collected from wells used for domestic drinking water. Samples were collected from spigots located as close as possible to the wellheads and upstream of any holding tanks or treatment systems. Because water was not pumped directly from the domestic drinking water well using standard low flow sampling methods, the faucet or spigot was adjusted to maintain the lowest flow practicable to use modified low-flow sampling techniques as described in the project QAPP (TerraGraphics 2017). Samples were shipped to a CLP laboratory for analysis of TAL metals by method EPA 3050B and 6010B/D or CLP SOW ISM02.4.

Two samples were collected from domestic drinking water wells where homeowners were present and allowed access. A third sample was collected from a spigot located near several cabins on the Gilmore Land Trust Parcel (west of the townsite). A fourth sample was collected from a hose bib immediately adjacent to a wellhead on a parcel at the south end of the townsite. Sample location descriptions and results are presented in Appendix A, Table 5. Sample locations are shown in Figure 12.

2.6.2.5 Lead Bioavailability Sampling

Two soil samples were analyzed for *In Vitro* Bioaccessibility Assay (IVBA) of lead: one from the source area and one from the northern townsite parcels and roadways. The source area sample was a composite of all six ISM samples collected from source area *decision units* (DUs; DUs 1 through 6). The northern townsite sample was a composite of six townsite DU samples with the highest lead XRF readings.

The selected field samples for IVBA analysis were composited at Alta's office in Kellogg, Idaho. First, the samples were each homogenized by stirring the soil in its sample bag. Equal volumes of soil from each sample bag were scooped into a clean plastic bowl, mixed by hand using a clean plastic spoon, and placed into a double, resealable plastic bag for shipping to the laboratory.

IVBA samples were submitted to MEL for analysis using EPA Method 1340 and 6010 B/D. IVBA sample calculations and results are shown in Appendix A, Table 6.

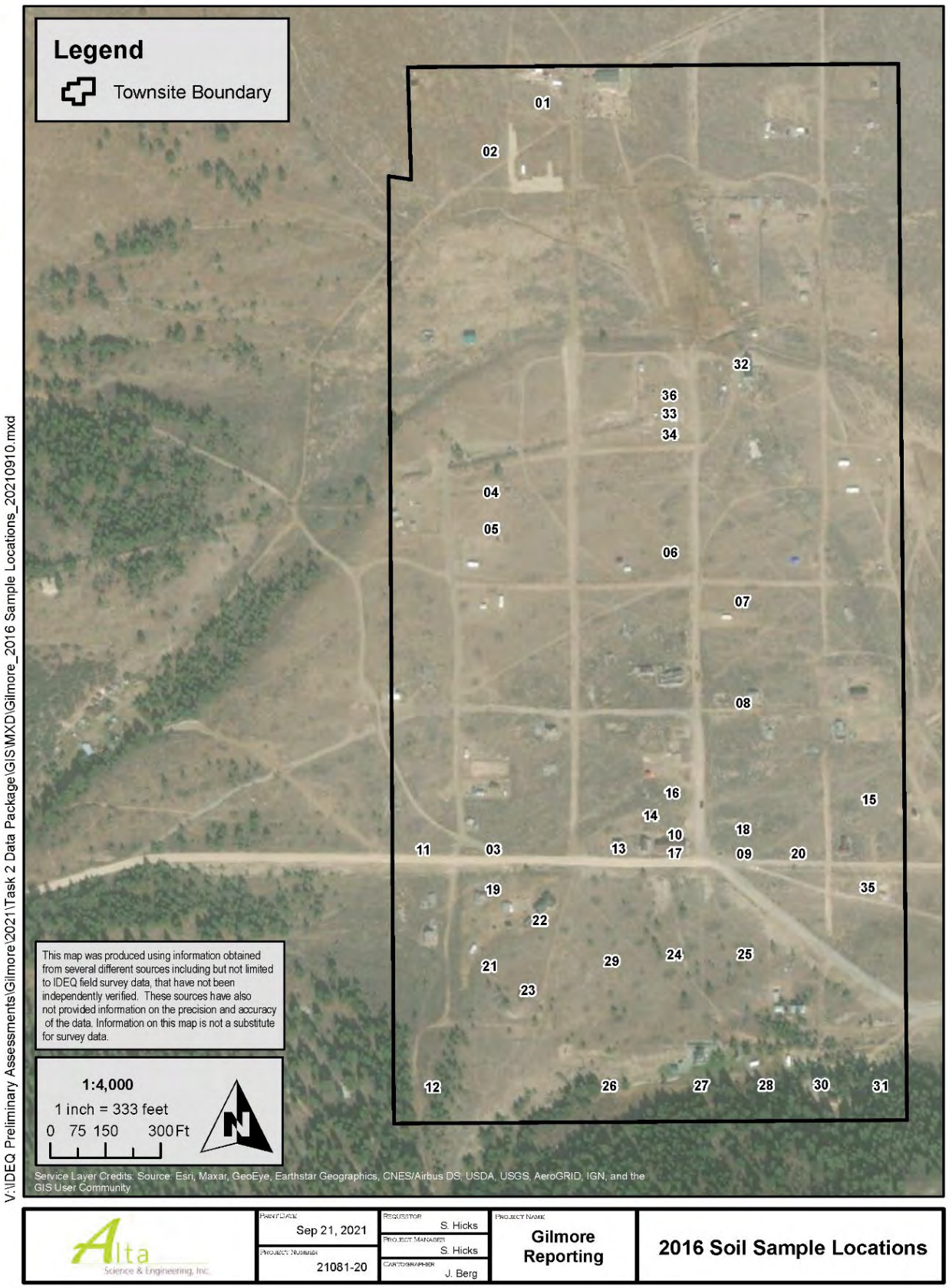


Figure 6. 2016 Soil Sample Locations

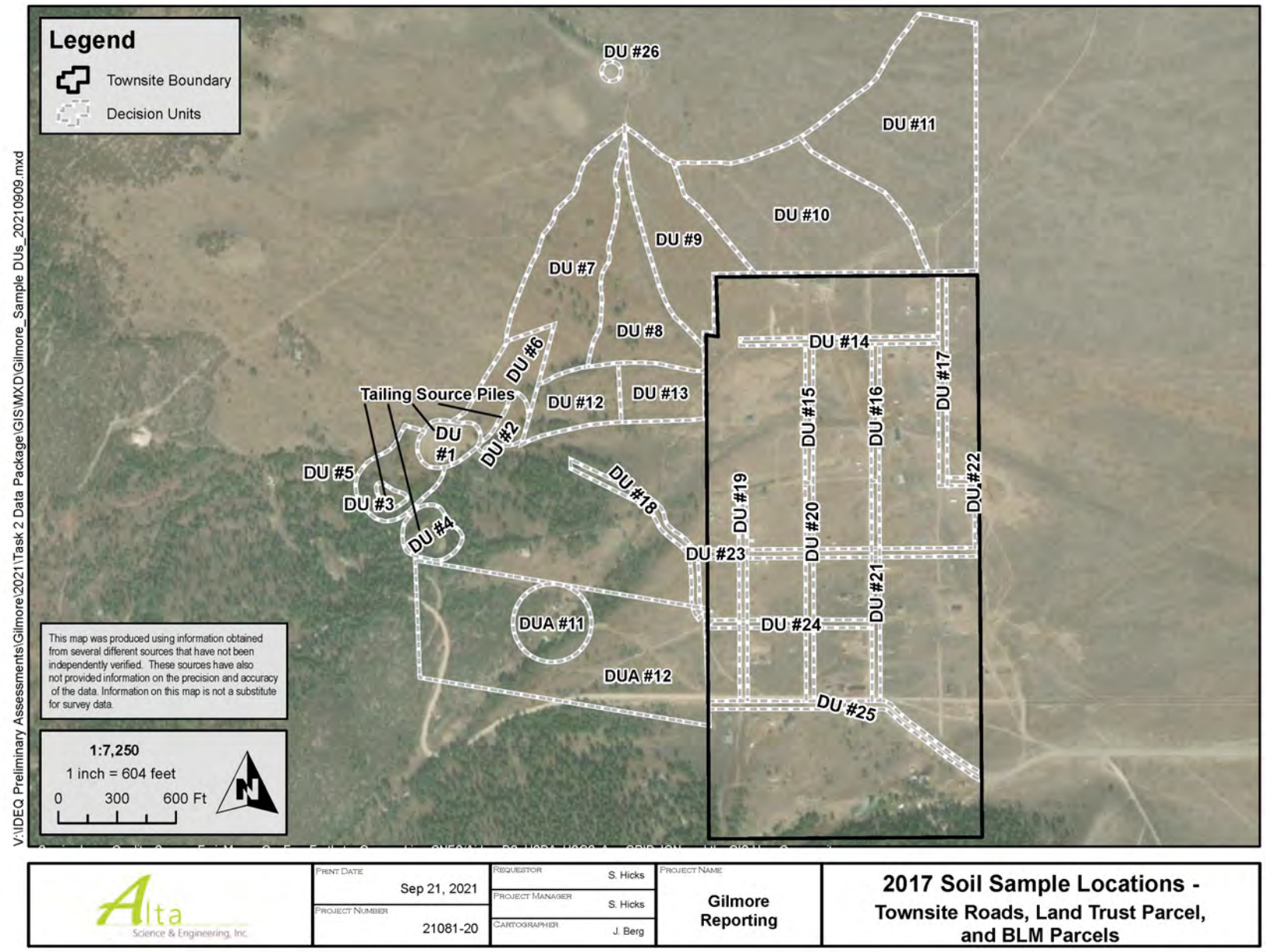


Figure 7. 2017 Soil Sample Locations – Townsite Roads, Land Trust Parcel, and BLM Parcels

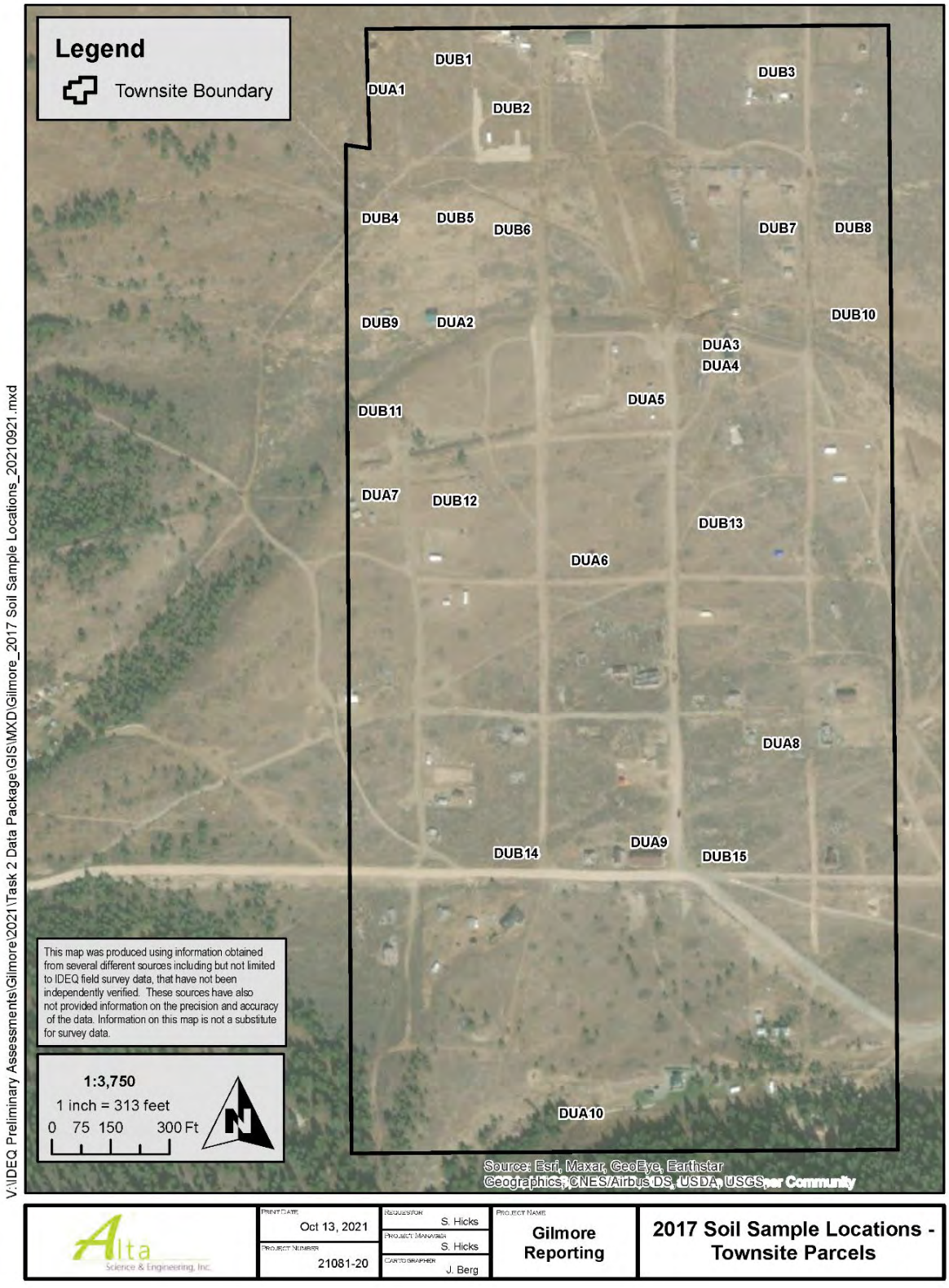


Figure 8. 2017 Soil Sample Locations – Townsite Parcels

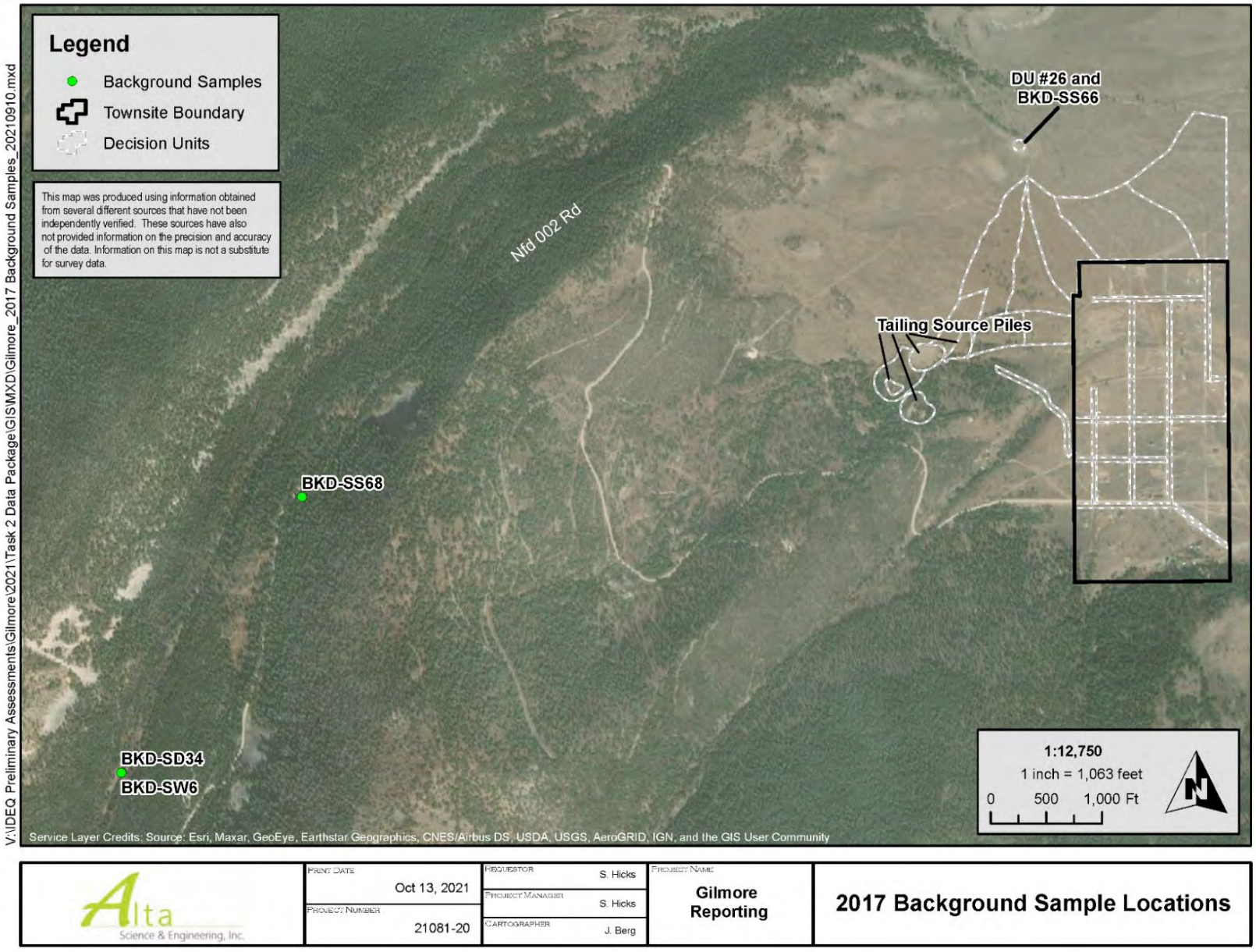


Figure 9. 2017 Background Sample Locations

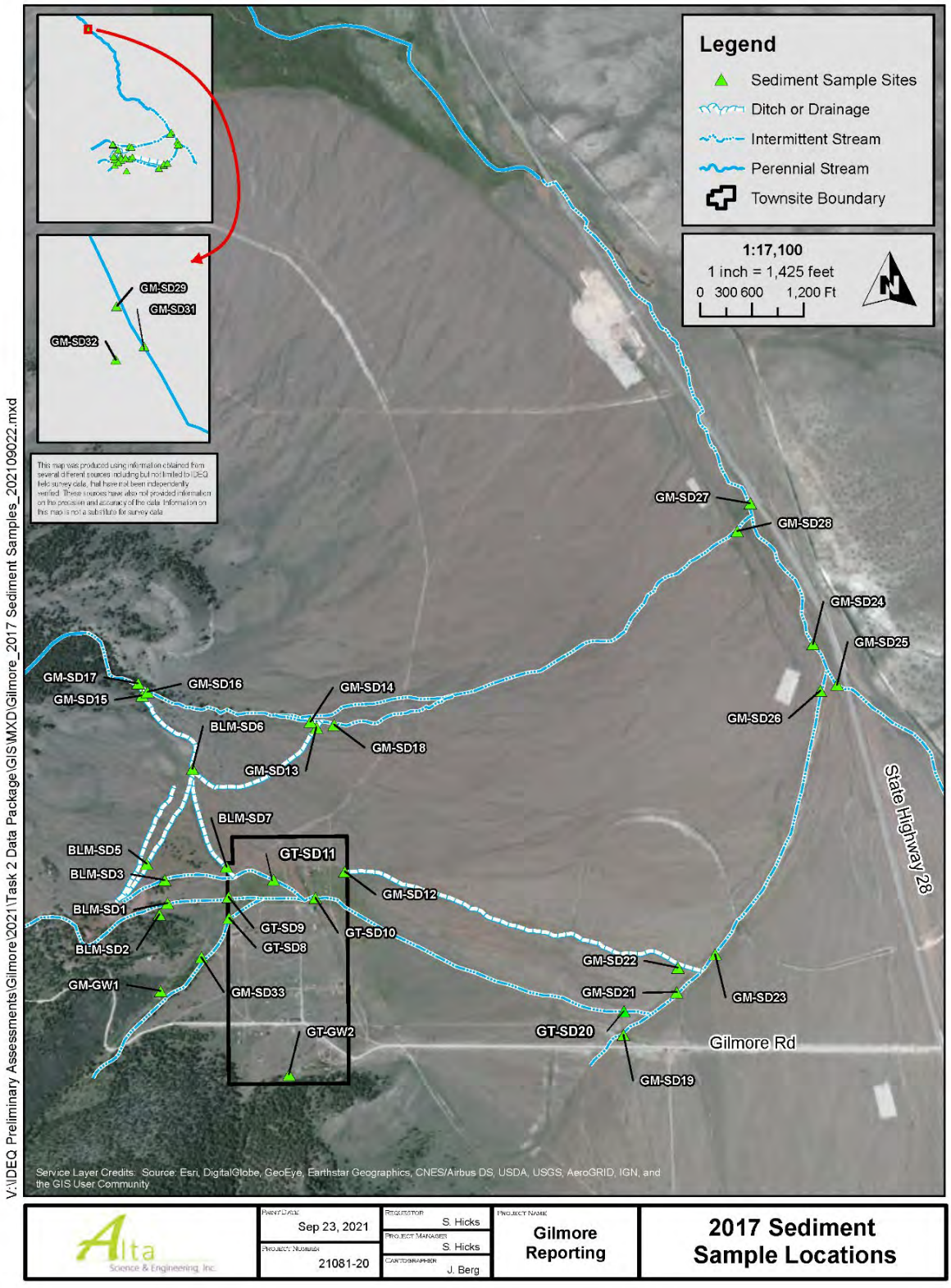


Figure 10. 2017 Sediment Sample Locations

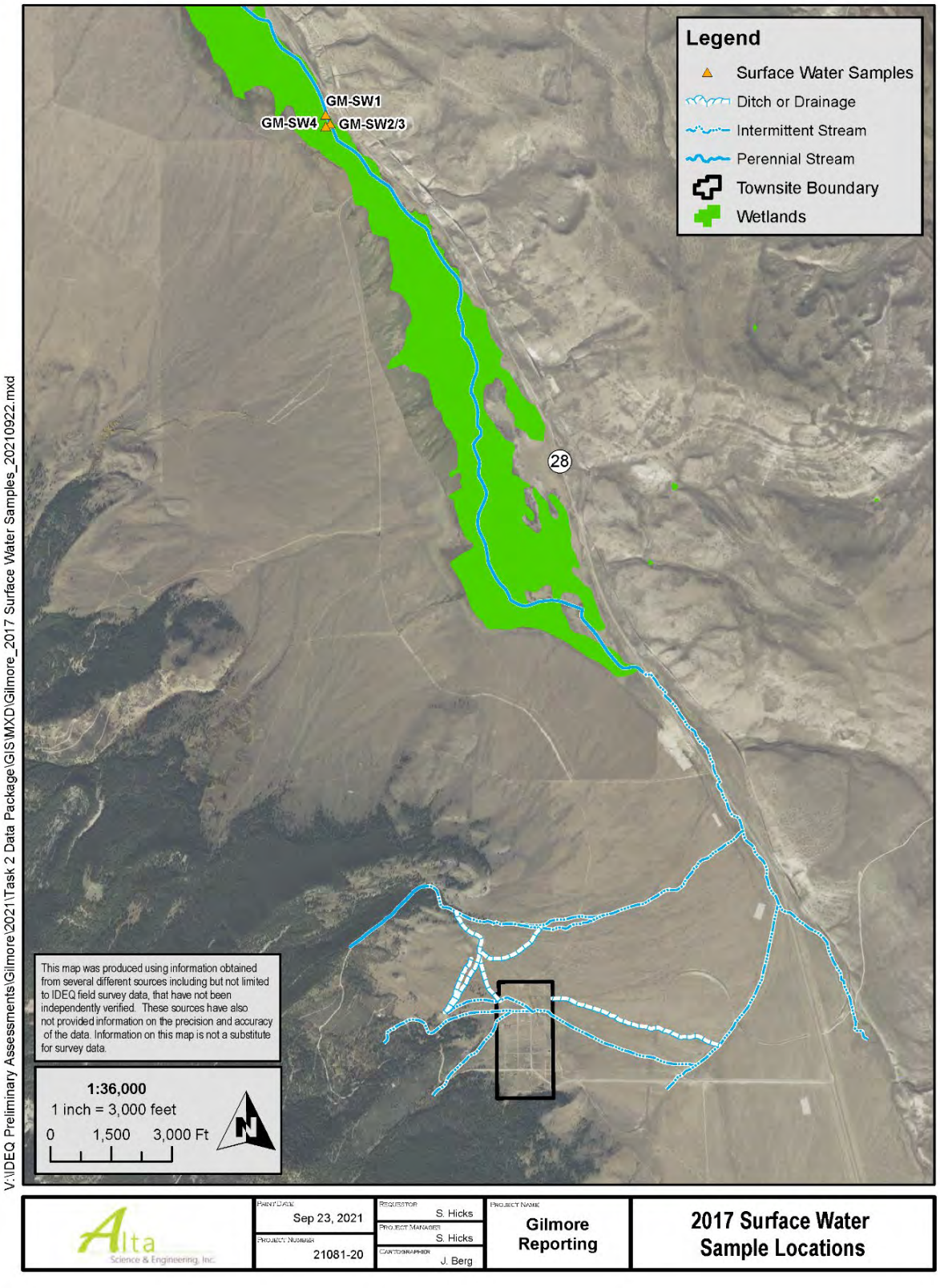


Figure 11. 2017 Surface Water Sample Locations

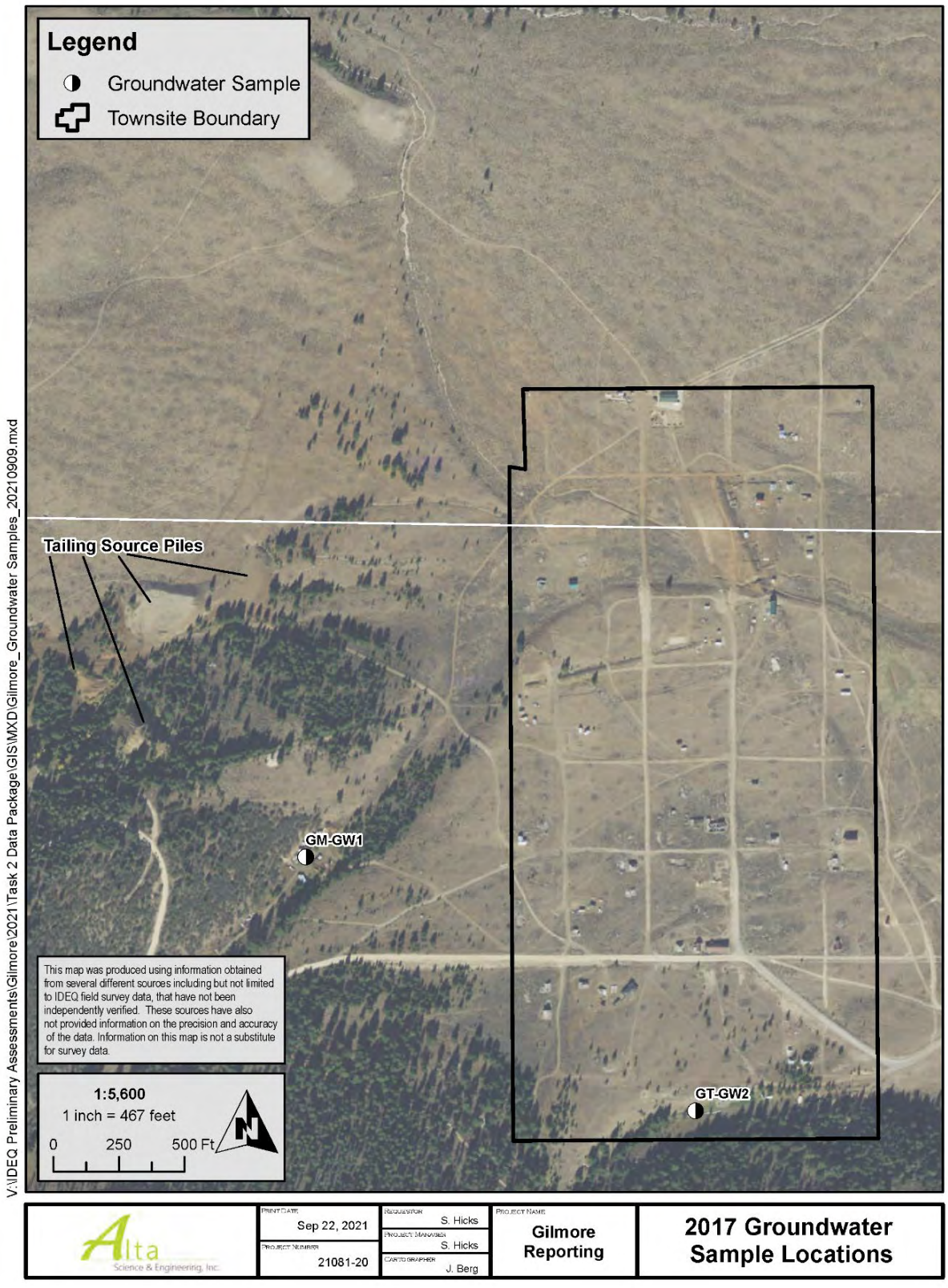


Figure 12. 2017 Groundwater Sample Locations

3 Migration & Exposure Pathways

The following observations and samples were collected during Site visits in 2016 and 2017. During these site visits, all four relevant exposure pathways were sampled – ground water, surface water, soil, and air. Additional discussion on soil sampling conducted during the 2016 Site visit can be found in the Gilmore Townsite Common Use Areas and Surrounding Lands PA/SI report (DEQ 2017). Overall, sample results from 2016 and 2017 revealed high levels of lead and arsenic in soil at the Site.

Much of the Site is privately owned, and sampling was only conducted on properties where access was granted. Additional sampling may be necessary to fully characterize contamination across the entire Site or within specific areas.

Note regarding population – The Site population is difficult to estimate. Users of the site are mostly transient, and occupancy varies greatly depending on the season. There are no public utilities available at the site. Lodging is primarily off-grid cabins, camping, or RVs. Observations made during Site visits suggest that most properties, if occupied at all, are likely used short-term (i.e., weekend stays), during summer months. However, full-time residency at the site is possible.

At the time of the 2017 Site visit, it was estimated that 11 parcels were in use, had been used in the past, or have the potential to be used as residential properties. It was estimated that another 27 parcels were being used as seasonal residential or part-time recreational properties. Based on communications with landowners during 2017, Site visits, it is estimated that four people were living full-time at the Site for at least the summer.

Additionally, it is difficult to account for transient day-use populations which may visit or pass through the site while recreating. Outdoor recreation activities are the primary draw to areas surrounding the Site. Activities may include but are not limited to all-terrain vehicle (ATV) riding, biking, driving, horseback riding, hiking, and walking. Meadow Lake Road is the primary access to the Meadow Lake Campground, a popular summer destination within the Salmon-Challis National Forest.

The estimated population within a 4-mile radius of the site based on 2017 census data is presented in Appendix A, Table 7. The potential population within a 4-mile radius based on 2016 observations is provided in Appendix A, Table 8.

3.1 Groundwater Migration Pathway

The TDL for the ground water migration pathway is a 4-mile radius that extends from the probable contaminant sources at the Site. There are eight domestic wells within the TDL (Figure 13).

3.1.1 Geologic Setting

The Site is located on an alluvial fan on the east flank of the Lemhi Mountains. The Lemhi Mountains are formed from sedimentary rocks, primarily quartzites and dolomitic limestones, of Ordovician, Silurian, Devonian, and Mississippian age. Igneous rocks are not abundant and consist of quartz-diorite-porphyry dikes. Additional conversation regarding the Site geology can

be found in the Gilmore Townsite Common Use Areas and Surrounding Lands PA/SI report (DEQ 2017).

Climate information is based on a summary for Leadore, Idaho obtained from the Western Regional Climate Center (WRCC). The climatological data was collected at the Leadore #2, Idaho Station (105177) (elevation 6,000 feet [ft] above mean sea level [amsl]), located in Leadore, Idaho. Based on data collected from 1965 to 2016, total annual precipitation averages 8.05 inches with a total annual snowfall average of 18.0 inches. The driest months of the year are August and October. The average annual high temperature is 54.9°F and the average annual low temperature is 23.5°F. July is the hottest month with an average temperature of 84.2°F. January is the coldest month with an average temperature of 3.7°F (WRCC 2016).

3.1.2 Aquifer System

Ground water in the lower Lemhi valley primarily is stored in and transmitted through the Quaternary alluvial deposits of the Lemhi River and its tributaries, alluvial fans, and, to a lesser degree, glacial deposits. Wells in the lower valley are completed primarily in the alluvium. Based on water-level measurements made by the Lemhi Irrigation District, the water table lies approximately 10 to 30 feet bgs in the lower basin, and 40 to 140 feet bgs in the middle of the basin (DEQ 2017)..

Well logs maintained by the Idaho Department of Water Resources (IDWR), indicate that ground water is first encountered (while drilling) from 245 to 420 feet and statics out between 220 and 380 feet bgs in wells drilled in and around the townsite (IDWR 2017). These wells are completed in fractured bedrock. Ground water flow is estimated to follow topography, flowing to the northeast toward Texas Creek (DEQ 2017).

3.1.3 Drinking Water Targets

A search of the IDWR internet database revealed the presence of eight (8) domestic wells within 4-miles of the Site (IDWR 2017). Four (4) wells are within a half mile of the townsite; all are on private property.

See note regarding population in Section 3 introduction.

3.1.4 2017 Sample Results and Discussion

Ground water samples were collected from two domestic wells – GM-GW1 located on private property upgradient of the townsite and source piles and GT-GW2 from a parcel along the south margin of the townsite upgradient of contaminant sources. No wells downgradient of contamination sources were evaluated because property access was not granted.

Total arsenic in GM-GW1 (0.0047 milligrams per liter [mg/L]) exceeds the EPA Regional Screening Level (RSL) for tap water (0.000052 mg/L) but did not exceed the federal Maximum Contaminant Level (MCL) for drinking water. No other total metals exceed RSLs or MCLs. Results for total metals analysis and field measured water quality parameters as compared to RSLs and MCLs are shown in Appendix A, Table 5.

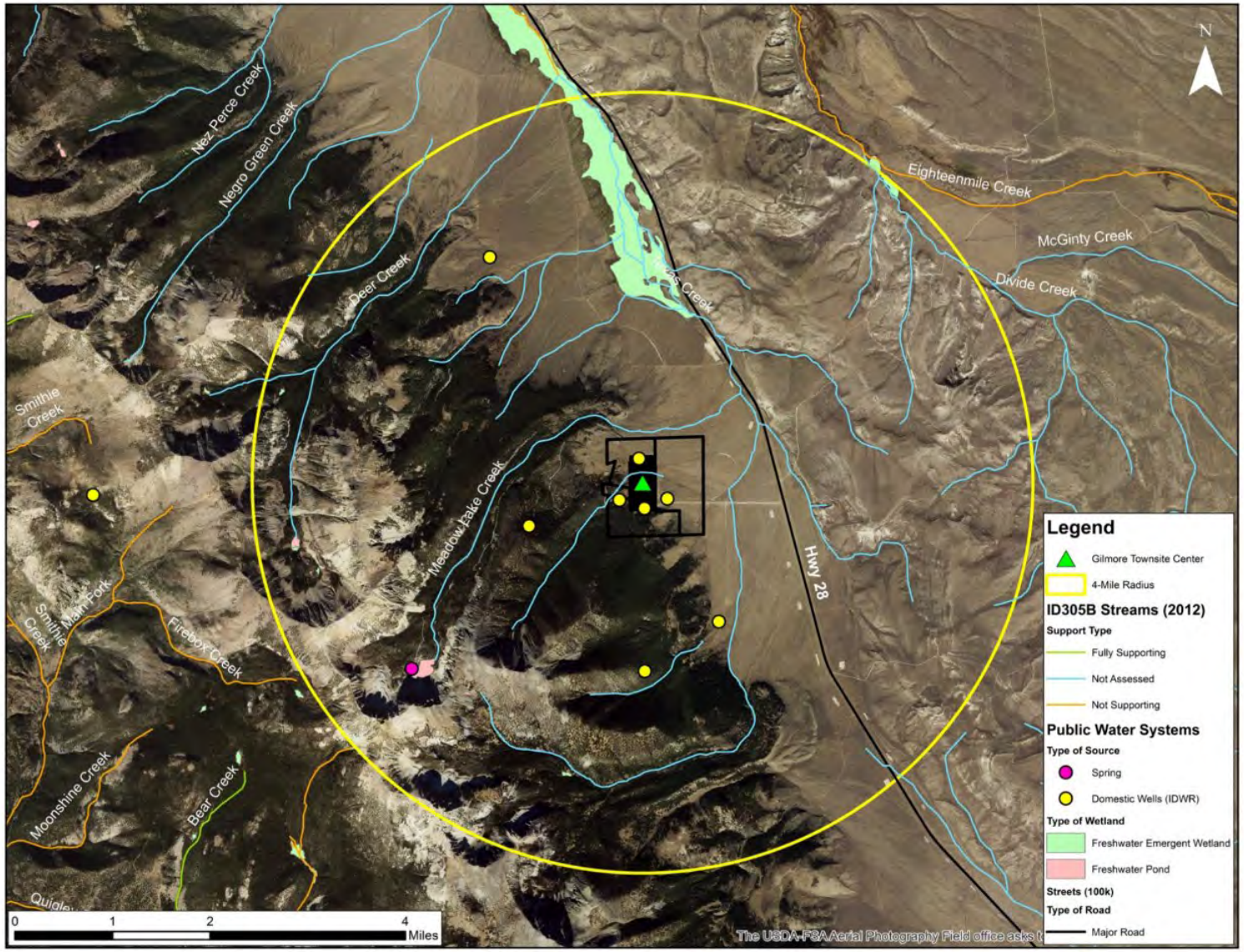


Figure 13. 4-Mile Ground Water Map

3.2 Surface Water Migration Pathway

The surface water migration pathway TDL begins at the probable point of entry (PPE) of source water runoff from the site to the nearest surface water body (Texas Creek) and extends downstream for 15 miles. The 15-mile TDL is completed near the confluence of Texas Creek and Eighteen Mile Creek outside of Leadore, Idaho (Figure 14). A freshwater emergent wetland is located approximately 2 miles north (downstream) of the townsite (Figure 13).

During the site visit, no surface water was observed around the townsite or surrounding lands; however, sediment samples were collected from dry streams, conveyance ditches, and other overland flow paths. Dry sediment sample locations and identified overland flow paths are shown in Figure 10, Attachment A. The presence of a surface water pathway may be seasonal (e.g., during snow melt) or only present during high precipitation events.

Flowing water was observed within the 15-mile TDL on Texas Creek approximately 1-mile north (downstream) of the confluence of Meadow Lake Creek and Texas Creek. Because portions of Texas Creek are located on private land, the first opportunity for sampling surface water in Texas Creek was approximately 4 miles north of the townsite.

3.2.1 Overland Route and Target Distance Limit

Most of the intermittent surface water impacting the Site originates from Liberty Gulch, which flows northeast, then east into the townsite where it is joined by two unnamed intermittent streams. Downstream of the confluence with the second unnamed stream, Liberty Gulch flows through what appears to be a breach in the embankment that may have once served as a portion of the railroad loading terminal and tailings impoundment dam. At the eastern edge of the townsite, Liberty Gulch begins to flow southeast to its confluence with yet another unnamed intermittent stream which originates south of the townsite. Additionally, based on aerial photographs, surface water also appears to have flowed overland from the north end of the townsite into a fourth unnamed stream whose drainage is marked by visibly discolored soil. All surface water at the Site flows east then north into Texas Creek.



Breached embankment at northern end of townsite. This embankment may have served as an extension of the railroad and to hold water coming from Liberty Gulch and Meadow Creek diversion. (2016 Site Visit, Photo 7)

Meadow Lake Creek originates from Meadow Lake located in the mountains west of the townsite. Meadow Lake Creek flows east, north of the townsite, towards Texas Creek. An unnamed diversion ditch is located between Meadow Lake Creek and the townsite (Figure 2). The flow direction of the diversion ditch is from the north to the south. Based on observations by the field crew in 2017, it appears that the upper portion of the diversion ditch was excavated to redirect flow from Meadow Lake Creek, and that Meadow Lake Creek is blocked with cobbles and boulders below the confluence with the diversion ditch as part of the stream diversion. Meadow Lake Creek is dry upstream of the confluence with the diversion ditch. Meadow Lake Creek has flowing water approximately 1.5 miles upstream of the diversion ditch, but field crews were unable to locate the point where Meadow Lake Creek dries up or goes underground. Texas Creek appears to have intermittent flow to the confluence with Meadow Lake Creek; at this point, the flow is perennial. Flow rates measured in upper Texas Creek during August 2017 sampling ranged from 21.78 cubic feet per second (cfs) to 22.96 cfs. Based on 2016 field observations, a historical conveyance ditch appears to have originated near the northeastern edge of the tailings piles that runs to the northeast to connect with Meadow Lake Creek.

Three PPE were identified. PPE 1 is located on the unnamed stream originating within the mining district, where it appears that this stream flows adjacent to both the west/gray and east/tan tailings piles. From the west/gray and east/tan tailings piles, surface water flows 0.2 miles east to the confluence of Liberty Gulch at the west edge of the townsite; this location is PPE 2 for Liberty Gulch. From the east/tan tailings pile, a historical conveyance ditch flows northeast to its confluence with Meadow Lake Creek; this location is PPE 3. From that point, surface water flows 1.1 miles northeast to its confluence with Texas Creek. Once in Texas Creek, surface water flows an additional 13.9 miles to the conclusion of the 15-mile TDL. PPE locations and the 15-mile TDL are shown on Figure 14.

For discussion purposes, dry sediment and surface water results are presented in the following groupings:

- Upstream Samples: Sediment samples on Meadow Lake Creek, Diversion Ditch, Texas Creek, and Unnamed Stream, which are upstream of overland routes that cross the mine waste piles and/or townsite (Appendix A, Table 3).
- Source Samples: Sediment samples from dry streams, conveyance ditches, and other overland flow paths that cross or originate within the source waste piles or townsite (Appendix A, Table 3).
- Downstream Samples: Sediment samples from dry streams that are downstream of other dry streams, conveyance ditches, and other overland flow paths that cross or originate within the source waste piles or townsite (Appendix A, Table 3).
- 15-mile TDL Samples: Surface water and co-located sediment samples on Texas Creek within the 15-mile TDL where water was present (Appendix A, Tables 3 and 4).
- Background Sample: Surface water and co-located sediment samples on Meadow Lake Creek several miles upstream of the townsite and surrounding mining district (Appendix A, Tables 3 and 4).

Sediment samples are compared to EPA RSLs for residential and industrial soils in Appendix A, Table 3. Sediment sample locations are presented in Figure 10.

Surface water samples are compared to EPA MCLs for drinking water and RSLs for tap water in Appendix A, Table 4. Sample locations are presented in Figure 11.

3.2.1.1 Upstream Samples

Lead in sediment exceeds the RSL for both residential (400 mg/kg) and industrial (800 mg/kg) soils at one location, GM-SD19 (2,620 mg/kg), which is on the unnamed stream originating east of the townsite and flows through the source waste piles.

Arsenic in sediment exceeds the RSL for residential soil (0.68 mg/kg) at all upstream locations and industrial soils (3 mg/kg) at four upstream locations. With the exception of GM-SD19, arsenic concentrations in sediment are lower in upstream sample locations compared to source and downstream sample locations. No other metals in upstream sediment samples exceed RSLs.

The highest lead (2,620 mg/kg) and arsenic (59.0 mg/kg) concentrations in upstream sediment samples are observed at GM-SD19, which is on the unnamed intermittent stream that originates southeast of the Site, upstream of the confluence with Liberty Gulch (Figure 10). All other detected metals in sediment are higher at GM-SD19 compared to other upstream sample locations. The location of GM-SD19 is topographically downgradient of the townsite and may be influenced by seasonal overland flows from waterways draining from the Site.

Upstream sediment samples were compared to the background sample BKD-SD34 collected on Meadow Lake Creek. Metals that are more than three times the background sample at one or more locations include: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, vanadium, and zinc.

3.2.1.2 Source Samples

Lead concentrations in sediment samples from all source sample locations exceed the RSL for residential soils (400 mg/kg), and all, except one sample GM-SD22, exceed the RSL for industrial soils (800 mg/kg). Lead concentrations range from 486 mg/kg to 35,700 mg/kg and are highest in sediment samples collected closest to the source waste piles. The maximum lead concentration (35,700 mg/kg) in source samples occurs at BLM-SD1, which is in a ditch that originates at the east/tan tailing pile and appears to flow to a marshy area (dry during the Site visit) along the west boundary of the townsite where it combines with flows from the unnamed stream that passes through the source area.

Arsenic concentrations in sediment samples from all source sample locations exceed the RSL for residential soils (0.68 mg/kg) and industrial soils (3 mg/kg). Arsenic concentrations range from 16.8 mg/kg to 577 mg/kg and are highest in sediment samples collected closest to the source waste piles. The maximum arsenic concentration (577 mg/kg) for the project is also located at BLM-SD1, which also contains the highest lead concentration observed in all source samples.

Other metals in source sediment samples that exceed the RSLs for residential soils include antimony, cadmium, iron, manganese, vanadium, and zinc.

Source sediment samples were compared to the background sample BKD-SD34 collected on Meadow Lake Creek. Metals that are more than three times the background sample include aluminum, arsenic, barium, beryllium, cadmium, calcium, cobalt, copper, iron, lead, magnesium, manganese, vanadium, zinc, antimony, mercury, nickel, silver, and chromium.

3.2.1.3 Downstream Samples

Lead concentrations in downstream sediment samples exceed the residential (400 mg/kg) and industrial (800 mg/kg) soil RSLs for five of seven downstream sample locations. Lead

concentrations range from 219 mg/kg to 39,900 mg/kg. Arsenic concentrations in sediment samples from all downstream sample locations exceed the residential (0.68 mg/kg) and industrial (3 mg/kg) soil RSLs. Arsenic concentrations range from 8.1 mg/kg to 550 mg/kg.

The maximum lead concentration (39,900 mg/kg) and arsenic concentration (550 mg/kg) in downstream sediment samples occurs at GM-SD21, which is located on the unnamed stream that originates east of the townsite below the confluence with Liberty Gulch and upstream of the confluence with the unnamed discolored drainage.

Other metals that exceed the residential soil RSLs include antimony, cadmium, iron, manganese, and zinc.

Downstream sediment samples were compared to the background sample BKD-SD34 collected on Meadow Lake Creek. Metals that are more than three times the background sample include aluminum, arsenic, barium, beryllium, cadmium, calcium, cobalt, copper, iron, lead, magnesium, manganese, nickel, vanadium, zinc, chromium, antimony, mercury, and silver.

3.2.1.4 15-mile TDL Samples

Sediment samples from Texas Creek exceed the arsenic residential soil RSL (0.68 mg/kg) at GM-SD32 (wetlands) and GM-SD31 (upstream sample). No other metals exceed soil RSLs. Metals that are more than three times the background concentrations at BKD-SD34 include arsenic, barium, calcium, chromium, magnesium, and vanadium results.

Arsenic concentrations for surface water sample GM-SW1 (downstream sample) exceed the RSL for tap water (0.052 µg/L). There are no other exceedances of the tap water RSL or drinking water MCL. The temperature exceeds the IDEQ Cold Water Biota Chronic Standard for salmonid spawning (13°C) at the upstream sample GM-SW2 (13.65°C).

3.2.1.5 Background Sample

One surface water sample and co-located sediment sample was collected on Meadow Lake Creek upstream of the source area and surrounding the mining district where flowing water was accessible.

Arsenic concentration for background sediment sample BKD-SD34 exceed the arsenic residential soil RSL (0.68 mg/kg). No other metals exceed soil RSLs.

No metals results exceed drinking water MCLs or RSLs for tap water in background surface water sample BKD-SW6. However, the temperature exceeds the DEQ Cold Water Biota Chronic Standard for salmonid spawning.

3.2.2 Drinking Water Targets

Surface water is not known to be used for drinking water purposes within the TDL. See note regarding population in Section 3 introduction.

3.2.3 Human Food Chain Targets

Fishing is permitted within the 15-mile TDL on Texas Creek; however, fish catch statistics could not be located. For this reason, it is assumed that between 0 and 100 pounds of fish are harvested and consumed within the TDL. Fish stocking records for Texas Creek indicate that stocking of

rainbow and brook trout occurred between 1968 and 1982. There are no records of recent stocking (IDFG 2016). Commercial fishing does not occur within the TDL.

3.2.4 Environmental Targets

Federal and/or state-listed endangered or threatened species occur within the 15-mile TDL (ISC 2017; USFWS 2017). These include the following:

- Bull trout (*Salvelinus confluentus*), a federal- and state-listed threatened species; and
- Steelhead (*Oncorhynchus mykiss*), a federal- and state-listed threatened species.

Additionally, the portion of Texas Creek located within the 15-mile TDL is designated as critical habitat for the federal- and state-listed threatened steelhead and the federal- and state-listed threatened bull trout (NOAA 2017b; USFWS 2017b).Wetlands are present along the 15-mile TDL. The nearest wetland is located on Texas Creek, downgradient of the Site (Figure 14). There are 20 miles of wetland frontage on Texas Creek within the 15-mile TDL (USFWS 2017b). Estimate of wetland acreage by distance ring is provided in Appendix A, Table 7.



Forest Service Road (002), known as Meadow Lake Road, approaching townsite from southeast. (2017 Site Visit, Photo 1358)

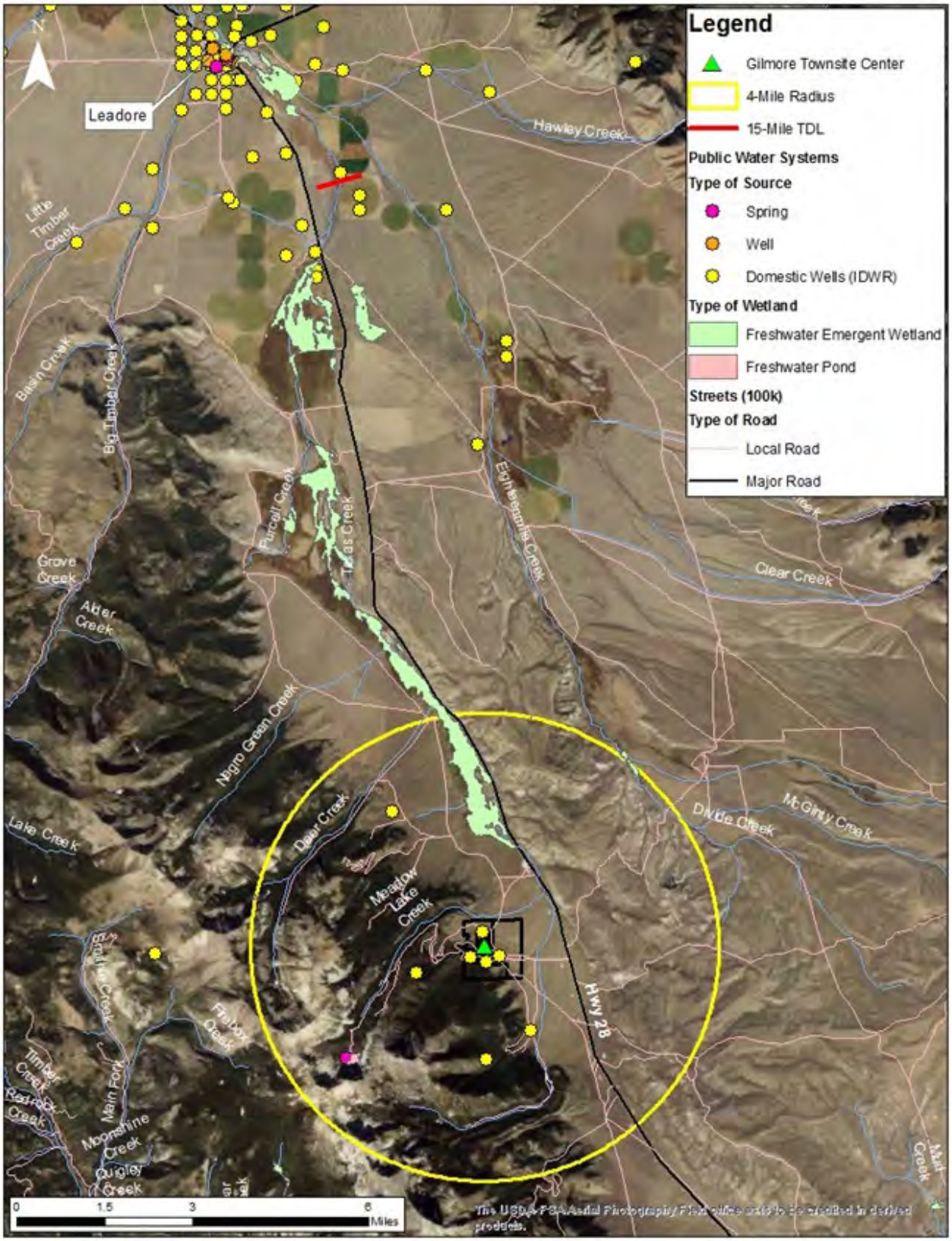


Figure 14. 15-Mile Map

3.3 Soil Exposure Pathway

The soil exposure pathway is evaluated based on the threat of direct-contact exposure to contaminated soil for onsite residents, onsite workers, nearby residents (within a 1-mile radius of the Site), and visitors to the Site. Soil laboratory analytical results are compared to EPA RSLs for residential and industrial soil and background concentrations.

3.3.1 Site Setting and Exposed Sources

Areas of exposed surface soil are present at the mine waste piles west of the townsite, within the townsite itself (e.g., roadways and impoundment area), and on portions of range land north of the townsite. Based on previous investigations, contaminated soil is present within 2-feet of the ground surface (DEQ 2017). The total area of contaminated soil west of the townsite is not known, nor is the total area of contaminated soil within the townsite. Volume estimates of the two largest mine waste piles at the site are presented in Section 2.4.1.

3.3.2 Targets

Sources of contaminated soil – mine waste piles, townsite roads, townsite impoundment, and tramway and railroad mine waste – are within 200 feet of properties with potential for residential dwellings. No workers, schools, daycares, or terrestrial sensitive environments are located on or within 200 feet of sources at the site. There are no public utilities at the site and townsite roads are unmaintained.

See note regarding population in Section 3 introduction. Demographics of Site population are unknown, but it should be assumed that children could visit or stay at the Site.

The site is located within the BLM's Spring Canyon grazing allotment, and cattle grazing may occur in the area surrounding the townsite.

The following subsections include observations about metal concentrations within soil samples. Lead is the primary contaminant of concern in soil at the Site. Detections were above the residential (400 mg/kg) and industrial (800 mg/kg) RSLs in most locations. Arsenic is also a contaminant of concern in soil with detections above the residential (0.68 mg/kg) and industrial (3 mg/kg) RSLs in most locations, including several background sample locations. Other metals with detections above the residential RSLs include antimony, cadmium, iron, manganese, vanadium, and zinc.

For discussion purposes, soil results are presented in the following groupings in Tables 1and 2 of Appendix A:

- Source Waste Piles Samples (Appendix A, Table 2): Samples collected in 2017 from tailings piles and impacted soils around mine waste source piles.
- Samples from Privately Owned Townsite Parcels: Samples collected from townsite parcels with evidence of residential or vacation use in 2016 (Appendix A, Table 1). Samples collected from townsite parcels with evidence of residential or vacation use in 2017 (Appendix A, Table 2).
- Land Trust Samples (Appendix A, Table 2): Samples collected in 2017 on the Land Trust Parcel west of the townsite.

- Road Samples (Appendix A, Table 2): Samples collected in 2017 from roads within the townsite and between the Townsite and source waste piles.
- BLM Property Samples (Appendix A, Table 2): Samples collected in 2017 from BLM property located north of the townsite and west of the townsite, between the townsite and source waste piles.
- Background Samples (Appendix A, Table 2): Samples collected in 2017 from locations outside of and upgradient of source waste piles and impacted areas.

3.3.3 Mine Waste Piles

Lead concentrations in waste piles range from 11,700 mg/kg to 41,200 mg/kg with the highest concentration in the large east/tan waste pile (DU2). Arsenic concentrations in source waste piles range from 321 mg/kg to 818 mg/kg with the highest concentration in the impacted soils between the larger and smaller tailings piles (DU5). The large west/gray tailings pile (DU1) has a lead concentration of 11,700 mg/kg and arsenic concentration of 321 mg/kg. Historically, waste from these piles may have been used as a gravel source for roads at the Site. Sample locations presented in Figure 7.

Other metals, including antimony, iron, and manganese, are present in concentrations above residential soil RSLs at all source locations. Cadmium, vanadium, and zinc exceed residential soil RSLs at some locations, but they are not observed above the residential soil RSLs at any sample locations outside of the source waste pile area.

Concentrations for antimony, arsenic, cadmium, copper, iron, lead, manganese, vanadium, and zinc at all source sample locations are more than three times the background sample concentrations when compared to the background soil sample (DU26) collected north and upgradient of the source area. Barium and calcium concentrations at one source location and silver concentrations at three source locations are also greater than three times the background soil sample.

Other potential source areas – townsite roads, townsite impoundment, and mine waste from tram and railroad – are discussed within the following sections relative to their location at the Site.



Flat top of East/Tan waste pile low to left. West/Gray waste pile above and to the right. (2017 Site Visit, Photo 1382)

3.3.4 Private Townsite Parcel Samples

Samples from privately owned townsite parcels were collected during 2016 and 2017 site visits. Samples were only collected from private property where access was granted by the landowner. Results for 2016 sampling are presented in Appendix A, Table 1. Results for 2017 sampling are presented in Appendix A, Table 2.

3.3.4.1 2016 Townsite Parcel Samples

During the 2016 site visit, composite soil samples and soil grab samples were collected. Most of the 2016 townsite composite soil sample locations exceeded the residential and industrial soil RSLs for lead. Just four locations had concentrations that only exceeded residential soil RSLs. Concentrations of lead ranged from 113 mg/kg to 24,600 mg/kg. All locations exceed the industrial and residential RSLs for arsenic.

Other metals that exceeded residential soil RSLs included antimony at five locations, iron at two locations, manganese at three locations, and zinc at one location. No other metals RSLs were exceeded.

Metals concentrations that were greater than three-times the background (BLM-SS7) in one or more composite soil samples collected from the townsite include: antimony, arsenic, cadmium, copper, iron, lead, manganese, mercury, selenium, silver, and zinc.

Six grab samples were also collected from three townsite locations in 2016. Lead concentrations in grab samples range from 60.8 mg/kg to 23,800 mg/kg. Three samples exceeded residential soil RSLs, and one sample exceeded residential and industrial soil RSLs for lead. Arsenic concentrations in grab samples range from 13.2 mg/kg to 243 mg/kg. All samples exceed residential and industrial soil RSLs for arsenic. Antimony concentrations in one grab sample exceeds the residential soil RSLs; however, no other metals exceed soil RSLs in these samples. Locations of 2016 townsite parcel samples are presented in Figure 6.

3.3.4.2 2017 Townsite Parcel Samples

Lead concentrations in ISM samples collected from townsite parcels in 2017 exceeded the residential and industrial soil RSLs at all but four locations. Concentrations ranged from 151 mg/kg to 20,500 mg/kg. One location has lead concentrations that exceed only residential soil RSLs. Three locations have lead concentrations below both residential and industrial soil RSLs.

Sampling showed that lead concentrations are significantly higher in the north half of the townsite, ranging from 4,420 mg/kg to 20,500 mg/kg as compared to the south half that range from 151 mg/kg to 2,230 mg/kg. The northern portion of the townsite is most likely to be impacted by the historical impoundment, tramway, and railroad. The closest samples to where the railroad was loaded are DUA3 and DUA4. Lead at DUA3 was 11, 200 mg/kg and at DUA4 was 20,500 mg/kg. A children's play structure was observed near DUA4.

Arsenic concentration in ISM samples collected from these same townsite parcels exceed the residential and industrial soil RSLs at all but three locations. Three locations are non-detect for arsenic. Detected concentrations range from 21 mg/kg to 445 mg/kg. Similar to lead concentrations, the north half of the townsite has higher arsenic concentrations (58 mg/kg to 445 mg/kg) compared to the south half of the townsite (non-detect to 50 mg/kg). The highest arsenic

concentration (445 mg/kg) occurs in the northwest corner of the townsite nearest to the mine waste piles (DUA1). The second highest arsenic concentration (420 mg/kg) is observed in DUA4.

Other metals that exceed residential soil RSLs include antimony at eight locations, iron at five locations, and manganese at fourteen locations. All concentrations for other metals that exceed the residential soil RSLs occur in the north half of the townsite. No other metals exceed soil RSLs in the south half of the townsite.

At several townsite locations, concentrations of multiple metals were greater than three times the background soil (DU26), to include: antimony, arsenic, cadmium, copper, iron, lead, manganese, vanadium, and zinc. Additionally, silver concentrations were greater than three times the background at four townsite locations. Locations of 2017 townsite parcel samples are presented in Figure 8

3.3.5 Land Trust Samples

The Land Trust parcel (previously the Katie mining claim) is located south of the source waste piles and separated from the western edge of the townsite by a thin strip of BLM land. Several cabins are in the north central portion of the parcel. Soil samples were collected from a 200-foot radius around the cabins (DUA11) and from the roads and trails (DUA12) that cross the parcel.

Both samples exceed the residential and industrial soil RSLs for lead and arsenic. Lead concentrations are 1,080 mg/kg and 4,310 mg/kg and arsenic concentrations are 32.3 mg/kg and 75.7 mg/kg, in DUA11 and DUA12 respectively. No other metals exceed soil RSLs. The soil sample from the 200-foot radius sample area (DUA11) exceeds three times the background sample (DU26) for lead. Soil results from the roads and trails (DUA12) exceed three times the background sample for arsenic, cadmium, copper, lead, and zinc. Sample locations presented in Figure 7.

3.3.6 Road Samples

Lead concentrations from townsite roads range from 278 mg/kg to 15,700 mg/kg, with the highest concentration occurring in the northern portion of the townsite (DU16) and the road between the townsite and source waste piles. Lead exceeds both residential and industrial soil RSLs in all but two locations. One townsite road exceeds residential soil RSLs but not industrial RSLs.

Arsenic concentrations from townsite roads range from 21 mg/kg to 351 mg/kg (two samples are non-detect), with the highest concentration occurring in DU16, which also has the highest lead concentration. Arsenic is above both residential and industrial soil RSLs in all but two locations. Arsenic is not detected in DU20 or DU25, both of which are at the south end of the townsite. Other metals exceeding residential soil RSLs on townsite roads include antimony, iron, and manganese.

Metals concentrations at roadway sampling locations are greater than three times the background sample (DU26) for most lead and zinc; at least half of the arsenic, cadmium, and copper results; and for a few antimony, iron, and manganese results.

The forest service road (DU25), which runs through the south end of the townsite does not exceed any soil RSLs. Field crews observed that gravel on the forest service road appeared different from roads within the townsite.

Sample locations presented in Figure 7.



GT-DU16-SS47 sample site. A north-south road, on north end of townsite. (2017 Site Visit, Photo 1349)

3.3.7 BLM Property Samples

Lead concentrations in DUs overlapping BLM property exceed the residential and industrial soil RSLs at all but one location and range from 643 mg/kg to 29,500 mg/kg. Lead concentrations are highest closest to the source waste piles and decrease to the east; slightly between the source waste piles and the townsite and significantly north of the townsite. The highest lead concentration (29,500 mg/kg) occurs in DU7, located to the northeast of the source waste piles.

Arsenic concentrations for these DUs exceed the residential and industrial soil RSLs at all but one location and range from 97 mg/kg to 484 mg/kg (one location is non-detect for arsenic). Similar to lead concentrations, arsenic concentrations are highest closest to the waste source piles and decrease to the east, with more significant decrease north of the townsite. The highest arsenic concentration (484 mg/kg) occurs in DU8, located northeast of the source waste piles and northwest of the townsite.

Other metals that exceed residential soil RSLs include antimony, iron, and manganese. Metals concentrations that exceed three times the background soil location at DU26 include: antimony, arsenic, cadmium, copper, iron, lead, manganese, silver, vanadium, and zinc. Sample locations presented in Figure 7.

3.3.8 Background Samples

One background ISM sample (DU26) was collected from a rocky knob on public land located north and upgradient of all other DUs. One grab sample was also collected from within DU26 (SS68). Another grab sample was also collected from public land approximately 1-mile west and upgradient of the Site, outside of the surrounding mining district (SS66).

3.4 Air Migration Pathway

The air migration pathway is evaluated based on the threat to onsite and nearby populations within a 4-mile radius TDL from releases to air. No schools or day care facilities are located within 4-miles of the townsite. The air migration pathway TDL is a 4-mile radius that extends from the sources at the Site (Figure 13).

In 2017, Ecology and Environment, Inc., under contract with the EPA, completed air monitoring of fugitive dust at the Site. From August 1 to August 2, 2017, ten sample locations were established including: two background locations north of the townsite, four locations near source areas, and four locations in common use areas such as roads (Figure 15). Air monitoring sample results show that lead concentrations exceeded RSLs for residential air at two source area (SA03 and SA04; 0.176 and 0.238 micrograms per cubic meter [µg/m^3] respectively) and two common use area (CU03 and CU04; 0.241 and 0.435 µg/m^3 respectively) locations on the first day of monitoring and at one common use area (CU03; 0.383 µg/m^3) location on the second day of monitoring (Appendix A, Tables 9 and 10).

3.4.1 Human Targets

See note regarding population in Section 3 introduction. Demographics of Site population are unknown, but it should be assumed that children could visit or stay at the Site. There are no students or workers on site.

The site is located within the BLM's Spring Canyon grazing allotment, and cattle grazing may occur within 0.5 mile of the townsite (DEQ 2011).

3.4.2 Environmental Targets

There are a total of 770 acres of wetlands within the 4-mile TDL. Wetland acreages by distance ring are provided in Appendix A, Table 8.

As mentioned in Section 3.2.4, portions of Texas Creek located within the 4-mile TDL are designated as critical habitat for the federal and state-listed threatened steelhead and the federal and state-listed threatened bull trout (USFWS 2017b).

Additionally, federal- or state-listed endangered or threatened species may occur within the 4-mile TDL (ISC 2017; USFWS 2017). These include the following:

- Yellow-billed cuckoo (Coccyzus americanus), a federal- and state-listed threatened species;
- Canada lynx (Lynx canadensis), a federal- and state-listed threatened species; and
- North American wolverine (Gulo luscus), a federal- proposed threatened species.

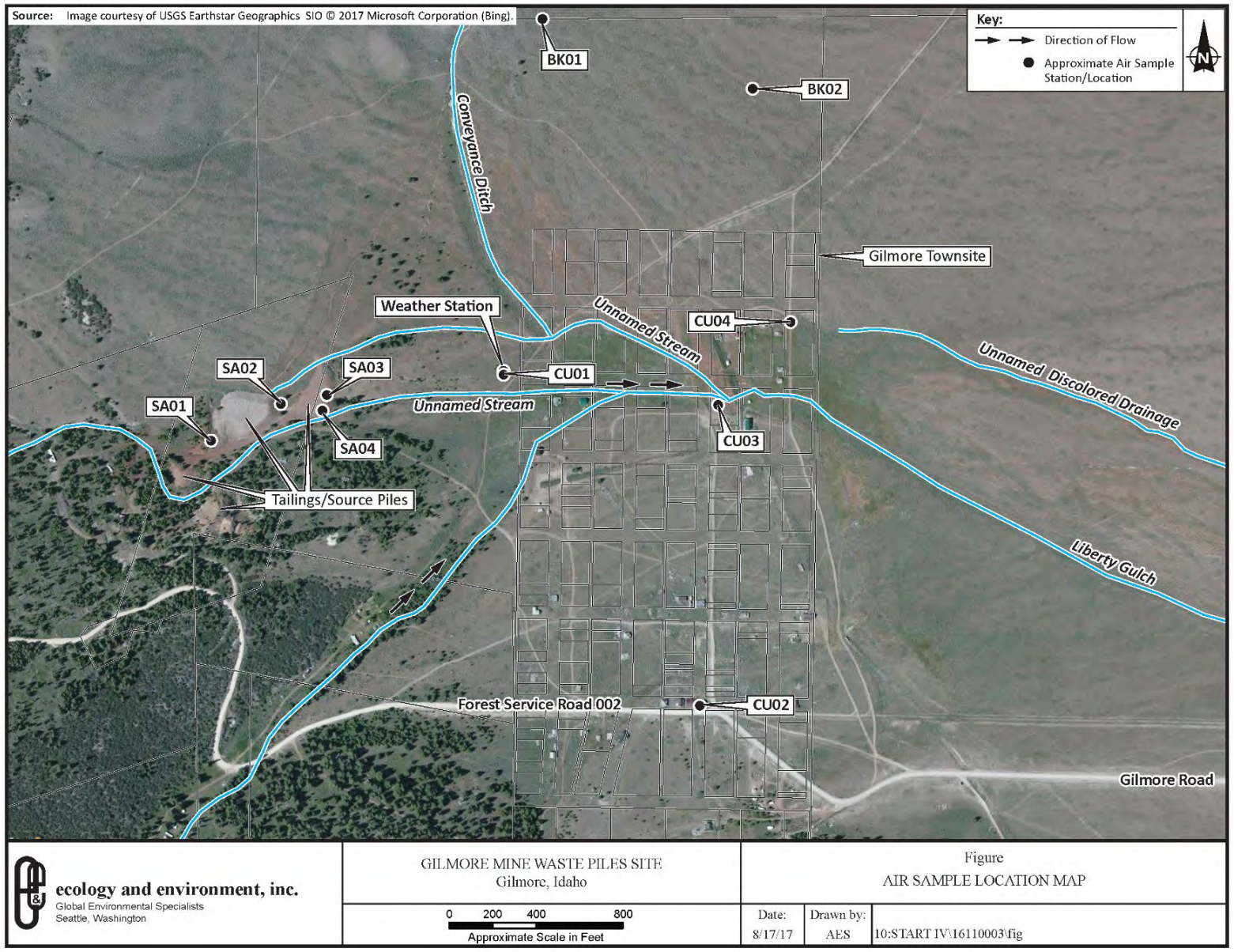


Figure 15. 2017 Air Sampling Locations

4 Conclusions and Recommendations

The purpose of this expanded site inspection (ESI) is to investigate potential contaminant sources, evaluate the potential threats to human health and the environment from historic mining practices, and determine the need for additional investigations or actions. Conducting this ESI is important to provide the property owners, residents, and recreational users of this area with information about the metals contamination at the Site and possible exposure pathways when living, visiting, and recreating in the area.

4.1 Conclusions

- **Groundwater Pathway:** Depth to ground water in wells near the townsite is 220 to 380 ft bgs. Sample location GW1, one of two sampled wells within the Site, had arsenic above the tapwater RSL (Arsenic 0.0047 mg/kg). No other tapwater RSLs were exceeded in either sample. Use of sampled wells for private drinking water is unknown. There are no known ground water wells serving public drinking water systems within four miles of the Site.
- **Surface Water Pathway:** There are no known surface water intakes serving public or private drinking water systems within 15-miles of the Site. One surface water sample, SW1, which was collected downgradient of the townsite in Texas Creek, had an arsenic concentration exceeding the RSL for tap water (Arsenic 0.0051 mg/L). Almost all sediment samples collected at the Site have levels of lead and arsenic exceeding the RSLs for residential and industrial soil. The highest lead and arsenic concentrations found in sediment samples were from SD1(Lead 35,700 mg/kg and Arsenic 577 mg/kg) and SD21(Lead 39,900 mg/kg and Arsenic 550 mg/kg). SD1 was collected from a dry waterway within the townsite that crosses or originates within the source waste piles. SD21 was collected from a dry waterway downstream of the townsite. The elevated levels of lead and arsenic in dry waterways downstream of the waste piles suggest that seasonal or intermittent flows likely transport source material from the mine waste piles and/or remobilizing previously deposited.
- **Soil Pathway:** 2016 and 2017 soil sampling both show there are significantly elevated levels of lead and arsenic in soil throughout the Site, but particularly in and nearby the mine waste piles and in the northern portion of the townsite where the historical impoundment, tramway, and railroad were located. Most soil samples collected in these areas exceeded the residential and industrial RSLs for lead and arsenic. In some locations lead was 50 times greater than residential RSL (400 mg/kg) and arsenic was over 100 magnitudes greater than its residential RSL (0.68 mg/kg). The highest lead and arsenic concentrations found in 2017 samples were collected from the mine waste piles (DU2, Lead 41,200 mg/kg; DU5, Arsenic 818 mg/kg). The highest lead and arsenic concentrations on a townsite road in 2017 were found closest to where the tramway unloaded ore to the railroad (DU16, Lead 15,700 mg/kg and Arsenic 351 mg/kg). The highest lead concentration on a private parcel in 2017 was also found closest to where the tramway unloaded (DUA4, Lead 20,500 mg/kg and Arsenic 420 mg/kg). The highest arsenic concentration found on a private parcel in 2017 was found in the northwest corner of the townsite (DUA1, Arsenic 445 mg/kg and Lead 19,500). Soil at the Site is an exposure pathway for residential and recreational users.

- **Air Pathway:** Lead concentrations in air samples at multiple locations within the Site exceeded the residential air RSL during 2017 sampling. The highest concentration was found at along townsite roads at CU04 (Lead 0.435 µg/m^3 [August 1, 2017]). Other locations where samples exceeded the residential air RSL for lead were located at the source was piles and within the northern portion of the townsite. Sample results suggest that fugitive dust consisting of contaminated soil from the mine waste piles or other source areas within the townsite is an exposure pathway for residential and recreational users at the Site.

4.2 Recommendations

The detections of lead and arsenic discussed in Sections 2 and 3 of this ESI report and in the PA/SI Report for the Gilmore Townsites Common Use Areas and Surrounding Lands (DEQ 2017) identify a concern for human health and the environment. Therefore, DEQ recommends **Additional Actions** for this Site.

Occupancy of the Site is largely dependent on to season. A transient population uses the site for short-term stays and day use primarily in the summer months. However, a few properties are used as full-time residences. Demographics of Site population are unknown, but age is not a factor limiting use of the Site.

In 2016, an effort was made to make residents and visitors aware of the physical hazards and metals contaminated soil within the area. This included adding an educational panel with 'Play Safe' messaging to the Gilmore townsite history display. Funding and creation of this panel was possible through collaboration with the Idaho Department of Health and Welfare (IDHW), BLM (BLM), and the Lemhi County Historical Society (Lemhi County Historical Society and Museum). Since, IDHW and DEQ have prepared and distributed additional factsheets to landowners recommending best practices to reduce exposures to metals.

DEQ recommends ongoing coordination with EPA, IDHW, and the Agency for Toxic Substances and Disease Registry (ATSDR) to update health and safety messaging, engage with the landowners and site users, and collaborate on future actions. Due to the significant levels of lead and arsenic in soil and the potential for increased population and occupancy at the Site, additional investigations and actions are needed to fully understand and mitigate threats to human health and the environment. This ESI, the PA/SI Report for the Gilmore Townsite Common Use Areas and Surrounding Lands (DEQ 2017), and previous investigations outlined in Section 2.5, should be used to prioritize and identify available federal and state programs and funding

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Appendix A Tables

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Table 1. 2016 Townsite Parcel Sampling Results

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)												
					antimony	arsenic	barium	cadmium	chromium	copper	iron	lead	manganese	selenium	silver	zinc	mercury
Samples from the Gilmore Townsite Common Use Areas																	
SE Side of Town Block 40 Parcel #15	GT-15-PL-SS1	RPD0050040003A	Composite	8/17/2016	6.1	18.5	251	1.85	16.9	38.6	18,300	**1,060**	990	**1.9 J**	**1.65**	412	0.087
SE Corner of Townsite Parcel #30	GT-30-PL-SS1	RPD0050050022A	Composite	8/17/2016	3.1	19.2	347	1.40	18.3	26.5	19,300	189	1,060	**2.09 J**	**1.10**	277	0.118
Furthest SE Lot Parcel #31	GT-31-PL-SS1	RPD0050050026A	Composite	8/17/2016	2.8	17.6	406	1.01	18.4	23.7	18,900	113	850	**2.02 J**	**0.89**	194	0.063
SW Corner of Townsite Parcel #12	GT-12-PL-SS1 (-10 mesh)	RPD0050044007M	Composite	8/17/2016	4.7	19.3	250	1.17	18.3	25.0	19,800	280	1,070	**2.06 J**	**0.92**	221	0.047
	GT-12-PL-SS1 (-60 mesh)	RPD0050044007M	Composite	8/17/2016	4.0	19.3	263	1.23	18.5	25.8	20,600	165	1,030	**2.10 J**	**1.05**	227	0.052
Parcel #12	GT-12-PL-SS2	RPD0050044007M	Grab (9-18 inch depth)	8/17/2016	5.1	21.6	219	0.87	16.9	21.4	21,300	60.8	989	**2.21 J**	**0.86**	154	<0.033
	GT-12-PL-SS3	RPD0050044007M	Grab (2-9" depth)	8/17/2016	6.3	22.7	229	1.01	17.4	26.4	20,800	130	1,040	**1.96 J**	**0.89**	196	0.042
North End of Parcel #3	GT-03-PL-SS1	RPD0050017004E	Composite	8/17/2016	8.1	20.1	151	**3.30**	13.1	34.7	15,800	**1,510**	888	**1.42 J**	**1.73**	**750**	0.070
South of Forest Service Road Parcel #21	GT-21-PL-SS1	RPD0050046003A	Composite	8/17/2016	3.7	21.7	283	1.80	19.6	30.1	22,100	**514**	1,250	**2.21 J**	**1.76**	328	0.100
South of Forest Service Road Parcel #19	GT-19-PL-SS1	RPD0050041011A	Composite	8/17/2016	7.2	17.6	174	1.77	15.2	32.2	16,900	**1,210**	853	**1.66 J**	**2.07**	359	0.062
South of Forest Service Road Parcel #22	GT-22-PL-SS1	RPD0050046013A	Composite	8/17/2016	4.7	23.1	286	1.89	19.1	33.0	20,300	**607**	1,050	**2.14 J**	**1.53**	374	0.097
South of Forest Service Road Parcel #23	GT-23-PL-SS1	RPD0050046009B	Composite	8/17/2016	3.2	19.4	301	1.39	16.9	27.2	18,100	193	1,010	**1.86 J**	**1.05**	225	**0.428**
North of Forest Service Road Parcel #11	GT-11-PL-SS1	RPD0050044007M	Composite	8/17/2016	5.9	14.5	167	1.37	14.9	28.7	17,000	**1,060**	855	**1.58 J**	**1.43**	294	0.042
	GT-11-PL-SS2	RPD0050044007M	Composite (Duplicate)	8/17/2016	6.0	13.6	167	1.24	14.2	27.7	16,400	**921**	862	**1.59 J**	**1.32**	284	0.047
Along Gold Road Parcel #35	GT-35-PL-SS1	RPD0050049001A	Composite	8/17/2016	4.8	21.1	268	2.18	16.1	33.5	17,100	**884**	980	**1.80 J**	**1.49**	465	0.165
North Lot Block 27 Parcel #36	GT-36-PL-SS1	RPD0050027011A	Composite	8/17/2016	**12.0**	26.2	256	2.69	17.2	52.2	23,000	**1,750**	1,350	**1.92 J**	**2.45**	**854**	**0.350**
North Lots Block 27 Parcel #33	GT-33-PL-SS1	RPD0050027009A	Composite	8/17/2016	**47.5**	**90.8**	266	**7.27**	16.9	**156**	31,100	**9,320**	1,880	**1.85 J**	**10.7**	**2,180**	**0.383**
North Lots Block 27 Parcel #34	GT-34-PL-SS1 (-10 mesh)	RPD0050027007A	Composite	8/17/2016	**15.2**	**35.0**	218	**3.71**	18.2	**62.8**	22,600	**2,850**	1,430	**1.75 J**	**3.71**	**876**	0.073
	GT-34-PL-SS1 (-60 mesh)	RPD0050027007A	Composite	8/17/2016	**12.2**	26.7	210	2.97	17.4	56.7	20,800	**1,990**	1,270	**1.79 J**	**2.31**	**742**	0.082
Middle East Lot Block 38 Parcel #8	GT-08-PL-SS1	RPD0050038012A	Composite	8/18/2016	7.9	16.4	268 J+	2.26	16.7	37.6	15,700	**927**	733	**1.61**	**1.68**	**547**	0.137
Middle East Lot Block 38 Parcel #7	GT-07-PL-SS1	RPD0050038001E	Composite	8/18/2016	6.7	12.0	233 J+	1.66	18.5	26.1	19,800	326	1,120	**2.09**	**1.00**	327	0.046
Middle Lot Block 32 Parcel #6	GT-06-PL-SS1	RPD0050032007A	Composite	8/18/2016	6.1	11.9	215 J+	1.84	17.4	25.0	18,900	328	1,070	**1.89**	**1.15**	332	0.039
Middle West Lot Block 33 Parcel #5	GT-05-PL-SS1	RPD00500330040	Composite	8/18/2016	5.5	10.9	253 J+	1.31	17.9	22.7	19,800	212	1,240	**2.02**	**1.00**	221	0.053
Middle West Lot Block 33 Parcel #4	GT-04-PL-SS1 (-10 mesh)	RPD00500330020, RPD00500330021	Composite	8/18/2016	**9.0**	17.1	251 J+	2.29	19.2	31.6	22,200	**564**	1,370	**2.09**	**1.34**	**476**	0.072
	GT-04-PL-SS1 (-60 mesh)	RPD00500330020, RPD00500330021	Composite	8/18/2016	**8.5**	16.5	244 J+	2.17	19.3	29.9	22,000	**519**	1,300	**2.09**	**1.34**	448	0.069
South Half of North Central Lots Block 28 Parcel #32	GT-32-PL-SS1 (-10 mesh)	RPD0050028001A	Composite	8/18/2016	**54.1**	**97.2**	204 J+	**8.41**	14.8	**156**	29,800	**8,840**	1,490	**1.54**	**17.6**	**2,530**	**0.593**
	GT-32-PL-SS1 (-60 mesh)	RPD0050028001A	Composite	8/18/2016	**65.8**	**113**	201 J+	**8.08**	15.7	**194**	32,200	**10,600**	1,410	**1.65**	**11.3**	**2,440**	**0.282**
North Half of North Central Lots Block 28 Parcel #32	GT-32-PL-SS2 (-10 mesh)	RPD0050028001A	Composite	8/18/2016	**262**	**427**	388 J+	**61.0**	18.2	**566**	**72,900**	**23,900**	**9,190**	**1.24**	**17.3**	**17,500**	**1.14**
	GT-32-PL-SS2 (-60 mesh)	RPD0050028001A	Composite	8/18/2016	**216**	**340**	376 J+	**55.7**	18.1	**526**	**67,300**	**20,900**	**8,470**	**1.30**	**16.6**	**15,400**	**1.02**
North Central Lots Block 28 Parcel #32	GT-32-PL-SS3	RPD0050028001A	Grab (6-12" depth)	8/18/2016	7.0	16.7	162 J+	0.87	12.8	24.9	12,500	**798**	511	**1.25**	**1.56**	188	0.042
	GT-32-PL-SS4	RPD0050028001A	Grab (2-6" depth)	8/18/2016	**140**	**243**	354 J+	**12.0**	10.0	**578**	**48,500**	**23,800**	1,290	**2.27**	**26.0**	**4,570**	**0.615**
Rinsate Taken on Trowel	GT-32-PL-SW1	NA	Rinsate Blank - mg/L	8/18/2016	<0.020	<0.00300	<0.0020	<0.0020	<0.0060	<0.0100	<0.100	<0.00300	<0.0080	<0.0030	<0.0050	<0.010	< 0.00020
North Lot Block 17 Parcel #1	GT-01-PL-SS1 (-10 mesh)	RPD0050017010A	Composite	8/18/2016	**50.5**	**98.0**	180 J+	**10.6**	12.0	**128**	23,900	**4,100**	1,790	**1.32**	**3.23**	**3,720**	0.175
	GT-01-PL-SS1 (-60 mesh)	RPD0050017010A	Composite	8/18/2016	**51.5**	**84.5**	247 J+	**13.9**	16.6	**141**	28,100	**4,510**	2,450	**1.60**	**4.18**	**3,920**	**0.202**
	GT-01-PL-SS2	RPD0050017010A	Grab (6-12" depth)	8/18/2016	**9.2**	16.1	237 J+	2.41	17.2	32.1	20,500	**612**	1,140	**1.74**	**0.93**	**538**	0.038
	GT-01-PL-SS3	RPD0050017010A	Grab (2-6" depth)	8/18/2016	6.9	13.2	212 J+	1.66	16.5	24.0	19,200	379	915	**1.93**	**0.67**	366	<0.033
North Lot Block 17 Parcel #2	GT-02-PL-SS1	RPD0050017004E	Composite	8/18/2016	**231**	**442**	290 J+	**67.5**	21.2	**856**	**81,100**	**23,900**	**6,860**	**1.55**	**20.8**	**24,000**	**1.10**
	GT-02-PL-SS2	RPD0050017004E	Composite	8/18/2016	**254**	**466**	262 J+	**61.4**	18.8	**804**	**76,000**	**24,600**	**6,420**	**1.71**	**20.0**	**21,300**	**1.10**
	GT-02-PL-SS3	RPD0050017004E	Composite	8/18/2016	**244**	**452**	272 J+	**65.3**	19.8	**830**	**78,100**	**23,600**	**6,450**	**1.61**	**20.1**	**23,000**	**1.02**

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)												
					antimony	arsenic	barium	cadmium	chromium	copper	iron	lead	manganese	selenium	silver	zinc	mercury
Samples from the Gilmore Townsite Common Use Areas (Continued)																	
North-South Road to the East	GT-01-RD-SS1	RPD0050035005A, RPD0050026007A, RPD0050032007A	Composite	8/15/2016	**12.7**	**35.9**	150	**8.21**	13.0	**62.8 *J+***	16,800	**2,930**	1,020	**1.29**	**4.38**	**1,970**	0.080
North-South Road to the West	GT-02-RD-SS1	no parcel (roadway)	Composite	8/15/2016	**11.2**	**34.2**	211	**9.13**	16.4	**67.5 *J+***	20,800	**2,340**	1,500	**1.71**	**3.22**	**1,810**	0.098
Northern Loop of the Roads	GT-03-RD-SS1 (-10 mesh)	RPD0050025002A, RPD00500270170, RPD00500210010	Composite	8/15/2016	**168**	**321**	327	**57.5**	13.9	**638 *J+***	**69,800**	**25,000**	**7,230**	**0.94**	**17.9**	**16,000**	**0.902**
	GT-03-RD-SS1 (-60 mesh)	RPD0050025002A, RPD00500270170, RPD00500210010	Composite	8/15/2016	**173**	**323**	360	**51.7**	13.3	**557 *J+***	**65,500**	**32,300**	**7,600**	**0.89**	**16.5**	**13,300**	**0.847**
	GT-03-RD-SS2	no parcel (roadway)	Composite (Duplicate)	8/15/2016	**170**	**302**	349	**48.6**	13.2	**514 *J+***	**61,400**	**19,900**	**7,170**	**0.89**	**15.3**	**12,500**	**0.798**
	GT-03-RD-SS3	no parcel (roadway)	Subsurface (2-12 inch depth)	8/15/2016	**246**	**383**	366	**73.3**	13.3	**710 *J+***	**74,700**	**26,400**	**8,950**	**0.79**	**21.5**	**17,400**	**1.14**
	GT-03-RD-SS4	no parcel (roadway)	Subsurface (12-24 inch depth)	8/15/2016	**242**	**419**	283	**81.8**	10.9	**769 *J+***	**78,600**	**42,900**	**7,080**	**0.79**	**25.1**	**21,100**	**0.912**
Southern Forest Service Road	GT-04-RD-SS1	RPD0050049012A, RPD00500490030, RPD0050048017D, RPD0050048028C, RP13N27E170600, RP13N27E172401, RPD0050048001A	Composite	8/15/2016	<2.0	10.9	45.9	0.74	6.04	8.81 *J+*	5,120	151	236	**0.91**	**0.74**	149	<0.033
Samples from Gilmore Townsite Privately Owned Parcels																	
South End of Parcel #17	GT-17-PL-SS1	RPD0050042008B	Composite	8/15/2016	5.3	23.9	219	2.36	15.7	40.5 *J+*	14,500	**1,490**	687	**1.6**	**2.08**	**623**	0.093
South End of Parcel #28	GT-28-PL-SS1	RPD0050050020A	Composite	8/16/2016	3.3	19.5	505	1.70	23.5	31.6 *J+*	21,300	197	1,180	**2.39**	**1.19**	278	**0.200**
South End of Parcel #27	GT-27-PL-SS1	RPD0050050015A	Composite	8/16/2016	3.0	24.2	265	1.67	23.7	26.4 *J+*	19,200	156	1,050	**2.11**	**1.22**	238	0.133
South End of Parcel #26	GT-26-PL-SS1	RPD0050050010A	Composite	8/16/2016	3.6	25.5	278	1.57	20.9	24.9 *J+*	19,500	142	1,120	**2.12**	**1.37**	241	0.050
South End of Parcel #29	GT-29-PL-SS1	RPD0050047001A	Composite	8/16/2016	3.2	21.4	293	1.56	20.2	25.9 *J+*	20,200	293	1,140	**2.16**	**1.31**	240	0.038
South End of Parcel #24	GT-24-PL-SS1	RPD0050047009A	Composite	8/16/2016	4.8	23.0	255	1.46	18.5	30.6 *J+*	18,700	**662**	969	**2.00**	**1.54**	266	0.043
South End of Parcel #25	GT-25-PL-SS1	RPD0050048001A	Composite	8/16/2016	6.1	27.2	239	2.00	17.9	36.7 *J+*	19,500	**1,210**	1,040	**1.92**	**2.13**	448	0.052
North of Mercantile Building Parcel #10	GT-10-PL-SS1 (-10 mesh)	RPD0050042010A	Composite	8/17/2016	4.7	**43.7**	268	2.56	17.1	41.3 *J+*	15,600	**1,770**	898	**1.61**	**1.87**	**607**	0.165
	GT-10-PL-SS1 (-60 mesh)	RPD0050042010A	Composite	8/17/2016	4.4	21.8	336	2.41	21.8	49.0 *J+*	16,100	**1,010**	1,020	**1.69**	**2.07**	**602**	0.132
2 Lots North of Mercantile Building Parcel #14	GT-14-PL-SS1	RPD00500420120	Composite	8/17/2016	6.1	25.1	247	**3.57**	17.9	49.4 *J+*	17,100	**1,250**	925	**1.68**	**2.59**	**803**	0.168
5 Lots North of Mercantile Building Lot 42 Parcel #16	GT-16-PL-SS1	RPD0050042014A	Composite	8/17/2016	6.8	24.6	234	2.16	20.8	50.1 *J+*	17,500	**1,230**	975	**1.80**	**2.28**	**558**	0.135
South End Block 41 Parcel #9	GT-09-PL-SS1	RPD0050038012A	Composite	8/17/2016	5.8	20.6	323	2.46	17.7	47.5 *J+*	15,900	**1,120**	837	**1.73**	**2.34**	**741**	0.145
East of Mercantile Building Parcel #18	GT-18-PL-SS1	RPD0050041011A	Composite	8/17/2016	3.6	18.6	335	2.49	19.1	46.6 *J+*	17,000	**934**	770	**1.48**	**1.19**	**604**	**0.457**
West of Mercantile Building Parcel #13	GT-13-PL-SS1	RPD00500420070, RPD00500420071, RPD00500420072	Composite	8/17/2016	3.3	20.1	220	1.75	16.6	25.9 *J+*	16,400	**810**	843	**1.75**	**1.02**	298	0.053
	GT-13-PL-SS2	RPD00500420070, RPD00500420071, RPD00500420072	Composite (Replicate)	8/17/2016	4.0	18.6	215	1.58	15.5	26.2	15,600	**749**	827	**1.59 *J***	**1.25**	305	0.058
	GT-13-PL-SS3	RPD00500420070, RPD00500420071, RPD00500420072	Composite (Replicate)	8/17/2016	4.9	19.1	211	1.55	15.1	25.1	15,200	**841**	800	**1.64 *J***	**1.23**	322	0.052
2 Lots East of Mercantile Building Parcel #20	GT-20-PL-SS1	RPD00500410150	Composite	8/17/2016	6.6	21.2	215	1.96	15.5	33.6	16,900	**858**	932	**1.54 *J***	**1.68**	456	0.082

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)												
					antimony	arsenic	barium	cadmium	chromium	copper	iron	lead	manganese	selenium	silver	zinc	mercury
Samples from Surrounding Lands - Collected on BLM Property																	
Tailings Material Eroded onto BLM Property	BLM-SS1	RP13N27E172401	Grab	8/16/2016	**350**	**546**	372 *J*	**106**	16.5	**1,090**	**131,000**	**40,400**	**9,690 *J***	**0.49** *J*	**48.3 *J***	**38,000**	**1.04**
	BLM-SS2	RP13N27E172401	Grab (Duplicate)	8/16/2016	**326**	**508**	417 *J*	**98.0**	17.7	**1,080**	**127,000**	**45,100**	**9,960 *J***	**0.43** *J*	**54.3 *J***	**35,900**	**1.21**
East-West Ditch from Tailings to Townsite	BLM-SS3	RP13N27E172401	Composite	8/16/2016	**287**	**289**	339 *J*	**55.8**	21.5	**669**	**86,900**	**23,000**	**8,040 *J***	**0.38** *J*	**29.2 *J***	**18,700**	**0.662**
Area Downgradient of Tailings on BLM Property	BLM-SS10	RP13N27E172401, RPD00500210010	Composite	8/16/2016	**157**	**267**	413 *J*	**74.7**	20.4	**597**	**89,300**	**22,700**	**8,020 *J***	**0.34** *J*	**23.8 *J***	**18,600**	**0.590**
	BLM-SS11	RP13N27E172401, RPD00500210010	Composite (Triplicate)	8/16/2016	**188**	**260**	339 *J*	**52.7**	19.6	**519**	**79,900**	**16,900**	**6,820 *J***	**0.32** *J*	**15.7 *J***	**14,600**	**0.738**
	BLM-SS12	RP13N27E172401, RPD00500210010	Composite (Triplicate)	8/16/2016	**177**	**308**	292 *J*	**43.2**	14.2	**429**	**63,800**	**22,600**	**6,090 *J***	**0.32** *J*	**17.9 *J***	**17,600**	**0.547**
Stained Soil North of Townsite	BLM-SS4	RP13N27E172401	Composite	8/16/2016	**28.1**	**56.8**	180 *J*	**15.0**	12.1	**83.0**	20,600	**3,030**	1,720 *J*	<0.30 *UJ*	**2.64 *J***	**3,290**	0.170
North Edge of Townsite	BLM-SS8	RPD0050020001B, RPD00500190060, RPD0050019001A, RPD00500180160, RPD0050017012A, RPD0050016001D, RPD0050017012A, RPD0050016001D, RP13N27E170600, RP13N27E172401	Composite	8/16/2016	**55.2**	**110**	177 *J*	**14.9**	12.4	**178**	25,100	**5,440**	2,000 *J*	<0.30 *UJ*	**4.88 *J***	**7,700**	0.190
West Edge of Townsite	BLM-SS9	RP13N27E172401	Composite	8/16/2016	**110**	**180**	259 *J*	**24.0**	16.4	**250**	40,300	**8,400**	**3,630 *J***	**0.33** *J*	**7.64 *J***	**10,800**	**0.367**
Downstream Sediment within North-South Ditch	BLM-SS5	RP13N27E172401[a]	Grab	8/16/2016	5.2	12.7	113 *J*	1.43	8.69	19.2	11,300	**456**	705 *J*	<0.30 *UJ*	<0.50 *UJ*	**480**	0.037
Upstream Sediment within North-South Ditch	BLM-SS6	RP13N27E172401[a]	Grab	8/16/2016	<2.0	8.04	106 *J*	0.54	8.98	8.60	10,700	65.7	586 *J*	<0.30 *UJ*	<0.50 *UJ*	96.3	<0.033
Background	BLM-SS7	RP13N27E073001	Grab	8/16/2016	2.8	10.6	195 *J*	1.02	14.3	20.7	15,600	129	899 *J*	<0.30 *UJ*	<0.50 *UJ*	157	0.065
EPA RSL for Resident Soil[b] (mg/kg)					31.0	0.68	15,000	71.0	NA	3,100	55,000	400	1,800	390	390	23,000	11.0
EPA RSL for Industrial Soil[b] (mg/kg)					470	3.00	220,000	980	NA	47,000	820,000	800	26,000	5,800	5,800	350,000	46.0
Mean Concentrations in Lemhi County[c] (ppm)					NA	14.180	NA	NA	NA	29.828	NA	69.095	603.702	0.645	NA	109.152	0.047

Notes:

Gray shaded values exceed regional screening levels (RSLs) for residential soils.

Orange shaded values exceed RSLs for both residential and industrial soils.

Bold = Greater than three times the background concentration (sample ID BLM-SS7). Where the background value is not-detected, the limit of detection was used as the background value for calculation purposes.

[a]Parcel number provided for general sample location purposes only.

[b]Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

[c]Significant digits shown as reported by USGS. Mean concentrations are not available for Sb, Ba, Cd, Cr, Fe, and Ag. http://mrdata.usgs.gov/geochem/county.php?place=f16059&el=Pb&rf=northwestern

mg/kg = milligrams per kilogram

ppm = parts per million

< = The analyte was not detected below the reporting limit shown.

J = The result is an estimated quantity.

J+ = The result is an estimated quantity and is biased high.

UJ = Concentration was not detected and is qualified as an estimate.

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Table 2. 2017 Gilmore Soil Samples

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)																		
					Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Se	Ag	Tl	V	Zn
Samples from Mine Waste Piles																							
Large West/Gray Tailings Pile (DU1)	GM-DU1-SS10	RP99000020015G	ISM30	7/31/2017	4,370	**31.5 *J***	**321**	264	0.36	**51.7**	**157,000**	13.7	2.77	**343**	**55,500**	**11,700**	88,700	**6,100**	9.77	<4.4	13.5	<4.4	**108**	**14,600**
Large East/Tan Tailings Pile (DU2)	GM-DU2-SS14	RP99000020015G, RP13N27E172401	ISM30	7/31/2017	2,810	**124 *J***	**616**	401	<0.43	**67.5**	120,000	16.4	3.3	**722**	**98,400**	**41,200**	66,700	**8,680**	10	<21	**36.2**	<21	**423**	**21,000**
Small Tailings Pile SW of Large Gray Pile (DU3)	GM-DU3-SS11	RP99000020015G	ISM30	7/31/2017	3,440	**155 *J***	**659**	355	0.431	**130**	118,000	15.3	3.04	**866**	**89,900**	**39,000**	69,600	**9,690**	9.38	<20	**48.7**	<20	**203**	**31,900**
Small Tailings Pile S of Large Gray Pile (DU4)	GM-DU4-SS12	RP99000020015G, RP990000200080	ISM30	7/31/2017	6,610	**49.2 *J***	**326**	490	0.46	**44.5**	132,000	20.9	6.8	**363**	**60,100**	**17,700**	77,200	**9,770**	20.1	<22	13	<22	**226**	**13,800**
Impacted Soils Between Larger and Smaller Tailings Piles (DU5)	GM-DU5-SS13	RP99000020015G, RP99000020015P, RP99000020015L	ISM30	7/31/2017	3,760	**77.8 *J***	**818**	**827**	0.51	**46.8**	86,300	21.1	2.5	**395**	**176,000**	**16,000**	42,400	**11,300**	12.5	<21	11	<21	**190**	**13,600**
Impacted Soils Between Larger Waste Piles and BLM Land (DU6)	GM-DU6-SS15	RP99000020015G, RP13N27E172401	ISM30	7/31/2017	9,190	**162 *J***	**461**	353	0.62	**47.1**	75,500	19.3	4	**739**	**74,900**	**33,900**	44,000	**8,320**	11.9	<23	**27.8**	<23	**474**	**14,300**
Samples from Townsite Parcels																							
Parcel -01D (DUA1)	GT-DUA1-SS35	RPD0050016001D	ISM30	8/2/2017	17,300	**107 *J***	**445**	258	0.86	**46.9**	27,600	22.4	5.4	**721**	**69,900**	**19,500**	18,600	**5,800**	13.8	<21	**17**	<21	**219**	**16,400**
Parcel -010 (DUA2)	GT-DUA2-SS22	RPD00500260010	ISM30	8/1/2017	20,600	**30 *J***	**127**	321	0.89	**11.3**	54,100	21.7	12	**203**	37,600	**7,380**	31,900	**3,270**	20.3	<25	<5	<25	**94.2**	**3,340**
Parcel -01A (DUA3)	GT-DUA3-SS18	RPD0050028001A	ISM30	8/1/2017	17,300	**30 *J***	**182**	237	0.73	**17.1**	76,600	20.2	5.8	**239**	40,200	**11,200**	43,300	**2,890**	15.6	<24	10	<24	**130**	**5,140**
Parcel -01A (DUA4) Children's Play Area	GT-DUA4-SS16	RPD0050028001A	ISM30	8/1/2017	10,700	**83.3 *J***	**420**	362	0.67	**54.6**	88,600	20.7	4.8	**555**	**72,200**	**20,500**	52,100	**8,300**	16.1	<23	**15**	<23	**250**	**16,300**
Parcels -11A, -09A, and -07A (DUA5)	GT-DUA5-SS17	PD0050027011A, RPD0050027009A, RPD0050027007A	ISM30	8/1/2017	19,800	11 *J*	**58**	241	0.83	**3.8**	41,500	19.2	6.3	**86**	26,400	**4,420**	25,000	1,700	17.6	<24	<4.8	<24	54	**1,270**
Parcel -060 (DUA6)	GT-DUA6-SS24	RPD00500320060	ISM30	8/1/2017	22,200	<9.4 *UJ*	<19	225	0.9	1.2	26,500	20.1	7.2	22.2	21,700	182	19,700	1,230	18.6	<23	<4.7	<23	29.6	230
Parcel -01B (DUA7)	GT-DUA7-SS42	RPD0050034001B	ISM30	8/2/2017	19,300	9.1 *J*	50	215	0.8	**7.6**	60,300	18.7	6.2	**67.4**	23,500	**2,230**	34,600	1,730	17.5	<22	<4.5	<22	45.8	**1,830**
Parcel -27A (DUA8)	GT-DUA8-SS3	RPD0050041027A	ISM30	7/31/2017	16,400	2.8 *J*	28.1	213	0.82	1.92	52,800	19.4	5.84	44.1	19,500	**1,840**	27,700	987	15.4	<5.2	3.1	<5.2	36.7	**682**
Parcels -10A and -08B (DUA9)	GT-DUA9-SS1	RPD0050042010A, RPD0050042008B	ISM30	7/31/2017	15,300	2.2 *J*	27.6	278	0.798	2.16	82,500	20.2	4.98	42.8	17,200	**943**	24,800	901	14.5	<4.8	2.2	<4.8	30.5	**694**
Parcels -10A and -15A (DUA10)	GT-DUA10-SS54	RPD0050050010A, RPD0050050015A	ISM30	8/2/2017	20,000	<9.2 *UJ*	28	221	0.77	1.3	73,700	21.2	6.4	22	17,900	151	25,800	961	22.2	<23	<4.6	<23	31	238
Parcel -01D (DUB1)	GT-DUB1-SS36	RPD0050016001D	ISM30	8/2/2017	19,200	**67.7 *J***	**358**	262	0.86	**31.1**	21,700	20.4	5.7	**423**	**54,100**	**13,600**	14,500	**3,880**	13.5	<24	10	<24	**167**	**11,500**
Parcel -08B (DUB2)	GT-DUB2-SS29	RPD00500170008B	ISM30	8/1/2017	24,700	24 *J*	**128**	302	1	**19.6**	10,700	22.5	7.2	**195**	35,400	**6,310**	9,100	**2,940**	14.9	<24	5.6	<24	**73.1**	**6,230**
Parcels -170 and -180 (DUB3)	GT-DUB3-SS37	RPD00500190170, RPD00500190180	ISM30	8/2/2017	23,600	<8.8 *UJ*	23	277	0.95	**2.9**	5,310	19.7	6.8	39.1	23,700	**816**	5,090	1,260	14	<22	<4.4	<22	36.5	**695**
Parcel -010 (DUB4)	GT-DUB4-SS26	RPD00500210010	ISM30	8/1/2017	11,000	**73.2 *J***	**346**	296	0.55	**44.8**	78,500	17.4	4.4	**480**	**59,000**	**18,100**	46,800	**5,160**	11.7 *J*	<23	**16**	<23	**249**	**12,200**
Parcel -010 (DUB5)	GT-DUB5-SS27	RPD00500210010	ISM30	8/1/2017	11,400	**80.5 *J***	**357**	341	0.59	**42.3**	79,000	18.2	4.7	**489**	**61,400**	**18,900**	48,100	**5,810**	12.7	<21	**16**	<21	**288**	**11,700**
Parcel -010 (DUB6)	GT-DUB6-SS28	RPD00500210010	ISM30	8/1/2017	16,000	**47 *J***	**242**	311	0.77	**29.3**	68,400	19.1	5.4	**375**	47,400	**14,200**	41,900	**5,050**	15.4	<22	10	<22	**203**	**8,250**
Parcel -010 (DUB7)	GT-DUB7-SS39	RPD00500210010	ISM30	8/2/2017	16,600	**37 *J***	**162**	292	0.78	**17.8**	61,100	18.6	5.6	**279**	41,200	**8,510**	36,300	**3,720**	15.8	<23	5.7	<23	**123**	**5,640**
Parcel -010 (DUB8)	GT-DUB8-SS38	RPD00500210010	ISM30	8/2/2017	16,600	**55.9 *J***	**196**	284	0.78	**23.3**	68,200	18.8	5.3	**283**	46,100	**9,910**	42,200	**4,020**	15.8	<20	7.6	<20	**124**	**7,380**
Parcel -010 (DUB9)	GT-DUB9-SS25	RPD00500250010	ISM30	8/1/2017	20,200	13 *J*	52	269	0.84	**4**	59,800	21.3	6.2	**93.8**	25,700	**2,450**	37,600	1,990	16.7	<22	<4.4	<22	44.4	**1,200**
Parcel -010 (DUB10)	GT-DUB10-SS21	RPD00500290010	ISM30	8/1/2017	14,900	**43 *J***	**211**	315	0.75	**28**	82,900	18.3	5.5	**291**	43,500	**10,300**	49,200	**4,630**	16.2	<23	7.9	<23	**139**	**7,930**
Parcel -05B (DUB11)	GT-DUB11-SS41	RPD00500250005B	ISM30	8/2/2017	23,200	12 *J*	**58**	250	0.94	**6.95**	47,600	21.8	6.8	**79.1**	29,000	**2,990**	29,700	1,870	19.8	<27	<5.4	<27	63.7	**1,860**
Parcel -030 (DUB12)	GT-DUB12-SS40	RPD00500330030	ISM30	8/2/2017	23,200	<8.6 *UJ*	<17	258	0.97	1.2	29,900	20.8	7	23.5	23,100	222	21,900	1,260	19.1	<22	<4.3	<22	29.2	256
Parcel -07A (DUB13)	GT-DUB13-SS23	RPD0050031007A	ISM30	8/1/2017	22,500	<9 *UJ*	<18	235	0.86	1.9	48,000	20.7	7	26.9	20,900	**531**	30,300	1,110	16.9	<23	<4.5	<23	31	377
Parcel -08A (DUB14)	GT-DUB14-SS32	RPD0050043008A	ISM30	8/1/2017	19,900	<8.5 *UJ*	21	177	0.73	1.5	73,600	19.3	6.1	35.7	17,700	**1,110**	33,500	851	15.5	<21	<4.2	<21	35.4	361
Parcel -130 (DUB15)	GT-DUB15-SS2	RPD00500410130	ISM30	7/31/2017	17,300	<9.6 *UJ*	26	303	0.73	2.3	78,700	20.2	5.7	47.7	17,400	**960**	25,300	885	16.9	<24	<4.8	<24	30	**661**
Gilmore Property Land Trust Parcel and Roads																							
200-foot Radius Around Residential Area on Parcel -080 (DUA11)	GM-DUA11-SS6	RP990000200080	ISM30	7/31/2017	15,400	2.3 *J*	32.3	153	0.839	1.89	124,000	19	6.1	36.7	20,100	**1,080**	34,200	1,050	31.6	<5.2	1.5	<5.2	40.1	460
Roads and Trails on Parcel -080 (DUA12)	GM-DUA12-SS7	RP990000200080	ISM30	7/31/2017	11,200	10.7 *J*	**75.7**	164	0.617	**14.6**	122,000	13.7	4.48	**97.6**	23,500	**4,310**	46,200	1,750	16.6	<4.2	5.29	<4.2	37.7	**4,030**

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)																		
					Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Se	Ag	Tl	V	Zn
Samples from Townsite Roads																								
East-West Road, North End of Townsite (DU14)	GT-DU14-SS48	no parcel (roadway)	ISM30	8/2/2017	11,200	**45.2 *J***	**234**	284	0.54	**27**	76,200	15.4	4.6	**301**	47,300	**11,100**	41,200	**4,160**	14.1	<22	8.1	<22	**164**	**8,290**
North-South Road, North End/ West Side of Townsite (DU15)	GT-DU15-SS49	RPD0050025002A, RPD0050026008A, RPD0050026007A	ISM30	8/2/2017	16,900	16 *J*	**76**	228	0.74	**12**	67,600	17.3	5.9	**113**	27,500	**3,760**	39,700	2,150	16.6	<22	<4.3	<22	60.1	**3,270**
North-South Road, North End/ Central Townsite (DU16)	GT-DU16-SS47	"RPD0050027007A, RPD0050027009A, RPD0050027011A, RPD0050025002A, RPD00500270170, RPD00500270130"	ISM30	8/2/2017	6,470	**62.3 *J***	**351**	345	0.45	**40.8**	122,000	15.9	3.7	**413**	**64,400**	**15,700**	68,000	**6,240**	12.1 *J*	<20	11	<20	**238**	**10,700**
North-South Road, North End/ East Side of Townsite (DU17)	GT-DU17-SS46	no parcel (roadway)	ISM30	8/2/2017	14,200	26 J	**111**	202	0.58	**19.3**	65,600	15.3	4.4	**152**	30,100	**6,810**	38,100	2,210	12.3	<21	8.1	<21	67.6	**6,140**
Road Between Townsite and Source Piles (DU18)	GT-DU18-SS53	RP990000200080, RP13N27E172401	ISM30	8/2/2017	14,400	23 J	**118**	179	0.61	**27.6**	98,800	15.5	5.5	**148**	33,500	**6,500**	51,700	2,280	14.8	<22	7.1	<22	42.1	**7,840**
North-South Road, South End/ West Side of Townsite (DU19)	GT-DU19-SS44	RPD0050044007M, RPD0050044004A, RPD0050044001A, RPD0050034001B, RPD0050034005A, RPD00500350060, RPD0050035005A, RPD0050035001B	ISM30	8/2/2017	20,000	<8.9 UJ	**42**	224	0.79	**10.5**	60,200	19.7	5.8	**60.3**	24,200	**1,900**	36,000	1,540	16.7	<22	<4.4	<22	33	**2,470**
North-South Road, South End/ Central Townsite (DU20)	GT-DU20-SS50	RPD0050043008A, RPD00500430100, RPD00500430130, RPD0050043005A, RPD00500360070, RPD0050036005B, RPD0050036003A, RPD0050026007A, RPD00500330010	ISM30	8/2/2017	18,400	<8.2 UJ	**<16**	192	0.75	**1.3**	83,200	17.5	6.1	**22.9**	18,900	**409**	32,700	911	16.6	<20	<4.1	<20	27.1	**306**
North-South Road, South End/ East Side of Townsite (DU21)	GT-DU21-SS51	RPD0050042008B, RPD0050042010A, RPD00500420120, RPD00500420130, RPD0050042014A, RPD0050042016A, RPD00500420180, RPD00500420010, RPD00500420210, RPD0050035005A, RPD0050026007A, RPD0050032007A	ISM30	8/2/2017	12,100	<9.6 UJ	**36**	145	<0.48	**6.54**	111,000	14.7	5	**51.5**	17,500	**2,010**	46,800	980	13.4	<24	<4.8	<24	30	**1,870**
Short L-Shaped Segment of Road Along East Central Side of Townsite (DU22)	GT-DU22-SS45	RPD0050030009A, RPD00500300050, RPD0050030003A, RPD0050030001A, RP13N27E170600	ISM30	8/2/2017	20,300	<9.2 UJ	**33**	224	0.82	**3.7**	43,000	19.7	6.2	**48.5**	23,600	**1,350**	27,500	1,290	17.4	<23	<4.6	<23	39.4	**1,030**
East-West Road, Central Townsite (DU23)	GT-DU23-SS43	RP13N27E172401	ISM30	8/2/2017	21,800	<9.1 UJ	**21**	237	0.89	**2.1**	37,900	20.7	6.7	**39.2**	23,000	**2,370**	24,000	1,150	18.4	<23	<4.5	<23	34.8	**564**
East-West Road, South End of Townsite (DU24)	GT-DU24-SS52	RP13N27E172401	ISM30	8/2/2017	9,790	15 J	**72**	139	<0.43	**20.4**	123,000	13.9	3.8 J	**100**	21,300	**4,340**	61,700	1,600	11.5 J	<22	5.1	<22	33	**5,300**

Location Description	Sample ID	County Parcel Number	Sample Type	Date	Analyte (mg/kg)																		
					Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Se	Ag	Tl	V	Zn
Forest Service Road 002 Crossing South End of Townsite (DU25)	GT-DU25-SS55	RPD0050049012A, RPD00500490030, RPD0050048017D, RPD0050048028C, RPD0050047009A, RP13N27E170600, RP13N27E172401, RPD0050048001A	ISM30	8/2/2017	3,940	<8.9 UJ	**<18**	52.2	<0.45	**0.94**	135,000	9.7	2.4 J	**10 J**	6,220	**278**	36,400	291	9.4 J	<22	<4.5	<22	11.6	**291**
Samples from BLM Property																							
North of Source Piles/ Encompassing Historical Conveyance Ditches (DU7)	BLM-DU7-SS61	RP99000020015G, RP13N27E172401	ISM 100-point Composite	8/3/2017	11,900	146 J	**448**	342	0.7	**50.9**	64,500	20.8	4.7	**709**	77,700	**29,500**	38,500	8,100	12.6	<22	21	<22	384	**15,700**
North of Source Piles/ Between Conveyance Ditch and Diversion Ditch (DU8)	BLM-DU8-SS60	RP13N27E172401	ISM 100-point Composite	8/3/2017	11,800	163 J	**484**	331	0.75	**53.4**	55,400	21.4	4.6	**852**	79,400	**28,800**	34,200	8,090	13.1	<19	26	<19	329	**16,400**
North of NW Corner of Townsite (DU9)	BLM-DU9-SS58	RP13N27E172401	ISM 100-point Composite	8/3/2017	16,100	103 J	**457**	282	0.86	**49.9**	39,200	21.8	5.6 J	**693**	72,600	**23,500**	24,600	6,460	13.8	<25	18	<25	262	**16,800**
North of Center North Edge of Townsite (DU10)	BLM-DU10-SS56	RP13N27E172401	ISM 100-point Composite	8/3/2017	27,000	<10 UJ	**<21**	256	1	**2.6**	5,520	20.9	7.2	**36.1**	24,700	**643**	5,260	1,290	14.4	<26	<5.2	<26	36.6	**657**
North of Northeast Corner of Townsite (DU11)	BLM-DU11-SS57	RP13N27E087200, RP13N27E073001, RP13N27E170600, RP13N27E172401	ISM 100-point Composite	8/3/2017	23,100	24 J	**97**	259	0.91	**20.3**	21,600	21.5	6.6	**143**	35,400	**5,560**	14,800	2,610	14.4	<25	<5	<25	69.6	**5,310**
West of Townsite and Adjacent (East) of Source Piles (DU12)	BLM-DU12-SS59	RP13N27E172401	ISM 100-point Composite	8/3/2017	16,700	101 J	**260**	322	0.81	**25.9**	66,300	19.6	5.5	**420**	55,700	**16,400**	41,400	5,670	14.8	<19	11	<19	237	**8,210**
Adjacent to West Edge of Townsite and East of Source Piles (DU13)	BLM-DU13-SS62	RP13N27E172401	ISM 100-point Composite	8/3/2017	16,600	48 J	**207**	291	0.75	**26.9**	61,400	18.6	6	**292**	49,600	**13,500**	38,000	4,560	15.5	<24	9.6	<24	175	**8,170**
Background Samples																							
Knob North of Source Piles and BLM Sample Locations (DU26)	BKD-DU26-SS65	RP13N27E073001, RP13N27E172401	ISM30	8/3/2017	16,000	<9.5 UJ	**<19**	181	0.65	**<0.95**	47,300	15.3	5	**21.2**	15,800	**154**	29,700	848	12.6	<24	<4.8	<24	21.9	**178**
Knob North of Source Piles and BLM Sample Locations	BKD-SS66	RP13N27E073001	Grab	8/3/2017	5,430	0.79 J	**11.4**	81.7	0.40	**0.83**	91,600	5.0	3.0 J	**12.7**	7,250	**120 J**	43,800	534	7.0	<2.6	0.29 J	<1.9	10.3	**122**
On Forest Service Land West and Upgradient of Townsite/Source Piles	BKD-SS68	RP13N26E130001	Grab	8/3/2017	23,600	0.84 J	**17.0**	266	1.3	**1.5**	24,900	14.6	10.4	**20.2**	24,800	**163 J**	15,900	1,720	19.5	<3.6	0.39 J	<2.6	32.1	**290**
EPA RSL for Resident Soil[a] (mg/kg)					77,000	31	0.68	15,000	160	71	NA	NA	23	3,100	50,000	400	NA	1,800	820[b]	390	390	0.78[c]	390	23,000
EPA RSL for Industrial Soil[a] (mg/kg)					1,100,000	470	3	220,000	2,300	980	NA	NA	350	47,000	820,000	800	NA	26,000	11000[b]	5,800	5,800	12[c]	5,800	350,000
Mean Concentrations in Lemhi County[d] (ppm)					6,110	NA	14.180	NA	NA	NA	2,097	NA	NA	29.828	2,850	69.095	1,132	603.702	NA	0.645	NA	NA	NA	109.152

Notes:
Gray shaded values exceed regional screening levels (RSLs) for residential soils.
Orange shaded values exceed RSLs for both residential and industrial soils.
Bold = Three times greater than background concentrations when comparing: 1) the soil and sediment sample to the background value at BKD-DU26-SS65. Where the background value is not-detected the limit of detection was used as the background value for calculation purposes.
[a] Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2016
[b] RSL shown for Nickel as Refinery Dust.
[c] RSL shown for Thallium (Soluble Salts).
[d] Significant digits shown as reported by USGS. Mean concentrations are not available for Sb, Ba, Cd, Cr, Fe, and Ag. http://mrdata.usgs.gov/geochem/county.php?place=f16059&el=Pb&rf=northwestern
ISM30 = ISM 30-point Composite
mg/kg = milligrams per kilogram
ppm = parts per million
< = The analyte was not detected below the limit of detection shown.
J = The result is an estimated quantity.
J+ = The result is an estimated quantity and is biased high.
UJ = Concentration was not detected and is qualified as an estimate.

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Table 3. 2017 Gilmore Sediment Samples

Location Description	Sample ID	County Parcel Number[a]	Sample Type	Date	Analyte (mg/kg)																			
					Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Se	Ag	Tl	V	Zn	zinc
Upstream Samples: Sediment Samples on Meadow Lake Creek, Diversion Ditch, Texas Creek, and Unnamed Stream Upstream of Site																								
Diversion Ditch Upstream of Confluence with Historic Conveyance Ditch	BLM-SD6	RP13N27E172401	Grab	8/4/2017	**3,860**	<4.7	2.3	**48.7**	0.21 *J*	0.27 *J*	**2,510**	3.3	**2.0 *J***	5.0	4,410 *J*	36.6	**2,430 *J***	299	0.0040 *J*	3.3	R	<0.79 *UJ*	<2.0	**6.2 *J***	53.9
Meadow Lake Creek Upstream of Confluence with Historic Conveyance Ditch	GM-SD14	RP13N27E073001	Grab	8/4/2017	**7,020**	0.72 *J*	**6.7**	**103**	**0.55**	1.2	**2,190**	**6.3**	**3.6 *J***	**14.2**	**8,350 *J***	147	**2,060 *J***	**632**	0.034 *J*	**6.6**	R	<0.78 *UJ*	<1.9	**11.3 *J***	**147**
Diversion Ditch Downstream of Confluence with Meadow Lake Creek	GM-SD15	RP13N27E073001	Grab	8/4/2017	2,160	<4.6	3.3	30.8	0.18 *J*	0.32 *J*	1,190	2.8	1.3 *J*	4.5	3,580 *J*	51.5	**1,510 *J***	216	0.015	2.9 *J*	R	<0.76 *UJ*	<1.9	4.3 *J*	64.3
Meadow Lake Creek Downstream of Confluence with Diversion Ditch	GM-SD16	RP13N27E073001	Grab	8/4/2017	2,070	<4.5	2.9	36.2	0.19 *J*	0.48	1,530	2.4	1.3 *J*	4.8	3,360 *J*	75.6	1,120 *J*	295	0.025 *J*	2.5 *J*	R	<0.75 *UJ*	<1.9	4.3 *J*	70.1
Meadow Lake Creek Upstream of Confluence with Diversion Ditch	GM-SD17	RP13N27E073001	Grab	8/4/2017	1,080	<4.8	**5.4**	24.2	0.17 *J*	0.27 *J*	888	1.2	0.84 *J*	5.2	3,700 *J*	42.2	652 *J*	159	0.022 *J*	1.6 *J*	R	<0.79 *UJ*	<2.0	3.8 *J*	46.1
Unnamed Stream East of Townsite Upstream of Confluence with Liberty Gulch	GM-SD19	RP13N27E160001	Grab	8/5/2017	**18,900**	9.5	**59.0**	**303**	**1.1**	**6.2**	**27,900**	**11.5**	**9.0**	**80.6**	**23,800 *J***	**2,620**	**16,900 *J***	**1,620**	0.17	**24.4**	R	2.2 *J*	<2.0	**50.7 *J***	**1,380**
Texas Creek Upstream of Confluence with Unnamed Stream East of Townsite	GM-SD25	RP13N27E090001	Grab	8/5/2017	**11,500**	0.46 *J*	**4.5**	**164**	**0.87**	**0.79**	**6,240**	**7.5**	**5.2**	**13.5**	**10,400**	99.2 *J*	**5,810**	**531**	<0.090	**9.2**	<2.7	0.13 *J*	<1.9	**11.6**	111
Source Samples: Sediment Samples from Dry Streams, Conveyance Ditches, and Other Overland Flow Paths that Cross or Originate within the Site																								
Ditch Between South Source Area and Townsite (Between Unnamed Streams)	BLM-SD1	RP13N27E172401	Grab	8/4/2017	**3,470**	**158**	**577**	**231**	**0.95**	**48.5**	**112,000**	<0.73	**4.2**	**780**	**102,000 *J***	**35,700**	**70,000 *J***	**9,310**	**1.1**	1.6 *J*	R	**33.3 *J***	<1.8	**340 *J***	**23,000**
Unnamed Stream Through Source Area to Townsite	BLM-SD2	RP13N27E172401	Grab	8/4/2017	**7,770**	**78.6**	**524**	**440**	**1.1**	**61.1**	**81,400**	<0.75	**5.5**	**464**	**108,000 *J***	**15,100**	**42,300 *J***	**8,540**	**0.53**	**7.2**	R	**17.8 *J***	<1.9	**87.1 *J***	**17,600**
Ditch (Unnamed Stream) Between North Source Area and Townsite	BLM-SD3	RP13N27E172401	Grab	8/4/2017	**6,140**	**97.1**	**416**	**330**	**0.8**	**44.4**	**77,700**	<0.74	**6.0**	**616**	**78,200 *J***	**33,700**	**42,700 *J***	**7,840**	**0.63**	**5**	R	**27.7 *J***	<1.9	**467 *J***	**15,300**
Historic Conveyance Ditch at Point Along Fence Dividing BLM and Source Pile Property	BLM-SD5	RP99000020015G	Grab	8/4/2017	**6,020**	**76.5**	**400**	**236**	**0.70**	**84.7**	**107,000**	<0.71	**4.0**	**528**	**72,800 *J***	**19,500**	**55,600 *J***	**6,950**	**0.58**	1.8 *J*	R	**18.1 *J***	<1.8	**115 *J***	**30,800**
Diversion Ditch Upstream of Confluence with Unnamed Stream	BLM-SD7	RP13N27E172401	Grab	8/4/2017	**5,720**	**65.2**	**175**	**97.1**	**0.53**	**16.2**	**8,990**	<0.79	**2.7 *J***	**329**	**28,200 *J***	**8,480**	**6,170 *J***	**1,700**	**0.59**	1.2 *J*	R	**7.8 *J***	<2.0	**138 *J***	**8,170**
Liberty Gulch Upstream of Confluence with Unnamed Stream	GT-SD8	RP13N27E172401	Grab	8/4/2017	**17,400**	4.8	**30.7**	**241**	**0.99**	**4.3**	**37,700**	**10.0**	**8.2**	**50.4**	**21,100 *J***	**1,350**	**20,500 *J***	**1,920**	0.15	**20.1**	R	1.4 *J*	<2.0	**35.6 *J***	**882**
Unnamed Stream Upstream of Confluence with Liberty Gulch	GT-SD9	RP13N27E172401	Grab	8/4/2017	**4,060**	**103**	**498**	**388**	**0.73**	**65.6**	**105,000**	<0.77	**4.5**	**640**	**84,100 *J***	**21,200**	**56,500 *J***	**10,000**	**0.82**	1.7 *J*	R	**20.8 *J***	<1.9	**197 *J***	**25,500**
Liberty Gulch (on Townsite) Downstream of Both Unnamed Streams	GT-SD10	no parcel (roadway)	Grab	8/4/2017	**13,000**	**19.1**	**112**	**155**	**0.89**	**19.6**	**62,800**	**5.7**	**4.8**	**186**	**27,800 *J***	**8,490**	**40,300 *J***	**1,130**	**0.53**	**11.4**	R	**8.2 *J***	<2.0	**83.4 *J***	**5,600**
Ditch (Unnamed Stream) Upstream of Confluence with Liberty Gulch	GT-SD11	no parcel (roadway)	Grab	8/4/2017	**10,300**	**35.5**	**141**	**218**	**0.72**	**15.8**	**79,600**	3.5	**4.9**	**196**	**28,800 *J***	**9,690**	**40,200 *J***	**3,420**	**0.37**	**10.6**	R	**7.0 *J***	<2.1	**131 *J***	**5,300**
Beginning of Unnamed Discolored Drainage	GM-SD12	RPD00500210010	Grab	8/4/2017	**10,400**	**91.4**	**319**	**277**	**0.95**	**44.6**	**66,700**	0.32 *J*	**5.6**	**575**	**55,000 *J***	**18,200**	**36,200 *J***	**6,900**	**0.77**	**8.6**	R	**12.5 *J***	<1.8	**166 *J***	**12,500**
Historic Conveyance Ditch Upstream of Confluence with Meadow Lake Creek	GM-SD13	RP13N27E073001	Grab	8/4/2017	**9,660**	13.8	**56.7**	**153**	**0.58**	**9.6**	**2,660**	**5.3**	**4.2**	**104**	**17,600 *J***	**3,130**	**3,000 *J***	**1,830**	0.12	**6.7**	R	**2.4 *J***	<1.8	**48.0 *J***	**2,190**
Liberty Gulch Upstream of Confluence with Unnamed Stream East of Townsite	GM-SD20	RP13N27E160001	Grab	8/5/2017	**11,700**	13.8	**65.1**	**214**	**0.67**	**9.5**	**18,200**	**5.3**	**5.3**	**101**	**19,500 *J***	**4,550**	**12,700 *J***	**1,840**	0.24	**11.0**	R	**3.1 *J***	<1.9	**53.2 *J***	**2,160**
Unnamed Discolored Drainage Upstream of Confluence with Unnamed Stream East of Townsite	GM-SD22	RP13N27E160001	Grab	8/5/2017	**15,300**	2.1 *J*	**16.8**	**227**	**0.87**	**2.3**	**39,000**	**8.8**	**6.5**	**32.4**	**16,200**	**486 *J***	**27,200**	**1,370**	<0.10	**15.7**	<2.7	0.75 *J*	<1.9	**21.3**	**466**
Liberty Gulch Upstream of Roads and Tailings Drainage Influence	GM-SD33	RP13N27E172401	Grab	8/5/2017	**11,000**	9.2 *J*	**72.0**	**178**	**0.82**	**6.0**	**95,900**	6.8	**6.5**	**101**	**21,900**	**5,540 *J***	**27,000**	**1,790**	0.18	**17.5**	<2.5	**5.0 *J***	<1.8	**54.4**	**1,530**

Location Description	Sample ID	County Parcel Number[a]	Sample Type	Date	Analyte (mg/kg)																				
					Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Ni	Se	Ag	Tl	V	Zn	zinc
Downstream Samples: Sediment Samples from Dry Streams Downstream of the Site																									
Meadow Lake Creek Downstream of Confluence with Historic Conveyance Ditch	GM-SD18	RP13N27E073001	Grab	8/4/2017	**10,100**	1.1 *J*	**8.1**	**158**	**0.74**	**1.7**	**3,600**	**8.2**	**4.9**	**18.7**	**11,200 *J***	**219**	**2,780 *J***	**800**	0.042 *J*	**8.7**	R	0.15 *J*	<2.0	**15.3 *J***	**218**
Unnamed Stream East of Townsite Downstream of Confluence with Liberty Gulch	GM-SD21	RP13N27E160001	Grab	8/5/2017	**5,250**	**96.9 *J***	**550**	**318**	**0.86**	**79.0**	**103,000**	<0.74	**4.9**	**886**	**92,300**	**39,900 *J***	**52,800**	**10,600**	**1.5**	**5.2**	<2.6	**31.1 *J***	<1.9	**314**	**23,100**
Unnamed Stream East of Townsite Downstream of Confluence with Unnamed Discolored Drainage	GM-SD23	RP13N27E160001	Grab	8/5/2017	**13,000**	**22.3 *J***	**134**	**249**	**0.96**	**22.1**	**30,900**	**5.9**	**7.0**	**228**	**31,500**	**7,470 *J***	**20,200**	**3,550**	**0.57**	**17.4**	<2.6	**5.9 *J***	<1.9	**92.0**	**5,120**
Texas Creek Downstream of Confluence with Unnamed Stream East of Townsite	GM-SD24	RP13N27E090001	Grab	8/5/2017	**8,690**	14.0 *J*	**72.8**	**150**	**0.75**	**8.8**	**14,200**	**4.4**	**5.1**	**104**	**19,500**	**3,700 *J***	**10,000**	**1,570**	0.14	**8.4**	<2.7	1.9 *J*	<1.9	**37.7**	**2,050**
Unnamed Stream East of Townsite Upstream of Texas Creek	GM-SD26	RP13N27E090001	Grab	8/5/2017	**6,040**	**22.4 *J***	**121**	**136**	**0.54**	**12.1**	**49,900**	2.6	**3.7**	**184**	**24,000**	**6,120 *J***	**30,200**	**2,920**	0.28	**8.1**	<2.5	**4.1 *J***	<1.8	**65.3**	**4,230**
Texas Creek Downstream of Confluence with Meadow Lake Creek	GM-SD27	RP13N27E090001	Grab	8/5/2017	**9,770**	9.0 *J*	**58.8**	**152**	**0.79**	**7.9**	**15,000**	**5.2**	**5.3**	**90.6**	**18,200**	**2,890 *J***	**10,700**	**1,460**	0.096	**8.9**	<2.6	1.8 *J*	<1.9	**40.0**	**2,010**
Meadow Lake Creek Upstream of Confluence with Texas Creek	GM-SD28	RP13N27E090001	Grab	8/5/2017	**8,330**	1.3 *J*	**12.6**	**141**	**0.65**	**2.4**	**3,300**	**7.8**	**4.5**	**23.6**	**11,000**	**387 *J***	**2,530**	**816**	<0.085	**7.7**	<2.5	0.25 *J*	<1.8	**15.2**	**317**
15-Mile TDL Samples: Sediment Samples Collocated with Surface Water Samples on Texas Creek																									
Texas Creek Downstream of Split Confluence (Collocated with GM-SW1)	GM-SD29	RP14N27E190001	Grab	8/5/2017	692	<4.9 *UJ*	<0.81	16.0 *J*	<0.41	<0.41	1,290	2.3	0.42 *J*	0.96 *J*	1,240	22.0 *J*	797	32.2	<0.11	0.52 *J*	<2.9	<0.81 *UJ*	<2.0	2.2 *J*	11.0
Texas Creek Upstream of Split (Collocated with GM-SW2)	GM-SD31	RP14N27E190001	Grab	8/5/2017	1,180	<5.5 *UJ*	2.0	25.7	0.086 *J*	<0.46	**2,800**	3.5	0.63 *J*	1.7 *J*	2,150	38.7 *J*	**1,620**	88.1	<0.11	0.91 *J*	0.70 J	<0.91 *UJ*	<2.3	3.2 *J*	21.5
Texas Creek Wetlands (Collocated with GM-SW4)	GM-SD32	RP14N27E190001	Grab	8/5/2017	1,750	1.3 *J*	**8.0**	**71.0**	0.17 *J*	0.15 *J*	**9,170**	**14.8**	1.1 *J*	5.3	4,040	7.1 *J*	**1,980**	42.7	<0.089	1.5 *J*	3.3	<0.94 *UJ*	<2.4	**15.7**	16.6
Background Sample																									
Meadow Lake Creek Upstream of Townsite	BKD-SD34	RP13N26E130001	Grab	8/5/2017	819	<4.8 *UJ*	1.4	12.6 *J*	0.11 *J*	0.17 *J*	608	1.2	0.66 *J*	2.5	1,780	63.6 *J*	496	155	<0.11	1.3 *J*	<2.8	<0.79 *UJ*	<2.0	2.0 *J*	45.6
EPA RSL for Resident Soil[b] (mg/kg)					77,000	31	0.68	15,000	160	71	NA	NA	23	3,100	50,000	400	NA	1,800	11	820[c]	390	390	0.78[d]	390	23,000
EPA RSL for Industrial Soil[b] (mg/kg)					1,100,000	470	3	220,000	2,300	980	NA	NA	350	47,000	820,000	800	NA	26,000	46	11,000[c]	5,800	5,800	12[d]	5,800	350,000
Mean Concentrations in Lemhi County[e] (ppm)					6,110	NA	14.180	NA	NA	NA	2,097	NA	NA	29.828	2,850	69.095	1,132	603.702	NA	NA	0.645	NA	NA	NA	109.152

Notes:
Gray shaded values exceed regional screening levels (RSLs) for residential soils.
Orange shaded values exceed RSLs for both residential and industrial soils.
Bold = Three times greater than background concentrations when comparing: 1) the soil and sediment sample to the background value at BKD-SD34. Where the background value is not-detected the limit of detection was used as the background value for calculation purposes.
[a]Parcel number provided for general sample location purposes only.
[b]Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2016
[c]RSL shown for Nickel as Refinery Dust.
[d]RSL shown for Thallium (Soluble Salts).
[e]Significant digits shown as reported by USGS. Mean concentrations are not available for antimony, barium, beryllium, cadmium, chromium, cobalt, mercury, nickel, silver, thallium, and vanadium. http://mrdata.usgs.gov/geochem/county.php?place=f16059&el=Pb&rf=northwestern
mg/kg = milligrams per kilogram
ppm = parts per million
< = The analyte was not detected below the limit of detection shown.
J = The result is an estimated quantity.
UJ = Concentration was not detected and is qualified as an estimate.
R = Data rejected by the laboratory because of quality control sample results.

Table 4. 2017 Surface Water Sample Results

Analyte/Parameter	EPA		DEQ		Sample ID			
	Drinking Water Standard MCL	RSL for Tapwater[a]	Cold Water Biota Standard Acute	Cold Water Biota Standard Chronic	GM-SW1 (Texas Creek Downstream of Split Confluence; RP14N27E190001[b])	GM-SW2 (Texas Creek Upstream of Split; RP14N27E190001[b])	GM-SW4 (Texas Creek Wetlands; RP14N27E190001[b])	BKD-SW6 (Background on Meadow Lake Creek; RP13N26E130001[b])
Aluminum (mg/L)	NA	20	NA	NA	0.0619 *J*	0.0621 *J*	<0.2	0.0286 *J*
Antimony (mg/L)	0.006	0.0078	NA	NA	<0.0600	<0.0600	<0.0600	<0.0600
Arsenic (mg/L)	0.01	0.000052	0.34	0.15	0.0051 *J*	<0.0100	0.0035 *J*	<0.0100
Barium (mg/L)	2	3.8	NA	NA	0.0510 *J*	0.0510 *J*	0.0326 *J*	<0.2
Beryllium (mg/L)	0.004	0.025	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050
Cadmium (mg/L)	0.005	0.0092	.0013 (H)	0.0006 (H)	<0.0050	<0.0050	<0.0050	<0.0050
Calcium (mg/L)	NA	NA	NA	NA	35.6	35.2	22.7	2.62 *J*
Chromium (mg/L)	0.1	NA	NA	NA	<0.0100	<0.0100	<0.0100	<0.0100
Cobalt (mg/L)	NA	0.006	NA	NA	<0.0500	<0.0500	<0.0500	<0.0500
Copper (mg/L)	1.0[c]	0.8	.017 (H)	.011 (H)	<0.0250	<0.0250	<0.0250	<0.0250
Iron (mg/L)	0.3[c]	14	NA	NA	0.164	0.146	<0.1	<0.1
Lead (mg/L)	0.015[d]	0.015	0.065 (H)	0.0025 (H)	<0.0100	<0.0100	<0.0100	<0.0100
Magnesium (mg/L)	NA	NA	NA	NA	17.9	17.7	12.8	1.12 *J*
Manganese (mg/L)	0.05[c]	0.43	NA	NA	0.0290	0.0269	<0.0150	<0.0150
Mercury (mg/L)	0.002	0.00063	NA	NA	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (mg/L)	NA	0.22[e]	0.47 (H)	0.052 (H)	<0.0400	<0.0400	<0.0400	<0.0400
Selenium (mg/L)	0.05	0.1	0.02 (T)	0.005 (T)	<0.0350	<0.0350	<0.0350	<0.0350
Silver (mg/L)	0.1[c]	0.094	0.0034 (H)	NA	<0.0100 *UJ*	<0.0100 *UJ*	<0.0100 *UJ*	<0.0100 *UJ*
Thallium (mg/L)	0.002	0.002[f]	NA	NA	<0.0250	<0.0250	<0.0250	<0.0250
Vanadium (mg/L)	NA	0.086	NA	NA	<0.0500	<0.0500	<0.0500	<0.0500
Zinc (mg/L)	5[c]	6	0.12 (H)	0.12 (H)	<0.0600	<0.0600	<0.0600	<0.0600
Temperature °C[g]	NA	NA	NA	Cold water aquatic life 22°C or less or a maximum daily average not >19°C[e]. Salmonid spawning 13°C or less with a maximum daily average not >9°C.	12.89	13.65	11.04	13.75
pH (su)	6.5 - 8.5[c]	NA	NA	6.5 - 9.0	7.74	8.15	8.30	6.95
ORP (mV)	NA	NA	NA	NA	138	136	136	145
SC (µS/cm)	NA	NA	NA	NA	265	268	187	24
Turbidity (NTU)	d	NA	Not >50 NTU instantaneous	Not >50 NTU instantaneous and not >25 NTU over a 10 day period.	3.01	2.26	1.56	1.18
DO (mg/L)	NA	NA	NA	>6 ppm	9.11	8.39	75.9	7.80

Notes:

Shaded values exceed at least one standard and/or RSL.

(T)-Standard in Total, (H)-Hardness dependent for cadmium, copper, lead, nickel, selenium, silver, and zinc. Hardness was not analyzed for in field samples. Value shown represents a hardness of 100 mg/L.

MCL = maximum contaminant level; RSL = regional screening level

[a]Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2016

[b]Parcel number provided for general sample location purposes only.

[c]Secondary Standard MCL - non-enforceable guideline.

[d]Action level regulated by treatment technique.

[e]RSL shown is for Nickel as Refinery Dust.

[f]RSL shown is for Thallium (Soluble Salts).

[g]Only a snapshot temperature reading was collected. A daily temperature average was not collected.

mg/L=milligrams per liter, su=standard units, mV=millivolts, µS/cm=micro-Siemens per centimeter, NTU=nephelometric turbidity units, °C=degrees Celcius, ppm=parts per million

ORP = oxidation-reduction potential; SC = specific conductivity; DO = dissolved oxygen

NA = not available

< = The analyte was not detected below the limit of detection shown.

J = The result is an estimated quantity.

UJ = Concentration was not detected and is qualified as an estimate.

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Table 5. 2017 Groundwater Sample Results (Residential Drinking Water Wells)

Analyte/Parameter	EPA		Sample ID	
	Drinking Water Standard MCL	RSL for Tapwater[a]	GM-GW1 (Spigot on Parcel RP990000200080)	GT-GW2 (Well on Parcel RPD0050050010A)
Aluminum (mg/L)	NA	20	<0.2	<0.2
Antimony (mg/L)	0.006	0.0078	<0.0600	<0.0600
Arsenic (mg/L)	0.01	0.000052	0.0047 *J*	<0.0100
Barium (mg/L)	2	3.8	0.0168 *J*	0.0167 *J*
Beryllium (mg/L)	0.004	0.025	<0.0050	<0.0050
Cadmium (mg/L)	0.005	0.0092	<0.0050	<0.0050
Calcium (mg/L)	NA	NA	22.2	18.4
Chromium (mg/L)	0.1	NA	<0.0100	<0.0100
Cobalt (mg/L)	NA	0.006	<0.0500	<0.0500
Copper (mg/L)	1.0[b]	0.8	<0.0250	<0.0250
Iron (mg/L)	0.3[b]	14	<0.1	<0.1
Lead (mg/L)	0.015[c]	0.015	<0.0100	<0.0100
Magnesium (mg/L)	NA	NA	12.7	10.6
Manganese (mg/L)	0.05[b]	0.43	<0.0150	<0.0150
Mercury (mg/L)	0.002	0.00063	<0.00020	<0.00020
Nickel (mg/L)	NA	0.22[d]	<0.0400	<0.0400
Selenium (mg/L)	0.05	0.1	<0.0350	<0.0350 *UJ*
Silver (mg/L)	0.1[b]	0.094	<0.0100 *UJ*	<0.0100 *UJ*
Thallium (mg/L)	0.002	0.002[e]	<0.0250	<0.0250
Vanadium (mg/L)	NA	0.086	<0.0500	<0.0500
Zinc (mg/L)	5[b]	6	<0.0600	<0.0600
Temperature °C[f]	NA	NA	6.47	9.83
ORP (mV)	NA	NA	72	139
SC (µS/cm)	NA	NA	190	159
Turbidity (NTU)	c	NA	0.87	2.17
DO (mg/L)	NA	NA	11.44	8.80

Notes:

Shaded values exceed at least one standard and/or RSL.

MCL = maximum contaminant level; RSL = regional screening level

[a]Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2016

[b]Secondary Standard MCL - non-enforceable guideline.

[c]Action level regulated by treatment technique.

[d]RSL shown is for Nickel as Refinery Dust.

[e]RSL shown is for Thallium (Soluble Salts).

[f]Only a snapshot temperature reading was collected. A daily temperature average was not collected.

mg/L=milligrams per liter, su=standard units, mV=millivolts, µS/cm=micro-Siemens per centimeter, NTU=nephelometric turbidity units, °C=degrees Celcius, ppm=parts per million

ORP = oxidation-reduction potential; SC = specific conductivity; DO = dissolved oxygen

NA = not available

< = The analyte was not detected below the limit of detection shown.

J = The result is an estimated quantity.

UJ = Concentration was not detected and is qualified as an estimate.

Table 6. 2017 Gilmore SFP-122A IVBA and RBA calculated ratios

Sample	Type	1340 Result	1340 Unit	1340 Qualifier	3050B Result	3050B Unit	3050B Qualifier	Calculated IVBA [a]	Calculated RBA [b]	Calculated ABS [c]	Sample Summary [d]
17314069	sam	19400	mg/kg		29300	mg/kg		66.2%	55%	28%	Composite of all six ISM samples collected from the source area decision units (DUs; DUs 1 through 6).
17314070	sam	11700	mg/kg		17900	mg/kg		65.4%	55%	27%	Composite of six townsite DUs with the highest lead XRF readings (DUA4, DUB1, DUB4, DUB5, DUB6, and DU16)

Notes:
[a] In vitro Bio-accessibility
[b] Relative Bio-availability
[c] Absolute Bio-availability
[d] The selected field samples for IVBA analysis were composited by first homogenizing the sample by stirring the soil in its sample bag. Equal volumes of soil from each sample bag were scooped into a clean plastic bowl and mixed using a clean plastic spoon and placed into a double, resealable plastic bag for shipment to Manchester Environmental Laboratory (MEL) for analysis using EPA Method 1340 and 6010 B/D.

Table 7. Groundwater Drinking Water Population Distance Ring

Distance Ring (miles)	Number of Wells (a)	Population Served (a x 2.03)
0 — ¼	1 Domestic Wells	2
¼ — ½	3 Domestic Wells	6
½ — 1	1 Domestic Wells	2
1 — 2	2 Domestic Wells	4
2 — 3	1 Domestic Wells	2
3 — 4	0 Domestic Wells	0
Total		**16**

Sources: DOC 2017 (*https://www.census.gov/quickfacts/table/PST045215/16059*)
Notes: Average number of persons per household for Lemhi County, Idaho is 2.03.
Population values were rounded to the nearest whole number.

Table 8. Population and Wetlands Acreage by Distance Ring

Distance Ring (miles)	Wetlands Acreage	Residents[1]	2016 Estimated Population[2]
0 — ¼	2.91	Vacation – 5 Residential – 10	0
¼ — ½	3.83	Vacation – 17 Residential – 11	12
½ — 1	11.05	Vacation – 0 Residential – 0	0
1 — 2	133.65	Vacation – 0 Residential – 4	2
2 — 3	337.89	Vacation – 0 Residential – 1	0
3 — 4	280.72	Vacation – 0 Residential – 0	0
Total	**770.05**		**14**

Sources: DOC 2017 (*https://www.census.gov/quickfacts/table/PST045215/16059*)

[1]Count shows number of potential residential properties and vacation use properties based on field observations from the DEQ 2016 PA/SI.

[2]Estimated potential population is based on observations made during the DEQ 2016 PA/SI.

Table 9. Air Samples Collected August 1, 2017

Sample Number Location ID Location Description	Superfund Chemical Data Matrix Benchmarks				EPA Regional Screening Level Residential Air	17314214 BK01AR01	17314216 BK02AR01	17314200 SA01AR01	17314202 SA02AR01	17314204 SA03AR01	17314220 SA04AR01	17314206 CU01AR01	17314208 CU02AR01	17314210 CU03AR01	17314212 CU04AR01
	NAAQS	NESHAPS	Cancer Risk	Non-Cancer Risk		Background		Source Area				Common Use Area			
TAL Metals (µg/m³)															
Antimony	--	--	--	0.2	--	0.0385 U	0.0401 U	0.0344 U	0.0345 U	0.0391 U	0.034 U	0.0366 U	0.0394 U	0.0361 U	0.0404 U
Arsenic	--	--	0.00065	0.015	0.00065	0.0385 U	0.0401 U	0.0344 U	0.0345 U	0.0391 U	0.034 U	0.0366 U	0.0394 U	0.0361 U	0.0404 U
Barium	--	--	--	0.5	0.52	0.0385 U	0.0401 U	0.0344 U	0.0345 U	0.0391 U	0.034 U	0.0366 U	0.0394 U	0.0361 U	0.0404 U
Beryllium	--	0.01	0.0011	0.02	0.0012	0.128 UJL	0.134 UJL	0.115 U	0.115 U	0.13 U	0.113 UJL	0.122 U	0.131 U	0.12 U	0.135 UJL
Cadmium	--	--	0.0015	0.01	0.0016	0.0128 U	0.0134 U	0.0115 U	0.0115 U	0.013 U	0.0113 U	0.0122 U	0.0131 U	0.012 U	0.0135 U
Chromium (total)	--	--	--	0.008	--	0.642 UJL	0.668 UJL	0.574 UJL	0.575 UJL	0.651 UJL	0.567 UJL	0.61 UJL	0.657 UJL	0.602 UJL	0.673 UJL
Cobalt	--	--	0.0003	0.006	0.00031	0.128 UJL	0.134 UJL	0.115 U	0.115 U	0.13 U	0.113 UJL	0.122 U	0.131 U	0.12 U	0.135 UJL
Copper	--	--	--	--	--	0.128 U	0.134 U	0.115 U	0.115 U	0.13 U	0.113 U	0.122 U	0.131 U	0.12 U	0.135 U
Lead	0.15*	--	--	--	0.15	0.0128 U	0.0168 U	**0.1**	0.0565 U	**0.176**	**0.238**	**0.0889**	0.0626 U	**0.241**	**0.435**
Manganese	--	--	--	0.05	0.052	0.0385 UJL	0.043 UJL	0.074 U	0.0534 U	0.108 U	0.155 UJL	0.0518 U	0.0865 U	0.15 U	0.206 UJL
Nickel	--	--	0.0058	0.09	0.011	0.0385 UJL	0.0401 UJL	0.0344 UJL	0.0345 UJL	0.0391 UJL	0.034 UJL	0.0366 UJL	0.0394 UJL	0.0361 UJL	0.0404 UJL
Selenium	--	--	--	20	21	0.0385 U	0.0401 U	0.0344 U	0.0345 U	0.0391 U	0.034 U	0.0366 U	0.0394 U	0.0361 U	0.0404 U
Silver	--	--	--	--	--	0.0128 UJL	0.0134 UJL	0.0115 UJL	0.0115 UJL	0.013 UJL	0.0113 UJL	0.0122 UJL	0.0131 UJL	0.012 UJL	0.0135 UJL
Thallium	--	--	--	--	--	0.0128 U	0.0134 U	0.0115 U	0.0115 U	0.013 U	0.0113 U	0.0122 U	0.0131 U	0.012 U	0.0135 U
Vanadium	--	--	0.00033	0.007	0.10	0.128 U	0.134 U	0.115 U	0.115 U	0.13 U	0.113 U	0.122 U	0.131 U	0.12 U	0.135 U
Zinc	--	--	--	--	--	0.642 UJL	0.668 UJL	0.574 UJL	0.575 UJL	0.651 UJL	**0.581 JL**	0.61 UJL	0.657 UJL	0.602 UJL	**0.834 JL**

Note: Bold type indicates the sample result is above the adjusted Contract Required Quantitation Limit.
Underline type indicates the result is elevated as defined in Section 5.
Yellow highlight indicates the sample result meets or exceeds the most conservative (i.e., lowest) benchmark/screening level.
Benchmarks gathered from: https://www.epa.gov/superfund/superfund-chemical-data-matrix-scdm
EPA Regional Screening Levels gathered from: https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-june-2017
* - Rolling 3 month average

Key:
EPA = United States Environmental Protection Agency
ID = Identification
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
L = Low bias
µg/m³ = Micrograms per cubic meter
NAAQS = National Ambient Air Quality Standards
NESHAPS = National Emission Standards for Hazardous Air Pollutants
U = The material was analyzed for but was not detected.

Table 10. Air Samples Collected August 2, 2017

Sample Number	Superfund Chemical Data Matrix Benchmarks				EPA Regional Screening Level Residential Air	17314215	17314217	17314201	17314203	17314205	17314221	17314207	17314209	17314211	17314213
Location ID	NAAQS	NESHAPS	Cancer Risk	Non-Cancer Risk		BK01AR02	BK02AR02	SA01AR02	SA02AR02	SA03AR02	SA04AR02	CU01AR02	CU02AR02	CU03AR02	CU04AR02
Location Description						Background		Source Area				Common Use Area			
TAL Metals (µg/m³)															
Antimony	--	--	--	0.2	--	0.0459 U	0.0406 U	0.0353 U	0.0356 U	0.0406 U	0.0355 U	0.0363 U	0.0408 U	0.0369 U	0.0413 U
Arsenic	--	--	0.00065	0.015	0.00065	0.0459 U	0.0406 U	0.0353 U	0.0356 U	0.0406 U	0.0355 U	0.0363 U	0.0408 U	0.0369 U	0.0413 U
Barium	--	--	--	0.5	0.52	0.0459 U	0.0406 U	0.0353 U	0.0356 U	0.0406 U	0.0355 U	0.0363 U	0.0408 U	0.0369 U	0.0413 U
Beryllium	--	0.01	0.0011	0.02	0.0012	0.153 UJL	0.135 UJL	0.118 U	0.119 U	0.135 U	0.118 UJL	0.121 U	0.136 U	0.123 UJL	0.138 UJL
Cadmium	--	--	0.0015	0.01	0.0016	0.0153 U	0.0135 U	0.0118 U	0.0119 U	0.0135 U	0.0118 U	0.0121 U	0.0136 U	0.0123 U	0.0138 U
Chromium (total)	--	--	--	0.008	--	0.765 UJL	0.677 UJL	0.589 UJL	0.594 UJL	0.677 UJL	0.591 UJL	0.605 UJL	0.68 UJL	0.614 UJL	0.689 UJL
Cobalt	--	--	0.0003	0.006	0.00031	0.153 UJL	0.135 UJL	0.118 U	0.119 U	0.135 U	0.118 UJL	0.121 U	0.136 U	0.123 UJL	0.138 UJL
Copper	--	--	--	--	--	0.153 U	0.135 U	0.118 U	0.119 U	0.135 U	0.118 U	0.121 U	0.136 U	0.123 U	0.138 U
Lead	0.15*	--	--	--	0.15	0.0181 U	0.0247 U	0.0299 U	0.0494 U	**0.0886**	**0.106**	0.0267 U	**0.0783**	**0.383**	**0.107**
Manganese	--	--	--	0.05	0.052	0.0546 UJL	0.113 UJL	0.068 U	0.0592 U	0.0709 U	0.121 UJL	0.0412 U	0.108 U	0.234 UJL	0.0868 UJL
Nickel	--	--	0.0058	0.09	0.011	0.0459 UJL	0.0406 UJL	0.0353 UJL	0.0356 UJL	0.0406 UJL	0.0355 UJL	0.0363 UJL	0.0408 UJL	0.0369 UJL	0.0413 UJL
Selenium	--	--	--	20	21	0.0459 U	0.0406 U	0.0353 U	0.0356 U	0.0406 U	0.0355 U	0.0363 U	0.0408 U	0.0369 U	0.0413 U
Silver	--	--	--	--	--	0.0153 UJL	0.0135 UJL	0.0118 UJL	0.0119 UJL	0.0135 UJL	0.0118 UJL	0.0121 UJL	0.0136 UJL	0.0123 UJL	0.0138 UJL
Thallium	--	--	--	--	--	0.0153 U	0.0135 U	0.0118 U	0.0119 U	0.0135 U	0.0118 U	0.0121 U	0.0136 U	0.0123 U	0.0138 U
Vanadium	--	--	0.00033	0.007	0.10	0.153 U	0.135 U	0.118 U	0.119 U	0.135 U	0.118 U	0.121 U	0.136 U	0.123 U	0.138 U
Zinc	--	--	--	--	--	0.765 UJL	0.677 UJL	0.589 UJL	0.594 UJL	0.677 UJL	0.591 UJL	0.605 UJL	0.68 UJL	**0.626 JL**	0.689 UJL

Note: Bold type indicates the sample result is above the adjusted Contract Required Quantitation Limit.
Underline type indicates the result is elevated as defined in Section 5.
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* - Rolling 3 month average

Key:
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U = The material was analyzed for but was not detected.

Appendix B 2016 Site Visit Photos

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Photo 12: GT-01-PL-SS2. Depth sample from 6 to 12 inches. Parcel RPD0050017010A.	Photo 13: GT-01-PL-SS1. Composite sample area facing west. Parcel RPD0050017010A.

	
Photo 14: GT-02-PL-SS1. Composite sample area facing northeast. Parcel RPD0050017004E.	Photo 1284: GT-03-PL-SS1. Composite sample area facing east. Parcel RPD0050017004E.



Photo 5: GT-04-PL-SS1. Composite sample area facing east. Parcel RPD00500330020.



Photo 4: GT-05-PL-SS1. Lot overview. Parcel RPD00500330040.



Photo 3: GT-06-PL-SS1. Composite sample area facing north. Parcel RPD0050032007A.



Photo 2: GT-07-PL-SS1. Composite sample area facing east. Parcel RPD0050038001E.



Photo 1: GT-08-PL-SS1. Lot overview. Parcel RPD0050038012A.



Photo 1261: GT-09-PL-SS1. Lot overview. Parcel RPD0050038012A.



Photo 1257: Signs on parcel RPD0050042010A.



Photo 1258: GT-10-PL-SS1. Lot overview. Parcel RPD0050042010A.



Photo 1285: GT-11-PL-SS1. Composite sample area. Parcel RPD0050044007M.



Photo 1276: GT-12-PL-SS1. Lot overview/road. Parcel RPD0050044007M.

	
Photo 1277: GT-12-PL-SS1. Lot overview. Parcel RPD0050044007M.	Photo 1278: GT-12-PL-SS2 and SS3. Depth sample by fire ring. Parcel RPD0050044007M.
	
Photo 1266: GT-13-PL-SS1. Lot overview. Parcel RPD00500420070.	Photo 1259: GT-14-PL-SS1. Front of property facing west. Parcel RPD00500420120.

	
Photo 1268: Old building on sampled lot. Parcel RPD0050040003A.	Photo 1269: GT-15-PL-SS1. Lot overview. Parcel RPD0050040003A.
	
Photo 1260: GT-16-PL-SS1. Front of property facing west. Parcel RPD0050042014A.	Photo 1234: GT-17-PL-SS1. Second building behind mercantile building on sampled lot. Parcel RPD0050042008B.



Photo 1235: GT-17-PL-SS1. Area between two buildings. Parcel RPD0050042008B.



Photo 1236: GT-17-PL-SS1. Mercantile building. Parcel RPD0050042008B.



Photo 1262: GT-18-PL-SS1. Front of lot facing east. Parcel RPD0050041011A.



Photo 1263: GT-18-PL-SS1. Pit near front of parcel. Parcel RPD0050041011A.



Photo 1264: GT-18-PL-SS1. Pit in south corner of lot. Parcel RPD0050041011A.



Photo 1265: GT-18-PL-SS1. Collapsed structure on sampled parcel. Parcel RPD0050041011A.



Photo 1283: GT-19-PL-SS1. Composite sample area. Parcel RPD0050041011A.



Photo 1267: GT-20-PL-SS1. Lot facing east. Parcel RPD00500410150.



Photo 1282: GT-21-PL-SS1. Composite sample area. Parcel RPD0050046003A.



Photo 1279: GT-22-PL-SS1. Buildings on sampled lot. Parcel RPD0050046013A.



Photo 1280: GT-22-PL-SS1. Lot overview. Parcel RPD0050046013A.



Photo 1281: GT-23-PL-SS1. Lot overview. Parcel RPD0050046009B.



Photo 1241: GT-26-PL-SS1. Lot overview. Parcel RPD0050050010A.



Photo 1240: GT-27-PL-SS1. Lot overview. Parcel RPD0050050015A.



Photo 1238: GT-28-PL-SS1. Yard overview looking east. Parcel RPD0050050020A.



Photo 1239: GT-28-PL-SS1. Yard overview looking southeast. Parcel RPD0050050020A.



Photo 1272: GT-30-PL-SS1. Cabin on sampled property. Parcel RPD0050050022A.



Photo 1273: GT-30-PL-SS1. Trailer on sampled property. Parcel RPD0050050022A.



Photo 1274: GT-30-PL-SS1. Septic system on sampled property. Parcel RPD0050050022A.



Photo 1275: GT-30-PL-SS1. Shed on sampled property. Parcel RPD0050050022A.



Photo 1270: GT-31-PL-SS1. Camper on sampled property. Parcel RPD0050050026A.



Photo 1271: Sample area overview. Parcel RPD0050050026A.



Photo 6: GT-32-PL-SS1. Upper (south) property. Parcel RPD0050028001A.



Photo 7: Breached earthen dam along west side of property. Parcel RPD0050028001A.

	
Photo 8: GT-32-PL-SS2. Playground on lower (north) section of property. Parcel RPD0050028001A.	Photo 9: GT-32-PL-SS2. Looking west. Parcel RPD0050028001A.

	
Photo 10: GT-32-PL-SS3 and SS4. Depth sample. Parcel RPD0050028001A.	Photo 11: GT-32-PL-SS3 and SS4. Looking northwest from depth sample. Parcel RPD0050028001A.



Photo 1288: GT-33-PL-SS1. Lot overview. Parcel RPD0050027009A.



Photo 1289: GT-34-PL-SS1. Lot overview. Parcel RPD0050027007A.



Photo 1286: GT-35-PL-SS1. Lot overview facing south. Parcel RPD0050049001A.



Photo 1287: GT-36-PL-SS1. Lot overview. Parcel RPD0050027011A.

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Appendix C 2017 Site Visit Photos

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Photo 1345: GT-DU23-SS43 east-west road central townsite.



Photo 1347: GT-DU22-SS45 north-south road east edge, central townsite.



Photo 1348: GT-DU22-SS45 north-south road east edge, central townsite.



Photo 1349: GT-DU16-SS47 north-south road, north townsite, tailings area.



Photo 1350: GT-DU21-SS51 north-south road, south townsite, information signs.



Photo 1351: GT-DU21-SS51 north-south road, south townsite, information signs.



Photo 1352: GT-DU24-SS52 east-west road, south townsite.



Photo 1353: GT-DUA10-SS54 lawn area.



Photo 1362: BLM-DU10-SS56 BLM land north of townsite.



Photo 1363: BLM-DU12-SS59 BLM land adjacent to tailings source.

	
Photo 1365: BLM-DU8-SS60 BLM land northwest of townsite.	Photo 1364: BLM-DU13-SS62 through SS64 (triplicate) BLM land between tailings and townsite.

	
Photo 1373: BLM-SD1 Located on ditch leading from tailings south end to townsite (sample point).	Photo 1374: BLM-SD1 Located on ditch leading from tailings south end to townsite (upstream).



Photo 1375: BLM-SD1 Located on ditch leading from tailings south end to townsite (downstream).



Photo 1376: BLM-SD2 Located on unnamed stream that passes through source pile area and flows toward townsite (upstream).



Photo 1377: BLM-SD2 Located on unnamed stream that passes through source pile area and flows toward townsite (downstream).



Photo 1378: BLM-SD2 Located on unnamed stream that passes through source pile area and flows toward townsite (sample point).



Photo 1379: BLM-SD3 and SD-4 (duplicate) Located on ditch leading from north end of tailings pile to townsite (sample point).



Photo 1380: BLM-SD3 and SD-4 (duplicate) Located on ditch leading from north end of tailings pile to townsite (upstream).



Photo 1381: BLM-SD3 and SD-4 (duplicate) Located on ditch leading from north end of tailings pile to townsite (downstream).



Photo 1382: BLM-SD5 Located on historic conveyance ditch north of source piles at fence (upstream).



Photo 1383: BLM-SD5 Located on historic conveyance ditch north of source piles at fence (downstream).



Photo 1384: BLM-SD5 Located on historic conveyance ditch north of source piles at fence (sample point).



Photo 1385: BLM-SD6 Located on diversion ditch upstream of historic conveyance ditch crossing and upstream of ATV trails crossing (piping inside channel).



Photo 1386: BLM-SD6 Located on diversion ditch upstream of historic conveyance ditch crossing and upstream of ATV trails crossing (upstream).

	
Photo 1389: BLM-SD7 Located on diversion ditch upstream of confluence with unnamed stream with source at tailings pile (upstream).	Photo 1390: BLM-SD7 Located on diversion ditch upstream of confluence with unnamed stream with source at tailings pile (downstream).

	
Photo 1391: BLM-SD7 Located on diversion ditch upstream of confluence with unnamed stream with source at tailings pile (upstream).	Photo 1392: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken upstream.

	
Photo 1393: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken downstream.	Photo 1394: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken in the meadow area.
	
Photo 1395: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken at the sample point.	Photo 1399: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken at the dirt road crossing Liberty Gulch.

	
Photo 1400. GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken at the earthen berm.	Photo 1401: GT-SD8 Located on Liberty Gulch upstream of confluence with unnamed stream from tailings source (south stream). Taken from a rough ATV trail by berm.

	
Photo 1396: GT-SD9 Located on unnamed stream (north branch sourced from tailings pile) upstream of confluence with Liberty Gulch (upstream).	Photo 1397: GT-SD9 Located on unnamed stream (north branch sourced from tailings pile) upstream of confluence with Liberty Gulch (downstream).



Photo 1398: GT-SD9 Located on unnamed stream (north branch sourced from tailings pile) upstream of confluence with Liberty Gulch (sample point).



Photo 1402: GT-SD9 North new graveled road.



Photo 1403: GT-SD9 South new graveled road.



Photo 1404: GT-SD10 Located on Liberty Gulch downstream of confluence with unnamed stream from tailings (sample point).



Photo 1405: GT-SD10 Located on Liberty Gulch downstream of confluence with unnamed stream from tailings (upstream).



Photo 1406: GT-SD10 Located on Liberty Gulch downstream of confluence with unnamed stream from tailings (downstream).



Photo 1407: GT-SD10 Profile of tailings dam at breach.



Photo 1408: GT-SD11 Located on unnamed stream from tailings (northern) prior to confluence with Liberty Gulch (proposed location).



Photo 1409: GT-SD11 Located on unnamed stream from tailings (northern) prior to confluence with Liberty Gulch (upstream).



Photo 1412: GM-SD12 Located at the beginning of discolored unnamed stream on east edge of townsite (upstream).



Photo 1413: GM-SD12 Located at the beginning of discolored unnamed stream on east edge of townsite (downstream).



Photo 1414: GM-SD12 Located at the beginning of discolored unnamed stream on east edge of townsite (sample point).

	
Photo 1415: GM-SD13 On historic conveyance ditch at confluence with Meadow Lake Creek (downstream).	Photo 1416: GM-SD13 On historic conveyance ditch at confluence with Meadow Lake Creek (upstream).
	
Photo 1417: GM-SD13 On historic conveyance ditch at confluence with Meadow Lake Creek (sample point).	Photo 1418: GM-SD14 Located on Meadow Lake Creek above confluence with historic conveyance ditch (upstream).

	
Photo 1419: GM-SD14 Located on Meadow Lake Creek above confluence with historic conveyance ditch (downstream).	Photo 1420: GM-SD14 Located on Meadow Lake Creek above confluence with historic conveyance ditch (sample point).

	
Photo 1421: GM-SD15 On diversion ditch downstream of confluence with Meadow Lake Creek. This is a constructed ditch and a plug of piled rock and dirt block Meadow Lake Creek (upstream).	Photo 1422: GM-SD15 On diversion ditch downstream of confluence with Meadow Lake Creek. This is a constructed ditch and a plug of piled rock and dirt block Meadow Lake Creek (downstream).

	
Photo 1423: GM-SD15 On diversion ditch downstream of confluence with Meadow Lake Creek. This is a constructed ditch and a plug of piled rock and dirt block Meadow Lake Creek (plug).	Photo 1424: GM-SD15 On diversion ditch downstream of confluence with Meadow Lake Creek. This is a constructed ditch and a plug of piled rock and dirt block Meadow Lake Creek (sample point).

	
Photo 1425: GM-SD16 On Meadow Lake Creek downstream of confluence with diversion ditch (upstream).	Photo 1426: GM-SD16 On Meadow Lake Creek downstream of confluence with diversion ditch (downstream).

	
Photo 1427: GM-SD16 On Meadow Lake Creek downstream of confluence with diversion ditch (sample point).	Photo 1428: GM-SD17 On Meadow Lake Creek upstream of confluence with diversion ditch (upstream).

	
Photo 1429: GM-SD17 On Meadow Lake Creek upstream of confluence with diversion ditch (downstream).	Photo 1430: GM-SD17 On Meadow Lake Creek upstream of confluence with diversion ditch (sample point).



Photo 1434: GM-SD18 Located on Meadow Lake Creek downstream of confluence with historic conveyance ditch (upstream).



Photo 1435: GM-SD18 Located on Meadow Lake Creek downstream of confluence with historic conveyance ditch (downstream).



Photo 1436: GM-SD18 Located on Meadow Lake Creek downstream of confluence with historic conveyance ditch (sample point).



Photo 1437: GM-SD19 Located on unnamed stream flowing northeast across grazing land east of townsite (culvert).

	
Photo 1438: GM-SD19 Located on unnamed stream flowing northeast across grazing land east of townsite (downstream).	Photo 1439: GM-SD19 Located on unnamed stream flowing northeast across grazing land east of townsite (upstream).

	
Photo 1440: GM-SD19 Located on unnamed stream flowing northeast across grazing land east of townsite (sample point).	Photo 1441: GM-SD20 Located on Liberty Gulch upstream of confluence with unnamed stream east of townsite (upstream).



Photo 1442: GM-SD20 Located on Liberty Gulch upstream of confluence with unnamed stream east of townsite (upstream).



Photo 1443: GM-SD20 Located on Liberty Gulch upstream of confluence with unnamed stream east of townsite (upstream).



Photo 1444: GM-SD21 Located on unnamed stream (east of townsite) downstream of confluence with Liberty Gulch (upstream).



Photo 1445: GM-SD21 Located on unnamed stream (east of townsite) downstream of confluence with Liberty Gulch (downstream).



Photo 1446: GM-SD21 Located on unnamed stream (east of townsite) downstream of confluence with Liberty Gulch (sample point).



Photo 1447: GM-SD22 Located on unnamed discolored drainage upstream of confluence with unnamed stream east of townsite (upstream).



Photo 1448: GM-SD22 Located on unnamed discolored drainage upstream of confluence with unnamed stream east of townsite (downstream).



Photo 1449: GM-SD22 Located on unnamed discolored drainage upstream of confluence with unnamed stream east of townsite (sample point).

	
Photo 1450: GM-SD23 Located on unnamed stream (east of townsite) downstream of confluence with unnamed discolored drainage (upstream).	Photo 1451: GM-SD23 Located on unnamed stream (east of townsite) downstream of confluence with unnamed discolored drainage (downstream).
	
Photo 1452: GM-SD23 Located on unnamed stream (east of townsite) downstream of confluence with unnamed discolored drainage (sample point).	Photo 1453: GM-SD24 (upstream) Located on Texas Creek downstream of confluence with unnamed stream (east of townsite).

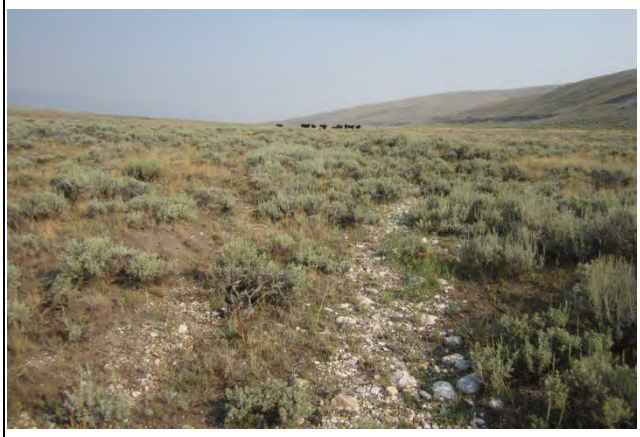
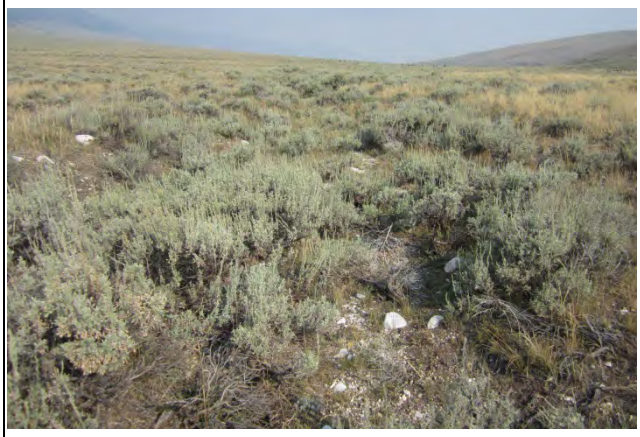
	
Photo 1454: GM-SD24 (downstream) Located on Texas Creek downstream of confluence with unnamed stream (east of townsite).	Photo 1455: GM-SD24 (sample point) Located on Texas Creek downstream of confluence with unnamed stream (east of townsite).

	
Photo 1456: GM-SD25 (upstream) Located on Texas Creek upstream of confluence with unnamed stream (east of townsite).	Photo 1457: GM-SD25 (upstream culvert under HWY 28) Located on Texas Creek upstream of confluence with unnamed stream (east of townsite).

	
Photo 1458: GM-SD25 (downstream) Located on Texas Creek upstream of confluence with unnamed stream (east of townsite).	Photo 1459: GM-SD25 (sample point) Located on Texas Creek upstream of confluence with unnamed stream (east of townsite).

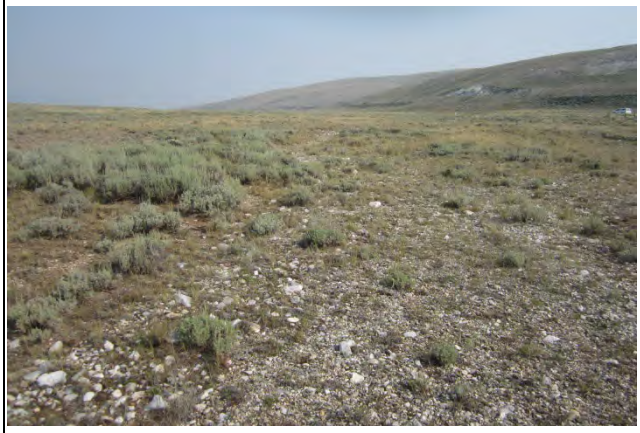
	
Photo 1460: GM-SD26 Located on unnamed stream (east of townsite) upstream of confluence with Texas Creek (upstream).	Photo 1461: GM-SD26 Located on unnamed stream (east of townsite) upstream of confluence with Texas Creek (downstream).



Photo 1462: GM-SD26 Located on unnamed stream (east of townsite) upstream of confluence with Texas Creek (sample point).



Photo 1463: GM-SD27 Located on Texas Creek downstream of confluence with Meadow Lake Creek (upstream).

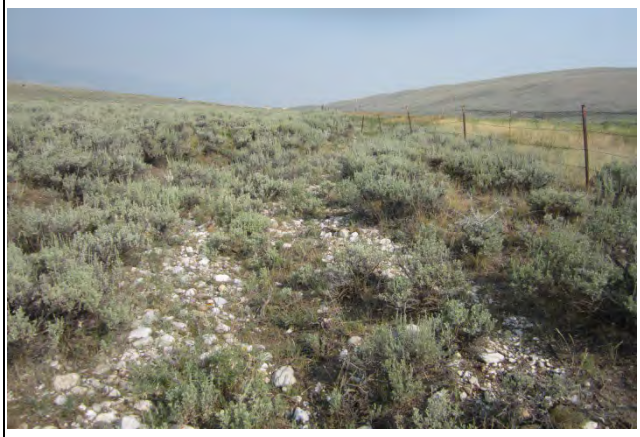


Photo 1464: GM-SD27 Located on Texas Creek downstream of confluence with Meadow Lake Creek (downstream).



Photo 1465: GM-SD27 Located on Texas Creek downstream of confluence with Meadow Lake Creek (sample point).



Photo 1466: GM-SD28 Located on Meadow Lake Creek upstream of confluence with Texas Creek (upstream).



Photo 1467: GM-SD28 Located on Meadow Lake Creek upstream of confluence with Texas Creek (downstream).



Photo 1469: GM-SD28 Located on Meadow Lake Creek upstream of confluence with Texas Creek (sample point).



Photo 1470: GM-SW1 Located on Texas Creek downstream of confluence of two channels of creek (upstream west fork).

	
Photo 1471: GM-SW1 Located on Texas Creek downstream of confluence of two channels of creek (upstream east fork).	Photo 1472: GM-SW1 Located on Texas Creek downstream of confluence of two channels of creek (downstream).
	
Photo 1473: GM-SD29 Collocated with surface water sample GM-SW1 (sample location).	Photo 1474: GM-SW2 Located on Texas Creek upstream of split (upstream).



Photo 1475: GM-SW2 Located on Texas Creek upstream of split (downstream).



Photo 1476: GM-SD31 Collocated with GM-SW2 (sample location).



Photo 1477: GM-SW4 (sample location) Located on Texas Creek wetlands (west of creek).



Photo 1478: GM-SW4 (upstream) Located on Texas Creek wetlands (west of creek).



Photo 1479: GM-SW4 (downstream) Located on Texas Creek wetlands (west of creek).



Photo 1482: GM-SD33 Sample of opportunity on Liberty Gulch upstream of roads and tailings drainage influence (downstream).



Photo 1481: GM-SD33 Sample of opportunity on Liberty Gulch upstream of roads and tailings drainage influence (upstream).



Photo 1483: GM-SD33 Sample of opportunity on Liberty Gulch upstream of roads and tailings drainage influence (sample location).



Photo 1495: BKD-SD34 Collocated with BKD-SW6 (sample location).



Photo 1493: BKD-SW6 On Meadow Lake Creek about 2 miles downstream of lake above Forest Service Road 014 crossing (upstream).



Photo 1494: BKD-SW6 On Meadow Lake Creek about 2 miles downstream of lake above Forest Service Road 014 crossing (downstream).



Photo 0234: Overview RPD0050016001D all of block 16.



Photo 0231: GT-DUB13-SS23 RPD0050031007A.



Photo 0230: GT-DUA6-SS24. Looking north RPD00500320060.



Photo 0232: GT-DUB5-SS27 Looking northwest RPD00500210010.



Photo 0233: GT-DUB6-SS28 Looking east RPD00500210010.

	
Photo 0235: GT-DUA1-SS35 Overview RPD0050016001D.	Photo 239: GT-DUB8-SS38 Looking east RPD00500210010 block 21.
	
Photo 0237: GT-DUB7-SS39 Looking northwest RPD00500210010 block 22, lots 13-24.	Photo 0238: GT-DUB7-SS39 Looking south RPD00500210010 block 22, lots 13-24.



Photo 0240: GT-DUB12-SS40 Looking east RPD00500330030.



Photo 0241: GT-DUA7-SS42 Looking northwest RPD0050034001B.



Photo 0247: GT-DU19-SS44 north-south road, west side, south townsite.



Photo 0242: GT-DU17-SS46 north-south road, east side, north townsite.



Photo 0243: GT-DU14-SS48 east-west road, north townsite.



Photo 0244: GT-DU15-SS49 east-west road, north townsite.



Photo 0245: GT-DU20-SS50 north-south road, south townsite.



Photo 0246: GT-DU18-SS53 road between west side of townsite and gate at source piles access.

	
Photo 1355: GT-GW2 Property at A10. Sample groundwater from spigot next to well.	Photo 1358: Forest Service Road (002), known as Meadow Lake Road, approaching townsite from east.

	
Photo 0248: BLM-DU11-SS57.	Photo 0249: BLM-DU9-SS58.



Photo 0250: BLM-DU7-SS61.



Photo 0251: BKD-SS26-SS65.



Photo 1366: BKD-SS67 (duplicate).



Photo 0252: BKD-SS68.

	
Photo 1341: Overview RPD00500190170 and RPD00500190180.	Photo 1344: Overview looking north RPD0050025005B block 25, lot 5-6.
	
Photo 1343: Outhouse and ATV trail looking south RPD0050025005B block 25, lot 5-6.	Photo 1342: Lower portion of lot looking east RPD0050025005B block 25, lot 5-6.

	
Photo 1336: Old cabin and dump truck with trailer looking east RPD 00500250010 block 25, lot 1.	Photo 1337: Cleared road/driveway looking south RPD 00500250010 block 25, lot 1.

	
Photo 1338: Overview looking south RPD00500210010 block 24, lots 1-5.	Photo 1339: Overview RPD0050017008B block 17, lots 8-9.



Photo 1340: Overview RPD0050043008A block 43, lots 8 and 9.



Photo 1331: RPD00500260010 block 26, lot 1 looking west toward trailer.



Photo 1332: RPD00500260010 block 26, lot 1 looking north toward house.



Photo 1333: RPD00500260010 block 26, lot 1 looking east toward ploughed driveway.

	
Photo 1334: RPD00500260010 block 26, lot 1 looking west.	Photo 1335: RPD00500260010 block 26, lot 1 looking west.

	
Photo 1298: Lot overview RPD0050041027A block 41, lots 27 and 28.	Photo 1297: Lot overview looking east RPD00500410130 block 41, lot 13.

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Appendix D 2016 Analytical Laboratory Reports

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
BLM-SS1	W6H0405-01	Soil	16-Aug-16 09:15	SH	17-Aug-2016	
BLM-SS2	W6H0405-02	Soil	16-Aug-16 09:15	SH	17-Aug-2016	
BLM-SS3	W6H0405-03	Soil	16-Aug-16 09:30	SH	17-Aug-2016	
BLM-SS4	W6H0405-04	Soil	16-Aug-16 10:30	SH	17-Aug-2016	
BLM-SS5	W6H0405-05	Soil	16-Aug-16 11:00	SH	17-Aug-2016	
BLM-SS6	W6H0405-06	Soil	16-Aug-16 11:15	SH	17-Aug-2016	
BLM-SS7	W6H0405-07	Soil	16-Aug-16 11:15	SH	17-Aug-2016	
BLM-SS8	W6H0405-08	Soil	16-Aug-16 11:45	SH	17-Aug-2016	
BLM-SS9	W6H0405-09	Soil	16-Aug-16 15:15	SH	17-Aug-2016	
BLM-SS10	W6H0405-10	Soil	16-Aug-16 15:45	SH	17-Aug-2016	
BLM-SS11	W6H0405-11	Soil	16-Aug-16 15:45	SH	17-Aug-2016	
BLM-SS12	W6H0405-12	Soil	16-Aug-16 15:45	SH	17-Aug-2016	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS1**
SVL Sample ID: **W6H0405-01 (Soil)**

Sampled: 16-Aug-16 09:15
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	546	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 06:48	D1,M3
EPA 6020A	**Lead**	40400	mg/kg Dry	20.0	3.30	1000	W635096	KWH	08/30/16 11:41	M3
EPA 6020A	**Selenium**	0.49	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 06:48	D1,M2
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	350	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:12	M1
EPA 6010C	**Barium**	372	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 13:16	B7,D1,M3
EPA 6010C	**Cadmium**	106	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 13:16	D1,M1
EPA 6010C	**Chromium**	16.5	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 13:16	D1
EPA 6010C	**Copper**	1090	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 13:16	D1,M3
EPA 6010C	**Iron**	131000	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 13:16	B7,D2,M3
EPA 6010C	**Manganese**	9690	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 13:16	D2,M3
EPA 6010C	**Silver**	48.3	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 13:16	D1,M3
EPA 6010C	**Zinc**	38000	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 13:16	D2,M3
EPA 7471B	**Mercury**	1.04	mg/kg	0.033	0.009		W635069	MWD	08/30/16 09:56	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS2**
SVL Sample ID: **W6H0405-02 (Soil)**

Sample Report Page 1 of 1

Sampled: 16-Aug-16 09:15
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	508	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 06:57	D1
EPA 6020A	**Lead**	45100	mg/kg Dry	20.0	3.30	1000	W635096	KWH	08/30/16 11:49	D2
EPA 6020A	**Selenium**	0.43	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 06:57	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	326	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:20	
EPA 6010C	**Barium**	417	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 13:25	B7,D1
EPA 6010C	**Cadmium**	98.0	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 13:25	D1
EPA 6010C	**Chromium**	17.7	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 13:25	D1
EPA 6010C	**Copper**	1080	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 13:25	D1
EPA 6010C	**Iron**	127000	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 13:25	B7,D2
EPA 6010C	**Manganese**	9960	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 13:25	D2
EPA 6010C	**Silver**	54.3	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 13:25	D1
EPA 6010C	**Zinc**	35900	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 13:25	D2
EPA 7471B	**Mercury**	1.21	mg/kg	0.033	0.009		W635069	MWD	08/30/16 09:58	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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BLM - Boise
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Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS3**
SVL Sample ID: **W6H0405-03 (Soil)**

Sample Report Page 1 of 1

Sampled: 16-Aug-16 09:30
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	289	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 06:59	D1
EPA 6020A	**Lead**	23000	mg/kg Dry	10.0	1.65	500	W635096	KWH	08/30/16 11:51	D2
EPA 6020A	**Selenium**	0.38	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 06:59	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	287	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:23	
EPA 6010C	**Barium**	339	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 13:29	B7,D1
EPA 6010C	**Cadmium**	55.8	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 13:29	D1
EPA 6010C	**Chromium**	21.5	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 13:29	D1
EPA 6010C	**Copper**	669	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 13:29	D1
EPA 6010C	**Iron**	86900	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 13:29	B7,D2
EPA 6010C	**Manganese**	8040	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 13:29	D2
EPA 6010C	**Silver**	29.2	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 13:29	D1
EPA 6010C	**Zinc**	18700	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 13:29	D2
EPA 7471B	**Mercury**	0.662	mg/kg	0.033	0.009		W635069	MWD	08/30/16 09:59	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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BLM - Boise
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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS4**
SVL Sample ID: **W6H0405-04 (Soil)**

Sampled: 16-Aug-16 10:30
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	56.8	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:02	D1
EPA 6020A	**Lead**	3030	mg/kg Dry	1.00	0.165	50	W635096	KWH	08/30/16 11:53	D2
EPA 6020A	Selenium	< 0.30	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:02	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	28.1	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:26	
EPA 6010C	**Barium**	180	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:32	B7
EPA 6010C	**Cadmium**	15.0	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:32	
EPA 6010C	**Chromium**	12.1	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:32	
EPA 6010C	**Copper**	83.0	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:32	
EPA 6010C	**Iron**	20600	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:32	B7
EPA 6010C	**Manganese**	1720	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:32	
EPA 6010C	**Silver**	2.64	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:32	
EPA 6010C	**Zinc**	3290	mg/kg Dry	1.0	0.5		W635207	SMB	08/30/16 13:32	
EPA 7471B	**Mercury**	0.170	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:01	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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BLM - Boise
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Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS5**
SVL Sample ID: **W6H0405-05 (Soil)**

Sampled: 16-Aug-16 11:00
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	12.7	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:04	D1
EPA 6020A	**Lead**	456	mg/kg Dry	0.200	0.033	10	W635096	KWH	08/30/16 11:55	D2
EPA 6020A	Selenium	< 0.30	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:04	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.2	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:29	
EPA 6010C	**Barium**	113	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:35	B7
EPA 6010C	**Cadmium**	1.43	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:35	
EPA 6010C	**Chromium**	8.69	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:35	
EPA 6010C	**Copper**	19.2	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:35	
EPA 6010C	**Iron**	11300	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:35	B7
EPA 6010C	**Manganese**	705	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:35	
EPA 6010C	Silver	< 0.50	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:35	
EPA 6010C	**Zinc**	480	mg/kg Dry	1.0	0.5		W635207	SMB	08/30/16 13:35	
EPA 7471B	**Mercury**	0.037	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:07	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS6**
SVL Sample ID: **W6H0405-06 (Soil)**

Sampled: 16-Aug-16 11:15
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	8.04	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:11	D1
EPA 6020A	**Lead**	65.7	mg/kg Dry	0.100	0.007	2	W635096	KWH	08/30/16 12:02	D2
EPA 6020A	Selenium	< 0.30	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:11	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	Antimony	< 2.0	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:32	
EPA 6010C	**Barium**	106	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:38	B7
EPA 6010C	**Cadmium**	0.54	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:38	
EPA 6010C	**Chromium**	8.98	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:38	
EPA 6010C	**Copper**	8.60	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:38	
EPA 6010C	**Iron**	10700	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:38	B7
EPA 6010C	**Manganese**	586	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:38	
EPA 6010C	Silver	< 0.50	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:38	
EPA 6010C	**Zinc**	96.3	mg/kg Dry	1.0	0.5		W635207	SMB	08/30/16 13:38	
EPA 7471B	Mercury	< 0.033	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:08	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS7**
SVL Sample ID: **W6H0405-07 (Soil)**

Sampled: 16-Aug-16 11:15
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	10.6	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:13	D1
EPA 6020A	**Lead**	129	mg/kg Dry	0.100	0.007	2	W635096	KWH	08/30/16 12:04	D2
EPA 6020A	Selenium	< 0.30	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:13	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	2.8	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:42	
EPA 6010C	**Barium**	195	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:49	B7
EPA 6010C	**Cadmium**	1.02	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:49	
EPA 6010C	**Chromium**	14.3	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:49	
EPA 6010C	**Copper**	20.7	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:49	
EPA 6010C	**Iron**	15600	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:49	B7
EPA 6010C	**Manganese**	899	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:49	
EPA 6010C	Silver	< 0.50	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:49	
EPA 6010C	**Zinc**	157	mg/kg Dry	1.0	0.5		W635207	SMB	08/30/16 13:49	
EPA 7471B	**Mercury**	0.065	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:14	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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BLM - Boise
1387 S. Vinnell Way
Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS8**
SVL Sample ID: **W6H0405-08 (Soil)**

Sampled: 16-Aug-16 11:45
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	110	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:15	D1
EPA 6020A	**Lead**	5440	mg/kg Dry	2.50	0.413	125	W635096	KWH	08/30/16 12:06	D2
EPA 6020A	Selenium	< 0.30	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:15	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	55.2	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:45	
EPA 6010C	**Barium**	177	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:52	B7
EPA 6010C	**Cadmium**	14.9	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:52	
EPA 6010C	**Chromium**	12.4	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:52	
EPA 6010C	**Copper**	178	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:52	
EPA 6010C	**Iron**	25100	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:52	B7
EPA 6010C	**Manganese**	2000	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:52	
EPA 6010C	**Silver**	4.88	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:52	
EPA 6010C	**Zinc**	7700	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 14:08	
EPA 7471B	**Mercury**	0.190	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:16	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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BLM - Boise
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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS9**
SVL Sample ID: **W6H0405-09 (Soil)**

Sampled: 16-Aug-16 15:15
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	180	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:18	D1
EPA 6020A	**Lead**	8400	mg/kg Dry	5.00	0.825	250	W635096	KWH	08/30/16 12:08	D2
EPA 6020A	**Selenium**	0.33	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:18	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	110	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:48	
EPA 6010C	**Barium**	259	mg/kg Dry	0.20	0.14		W635207	SMB	08/30/16 13:55	B7
EPA 6010C	**Cadmium**	24.0	mg/kg Dry	0.20	0.06		W635207	SMB	08/30/16 13:55	
EPA 6010C	**Chromium**	16.4	mg/kg Dry	0.60	0.13		W635207	SMB	08/30/16 13:55	
EPA 6010C	**Copper**	250	mg/kg Dry	1.00	0.16		W635207	SMB	08/30/16 13:55	
EPA 6010C	**Iron**	40300	mg/kg Dry	10.0	4.0		W635207	SMB	08/30/16 13:55	B7
EPA 6010C	**Manganese**	3630	mg/kg Dry	0.80	0.22		W635207	SMB	08/30/16 13:55	
EPA 6010C	**Silver**	7.64	mg/kg Dry	0.50	0.14		W635207	SMB	08/30/16 13:55	
EPA 6010C	**Zinc**	10800	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 14:11	D1
EPA 7471B	**Mercury**	0.367	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:17	

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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS10**
SVL Sample ID: **W6H0405-10 (Soil)**

Sampled: 16-Aug-16 15:45
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	267	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:20	D1
EPA 6020A	**Lead**	22700	mg/kg Dry	10.0	1.65	500	W635096	KWH	08/30/16 12:10	D2
EPA 6020A	**Selenium**	0.34	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:20	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	157	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:51	
EPA 6010C	**Barium**	413	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 13:58	B7,D1
EPA 6010C	**Cadmium**	74.7	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 13:58	D1
EPA 6010C	**Chromium**	20.4	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 13:58	D1
EPA 6010C	**Copper**	597	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 13:58	D1
EPA 6010C	**Iron**	89300	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 13:58	B7,D2
EPA 6010C	**Manganese**	8020	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 13:58	D2
EPA 6010C	**Silver**	23.8	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 13:58	D1
EPA 6010C	**Zinc**	18600	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 13:58	D2
EPA 7471B	**Mercury**	0.590	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:19	

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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS11**
SVL Sample ID: **W6H0405-11 (Soil)**

Sampled: 16-Aug-16 15:45
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	260	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:22	D1
EPA 6020A	**Lead**	16900	mg/kg Dry	10.0	1.65	500	W635096	KWH	08/30/16 12:12	D2
EPA 6020A	**Selenium**	0.32	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:22	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	188	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:54	
EPA 6010C	**Barium**	339	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 14:02	B7,D1
EPA 6010C	**Cadmium**	52.7	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 14:02	D1
EPA 6010C	**Chromium**	19.6	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 14:02	D1
EPA 6010C	**Copper**	519	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 14:02	D1
EPA 6010C	**Iron**	79900	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 14:02	B7,D2
EPA 6010C	**Manganese**	6820	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 14:02	D2
EPA 6010C	**Silver**	15.7	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 14:02	D1
EPA 6010C	**Zinc**	14600	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 14:02	D2
EPA 7471B	**Mercury**	0.738	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:21	

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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Client Sample ID: **BLM-SS12**
SVL Sample ID: **W6H0405-12 (Soil)**

Sampled: 16-Aug-16 15:45
Received: 17-Aug-16
Sampled By: SH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	308	mg/kg Dry	0.300	0.009	2	W635096	KWH	08/30/16 07:24	D1
EPA 6020A	**Lead**	22600	mg/kg Dry	10.0	1.65	500	W635096	KWH	08/30/16 12:14	D2
EPA 6020A	**Selenium**	0.32	mg/kg Dry	0.30	0.03	2	W635096	KWH	08/30/16 07:24	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	177	mg/kg Dry	2.0	0.5		W635206	AS	08/29/16 12:57	
EPA 6010C	**Barium**	292	mg/kg Dry	2.00	1.40	10	W635207	SMB	08/30/16 14:05	B7,D1
EPA 6010C	**Cadmium**	43.2	mg/kg Dry	2.00	0.59	10	W635207	SMB	08/30/16 14:05	D1
EPA 6010C	**Chromium**	14.2	mg/kg Dry	6.00	1.30	10	W635207	SMB	08/30/16 14:05	D1
EPA 6010C	**Copper**	429	mg/kg Dry	10.0	1.60	10	W635207	SMB	08/30/16 14:05	D1
EPA 6010C	**Iron**	63800	mg/kg Dry	100	40.0	10	W635207	SMB	08/30/16 14:05	B7,D2
EPA 6010C	**Manganese**	6090	mg/kg Dry	8.00	2.20	10	W635207	SMB	08/30/16 14:05	D2
EPA 6010C	**Silver**	17.9	mg/kg Dry	5.00	1.40	10	W635207	SMB	08/30/16 14:05	D1
EPA 6010C	**Zinc**	17600	mg/kg Dry	10.0	4.8	10	W635207	SMB	08/30/16 14:05	D2
EPA 7471B	**Mercury**	0.547	mg/kg	0.033	0.009		W635069	MWD	08/30/16 10:23	

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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W635096	30-Aug-16	D1
EPA 6020A	Lead	mg/kg	0.132	0.007	0.100	W635096	30-Aug-16	B7
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W635096	30-Aug-16	D1
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W635206	29-Aug-16	
EPA 6010C	Barium	mg/kg	0.26	0.14	0.20	W635207	30-Aug-16	B7
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W635207	30-Aug-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W635207	30-Aug-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W635207	30-Aug-16	
EPA 6010C	Iron	mg/kg	<10.0	4.0	10.0	W635207	30-Aug-16	B7
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W635207	30-Aug-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W635207	30-Aug-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W635207	30-Aug-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W635069	30-Aug-16	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 6020A	Arsenic	mg/kg	2.53	2.50	101	80 - 120	W635096	30-Aug-16	D1
EPA 6020A	Lead	mg/kg	2.81	2.50	112	80 - 120	W635096	30-Aug-16	
EPA 6020A	Selenium	mg/kg	2.38	2.50	95.0	80 - 120	W635096	30-Aug-16	D1
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010C	Antimony	mg/kg	99.6	100	99.6	80 - 120	W635206	29-Aug-16	
EPA 6010C	Barium	mg/kg	94.4	100	94.4	80 - 120	W635207	30-Aug-16	
EPA 6010C	Cadmium	mg/kg	95.2	100	95.2	80 - 120	W635207	30-Aug-16	
EPA 6010C	Chromium	mg/kg	99.6	100	99.6	80 - 120	W635207	30-Aug-16	
EPA 6010C	Copper	mg/kg	99.1	100	99.1	80 - 120	W635207	30-Aug-16	
EPA 6010C	Iron	mg/kg	895	1000	89.5	80 - 120	W635207	30-Aug-16	
EPA 6010C	Manganese	mg/kg	96.8	100	96.8	80 - 120	W635207	30-Aug-16	
EPA 6010C	Silver	mg/kg	4.66	5.00	93.2	80 - 120	W635207	30-Aug-16	
EPA 6010C	Zinc	mg/kg	95.1	100	95.1	80 - 120	W635207	30-Aug-16	
EPA 7471B	Mercury	mg/kg	0.795	0.833	95.4	80 - 120	W635069	30-Aug-16	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 6020A	Arsenic	mg/kg	562	546	2.50	R > 4S	75 - 125	W635096	30-Aug-16	D1,M3
EPA 6020A	Lead	mg/kg	42200	40400	2.50	R > 4S	75 - 125	W635096	30-Aug-16	M3
EPA 6020A	Selenium	mg/kg	1.91	0.49	2.50	56.7	75 - 125	W635096	30-Aug-16	D1,M2
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Antimony	mg/kg	462	350	100	111	75 - 125	W635206	29-Aug-16	
EPA 6010C	Barium	mg/kg	427	372	100	55.6	75 - 125	W635207	30-Aug-16	D1,M3
EPA 6010C	Cadmium	mg/kg	197	106	100	91.1	75 - 125	W635207	30-Aug-16	D1
EPA 6010C	Chromium	mg/kg	123	16.5	100	107	75 - 125	W635207	30-Aug-16	D1
EPA 6010C	Copper	mg/kg	998	1090	100	R > 4S	75 - 125	W635207	30-Aug-16	D1,M3

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Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Continued)										
EPA 6010C	Iron	mg/kg	120000	131000	1000	R > 4S	75 - 125	W635207	30-Aug-16	D2,M3
EPA 6010C	Manganese	mg/kg	8700	9690	100	R > 4S	75 - 125	W635207	30-Aug-16	D2,M3
EPA 6010C	Silver	mg/kg	41.2	48.3	5.00	R > 4S	75 - 125	W635207	30-Aug-16	D1,M3
EPA 6010C	Zinc	mg/kg	33100	38000	100	R > 4S	75 - 125	W635207	30-Aug-16	D2,M3
EPA 7471B	Mercury	mg/kg	0.478	0.170	0.333	92.5	75 - 125	W635069	30-Aug-16	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)											
EPA 6020A	Arsenic	mg/kg	505	562	2.50	R > 4S	10.7	20	W635096	30-Aug-16	D1,M3
EPA 6020A	Lead	mg/kg	39300	42200	2.50	R > 4S	7.1	20	W635096	30-Aug-16	M3
EPA 6020A	Selenium	mg/kg	1.71	1.91	2.50	48.7	11.1	20	W635096	30-Aug-16	D1,M2
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010C	Antimony	mg/kg	484	462	100	134	4.8	20	W635206	29-Aug-16	M1
EPA 6010C	Barium	mg/kg	548	427	100	176	24.7	20	W635207	30-Aug-16	D1,M3
EPA 6010C	Cadmium	mg/kg	240	197	100	134	19.7	20	W635207	30-Aug-16	D1,M1
EPA 6010C	Chromium	mg/kg	141	123	100	124	13.3	20	W635207	30-Aug-16	D1
EPA 6010C	Copper	mg/kg	1180	998	100	90.9	16.9	20	W635207	30-Aug-16	D1
EPA 6010C	Iron	mg/kg	132000	120000	1000	108	10.0	20	W635207	30-Aug-16	D2
EPA 6010C	Manganese	mg/kg	11100	8700	100	R > 4S	24.1	20	W635207	30-Aug-16	D2,M3
EPA 6010C	Silver	mg/kg	53.1	41.2	5.00	96.6	25.1	20	W635207	30-Aug-16	D1,M3
EPA 6010C	Zinc	mg/kg	39700	33100	100	R > 4S	18.0	20	W635207	30-Aug-16	D2,M3
EPA 7471B	Mercury	mg/kg	0.493	0.478	0.333	97.0	3.1	20	W635069	30-Aug-16	

Quality Control - POST DIGESTION SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Antimony	mg/kg	344	350	20.0	-32.5	75 - 125	W635206	29-Aug-16	M3
EPA 6010C	Cadmium	mg/kg	97.5	106	2.00	-426	75 - 125	W635207	30-Aug-16	D1,M3

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Boise, ID 83709

Project Name: Gilmore Townsite 2016
Work Order: **W6H0405**
Reported: 30-Aug-16 14:59

Notes and Definitions

B7	Target analyte detected in method blank exceeded method QC limits, but concentrations in the samples are at least 10x the blank concentration.
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GT-01-RD-SS1	W6H0614-01	Soil	15-Aug-16 12:00	25-Aug-2016	
GT-02-RD-SS1	W6H0614-02	Soil	15-Aug-16 12:30	25-Aug-2016	
GT-03-RD-SS1 (-60)	W6H0614-03	Soil	15-Aug-16 13:00	25-Aug-2016	
GT-03-RD-SS1 (-10)	W6H0614-04	Soil	15-Aug-16 13:00	25-Aug-2016	
GT-03-RD-SS2	W6H0614-05	Soil	15-Aug-16 13:00	25-Aug-2016	
GT-04-RD-SS1	W6H0614-06	Soil	15-Aug-16 13:30	25-Aug-2016	
GT-03-RD-SS3	W6H0614-07	Soil	15-Aug-16 14:55	25-Aug-2016	
GT-03-RD-SS4	W6H0614-08	Soil	15-Aug-16 14:50	25-Aug-2016	
GT-17-PL-SS1	W6H0614-09	Soil	15-Aug-16 15:30	25-Aug-2016	
GT-28-PL-SS1	W6H0614-10	Soil	16-Aug-16 13:45	25-Aug-2016	
GT-27-PL-SS1	W6H0614-11	Soil	16-Aug-16 14:15	25-Aug-2016	
GT-26-PL-SS1	W6H0614-12	Soil	16-Aug-16 14:45	25-Aug-2016	
GT-29-PL-SS1	W6H0614-13	Soil	16-Aug-16 14:00	25-Aug-2016	
GT-24-PL-SS1	W6H0614-14	Soil	16-Aug-16 14:20	25-Aug-2016	
GT-25-PL-SS1	W6H0614-15	Soil	16-Aug-16 14:30	25-Aug-2016	
GT-10-PL-SS1 (-60)	W6H0614-16	Soil	17-Aug-16 08:45	25-Aug-2016	
GT-10-PL-SS1 (-10)	W6H0614-17	Soil	17-Aug-16 08:45	25-Aug-2016	
GT-14-PL-SS1	W6H0614-18	Soil	17-Aug-16 08:45	25-Aug-2016	
GT-16-PL-SS1	W6H0614-19	Soil	17-Aug-16 09:00	25-Aug-2016	
GT-09-PL-SS1	W6H0614-20	Soil	17-Aug-16 09:20	25-Aug-2016	
GT-18-PL-SS1	W6H0614-21	Soil	17-Aug-16 09:15	25-Aug-2016	
GT-13-PL-SS1	W6H0614-22	Soil	17-Aug-16 10:00	25-Aug-2016	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-01-RD-SS1**
SVL Sample ID: **W6H0614-01 (Soil)**

Sampled: 15-Aug-16 12:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	35.9	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 09:46	D1,M3
EPA 6020A	**Lead**	2930	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:18	D2,M3
EPA 6020A	**Selenium**	1.29	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 09:46	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	12.7	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 10:44	
EPA 6010C	**Barium**	150	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 08:57	
EPA 6010C	**Cadmium**	8.21	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 08:57	
EPA 6010C	**Chromium**	13.0	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 08:57	
EPA 6010C	**Copper**	62.8	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 08:57	M1
EPA 6010C	**Iron**	16800	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 08:57	B7,M3
EPA 6010C	**Manganese**	1020	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 08:57	M3
EPA 6010C	**Silver**	4.38	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 08:57	
EPA 6010C	**Zinc**	1970	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 08:57	M3
EPA 7471B	**Mercury**	0.080	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 16:51	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-02-RD-SS1**
SVL Sample ID: **W6H0614-02 (Soil)**

Sampled: 15-Aug-16 12:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	34.2	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 09:52	D1
EPA 6020A	**Lead**	2340	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:26	D2
EPA 6020A	**Selenium**	1.71	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 09:52	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	11.2	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 10:52	
EPA 6010C	**Barium**	211	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Cadmium**	9.13	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Chromium**	16.4	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Copper**	67.5	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Iron**	20800	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:06	B7
EPA 6010C	**Manganese**	1500	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Silver**	3.22	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:06	
EPA 6010C	**Zinc**	1810	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 09:06	
EPA 7471B	**Mercury**	0.098	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 16:58	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-03-RD-SS1 (-60)**
SVL Sample ID: **W6H0614-03 (Soil)**

Sampled: 15-Aug-16 13:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	323	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 09:54	D1
EPA 6020A	**Lead**	32300	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:29	D2
EPA 6020A	**Selenium**	0.89	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 09:54	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	173	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 10:55	
EPA 6010C	**Barium**	360	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Cadmium**	51.7	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Chromium**	13.3	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Copper**	557	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Iron**	65500	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:09	B7
EPA 6010C	**Manganese**	7600	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Silver**	16.5	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:09	
EPA 6010C	**Zinc**	13300	mg/kg Dry	10.0	4.8	10	W636045	SMB	09/12/16 09:13	D2
EPA 7471B	**Mercury**	0.847	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:00	

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IDEQ (Boise)
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-03-RD-SS1 (-10)**
SVL Sample ID: **W6H0614-04 (Soil)**

Sampled: 15-Aug-16 13:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	321	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 09:56	D1
EPA 6020A	**Lead**	25000	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:31	D2
EPA 6020A	**Selenium**	0.94	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 09:56	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	168	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 10:58	
EPA 6010C	**Barium**	327	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Cadmium**	57.5	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Chromium**	13.9	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Copper**	638	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Iron**	69800	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:23	B7
EPA 6010C	**Manganese**	7230	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Silver**	17.9	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:23	
EPA 6010C	**Zinc**	16000	mg/kg Dry	10.0	4.8	10	W636045	SMB	09/12/16 09:26	D2
EPA 7471B	**Mercury**	0.902	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:06	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-03-RD-SS2**
SVL Sample ID: **W6H0614-05 (Soil)**

Sampled: 15-Aug-16 13:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	302	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 09:58	D1
EPA 6020A	**Lead**	19900	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:33	D2
EPA 6020A	**Selenium**	0.89	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 09:58	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	170	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:01	
EPA 6010C	**Barium**	349	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Cadmium**	48.6	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Chromium**	13.2	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Copper**	514	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Iron**	61400	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:29	B7
EPA 6010C	**Manganese**	7170	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Silver**	15.3	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:29	
EPA 6010C	**Zinc**	12500	mg/kg Dry	10.0	4.8	10	W636045	SMB	09/12/16 09:33	D2
EPA 7471B	**Mercury**	0.798	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:08	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-04-RD-SS1**
SVL Sample ID: **W6H0614-06 (Soil)**

Sampled: 15-Aug-16 13:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	10.9	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:00	D1
EPA 6020A	**Lead**	151	mg/kg Dry	0.200	0.033	10	W636064	KWH	09/08/16 07:33	D2
EPA 6020A	**Selenium**	0.91	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:00	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	Antimony	< 2.0	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:04	
EPA 6010C	**Barium**	45.9	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Cadmium**	0.74	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Chromium**	6.04	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Copper**	8.81	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Iron**	5120	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:36	B7
EPA 6010C	**Manganese**	236	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Silver**	0.74	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:36	
EPA 6010C	**Zinc**	149	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 09:36	
EPA 7471B	Mercury	< 0.033	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:11	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-03-RD-SS3**
SVL Sample ID: **W6H0614-07 (Soil)**

Sampled: 15-Aug-16 14:55
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	383	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:07	D1
EPA 6020A	**Lead**	26400	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:41	D2
EPA 6020A	**Selenium**	0.79	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:07	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	246	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:14	
EPA 6010C	**Barium**	366	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 09:39	
EPA 6010C	**Cadmium**	73.3	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 09:39	
EPA 6010C	**Chromium**	13.3	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 09:39	
EPA 6010C	**Copper**	710	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 09:39	
EPA 6010C	**Iron**	74700	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 09:39	B7
EPA 6010C	**Manganese**	8950	mg/kg Dry	8.00	2.20	10	W636045	SMB	09/12/16 09:43	D2
EPA 6010C	**Silver**	21.5	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 09:39	
EPA 6010C	**Zinc**	17400	mg/kg Dry	10.0	4.8	10	W636045	SMB	09/12/16 09:43	D2
EPA 7471B	**Mercury**	1.14	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:13	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-03-RD-SS4**
SVL Sample ID: **W6H0614-08 (Soil)**

Sampled: 15-Aug-16 14:50
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	419	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:09	D1
EPA 6020A	**Lead**	42900	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:44	D2
EPA 6020A	**Selenium**	0.79	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:09	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	242	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:17	
EPA 6010C	**Barium**	283	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Cadmium**	81.8	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Chromium**	10.9	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Copper**	769	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Iron**	78600	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:02	B7
EPA 6010C	**Manganese**	7080	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Silver**	25.1	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:02	
EPA 6010C	**Zinc**	21100	mg/kg Dry	10.0	4.8	10	W636045	SMB	09/12/16 10:05	D2
EPA 7471B	**Mercury**	0.912	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:15	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-17-PL-SS1**
SVL Sample ID: **W6H0614-09 (Soil)**

Sample Report Page 1 of 1

Sampled: 15-Aug-16 15:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	23.9	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:11	D1
EPA 6020A	**Lead**	1490	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:46	D2
EPA 6020A	**Selenium**	1.60	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:11	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.3	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:20	
EPA 6010C	**Barium**	219	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Cadmium**	2.36	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Chromium**	15.7	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Copper**	40.5	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Iron**	14500	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:08	B7
EPA 6010C	**Manganese**	687	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Silver**	2.08	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:08	
EPA 6010C	**Zinc**	623	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:08	
EPA 7471B	**Mercury**	0.093	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:17	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-28-PL-SS1**
SVL Sample ID: **W6H0614-10 (Soil)**

Sampled: 16-Aug-16 13:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.5	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:13	D1
EPA 6020A	**Lead**	197	mg/kg Dry	0.200	0.033	10	W636064	KWH	09/08/16 07:35	D2
EPA 6020A	**Selenium**	2.39	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:13	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.3	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:22	
EPA 6010C	**Barium**	505	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Cadmium**	1.70	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Chromium**	23.5	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Copper**	31.6	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Iron**	21300	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:12	B7
EPA 6010C	**Manganese**	1180	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Silver**	1.19	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:12	
EPA 6010C	**Zinc**	278	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:12	
EPA 7471B	**Mercury**	0.200	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:24	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-27-PL-SS1**
SVL Sample ID: **W6H0614-11 (Soil)**

Sampled: 16-Aug-16 14:15
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	24.2	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:15	D1
EPA 6020A	**Lead**	156	mg/kg Dry	0.200	0.033	10	W636064	KWH	09/08/16 07:37	D2
EPA 6020A	**Selenium**	2.11	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:15	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.0	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:25	
EPA 6010C	**Barium**	265	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Cadmium**	1.67	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Chromium**	23.7	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Copper**	26.4	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Iron**	19200	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:15	B7
EPA 6010C	**Manganese**	1050	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Silver**	1.22	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:15	
EPA 6010C	**Zinc**	238	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:15	
EPA 7471B	**Mercury**	0.133	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:26	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-26-PL-SS1**
SVL Sample ID: **W6H0614-12 (Soil)**

Sampled: 16-Aug-16 14:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	25.5	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:17	D1
EPA 6020A	**Lead**	142	mg/kg Dry	0.200	0.033	10	W636064	KWH	09/08/16 07:39	D2
EPA 6020A	**Selenium**	2.12	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:17	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.6	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:28	
EPA 6010C	**Barium**	278	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Cadmium**	1.57	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Chromium**	20.9	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Copper**	24.9	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Iron**	19500	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:19	B7
EPA 6010C	**Manganese**	1120	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Silver**	1.37	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:19	
EPA 6010C	**Zinc**	241	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:19	
EPA 7471B	**Mercury**	0.050	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:28	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-29-PL-SS1**
SVL Sample ID: **W6H0614-13 (Soil)**

Sampled: 16-Aug-16 14:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.4	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:20	D1
EPA 6020A	**Lead**	293	mg/kg Dry	0.200	0.033	10	W636064	KWH	09/08/16 07:42	D2
EPA 6020A	**Selenium**	2.16	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:20	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.2	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:31	
EPA 6010C	**Barium**	293	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Cadmium**	1.56	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Chromium**	20.2	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Copper**	25.9	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Iron**	20200	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:22	B7
EPA 6010C	**Manganese**	1140	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Silver**	1.31	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:22	
EPA 6010C	**Zinc**	240	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:22	
EPA 7471B	**Mercury**	0.038	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:30	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-24-PL-SS1**
SVL Sample ID: **W6H0614-14 (Soil)**

Sampled: 16-Aug-16 14:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	23.0	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:22	D1
EPA 6020A	**Lead**	662	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:57	D2
EPA 6020A	**Selenium**	2.00	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:22	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.8	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:34	
EPA 6010C	**Barium**	255	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Cadmium**	1.46	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Chromium**	18.5	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Copper**	30.6	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Iron**	18700	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:26	B7
EPA 6010C	**Manganese**	969	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Silver**	1.54	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:26	
EPA 6010C	**Zinc**	266	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:26	
EPA 7471B	**Mercury**	0.043	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:32	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-25-PL-SS1**
SVL Sample ID: **W6H0614-15 (Soil)**

Sampled: 16-Aug-16 14:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	27.2	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:24	D1
EPA 6020A	**Lead**	1210	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 06:59	D2
EPA 6020A	**Selenium**	1.92	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:24	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.1	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:37	
EPA 6010C	**Barium**	239	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Cadmium**	2.00	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Chromium**	17.9	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Copper**	36.7	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Iron**	19500	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:29	B7
EPA 6010C	**Manganese**	1040	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Silver**	2.13	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:29	
EPA 6010C	**Zinc**	448	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:29	
EPA 7471B	**Mercury**	0.052	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:34	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-10-PL-SS1 (-60)**
SVL Sample ID: **W6H0614-16 (Soil)**

Sampled: 17-Aug-16 08:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.8	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:26	D1
EPA 6020A	**Lead**	1010	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 07:05	D2
EPA 6020A	**Selenium**	1.69	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:26	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.4	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:40	
EPA 6010C	**Barium**	336	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Cadmium**	2.41	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Chromium**	21.8	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Copper**	49.0	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Iron**	16100	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:32	B7
EPA 6010C	**Manganese**	1020	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Silver**	2.07	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:32	
EPA 6010C	**Zinc**	602	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:32	
EPA 7471B	**Mercury**	0.132	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:36	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-10-PL-SS1 (-10)**
SVL Sample ID: **W6H0614-17 (Soil)**

Sampled: 17-Aug-16 08:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	43.7	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:32	D1
EPA 6020A	**Lead**	1770	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 07:07	D2
EPA 6020A	**Selenium**	1.61	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:32	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.7	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:50	
EPA 6010C	**Barium**	268	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Cadmium**	2.56	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Chromium**	17.1	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Copper**	41.3	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Iron**	15600	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:44	B7
EPA 6010C	**Manganese**	898	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Silver**	1.87	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:44	
EPA 6010C	**Zinc**	607	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:44	
EPA 7471B	**Mercury**	0.165	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:38	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

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IDEQ (Boise)
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-14-PL-SS1**
SVL Sample ID: **W6H0614-18 (Soil)**

Sample Report Page 1 of 1

Sampled: 17-Aug-16 08:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	25.1	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:34	D1
EPA 6020A	**Lead**	1250	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 07:10	D2
EPA 6020A	**Selenium**	1.68	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:34	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.1	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:53	
EPA 6010C	**Barium**	247	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Cadmium**	3.57	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Chromium**	17.9	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Copper**	49.4	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Iron**	17100	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:47	B7
EPA 6010C	**Manganese**	925	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Silver**	2.59	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:47	
EPA 6010C	**Zinc**	803	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:47	
EPA 7471B	**Mercury**	0.168	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:41	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-16-PL-SS1**
SVL Sample ID: **W6H0614-19 (Soil)**

Sampled: 17-Aug-16 09:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	24.6	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:37	D1
EPA 6020A	**Lead**	1230	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 07:12	D2
EPA 6020A	**Selenium**	1.80	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:37	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.8	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:56	
EPA 6010C	**Barium**	234	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Cadmium**	2.16	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Chromium**	20.8	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Copper**	50.1	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Iron**	17500	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:51	B7
EPA 6010C	**Manganese**	975	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Silver**	2.28	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:51	
EPA 6010C	**Zinc**	558	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:51	
EPA 7471B	**Mercury**	0.135	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:43	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-09-PL-SS1**
SVL Sample ID: **W6H0614-20 (Soil)**

Sampled: 17-Aug-16 09:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	20.6	mg/kg Dry	0.300	0.009	2	W636064	KWH	09/09/16 10:39	D1
EPA 6020A	**Lead**	1120	mg/kg Dry	10.0	1.65	500	W636064	KWH	09/08/16 07:14	D2
EPA 6020A	**Selenium**	1.73	mg/kg Dry	0.30	0.03	2	W636064	KWH	09/09/16 10:39	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.8	mg/kg Dry	2.0	0.5		W636048	AS	09/09/16 11:59	
EPA 6010C	**Barium**	323	mg/kg Dry	0.20	0.14		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Cadmium**	2.46	mg/kg Dry	0.20	0.06		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Chromium**	17.7	mg/kg Dry	0.60	0.13		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Copper**	47.5	mg/kg Dry	1.00	0.16		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Iron**	15900	mg/kg Dry	10.0	4.0		W636045	SMB	09/12/16 10:54	B7
EPA 6010C	**Manganese**	837	mg/kg Dry	0.80	0.22		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Silver**	2.34	mg/kg Dry	0.50	0.14		W636045	SMB	09/12/16 10:54	
EPA 6010C	**Zinc**	741	mg/kg Dry	1.0	0.5		W636045	SMB	09/12/16 10:54	
EPA 7471B	**Mercury**	0.145	mg/kg Dry	0.033	0.009		W637066	MWD	09/07/16 17:49	

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-18-PL-SS1**
SVL Sample ID: **W6H0614-21 (Soil)**

Sample Report Page 1 of 1

Sampled: 17-Aug-16 09:15
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	18.6	mg/kg Dry	0.300	0.009	2	W636067	KWH	09/09/16 09:18	
EPA 6020A	**Lead**	934	mg/kg Dry	5.00	0.825	250	W636067	KWH	09/08/16 07:57	D2,M3
EPA 6020A	**Selenium**	1.48	mg/kg Dry	0.30	0.03	2	W636067	KWH	09/09/16 09:18	
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.6	mg/kg Dry	2.0	0.5		W636063	AS	09/09/16 09:07	
EPA 6010C	**Barium**	335	mg/kg Dry	0.20	0.14		W636047	AS	09/12/16 11:47	
EPA 6010C	**Cadmium**	2.49	mg/kg Dry	0.20	0.06		W636047	AS	09/12/16 11:47	
EPA 6010C	**Chromium**	19.1	mg/kg Dry	0.60	0.13		W636047	AS	09/12/16 11:47	
EPA 6010C	**Copper**	46.6	mg/kg Dry	1.00	0.16		W636047	AS	09/12/16 11:47	
EPA 6010C	**Iron**	17000	mg/kg Dry	10.0	4.0		W636047	AS	09/12/16 11:47	M3
EPA 6010C	**Manganese**	770	mg/kg Dry	0.80	0.22		W636047	SMB	09/12/16 13:49	
EPA 6010C	**Silver**	1.19	mg/kg Dry	0.50	0.14		W636047	AS	09/12/16 11:47	
EPA 6010C	**Zinc**	604	mg/kg Dry	1.0	0.5		W636047	AS	09/12/16 11:47	
EPA 7471B	**Mercury**	0.457	mg/kg Dry	0.033	0.009		W637069	MWD	09/07/16 16:36	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Client Sample ID: **GT-13-PL-SS1**
SVL Sample ID: **W6H0614-22 (Soil)**

Sampled: 17-Aug-16 10:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	20.1	mg/kg Dry	0.300	0.009	2	W636067	KWH	09/09/16 09:25	
EPA 6020A	**Lead**	810	mg/kg Dry	5.00	0.825	250	W636067	KWH	09/08/16 08:06	D2
EPA 6020A	**Selenium**	1.75	mg/kg Dry	0.30	0.03	2	W636067	KWH	09/09/16 09:25	
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.3	mg/kg Dry	2.0	0.5		W636063	AS	09/09/16 09:48	
EPA 6010C	**Barium**	220	mg/kg Dry	0.20	0.14		W636047	AS	09/12/16 11:56	
EPA 6010C	**Cadmium**	1.75	mg/kg Dry	0.20	0.06		W636047	AS	09/12/16 11:56	
EPA 6010C	**Chromium**	16.6	mg/kg Dry	0.60	0.13		W636047	AS	09/12/16 11:56	
EPA 6010C	**Copper**	25.9	mg/kg Dry	1.00	0.16		W636047	AS	09/12/16 11:56	
EPA 6010C	**Iron**	16400	mg/kg Dry	10.0	4.0		W636047	AS	09/12/16 11:56	
EPA 6010C	**Manganese**	843	mg/kg Dry	0.80	0.22		W636047	SMB	09/12/16 13:59	
EPA 6010C	**Silver**	1.02	mg/kg Dry	0.50	0.14		W636047	AS	09/12/16 11:56	
EPA 6010C	**Zinc**	298	mg/kg Dry	1.0	0.5		W636047	AS	09/12/16 11:56	
EPA 7471B	**Mercury**	0.053	mg/kg Dry	0.033	0.009		W637069	MWD	09/07/16 16:38	

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W636064	09-Sep-16	D1
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W636067	09-Sep-16	
EPA 6020A	Lead	mg/kg	<0.100	0.007	0.100	W636064	08-Sep-16	
EPA 6020A	Lead	mg/kg	<0.100	0.007	0.100	W636067	08-Sep-16	B7
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W636064	09-Sep-16	D1
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W636067	09-Sep-16	
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W636048	09-Sep-16	
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W636063	09-Sep-16	
EPA 6010C	Barium	mg/kg	<0.20	0.14	0.20	W636045	12-Sep-16	
EPA 6010C	Barium	mg/kg	<0.20	0.14	0.20	W636047	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W636045	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W636047	12-Sep-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W636045	12-Sep-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W636047	12-Sep-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W636045	12-Sep-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W636047	12-Sep-16	
EPA 6010C	Iron	mg/kg	<10.0	4.0	10.0	W636045	12-Sep-16	B7
EPA 6010C	Iron	mg/kg	<10.0	4.0	10.0	W636047	12-Sep-16	
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W636045	12-Sep-16	
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W636047	12-Sep-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W636045	12-Sep-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W636047	12-Sep-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W636045	12-Sep-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W636047	12-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637066	07-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637069	07-Sep-16	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 6020A	Arsenic	mg/kg	2.30	2.50	92.0	80 - 120	W636067	09-Sep-16	
EPA 6020A	Arsenic	mg/kg	2.30	2.50	91.8	80 - 120	W636064	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	2.41	2.50	96.3	80 - 120	W636064	08-Sep-16	
EPA 6020A	Lead	mg/kg	2.42	2.50	97.0	80 - 120	W636067	08-Sep-16	
EPA 6020A	Selenium	mg/kg	2.24	2.50	89.7	80 - 120	W636067	09-Sep-16	
EPA 6020A	Selenium	mg/kg	2.35	2.50	93.8	80 - 120	W636064	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010C	Antimony	mg/kg	94.3	100	94.3	80 - 120	W636063	09-Sep-16	
EPA 6010C	Antimony	mg/kg	98.0	100	98.0	80 - 120	W636048	09-Sep-16	
EPA 6010C	Barium	mg/kg	101	100	101	80 - 120	W636045	12-Sep-16	
EPA 6010C	Barium	mg/kg	99.2	100	99.2	80 - 120	W636047	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	96.4	100	96.4	80 - 120	W636045	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	98.0	100	98.0	80 - 120	W636047	12-Sep-16	
EPA 6010C	Chromium	mg/kg	102	100	102	80 - 120	W636045	12-Sep-16	
EPA 6010C	Chromium	mg/kg	99.2	100	99.2	80 - 120	W636047	12-Sep-16	
EPA 6010C	Copper	mg/kg	102	100	102	80 - 120	W636045	12-Sep-16	
EPA 6010C	Copper	mg/kg	101	100	101	80 - 120	W636047	12-Sep-16	
EPA 6010C	Iron	mg/kg	987	1000	98.7	80 - 120	W636045	12-Sep-16	
EPA 6010C	Iron	mg/kg	979	1000	97.9	80 - 120	W636047	12-Sep-16	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Continued)									
EPA 6010C	Manganese	mg/kg	98.9	100	98.9	80 - 120	W636045	12-Sep-16	
EPA 6010C	Manganese	mg/kg	96.3	100	96.3	80 - 120	W636047	12-Sep-16	
EPA 6010C	Silver	mg/kg	5.05	5.00	101	80 - 120	W636045	12-Sep-16	
EPA 6010C	Silver	mg/kg	4.74	5.00	94.8	80 - 120	W636047	12-Sep-16	
EPA 6010C	Zinc	mg/kg	95.3	100	95.3	80 - 120	W636045	12-Sep-16	
EPA 6010C	Zinc	mg/kg	99.2	100	99.2	80 - 120	W636047	12-Sep-16	
EPA 7471B	Mercury	mg/kg	0.778	0.833	93.4	80 - 120	W637069	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.777	0.833	93.2	80 - 120	W637066	07-Sep-16	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 6020A	Arsenic	mg/kg	21.1	18.6	2.50	100	75 - 125	W636067	09-Sep-16	
EPA 6020A	Arsenic	mg/kg	40.5	35.9	2.50	R > 4S	75 - 125	W636064	09-Sep-16	D1,M3
EPA 6020A	Lead	mg/kg	2790	2930	2.50	R > 4S	75 - 125	W636064	08-Sep-16	D2,M3
EPA 6020A	Lead	mg/kg	828	934	2.50	R > 4S	75 - 125	W636067	08-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.58	1.48	2.50	84.0	75 - 125	W636067	09-Sep-16	
EPA 6020A	Selenium	mg/kg	3.55	1.29	2.50	90.5	75 - 125	W636064	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Antimony	mg/kg	86.1	3.6	100	82.5	75 - 125	W636063	09-Sep-16	
EPA 6010C	Antimony	mg/kg	100	12.7	100	87.6	75 - 125	W636048	09-Sep-16	
EPA 6010C	Barium	mg/kg	268	150	100	118	75 - 125	W636045	12-Sep-16	
EPA 6010C	Barium	mg/kg	443	335	100	108	75 - 125	W636047	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	112	8.21	100	104	75 - 125	W636045	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	104	2.49	100	101	75 - 125	W636047	12-Sep-16	
EPA 6010C	Chromium	mg/kg	118	13.0	100	105	75 - 125	W636045	12-Sep-16	
EPA 6010C	Chromium	mg/kg	122	19.1	100	103	75 - 125	W636047	12-Sep-16	
EPA 6010C	Copper	mg/kg	189	62.8	100	126	75 - 125	W636045	12-Sep-16	M1
EPA 6010C	Copper	mg/kg	153	46.6	100	106	75 - 125	W636047	12-Sep-16	
EPA 6010C	Iron	mg/kg	19100	16800	1000	R > 4S	75 - 125	W636045	12-Sep-16	M3
EPA 6010C	Iron	mg/kg	18700	17000	1000	R > 4S	75 - 125	W636047	12-Sep-16	M3
EPA 6010C	Manganese	mg/kg	1150	1020	100	125	75 - 125	W636045	12-Sep-16	
EPA 6010C	Manganese	mg/kg	877	770	100	107	75 - 125	W636047	12-Sep-16	
EPA 6010C	Silver	mg/kg	10.3	4.38	5.00	119	75 - 125	W636045	12-Sep-16	
EPA 6010C	Silver	mg/kg	6.22	1.19	5.00	101	75 - 125	W636047	12-Sep-16	
EPA 6010C	Zinc	mg/kg	2170	1970	100	R > 4S	75 - 125	W636045	12-Sep-16	M3
EPA 6010C	Zinc	mg/kg	684	604	100	80.0	75 - 125	W636047	12-Sep-16	
EPA 7471B	Mercury	mg/kg	0.353	0.053	0.333	90.0	75 - 125	W637069	07-Sep-16	
EPA 7471B	Mercury	mg/kg	1.16	0.847	0.333	93.5	75 - 125	W637066	07-Sep-16	

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IDEQ (Boise)
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)											
EPA 6020A	Arsenic	mg/kg	39.2	40.5	2.50	R > 4S	3.3	20	W636064	09-Sep-16	D1,M3
EPA 6020A	Arsenic	mg/kg	21.1	21.1	2.50	100	0.0	20	W636067	09-Sep-16	
EPA 6020A	Lead	mg/kg	2900	2790	2.50	R > 4S	4.0	20	W636064	08-Sep-16	D2,M3
EPA 6020A	Lead	mg/kg	834	828	2.50	R > 4S	0.8	20	W636067	08-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.29	3.55	2.50	80.0	7.7	20	W636064	09-Sep-16	D1
EPA 6020A	Selenium	mg/kg	3.60	3.58	2.50	84.5	0.4	20	W636067	09-Sep-16	
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010C	Antimony	mg/kg	100	100	100	87.4	0.2	20	W636048	09-Sep-16	
EPA 6010C	Antimony	mg/kg	85.5	86.1	100	81.9	0.8	20	W636063	09-Sep-16	
EPA 6010C	Barium	mg/kg	268	268	100	118	0.1	20	W636045	12-Sep-16	
EPA 6010C	Barium	mg/kg	453	443	100	118	2.1	20	W636047	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	112	112	100	104	0.5	20	W636045	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	105	104	100	103	1.4	20	W636047	12-Sep-16	
EPA 6010C	Chromium	mg/kg	118	118	100	105	0.3	20	W636045	12-Sep-16	
EPA 6010C	Chromium	mg/kg	123	122	100	104	1.3	20	W636047	12-Sep-16	
EPA 6010C	Copper	mg/kg	178	189	100	115	5.6	20	W636045	12-Sep-16	
EPA 6010C	Copper	mg/kg	153	153	100	107	0.3	20	W636047	12-Sep-16	
EPA 6010C	Iron	mg/kg	18900	19100	1000	R > 4S	0.8	20	W636045	12-Sep-16	M3
EPA 6010C	Iron	mg/kg	19300	18700	1000	R > 4S	3.0	20	W636047	12-Sep-16	M3
EPA 6010C	Manganese	mg/kg	1170	1150	100	R > 4S	1.7	20	W636045	12-Sep-16	M3
EPA 6010C	Manganese	mg/kg	861	877	100	90.4	1.9	20	W636047	12-Sep-16	
EPA 6010C	Silver	mg/kg	10.3	10.3	5.00	119	0.1	20	W636045	12-Sep-16	
EPA 6010C	Silver	mg/kg	6.27	6.22	5.00	101	0.7	20	W636047	12-Sep-16	
EPA 6010C	Zinc	mg/kg	2200	2170	100	R > 4S	1.2	20	W636045	12-Sep-16	M3
EPA 6010C	Zinc	mg/kg	694	684	100	90.3	1.5	20	W636047	12-Sep-16	
EPA 7471B	Mercury	mg/kg	1.18	1.16	0.333	99.0	1.6	20	W637066	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.360	0.353	0.333	92.0	1.9	20	W637069	07-Sep-16	

Quality Control - POST DIGESTION SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Copper	mg/kg	72.2	62.8	6.00	156	75 - 125	W636045	12-Sep-16	M3

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0614**
Reported: 12-Sep-16 14:28

Notes and Definitions

B7	Target analyte detected in method blank exceeded method QC limits, but concentrations in the samples are at least 10x the blank concentration.
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GT-13-PL-SS2	W6H0616-01	Soil	17-Aug-16 10:00	25-Aug-2016	
GT-13-PL-SS3	W6H0616-02	Soil	17-Aug-16 10:00	25-Aug-2016	
GT-20-PL-SS1	W6H0616-03	Soil	17-Aug-16 10:15	25-Aug-2016	
GT-15-PL-SS1	W6H0616-04	Soil	17-Aug-16 10:30	25-Aug-2016	
GT-30-PL-SS1	W6H0616-05	Soil	17-Aug-16 11:00	25-Aug-2016	
GT-31-PL-SS1	W6H0616-06	Soil	17-Aug-16 11:00	25-Aug-2016	
GT-12-PL-SS1 (-60)	W6H0616-07	Soil	17-Aug-16 12:00	25-Aug-2016	
GT-12-PL-SS1 (-10)	W6H0616-08	Soil	17-Aug-16 12:00	25-Aug-2016	
GT-12-PL-SS2	W6H0616-09	Soil	17-Aug-16 12:20	25-Aug-2016	
GT-12-PL-SS3	W6H0616-10	Soil	17-Aug-16 12:25	25-Aug-2016	
GT-03-PL-SS1	W6H0616-11	Soil	17-Aug-16 13:30	25-Aug-2016	
GT-21-PL-SS1	W6H0616-12	Soil	17-Aug-16 12:45	25-Aug-2016	
GT-19-PL-SS1	W6H0616-13	Soil	17-Aug-16 14:00	25-Aug-2016	
GT-22-PL-SS1	W6H0616-14	Soil	17-Aug-16 12:50	25-Aug-2016	
GT-23-PL-SS1	W6H0616-15	Soil	17-Aug-16 13:30	25-Aug-2016	
GT-11-PL-SS1	W6H0616-16	Soil	17-Aug-16 14:00	25-Aug-2016	
GT-11-PL-SS2	W6H0616-17	Soil	17-Aug-16 14:00	25-Aug-2016	
GT-35-PL-SS1	W6H0616-18	Soil	17-Aug-16 14:30	25-Aug-2016	
GT-36-PL-SS1	W6H0616-19	Soil	17-Aug-16 15:00	25-Aug-2016	
GT-33-PL-SS1	W6H0616-20	Soil	17-Aug-16 15:10	25-Aug-2016	
GT-34-PL-SS1 (-60)	W6H0616-21	Soil	17-Aug-16 15:20	25-Aug-2016	
GT-34-PL-SS1 (-10)	W6H0616-22	Soil	17-Aug-16 15:20	25-Aug-2016	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-13-PL-SS2**
SVL Sample ID: **W6H0616-01 (Soil)**

Sampled: 17-Aug-16 10:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	18.6	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:25	D1,M3
EPA 6020A	**Lead**	749	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 08:29	D2,M3
EPA 6020A	**Selenium**	1.59	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:25	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.0	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:04	
EPA 6010C	**Barium**	215	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:31	
EPA 6010C	**Cadmium**	1.58	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 08:21	
EPA 6010C	**Chromium**	15.5	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 08:21	
EPA 6010C	**Copper**	26.2	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 08:21	
EPA 6010C	**Iron**	15600	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:31	B7,M3
EPA 6010C	**Manganese**	827	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:31	
EPA 6010C	**Silver**	1.25	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 08:21	
EPA 6010C	**Zinc**	305	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:31	
EPA 7471B	**Mercury**	0.058	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 17:56	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-13-PL-SS3**
SVL Sample ID: **W6H0616-02 (Soil)**

Sample Report Page 1 of 1

Sampled: 17-Aug-16 10:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.1	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:31	D1
EPA 6020A	**Lead**	841	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 08:38	D2
EPA 6020A	**Selenium**	1.64	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:31	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.9	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:12	
EPA 6010C	**Barium**	211	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:40	
EPA 6010C	**Cadmium**	1.55	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 08:29	
EPA 6010C	**Chromium**	15.1	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 08:29	
EPA 6010C	**Copper**	25.1	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 08:29	
EPA 6010C	**Iron**	15200	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:40	B7
EPA 6010C	**Manganese**	800	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:40	
EPA 6010C	**Silver**	1.23	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 08:29	
EPA 6010C	**Zinc**	322	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:40	
EPA 7471B	**Mercury**	0.052	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 17:58	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-20-PL-SS1**
SVL Sample ID: **W6H0616-03 (Soil)**

Sampled: 17-Aug-16 10:15
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.2	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:33	D1
EPA 6020A	**Lead**	858	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 08:40	D2
EPA 6020A	**Selenium**	1.54	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:33	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.6	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:15	
EPA 6010C	**Barium**	215	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:44	
EPA 6010C	**Cadmium**	1.96	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 08:32	
EPA 6010C	**Chromium**	15.5	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 08:32	
EPA 6010C	**Copper**	33.6	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 08:32	
EPA 6010C	**Iron**	16900	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:44	B7
EPA 6010C	**Manganese**	932	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:44	
EPA 6010C	**Silver**	1.68	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 08:32	
EPA 6010C	**Zinc**	456	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:44	
EPA 7471B	**Mercury**	0.082	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:04	

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-15-PL-SS1**
SVL Sample ID: **W6H0616-04 (Soil)**

Sampled: 17-Aug-16 10:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	18.5	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:35	D1
EPA 6020A	**Lead**	1060	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 08:42	D2
EPA 6020A	**Selenium**	1.90	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:35	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.1	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:18	
EPA 6010C	**Barium**	251	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:47	
EPA 6010C	**Cadmium**	1.85	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 08:35	
EPA 6010C	**Chromium**	16.9	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 08:35	
EPA 6010C	**Copper**	38.6	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 08:35	
EPA 6010C	**Iron**	18300	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:47	B7
EPA 6010C	**Manganese**	990	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:47	
EPA 6010C	**Silver**	1.65	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 08:35	
EPA 6010C	**Zinc**	412	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:47	
EPA 7471B	**Mercury**	0.087	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:06	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-30-PL-SS1**
SVL Sample ID: **W6H0616-05 (Soil)**

Sampled: 17-Aug-16 11:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.2	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:37	D1
EPA 6020A	**Lead**	189	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:40	D2
EPA 6020A	**Selenium**	2.09	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:37	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.1	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:21	
EPA 6010C	**Barium**	347	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:50	
EPA 6010C	**Cadmium**	1.40	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 08:57	
EPA 6010C	**Chromium**	18.3	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 08:57	
EPA 6010C	**Copper**	26.5	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 08:57	
EPA 6010C	**Iron**	19300	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:50	B7
EPA 6010C	**Manganese**	1060	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:50	
EPA 6010C	**Silver**	1.10	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 08:57	
EPA 6010C	**Zinc**	277	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:50	
EPA 7471B	**Mercury**	0.118	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:09	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-31-PL-SS1**
SVL Sample ID: **W6H0616-06 (Soil)**

Sampled: 17-Aug-16 11:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	17.6	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:39	D1
EPA 6020A	**Lead**	113	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:42	D2
EPA 6020A	**Selenium**	2.02	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:39	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	2.8	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:24	
EPA 6010C	**Barium**	406	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 08:53	
EPA 6010C	**Cadmium**	1.01	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:00	
EPA 6010C	**Chromium**	18.4	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:00	
EPA 6010C	**Copper**	23.7	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:00	
EPA 6010C	**Iron**	18900	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 08:53	B7
EPA 6010C	**Manganese**	850	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 08:53	
EPA 6010C	**Silver**	0.89	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:00	
EPA 6010C	**Zinc**	194	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 08:53	
EPA 7471B	**Mercury**	0.063	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:15	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-12-PL-SS1 (-60)**
SVL Sample ID: **W6H0616-07 (Soil)**

Sampled: 17-Aug-16 12:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.3	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:46	D1
EPA 6020A	**Lead**	165	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:44	D2
EPA 6020A	**Selenium**	2.10	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:46	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.0	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:34	
EPA 6010C	**Barium**	263	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:15	
EPA 6010C	**Cadmium**	1.23	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:03	
EPA 6010C	**Chromium**	18.5	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:03	
EPA 6010C	**Copper**	25.8	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:03	
EPA 6010C	**Iron**	20600	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:15	B7
EPA 6010C	**Manganese**	1030	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:15	
EPA 6010C	**Silver**	1.05	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:03	
EPA 6010C	**Zinc**	227	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:15	
EPA 7471B	**Mercury**	0.052	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:18	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-12-PL-SS1 (-10)**
SVL Sample ID: **W6H0616-08 (Soil)**

Sampled: 17-Aug-16 12:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.3	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:48	D1
EPA 6020A	**Lead**	280	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:46	D2
EPA 6020A	**Selenium**	2.06	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:48	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.7	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:36	
EPA 6010C	**Barium**	250	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:19	
EPA 6010C	**Cadmium**	1.17	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:06	
EPA 6010C	**Chromium**	18.3	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:06	
EPA 6010C	**Copper**	25.0	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:06	
EPA 6010C	**Iron**	19800	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:19	B7
EPA 6010C	**Manganese**	1070	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:19	
EPA 6010C	**Silver**	0.92	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:06	
EPA 6010C	**Zinc**	221	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:19	
EPA 7471B	**Mercury**	0.047	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:20	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-12-PL-SS2**
SVL Sample ID: **W6H0616-09 (Soil)**

Sampled: 17-Aug-16 12:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.6	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:50	D1
EPA 6020A	**Lead**	60.8	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:48	D2
EPA 6020A	**Selenium**	2.21	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:50	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.1	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:39	
EPA 6010C	**Barium**	219	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:22	
EPA 6010C	**Cadmium**	0.87	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:09	
EPA 6010C	**Chromium**	16.9	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:09	
EPA 6010C	**Copper**	21.4	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:09	
EPA 6010C	**Iron**	21300	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:22	B7
EPA 6010C	**Manganese**	989	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:22	
EPA 6010C	**Silver**	0.86	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:09	
EPA 6010C	**Zinc**	154	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:22	
EPA 7471B	Mercury	< 0.033	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:22	

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-12-PL-SS3**
SVL Sample ID: **W6H0616-10 (Soil)**

Sampled: 17-Aug-16 12:25
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	22.7	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:52	D1
EPA 6020A	**Lead**	130	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:51	D2
EPA 6020A	**Selenium**	1.96	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:52	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.3	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:42	
EPA 6010C	**Barium**	229	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:25	
EPA 6010C	**Cadmium**	1.01	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:12	
EPA 6010C	**Chromium**	17.4	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:12	
EPA 6010C	**Copper**	26.4	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:12	
EPA 6010C	**Iron**	20800	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:25	B7
EPA 6010C	**Manganese**	1040	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:25	
EPA 6010C	**Silver**	0.89	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:12	
EPA 6010C	**Zinc**	196	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:25	
EPA 7471B	**Mercury**	0.042	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:25	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-03-PL-SS1**
SVL Sample ID: **W6H0616-11 (Soil)**

Sampled: 17-Aug-16 13:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	20.1	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:54	D1
EPA 6020A	**Lead**	1510	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:02	D2
EPA 6020A	**Selenium**	1.42	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:54	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	8.1	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:45	
EPA 6010C	**Barium**	151	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:28	
EPA 6010C	**Cadmium**	3.30	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:15	
EPA 6010C	**Chromium**	13.1	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:15	
EPA 6010C	**Copper**	34.7	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:15	
EPA 6010C	**Iron**	15800	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:28	B7
EPA 6010C	**Manganese**	888	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:28	
EPA 6010C	**Silver**	1.73	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:15	
EPA 6010C	**Zinc**	750	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:28	
EPA 7471B	**Mercury**	0.070	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:27	

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-21-PL-SS1**
SVL Sample ID: **W6H0616-12 (Soil)**

Sampled: 17-Aug-16 12:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.7	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:56	D1
EPA 6020A	**Lead**	514	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:04	D2
EPA 6020A	**Selenium**	2.21	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:56	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.7	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:48	
EPA 6010C	**Barium**	283	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:31	
EPA 6010C	**Cadmium**	1.80	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:18	
EPA 6010C	**Chromium**	19.6	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:18	
EPA 6010C	**Copper**	30.1	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:18	
EPA 6010C	**Iron**	22100	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:31	B7
EPA 6010C	**Manganese**	1250	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:31	
EPA 6010C	**Silver**	1.76	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:18	
EPA 6010C	**Zinc**	328	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:31	
EPA 7471B	**Mercury**	0.100	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:29	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-19-PL-SS1**
SVL Sample ID: **W6H0616-13 (Soil)**

Sampled: 17-Aug-16 14:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	17.6	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 11:58	D1
EPA 6020A	**Lead**	1210	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:06	D2
EPA 6020A	**Selenium**	1.66	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 11:58	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	7.2	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:51	
EPA 6010C	**Barium**	174	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:34	
EPA 6010C	**Cadmium**	1.77	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:21	
EPA 6010C	**Chromium**	15.2	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:21	
EPA 6010C	**Copper**	32.2	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:21	
EPA 6010C	**Iron**	16900	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:34	B7
EPA 6010C	**Manganese**	853	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:34	
EPA 6010C	**Silver**	2.07	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:21	
EPA 6010C	**Zinc**	359	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:34	
EPA 7471B	**Mercury**	0.062	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:31	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-22-PL-SS1**
SVL Sample ID: **W6H0616-14 (Soil)**

Sampled: 17-Aug-16 12:50
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	23.1	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:01	D1
EPA 6020A	**Lead**	607	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:08	D2
EPA 6020A	**Selenium**	2.14	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:01	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.7	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:54	
EPA 6010C	**Barium**	286	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:38	
EPA 6010C	**Cadmium**	1.89	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:24	
EPA 6010C	**Chromium**	19.1	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:24	
EPA 6010C	**Copper**	33.0	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:24	
EPA 6010C	**Iron**	20300	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:38	B7
EPA 6010C	**Manganese**	1050	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:38	
EPA 6010C	**Silver**	1.53	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:24	
EPA 6010C	**Zinc**	374	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:38	
EPA 7471B	**Mercury**	0.097	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:33	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-23-PL-SS1**
SVL Sample ID: **W6H0616-15 (Soil)**

Sampled: 17-Aug-16 13:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	19.4	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:03	D1
EPA 6020A	**Lead**	193	mg/kg Dry	0.200	0.033	10	W636083	KWH	09/08/16 09:53	D2
EPA 6020A	**Selenium**	1.86	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:03	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	3.2	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 12:57	
EPA 6010C	**Barium**	301	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:41	
EPA 6010C	**Cadmium**	1.39	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:33	
EPA 6010C	**Chromium**	16.9	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:33	
EPA 6010C	**Copper**	27.2	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:33	
EPA 6010C	**Iron**	18100	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:41	B7
EPA 6010C	**Manganese**	1010	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:41	
EPA 6010C	**Silver**	1.05	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:33	
EPA 6010C	**Zinc**	225	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:41	
EPA 7471B	**Mercury**	0.428	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:35	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-11-PL-SS1**
SVL Sample ID: **W6H0616-16 (Soil)**

Sampled: 17-Aug-16 14:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	14.5	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:05	D1
EPA 6020A	**Lead**	1060	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:17	D2
EPA 6020A	**Selenium**	1.58	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:05	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.9	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 13:00	
EPA 6010C	**Barium**	167	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:52	
EPA 6010C	**Cadmium**	1.37	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:36	
EPA 6010C	**Chromium**	14.9	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:36	
EPA 6010C	**Copper**	28.7	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:36	
EPA 6010C	**Iron**	17000	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:52	B7
EPA 6010C	**Manganese**	855	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:52	
EPA 6010C	**Silver**	1.43	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:36	
EPA 6010C	**Zinc**	294	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:52	
EPA 7471B	**Mercury**	0.042	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:42	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-11-PL-SS2**
SVL Sample ID: **W6H0616-17 (Soil)**

Sampled: 17-Aug-16 14:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	13.6	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:11	D1
EPA 6020A	**Lead**	921	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:19	D2
EPA 6020A	**Selenium**	1.59	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:11	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.0	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 13:10	
EPA 6010C	**Barium**	167	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:55	
EPA 6010C	**Cadmium**	1.24	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:39	
EPA 6010C	**Chromium**	14.2	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:39	
EPA 6010C	**Copper**	27.7	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:39	
EPA 6010C	**Iron**	16400	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:55	B7
EPA 6010C	**Manganese**	862	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:55	
EPA 6010C	**Silver**	1.32	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:39	
EPA 6010C	**Zinc**	284	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:55	
EPA 7471B	**Mercury**	0.047	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:44	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-35-PL-SS1**
SVL Sample ID: **W6H0616-18 (Soil)**

Sampled: 17-Aug-16 14:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	21.1	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:13	D1
EPA 6020A	**Lead**	884	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:21	D2
EPA 6020A	**Selenium**	1.80	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:13	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	4.8	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 13:13	
EPA 6010C	**Barium**	268	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 09:58	
EPA 6010C	**Cadmium**	2.18	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:42	
EPA 6010C	**Chromium**	16.1	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:42	
EPA 6010C	**Copper**	33.5	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:42	
EPA 6010C	**Iron**	17100	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 09:58	B7
EPA 6010C	**Manganese**	980	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 09:58	
EPA 6010C	**Silver**	1.49	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:42	
EPA 6010C	**Zinc**	465	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 09:58	
EPA 7471B	**Mercury**	0.165	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:46	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-36-PL-SS1**
SVL Sample ID: **W6H0616-19 (Soil)**

Sampled: 17-Aug-16 15:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	26.2	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:15	D1
EPA 6020A	**Lead**	1750	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:23	D2
EPA 6020A	**Selenium**	1.92	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:15	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	12.0	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 13:16	
EPA 6010C	**Barium**	256	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 10:01	
EPA 6010C	**Cadmium**	2.69	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:45	
EPA 6010C	**Chromium**	17.2	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:45	
EPA 6010C	**Copper**	52.2	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:45	
EPA 6010C	**Iron**	23000	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 10:01	B7
EPA 6010C	**Manganese**	1350	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 10:01	
EPA 6010C	**Silver**	2.45	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:45	
EPA 6010C	**Zinc**	854	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 10:01	
EPA 7471B	**Mercury**	0.350	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:48	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-33-PL-SS1**
SVL Sample ID: **W6H0616-20 (Soil)**

Sampled: 17-Aug-16 15:10
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	90.8	mg/kg Dry	0.300	0.009	2	W636083	KWH	09/09/16 12:18	D1
EPA 6020A	**Lead**	9320	mg/kg Dry	5.00	0.825	250	W636083	KWH	09/08/16 09:25	D2
EPA 6020A	**Selenium**	1.85	mg/kg Dry	0.30	0.03	2	W636083	KWH	09/09/16 12:18	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	47.5	mg/kg Dry	2.0	0.5		W636121	AS	09/08/16 13:19	
EPA 6010C	**Barium**	266	mg/kg Dry	0.20	0.14		W636116	AS	09/11/16 10:04	
EPA 6010C	**Cadmium**	7.27	mg/kg Dry	0.20	0.06		W636116	AS	09/09/16 09:48	
EPA 6010C	**Chromium**	16.9	mg/kg Dry	0.60	0.13		W636116	AS	09/09/16 09:48	
EPA 6010C	**Copper**	156	mg/kg Dry	1.00	0.16		W636116	AS	09/09/16 09:48	
EPA 6010C	**Iron**	31100	mg/kg Dry	10.0	4.0		W636116	AS	09/11/16 10:04	B7
EPA 6010C	**Manganese**	1880	mg/kg Dry	0.80	0.22		W636116	AS	09/11/16 10:04	
EPA 6010C	**Silver**	10.7	mg/kg Dry	0.50	0.14		W636116	AS	09/09/16 09:48	
EPA 6010C	**Zinc**	2180	mg/kg Dry	1.0	0.5		W636116	AS	09/11/16 10:04	
EPA 7471B	**Mercury**	0.383	mg/kg Dry	0.033	0.009		W637067	MWD	09/07/16 18:50	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-34-PL-SS1 (-60)**
SVL Sample ID: **W6H0616-21 (Soil)**

Sampled: 17-Aug-16 15:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	26.7	mg/kg Dry	0.300	0.009	2	W636082	KWH	09/09/16 10:56	D1
EPA 6020A	**Lead**	1990	mg/kg Dry	5.00	0.825	250	W636082	KWH	09/08/16 11:31	D2,M3
EPA 6020A	**Selenium**	1.79	mg/kg Dry	0.30	0.03	2	W636082	KWH	09/09/16 10:56	D1,M2
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	12.2	mg/kg Dry	2.0	0.5		W636123	AS	09/09/16 08:23	
EPA 6010C	**Barium**	210	mg/kg Dry	0.20	0.14		W636118	AS	09/11/16 07:52	
EPA 6010C	**Cadmium**	2.97	mg/kg Dry	0.20	0.06		W636118	AS	09/11/16 07:52	
EPA 6010C	**Chromium**	17.4	mg/kg Dry	0.60	0.13		W636118	AS	09/11/16 07:52	
EPA 6010C	**Copper**	56.7	mg/kg Dry	1.00	0.16		W636118	AS	09/11/16 07:52	
EPA 6010C	**Iron**	20800	mg/kg Dry	10.0	4.0		W636118	AS	09/11/16 07:52	M3
EPA 6010C	**Manganese**	1270	mg/kg Dry	0.80	0.22		W636118	AS	09/11/16 07:52	
EPA 6010C	**Silver**	2.31	mg/kg Dry	0.50	0.14		W636118	AS	09/11/16 07:52	
EPA 6010C	**Zinc**	742	mg/kg Dry	1.0	0.5		W636118	AS	09/11/16 07:52	
EPA 7471B	**Mercury**	0.082	mg/kg Dry	0.033	0.009		W637069	MWD	09/07/16 16:45	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Client Sample ID: **GT-34-PL-SS1 (-10)**
SVL Sample ID: **W6H0616-22 (Soil)**

Sampled: 17-Aug-16 15:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	35.0	mg/kg Dry	0.300	0.009	2	W636082	KWH	09/09/16 11:02	D1
EPA 6020A	**Lead**	2850	mg/kg Dry	5.00	0.825	250	W636082	KWH	09/08/16 11:39	D2
EPA 6020A	**Selenium**	1.75	mg/kg Dry	0.30	0.03	2	W636082	KWH	09/09/16 11:02	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	15.2	mg/kg Dry	2.0	0.5		W636123	AS	09/09/16 08:32	
EPA 6010C	**Barium**	218	mg/kg Dry	0.20	0.14		W636118	AS	09/11/16 08:01	
EPA 6010C	**Cadmium**	3.71	mg/kg Dry	0.20	0.06		W636118	AS	09/11/16 08:01	
EPA 6010C	**Chromium**	18.2	mg/kg Dry	0.60	0.13		W636118	AS	09/11/16 08:01	
EPA 6010C	**Copper**	62.8	mg/kg Dry	1.00	0.16		W636118	AS	09/11/16 08:01	
EPA 6010C	**Iron**	22600	mg/kg Dry	10.0	4.0		W636118	AS	09/11/16 08:01	
EPA 6010C	**Manganese**	1430	mg/kg Dry	0.80	0.22		W636118	AS	09/11/16 08:01	
EPA 6010C	**Silver**	3.71	mg/kg Dry	0.50	0.14		W636118	AS	09/11/16 08:01	
EPA 6010C	**Zinc**	876	mg/kg Dry	1.0	0.5		W636118	AS	09/11/16 08:01	
EPA 7471B	**Mercury**	0.073	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:14	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W636082	09-Sep-16	D1
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W636083	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	<0.100	0.007	0.100	W636082	08-Sep-16	D1
EPA 6020A	Lead	mg/kg	<0.100	0.007	0.100	W636083	08-Sep-16	
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W636082	09-Sep-16	D1
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W636083	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W636121	08-Sep-16	
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W636123	09-Sep-16	
EPA 6010C	Barium	mg/kg	<0.20	0.14	0.20	W636116	11-Sep-16	M3
EPA 6010C	Barium	mg/kg	<0.20	0.14	0.20	W636118	11-Sep-16	
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W636116	09-Sep-16	
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W636118	11-Sep-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W636116	09-Sep-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W636118	11-Sep-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W636116	09-Sep-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W636118	11-Sep-16	
EPA 6010C	Iron	mg/kg	10.5	4.0	10.0	W636116	11-Sep-16	B7
EPA 6010C	Iron	mg/kg	<10.0	4.0	10.0	W636118	11-Sep-16	
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W636116	11-Sep-16	
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W636118	11-Sep-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W636116	09-Sep-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W636116	11-Sep-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W636118	11-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637067	07-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637068	07-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637069	07-Sep-16	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 6020A	Arsenic	mg/kg	2.29	2.50	91.7	80 - 120	W636082	09-Sep-16	D1
EPA 6020A	Arsenic	mg/kg	2.30	2.50	92.1	80 - 120	W636083	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	2.45	2.50	98.2	80 - 120	W636083	08-Sep-16	
EPA 6020A	Lead	mg/kg	2.44	2.50	97.6	80 - 120	W636082	08-Sep-16	D1
EPA 6020A	Selenium	mg/kg	2.22	2.50	88.7	80 - 120	W636082	09-Sep-16	D1
EPA 6020A	Selenium	mg/kg	2.36	2.50	94.3	80 - 120	W636083	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010C	Antimony	mg/kg	106	100	106	80 - 120	W636121	08-Sep-16	
EPA 6010C	Antimony	mg/kg	98.1	100	98.1	80 - 120	W636123	09-Sep-16	
EPA 6010C	Barium	mg/kg	99.3	100	99.3	80 - 120	W636118	11-Sep-16	
EPA 6010C	Barium	mg/kg	102	100	102	80 - 120	W636116	11-Sep-16	
EPA 6010C	Cadmium	mg/kg	93.9	100	93.9	80 - 120	W636116	09-Sep-16	
EPA 6010C	Cadmium	mg/kg	98.2	100	98.2	80 - 120	W636118	11-Sep-16	
EPA 6010C	Chromium	mg/kg	98.7	100	98.7	80 - 120	W636116	09-Sep-16	
EPA 6010C	Chromium	mg/kg	98.0	100	98.0	80 - 120	W636118	11-Sep-16	
EPA 6010C	Copper	mg/kg	99.5	100	99.5	80 - 120	W636116	09-Sep-16	
EPA 6010C	Copper	mg/kg	101	100	101	80 - 120	W636118	11-Sep-16	
EPA 6010C	Iron	mg/kg	981	1000	98.1	80 - 120	W636118	11-Sep-16	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Continued)									
EPA 6010C	Iron	mg/kg	1000	1000	100	80 - 120	W636116	11-Sep-16	
EPA 6010C	Manganese	mg/kg	99.1	100	99.1	80 - 120	W636118	11-Sep-16	
EPA 6010C	Manganese	mg/kg	101	100	101	80 - 120	W636116	11-Sep-16	
EPA 6010C	Silver	mg/kg	4.88	5.00	97.7	80 - 120	W636116	09-Sep-16	
EPA 6010C	Silver	mg/kg	4.81	5.00	96.2	80 - 120	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	97.4	100	97.4	80 - 120	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	98.4	100	98.4	80 - 120	W636116	11-Sep-16	
EPA 7471B	Mercury	mg/kg	0.778	0.833	93.4	80 - 120	W637069	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.793	0.833	95.2	80 - 120	W637067	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.818	0.833	98.2	80 - 120	W637068	07-Sep-16	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 6020A	Arsenic	mg/kg	29.3	26.7	2.50	106	75 - 125	W636082	09-Sep-16	D1
EPA 6020A	Arsenic	mg/kg	22.3	18.6	2.50	R > 4S	75 - 125	W636083	09-Sep-16	D1,M3
EPA 6020A	Lead	mg/kg	766	749	2.50	R > 4S	75 - 125	W636083	08-Sep-16	D2,M3
EPA 6020A	Lead	mg/kg	1920	1990	2.50	R > 4S	75 - 125	W636082	08-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.61	1.79	2.50	73.1	75 - 125	W636082	09-Sep-16	D1,M2
EPA 6020A	Selenium	mg/kg	3.79	1.59	2.50	88.0	75 - 125	W636083	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Antimony	mg/kg	103	4.0	100	99.1	75 - 125	W636121	08-Sep-16	
EPA 6010C	Antimony	mg/kg	102	12.2	100	90.2	75 - 125	W636123	09-Sep-16	
EPA 6010C	Barium	mg/kg	321	210	100	111	75 - 125	W636118	11-Sep-16	
EPA 6010C	Barium	mg/kg	332	215	100	118	75 - 125	W636116	11-Sep-16	
EPA 6010C	Cadmium	mg/kg	101	1.58	100	99.8	75 - 125	W636116	09-Sep-16	
EPA 6010C	Cadmium	mg/kg	107	2.97	100	104	75 - 125	W636118	11-Sep-16	
EPA 6010C	Chromium	mg/kg	117	15.5	100	102	75 - 125	W636116	09-Sep-16	
EPA 6010C	Chromium	mg/kg	119	17.4	100	102	75 - 125	W636118	11-Sep-16	
EPA 6010C	Copper	mg/kg	132	26.2	100	106	75 - 125	W636116	09-Sep-16	
EPA 6010C	Copper	mg/kg	170	56.7	100	113	75 - 125	W636118	11-Sep-16	
EPA 6010C	Iron	mg/kg	23500	20800	1000	R > 4S	75 - 125	W636118	11-Sep-16	M3
EPA 6010C	Iron	mg/kg	18200	15600	1000	R > 4S	75 - 125	W636116	11-Sep-16	M3
EPA 6010C	Manganese	mg/kg	1360	1270	100	91.8	75 - 125	W636118	11-Sep-16	
EPA 6010C	Manganese	mg/kg	930	827	100	103	75 - 125	W636116	11-Sep-16	
EPA 6010C	Silver	mg/kg	6.61	1.25	5.00	107	75 - 125	W636116	09-Sep-16	
EPA 6010C	Silver	mg/kg	7.35	2.31	5.00	101	75 - 125	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	828	742	100	85.4	75 - 125	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	416	305	100	111	75 - 125	W636116	11-Sep-16	
EPA 7471B	Mercury	mg/kg	0.353	0.053	0.333	90.0	75 - 125	W637069	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.365	0.052	0.333	94.0	75 - 125	W637067	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.362	0.046	0.333	94.8	75 - 125	W637068	07-Sep-16	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)											
EPA 6020A	Arsenic	mg/kg	29.4	29.3	2.50	107	0.1	20	W636082	09-Sep-16	D1
EPA 6020A	Arsenic	mg/kg	21.1	22.3	2.50	103	5.6	20	W636083	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	1870	1920	2.50	R > 4S	2.5	20	W636082	08-Sep-16	D2,M3
EPA 6020A	Lead	mg/kg	796	766	2.50	R > 4S	3.7	20	W636083	08-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.78	3.61	2.50	79.9	4.6	20	W636082	09-Sep-16	D1
EPA 6020A	Selenium	mg/kg	3.73	3.79	2.50	85.4	1.7	20	W636083	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010C	Antimony	mg/kg	102	103	100	98.4	0.7	20	W636121	08-Sep-16	
EPA 6010C	Antimony	mg/kg	101	102	100	88.3	1.9	20	W636123	09-Sep-16	
EPA 6010C	Barium	mg/kg	324	332	100	109	2.5	20	W636116	11-Sep-16	
EPA 6010C	Barium	mg/kg	331	321	100	122	3.4	20	W636118	11-Sep-16	
EPA 6010C	Cadmium	mg/kg	98.2	101	100	96.6	3.2	20	W636116	09-Sep-16	
EPA 6010C	Cadmium	mg/kg	110	107	100	107	2.5	20	W636118	11-Sep-16	
EPA 6010C	Chromium	mg/kg	115	117	100	99.2	2.4	20	W636116	09-Sep-16	
EPA 6010C	Chromium	mg/kg	123	119	100	106	3.2	20	W636118	11-Sep-16	
EPA 6010C	Copper	mg/kg	128	132	100	102	3.0	20	W636116	09-Sep-16	
EPA 6010C	Copper	mg/kg	173	170	100	116	2.1	20	W636118	11-Sep-16	
EPA 6010C	Iron	mg/kg	17600	18200	1000	R > 4S	3.1	20	W636116	11-Sep-16	M3
EPA 6010C	Iron	mg/kg	23900	23500	1000	R > 4S	1.9	20	W636118	11-Sep-16	M3
EPA 6010C	Manganese	mg/kg	908	930	100	80.7	2.5	20	W636116	11-Sep-16	
EPA 6010C	Manganese	mg/kg	1390	1360	100	123	2.2	20	W636118	11-Sep-16	
EPA 6010C	Silver	mg/kg	7.05	6.61	5.00	116	6.4	20	W636116	09-Sep-16	
EPA 6010C	Silver	mg/kg	7.49	7.35	5.00	104	1.9	20	W636118	11-Sep-16	
EPA 6010C	Zinc	mg/kg	407	416	100	102	2.0	20	W636116	11-Sep-16	
EPA 6010C	Zinc	mg/kg	839	828	100	96.5	1.3	20	W636118	11-Sep-16	
EPA 7471B	Mercury	mg/kg	0.360	0.365	0.333	92.5	1.4	20	W637067	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.367	0.362	0.333	96.3	1.4	20	W637068	07-Sep-16	
EPA 7471B	Mercury	mg/kg	0.360	0.353	0.333	92.0	1.9	20	W637069	07-Sep-16	

Quality Control - POST DIGESTION SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 6020A	Selenium	mg/kg	23.1	1.79	20.0	106	75 - 125	W636082	09-Sep-16	D1

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0616**
Reported: 12-Sep-16 09:37

Notes and Definitions

B7	Target analyte detected in method blank exceeded method QC limits, but concentrations in the samples are at least 10x the blank concentration.
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GT-08-PL-SS1	W6H0618-01	Soil	18-Aug-16 08:00	25-Aug-2016	
GT-07-PL-SS1	W6H0618-02	Soil	18-Aug-16 08:15	25-Aug-2016	
GT-06-PL-SS1	W6H0618-03	Soil	18-Aug-16 08:45	25-Aug-2016	
GT-05-PL-SS1	W6H0618-04	Soil	18-Aug-16 09:00	25-Aug-2016	
GT-04-PL-SS1 (-60)	W6H0618-05	Soil	18-Aug-16 09:10	25-Aug-2016	
GT-04-PL-SS1 (-10)	W6H0618-06	Soil	18-Aug-16 09:10	25-Aug-2016	
GT-32-PL-SS1 (-60)	W6H0618-07	Soil	18-Aug-16 09:25	25-Aug-2016	
GT-32-PL-SS1 (-10)	W6H0618-08	Soil	18-Aug-16 09:25	25-Aug-2016	
GT-32-PL-SS2 (-60)	W6H0618-09	Soil	18-Aug-16 09:30	25-Aug-2016	
GT-32-PL-SS2 (-10)	W6H0618-10	Soil	18-Aug-16 09:30	25-Aug-2016	
GT-32-PL-SS3	W6H0618-11	Soil	18-Aug-16 10:15	25-Aug-2016	
GT-32-PL-SS4	W6H0618-12	Soil	18-Aug-16 10:20	25-Aug-2016	
GT-32-PL-SW1	W6H0618-13	Water	18-Aug-16 10:30	25-Aug-2016	
GT-01-PL-SS1 (-60)	W6H0618-14	Soil	18-Aug-16 10:45	25-Aug-2016	
GT-01-PL-SS1 (-10)	W6H0618-15	Soil	18-Aug-16 10:45	25-Aug-2016	
GT-01-PL-SS2	W6H0618-16	Soil	18-Aug-16 11:00	25-Aug-2016	
GT-01-PL-SS3	W6H0618-17	Soil	18-Aug-16 11:05	25-Aug-2016	
GT-02-PL-SS1	W6H0618-18	Soil	18-Aug-16 11:30	25-Aug-2016	
GT-02-PL-SS2	W6H0618-19	Soil	18-Aug-16 11:30	25-Aug-2016	
GT-02-PL-SS3	W6H0618-20	Soil	18-Aug-16 11:30	25-Aug-2016	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-08-PL-SS1**
SVL Sample ID: **W6H0618-01 (Soil)**

Sampled: 18-Aug-16 08:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	16.4	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 07:55	D1,M3
EPA 6020A	**Lead**	927	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:33	D2,M3
EPA 6020A	**Selenium**	1.61	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 07:55	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	7.9	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:09	
EPA 6010C	**Barium**	268	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:25	M1
EPA 6010C	**Cadmium**	2.26	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:25	
EPA 6010C	**Chromium**	16.7	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:25	
EPA 6010C	**Copper**	37.6	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:25	
EPA 6010C	**Iron**	15700	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:25	M3
EPA 6010C	**Manganese**	733	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:25	
EPA 6010C	**Silver**	1.68	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:25	
EPA 6010C	**Zinc**	547	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:25	M3
EPA 7471B	**Mercury**	0.137	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:16	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-07-PL-SS1**
SVL Sample ID: **W6H0618-02 (Soil)**

Sampled: 18-Aug-16 08:15
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	12.0	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:03	D1
EPA 6020A	**Lead**	326	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:42	D2
EPA 6020A	**Selenium**	2.09	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:03	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.7	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:17	
EPA 6010C	**Barium**	233	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Cadmium**	1.66	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Chromium**	18.5	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Copper**	26.1	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Iron**	19800	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Manganese**	1120	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Silver**	1.00	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:34	
EPA 6010C	**Zinc**	327	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:34	
EPA 7471B	**Mercury**	0.046	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:18	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-06-PL-SS1**
SVL Sample ID: **W6H0618-03 (Soil)**

Sampled: 18-Aug-16 08:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	11.9	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:06	D1
EPA 6020A	**Lead**	328	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:44	D2
EPA 6020A	**Selenium**	1.89	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:06	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.1	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:20	
EPA 6010C	**Barium**	215	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Cadmium**	1.84	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Chromium**	17.4	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Copper**	25.0	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Iron**	18900	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Manganese**	1070	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Silver**	1.15	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:37	
EPA 6010C	**Zinc**	332	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:37	
EPA 7471B	**Mercury**	0.039	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:23	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-05-PL-SS1**
SVL Sample ID: **W6H0618-04 (Soil)**

Sampled: 18-Aug-16 09:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	10.9	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:08	D1
EPA 6020A	**Lead**	212	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:46	D2
EPA 6020A	**Selenium**	2.02	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:08	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	5.5	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:23	
EPA 6010C	**Barium**	253	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Cadmium**	1.31	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Chromium**	17.9	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Copper**	22.7	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Iron**	19800	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Manganese**	1240	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Silver**	1.00	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:40	
EPA 6010C	**Zinc**	221	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:40	
EPA 7471B	**Mercury**	0.053	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:25	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-04-PL-SS1 (-60)**
SVL Sample ID: **W6H0618-05 (Soil)**

Sampled: 18-Aug-16 09:10
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	16.5	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:10	D1
EPA 6020A	**Lead**	519	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:49	D2
EPA 6020A	**Selenium**	2.09	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:10	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	8.5	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:26	
EPA 6010C	**Barium**	244	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Cadmium**	2.17	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Chromium**	19.3	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Copper**	29.9	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Iron**	22000	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Manganese**	1300	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Silver**	1.34	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:44	
EPA 6010C	**Zinc**	448	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:44	
EPA 7471B	**Mercury**	0.069	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:27	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-04-PL-SS1 (-10)**
SVL Sample ID: **W6H0618-06 (Soil)**

Sampled: 18-Aug-16 09:10
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	17.1	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:16	D1
EPA 6020A	**Lead**	564	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:55	D2
EPA 6020A	**Selenium**	2.09	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:16	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	9.0	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:29	
EPA 6010C	**Barium**	251	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Cadmium**	2.29	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Chromium**	19.2	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Copper**	31.6	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Iron**	22200	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Manganese**	1370	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Silver**	1.34	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:47	
EPA 6010C	**Zinc**	476	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:47	
EPA 7471B	**Mercury**	0.072	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:32	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS1 (-60)**
SVL Sample ID: **W6H0618-07 (Soil)**

Sampled: 18-Aug-16 09:25
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	113	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:18	D1
EPA 6020A	**Lead**	10600	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 06:57	D2
EPA 6020A	**Selenium**	1.65	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:18	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	65.8	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:38	
EPA 6010C	**Barium**	201	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Cadmium**	8.08	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Chromium**	15.7	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Copper**	194	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Iron**	32200	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Manganese**	1410	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Silver**	11.3	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 11:59	
EPA 6010C	**Zinc**	2440	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 11:59	
EPA 7471B	**Mercury**	0.282	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:34	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

SVL holds the following certifications:
AZ:0538, **CA**:2080, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **UT**(**TNI**):ID000192015-1, **WA**:C573

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IDEQ (Boise)
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS1 (-10)**
SVL Sample ID: **W6H0618-08 (Soil)**

Sampled: 18-Aug-16 09:25
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	97.2	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:20	D1
EPA 6020A	**Lead**	8840	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:00	D2
EPA 6020A	**Selenium**	1.54	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:20	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	54.1	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:41	
EPA 6010C	**Barium**	204	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Cadmium**	8.41	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Chromium**	14.8	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Copper**	156	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Iron**	29800	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Manganese**	1490	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Silver**	17.6	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:02	
EPA 6010C	**Zinc**	2530	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:02	
EPA 7471B	**Mercury**	0.593	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:36	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS2 (-60)**
SVL Sample ID: **W6H0618-09 (Soil)**

Sampled: 18-Aug-16 09:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	340	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:23	D2
EPA 6020A	**Lead**	20900	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:02	D2
EPA 6020A	**Selenium**	1.30	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:23	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	216	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:44	
EPA 6010C	**Barium**	376	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Cadmium**	55.7	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Chromium**	18.1	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Copper**	526	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Iron**	67300	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Manganese**	8470	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 12:05	D2
EPA 6010C	**Silver**	16.6	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 12:05	D1
EPA 6010C	**Zinc**	15400	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 12:05	D2
EPA 7471B	**Mercury**	1.02	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:37	

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1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS2 (-10)**
SVL Sample ID: **W6H0618-10 (Soil)**

Sampled: 18-Aug-16 09:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	427	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:25	D2
EPA 6020A	**Lead**	23900	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:04	D2
EPA 6020A	**Selenium**	1.24	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:25	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	262	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:47	
EPA 6010C	**Barium**	388	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Cadmium**	61.0	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Chromium**	18.2	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Copper**	566	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Iron**	72900	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Manganese**	9190	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 12:09	D2
EPA 6010C	**Silver**	17.3	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 12:09	D1
EPA 6010C	**Zinc**	17500	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 12:09	D2
EPA 7471B	**Mercury**	1.14	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:39	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS3**
SVL Sample ID: **W6H0618-11 (Soil)**

Sampled: 18-Aug-16 10:15
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	16.7	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:27	D1
EPA 6020A	**Lead**	798	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:06	D2
EPA 6020A	**Selenium**	1.25	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:27	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	7.0	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:50	
EPA 6010C	**Barium**	162	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Cadmium**	0.87	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Chromium**	12.8	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Copper**	24.9	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Iron**	12500	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Manganese**	511	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Silver**	1.56	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:12	
EPA 6010C	**Zinc**	188	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:12	
EPA 7471B	**Mercury**	0.042	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:41	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SS4**
SVL Sample ID: **W6H0618-12 (Soil)**

Sampled: 18-Aug-16 10:20
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	243	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:29	D2
EPA 6020A	**Lead**	23800	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:08	D2
EPA 6020A	**Selenium**	2.27	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:29	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	140	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:52	
EPA 6010C	**Barium**	354	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Cadmium**	12.0	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Chromium**	10.0	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Copper**	578	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Iron**	48500	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Manganese**	1290	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Silver**	26.0	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 12:15	D1
EPA 6010C	**Zinc**	4570	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 12:15	D2
EPA 7471B	**Mercury**	0.615	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:43	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-32-PL-SW1**
SVL Sample ID: **W6H0618-13 (Water)**

Sampled: 18-Aug-16 10:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		W636247	MWD	09/06/16 13:16	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Antimony	< 0.020	mg/L	0.020	0.004		W636140	AS	09/09/16 08:48	
EPA 200.7	Barium	< 0.0020	mg/L	0.0020	0.0005		W636140	AS	09/09/16 08:48	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0004		W636140	AS	09/09/16 08:48	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0008		W636140	AS	09/09/16 08:48	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0013		W636140	AS	09/09/16 08:48	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.020		W636140	AS	09/09/16 08:48	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0012		W636140	AS	09/09/16 08:48	
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0008		W636140	AS	09/09/16 08:48	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.001		W636140	AS	09/09/16 08:48	
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00023	2	W636115	KWH	09/08/16 10:18	
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.000075	2	W636115	KWH	09/08/16 10:18	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002	2	W636115	KWH	09/08/16 10:18	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-01-PL-SS1 (-60)**
SVL Sample ID: **W6H0618-14 (Soil)**

Sampled: 18-Aug-16 10:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	84.5	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:31	D1
EPA 6020A	**Lead**	4510	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:10	D2
EPA 6020A	**Selenium**	1.60	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:31	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	51.5	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:55	
EPA 6010C	**Barium**	247	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Cadmium**	13.9	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Chromium**	16.6	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Copper**	141	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Iron**	28100	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Manganese**	2450	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Silver**	4.18	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:43	
EPA 6010C	**Zinc**	3920	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:43	
EPA 7471B	**Mercury**	0.202	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:45	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-01-PL-SS1 (-10)**
SVL Sample ID: **W6H0618-15 (Soil)**

Sampled: 18-Aug-16 10:45
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	98.0	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:33	D1
EPA 6020A	**Lead**	4100	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:12	D2
EPA 6020A	**Selenium**	1.32	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:33	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	50.5	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 12:58	
EPA 6010C	**Barium**	180	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Cadmium**	10.6	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Chromium**	12.0	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Copper**	128	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Iron**	23900	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Manganese**	1790	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Silver**	3.23	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:46	
EPA 6010C	**Zinc**	3720	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:46	
EPA 7471B	**Mercury**	0.175	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:46	

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IDEQ (Boise)
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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-01-PL-SS2**
SVL Sample ID: **W6H0618-16 (Soil)**

Sampled: 18-Aug-16 11:00
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	16.1	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:35	D1
EPA 6020A	**Lead**	612	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:14	D2
EPA 6020A	**Selenium**	1.74	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:35	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	9.2	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 13:01	
EPA 6010C	**Barium**	237	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Cadmium**	2.41	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Chromium**	17.2	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Copper**	32.1	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Iron**	20500	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Manganese**	1140	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Silver**	0.93	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:50	
EPA 6010C	**Zinc**	538	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:50	
EPA 7471B	**Mercury**	0.038	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:48	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-01-PL-SS3**
SVL Sample ID: **W6H0618-17 (Soil)**

Sampled: 18-Aug-16 11:05
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	13.2	mg/kg Dry	0.300	0.009	2	W636081	KWH	09/09/16 08:42	D1
EPA 6020A	**Lead**	379	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:21	D2
EPA 6020A	**Selenium**	1.93	mg/kg Dry	0.30	0.03	2	W636081	KWH	09/09/16 08:42	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	6.9	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 13:04	
EPA 6010C	**Barium**	212	mg/kg Dry	0.20	0.14		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Cadmium**	1.66	mg/kg Dry	0.20	0.06		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Chromium**	16.5	mg/kg Dry	0.60	0.13		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Copper**	24.0	mg/kg Dry	1.00	0.16		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Iron**	19200	mg/kg Dry	10.0	4.0		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Manganese**	915	mg/kg Dry	0.80	0.22		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Silver**	0.67	mg/kg Dry	0.50	0.14		W636120	SMB	09/12/16 12:53	
EPA 6010C	**Zinc**	366	mg/kg Dry	1.0	0.5		W636120	SMB	09/12/16 12:53	
EPA 7471B	Mercury	< 0.033	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:54	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-02-PL-SS1**
SVL Sample ID: **W6H0618-18 (Soil)**

Sampled: 18-Aug-16 11:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	442	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:44	D2
EPA 6020A	**Lead**	23900	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:23	D2
EPA 6020A	**Selenium**	1.55	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:44	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	231	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 13:13	
EPA 6010C	**Barium**	290	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 12:56	D1
EPA 6010C	**Cadmium**	67.5	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 12:56	D1
EPA 6010C	**Chromium**	21.2	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 12:56	D1
EPA 6010C	**Copper**	856	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 12:56	D1
EPA 6010C	**Iron**	81100	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 12:56	D2
EPA 6010C	**Manganese**	6860	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 12:56	D2
EPA 6010C	**Silver**	20.8	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 12:56	D1
EPA 6010C	**Zinc**	24000	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 12:56	D2
EPA 7471B	**Mercury**	1.10	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:55	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-02-PL-SS2**
SVL Sample ID: **W6H0618-19 (Soil)**

Sampled: 18-Aug-16 11:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	466	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:46	D2
EPA 6020A	**Lead**	24600	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:25	D2
EPA 6020A	**Selenium**	1.71	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:46	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	254	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 13:16	
EPA 6010C	**Barium**	262	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 13:00	D1
EPA 6010C	**Cadmium**	61.4	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 13:00	D1
EPA 6010C	**Chromium**	18.8	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 13:00	D1
EPA 6010C	**Copper**	804	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 13:00	D1
EPA 6010C	**Iron**	76000	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 13:00	D2
EPA 6010C	**Manganese**	6420	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 13:00	D2
EPA 6010C	**Silver**	20.0	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 13:00	D1
EPA 6010C	**Zinc**	21300	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 13:00	D2
EPA 7471B	**Mercury**	1.10	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:57	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Client Sample ID: **GT-02-PL-SS3**
SVL Sample ID: **W6H0618-20 (Soil)**

Sampled: 18-Aug-16 11:30
Received: 25-Aug-16
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) (Sieved)										
EPA 6020A	**Arsenic**	452	mg/kg Dry	0.750	0.024	5	W636081	KWH	09/09/16 08:48	D2
EPA 6020A	**Lead**	23600	mg/kg Dry	5.00	0.825	250	W636081	KWH	09/09/16 07:27	D2
EPA 6020A	**Selenium**	1.61	mg/kg Dry	0.50	0.07	5	W636081	KWH	09/09/16 08:48	D1
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010C	**Antimony**	244	mg/kg Dry	2.0	0.5		W636125	AS	09/06/16 13:19	
EPA 6010C	**Barium**	272	mg/kg Dry	2.00	1.40	10	W636120	SMB	09/12/16 13:03	D1
EPA 6010C	**Cadmium**	65.3	mg/kg Dry	2.00	0.59	10	W636120	SMB	09/12/16 13:03	D1
EPA 6010C	**Chromium**	19.8	mg/kg Dry	6.00	1.30	10	W636120	SMB	09/12/16 13:03	D1
EPA 6010C	**Copper**	830	mg/kg Dry	10.0	1.60	10	W636120	SMB	09/12/16 13:03	D1
EPA 6010C	**Iron**	78100	mg/kg Dry	100	40.0	10	W636120	SMB	09/12/16 13:03	D2
EPA 6010C	**Manganese**	6450	mg/kg Dry	8.00	2.20	10	W636120	SMB	09/12/16 13:03	D2
EPA 6010C	**Silver**	20.1	mg/kg Dry	5.00	1.40	10	W636120	SMB	09/12/16 13:03	D1
EPA 6010C	**Zinc**	23000	mg/kg Dry	10.0	4.8	10	W636120	SMB	09/12/16 13:03	D2
EPA 7471B	**Mercury**	1.02	mg/kg Dry	0.033	0.009		W637068	MWD	09/07/16 18:59	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000053	0.00020	W636247	06-Sep-16	
EPA 6020A	Arsenic	mg/kg	<0.300	0.009	0.300	W636081	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	<0.100	0.007	0.100	W636081	09-Sep-16	
EPA 6020A	Selenium	mg/kg	<0.30	0.03	0.30	W636081	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010C	Antimony	mg/kg	<2.0	0.5	2.0	W636125	06-Sep-16	
EPA 6010C	Barium	mg/kg	<0.20	0.14	0.20	W636120	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	<0.20	0.06	0.20	W636120	12-Sep-16	
EPA 6010C	Chromium	mg/kg	<0.60	0.13	0.60	W636120	12-Sep-16	
EPA 6010C	Copper	mg/kg	<1.00	0.16	1.00	W636120	12-Sep-16	
EPA 6010C	Iron	mg/kg	<10.0	4.0	10.0	W636120	12-Sep-16	
EPA 6010C	Manganese	mg/kg	<0.80	0.22	0.80	W636120	12-Sep-16	
EPA 6010C	Silver	mg/kg	<0.50	0.14	0.50	W636120	12-Sep-16	
EPA 6010C	Zinc	mg/kg	<1.0	0.5	1.0	W636120	12-Sep-16	
EPA 7471B	Mercury	mg/kg	<0.033	0.009	0.033	W637068	07-Sep-16	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.7	Antimony	mg/L	<0.020	0.004	0.020	W636140	09-Sep-16	
EPA 200.7	Barium	mg/L	<0.0020	0.0005	0.0020	W636140	09-Sep-16	
EPA 200.7	Cadmium	mg/L	<0.0020	0.0004	0.0020	W636140	09-Sep-16	
EPA 200.7	Chromium	mg/L	<0.0060	0.0008	0.0060	W636140	09-Sep-16	
EPA 200.7	Copper	mg/L	<0.0100	0.0013	0.0100	W636140	09-Sep-16	
EPA 200.7	Iron	mg/L	<0.100	0.020	0.100	W636140	09-Sep-16	
EPA 200.7	Manganese	mg/L	<0.0080	0.0012	0.0080	W636140	09-Sep-16	
EPA 200.7	Silver	mg/L	<0.0050	0.0008	0.0050	W636140	09-Sep-16	
EPA 200.7	Zinc	mg/L	<0.010	0.001	0.010	W636140	09-Sep-16	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00023	0.00300	W636115	08-Sep-16	
EPA 200.8	Lead	mg/L	<0.00300	0.000075	0.00300	W636115	08-Sep-16	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	W636115	08-Sep-16	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 245.1	Mercury	mg/L	0.00482	0.00500	96.4	85 - 115	W636247	06-Sep-16	
EPA 6020A	Arsenic	mg/kg	2.36	2.50	94.3	80 - 120	W636081	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	2.48	2.50	99.1	80 - 120	W636081	09-Sep-16	
EPA 6020A	Selenium	mg/kg	2.33	2.50	93.3	80 - 120	W636081	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010C	Antimony	mg/kg	95.0	100	95.0	80 - 120	W636125	06-Sep-16	
EPA 6010C	Barium	mg/kg	97.4	100	97.4	80 - 120	W636120	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	93.7	100	93.7	80 - 120	W636120	12-Sep-16	
EPA 6010C	Chromium	mg/kg	98.6	100	98.6	80 - 120	W636120	12-Sep-16	
EPA 6010C	Copper	mg/kg	98.6	100	98.6	80 - 120	W636120	12-Sep-16	
EPA 6010C	Iron	mg/kg	950	1000	95.0	80 - 120	W636120	12-Sep-16	
EPA 6010C	Manganese	mg/kg	95.7	100	95.7	80 - 120	W636120	12-Sep-16	
EPA 6010C	Silver	mg/kg	4.88	5.00	97.6	80 - 120	W636120	12-Sep-16	
EPA 6010C	Zinc	mg/kg	92.1	100	92.1	80 - 120	W636120	12-Sep-16	
EPA 7471B	Mercury	mg/kg	0.818	0.833	98.2	80 - 120	W637068	07-Sep-16	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.7	Antimony	mg/L	1.03	1.00	103	85 - 115	W636140	09-Sep-16	

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136) (Continued)									
EPA 200.7	Barium	mg/L	1.02	1.00	102	85 - 115	W636140	09-Sep-16	
EPA 200.7	Cadmium	mg/L	1.02	1.00	102	85 - 115	W636140	09-Sep-16	
EPA 200.7	Chromium	mg/L	1.02	1.00	102	85 - 115	W636140	09-Sep-16	
EPA 200.7	Copper	mg/L	1.01	1.00	101	85 - 115	W636140	09-Sep-16	
EPA 200.7	Iron	mg/L	10.0	10.0	100	85 - 115	W636140	09-Sep-16	
EPA 200.7	Manganese	mg/L	1.02	1.00	102	85 - 115	W636140	09-Sep-16	
EPA 200.7	Silver	mg/L	0.0534	0.0500	107	85 - 115	W636140	09-Sep-16	
EPA 200.7	Zinc	mg/L	1.00	1.00	100	85 - 115	W636140	09-Sep-16	
EPA 200.8	Arsenic	mg/L	0.0249	0.0250	99.6	85 - 115	W636115	08-Sep-16	
EPA 200.8	Lead	mg/L	0.0235	0.0250	94.2	85 - 115	W636115	08-Sep-16	
EPA 200.8	Selenium	mg/L	0.0243	0.0250	97.2	85 - 115	W636115	08-Sep-16	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 245.1	Mercury	mg/L	0.00097	<0.00020	0.00100	97.0	70 - 130	W636247	06-Sep-16	
EPA 245.1	Mercury	mg/L	0.00094	<0.00020	0.00100	93.9	70 - 130	W636247	06-Sep-16	
EPA 6020A	Arsenic	mg/kg	18.8	16.4	2.50	94.6	75 - 125	W636081	09-Sep-16	D1
EPA 6020A	Lead	mg/kg	900	927	2.50	R > 4S	75 - 125	W636081	09-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.68	1.61	2.50	82.9	75 - 125	W636081	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Antimony	mg/kg	102	7.9	100	94.6	75 - 125	W636125	06-Sep-16	
EPA 6010C	Barium	mg/kg	394	268	100	126	75 - 125	W636120	12-Sep-16	M1
EPA 6010C	Cadmium	mg/kg	103	2.26	100	101	75 - 125	W636120	12-Sep-16	
EPA 6010C	Chromium	mg/kg	119	16.7	100	102	75 - 125	W636120	12-Sep-16	
EPA 6010C	Copper	mg/kg	149	37.6	100	111	75 - 125	W636120	12-Sep-16	
EPA 6010C	Iron	mg/kg	17800	15700	1000	R > 4S	75 - 125	W636120	12-Sep-16	M3
EPA 6010C	Manganese	mg/kg	834	733	100	102	75 - 125	W636120	12-Sep-16	
EPA 6010C	Silver	mg/kg	7.32	1.68	5.00	113	75 - 125	W636120	12-Sep-16	
EPA 6010C	Zinc	mg/kg	628	547	100	80.7	75 - 125	W636120	12-Sep-16	
EPA 7471B	Mercury	mg/kg	0.362	0.046	0.333	94.8	75 - 125	W637068	07-Sep-16	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Antimony	mg/L	1.04	<0.020	1.00	104	70 - 130	W636140	09-Sep-16	
EPA 200.7	Barium	mg/L	1.04	<0.0020	1.00	104	70 - 130	W636140	09-Sep-16	
EPA 200.7	Cadmium	mg/L	1.02	<0.0020	1.00	102	70 - 130	W636140	09-Sep-16	
EPA 200.7	Chromium	mg/L	1.03	<0.0060	1.00	103	70 - 130	W636140	09-Sep-16	
EPA 200.7	Copper	mg/L	1.04	<0.0100	1.00	104	70 - 130	W636140	09-Sep-16	
EPA 200.7	Iron	mg/L	10.2	<0.100	10.0	102	70 - 130	W636140	09-Sep-16	
EPA 200.7	Manganese	mg/L	1.03	<0.0080	1.00	103	70 - 130	W636140	09-Sep-16	
EPA 200.7	Silver	mg/L	0.0543	<0.0050	0.0500	109	70 - 130	W636140	09-Sep-16	
EPA 200.7	Zinc	mg/L	1.01	<0.010	1.00	101	70 - 130	W636140	09-Sep-16	
EPA 200.8	Arsenic	mg/L	0.864	0.848	0.0250	R > 4S	70 - 130	W636115	08-Sep-16	M3
EPA 200.8	Lead	mg/L	0.0221	<0.00300	0.0250	88.5	70 - 130	W636115	08-Sep-16	
EPA 200.8	Selenium	mg/L	0.184	0.160	0.0250	97.8	70 - 130	W636115	08-Sep-16	

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IDEQ (Boise)
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Boise, ID 83706

Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	%R	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)											
EPA 245.1	Mercury	mg/L	0.00093	0.00097	0.00100	92.9	4.3	20	W636247	06-Sep-16	
EPA 6020A	Arsenic	mg/kg	19.6	18.8	2.50	R > 4S	4.3	20	W636081	09-Sep-16	D1,M3
EPA 6020A	Lead	mg/kg	921	900	2.50	R > 4S	2.3	20	W636081	09-Sep-16	D2,M3
EPA 6020A	Selenium	mg/kg	3.89	3.68	2.50	91.0	5.4	20	W636081	09-Sep-16	D1
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010C	Antimony	mg/kg	104	102	100	96.2	1.6	20	W636125	06-Sep-16	
EPA 6010C	Barium	mg/kg	388	394	100	120	1.5	20	W636120	12-Sep-16	
EPA 6010C	Cadmium	mg/kg	101	103	100	98.7	1.9	20	W636120	12-Sep-16	
EPA 6010C	Chromium	mg/kg	118	119	100	101	0.8	20	W636120	12-Sep-16	
EPA 6010C	Copper	mg/kg	146	149	100	108	1.8	20	W636120	12-Sep-16	
EPA 6010C	Iron	mg/kg	17300	17800	1000	R > 4S	2.9	20	W636120	12-Sep-16	M3
EPA 6010C	Manganese	mg/kg	819	834	100	86.5	1.8	20	W636120	12-Sep-16	
EPA 6010C	Silver	mg/kg	7.13	7.32	5.00	109	2.6	20	W636120	12-Sep-16	
EPA 6010C	Zinc	mg/kg	609	628	100	R > 4S	3.0	20	W636120	12-Sep-16	M3
EPA 7471B	Mercury	mg/kg	0.367	0.362	0.333	96.3	1.4	20	W637068	07-Sep-16	
Metals (Total Recoverable--reportable as Total per 40 CFR 136)											
EPA 200.7	Antimony	mg/L	1.04	1.04	1.00	104	0.7	20	W636140	09-Sep-16	
EPA 200.7	Barium	mg/L	1.05	1.04	1.00	105	1.0	20	W636140	09-Sep-16	
EPA 200.7	Cadmium	mg/L	1.03	1.02	1.00	103	0.6	20	W636140	09-Sep-16	
EPA 200.7	Chromium	mg/L	1.03	1.03	1.00	103	0.1	20	W636140	09-Sep-16	
EPA 200.7	Copper	mg/L	1.04	1.04	1.00	104	0.3	20	W636140	09-Sep-16	
EPA 200.7	Iron	mg/L	10.2	10.2	10.0	102	0.5	20	W636140	09-Sep-16	
EPA 200.7	Manganese	mg/L	1.03	1.03	1.00	103	0.1	20	W636140	09-Sep-16	
EPA 200.7	Silver	mg/L	0.0541	0.0543	0.0500	108	0.3	20	W636140	09-Sep-16	
EPA 200.7	Zinc	mg/L	1.01	1.01	1.00	101	0.2	20	W636140	09-Sep-16	
EPA 200.8	Arsenic	mg/L	0.864	0.864	0.0250	R > 4S	0.0	20	W636115	08-Sep-16	M3
EPA 200.8	Lead	mg/L	0.0223	0.0221	0.0250	89.4	1.0	20	W636115	08-Sep-16	
EPA 200.8	Selenium	mg/L	0.185	0.184	0.0250	102	0.6	20	W636115	08-Sep-16	

Quality Control - POST DIGESTION SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010C	Barium	mg/kg	271	268	2.00	172	75 - 125	W636120	12-Sep-16	M3

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Project Name: Gilmore Townsite 2016 / 16088-02-02
Work Order: **W6H0618**
Reported: 12-Sep-16 13:51

Notes and Definitions

D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

August 31, 2017

MEMORANDUM

SUBJECT: Data Validation Report for the Gilmore Mine Waste Piles Integrated Assessment, Case# 47085, SDG: MJJ3S9, Inorganic Analyses

FROM: Don Matheny, Chemist
Environmental Services Unit, OERA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup

The quality assurance (QA) review of the analytical data generated from the analysis of thirteen water samples collected from the above referenced site has been completed. These samples were analyzed for total metals (including mercury) by Chemtech Consulting located in Mountainside, NJ.

Sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted according to the Quality Control Specifications outlined in:

- SQAP for Gilmore Mine Waste Piles Site, TerraGraphics (July, 2017)
- USEPA CLP Statement of Work for Inorganic Superfund Methods (ISM02.4)
- National Functional Guidelines for Inorganic Superfund Data Review (EPA-540-R-2017-001)
- Guidance for Labeling Externally Validated Laboratory Analytical Data (EPA-540-R08-005)

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt and analyses is attached along with the validated data.

I. QUALITY CONTROL RESULTS SUMMARY

The table below summarizes the major sample quality control (QC) tests, associated test results, criteria for evaluation and identification of outliers. Some criteria for evaluation may be QAPP specific and different from the National Functional Guidelines. Certain QC tests are electronically evaluated the results of which are not summarized in the table below though any excursions of these tests will appear in the *Data Qualifications* section. In addition to the QC tests, calculations from 10% of the samples are verified against the raw data.

QC Results Summary

Quality Control Test[1]	Result Ranges	Outliers[2] (Y or N)	Evaluation Criteria
Preservation / Holding Times	Holding Times met	N	Cool $\leq$ 6°C, pH <2 Metals 180 Days; Hg 28 Days
MS Tune	N/A	N/A	$\leq$ 0.1 amu; $\leq$ 5% RSD
Instrument Calibration	Calibration criteria met	N	$\pm$ 30% Difference; Corr. Coeff. $\geq$ 0.995
Calibration Verification	All checks passed	N	Metals 90 – 110% Recovery Hg 85 – 115% Recovery
Interference Check Std.	81 - 109%	N	80 – 120% Recovery
Lab Blanks	**Significant detects reported**	**Y**	**Not detected or <10% of Sample**
Matrix Spike	**48 - 142%**	**Y**	**75 - 125% Recovery**
Lab Duplicate	1% or $\pm$ CRQL	N	$\leq$ 20% RPD or $\pm$ CRQL
LCS (blank spike)	91 - 127%	N	70 - 130% Recovery
Serial Dilution[3]	1%	N	$\leq$ 15% Difference (soils)

[1] Lab QC (matrix spike, lab duplicate, serial dilution) were performed on sample MJJ3T6.

[2] See the "*Data Qualifications*" section below for QC excursions and qualification of affected data.

[3] The serial dilution analysis was limited to Calcium as the native concentrations of the remaining elements in the sample were too low for evaluating a 1:5 Serial Dilution.

II. DATA QUALIFICATIONS

Summary of Data Validation Qualifiers Applied

After the manual and electronic data review, the following data qualifications were applied:

1. **Blanks –** The following analytes have detected sample results < CRQLs and the associated laboratory blanks also had detects at concentrations < CRQL.

Data Qualifications: Sample results are qualified U and the values elevated to the CRQLs.
Qualified Analytical Results:
Iron - MJJ3T0, MJJ3T8, MJJ3W0
Lead - MJJ3T6, MJJ3T5, MJJ3T7
Manganese – MJJ3T8

2. **Detection / Quantitation Limits -** The following analytes have positively detected results < CRQLs (below the range of quantitation) and the associated laboratory blanks were not detected.

Data Qualifications: Sample results are qualified J with no indication of bias.
Qualified Analytical Results:
Aluminum – MJJ3T6, MJJ3W0, MJJ3T7, MJJ3T5
Arsenic – MJJ3T5, MJJ3T8, MJJ3S9
Barium - MJJ3T8, MJJ3T2, MJJ3S9, MJJ3T6, MJJ3T5, MJJ3T7
Calcium - MJJ3W0
Copper - MJJ3T0
Magnesium - MJJ3W0
Selenium - MJJ3T2, MJJ3T9
Sodium – MJJ3S9, MJJ3T0 - MJJ3T8, MJJ3W0
Zinc – MJJ3T0

3. **Matrix Spikes –** Silver had a low spike recovery (48%) and Thallium had a high recovery (142%). All Thallium results were non-detect and no qualification was needed. Field samples (not field blanks) were qualified for Silver as indicated below.

Data Qualifications: Sample results are qualified UJ and may be biased low.
Qualified Analytical Results:
Silver – MJJ3S9, MJJ3T2, MJJ3T5, MJJ3T6, MJJ3T7, MJJ3T8, MJJ3W0

Data Qualifiers

The data qualifiers and their respective definitions applied to the sample result(s) are provided as follows.

Functional Guidelines Data Qualifiers	
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The associated value is an estimated quantity.
UJ	The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The analyte may or may not be present in the sample.

III. SAMPLE INDEX

The sample listing dates of sample collection, laboratory receipt and analysis are provided below.

Sample ID	Matrix	Sample Date	Date Rec'd	ICP-AES Analysis	Mercury Analysis
MJJ3S9	Water	7/31/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T0	Water	7/31/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T1	Water	8/1/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T2	Water	8/2/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T3	Water	8/2/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T4	Water	8/3/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T5	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T6	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T7	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T8	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3T9	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3W0	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017
MJJ3W1	Water	8/5/2017	8/10/2017	8/15/2017	8/16/2017

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3S9	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 07/31/2017	Sample Time: 12:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3S9	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 07/31/2017	Sample Time: 12:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	4.7	J	ug/L	4.7	J	1.0	YES	S4VEM
Barium	Target	16.8	J	ug/L	16.8	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	22200		ug/L	22200		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	12700		ug/L	12700		1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	1230	J	ug/L	1230	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T0	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 07/31/2017	Sample Time: 16:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T0	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 07/31/2017	Sample Time: 16:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	5.3	J	ug/L	5.3	J	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	20.4	J	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	602	J	ug/L	602	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	36.6	J	ug/L	36.6	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T1	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/01/2017	Sample Time: 16:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T1	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/01/2017	Sample Time: 16:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	673	J	ug/L	673	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T2	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/02/2017	Sample Time: 15:52:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T2	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/02/2017	Sample Time: 15:52:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	16.7	J	ug/L	16.7	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	18400		ug/L	18400		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	10600		ug/L	10600		1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	4.1	J	ug/L	4.1	J	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	911	J	ug/L	911	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T3	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/02/2017	Sample Time: 17:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T3	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Gilmore Townsite	pH: 2	Sample Date: 08/02/2017	Sample Time: 17:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	691	J	ug/L	691	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T4	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/03/2017	Sample Time: 16:45:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T4	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/03/2017	Sample Time: 16:45:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	535	J	ug/L	535	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T5	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:00:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T5	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:00:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	61.9	J	ug/L	61.9	J	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	5.1	J	ug/L	5.1	J	1.0	YES	S4VEM
Barium	Target	51.0	J	ug/L	51.0	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	35600		ug/L	35600		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	164		ug/L	164		1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	5.7	J	1.0	YES	S4VEM
Magnesium	Target	17900		ug/L	17900		1.0	YES	S4VEM
Manganese	Target	29.0		ug/L	29.0		1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	1750	J	ug/L	1750	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T6	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T6	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	62.1	J	ug/L	62.1	J	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	51.0	J	ug/L	51.0	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	35200		ug/L	35200		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	146		ug/L	146		1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	3.5	J	1.0	YES	S4VEM
Magnesium	Target	17700		ug/L	17700		1.0	YES	S4VEM
Manganese	Target	26.9		ug/L	26.9		1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	1740	J	ug/L	1740	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T7	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3S9** | **Lab Code: CHM**

Sample Number: MJJ3T7	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 11:50:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	36.6	J	ug/L	36.6	J	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	51.0	J	ug/L	51.0	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	35300		ug/L	35300		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	123		ug/L	123		1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	4.4	J	1.0	YES	S4VEM
Magnesium	Target	17800		ug/L	17800		1.0	YES	S4VEM
Manganese	Target	27.2		ug/L	27.2		1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	1810	J	ug/L	1810	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T8	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 12:45:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T8	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 12:45:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	3.5	J	ug/L	3.5	J	1.0	YES	S4VEM
Barium	Target	32.6	J	ug/L	32.6	J	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	22700		ug/L	22700		1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	65.2	J	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	12800		ug/L	12800		1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	3.2	J	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	1890	J	ug/L	1890	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T9	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 13:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3T9	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Greater Gilmore Project Area	pH: 2	Sample Date: 08/05/2017	Sample Time: 13:30:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	5.3	J	ug/L	5.3	J	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3W0	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/05/2017	Sample Time: 16:00:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3W0	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/05/2017	Sample Time: 16:00:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	28.6	J	ug/L	28.6	J	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	2620	J	ug/L	2620	J	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	30.8	J	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	1120	J	ug/L	1120	J	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	UJ	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	390	J	ug/L	390	J	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3W1	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/05/2017	Sample Time: 16:15:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3S9	Lab Code: CHM

Sample Number: MJJ3W1	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: Background	pH: 2	Sample Date: 08/05/2017	Sample Time: 16:15:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Antimony	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Barium	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Calcium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Copper	Target	25.0	U	ug/L	25.0	U	1.0	YES	S4VEM
Iron	Target	100	U	ug/L	100	U	1.0	YES	S4VEM
Lead	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Magnesium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1.0	YES	S4VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1.0	YES	S4VEM
Potassium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1.0	YES	S4VEM
Silver	Target	10.0	U	ug/L	10.0	U*	1.0	YES	S4VEM
Sodium	Target	5000	U	ug/L	5000	U	1.0	YES	S4VEM
Thallium	Target	25.0	U	ug/L	25.0	U*	1.0	YES	S4VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1.0	YES	S4VEM
Zinc	Target	60.0	U	ug/L	60.0	U	1.0	YES	S4VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

August 31, 2017

MEMORANDUM

SUBJECT: Data Validation Report for the Gilmore Mine Waste Piles Integrated Assessment, Case# 47085, SDG: MJJ3W2, Inorganic Analyses

FROM: Don Matheny, Chemist
Environmental Services Unit, OERA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup

The quality assurance (QA) review of the analytical data generated from the analysis of twenty sediment samples collected from the above referenced site has been completed. These samples were analyzed for total metals (including mercury) by Chemtech Consulting located in Mountainside, NJ.

Sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted according to the Quality Control Specifications outlined in:

- SQAP for Gilmore Mine Waste Piles Site, TerraGraphics (July, 2017)
- USEPA CLP Statement of Work for Inorganic Superfund Methods (ISM02.4)
- National Functional Guidelines for Inorganic Superfund Data Review (EPA-540-R-2017-001)
- Guidance for Labeling Externally Validated Laboratory Analytical Data (EPA-540-R08-005)

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt and analyses is attached along with the validated data.

I. QUALITY CONTROL RESULTS SUMMARY

The table below summarizes the major sample quality control (QC) tests, associated test results, criteria for evaluation and identification of outliers. Some criteria for evaluation may be QAPP specific and different from the National Functional Guidelines. Certain QC tests are electronically evaluated the results of which are not summarized in the table below though any excursions of these tests will appear in the *Data Qualifications* section. In addition to the QC tests, calculations from 10% of the samples are verified against the raw data.

QC Results Summary

Quality Control Test[1]	Result Ranges	Outliers[2] (Y or N)	Evaluation Criteria
Preservation / Holding Times	Holding Times met	N	Cool $\leq$ 6°C Metals 180 Days; Hg 28 Days
MS Tune	N/A	N/A	$\leq$ 0.1 amu; $\leq$ 5% RSD
Instrument Calibration	Calibration criteria met	N	$\pm$ 30% Difference; Corr. Coeff. $\geq$ 0.995
Calibration Verification	All checks passed	N	Metals 90 – 110% Recovery Hg 85 – 115% Recovery
Interference Check Std.	86 - 110%	N	80 – 120% Recovery
Lab Blanks	**Significant detects reported**	**Y**	**Not detected or <10% of Sample**
Matrix Spike[3]	**19 - 107%**	**Y**	**75 - 125% Recovery**
Lab Duplicate	$\leq$ 2% or $\pm$ 2xCRQL	N	$\leq$ 35% RPD or $\pm$ 2xCRQL
LCS (blank spike)	92 - 124%	N	70 - 130% Recovery
Serial Dilution[4]	**$\leq$ 20%**	**Y**	**$\leq$ 15% Difference (soils)**

[1] Lab QC (matrix spike, lab duplicate, serial dilution) were performed on sample MJJ3X2.

[2] See the "*Data Qualifications*" section below for QC excursions and qualification of affected data.

[3] The Matrix Spike recovery was not evaluated for Arsenic, Copper, Lead, Manganese and Zinc because the native concentrations of these elements in the sample exceeded the spike concentration by > 4x.

[4] The Serial Dilution evaluation was not performed for Beryllium, Chromium, Cobalt, Nickel, Potassium, Selenium, Sodium and Thallium as the native concentrations of these elements in the sample were too low for evaluating a 1:5 Serial Dilution.

II. DATA QUALIFICATIONS

Summary of Data Validation Qualifiers Applied

After the manual and electronic data review, the following data qualifications were applied:

1. **Detection / Quantitation Limits -** The following analytes have positively detected results < CRQLs (below the range of quantitation) and the associated laboratory blanks were not detected.

Data Qualifications: Sample results are qualified J with no indication of bias.
Qualified Analytical Results:
Antimony – MJJ3X5, MJJ3X9
Beryllium – MJJ3W7, MJJ3X6, MJJ3X7, MJJ3X8
Cadmium - MJJ3W7, MJJ3X8, MJJ3X6
Chromium - MJJ3X3
Cobalt - MJJ3W7, MJJ3W8, MJJ3X5, MJJ3X6, MJJ3X7, MJJ3X8
Mercury - MJJ3W7, MJJ3X5, MJJ3X6, MJJ3X7, MJJ3X8, MJJ3X9
Nickel - MJJ3W2, MJJ3W6, MJJ3W8, MJJ3X0, MJJ3X6, MJJ3X7, MJJ3X8
Potassium - MJJ3X6, MJJ3X7, MJJ3X8
Silver - MJJ3X9
Sodium – MJJ3W7 - MJJ3W9, MJJ3X1, MJJ3X2, MJJ3X4 - MJJ3X9, MJJ3Y0, MJJ3Y1
Vanadium – MJJ3X8

2. **Matrix Spikes –** Selenium (19%) and Silver (40%) had matrix spike recoveries that were below the 75 – 125% acceptance criteria. Selenium had a post spike recovery of 0% and all sample values were non-detect. Selenium data were qualified R (rejected). For Silver, sample values reported above the CRQL were qualified J and non-detects UJ (see list of qualified samples below).

Qualified Analytical Results:	
Selenium –	All samples
Silver –	MJJ3W2 - MJJ3X8, MJJ3Y0, MJJ3Y1

3. **Serial Dilution** – The following analytes had percent differences the exceeded the serial dilution 15% criteria for soil/sediments.

Data Qualifications: Sample results above the CRQL are qualified J.	
Qualified Analytical Results:	
Iron (18%) -	All samples
Magnesium (20%) -	All samples
Vanadium (19%) -	MJJ3W2 - MJJ3X7, MJJ3X9, MJJ3Y0, MJJ3Y1

Data Qualifiers

The data qualifiers and their respective definitions applied to the sample result(s) are provided as follows.

Functional Guidelines Data Qualifiers	
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The associated value is an estimated quantity.
UJ	The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The analyte may or may not be present in the sample.

III. SAMPLE INDEX

The sample listing dates of sample collection, laboratory receipt and analysis are provided below.

Sample ID	Matrix	Sample Date	Date Rec'd	ICP-AES Analysis	Mercury Analysis
MJJ3W2	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W3	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W4	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W5	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W6	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W7	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3W8	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3W9	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X0	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3X1	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3X2	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3X3	Sediment	8/4/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3X4	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X5	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X6	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X7	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X8	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3X9	Sediment	8/4/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3Y0	Sediment	8/5/2017	8/10/2017	8/11/2017	8/17/2017
MJJ3Y1	Sediment	8/5/2017	8/10/2017	8/11-14/2017	8/17/2017

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W2	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 10:30:00
% Moisture:		% Solids: 97.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	1.1		mg/kg	1.1		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W2	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 10:30:00
% Moisture:		% Solids: 97.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3470		mg/kg	3470		1.0	YES	S4VEM
Antimony	Target	158		mg/kg	158		1.0	YES	S4VEM
Arsenic	Target	577		mg/kg	577		1.0	YES	S4VEM
Barium	Target	231		mg/kg	231	*	1.0	YES	S4VEM
Beryllium	Target	0.95		mg/kg	0.95		1.0	YES	S4VEM
Cadmium	Target	48.5		mg/kg	48.5		1.0	YES	S4VEM
Calcium	Target	112000		mg/kg	112000	D	10.0	YES	S4VEM
Chromium	Target	0.73	U	mg/kg	0.73	U	1.0	YES	S4VEM
Cobalt	Target	4.2		mg/kg	4.2		1.0	YES	S4VEM
Copper	Target	780		mg/kg	780		1.0	YES	S4VEM
Iron	Target	102000	J	mg/kg	102000	D*	10.0	YES	S4VEM
Lead	Target	35700		mg/kg	35700	D	10.0	YES	S4VEM
Magnesium	Target	70000	J	mg/kg	70000	D*	10.0	YES	S4VEM
Manganese	Target	9310		mg/kg	9310	D	10.0	YES	S4VEM
Nickel	Target	1.6	J	mg/kg	1.6	J	1.0	YES	S4VEM
Potassium	Target	421		mg/kg	421		1.0	YES	S4VEM
Selenium	Target	2.5	R	mg/kg	2.5	U*	1.0	YES	S4VEM
Silver	Target	33.3	J	mg/kg	33.3	*	1.0	YES	S4VEM
Sodium	Target	768		mg/kg	768		1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	340	J	mg/kg	340	*	1.0	YES	S4VEM
Zinc	Target	23000		mg/kg	23000	D	20.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W3	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 10:40:00
% Moisture:		% Solids: 98.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.53		mg/kg	0.53		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3W3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 10:40:00
% Moisture:		% Solids: 98.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	7770		mg/kg	7770		1.0	YES	S4VEM
Antimony	Target	78.6		mg/kg	78.6		1.0	YES	S4VEM
Arsenic	Target	524		mg/kg	524		1.0	YES	S4VEM
Barium	Target	440		mg/kg	440	*	1.0	YES	S4VEM
Beryllium	Target	1.1		mg/kg	1.1		1.0	YES	S4VEM
Cadmium	Target	61.1		mg/kg	61.1		1.0	YES	S4VEM
Calcium	Target	81400		mg/kg	81400	D	10.0	YES	S4VEM
Chromium	Target	0.75	U	mg/kg	0.75	U	1.0	YES	S4VEM
Cobalt	Target	5.5		mg/kg	5.5		1.0	YES	S4VEM
Copper	Target	464		mg/kg	464		1.0	YES	S4VEM
Iron	Target	108000	J	mg/kg	108000	D*	10.0	YES	S4VEM
Lead	Target	15100		mg/kg	15100	D	10.0	YES	S4VEM
Magnesium	Target	42300	J	mg/kg	42300	*	1.0	YES	S4VEM
Manganese	Target	8540		mg/kg	8540	D	10.0	YES	S4VEM
Nickel	Target	7.2		mg/kg	7.2		1.0	YES	S4VEM
Potassium	Target	1150		mg/kg	1150		1.0	YES	S4VEM
Selenium	Target	2.6	R	mg/kg	2.6	U*	1.0	YES	S4VEM
Silver	Target	17.8	J	mg/kg	17.8	*	1.0	YES	S4VEM
Sodium	Target	778		mg/kg	778		1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	87.1	J	mg/kg	87.1	*	1.0	YES	S4VEM
Zinc	Target	17600		mg/kg	17600	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W4	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:00:00
% Moisture:		% Solids: 96.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.82		mg/kg	0.82		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:00:00
% Moisture:		% Solids: 96.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6120		mg/kg	6120		1.0	YES	S4VEM
Antimony	Target	92.7		mg/kg	92.7		1.0	YES	S4VEM
Arsenic	Target	416		mg/kg	416		1.0	YES	S4VEM
Barium	Target	345		mg/kg	345	*	1.0	YES	S4VEM
Beryllium	Target	0.81		mg/kg	0.81		1.0	YES	S4VEM
Cadmium	Target	41.9		mg/kg	41.9		1.0	YES	S4VEM
Calcium	Target	68400		mg/kg	68400	D	10.0	YES	S4VEM
Chromium	Target	0.77	U	mg/kg	0.77	U	1.0	YES	S4VEM
Cobalt	Target	5.1		mg/kg	5.1		1.0	YES	S4VEM
Copper	Target	611		mg/kg	611		1.0	YES	S4VEM
Iron	Target	75900	J	mg/kg	75900	D*	10.0	YES	S4VEM
Lead	Target	36600		mg/kg	36600	D	10.0	YES	S4VEM
Magnesium	Target	38000	J	mg/kg	38000	*	1.0	YES	S4VEM
Manganese	Target	8040		mg/kg	8040	D	10.0	YES	S4VEM
Nickel	Target	5.1		mg/kg	5.1		1.0	YES	S4VEM
Potassium	Target	884		mg/kg	884		1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	33.9	J	mg/kg	33.9	*	1.0	YES	S4VEM
Sodium	Target	567		mg/kg	567		1.0	YES	S4VEM
Thallium	Target	2.5		mg/kg	2.5		1.0	YES	S4VEM
Vanadium	Target	553	J	mg/kg	553	D*	10.0	YES	S4VEM
Zinc	Target	14100		mg/kg	14100	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W5	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:00:00
% Moisture:		% Solids: 96.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.63		mg/kg	0.63		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:00:00
% Moisture:		% Solids: 96.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6140		mg/kg	6140		1.0	YES	S4VEM
Antimony	Target	97.1		mg/kg	97.1		1.0	YES	S4VEM
Arsenic	Target	416		mg/kg	416		1.0	YES	S4VEM
Barium	Target	330		mg/kg	330	*	1.0	YES	S4VEM
Beryllium	Target	0.80		mg/kg	0.80		1.0	YES	S4VEM
Cadmium	Target	44.4		mg/kg	44.4		1.0	YES	S4VEM
Calcium	Target	77700		mg/kg	77700	D	10.0	YES	S4VEM
Chromium	Target	0.74	U	mg/kg	0.74	U	1.0	YES	S4VEM
Cobalt	Target	6.0		mg/kg	6.0		1.0	YES	S4VEM
Copper	Target	616		mg/kg	616		1.0	YES	S4VEM
Iron	Target	78200	J	mg/kg	78200	D*	10.0	YES	S4VEM
Lead	Target	33700		mg/kg	33700	D	10.0	YES	S4VEM
Magnesium	Target	42700	J	mg/kg	42700	*	1.0	YES	S4VEM
Manganese	Target	7840		mg/kg	7840	D	10.0	YES	S4VEM
Nickel	Target	5.0		mg/kg	5.0		1.0	YES	S4VEM
Potassium	Target	879		mg/kg	879		1.0	YES	S4VEM
Selenium	Target	2.6	R	mg/kg	2.6	U*	1.0	YES	S4VEM
Silver	Target	27.7	J	mg/kg	27.7	*	1.0	YES	S4VEM
Sodium	Target	593		mg/kg	593		1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	467	J	mg/kg	467	D*	10.0	YES	S4VEM
Zinc	Target	15300		mg/kg	15300	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W6	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:30:00
% Moisture:		% Solids: 98.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.58		mg/kg	0.58		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3W6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:30:00
% Moisture:		% Solids: 98.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6020		mg/kg	6020		1.0	YES	S4VEM
Antimony	Target	76.5		mg/kg	76.5		1.0	YES	S4VEM
Arsenic	Target	400		mg/kg	400		1.0	YES	S4VEM
Barium	Target	236		mg/kg	236	*	1.0	YES	S4VEM
Beryllium	Target	0.70		mg/kg	0.70		1.0	YES	S4VEM
Cadmium	Target	84.7		mg/kg	84.7		1.0	YES	S4VEM
Calcium	Target	107000		mg/kg	107000	D	10.0	YES	S4VEM
Chromium	Target	0.71	U	mg/kg	0.71	U	1.0	YES	S4VEM
Cobalt	Target	4.0		mg/kg	4.0		1.0	YES	S4VEM
Copper	Target	528		mg/kg	528		1.0	YES	S4VEM
Iron	Target	72800	J	mg/kg	72800	D*	10.0	YES	S4VEM
Lead	Target	19500		mg/kg	19500	D	10.0	YES	S4VEM
Magnesium	Target	55600	J	mg/kg	55600	*	1.0	YES	S4VEM
Manganese	Target	6950		mg/kg	6950	D	10.0	YES	S4VEM
Nickel	Target	1.8	J	mg/kg	1.8	J	1.0	YES	S4VEM
Potassium	Target	734		mg/kg	734		1.0	YES	S4VEM
Selenium	Target	2.5	R	mg/kg	2.5	U*	1.0	YES	S4VEM
Silver	Target	18.1	J	mg/kg	18.1	*	1.0	YES	S4VEM
Sodium	Target	549		mg/kg	549		1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	115	J	mg/kg	115	*	1.0	YES	S4VEM
Zinc	Target	30800		mg/kg	30800	D	20.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W7	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:40:00
% Moisture:		% Solids: 96.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0040	J	mg/kg	0.0040	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 11:40:00
% Moisture:		% Solids: 96.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3860		mg/kg	3860		1.0	YES	S4VEM
Antimony	Target	4.7	U	mg/kg	4.7	U	1.0	YES	S4VEM
Arsenic	Target	2.3		mg/kg	2.3		1.0	YES	S4VEM
Barium	Target	48.7		mg/kg	48.7	*	1.0	YES	S4VEM
Beryllium	Target	0.21	J	mg/kg	0.21	J	1.0	YES	S4VEM
Cadmium	Target	0.27	J	mg/kg	0.27	J	1.0	YES	S4VEM
Calcium	Target	2510		mg/kg	2510		1.0	YES	S4VEM
Chromium	Target	3.3		mg/kg	3.3		1.0	YES	S4VEM
Cobalt	Target	2.0	J	mg/kg	2.0	J	1.0	YES	S4VEM
Copper	Target	5.0		mg/kg	5.0		1.0	YES	S4VEM
Iron	Target	4410	J	mg/kg	4410	*	1.0	YES	S4VEM
Lead	Target	36.6		mg/kg	36.6		1.0	YES	S4VEM
Magnesium	Target	2430	J	mg/kg	2430	*	1.0	YES	S4VEM
Manganese	Target	299		mg/kg	299		1.0	YES	S4VEM
Nickel	Target	3.3		mg/kg	3.3		1.0	YES	S4VEM
Potassium	Target	470		mg/kg	470		1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	0.79	UJ	mg/kg	0.79	U*	1.0	YES	S4VEM
Sodium	Target	49.8	J	mg/kg	49.8	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	6.2	J	mg/kg	6.2	*	1.0	YES	S4VEM
Zinc	Target	53.9		mg/kg	53.9		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W8	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 12:00:00
% Moisture:		% Solids: 94.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.59		mg/kg	0.59		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BLM Property	pH:	Sample Date: 08/04/2017	Sample Time: 12:00:00
% Moisture:		% Solids: 94.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5720		mg/kg	5720		1.0	YES	S4VEM
Antimony	Target	65.2		mg/kg	65.2		1.0	YES	S4VEM
Arsenic	Target	175		mg/kg	175		1.0	YES	S4VEM
Barium	Target	97.1		mg/kg	97.1	*	1.0	YES	S4VEM
Beryllium	Target	0.53		mg/kg	0.53		1.0	YES	S4VEM
Cadmium	Target	16.2		mg/kg	16.2		1.0	YES	S4VEM
Calcium	Target	8990		mg/kg	8990		1.0	YES	S4VEM
Chromium	Target	0.79	U	mg/kg	0.79	U	1.0	YES	S4VEM
Cobalt	Target	2.7	J	mg/kg	2.7	J	1.0	YES	S4VEM
Copper	Target	329		mg/kg	329		1.0	YES	S4VEM
Iron	Target	28200	J	mg/kg	28200	*	1.0	YES	S4VEM
Lead	Target	8480		mg/kg	8480	D	10.0	YES	S4VEM
Magnesium	Target	6170	J	mg/kg	6170	*	1.0	YES	S4VEM
Manganese	Target	1700		mg/kg	1700		1.0	YES	S4VEM
Nickel	Target	1.2	J	mg/kg	1.2	J	1.0	YES	S4VEM
Potassium	Target	737		mg/kg	737		1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	7.8	J	mg/kg	7.8	*	1.0	YES	S4VEM
Sodium	Target	225	J	mg/kg	225	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	138	J	mg/kg	138	*	1.0	YES	S4VEM
Zinc	Target	8170		mg/kg	8170	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W9	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 12:40:00
% Moisture:		% Solids: 94.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.15		mg/kg	0.15		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3W9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 12:40:00
% Moisture:		% Solids: 94.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	17400		mg/kg	17400		1.0	YES	S4VEM
Antimony	Target	4.8		mg/kg	4.8		1.0	YES	S4VEM
Arsenic	Target	30.7		mg/kg	30.7		1.0	YES	S4VEM
Barium	Target	241		mg/kg	241	*	1.0	YES	S4VEM
Beryllium	Target	0.99		mg/kg	0.99		1.0	YES	S4VEM
Cadmium	Target	4.3		mg/kg	4.3		1.0	YES	S4VEM
Calcium	Target	37700		mg/kg	37700		1.0	YES	S4VEM
Chromium	Target	10.0		mg/kg	10.0		1.0	YES	S4VEM
Cobalt	Target	8.2		mg/kg	8.2		1.0	YES	S4VEM
Copper	Target	50.4		mg/kg	50.4		1.0	YES	S4VEM
Iron	Target	21100	J	mg/kg	21100	*	1.0	YES	S4VEM
Lead	Target	1350		mg/kg	1350		1.0	YES	S4VEM
Magnesium	Target	20500	J	mg/kg	20500	*	1.0	YES	S4VEM
Manganese	Target	1920		mg/kg	1920		1.0	YES	S4VEM
Nickel	Target	20.1		mg/kg	20.1		1.0	YES	S4VEM
Potassium	Target	2930		mg/kg	2930		1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	1.4	J	mg/kg	1.4	*	1.0	YES	S4VEM
Sodium	Target	254	J	mg/kg	254	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	35.6	J	mg/kg	35.6	*	1.0	YES	S4VEM
Zinc	Target	882		mg/kg	882		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X0	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:00:00
% Moisture:		% Solids: 97.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.82		mg/kg	0.82		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X0	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:00:00
% Moisture:		% Solids: 97.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4060		mg/kg	4060		1.0	YES	S4VEM
Antimony	Target	103		mg/kg	103		1.0	YES	S4VEM
Arsenic	Target	498		mg/kg	498		1.0	YES	S4VEM
Barium	Target	388		mg/kg	388	*	1.0	YES	S4VEM
Beryllium	Target	0.73		mg/kg	0.73		1.0	YES	S4VEM
Cadmium	Target	65.6		mg/kg	65.6		1.0	YES	S4VEM
Calcium	Target	105000		mg/kg	105000	D	10.0	YES	S4VEM
Chromium	Target	0.77	U	mg/kg	0.77	U	1.0	YES	S4VEM
Cobalt	Target	4.5		mg/kg	4.5		1.0	YES	S4VEM
Copper	Target	640		mg/kg	640		1.0	YES	S4VEM
Iron	Target	84100	J	mg/kg	84100	D*	10.0	YES	S4VEM
Lead	Target	21200		mg/kg	21200	D	10.0	YES	S4VEM
Magnesium	Target	56500	J	mg/kg	56500	*	1.0	YES	S4VEM
Manganese	Target	10000		mg/kg	10000	D	10.0	YES	S4VEM
Nickel	Target	1.7	J	mg/kg	1.7	J	1.0	YES	S4VEM
Potassium	Target	826		mg/kg	826		1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	20.8	J	mg/kg	20.8	*	1.0	YES	S4VEM
Sodium	Target	669		mg/kg	669		1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	197	J	mg/kg	197	*	1.0	YES	S4VEM
Zinc	Target	25500		mg/kg	25500	D	20.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X1	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:30:00
% Moisture:		% Solids: 92.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.53		mg/kg	0.53		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X1	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:30:00
% Moisture:		% Solids: 92.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	13000		mg/kg	13000		1.0	YES	S4VEM
Antimony	Target	19.1		mg/kg	19.1		1.0	YES	S4VEM
Arsenic	Target	112		mg/kg	112		1.0	YES	S4VEM
Barium	Target	155		mg/kg	155	*	1.0	YES	S4VEM
Beryllium	Target	0.89		mg/kg	0.89		1.0	YES	S4VEM
Cadmium	Target	19.6		mg/kg	19.6		1.0	YES	S4VEM
Calcium	Target	62800		mg/kg	62800		1.0	YES	S4VEM
Chromium	Target	5.7		mg/kg	5.7		1.0	YES	S4VEM
Cobalt	Target	4.8		mg/kg	4.8		1.0	YES	S4VEM
Copper	Target	186		mg/kg	186		1.0	YES	S4VEM
Iron	Target	27800	J	mg/kg	27800	*	1.0	YES	S4VEM
Lead	Target	8490		mg/kg	8490	D	10.0	YES	S4VEM
Magnesium	Target	40300	J	mg/kg	40300	*	1.0	YES	S4VEM
Manganese	Target	1130		mg/kg	1130		1.0	YES	S4VEM
Nickel	Target	11.4		mg/kg	11.4		1.0	YES	S4VEM
Potassium	Target	1870		mg/kg	1870		1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	8.2	J	mg/kg	8.2	*	1.0	YES	S4VEM
Sodium	Target	351	J	mg/kg	351	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	83.4	J	mg/kg	83.4	*	1.0	YES	S4VEM
Zinc	Target	5600		mg/kg	5600	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X2	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:45:00
% Moisture:		% Solids: 86.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.37		mg/kg	0.37		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X2	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Gilmore Townsite	pH:	Sample Date: 08/04/2017	Sample Time: 13:45:00
% Moisture:		% Solids: 86.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10300		mg/kg	10300		1.0	YES	S4VEM
Antimony	Target	35.5		mg/kg	35.5		1.0	YES	S4VEM
Arsenic	Target	141		mg/kg	141		1.0	YES	S4VEM
Barium	Target	218		mg/kg	218	*	1.0	YES	S4VEM
Beryllium	Target	0.72		mg/kg	0.72		1.0	YES	S4VEM
Cadmium	Target	15.8		mg/kg	15.8		1.0	YES	S4VEM
Calcium	Target	79600		mg/kg	79600	D	10.0	YES	S4VEM
Chromium	Target	3.5		mg/kg	3.5		1.0	YES	S4VEM
Cobalt	Target	4.9		mg/kg	4.9		1.0	YES	S4VEM
Copper	Target	196		mg/kg	196		1.0	YES	S4VEM
Iron	Target	28800	J	mg/kg	28800	*	1.0	YES	S4VEM
Lead	Target	9690		mg/kg	9690	D	10.0	YES	S4VEM
Magnesium	Target	40200	J	mg/kg	40200	*	1.0	YES	S4VEM
Manganese	Target	3420		mg/kg	3420	D	10.0	YES	S4VEM
Nickel	Target	10.6		mg/kg	10.6		1.0	YES	S4VEM
Potassium	Target	1670		mg/kg	1670		1.0	YES	S4VEM
Selenium	Target	2.9	R	mg/kg	2.9	U*	1.0	YES	S4VEM
Silver	Target	7.0	J	mg/kg	7.0	*	1.0	YES	S4VEM
Sodium	Target	330	J	mg/kg	330	J	1.0	YES	S4VEM
Thallium	Target	2.1	U	mg/kg	2.1	U	1.0	YES	S4VEM
Vanadium	Target	131	J	mg/kg	131	*	1.0	YES	S4VEM
Zinc	Target	5300		mg/kg	5300	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X3	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:00:00
% Moisture:		% Solids: 97.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.77		mg/kg	0.77		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:00:00
% Moisture:		% Solids: 97.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10400		mg/kg	10400		1.0	YES	S4VEM
Antimony	Target	91.4		mg/kg	91.4		1.0	YES	S4VEM
Arsenic	Target	319		mg/kg	319		1.0	YES	S4VEM
Barium	Target	277		mg/kg	277	*	1.0	YES	S4VEM
Beryllium	Target	0.95		mg/kg	0.95		1.0	YES	S4VEM
Cadmium	Target	44.6		mg/kg	44.6		1.0	YES	S4VEM
Calcium	Target	66700		mg/kg	66700	D	10.0	YES	S4VEM
Chromium	Target	0.32	J	mg/kg	0.32	J	1.0	YES	S4VEM
Cobalt	Target	5.6		mg/kg	5.6		1.0	YES	S4VEM
Copper	Target	575		mg/kg	575		1.0	YES	S4VEM
Iron	Target	55000	J	mg/kg	55000	*	1.0	YES	S4VEM
Lead	Target	18200		mg/kg	18200	D	10.0	YES	S4VEM
Magnesium	Target	36200	J	mg/kg	36200	*	1.0	YES	S4VEM
Manganese	Target	6900		mg/kg	6900	D	10.0	YES	S4VEM
Nickel	Target	8.6		mg/kg	8.6		1.0	YES	S4VEM
Potassium	Target	1690		mg/kg	1690		1.0	YES	S4VEM
Selenium	Target	2.5	R	mg/kg	2.5	U*	1.0	YES	S4VEM
Silver	Target	12.5	J	mg/kg	12.5	*	1.0	YES	S4VEM
Sodium	Target	518		mg/kg	518		1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	166	J	mg/kg	166	*	1.0	YES	S4VEM
Zinc	Target	12500		mg/kg	12500	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X4	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:30:00
% Moisture:		% Solids: 97.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.12		mg/kg	0.12		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:30:00
% Moisture:		% Solids: 97.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	9660		mg/kg	9660		1.0	YES	S4VEM
Antimony	Target	13.8		mg/kg	13.8		1.0	YES	S4VEM
Arsenic	Target	56.7		mg/kg	56.7		1.0	YES	S4VEM
Barium	Target	153		mg/kg	153	*	1.0	YES	S4VEM
Beryllium	Target	0.58		mg/kg	0.58		1.0	YES	S4VEM
Cadmium	Target	9.6		mg/kg	9.6		1.0	YES	S4VEM
Calcium	Target	2660		mg/kg	2660		1.0	YES	S4VEM
Chromium	Target	5.3		mg/kg	5.3		1.0	YES	S4VEM
Cobalt	Target	4.2		mg/kg	4.2		1.0	YES	S4VEM
Copper	Target	104		mg/kg	104		1.0	YES	S4VEM
Iron	Target	17600	J	mg/kg	17600	*	1.0	YES	S4VEM
Lead	Target	3130		mg/kg	3130		1.0	YES	S4VEM
Magnesium	Target	3000	J	mg/kg	3000	*	1.0	YES	S4VEM
Manganese	Target	1830		mg/kg	1830		1.0	YES	S4VEM
Nickel	Target	6.7		mg/kg	6.7		1.0	YES	S4VEM
Potassium	Target	1640		mg/kg	1640		1.0	YES	S4VEM
Selenium	Target	2.6	R	mg/kg	2.6	U*	1.0	YES	S4VEM
Silver	Target	2.4	J	mg/kg	2.4	*	1.0	YES	S4VEM
Sodium	Target	165	J	mg/kg	165	J	1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	48.0	J	mg/kg	48.0	*	1.0	YES	S4VEM
Zinc	Target	2190		mg/kg	2190		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X5	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:40:00
% Moisture:		% Solids: 97.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.034	J	mg/kg	0.034	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 14:40:00
% Moisture:		% Solids: 97.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	7020		mg/kg	7020		1.0	YES	S4VEM
Antimony	Target	0.72	J	mg/kg	0.72	J	1.0	YES	S4VEM
Arsenic	Target	6.7		mg/kg	6.7		1.0	YES	S4VEM
Barium	Target	103		mg/kg	103	*	1.0	YES	S4VEM
Beryllium	Target	0.55		mg/kg	0.55		1.0	YES	S4VEM
Cadmium	Target	1.2		mg/kg	1.2		1.0	YES	S4VEM
Calcium	Target	2190		mg/kg	2190		1.0	YES	S4VEM
Chromium	Target	6.3		mg/kg	6.3		1.0	YES	S4VEM
Cobalt	Target	3.6	J	mg/kg	3.6	J	1.0	YES	S4VEM
Copper	Target	14.2		mg/kg	14.2		1.0	YES	S4VEM
Iron	Target	8350	J	mg/kg	8350	*	1.0	YES	S4VEM
Lead	Target	147		mg/kg	147		1.0	YES	S4VEM
Magnesium	Target	2060	J	mg/kg	2060	*	1.0	YES	S4VEM
Manganese	Target	632		mg/kg	632		1.0	YES	S4VEM
Nickel	Target	6.6		mg/kg	6.6		1.0	YES	S4VEM
Potassium	Target	927		mg/kg	927		1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	0.78	UJ	mg/kg	0.78	U*	1.0	YES	S4VEM
Sodium	Target	89.5	J	mg/kg	89.5	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	11.3	J	mg/kg	11.3	*	1.0	YES	S4VEM
Zinc	Target	147		mg/kg	147		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X6	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:00:00
% Moisture:		% Solids: 97.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.015	J	mg/kg	0.015	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:00:00
% Moisture:		% Solids: 97.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2160		mg/kg	2160		1.0	YES	S4VEM
Antimony	Target	4.6	U	mg/kg	4.6	U	1.0	YES	S4VEM
Arsenic	Target	3.3		mg/kg	3.3		1.0	YES	S4VEM
Barium	Target	30.8		mg/kg	30.8	*	1.0	YES	S4VEM
Beryllium	Target	0.18	J	mg/kg	0.18	J	1.0	YES	S4VEM
Cadmium	Target	0.32	J	mg/kg	0.32	J	1.0	YES	S4VEM
Calcium	Target	1190		mg/kg	1190		1.0	YES	S4VEM
Chromium	Target	2.8		mg/kg	2.8		1.0	YES	S4VEM
Cobalt	Target	1.3	J	mg/kg	1.3	J	1.0	YES	S4VEM
Copper	Target	4.5		mg/kg	4.5		1.0	YES	S4VEM
Iron	Target	3580	J	mg/kg	3580	*	1.0	YES	S4VEM
Lead	Target	51.5		mg/kg	51.5		1.0	YES	S4VEM
Magnesium	Target	1510	J	mg/kg	1510	*	1.0	YES	S4VEM
Manganese	Target	216		mg/kg	216		1.0	YES	S4VEM
Nickel	Target	2.9	J	mg/kg	2.9	J	1.0	YES	S4VEM
Potassium	Target	218	J	mg/kg	218	J	1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	0.76	UJ	mg/kg	0.76	U*	1.0	YES	S4VEM
Sodium	Target	34.6	J	mg/kg	34.6	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	4.3	J	mg/kg	4.3	*	1.0	YES	S4VEM
Zinc	Target	64.3		mg/kg	64.3		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X7	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:15:00
% Moisture:		% Solids: 98.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.025	J	mg/kg	0.025	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:15:00
% Moisture:		% Solids: 98.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2070		mg/kg	2070		1.0	YES	S4VEM
Antimony	Target	4.5	U	mg/kg	4.5	U	1.0	YES	S4VEM
Arsenic	Target	2.9		mg/kg	2.9		1.0	YES	S4VEM
Barium	Target	36.2		mg/kg	36.2	*	1.0	YES	S4VEM
Beryllium	Target	0.19	J	mg/kg	0.19	J	1.0	YES	S4VEM
Cadmium	Target	0.48		mg/kg	0.48		1.0	YES	S4VEM
Calcium	Target	1530		mg/kg	1530		1.0	YES	S4VEM
Chromium	Target	2.4		mg/kg	2.4		1.0	YES	S4VEM
Cobalt	Target	1.3	J	mg/kg	1.3	J	1.0	YES	S4VEM
Copper	Target	4.8		mg/kg	4.8		1.0	YES	S4VEM
Iron	Target	3360	J	mg/kg	3360	*	1.0	YES	S4VEM
Lead	Target	75.6		mg/kg	75.6		1.0	YES	S4VEM
Magnesium	Target	1120	J	mg/kg	1120	*	1.0	YES	S4VEM
Manganese	Target	295		mg/kg	295		1.0	YES	S4VEM
Nickel	Target	2.5	J	mg/kg	2.5	J	1.0	YES	S4VEM
Potassium	Target	293	J	mg/kg	293	J	1.0	YES	S4VEM
Selenium	Target	2.6	R	mg/kg	2.6	U*	1.0	YES	S4VEM
Silver	Target	0.75	UJ	mg/kg	0.75	U*	1.0	YES	S4VEM
Sodium	Target	39.7	J	mg/kg	39.7	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	4.3	J	mg/kg	4.3	*	1.0	YES	S4VEM
Zinc	Target	70.1		mg/kg	70.1		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X8	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:30:00
% Moisture:		% Solids: 91.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.022	J	mg/kg	0.022	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 15:30:00
% Moisture:		% Solids: 91.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1080		mg/kg	1080		1.0	YES	S4VEM
Antimony	Target	4.8	U	mg/kg	4.8	U	1.0	YES	S4VEM
Arsenic	Target	5.4		mg/kg	5.4		1.0	YES	S4VEM
Barium	Target	24.2		mg/kg	24.2	*	1.0	YES	S4VEM
Beryllium	Target	0.17	J	mg/kg	0.17	J	1.0	YES	S4VEM
Cadmium	Target	0.27	J	mg/kg	0.27	J	1.0	YES	S4VEM
Calcium	Target	888		mg/kg	888		1.0	YES	S4VEM
Chromium	Target	1.2		mg/kg	1.2		1.0	YES	S4VEM
Cobalt	Target	0.84	J	mg/kg	0.84	J	1.0	YES	S4VEM
Copper	Target	5.2		mg/kg	5.2		1.0	YES	S4VEM
Iron	Target	3700	J	mg/kg	3700	*	1.0	YES	S4VEM
Lead	Target	42.2		mg/kg	42.2		1.0	YES	S4VEM
Magnesium	Target	652	J	mg/kg	652	*	1.0	YES	S4VEM
Manganese	Target	159		mg/kg	159		1.0	YES	S4VEM
Nickel	Target	1.6	J	mg/kg	1.6	J	1.0	YES	S4VEM
Potassium	Target	98.7	J	mg/kg	98.7	J	1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	0.79	UJ	mg/kg	0.79	U*	1.0	YES	S4VEM
Sodium	Target	38.2	J	mg/kg	38.2	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	3.8	J	mg/kg	3.8	J*	1.0	YES	S4VEM
Zinc	Target	46.1		mg/kg	46.1		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3X9	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 17:00:00
% Moisture:		% Solids: 95.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.042	J	mg/kg	0.042	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3X9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/04/2017	Sample Time: 17:00:00
% Moisture:		% Solids: 95.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10100		mg/kg	10100		1.0	YES	S4VEM
Antimony	Target	1.1	J	mg/kg	1.1	J	1.0	YES	S4VEM
Arsenic	Target	8.1		mg/kg	8.1		1.0	YES	S4VEM
Barium	Target	158		mg/kg	158	*	1.0	YES	S4VEM
Beryllium	Target	0.74		mg/kg	0.74		1.0	YES	S4VEM
Cadmium	Target	1.7		mg/kg	1.7		1.0	YES	S4VEM
Calcium	Target	3600		mg/kg	3600		1.0	YES	S4VEM
Chromium	Target	8.2		mg/kg	8.2		1.0	YES	S4VEM
Cobalt	Target	4.9		mg/kg	4.9		1.0	YES	S4VEM
Copper	Target	18.7		mg/kg	18.7		1.0	YES	S4VEM
Iron	Target	11200	J	mg/kg	11200	*	1.0	YES	S4VEM
Lead	Target	219		mg/kg	219		1.0	YES	S4VEM
Magnesium	Target	2780	J	mg/kg	2780	*	1.0	YES	S4VEM
Manganese	Target	800		mg/kg	800		1.0	YES	S4VEM
Nickel	Target	8.7		mg/kg	8.7		1.0	YES	S4VEM
Potassium	Target	1550		mg/kg	1550		1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	0.15	J	mg/kg	0.15	J*	1.0	YES	S4VEM
Sodium	Target	118	J	mg/kg	118	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	15.3	J	mg/kg	15.3	*	1.0	YES	S4VEM
Zinc	Target	218		mg/kg	218		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3Y0	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:15:00
% Moisture:		% Solids: 91.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.17		mg/kg	0.17		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3Y0 | Method: Metals by ICP-AES | Matrix: Soil | MA Number:

Sample Location: Greater Gilmore Project Area | pH: | Sample Date: 08/05/2017 | Sample Time: 08:15:00

% Moisture: | % Solids: 91.2

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	18900		mg/kg	18900		1.0	YES	S4VEM
Antimony	Target	9.5		mg/kg	9.5		1.0	YES	S4VEM
Arsenic	Target	59.0		mg/kg	59.0		1.0	YES	S4VEM
Barium	Target	303		mg/kg	303	*	1.0	YES	S4VEM
Beryllium	Target	1.1		mg/kg	1.1		1.0	YES	S4VEM
Cadmium	Target	6.2		mg/kg	6.2		1.0	YES	S4VEM
Calcium	Target	27900		mg/kg	27900		1.0	YES	S4VEM
Chromium	Target	11.5		mg/kg	11.5		1.0	YES	S4VEM
Cobalt	Target	9.0		mg/kg	9.0		1.0	YES	S4VEM
Copper	Target	80.6		mg/kg	80.6		1.0	YES	S4VEM
Iron	Target	23800	J	mg/kg	23800	*	1.0	YES	S4VEM
Lead	Target	2620		mg/kg	2620		1.0	YES	S4VEM
Magnesium	Target	16900	J	mg/kg	16900	*	1.0	YES	S4VEM
Manganese	Target	1620		mg/kg	1620		1.0	YES	S4VEM
Nickel	Target	24.4		mg/kg	24.4		1.0	YES	S4VEM
Potassium	Target	2750		mg/kg	2750		1.0	YES	S4VEM
Selenium	Target	2.8	R	mg/kg	2.8	U*	1.0	YES	S4VEM
Silver	Target	2.2	J	mg/kg	2.2	*	1.0	YES	S4VEM
Sodium	Target	261	J	mg/kg	261	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	50.7	J	mg/kg	50.7	*	1.0	YES	S4VEM
Zinc	Target	1380		mg/kg	1380		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3W2	Lab Code: CHM

Sample Number: MJJ3Y1	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:25:00
% Moisture:		% Solids: 96.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.24		mg/kg	0.24		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3W2** | **Lab Code: CHM**

Sample Number: MJJ3Y1	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:25:00
% Moisture:		% Solids: 96.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11700		mg/kg	11700		1.0	YES	S4VEM
Antimony	Target	13.8		mg/kg	13.8		1.0	YES	S4VEM
Arsenic	Target	65.1		mg/kg	65.1		1.0	YES	S4VEM
Barium	Target	214		mg/kg	214	*	1.0	YES	S4VEM
Beryllium	Target	0.67		mg/kg	0.67		1.0	YES	S4VEM
Cadmium	Target	9.5		mg/kg	9.5		1.0	YES	S4VEM
Calcium	Target	18200		mg/kg	18200		1.0	YES	S4VEM
Chromium	Target	5.3		mg/kg	5.3		1.0	YES	S4VEM
Cobalt	Target	5.3		mg/kg	5.3		1.0	YES	S4VEM
Copper	Target	101		mg/kg	101		1.0	YES	S4VEM
Iron	Target	19500	J	mg/kg	19500	*	1.0	YES	S4VEM
Lead	Target	4550		mg/kg	4550	D	10.0	YES	S4VEM
Magnesium	Target	12700	J	mg/kg	12700	*	1.0	YES	S4VEM
Manganese	Target	1840		mg/kg	1840		1.0	YES	S4VEM
Nickel	Target	11.0		mg/kg	11.0		1.0	YES	S4VEM
Potassium	Target	2060		mg/kg	2060		1.0	YES	S4VEM
Selenium	Target	2.7	R	mg/kg	2.7	U*	1.0	YES	S4VEM
Silver	Target	3.1	J	mg/kg	3.1	*	1.0	YES	S4VEM
Sodium	Target	221	J	mg/kg	221	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	53.2	J	mg/kg	53.2	*	1.0	YES	S4VEM
Zinc	Target	2160		mg/kg	2160		1.0	YES	S4VEM

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Appendix E 2017 Analytical Laboratory Reports

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ENVIRONMENTAL REVIEW
AND ASSESSMENT

August 30, 2017

MEMORANDUM

SUBJECT: Data Validation Report for the Gilmore Mine Waste Piles Integrated Assessment, Case# 47085, SDG: MJJ3Y2, Inorganic Analyses

FROM: Don Matheny, Chemist
Environmental Services Unit, OERA

TO: Ken Marcy, Site Assessment Manager
Office of Environmental Cleanup

The quality assurance (QA) review of the analytical data generated from the analysis of fourteen sediment and three soil samples collected from the above referenced site has been completed. These samples were analyzed for total metals (including mercury) by Chemtech Consulting located in Mountainside, NJ.

Sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted according to the Quality Control Specifications outlined in:

- SQAP for Gilmore Mine Waste Piles Site, TerraGraphics (July, 2017)
- USEPA CLP Statement of Work for Inorganic Superfund Methods (ISM02.4)
- National Functional Guidelines for Inorganic Superfund Data Review (EPA-540-R-2017-001)
- Guidance for Labeling Externally Validated Laboratory Analytical Data (EPA-540-R08-005)

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt and analyses is attached along with the validated data.

I. QUALITY CONTROL RESULTS SUMMARY

The table below summarizes the major sample quality control (QC) tests, associated test results, criteria for evaluation and identification of outliers. Some criteria for evaluation may be QAPP specific and different from the National Functional Guidelines. Certain QC tests are electronically evaluated the results of which are not summarized in the table below though any excursions of these tests will appear in the *Data Qualifications* section. In addition to the QC tests, calculations from 10% of the samples are verified against the raw data.

QC Results Summary

Quality Control Test[1]	Result Ranges	Outliers[2] (Y or N)	Evaluation Criteria
Preservation / Holding Times	Holding Times met	N	Cool $\leq$ 6°C Metals 180 Days; Hg 28 Days
MS Tune	N/A	N/A	$\leq$ 0.1 amu; $\leq$ 5% RSD
Instrument Calibration	Calibration criteria met	N	$\pm$ 30% Difference; Corr. Coeff. $\geq$ 0.995
Calibration Verification	All checks passed	N	Metals 90 – 110% Recovery Hg 85 – 115% Recovery
Interference Check Std.	81 - 110%	N	80 – 120% Recovery
Lab Blanks	**Significant detects reported**	**Y**	**Not detected or <10% of Sample**
Matrix Spike	**40 - 113%**	**Y**	**75 - 125% Recovery**
Lab Duplicate	$\leq$ 6% or $\pm$ 2xCRQL	N	$\leq$ 35% RPD or $\pm$ 2xCRQL
LCS (blank spike)	80 - 115%	N	70 - 130% Recovery
Serial Dilution[3]	$\leq$ 5%	N	$\leq$ 15% Difference (soils)

[1] Lab QC (matrix spike, lab duplicate, serial dilution) were performed on sample MJJ3Z3.

[2] See the "*Data Qualifications*" section below for QC excursions and qualification of affected data.

[3] The serial dilution analysis was limited to Aluminum, Arsenic, Calcium, Chromium, Iron, Lead and Manganese as the native concentrations of the remaining elements in the sample were too low for evaluating a 1:5 Serial Dilution.

II. DATA QUALIFICATIONS

Summary of Data Validation Qualifiers Applied

After the manual and electronic data review, the following data qualifications were applied:

1. **Blanks –** The following analytes have detected sample results < CRQLs and the associated laboratory blanks also had detects at concentrations < CRQL.

Data Qualifications: Sample results are qualified U and the values elevated to the CRQLs.	
Qualified Analytical Results:	
Arsenic -	MJJ3Z0
Mercury –	MJJ3Z0 - MJJ3Z3, MJJ3Z5 - MJJ3Z8, MJJ3Y3, MJJ3Y6, MJJ3Y9,

2. **Detection / Quantitation Limits -** The following analytes have positively detected results < CRQLs (below the range of quantitation) and the associated laboratory blanks were not detected.

Data Qualifications: Sample results are qualified J with no indication of bias.	
Qualified Analytical Results:	
Antimony –	MJJ3Y3, MJJ3Y6, MJJ3Y9, MJJ3Z3, MJJ3Z6 - MJJ3Z8
Barium –	MJJ3Z0, MJJ3Z5
Beryllium -	MJJ3Z2, MJJ3Z3, MJJ3Z5
Cadmium -	MJJ3Z3, MJJ3Z5
Cobalt -	MJJ3Z0 - MJJ3Z3, MJJ3Z5 - MJJ3Z7
Copper -	MJJ3Z0 - MJJ3Z2
Selenium -	MJJ3Z1, MJJ3Z2
Silver -	MJJ3Y3, MJJ3Y6, MJJ3Y9, MJJ3Z6 - MJJ3Z8
Sodium –	MJJ3Y3 - MJJ3Y9, MJJ3Z1, MJJ3Z3, MJJ3Z4, MJJ3Z6 - MJJ3Z8
Nickel, Potassium, Vanadium –	MJJ3Z0 - MJJ3Z3, MJJ3Z5

3. **Matrix Spikes –** The following analytes had spike recoveries within 30-74% and post spike recoveries ≥ 75% (with the exception of silver which does not require a post digestion spike).

Data Qualifications: Sample results > CRQL are qualified J and non-detects UJ. The data may be biased low.	
Qualified Analytical Results:	
Antimony –	MJJ3Y2, MJJ3Y4, MJJ3Y5, MJJ3Y7, MJJ3Y8, MJJ3Z0 - MJJ3Z2, MJJ3Z4, MJJ3Z5
Lead –	All samples
Silver –	MJJ3Y2, MJJ3Y4, MJJ3Y5, MJJ3Y7, MJJ3Y8, MJJ3Z0 - MJJ3Z5

Data Qualifiers

The data qualifiers and their respective definitions applied to the sample result(s) are provided as follows.

Functional Guidelines Data Qualifiers	
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The associated value is an estimated quantity.
UJ	The analyte was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The analyte may or may not be present in the sample.

III. SAMPLE INDEX

The sample listing dates of sample collection, laboratory receipt and analysis are provided below.

Sample ID	Matrix	Sample Date	Date Rec'd	ICP-AES Analysis	Mercury Analysis
MJJ3Y2	Sediment	8/5/2017	8/10/2017	8/11-14/2017	8/17/2017
MJJ3Y3	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Y4	Sediment	8/5/2017	8/10/2017	8/14-15/2017	8/17/2017
MJJ3Y5	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Y6	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Y7	Sediment	8/5/2017	8/10/2017	8/14-15/2017	8/17/2017
MJJ3Y8	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Y9	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Z0	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Z1	Sediment	8/5/2017	8/10/2017	8/14/2017	8/17/2017
MJJ3Z2	Sediment	8/5/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z3	Sediment	8/5/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z4	Sediment	8/5/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z5	Sediment	8/5/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z6	Soil	8/3/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z7	Soil	8/3/2017	8/10/2017	8/15/2017	8/17/2017
MJJ3Z8	Soil	8/3/2017	8/10/2017	8/15/2017	8/17/2017

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y2	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:40:00
% Moisture:		% Solids: 97.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	1.5		mg/kg	1.5		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y2	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:40:00
% Moisture:		% Solids: 97.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5250		mg/kg	5250		1.0	YES	S4VEM
Antimony	Target	96.9	J	mg/kg	96.9	*	1.0	YES	S4VEM
Arsenic	Target	550		mg/kg	550		1.0	YES	S4VEM
Barium	Target	318		mg/kg	318		1.0	YES	S4VEM
Beryllium	Target	0.86		mg/kg	0.86		1.0	YES	S4VEM
Cadmium	Target	79.0		mg/kg	79.0		1.0	YES	S4VEM
Calcium	Target	103000		mg/kg	103000	D	10.0	YES	S4VEM
Chromium	Target	0.74	U	mg/kg	0.74	U	1.0	YES	S4VEM
Cobalt	Target	4.9		mg/kg	4.9		1.0	YES	S4VEM
Copper	Target	886		mg/kg	886		1.0	YES	S4VEM
Iron	Target	92300		mg/kg	92300	D	10.0	YES	S4VEM
Lead	Target	39900	J	mg/kg	39900	D*	20.0	YES	S4VEM
Magnesium	Target	52800		mg/kg	52800		1.0	YES	S4VEM
Manganese	Target	10600		mg/kg	10600	D	10.0	YES	S4VEM
Nickel	Target	5.2		mg/kg	5.2		1.0	YES	S4VEM
Potassium	Target	724		mg/kg	724		1.0	YES	S4VEM
Selenium	Target	2.6	U	mg/kg	2.6	U	1.0	YES	S4VEM
Silver	Target	31.1	J	mg/kg	31.1	*	1.0	YES	S4VEM
Sodium	Target	683		mg/kg	683		1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	314		mg/kg	314		1.0	YES	S4VEM
Zinc	Target	23100		mg/kg	23100	D	20.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y3	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:50:00
% Moisture:		% Solids: 96.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.10	U	mg/kg	0.048	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 08:50:00
% Moisture:		% Solids: 96.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	15300		mg/kg	15300		1.0	YES	S4VEM
Antimony	Target	2.1	J	mg/kg	2.1	J*	1.0	YES	S4VEM
Arsenic	Target	16.8		mg/kg	16.8		1.0	YES	S4VEM
Barium	Target	227		mg/kg	227		1.0	YES	S4VEM
Beryllium	Target	0.87		mg/kg	0.87		1.0	YES	S4VEM
Cadmium	Target	2.3		mg/kg	2.3		1.0	YES	S4VEM
Calcium	Target	39000		mg/kg	39000		1.0	YES	S4VEM
Chromium	Target	8.8		mg/kg	8.8		1.0	YES	S4VEM
Cobalt	Target	6.5		mg/kg	6.5		1.0	YES	S4VEM
Copper	Target	32.4		mg/kg	32.4		1.0	YES	S4VEM
Iron	Target	16200		mg/kg	16200		1.0	YES	S4VEM
Lead	Target	485	J	mg/kg	485	*	1.0	YES	S4VEM
Magnesium	Target	27200		mg/kg	27200		1.0	YES	S4VEM
Manganese	Target	1370		mg/kg	1370		1.0	YES	S4VEM
Nickel	Target	15.7		mg/kg	15.7		1.0	YES	S4VEM
Potassium	Target	2760		mg/kg	2760		1.0	YES	S4VEM
Selenium	Target	2.7	U	mg/kg	2.7	U	1.0	YES	S4VEM
Silver	Target	0.75	J	mg/kg	0.75	J*	1.0	YES	S4VEM
Sodium	Target	185	J	mg/kg	185	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	21.3		mg/kg	21.3		1.0	YES	S4VEM
Zinc	Target	466		mg/kg	466		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y4	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:00:00
% Moisture:		% Solids: 96.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.57		mg/kg	0.57		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:00:00
% Moisture:		% Solids: 96.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	13000		mg/kg	13000		1.0	YES	S4VEM
Antimony	Target	22.3	J	mg/kg	22.3	*	1.0	YES	S4VEM
Arsenic	Target	134		mg/kg	134		1.0	YES	S4VEM
Barium	Target	249		mg/kg	249		1.0	YES	S4VEM
Beryllium	Target	0.96		mg/kg	0.96		1.0	YES	S4VEM
Cadmium	Target	22.1		mg/kg	22.1		1.0	YES	S4VEM
Calcium	Target	30900		mg/kg	30900		1.0	YES	S4VEM
Chromium	Target	5.9		mg/kg	5.9		1.0	YES	S4VEM
Cobalt	Target	7.0		mg/kg	7.0		1.0	YES	S4VEM
Copper	Target	228		mg/kg	228		1.0	YES	S4VEM
Iron	Target	31500		mg/kg	31500		1.0	YES	S4VEM
Lead	Target	7470	J	mg/kg	7470	D*	10.0	YES	S4VEM
Magnesium	Target	20200		mg/kg	20200		1.0	YES	S4VEM
Manganese	Target	3550		mg/kg	3550	D	10.0	YES	S4VEM
Nickel	Target	17.4		mg/kg	17.4		1.0	YES	S4VEM
Potassium	Target	2030		mg/kg	2030		1.0	YES	S4VEM
Selenium	Target	2.6	U	mg/kg	2.6	U	1.0	YES	S4VEM
Silver	Target	5.9	J	mg/kg	5.9	*	1.0	YES	S4VEM
Sodium	Target	242	J	mg/kg	242	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	92.0		mg/kg	92.0		1.0	YES	S4VEM
Zinc	Target	5120		mg/kg	5120	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y5	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:30:00
% Moisture:		% Solids: 94.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.14		mg/kg	0.14		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:30:00
% Moisture:		% Solids: 94.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8690		mg/kg	8690		1.0	YES	S4VEM
Antimony	Target	14.0	J	mg/kg	14.0	*	1.0	YES	S4VEM
Arsenic	Target	72.8		mg/kg	72.8		1.0	YES	S4VEM
Barium	Target	150		mg/kg	150		1.0	YES	S4VEM
Beryllium	Target	0.75		mg/kg	0.75		1.0	YES	S4VEM
Cadmium	Target	8.8		mg/kg	8.8		1.0	YES	S4VEM
Calcium	Target	14200		mg/kg	14200		1.0	YES	S4VEM
Chromium	Target	4.4		mg/kg	4.4		1.0	YES	S4VEM
Cobalt	Target	5.1		mg/kg	5.1		1.0	YES	S4VEM
Copper	Target	104		mg/kg	104		1.0	YES	S4VEM
Iron	Target	19500		mg/kg	19500		1.0	YES	S4VEM
Lead	Target	3700	J	mg/kg	3700	*	1.0	YES	S4VEM
Magnesium	Target	10000		mg/kg	10000		1.0	YES	S4VEM
Manganese	Target	1570		mg/kg	1570		1.0	YES	S4VEM
Nickel	Target	8.4		mg/kg	8.4		1.0	YES	S4VEM
Potassium	Target	1590		mg/kg	1590		1.0	YES	S4VEM
Selenium	Target	2.7	U	mg/kg	2.7	U	1.0	YES	S4VEM
Silver	Target	1.9	J	mg/kg	1.9	*	1.0	YES	S4VEM
Sodium	Target	145	J	mg/kg	145	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	37.7		mg/kg	37.7		1.0	YES	S4VEM
Zinc	Target	2050		mg/kg	2050		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y6	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:45:00
% Moisture:		% Solids: 94.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.090	U	mg/kg	0.027	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 09:45:00
% Moisture:		% Solids: 94.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11500		mg/kg	11500		1.0	YES	S4VEM
Antimony	Target	0.46	J	mg/kg	0.46	J*	1.0	YES	S4VEM
Arsenic	Target	4.5		mg/kg	4.5		1.0	YES	S4VEM
Barium	Target	164		mg/kg	164		1.0	YES	S4VEM
Beryllium	Target	0.87		mg/kg	0.87		1.0	YES	S4VEM
Cadmium	Target	0.79		mg/kg	0.79		1.0	YES	S4VEM
Calcium	Target	6240		mg/kg	6240		1.0	YES	S4VEM
Chromium	Target	7.5		mg/kg	7.5		1.0	YES	S4VEM
Cobalt	Target	5.2		mg/kg	5.2		1.0	YES	S4VEM
Copper	Target	13.5		mg/kg	13.5		1.0	YES	S4VEM
Iron	Target	10400		mg/kg	10400		1.0	YES	S4VEM
Lead	Target	99.2	J	mg/kg	99.2	*	1.0	YES	S4VEM
Magnesium	Target	5810		mg/kg	5810		1.0	YES	S4VEM
Manganese	Target	531		mg/kg	531		1.0	YES	S4VEM
Nickel	Target	9.2		mg/kg	9.2		1.0	YES	S4VEM
Potassium	Target	2090		mg/kg	2090		1.0	YES	S4VEM
Selenium	Target	2.7	U	mg/kg	2.7	U	1.0	YES	S4VEM
Silver	Target	0.13	J	mg/kg	0.13	J*	1.0	YES	S4VEM
Sodium	Target	104	J	mg/kg	104	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	11.6		mg/kg	11.6		1.0	YES	S4VEM
Zinc	Target	111		mg/kg	111		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y7	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:00:00
% Moisture:		% Solids: 97.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.28		mg/kg	0.28		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:00:00
% Moisture:		% Solids: 97.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6040		mg/kg	6040		1.0	YES	S4VEM
Antimony	Target	22.4	J	mg/kg	22.4	*	1.0	YES	S4VEM
Arsenic	Target	121		mg/kg	121		1.0	YES	S4VEM
Barium	Target	136		mg/kg	136		1.0	YES	S4VEM
Beryllium	Target	0.54		mg/kg	0.54		1.0	YES	S4VEM
Cadmium	Target	12.1		mg/kg	12.1		1.0	YES	S4VEM
Calcium	Target	49900		mg/kg	49900		1.0	YES	S4VEM
Chromium	Target	2.6		mg/kg	2.6		1.0	YES	S4VEM
Cobalt	Target	3.7		mg/kg	3.7		1.0	YES	S4VEM
Copper	Target	184		mg/kg	184		1.0	YES	S4VEM
Iron	Target	24000		mg/kg	24000		1.0	YES	S4VEM
Lead	Target	6120	J	mg/kg	6120	D*	10.0	YES	S4VEM
Magnesium	Target	30200		mg/kg	30200		1.0	YES	S4VEM
Manganese	Target	2920		mg/kg	2920	D	10.0	YES	S4VEM
Nickel	Target	8.1		mg/kg	8.1		1.0	YES	S4VEM
Potassium	Target	960		mg/kg	960		1.0	YES	S4VEM
Selenium	Target	2.5	U	mg/kg	2.5	U	1.0	YES	S4VEM
Silver	Target	4.1	J	mg/kg	4.1	*	1.0	YES	S4VEM
Sodium	Target	188	J	mg/kg	188	J	1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	65.3		mg/kg	65.3		1.0	YES	S4VEM
Zinc	Target	4230		mg/kg	4230	D	10.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y8	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:15:00
% Moisture:		% Solids: 97.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.096		mg/kg	0.096		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:15:00
% Moisture:		% Solids: 97.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	9770		mg/kg	9770		1.0	YES	S4VEM
Antimony	Target	9.0	J	mg/kg	9.0	*	1.0	YES	S4VEM
Arsenic	Target	58.8		mg/kg	58.8		1.0	YES	S4VEM
Barium	Target	152		mg/kg	152		1.0	YES	S4VEM
Beryllium	Target	0.79		mg/kg	0.79		1.0	YES	S4VEM
Cadmium	Target	7.9		mg/kg	7.9		1.0	YES	S4VEM
Calcium	Target	15000		mg/kg	15000		1.0	YES	S4VEM
Chromium	Target	5.2		mg/kg	5.2		1.0	YES	S4VEM
Cobalt	Target	5.3		mg/kg	5.3		1.0	YES	S4VEM
Copper	Target	90.6		mg/kg	90.6		1.0	YES	S4VEM
Iron	Target	18200		mg/kg	18200		1.0	YES	S4VEM
Lead	Target	2890	J	mg/kg	2890	*	1.0	YES	S4VEM
Magnesium	Target	10700		mg/kg	10700		1.0	YES	S4VEM
Manganese	Target	1460		mg/kg	1460		1.0	YES	S4VEM
Nickel	Target	8.9		mg/kg	8.9		1.0	YES	S4VEM
Potassium	Target	1760		mg/kg	1760		1.0	YES	S4VEM
Selenium	Target	2.6	U	mg/kg	2.6	U	1.0	YES	S4VEM
Silver	Target	1.8	J	mg/kg	1.8	*	1.0	YES	S4VEM
Sodium	Target	150	J	mg/kg	150	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	40.0		mg/kg	40.0		1.0	YES	S4VEM
Zinc	Target	2010		mg/kg	2010		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Y9	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:20:00
% Moisture:		% Solids: 97.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.085	U	mg/kg	0.083	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Y9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 10:20:00
% Moisture:		% Solids: 97.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8330		mg/kg	8330		1.0	YES	S4VEM
Antimony	Target	1.3	J	mg/kg	1.3	J*	1.0	YES	S4VEM
Arsenic	Target	12.6		mg/kg	12.6		1.0	YES	S4VEM
Barium	Target	141		mg/kg	141		1.0	YES	S4VEM
Beryllium	Target	0.65		mg/kg	0.65		1.0	YES	S4VEM
Cadmium	Target	2.4		mg/kg	2.4		1.0	YES	S4VEM
Calcium	Target	3300		mg/kg	3300		1.0	YES	S4VEM
Chromium	Target	7.8		mg/kg	7.8		1.0	YES	S4VEM
Cobalt	Target	4.5		mg/kg	4.5		1.0	YES	S4VEM
Copper	Target	23.6		mg/kg	23.6		1.0	YES	S4VEM
Iron	Target	11000		mg/kg	11000		1.0	YES	S4VEM
Lead	Target	387	J	mg/kg	387	*	1.0	YES	S4VEM
Magnesium	Target	2530		mg/kg	2530		1.0	YES	S4VEM
Manganese	Target	816		mg/kg	816		1.0	YES	S4VEM
Nickel	Target	7.7		mg/kg	7.7		1.0	YES	S4VEM
Potassium	Target	1270		mg/kg	1270		1.0	YES	S4VEM
Selenium	Target	2.5	U	mg/kg	2.5	U	1.0	YES	S4VEM
Silver	Target	0.25	J	mg/kg	0.25	J*	1.0	YES	S4VEM
Sodium	Target	102	J	mg/kg	102	J	1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	15.2		mg/kg	15.2		1.0	YES	S4VEM
Zinc	Target	317		mg/kg	317		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z0	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 11:15:00
% Moisture:		% Solids: 86.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.11	U	mg/kg	0.015	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 **Contract: EPW14030** **SDG: MJJ3Y2** **Lab Code: CHM**

Sample Number: MJJ3Z0 | Method: Metals by ICP-AES | Matrix: Soil | MA Number:

Sample Location: Greater Gilmore Project Area | pH: | Sample Date: 08/05/2017 | Sample Time: 11:15:00

% Moisture: | % Solids: 86.5

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	692		mg/kg	692		1.0	YES	S4VEM
Antimony	Target	4.9	UJ	mg/kg	4.9	U*	1.0	YES	S4VEM
Arsenic	Target	0.81	U	mg/kg	0.71	J	1.0	YES	S4VEM
Barium	Target	16.0	J	mg/kg	16.0	J	1.0	YES	S4VEM
Beryllium	Target	0.41	U	mg/kg	0.41	U	1.0	YES	S4VEM
Cadmium	Target	0.41	U	mg/kg	0.41	U	1.0	YES	S4VEM
Calcium	Target	1290		mg/kg	1290		1.0	YES	S4VEM
Chromium	Target	2.3		mg/kg	2.3		1.0	YES	S4VEM
Cobalt	Target	0.42	J	mg/kg	0.42	J	1.0	YES	S4VEM
Copper	Target	0.96	J	mg/kg	0.96	J	1.0	YES	S4VEM
Iron	Target	1240		mg/kg	1240		1.0	YES	S4VEM
Lead	Target	22.0	J	mg/kg	22.0	*	1.0	YES	S4VEM
Magnesium	Target	797		mg/kg	797		1.0	YES	S4VEM
Manganese	Target	32.2		mg/kg	32.2		1.0	YES	S4VEM
Nickel	Target	0.52	J	mg/kg	0.52	J	1.0	YES	S4VEM
Potassium	Target	93.2	J	mg/kg	93.2	J	1.0	YES	S4VEM
Selenium	Target	2.9	U	mg/kg	2.9	U	1.0	YES	S4VEM
Silver	Target	0.81	UJ	mg/kg	0.81	U*	1.0	YES	S4VEM
Sodium	Target	407	U	mg/kg	407	U	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	2.2	J	mg/kg	2.2	J	1.0	YES	S4VEM
Zinc	Target	11.0		mg/kg	11.0		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z1	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 11:15:00
% Moisture:		% Solids: 93.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.10	U	mg/kg	0.0070	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z1 | Method: Metals by ICP-AES | Matrix: Soil | MA Number:

Sample Location: Greater Gilmore Project Area | pH: | Sample Date: 08/05/2017 | Sample Time: 11:15:00

% Moisture: | % Solids: 93.4

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	747		mg/kg	747		1.0	YES	S4VEM
Antimony	Target	4.7	UJ	mg/kg	4.7	U*	1.0	YES	S4VEM
Arsenic	Target	0.88		mg/kg	0.88		1.0	YES	S4VEM
Barium	Target	15.8		mg/kg	15.8		1.0	YES	S4VEM
Beryllium	Target	0.39	U	mg/kg	0.39	U	1.0	YES	S4VEM
Cadmium	Target	0.39	U	mg/kg	0.39	U	1.0	YES	S4VEM
Calcium	Target	1450		mg/kg	1450		1.0	YES	S4VEM
Chromium	Target	2.0		mg/kg	2.0		1.0	YES	S4VEM
Cobalt	Target	0.46	J	mg/kg	0.46	J	1.0	YES	S4VEM
Copper	Target	0.99	J	mg/kg	0.99	J	1.0	YES	S4VEM
Iron	Target	1290		mg/kg	1290		1.0	YES	S4VEM
Lead	Target	21.1	J	mg/kg	21.1	*	1.0	YES	S4VEM
Magnesium	Target	895		mg/kg	895		1.0	YES	S4VEM
Manganese	Target	31.6		mg/kg	31.6		1.0	YES	S4VEM
Nickel	Target	0.57	J	mg/kg	0.57	J	1.0	YES	S4VEM
Potassium	Target	103	J	mg/kg	103	J	1.0	YES	S4VEM
Selenium	Target	0.58	J	mg/kg	0.58	J	1.0	YES	S4VEM
Silver	Target	0.79	UJ	mg/kg	0.79	U*	1.0	YES	S4VEM
Sodium	Target	23.6	J	mg/kg	23.6	J	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	2.1	J	mg/kg	2.1	J	1.0	YES	S4VEM
Zinc	Target	11.9		mg/kg	11.9		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z2	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 12:00:00
% Moisture:		% Solids: 80.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.11	U	mg/kg	0.0080	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z2 | Method: Metals by ICP-AES | Matrix: Soil | MA Number:

Sample Location: Greater Gilmore Project Area | pH: | Sample Date: 08/05/2017 | Sample Time: 12:00:00

% Moisture: | % Solids: 80.5

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1180		mg/kg	1180		1.0	YES	S4VEM
Antimony	Target	5.5	UJ	mg/kg	5.5	U*	1.0	YES	S4VEM
Arsenic	Target	2.0		mg/kg	2.0		1.0	YES	S4VEM
Barium	Target	25.7		mg/kg	25.7		1.0	YES	S4VEM
Beryllium	Target	0.086	J	mg/kg	0.086	J	1.0	YES	S4VEM
Cadmium	Target	0.46	U	mg/kg	0.46	U	1.0	YES	S4VEM
Calcium	Target	2800		mg/kg	2800		1.0	YES	S4VEM
Chromium	Target	3.5		mg/kg	3.5		1.0	YES	S4VEM
Cobalt	Target	0.63	J	mg/kg	0.63	J	1.0	YES	S4VEM
Copper	Target	1.7	J	mg/kg	1.7	J	1.0	YES	S4VEM
Iron	Target	2150		mg/kg	2150		1.0	YES	S4VEM
Lead	Target	38.7	J	mg/kg	38.7	*	1.0	YES	S4VEM
Magnesium	Target	1620		mg/kg	1620		1.0	YES	S4VEM
Manganese	Target	88.1		mg/kg	88.1		1.0	YES	S4VEM
Nickel	Target	0.91	J	mg/kg	0.91	J	1.0	YES	S4VEM
Potassium	Target	154	J	mg/kg	154	J	1.0	YES	S4VEM
Selenium	Target	0.70	J	mg/kg	0.70	J	1.0	YES	S4VEM
Silver	Target	0.91	UJ	mg/kg	0.91	U*	1.0	YES	S4VEM
Sodium	Target	457	U	mg/kg	457	U	1.0	YES	S4VEM
Thallium	Target	2.3	U	mg/kg	2.3	U	1.0	YES	S4VEM
Vanadium	Target	3.2	J	mg/kg	3.2	J	1.0	YES	S4VEM
Zinc	Target	21.5		mg/kg	21.5		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z3	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 13:00:00
% Moisture:		% Solids: 8.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.089	U	mg/kg	0.044	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 13:00:00
% Moisture:		% Solids: 8.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1750		mg/kg	1750		1.0	YES	S4VEM
Antimony	Target	1.3	J	mg/kg	1.3	J*	1.0	YES	S4VEM
Arsenic	Target	8.0		mg/kg	8.0		1.0	YES	S4VEM
Barium	Target	71.0		mg/kg	71.0		1.0	YES	S4VEM
Beryllium	Target	0.17	J	mg/kg	0.17	J	1.0	YES	S4VEM
Cadmium	Target	0.15	J	mg/kg	0.15	J	1.0	YES	S4VEM
Calcium	Target	9170		mg/kg	9170		1.0	YES	S4VEM
Chromium	Target	14.8		mg/kg	14.8		1.0	YES	S4VEM
Cobalt	Target	1.1	J	mg/kg	1.1	J	1.0	YES	S4VEM
Copper	Target	5.3		mg/kg	5.3		1.0	YES	S4VEM
Iron	Target	4040		mg/kg	4040		1.0	YES	S4VEM
Lead	Target	7.1	J	mg/kg	7.1	*	1.0	YES	S4VEM
Magnesium	Target	1980		mg/kg	1980		1.0	YES	S4VEM
Manganese	Target	42.7		mg/kg	42.7		1.0	YES	S4VEM
Nickel	Target	1.5	J	mg/kg	1.5	J	1.0	YES	S4VEM
Potassium	Target	298	J	mg/kg	298	J	1.0	YES	S4VEM
Selenium	Target	3.3		mg/kg	3.3		1.0	YES	S4VEM
Silver	Target	0.94	UJ	mg/kg	0.94	U*	1.0	YES	S4VEM
Sodium	Target	78.8	J	mg/kg	78.8	J	1.0	YES	S4VEM
Thallium	Target	2.4	U	mg/kg	2.4	U	1.0	YES	S4VEM
Vanadium	Target	15.7		mg/kg	15.7		1.0	YES	S4VEM
Zinc	Target	16.6		mg/kg	16.6		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z4	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 14:30:00
% Moisture:		% Solids: 96.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.18		mg/kg	0.18		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Greater Gilmore Project Area	pH:	Sample Date: 08/05/2017	Sample Time: 14:30:00
% Moisture:		% Solids: 96.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11000		mg/kg	11000		1.0	YES	S4VEM
Antimony	Target	9.2	J	mg/kg	9.2	*	1.0	YES	S4VEM
Arsenic	Target	72.0		mg/kg	72.0		1.0	YES	S4VEM
Barium	Target	178		mg/kg	178		1.0	YES	S4VEM
Beryllium	Target	0.82		mg/kg	0.82		1.0	YES	S4VEM
Cadmium	Target	6.0		mg/kg	6.0		1.0	YES	S4VEM
Calcium	Target	95900		mg/kg	95900	D	10.0	YES	S4VEM
Chromium	Target	6.8		mg/kg	6.8		1.0	YES	S4VEM
Cobalt	Target	6.5		mg/kg	6.5		1.0	YES	S4VEM
Copper	Target	101		mg/kg	101		1.0	YES	S4VEM
Iron	Target	21900		mg/kg	21900		1.0	YES	S4VEM
Lead	Target	5540	J	mg/kg	5540	D*	10.0	YES	S4VEM
Magnesium	Target	27000		mg/kg	27000		1.0	YES	S4VEM
Manganese	Target	1790		mg/kg	1790		1.0	YES	S4VEM
Nickel	Target	17.5		mg/kg	17.5		1.0	YES	S4VEM
Potassium	Target	1950		mg/kg	1950		1.0	YES	S4VEM
Selenium	Target	2.5	U	mg/kg	2.5	U	1.0	YES	S4VEM
Silver	Target	5.0	J	mg/kg	5.0	*	1.0	YES	S4VEM
Sodium	Target	176	J	mg/kg	176	J	1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	54.4		mg/kg	54.4		1.0	YES	S4VEM
Zinc	Target	1530		mg/kg	1530		1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z5	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/05/2017	Sample Time: 16:15:00
% Moisture:		% Solids: 90.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.11	U	mg/kg	0.0060	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085	Contract: EPW14030	SDG: MJJ3Y2	Lab Code: CHM

Sample Number: MJJ3Z5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/05/2017	Sample Time: 16:15:00
% Moisture:		% Solids: 90.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	819		mg/kg	819		1.0	YES	S4VEM
Antimony	Target	4.8	UJ	mg/kg	4.8	U*	1.0	YES	S4VEM
Arsenic	Target	1.4		mg/kg	1.4		1.0	YES	S4VEM
Barium	Target	12.6	J	mg/kg	12.6	J	1.0	YES	S4VEM
Beryllium	Target	0.11	J	mg/kg	0.11	J	1.0	YES	S4VEM
Cadmium	Target	0.17	J	mg/kg	0.17	J	1.0	YES	S4VEM
Calcium	Target	608		mg/kg	608		1.0	YES	S4VEM
Chromium	Target	1.2		mg/kg	1.2		1.0	YES	S4VEM
Cobalt	Target	0.66	J	mg/kg	0.66	J	1.0	YES	S4VEM
Copper	Target	2.5		mg/kg	2.5		1.0	YES	S4VEM
Iron	Target	1780		mg/kg	1780		1.0	YES	S4VEM
Lead	Target	63.6	J	mg/kg	63.6	*	1.0	YES	S4VEM
Magnesium	Target	496		mg/kg	496		1.0	YES	S4VEM
Manganese	Target	155		mg/kg	155		1.0	YES	S4VEM
Nickel	Target	1.3	J	mg/kg	1.3	J	1.0	YES	S4VEM
Potassium	Target	95.6	J	mg/kg	95.6	J	1.0	YES	S4VEM
Selenium	Target	2.8	U	mg/kg	2.8	U	1.0	YES	S4VEM
Silver	Target	0.79	UJ	mg/kg	0.79	U*	1.0	YES	S4VEM
Sodium	Target	396	U	mg/kg	396	U	1.0	YES	S4VEM
Thallium	Target	2.0	U	mg/kg	2.0	U	1.0	YES	S4VEM
Vanadium	Target	2.0	J	mg/kg	2.0	J	1.0	YES	S4VEM
Zinc	Target	45.6		mg/kg	45.6		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z6	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 15:25:00
% Moisture:		% Solids: 98.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.087	U	mg/kg	0.033	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 15:25:00
% Moisture:		% Solids: 98.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5430		mg/kg	5430		1.0	YES	S4VEM
Antimony	Target	0.79	J	mg/kg	0.79	J*	1.0	YES	S4VEM
Arsenic	Target	11.4		mg/kg	11.4		1.0	YES	S4VEM
Barium	Target	81.7		mg/kg	81.7		1.0	YES	S4VEM
Beryllium	Target	0.40		mg/kg	0.40		1.0	YES	S4VEM
Cadmium	Target	0.83		mg/kg	0.83		1.0	YES	S4VEM
Calcium	Target	91600		mg/kg	91600	D	10.0	YES	S4VEM
Chromium	Target	5.0		mg/kg	5.0		1.0	YES	S4VEM
Cobalt	Target	3.0	J	mg/kg	3.0	J	1.0	YES	S4VEM
Copper	Target	12.7		mg/kg	12.7		1.0	YES	S4VEM
Iron	Target	7250		mg/kg	7250		1.0	YES	S4VEM
Lead	Target	120	J	mg/kg	120	*	1.0	YES	S4VEM
Magnesium	Target	43800		mg/kg	43800		1.0	YES	S4VEM
Manganese	Target	534		mg/kg	534		1.0	YES	S4VEM
Nickel	Target	7.0		mg/kg	7.0		1.0	YES	S4VEM
Potassium	Target	1340		mg/kg	1340		1.0	YES	S4VEM
Selenium	Target	2.6	U	mg/kg	2.6	U	1.0	YES	S4VEM
Silver	Target	0.29	J	mg/kg	0.29	J*	1.0	YES	S4VEM
Sodium	Target	110	J	mg/kg	110	J	1.0	YES	S4VEM
Thallium	Target	1.9	U	mg/kg	1.9	U	1.0	YES	S4VEM
Vanadium	Target	10.3		mg/kg	10.3		1.0	YES	S4VEM
Zinc	Target	122		mg/kg	122		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z7	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 15:25:00
% Moisture:		% Solids: 99.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.092	U	mg/kg	0.029	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 15:25:00
% Moisture:		% Solids: 99.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5280		mg/kg	5280		1.0	YES	S4VEM
Antimony	Target	0.63	J	mg/kg	0.63	J*	1.0	YES	S4VEM
Arsenic	Target	10.1		mg/kg	10.1		1.0	YES	S4VEM
Barium	Target	78.3		mg/kg	78.3		1.0	YES	S4VEM
Beryllium	Target	0.37		mg/kg	0.37		1.0	YES	S4VEM
Cadmium	Target	0.75		mg/kg	0.75		1.0	YES	S4VEM
Calcium	Target	85800		mg/kg	85800	D	10.0	YES	S4VEM
Chromium	Target	4.9		mg/kg	4.9		1.0	YES	S4VEM
Cobalt	Target	2.9	J	mg/kg	2.9	J	1.0	YES	S4VEM
Copper	Target	12.2		mg/kg	12.2		1.0	YES	S4VEM
Iron	Target	6930		mg/kg	6930		1.0	YES	S4VEM
Lead	Target	112	J	mg/kg	112	*	1.0	YES	S4VEM
Magnesium	Target	41800		mg/kg	41800		1.0	YES	S4VEM
Manganese	Target	518		mg/kg	518		1.0	YES	S4VEM
Nickel	Target	6.6		mg/kg	6.6		1.0	YES	S4VEM
Potassium	Target	1310		mg/kg	1310		1.0	YES	S4VEM
Selenium	Target	2.5	U	mg/kg	2.5	U	1.0	YES	S4VEM
Silver	Target	0.28	J	mg/kg	0.28	J*	1.0	YES	S4VEM
Sodium	Target	108	J	mg/kg	108	J	1.0	YES	S4VEM
Thallium	Target	1.8	U	mg/kg	1.8	U	1.0	YES	S4VEM
Vanadium	Target	9.9		mg/kg	9.9		1.0	YES	S4VEM
Zinc	Target	118		mg/kg	118		1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z8	Method: Mercury by Cold Vapor	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 16:30:00
% Moisture:		% Solids: 73.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.12	U	mg/kg	0.039	J	1.0	YES	S4VEM

Sample Summary Report

Case: 47085 | **Contract: EPW14030** | **SDG: MJJ3Y2** | **Lab Code: CHM**

Sample Number: MJJ3Z8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: Background	pH:	Sample Date: 08/03/2017	Sample Time: 16:30:00
% Moisture:		% Solids: 73.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	23600		mg/kg	23600		1.0	YES	S4VEM
Antimony	Target	0.84	J	mg/kg	0.84	J*	1.0	YES	S4VEM
Arsenic	Target	17.0		mg/kg	17.0		1.0	YES	S4VEM
Barium	Target	266		mg/kg	266		1.0	YES	S4VEM
Beryllium	Target	1.3		mg/kg	1.3		1.0	YES	S4VEM
Cadmium	Target	1.5		mg/kg	1.5		1.0	YES	S4VEM
Calcium	Target	24900		mg/kg	24900		1.0	YES	S4VEM
Chromium	Target	14.6		mg/kg	14.6		1.0	YES	S4VEM
Cobalt	Target	10.4		mg/kg	10.4		1.0	YES	S4VEM
Copper	Target	20.2		mg/kg	20.2		1.0	YES	S4VEM
Iron	Target	24800		mg/kg	24800		1.0	YES	S4VEM
Lead	Target	163	J	mg/kg	163	*	1.0	YES	S4VEM
Magnesium	Target	15900		mg/kg	15900		1.0	YES	S4VEM
Manganese	Target	1720		mg/kg	1720		1.0	YES	S4VEM
Nickel	Target	19.5		mg/kg	19.5		1.0	YES	S4VEM
Potassium	Target	1970		mg/kg	1970		1.0	YES	S4VEM
Selenium	Target	3.6	U	mg/kg	3.6	U	1.0	YES	S4VEM
Silver	Target	0.39	J	mg/kg	0.39	J*	1.0	YES	S4VEM
Sodium	Target	218	J	mg/kg	218	J	1.0	YES	S4VEM
Thallium	Target	2.6	U	mg/kg	2.6	U	1.0	YES	S4VEM
Vanadium	Target	32.1		mg/kg	32.1		1.0	YES	S4VEM
Zinc	Target	290		mg/kg	290		1.0	YES	S4VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for Inorganics Results from the Region 10 USEPA Laboratory

PROJECT NAME: Gilmore Mine Waste Piles Integrated Assessment

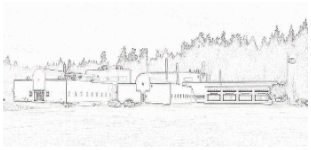
PROJECT CODE: SFP-122A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Review and Assessment
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Manager
Office of Environmental Cleanup,
Assessment and Brownfields Unit, USEPA Region 10

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

I have authorized release of this data package. Attached you will find the Metals results for the Gilmore Mine Waste Piles Integrated Assessment project for the High Priority samples received 8/11/2017. For further information regarding the attached data, contact Katie Adams at 360-871-8748.



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-122A
Site : GILMORE MINE WASTE PILES
Contact : Ken Marcy
Account : 2017T10P303DD210ZZLA00

Sample : 17314000 HIGH PRIORITY

Information : Townsite Parcel A9
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 9:20:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15300**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**2.2**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**27.6**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**278**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.798**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.16**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**82500**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**20.2**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**4.98**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**42.8**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**17200**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**943**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**24800**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**901**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**14.5**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.8	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**2.2**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.8	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**30.5**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**694**	**mg/Kg**		9/ 8/17	5

Sample : 17314002 HIGH PRIORITY

Information : Townsite Parcel A8
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 11:00:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16400**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**2.8**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**28.1**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**213**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.820**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**1.92**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**52800**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**19.4**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**5.84**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**44.1**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**19500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**1840**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**27700**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**987**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**15.4**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.2	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**3.1**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.2	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**36.7**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**682**	**mg/Kg**		9/ 8/17	5

Sample : 17314003 HIGH PRIORITY

Information : Townsite Parcel A8
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 11:00:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17400**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**4.0**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**29.7**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**215**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.822**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.10**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**59000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**21.6**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**5.87**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**46.5**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**21300**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**2020**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**28700**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1030**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**17.0**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.1	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**3.5**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.1	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**41.3**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**754**	**mg/Kg**		9/ 8/17	5

Sample : 17314004 HIGH PRIORITY

Information : Townsite Parcel A8
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 11:00:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17400**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**4.4**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**28.8**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**207**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.811**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.09**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**58000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**21.2**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**5.91**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**44.7**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**20700**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**1930**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**28100**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1000**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**17.1**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.2	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**3.6**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.2	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**39.4**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**729**	**mg/Kg**		9/ 8/17	5

Sample : 17314005 HIGH PRIORITY

Information : Townsite Parcel A8
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 11:00:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17500**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**3.9**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**29.6**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**214**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.892**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.13**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**59200**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**24.3**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**6.03**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**45.1**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**21500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**2040**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**28800**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1030**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**16.7**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.0	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**3.6**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.0	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**47.7**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**763**	**mg/Kg**		9/ 8/17	5

Sample : 17314006 HIGH PRIORITY

Information : Townsite Parcel A8
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 11:00:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15600**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**4.2**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**28.1**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**216**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.808**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.20**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**49900**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**21.4**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**5.53**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**46.8**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**20500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**2090**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**27400**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1010**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**14.9**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.6	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**2.8**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.6	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**39.6**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**774**	**mg/Kg**		9/ 8/17	5

Sample : 17314007 HIGH PRIORITY

Information : Land Trust Parcel 1
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 12:15:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15400**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**2.3**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**32.3**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**153**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.839**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**1.89**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**124000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**19.0**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**6.10**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**36.7**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**20100**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**1080**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**34200**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1050**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**31.6**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.2	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**1.5**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.2	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**40.1**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**460**	**mg/Kg**		9/ 8/17	5

Sample : 17314008 HIGH PRIORITY

Information : Land Trust Parcel 2
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 1:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11200**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**10.7**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**75.7**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**164**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.617**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**14.6**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**122000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**13.7**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**4.48**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**97.6**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**23500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**4310**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**46200**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1750**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**16.6**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.2	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**5.29**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.2	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**37.7**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**4030**	**mg/Kg**		9/ 8/17	5

Sample : 17314009 HIGH PRIORITY

Information : Land Trust Parcel 2
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 1:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**12200**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**11.6**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**67.7**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**167**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.663**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**13.0**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**111000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**14.7**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**4.71**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**88.2**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**23500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**3690**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**43800**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1680**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**16.2**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.6	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**5.66**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.6	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**40.7**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**3620**	**mg/Kg**		9/ 8/17	5

Sample : 17314010 HIGH PRIORITY

Information : Land Trust Parcel 2
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 1:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11600**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**11.1**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**71.6**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**162**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.636**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**15.5**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**119000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**14.6**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**4.58**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**91.4**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**23600**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**3790**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**45600**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**1740**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**16.6**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.5	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**4.75**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.5	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**38.5**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**4010**	**mg/Kg**		9/ 8/17	5

Sample : 17314011 HIGH PRIORITY

Information : Source Pile Area 3
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 2:20:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**3440**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**155**	**mg/Kg**	J	9/ 8/17	5
7440382	**Arsenic**	**659**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**355**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.431**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**130**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**118000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**15.3**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**3.04**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**866**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**89900**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**39000**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**69600**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**9690**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**9.38**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	20	mg/Kg	U	9/ 8/17	5
7440224	**Silver**	**48.7**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	20	mg/Kg	U	9/ 8/17	5
7440622	**Vanadium**	**203**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**31900**	**mg/Kg**		9/ 8/17	5

Sample : 17314012 HIGH PRIORITY

Information : Source Pile Area 1
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 2:45:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**4370**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**31.5**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**321**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**264**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.36**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**51.7**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**157000**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**13.7**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**2.77**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**343**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**55500**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**11700**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**88700**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**6100**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**9.77**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	4.4	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**13.5**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	4.4	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**108**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**14600**	**mg/Kg**		9/ 8/17	5

Sample : 17314013 HIGH PRIORITY

Information : Source Pile Area 5
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 3:10:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**3760**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**77.8**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**818**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**827**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.51**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**46.8**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**86300**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**21.1**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**2.5**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**395**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**176000**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**16000**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**42400**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**11300**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**12.5**	**mg/Kg**		9/11/17	5
7782492	Selenium	21	mg/Kg	U	9/11/17	5
7440224	**Silver**	**11**	**mg/Kg**		9/11/17	5
7440280	Thallium	21	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**190**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**13600**	**mg/Kg**		9/11/17	5

Sample : 17314014 HIGH PRIORITY

Information : Source Pile Area 4
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 3:40:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**6610**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**49.2**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**326**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**490**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.46**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**44.5**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**132000**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**20.9**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**6.8**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**363**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**60100**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**17700**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**77200**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**9770**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**20.1**	**mg/Kg**		9/11/17	5
7782492	Selenium	22	mg/Kg	U	9/11/17	5
7440224	**Silver**	**13**	**mg/Kg**		9/11/17	5
7440280	Thallium	22	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**226**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**13800**	**mg/Kg**		9/11/17	5

Sample : 17314015 HIGH PRIORITY

Information : Source Pile Area 2
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 4:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**2810**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**124**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**616**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**401**	**mg/Kg**		9/11/17	5
7440417	Beryllium	0.43	mg/Kg	U	9/11/17	5
7440439	**Cadmium**	**67.5**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**120000**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**16.4**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**3.3**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**722**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**98400**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**41200**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**66700**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**8680**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**10**	**mg/Kg**		9/11/17	5
7782492	Selenium	21	mg/Kg	U	9/11/17	5
7440224	**Silver**	**36.2**	**mg/Kg**		9/11/17	5
7440280	Thallium	21	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**423**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**21000**	**mg/Kg**		9/11/17	5

Sample : 17314016 HIGH PRIORITY

Information : Townsite Parcel A4
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 4:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**9190**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**162**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**461**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**353**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.62**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**47.1**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**75500**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**19.3**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**4.0**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**739**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**74900**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**33900**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**44000**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**8320**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**11.9**	**mg/Kg**		9/11/17	5
7782492	Selenium	23	mg/Kg	U	9/11/17	5
7440224	**Silver**	**27.8**	**mg/Kg**		9/11/17	5
7440280	Thallium	23	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**474**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**14300**	**mg/Kg**		9/11/17	5

Sample : 17314017 HIGH PRIORITY

Information : Townsite Parcel A4
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 10:30:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**10700**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**83.3**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**420**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**362**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.67**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**54.6**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**88600**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**20.7**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**4.8**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**555**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**72200**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**20500**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**52100**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**8300**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**16.1**	**mg/Kg**		9/11/17	5
7782492	Selenium	23	mg/Kg	U	9/11/17	5
7440224	**Silver**	**15**	**mg/Kg**		9/11/17	5
7440280	Thallium	23	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**250**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**16300**	**mg/Kg**		9/11/17	5

Sample : 17314018 HIGH PRIORITY

Information : Townsite Parcel A5
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 10:40:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**19800**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**11**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**58**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**241**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.83**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**3.8**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**41500**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**19.2**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**6.3**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**86.0**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**26400**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**4420**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**25000**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**1700**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**17.6**	**mg/Kg**		9/11/17	5
7782492	Selenium	24	mg/Kg	U	9/11/17	5
7440224	Silver	4.8	mg/Kg	U	9/11/17	5
7440280	Thallium	24	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**54.0**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**1270**	**mg/Kg**		9/11/17	5

Sample : 17314020 HIGH PRIORITY

Information : Townsite Parcel A3
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 11:15:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15700**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**33**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**150**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**202**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.68**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**15.2**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**69300**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**18.2**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**5.4**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**196**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**36300**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**9150**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**38700**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**2780**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**16.2**	**mg/Kg**		9/11/17	5
7782492	Selenium	24	mg/Kg	U	9/11/17	5
7440224	**Silver**	**9.0**	**mg/Kg**		9/11/17	5
7440280	Thallium	24	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**114**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**4840**	**mg/Kg**		9/11/17	5

Sample : 17314023 HIGH PRIORITY

Information : Townsite Parcel A2
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 1:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20600**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**30**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**127**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**321**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.89**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**11.3**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**54100**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**21.7**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**12**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**203**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**37600**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**7380**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**31900**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**3270**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**20.3**	**mg/Kg**		9/11/17	5
7782492	Selenium	25	mg/Kg	U	9/11/17	5
7440224	Silver	5.0	mg/Kg	U	9/11/17	5
7440280	Thallium	25	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**94.2**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**3340**	**mg/Kg**		9/11/17	5

Sample : 17314025 HIGH PRIORITY

Information : Townsite Parcel A6
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 1:40:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**22200**	**mg/Kg**		9/11/17	5
7440360	Antimony	9.4	mg/Kg	UJ	9/11/17	5
7440382	Arsenic	19	mg/Kg	U	9/11/17	5
7440393	**Barium**	**225**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.90**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**1.2**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**26500**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**20.1**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**7.2**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**22.2**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**21700**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**182**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**19700**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**1230**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**18.6**	**mg/Kg**		9/11/17	5
7782492	Selenium	23	mg/Kg	U	9/11/17	5
7440224	Silver	4.7	mg/Kg	U	9/11/17	5
7440280	Thallium	23	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**29.6**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**230**	**mg/Kg**		9/11/17	5

Sample : 17314036 HIGH PRIORITY

Information : Townsite Parcel A1
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 8:45:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17300**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**107**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**445**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**258**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**46.9**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**27600**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**22.4**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**5.4**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**721**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**69900**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**19500**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**18600**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**5800**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**13.8**	**mg/Kg**		9/11/17	5
7782492	Selenium	21	mg/Kg	U	9/11/17	5
7440224	**Silver**	**17**	**mg/Kg**		9/11/17	5
7440280	Thallium	21	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**219**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**16400**	**mg/Kg**		9/11/17	5

Sample : 17314043 HIGH PRIORITY

Information : Townsite Parcel A7
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 11:15:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**19300**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**9.1**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**50**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**215**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.80**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**7.60**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**60300**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**18.7**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**6.2**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**67.4**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**23500**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**2230**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**34600**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**1730**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**17.5**	**mg/Kg**		9/11/17	5
7782492	Selenium	22	mg/Kg	U	9/11/17	5
7440224	Silver	4.5	mg/Kg	U	9/11/17	5
7440280	Thallium	22	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**45.8**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**1830**	**mg/Kg**		9/11/17	5

Sample : 17314055 HIGH PRIORITY

Information : Townsite Parcel A10
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 3:20:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20000**	**mg/Kg**		9/11/17	5
7440360	Antimony	9.2	mg/Kg	UJ	9/11/17	5
7440382	**Arsenic**	**28**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**221**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.77**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**1.3**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**73700**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**21.2**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**6.4**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**22.0**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**17900**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**151**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**25800**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**961**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**22.2**	**mg/Kg**		9/11/17	5
7782492	Selenium	23	mg/Kg	U	9/11/17	5
7440224	Silver	4.6	mg/Kg	U	9/11/17	5
7440280	Thallium	23	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**31.0**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**238**	**mg/Kg**		9/11/17	5

Sample : 17314000 Sample Duplicate

Information : Townsite Parcel A9
Matrix : Soil **Weight Basis :** Dry
Collected : 7/31/2017 9:20:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15300**	**mg/Kg**		9/ 8/17	1
7440360	**Antimony**	**2.1**	**mg/Kg**	J	9/ 8/17	1
7440382	**Arsenic**	**28.5**	**mg/Kg**		9/ 8/17	1
7440393	**Barium**	**278**	**mg/Kg**		9/ 8/17	5
7440417	**Beryllium**	**0.791**	**mg/Kg**		9/ 8/17	1
7440439	**Cadmium**	**2.11**	**mg/Kg**		9/ 8/17	1
7440702	**Calcium**	**84200**	**mg/Kg**		9/ 8/17	5
7440473	**Chromium**	**21.3**	**mg/Kg**		9/ 8/17	1
7440484	**Cobalt**	**4.95**	**mg/Kg**		9/ 8/17	1
7440508	**Copper**	**41.6**	**mg/Kg**		9/ 8/17	1
7439896	**Iron**	**17600**	**mg/Kg**		9/ 8/17	5
7439921	**Lead**	**949**	**mg/Kg**		9/ 8/17	5
7439954	**Magnesium**	**25000**	**mg/Kg**		9/ 8/17	5
7439965	**Manganese**	**902**	**mg/Kg**		9/ 8/17	5
7440020	**Nickel**	**15.1**	**mg/Kg**		9/ 8/17	1
7782492	Selenium	5.0	mg/Kg	U	9/ 8/17	1
7440224	**Silver**	**2.2**	**mg/Kg**		9/ 8/17	1
7440280	Thallium	5.0	mg/Kg	U	9/ 8/17	1
7440622	**Vanadium**	**30.2**	**mg/Kg**		9/ 8/17	1
7440666	**Zinc**	**691**	**mg/Kg**		9/ 8/17	5

Sample : 17314036 Sample Duplicate

Information : Townsite Parcel A1
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 8:45:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16700**	**mg/Kg**		9/11/17	5
7440360	**Antimony**	**117**	**mg/Kg**	J	9/11/17	5
7440382	**Arsenic**	**450**	**mg/Kg**		9/11/17	5
7440393	**Barium**	**260**	**mg/Kg**		9/11/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		9/11/17	5
7440439	**Cadmium**	**47.6**	**mg/Kg**		9/11/17	5
7440702	**Calcium**	**27500**	**mg/Kg**		9/11/17	5
7440473	**Chromium**	**22.2**	**mg/Kg**		9/11/17	5
7440484	**Cobalt**	**5.4**	**mg/Kg**		9/11/17	5
7440508	**Copper**	**732**	**mg/Kg**		9/11/17	5
7439896	**Iron**	**69100**	**mg/Kg**		9/11/17	5
7439921	**Lead**	**19700**	**mg/Kg**		9/11/17	5
7439954	**Magnesium**	**18200**	**mg/Kg**		9/11/17	5
7439965	**Manganese**	**5750**	**mg/Kg**		9/11/17	5
7440020	**Nickel**	**13.7**	**mg/Kg**		9/11/17	5
7782492	Selenium	19	mg/Kg	U	9/11/17	5
7440224	**Silver**	**17**	**mg/Kg**		9/11/17	5
7440280	Thallium	19	mg/Kg	U	9/11/17	5
7440622	**Vanadium**	**217**	**mg/Kg**		9/11/17	5
7440666	**Zinc**	**16500**	**mg/Kg**		9/11/17	5

Sample : 17314000 Matrix Spike

Information : Townsite Parcel A9
Matrix : Soil
Weight Basis : Dry
Collected : 7/31/2017 9:20:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/ 8/17	1
7440360	Antimony	25	%Rec		9/ 8/17	1
7440382	Arsenic	102	%Rec		9/ 8/17	1
7440393	Barium	96	%Rec		9/ 8/17	5
7440417	Beryllium	93	%Rec		9/ 8/17	1
7440439	Cadmium	80	%Rec		9/ 8/17	1
7440702	Calcium			NA	9/ 8/17	5
7440473	Chromium	98	%Rec		9/ 8/17	1
7440484	Cobalt	88	%Rec		9/ 8/17	1
7440508	Copper	103	%Rec		9/ 8/17	1
7439896	Iron			NA	9/ 8/17	5
7439921	Lead			NA	9/ 8/17	5
7439954	Magnesium			NA	9/ 8/17	5
7439965	Manganese	120	%Rec		9/ 8/17	5
7440020	Nickel	81	%Rec		9/ 8/17	1
7782492	Selenium	93	%Rec		9/ 8/17	1
7440224	Silver	104	%Rec		9/ 8/17	1
7440280	Thallium	95	%Rec		9/ 8/17	1
7440622	Vanadium	99	%Rec		9/ 8/17	1
7440666	Zinc			NA	9/ 8/17	5

Sample : 17314036 Matrix Spike

Information : Townsite Parcel A1
Matrix : Soil
Collected : 8/2/2017 8:45:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/11/17	5
7440360	Antimony	15	%Rec		9/11/17	5
7440382	Arsenic	104	%Rec		9/11/17	5
7440393	Barium	107	%Rec		9/11/17	5
7440417	Beryllium	92	%Rec		9/11/17	5
7440439	Cadmium	96	%Rec		9/11/17	5
7440702	Calcium	77	%Rec		9/11/17	5
7440473	Chromium	97	%Rec		9/11/17	5
7440484	Cobalt	94	%Rec		9/11/17	5
7440508	Copper	109	%Rec		9/11/17	5
7439896	Iron			NA	9/11/17	5
7439921	Lead			NA	9/11/17	5
7439954	Magnesium	89	%Rec		9/11/17	5
7439965	Manganese			NA	9/11/17	5
7440020	Nickel	94	%Rec		9/11/17	5
7782492	Selenium	93	%Rec		9/11/17	5
7440224	Silver	92	%Rec		9/11/17	5
7440280	Thallium	93	%Rec		9/11/17	5
7440622	Vanadium	95	%Rec		9/11/17	5
7440666	Zinc			NA	9/11/17	5

Sample : 17314000 Matrix Spike#2

Information : Townsite Parcel A9
Matrix : Soil
Collected : 7/31/2017 9:20:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/ 8/17	1
7440360	Antimony	21	%Rec		9/ 8/17	1
7440382	Arsenic	103	%Rec		9/ 8/17	1
7440393	Barium	111	%Rec		9/ 8/17	5
7440417	Beryllium	95	%Rec		9/ 8/17	1
7440439	Cadmium	81	%Rec		9/ 8/17	1
7440702	Calcium			NA	9/ 8/17	5
7440473	Chromium	98	%Rec		9/ 8/17	1
7440484	Cobalt	89	%Rec		9/ 8/17	1
7440508	Copper	105	%Rec		9/ 8/17	1
7439896	Iron			NA	9/ 8/17	5
7439921	Lead			NA	9/ 8/17	5
7439954	Magnesium			NA	9/ 8/17	5
7439965	Manganese	117	%Rec		9/ 8/17	5
7440020	Nickel	82	%Rec		9/ 8/17	1
7782492	Selenium	95	%Rec		9/ 8/17	1
7440224	Silver	108	%Rec		9/ 8/17	1
7440280	Thallium	96	%Rec		9/ 8/17	1
7440622	Vanadium	100	%Rec		9/ 8/17	1
7440666	Zinc			NA	9/ 8/17	5

Sample : 17314036 Matrix Spike#2

Information : Townsite Parcel A1
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 8:45:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/11/17	5
7440360	Antimony	15	%Rec		9/11/17	5
7440382	Arsenic	101	%Rec		9/11/17	5
7440393	Barium	108	%Rec		9/11/17	5
7440417	Beryllium	92	%Rec		9/11/17	5
7440439	Cadmium	100	%Rec		9/11/17	5
7440702	Calcium	96	%Rec		9/11/17	5
7440473	Chromium	97	%Rec		9/11/17	5
7440484	Cobalt	95	%Rec		9/11/17	5
7440508	Copper	106	%Rec		9/11/17	5
7439896	Iron			NA	9/11/17	5
7439921	Lead			NA	9/11/17	5
7439954	Magnesium	86	%Rec		9/11/17	5
7439965	Manganese			NA	9/11/17	5
7440020	Nickel	95	%Rec		9/11/17	5
7782492	Selenium	93	%Rec		9/11/17	5
7440224	Silver	89	%Rec		9/11/17	5
7440280	Thallium	94	%Rec		9/11/17	5
7440622	Vanadium	93	%Rec		9/11/17	5
7440666	Zinc			NA	9/11/17	5

Sample : IS083017ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	9/ 8/17	1
7440360	Antimony	2.1	mg/Kg	U	9/ 8/17	1
7440382	Arsenic	4.1	mg/Kg	U	9/ 8/17	1
7440393	Barium	0.10	mg/Kg	U	9/ 8/17	1
7440417	Beryllium	0.10	mg/Kg	U	9/ 8/17	1
7440439	Cadmium	0.21	mg/Kg	U	9/ 8/17	1
7440702	**Calcium**	**9.0**	**mg/Kg**		9/ 8/17	1
7440473	Chromium	0.51	mg/Kg	U	9/ 8/17	1
7440484	Cobalt	0.51	mg/Kg	U	9/ 8/17	1
7440508	Copper	0.51	mg/Kg	U	9/ 8/17	1
7439896	Iron	2.1	mg/Kg	U	9/ 8/17	1
7439921	Lead	2.6	mg/Kg	U	9/ 8/17	1
7439954	Magnesium	5.1	mg/Kg	U	9/ 8/17	1
7439965	Manganese	0.21	mg/Kg	U	9/ 8/17	1
7440020	Nickel	0.51	mg/Kg	U	9/ 8/17	1
7782492	Selenium	5.1	mg/Kg	U	9/ 8/17	1
7440224	Silver	1.0	mg/Kg	U	9/ 8/17	1
7440280	Thallium	5.1	mg/Kg	U	9/ 8/17	1
7440622	Vanadium	0.51	mg/Kg	U	9/ 8/17	1
7440666	Zinc	0.51	mg/Kg	U	9/ 8/17	1

Sample : IS090617ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	9/11/17	1
7440360	Antimony	2.0	mg/Kg	U	9/11/17	1
7440382	Arsenic	4.0	mg/Kg	U	9/11/17	1
7440393	Barium	0.10	mg/Kg	U	9/11/17	1
7440417	Beryllium	0.10	mg/Kg	U	9/11/17	1
7440439	Cadmium	0.20	mg/Kg	U	9/11/17	1
7440702	Calcium	5.0	mg/Kg	U	9/11/17	1
7440473	Chromium	0.50	mg/Kg	U	9/11/17	1
7440484	Cobalt	0.50	mg/Kg	U	9/11/17	1
7440508	Copper	0.50	mg/Kg	U	9/11/17	1
7439896	Iron	2.0	mg/Kg	U	9/11/17	1
7439921	Lead	2.5	mg/Kg	U	9/11/17	1
7439954	Magnesium	5.0	mg/Kg	U	9/11/17	1
7439965	Manganese	0.20	mg/Kg	U	9/11/17	1
7440020	Nickel	0.50	mg/Kg	U	9/11/17	1
7782492	Selenium	5.0	mg/Kg	U	9/11/17	1
7440224	Silver	1.0	mg/Kg	U	9/11/17	1
7440280	Thallium	5.0	mg/Kg	U	9/11/17	1
7440622	Vanadium	0.50	mg/Kg	U	9/11/17	1
7440666	Zinc	0.50	mg/Kg	U	9/11/17	1

Sample : IS083017AL1 Lab Control Std

Information : Lab Control Standard

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	101	%Rec		9/ 8/17	1
7440360	Antimony	100	%Rec		9/ 8/17	1
7440382	Arsenic	100	%Rec		9/ 8/17	1
7440393	Barium	97	%Rec		9/ 8/17	1
7440417	Beryllium	95	%Rec		9/ 8/17	1
7440439	Cadmium	97	%Rec		9/ 8/17	1
7440702	Calcium	92	%Rec		9/ 8/17	1
7440473	Chromium	94	%Rec		9/ 8/17	1
7440484	Cobalt	95	%Rec		9/ 8/17	1
7440508	Copper	96	%Rec		9/ 8/17	1
7439896	Iron	94	%Rec		9/ 8/17	1
7439921	Lead	94	%Rec		9/ 8/17	1
7439954	Magnesium	96	%Rec		9/ 8/17	1
7439965	Manganese	94	%Rec		9/ 8/17	1
7440020	Nickel	98	%Rec		9/ 8/17	1
7782492	Selenium	108	%Rec		9/ 8/17	1
7440224	Silver	97	%Rec		9/ 8/17	1
7440280	Thallium	97	%Rec		9/ 8/17	1
7440622	Vanadium	95	%Rec		9/ 8/17	1
7440666	Zinc	99	%Rec		9/ 8/17	1

Sample : IS090617AL1 Lab Control Std

Information : Lab Control Standard

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	98	%Rec		9/11/17	1
7440360	Antimony	96	%Rec		9/11/17	1
7440382	Arsenic	96	%Rec		9/11/17	1
7440393	Barium	87	%Rec		9/11/17	1
7440417	Beryllium	90	%Rec		9/11/17	1
7440439	Cadmium	92	%Rec		9/11/17	1
7440702	Calcium	95	%Rec		9/11/17	1
7440473	Chromium	92	%Rec		9/11/17	1
7440484	Cobalt	92	%Rec		9/11/17	1
7440508	Copper	93	%Rec		9/11/17	1
7439896	Iron	94	%Rec		9/11/17	1
7439921	Lead	91	%Rec		9/11/17	1
7439954	Magnesium	92	%Rec		9/11/17	1
7439965	Manganese	92	%Rec		9/11/17	1
7440020	Nickel	94	%Rec		9/11/17	1
7782492	Selenium	103	%Rec		9/11/17	1
7440224	Silver	89	%Rec		9/11/17	1
7440280	Thallium	95	%Rec		9/11/17	1
7440622	Vanadium	94	%Rec		9/11/17	1
7440666	Zinc	95	%Rec		9/11/17	1

Sample : IS083017AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	100	%Rec		9/ 8/17	1
7440360	Antimony	101	%Rec		9/ 8/17	1
7440382	Arsenic	101	%Rec		9/ 8/17	1
7440393	Barium	99	%Rec		9/ 8/17	1
7440417	Beryllium	98	%Rec		9/ 8/17	1
7440439	Cadmium	98	%Rec		9/ 8/17	1
7440702	Calcium	92	%Rec		9/ 8/17	1
7440473	Chromium	97	%Rec		9/ 8/17	1
7440484	Cobalt	96	%Rec		9/ 8/17	1
7440508	Copper	97	%Rec		9/ 8/17	1
7439896	Iron	97	%Rec		9/ 8/17	1
7439921	Lead	95	%Rec		9/ 8/17	1
7439954	Magnesium	96	%Rec		9/ 8/17	1
7439965	Manganese	96	%Rec		9/ 8/17	1
7440020	Nickel	98	%Rec		9/ 8/17	1
7782492	Selenium	109	%Rec		9/ 8/17	1
7440224	Silver	99	%Rec		9/ 8/17	1
7440280	Thallium	99	%Rec		9/ 8/17	1
7440622	Vanadium	97	%Rec		9/ 8/17	1
7440666	Zinc	100	%Rec		9/ 8/17	1

Sample : IS090617AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	99	%Rec		9/11/17	1
7440360	Antimony	97	%Rec		9/11/17	1
7440382	Arsenic	97	%Rec		9/11/17	1
7440393	Barium	88	%Rec		9/11/17	1
7440417	Beryllium	90	%Rec		9/11/17	1
7440439	Cadmium	93	%Rec		9/11/17	1
7440702	Calcium	95	%Rec		9/11/17	1
7440473	Chromium	92	%Rec		9/11/17	1
7440484	Cobalt	93	%Rec		9/11/17	1
7440508	Copper	94	%Rec		9/11/17	1
7439896	Iron	94	%Rec		9/11/17	1
7439921	Lead	92	%Rec		9/11/17	1
7439954	Magnesium	93	%Rec		9/11/17	1
7439965	Manganese	92	%Rec		9/11/17	1
7440020	Nickel	95	%Rec		9/11/17	1
7782492	Selenium	104	%Rec		9/11/17	1
7440224	Silver	90	%Rec		9/11/17	1
7440280	Thallium	95	%Rec		9/11/17	1
7440622	Vanadium	94	%Rec		9/11/17	1
7440666	Zinc	96	%Rec		9/11/17	1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for Inorganics Results from the Region 10 USEPA Laboratory

PROJECT NAME: Gilmore Mine Waste Piles Integrated Assessment

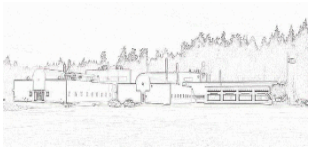
PROJECT CODE: SFP-122A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Review and Assessment
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Manager
Office of Environmental Cleanup,
Assessment and Brownfields Unit, USEPA Region 10

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

I have authorized release of this data package. Attached you will find the Metals and percent solids results for the Gilmore Mine Waste Piles Integrated Assessment project for the samples received 8/11/2017. For further information regarding the attached data, contact Stephanie Le at 360-871-8715.



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-122A
Site : GILMORE MINE WASTE PILES
Contact : Ken Marcy
Account : 2017T10P303DD210ZZLA00

Sample : 17314001

Information : Townsite Parcel B15
Matrix : Soil
Weight Basis : Dry
Collected : 7/31/2017 10:15:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17300**	**mg/Kg**		9/28/17	5
7440360	Antimony	9.6	mg/Kg	UJ	9/28/17	5
7440382	**Arsenic**	**26**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**303**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.73**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**2.3**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**78700**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**20.2**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**5.7**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**47.7**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**17400**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**960**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**25300**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**885**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**16.9**	**mg/Kg**		9/28/17	5
7782492	Selenium	24	mg/Kg	U	9/28/17	5
7440224	Silver	4.8	mg/Kg	U	9/28/17	5
7440280	Thallium	24	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**30.0**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**661**	**mg/Kg**		9/28/17	5

Sample : 17314019

Information : Townsite Parcel A3
Matrix : Soil
Collected : 8/1/2017 11:15:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17300**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**30**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**182**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**237**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.73**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**17.1**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**76600**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**20.2**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**5.8**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**239**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**40200**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**11200**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**43300**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**2890**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**15.6**	**mg/Kg**		9/28/17	5
7782492	Selenium	24	mg/Kg	U	9/28/17	5
7440224	**Silver**	**10**	**mg/Kg**		9/28/17	5
7440280	Thallium	24	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**130**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**5140**	**mg/Kg**		9/28/17	5

Sample : 17314021

Information : Townsite Parcel A3
Matrix : Soil
Collected : 8/1/2017 11:15:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16400**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**25**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**153**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**236**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.75**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**16.4**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**73100**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**19.5**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**5.7**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**203**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**36800**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**8890**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**42900**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**2900**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**16.1**	**mg/Kg**		9/28/17	5
7782492	Selenium	22	mg/Kg	U	9/28/17	5
7440224	**Silver**	**8.7**	**mg/Kg**		9/28/17	5
7440280	Thallium	22	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**108**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**4830**	**mg/Kg**		9/28/17	5

Sample : 17314022

Information : Townsite Parcel B10
Matrix : Soil
Collected : 8/1/2017 12:20:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**14900**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**43**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**211**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**315**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.75**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**28.0**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**82900**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**18.3**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**5.5**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**291**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**43500**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**10300**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**49200**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**4630**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**16.2**	**mg/Kg**		9/28/17	5
7782492	Selenium	23	mg/Kg	U	9/28/17	5
7440224	**Silver**	**7.9**	**mg/Kg**		9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**139**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**7930**	**mg/Kg**		9/28/17	5

Sample : 17314024

Information : Townsite Parcel B13
Matrix : Soil
Collected : 8/1/2017 1:10:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**22500**	**mg/Kg**		9/28/17	5
7440360	Antimony	9.0	mg/Kg	UJ	9/28/17	5
7440382	Arsenic	18	mg/Kg	U	9/28/17	5
7440393	**Barium**	**235**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**1.9**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**48000**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**20.7**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**7.0**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**26.9**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**20900**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**531**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**30300**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**1110**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**16.9**	**mg/Kg**		9/28/17	5
7782492	Selenium	23	mg/Kg	U	9/28/17	5
7440224	Silver	4.5	mg/Kg	U	9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**31.0**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**377**	**mg/Kg**		9/28/17	5

Sample : 17314026

Information : Townsite Parcel B9
Matrix : Soil
Collected : 8/1/2017 1:45:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20200**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**13**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**52**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**269**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.84**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**4.0**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**59800**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**21.3**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**6.2**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**93.8**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**25700**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**2450**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**37600**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**1990**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**16.7**	**mg/Kg**		9/28/17	5
7782492	Selenium	22	mg/Kg	U	9/28/17	5
7440224	Silver	4.4	mg/Kg	U	9/28/17	5
7440280	Thallium	22	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**44.4**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**1200**	**mg/Kg**		9/28/17	5

Sample : 17314027

Information : Townsite Parcel B5
Matrix : Soil
Collected : 8/1/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11400**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**80.5**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**357**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**341**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.59**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**42.3**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**79000**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**18.2**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**4.7**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**489**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**61400**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**18900**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**48100**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**5810**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**12.7**	**mg/Kg**		9/28/17	5
7782492	Selenium	21	mg/Kg	U	9/28/17	5
7440224	**Silver**	**16**	**mg/Kg**		9/28/17	5
7440280	Thallium	21	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**288**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**11700**	**mg/Kg**		9/28/17	5

Sample : 17314028

Information : Townsite Parcel B4
Matrix : Soil
Collected : 8/1/2017 2:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11000**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**73.2**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**346**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**296**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.55**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**44.8**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**78500**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**17.4**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**4.4**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**480**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**59000**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**18100**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**46800**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**5160**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**11.7**	**mg/Kg**	J	9/28/17	5
7782492	Selenium	23	mg/Kg	U	9/28/17	5
7440224	**Silver**	**16**	**mg/Kg**		9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**249**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**12200**	**mg/Kg**		9/28/17	5

Sample : 17314029

Information : Townsite Parcel B6
Matrix : Soil
Collected : 8/1/2017 2:25:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16000**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**47.0**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**242**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**311**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.77**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**29.3**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**68400**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**19.1**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**5.4**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**375**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**47400**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**14200**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**41900**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**5050**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**15.4**	**mg/Kg**		9/28/17	5
7782492	Selenium	22	mg/Kg	U	9/28/17	5
7440224	**Silver**	**10**	**mg/Kg**		9/28/17	5
7440280	Thallium	22	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**203**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**8250**	**mg/Kg**		9/28/17	5

Sample : 17314030

Information : Townsite Parcel B2
Matrix : Soil
Collected : 8/1/2017 3:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**24700**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**24**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**128**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**302**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**1.0**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**19.6**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**10700**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**22.5**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**7.2**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**195**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**35400**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**6310**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**9100**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**2940**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**14.9**	**mg/Kg**		9/28/17	5
7782492	Selenium	24	mg/Kg	U	9/28/17	5
7440224	**Silver**	**5.6**	**mg/Kg**		9/28/17	5
7440280	Thallium	24	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**73.1**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**6230**	**mg/Kg**		9/28/17	5

Sample : 17314031

Information : Townsite Parcel B2
Matrix : Soil
Collected : 8/1/2017 3:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23200**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**29**	**mg/Kg**	J	9/28/17	5
7440382	**Arsenic**	**162**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**294**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.96**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**25.3**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**12600**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**21.8**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**7.1**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**243**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**38700**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**8170**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**10500**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**3440**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**15.0**	**mg/Kg**		9/28/17	5
7782492	Selenium	23	mg/Kg	U	9/28/17	5
7440224	**Silver**	**7.0**	**mg/Kg**		9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**81.2**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**8070**	**mg/Kg**		9/28/17	5

Sample : 17314032

Information : Townsite Parcel B2
Matrix : Soil
Collected : 8/1/2017 3:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23300**	**mg/Kg**		9/28/17	5
7440360	**Antimony**	**37**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**175**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**306**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.97**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**27.4**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**13900**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**22.6**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**7.3**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**261**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**40600**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**9000**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**11300**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**4080**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.0**	**mg/Kg**		9/28/17	5
7782492	Selenium	23	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**7.8**	**mg/Kg**		9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**88.2**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**8650**	**mg/Kg**		9/28/17	5

Sample : 17314033

Information : Townsite Parcel B14
Matrix : Soil
Collected : 8/1/2017 4:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**19900**	**mg/Kg**		9/28/17	5
7440360	Antimony	8.5	mg/Kg	UJ	10/ 2/17	5
7440382	**Arsenic**	**21**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**177**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.73**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**1.5**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**73600**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**19.3**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**6.1**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**35.7**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**17700**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**1110**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**33500**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**851**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		9/28/17	5
7782492	Selenium	21	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.2	mg/Kg	U	9/28/17	5
7440280	Thallium	21	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**35.4**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**361**	**mg/Kg**		9/28/17	5

Sample : 17314034

Information : Townsite Parcel B14
Matrix : Soil
Collected : 8/1/2017 4:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**18700**	**mg/Kg**		9/28/17	5
7440360	Antimony	8.8	mg/Kg	UJ	10/ 2/17	5
7440382	**Arsenic**	**22**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**179**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.74**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**1.5**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**73000**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**18.4**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**6.5**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**37.5**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**17400**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**1010**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**32700**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**858**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		9/28/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.4	mg/Kg	U	9/28/17	5
7440280	Thallium	22	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**32.2**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**368**	**mg/Kg**		9/28/17	5

Sample : 17314035

Information : Townsite Parcel B14
Matrix : Soil
Collected : 8/1/2017 4:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**18300**	**mg/Kg**		9/28/17	5
7440360	Antimony	8.7	mg/Kg	UJ	10/ 2/17	5
7440382	**Arsenic**	**20**	**mg/Kg**		9/28/17	5
7440393	**Barium**	**169**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.71**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**1.5**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**72900**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**18.1**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**6.1**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**35.2**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**17200**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**1040**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**32700**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**847**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		9/28/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.4	mg/Kg	U	9/28/17	5
7440280	Thallium	22	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**32.9**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**362**	**mg/Kg**		9/28/17	5

Sample : 17314037

Information : Townsite Parcel B1
Matrix : Soil
Collected : 8/2/2017 9:00:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**19200**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**67.7**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**358**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**262**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**31.1**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**21700**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**20.4**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**5.7**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**423**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**54100**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**13600**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**14500**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**3880**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**13.5**	**mg/Kg**		9/29/17	5
7782492	Selenium	24	mg/Kg	U	9/29/17	5
7440224	**Silver**	**10**	**mg/Kg**		9/29/17	5
7440280	Thallium	24	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**167**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**11500**	**mg/Kg**		9/29/17	5

Sample : 17314038

Information : Townsite Parcel B3
Matrix : Soil
Collected : 8/2/2017 9:50:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23600**	**mg/Kg**		9/29/17	5
7440360	Antimony	8.8	mg/Kg	UJ	9/29/17	5
7440382	**Arsenic**	**23**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**277**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.95**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**2.9**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**5310**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**19.7**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**6.8**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**39.1**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**23700**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**816**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**5090**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1260**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**14.0**	**mg/Kg**		9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	Silver	4.4	mg/Kg	U	9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**36.5**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**695**	**mg/Kg**		9/29/17	5

Sample : 17314039

Information : Townsite Parcel B8
Matrix : Soil
Collected : 8/2/2017 10:00:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16600**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**55.9**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**196**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**284**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.78**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**23.3**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**68200**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**18.8**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**5.3**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**283**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**46100**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**9910**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**42200**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**4020**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**15.8**	**mg/Kg**		9/29/17	5
7782492	Selenium	20	mg/Kg	U	9/29/17	5
7440224	**Silver**	**7.6**	**mg/Kg**		9/29/17	5
7440280	Thallium	20	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**124**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**7380**	**mg/Kg**		9/29/17	5

Sample : 17314040

Information : Townsite Parcel B7
Matrix : Soil
Collected : 8/2/2017 10:30:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16600**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**37**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**162**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**292**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.78**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**17.8**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**61100**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**18.6**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**5.6**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**279**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**41200**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**8510**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**36300**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**3720**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**15.8**	**mg/Kg**		9/29/17	5
7782492	Selenium	23	mg/Kg	U	9/29/17	5
7440224	**Silver**	**5.7**	**mg/Kg**		9/29/17	5
7440280	Thallium	23	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**123**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**5640**	**mg/Kg**		9/29/17	5

Sample : 17314041

Information : Townsite Parcel B11
Matrix : Soil
Collected : 8/2/2017 10:45:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23200**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**12**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**58**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**250**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.94**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**6.95**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**47600**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**21.8**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**6.8**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**79.1**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**29000**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**2990**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**29700**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1870**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**19.8**	**mg/Kg**		9/29/17	5
7782492	Selenium	27	mg/Kg	U	9/29/17	5
7440224	Silver	5.4	mg/Kg	U	9/29/17	5
7440280	Thallium	27	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**63.7**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**1860**	**mg/Kg**		9/29/17	5

Sample : 17314042

Information : Townsite Parcel B13
Matrix : Soil
Collected : 8/2/2017 11:00:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23200**	**mg/Kg**		9/29/17	5
7440360	Antimony	8.6	mg/Kg	UJ	9/29/17	5
7440382	Arsenic	17	mg/Kg	U	9/29/17	5
7440393	**Barium**	**258**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.97**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**1.2**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**29900**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**20.8**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**7.0**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**23.5**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**23100**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**222**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**21900**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1260**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**19.1**	**mg/Kg**		9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	Silver	4.3	mg/Kg	U	9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**29.2**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**256**	**mg/Kg**		9/29/17	5

Sample : 17314044

Information : Townsite Road 10
Matrix : Soil
Collected : 8/2/2017 12:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**21800**	**mg/Kg**		9/29/17	5
7440360	Antimony	9.1	mg/Kg	UJ	9/29/17	5
7440382	**Arsenic**	**21**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**237**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.89**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**2.1**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**37900**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**20.7**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**6.7**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**39.2**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**23000**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**2370**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**24000**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1150**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**18.4**	**mg/Kg**		9/29/17	5
7782492	Selenium	23	mg/Kg	U	9/29/17	5
7440224	Silver	4.5	mg/Kg	U	9/29/17	5
7440280	Thallium	23	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**34.8**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**564**	**mg/Kg**		9/29/17	5

Sample : 17314045

Information : Townsite Road 6
Matrix : Soil
Collected : 8/2/2017 12:20:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20000**	**mg/Kg**		9/29/17	5
7440360	Antimony	8.9	mg/Kg	UJ	9/29/17	5
7440382	**Arsenic**	**42**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**224**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.79**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**10.5**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**60200**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**19.7**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**5.8**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**60.3**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**24200**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**1900**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**36000**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1540**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**16.7**	**mg/Kg**		9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	Silver	4.4	mg/Kg	U	9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**33.0**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**2470**	**mg/Kg**		9/29/17	5

Sample : 17314046

Information : Townsite Road 9
Matrix : Soil
Collected : 8/2/2017 12:30:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20300**	**mg/Kg**		9/29/17	5
7440360	Antimony	9.2	mg/Kg	UJ	9/29/17	5
7440382	**Arsenic**	**33**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**224**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.82**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**3.7**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**43000**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**19.7**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**6.2**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**48.5**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**23600**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**1350**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**27500**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1290**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**17.4**	**mg/Kg**		9/29/17	5
7782492	Selenium	23	mg/Kg	U	9/29/17	5
7440224	Silver	4.6	mg/Kg	U	9/29/17	5
7440280	Thallium	23	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**39.4**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**1030**	**mg/Kg**		9/29/17	5

Sample : 17314047

Information : Townsite Road 4
Matrix : Soil
Collected : 8/2/2017 12:45:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**14200**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**26**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**111**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**202**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.58**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**19.3**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**65600**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**15.3**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**4.4**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**152**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**30100**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**6810**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**38100**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**2210**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**12.3**	**mg/Kg**		9/29/17	5
7782492	Selenium	21	mg/Kg	U	9/29/17	5
7440224	**Silver**	**8.1**	**mg/Kg**		9/29/17	5
7440280	Thallium	21	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**67.6**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**6140**	**mg/Kg**		9/29/17	5

Sample : 17314048

Information : Townsite Road 1
Matrix : Soil
Collected : 8/2/2017 1:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11200**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**45.2**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**234**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**284**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.54**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**27.0**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**76200**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**15.4**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**4.6**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**301**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**47300**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**11100**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**41200**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**4160**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**14.1**	**mg/Kg**		9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	**Silver**	**8.1**	**mg/Kg**		9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**164**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**8290**	**mg/Kg**		9/29/17	5

Sample : 17314049

Information : Townsite Road 3
Matrix : Soil
Collected : 8/2/2017 1:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**6470**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**62.3**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**351**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**345**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.45**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**40.8**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**122000**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**15.9**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**3.7**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**413**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**64400**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**15700**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**68000**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**6240**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**12.1**	**mg/Kg**	J	9/29/17	5
7782492	Selenium	20	mg/Kg	U	9/29/17	5
7440224	**Silver**	**11**	**mg/Kg**		9/29/17	5
7440280	Thallium	20	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**238**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**10700**	**mg/Kg**		9/29/17	5

Sample : 17314050

Information : Townsite Road 2
Matrix : Soil
Collected : 8/2/2017 1:25:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16900**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**16**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**76**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**228**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.74**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**12.0**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**67600**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**17.3**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**5.9**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**113**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**27500**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**3760**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**39700**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**2150**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**16.6**	**mg/Kg**		9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	Silver	4.3	mg/Kg	U	9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**60.1**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**3270**	**mg/Kg**		9/29/17	5

Sample : 17314051

Information : Townsite Road 7
Matrix : Soil
Collected : 8/2/2017 1:50:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**18400**	**mg/Kg**		10/ 2/17	5
7440360	Antimony	8.2	mg/Kg	UJ	10/ 2/17	5
7440382	Arsenic	16	mg/Kg	U	10/ 2/17	5
7440393	**Barium**	**192**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.75**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**1.3**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**83200**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**17.5**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**6.1**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**22.9**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**18900**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**409**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**32700**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**911**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**16.6**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	20	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.1	mg/Kg	U	10/ 2/17	5
7440280	Thallium	20	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**27.1**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**306**	**mg/Kg**		10/ 2/17	5

Sample : 17314052

Information : Townsite Road 8
Matrix : Soil
Collected : 8/2/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**12100**	**mg/Kg**		10/ 2/17	5
7440360	Antimony	9.6	mg/Kg	UJ	10/ 2/17	5
7440382	**Arsenic**	**36**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**145**	**mg/Kg**		10/ 2/17	5
7440417	Beryllium	0.48	mg/Kg	U	10/ 2/17	5
7440439	**Cadmium**	**6.54**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**111000**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**14.7**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.0**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**51.5**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**17500**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**2010**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**46800**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**980**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**13.4**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	24	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.8	mg/Kg	U	10/ 2/17	5
7440280	Thallium	24	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**30.0**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**1870**	**mg/Kg**		10/ 2/17	5

Sample : 17314053

Information : Townsite Road 11
Matrix : Soil
Collected : 8/2/2017 2:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**9790**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**15**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**72**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**139**	**mg/Kg**		9/29/17	5
7440417	Beryllium	0.43	mg/Kg	U	9/29/17	5
7440439	**Cadmium**	**20.4**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**123000**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**13.9**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**3.8**	**mg/Kg**	J	9/29/17	5
7440508	**Copper**	**100**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**21300**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**4340**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**61700**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1600**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**11.5**	**mg/Kg**	J	9/29/17	5
7782492	Selenium	22	mg/Kg	U	9/29/17	5
7440224	**Silver**	**5.1**	**mg/Kg**		9/29/17	5
7440280	Thallium	22	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**33.0**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**5300**	**mg/Kg**		9/29/17	5

Sample : 17314054

Information : Townsite Road 5
Matrix : Soil
Collected : 8/2/2017 2:25:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**14400**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**23**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**118**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**179**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.61**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**27.6**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**98800**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**15.5**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.5**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**148**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**33500**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**6500**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**51700**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**2280**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**14.8**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**7.1**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**42.1**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**7840**	**mg/Kg**		10/ 2/17	5

Sample : 17314056

Information : Townsite Road 12
Matrix : Soil
Collected : 8/2/2017 4:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**3940**	**mg/Kg**		10/ 2/17	5
7440360	Antimony	8.9	mg/Kg	UJ	10/ 2/17	5
7440382	Arsenic	18	mg/Kg	U	10/ 2/17	5
7440393	**Barium**	**52.2**	**mg/Kg**		10/ 2/17	5
7440417	Beryllium	0.45	mg/Kg	U	10/ 2/17	5
7440439	**Cadmium**	**0.94**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**135000**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**9.7**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**2.4**	**mg/Kg**	J	10/ 2/17	5
7440508	**Copper**	**10**	**mg/Kg**	J	10/ 2/17	5
7439896	**Iron**	**6220**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**278**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**36400**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**291**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**9.4**	**mg/Kg**	J	10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.5	mg/Kg	U	10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**11.6**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**291**	**mg/Kg**		10/ 2/17	5

Sample : 17314057

Information : BLM Property 5
Matrix : Soil
Collected : 8/3/2017 8:30:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23100**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**24**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**97**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**259**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.91**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**20.3**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**21600**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**21.5**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**6.6**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**143**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**35400**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**5560**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**14800**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**2610**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**14.4**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	25	mg/Kg	U	10/ 2/17	5
7440224	Silver	5.0	mg/Kg	U	10/ 2/17	5
7440280	Thallium	25	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**69.6**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**5310**	**mg/Kg**		10/ 2/17	5

Sample : 17314058

Information : BLM Property 4
Matrix : Soil
Collected : 8/3/2017 9:00:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**27000**	**mg/Kg**		10/ 2/17	5
7440360	Antimony	10	mg/Kg	UJ	10/ 2/17	5
7440382	Arsenic	21	mg/Kg	U	10/ 2/17	5
7440393	**Barium**	**256**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**1.0**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**2.6**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**5520**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**20.9**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**7.2**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**36.1**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**24700**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**643**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**5260**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**1290**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**14.4**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	26	mg/Kg	U	10/ 2/17	5
7440224	Silver	5.2	mg/Kg	U	10/ 2/17	5
7440280	Thallium	26	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**36.6**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**657**	**mg/Kg**		10/ 2/17	5

Sample : 17314059

Information : BLM Property 3
Matrix : Soil
Collected : 8/3/2017 10:30:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16100**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**103**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**457**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**282**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**49.9**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**39200**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**21.8**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.6**	**mg/Kg**	J	10/ 2/17	5
7440508	**Copper**	**693**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**72600**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**23500**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**24600**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**6460**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**13.8**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	25	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**18**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	25	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**262**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**16800**	**mg/Kg**		10/ 2/17	5

Sample : 17314060

Information : BLM Property 6
Matrix : Soil
Collected : 8/3/2017 10:45:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16700**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**101**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**260**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**322**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.81**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**25.9**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**66300**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**19.6**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.5**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**420**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**55700**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**16400**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**41400**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**5670**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**14.8**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	19	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**11**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	19	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**237**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**8210**	**mg/Kg**		10/ 2/17	5

Sample : 17314061

Information : BLM Property 2
Matrix : Soil
Collected : 8/3/2017 12:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11800**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**163**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**484**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**331**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.75**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**53.4**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**55400**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**21.4**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**4.6**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**852**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**79400**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**28800**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**34200**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**8090**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**13.1**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	19	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**26.0**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	19	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**329**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**16400**	**mg/Kg**		10/ 2/17	5

Sample : 17314062

Information : BLM Property 1
Matrix : Soil
Collected : 8/3/2017 12:45:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11900**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**146**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**448**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**342**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.70**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**50.9**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**64500**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**20.8**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**4.7**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**709**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**77700**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**29500**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**38500**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**8100**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**12.6**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**21**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**384**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**15700**	**mg/Kg**		10/ 2/17	5

Sample : 17314063

Information : BLM Property 7
Matrix : Soil
Collected : 8/3/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16600**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**48**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**207**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**291**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.75**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**26.9**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**61400**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**18.6**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**6.0**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**292**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**49600**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**13500**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**38000**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**4560**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	24	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**9.6**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	24	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**175**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**8170**	**mg/Kg**		10/ 2/17	5

Sample : 17314064

Information : BLM Property 7
Matrix : Soil
Collected : 8/3/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17000**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**50.7**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**207**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**286**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.76**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**27.3**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**60500**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**19.6**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.8**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**294**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**49300**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**13300**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**38100**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**4500**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.4**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	23	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**9.5**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	23	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**172**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**8090**	**mg/Kg**		10/ 2/17	5

Sample : 17314065

Information : BLM Property 7
Matrix : Soil
Collected : 8/3/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16900**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**48**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**208**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**289**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.77**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**27.1**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**60900**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**19.6**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**6.0**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**293**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**49600**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**13200**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**38500**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**4530**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	26	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**9.6**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	26	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**169**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**8190**	**mg/Kg**		10/ 2/17	5

Sample : 17314066

Information : BLM Property 7
Matrix : Soil
Collected : 8/3/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17100**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**45.2**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**185**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**270**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.77**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**24.4**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**57900**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**19.2**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.9**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**265**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**46400**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**11800**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**36800**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**4140**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.5**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**8.5**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**164**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**7390**	**mg/Kg**		10/ 2/17	5

Sample : 17314067

Information : BLM Property 7
Matrix : Soil
Collected : 8/3/2017 2:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**17500**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**48.6**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**193**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**284**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.78**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**25.4**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**56000**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**20.3**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.8**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**272**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**47100**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**11800**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**36200**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**4350**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**15.6**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**8.1**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**161**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**7480**	**mg/Kg**		10/ 2/17	5

Sample : 17314068

Information : BLM Property 8
Matrix : Soil
Collected : 8/3/2017 3:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**16000**	**mg/Kg**		10/ 2/17	5
7440360	Antimony	9.5	mg/Kg	UJ	10/ 2/17	5
7440382	Arsenic	19	mg/Kg	U	10/ 2/17	5
7440393	**Barium**	**181**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.65**	**mg/Kg**		10/ 2/17	5
7440439	Cadmium	0.95	mg/Kg	U	10/ 2/17	5
7440702	**Calcium**	**47300**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**15.3**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**5.0**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**21.2**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**15800**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**154**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**29700**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**848**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**12.6**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	24	mg/Kg	U	10/ 2/17	5
7440224	Silver	4.8	mg/Kg	U	10/ 2/17	5
7440280	Thallium	24	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**21.9**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**178**	**mg/Kg**		10/ 2/17	5

Sample : 17314024 Sample Duplicate

Information : Townsite Parcel B13
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 1:10:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**22000**	**mg/Kg**		9/28/17	5
7440360	Antimony	9.2	mg/Kg	UJ	9/28/17	5
7440382	Arsenic	18	mg/Kg	U	9/28/17	5
7440393	**Barium**	**233**	**mg/Kg**		9/28/17	5
7440417	**Beryllium**	**0.86**	**mg/Kg**		9/28/17	5
7440439	**Cadmium**	**1.8**	**mg/Kg**		9/28/17	5
7440702	**Calcium**	**47000**	**mg/Kg**		9/28/17	5
7440473	**Chromium**	**20.9**	**mg/Kg**		9/28/17	5
7440484	**Cobalt**	**6.7**	**mg/Kg**		9/28/17	5
7440508	**Copper**	**26.9**	**mg/Kg**		9/28/17	5
7439896	**Iron**	**20800**	**mg/Kg**		9/28/17	5
7439921	**Lead**	**502**	**mg/Kg**		9/28/17	5
7439954	**Magnesium**	**29700**	**mg/Kg**		9/28/17	5
7439965	**Manganese**	**1110**	**mg/Kg**		9/28/17	5
7440020	**Nickel**	**17.2**	**mg/Kg**		9/28/17	5
7782492	Selenium	23	mg/Kg	U	9/28/17	5
7440224	Silver	4.6	mg/Kg	U	9/28/17	5
7440280	Thallium	23	mg/Kg	U	9/28/17	5
7440622	**Vanadium**	**31.3**	**mg/Kg**		9/28/17	5
7440666	**Zinc**	**371**	**mg/Kg**		9/28/17	5

Sample : 17314053 Sample Duplicate

Information : Townsite Road 11
Matrix : Soil **Weight Basis :** Dry
Collected : 8/2/2017 2:15:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**9830**	**mg/Kg**		9/29/17	5
7440360	**Antimony**	**17**	**mg/Kg**	J	9/29/17	5
7440382	**Arsenic**	**75**	**mg/Kg**		9/29/17	5
7440393	**Barium**	**141**	**mg/Kg**		9/29/17	5
7440417	**Beryllium**	**0.40**	**mg/Kg**		9/29/17	5
7440439	**Cadmium**	**20.2**	**mg/Kg**		9/29/17	5
7440702	**Calcium**	**123000**	**mg/Kg**		9/29/17	5
7440473	**Chromium**	**14.0**	**mg/Kg**		9/29/17	5
7440484	**Cobalt**	**4.6**	**mg/Kg**		9/29/17	5
7440508	**Copper**	**101**	**mg/Kg**		9/29/17	5
7439896	**Iron**	**21400**	**mg/Kg**		9/29/17	5
7439921	**Lead**	**4450**	**mg/Kg**		9/29/17	5
7439954	**Magnesium**	**61700**	**mg/Kg**		9/29/17	5
7439965	**Manganese**	**1590**	**mg/Kg**		9/29/17	5
7440020	**Nickel**	**11.3**	**mg/Kg**	J	9/29/17	5
7782492	Selenium	19	mg/Kg	U	9/29/17	5
7440224	**Silver**	**4.9**	**mg/Kg**		9/29/17	5
7440280	Thallium	19	mg/Kg	U	9/29/17	5
7440622	**Vanadium**	**33.7**	**mg/Kg**		9/29/17	5
7440666	**Zinc**	**5240**	**mg/Kg**		9/29/17	5

Sample : 17314061 Sample Duplicate

Information : BLM Property 2
Matrix : Soil **Weight Basis :** Dry
Collected : 8/3/2017 12:00:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**11900**	**mg/Kg**		10/ 2/17	5
7440360	**Antimony**	**170**	**mg/Kg**	J	10/ 2/17	5
7440382	**Arsenic**	**478**	**mg/Kg**		10/ 2/17	5
7440393	**Barium**	**325**	**mg/Kg**		10/ 2/17	5
7440417	**Beryllium**	**0.73**	**mg/Kg**		10/ 2/17	5
7440439	**Cadmium**	**53.0**	**mg/Kg**		10/ 2/17	5
7440702	**Calcium**	**55600**	**mg/Kg**		10/ 2/17	5
7440473	**Chromium**	**20.8**	**mg/Kg**		10/ 2/17	5
7440484	**Cobalt**	**4.8**	**mg/Kg**		10/ 2/17	5
7440508	**Copper**	**841**	**mg/Kg**		10/ 2/17	5
7439896	**Iron**	**79400**	**mg/Kg**		10/ 2/17	5
7439921	**Lead**	**28600**	**mg/Kg**		10/ 2/17	5
7439954	**Magnesium**	**34100**	**mg/Kg**		10/ 2/17	5
7439965	**Manganese**	**7940**	**mg/Kg**		10/ 2/17	5
7440020	**Nickel**	**13.0**	**mg/Kg**		10/ 2/17	5
7782492	Selenium	22	mg/Kg	U	10/ 2/17	5
7440224	**Silver**	**25.1**	**mg/Kg**		10/ 2/17	5
7440280	Thallium	22	mg/Kg	U	10/ 2/17	5
7440622	**Vanadium**	**319**	**mg/Kg**		10/ 2/17	5
7440666	**Zinc**	**16400**	**mg/Kg**		10/ 2/17	5

Sample : 17314024 Matrix Spike

Information : Townsite Parcel B13
Matrix : Soil
Collected : 8/1/2017 1:10:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/28/17	5
7440360	Antimony	20	%Rec		9/28/17	5
7440382	Arsenic	117	%Rec		9/28/17	5
7440393	Barium	108	%Rec		9/28/17	5
7440417	Beryllium	100	%Rec		9/28/17	5
7440439	Cadmium	93	%Rec		9/28/17	5
7440702	Calcium			NA	9/28/17	5
7440473	Chromium	99	%Rec		9/28/17	5
7440484	Cobalt	98	%Rec		9/28/17	5
7440508	Copper	98	%Rec		9/28/17	5
7439896	Iron			NA	9/28/17	5
7439921	Lead	88	%Rec		9/28/17	5
7439954	Magnesium	125	%Rec		9/28/17	5
7439965	Manganese	112	%Rec		9/28/17	5
7440020	Nickel	91	%Rec		9/28/17	5
7782492	Selenium	96	%Rec		9/28/17	5
7440224	Silver	113	%Rec		9/28/17	5
7440280	Thallium	100	%Rec		9/28/17	5
7440622	Vanadium	97	%Rec		9/28/17	5
7440666	Zinc	92	%Rec		9/28/17	5

Sample : 17314053 Matrix Spike

Information : Townsite Road 11
Matrix : Soil
Collected : 8/2/2017 2:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/29/17	5
7440360	Antimony	26	%Rec		9/29/17	5
7440382	Arsenic	100	%Rec		9/29/17	5
7440393	Barium	112	%Rec		9/29/17	5
7440417	Beryllium	101	%Rec		9/29/17	5
7440439	Cadmium	87	%Rec		9/29/17	5
7440702	Calcium			NA	9/29/17	5
7440473	Chromium	101	%Rec		9/29/17	5
7440484	Cobalt	93	%Rec		9/29/17	5
7440508	Copper	97	%Rec		9/29/17	5
7439896	Iron			NA	9/29/17	5
7439921	Lead			NA	9/29/17	5
7439954	Magnesium	121	%Rec		9/29/17	5
7439965	Manganese			NA	9/29/17	5
7440020	Nickel	95	%Rec		9/29/17	5
7782492	Selenium	100	%Rec		9/29/17	5
7440224	Silver	104	%Rec		9/29/17	5
7440280	Thallium	97	%Rec		9/29/17	5
7440622	Vanadium	95	%Rec		9/29/17	5
7440666	Zinc			NA	9/29/17	5

Sample : 17314061 Matrix Spike

Information : BLM Property 2
Matrix : Soil
Collected : 8/3/2017 12:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	10/ 2/17	5
7440360	Antimony	43	%Rec		10/ 2/17	5
7440382	Arsenic	95	%Rec		10/ 2/17	5
7440393	Barium	113	%Rec		10/ 2/17	5
7440417	Beryllium	99	%Rec		10/ 2/17	5
7440439	Cadmium	89	%Rec		10/ 2/17	5
7440702	Calcium	94	%Rec		10/ 2/17	5
7440473	Chromium	100	%Rec		10/ 2/17	5
7440484	Cobalt	100	%Rec		10/ 2/17	5
7440508	Copper	76	%Rec		10/ 2/17	5
7439896	Iron			NA	10/ 2/17	5
7439921	Lead			NA	10/ 2/17	5
7439954	Magnesium	84	%Rec		10/ 2/17	5
7439965	Manganese			NA	10/ 2/17	5
7440020	Nickel	99	%Rec		10/ 2/17	5
7782492	Selenium	97	%Rec		10/ 2/17	5
7440224	Silver	93	%Rec		10/ 2/17	5
7440280	Thallium	98	%Rec		10/ 2/17	5
7440622	Vanadium	95	%Rec		10/ 2/17	5
7440666	Zinc			NA	10/ 2/17	5

Sample : 17314024 Matrix Spike#2

Information : Townsite Parcel B13
Matrix : Soil **Weight Basis :** Dry
Collected : 8/1/2017 1:10:00PM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/28/17	5
7440360	Antimony	24	%Rec		9/28/17	5
7440382	Arsenic	118	%Rec		9/28/17	5
7440393	Barium	89	%Rec		9/28/17	5
7440417	Beryllium	101	%Rec		9/28/17	5
7440439	Cadmium	93	%Rec		9/28/17	5
7440702	Calcium			NA	9/28/17	5
7440473	Chromium	102	%Rec		9/28/17	5
7440484	Cobalt	98	%Rec		9/28/17	5
7440508	Copper	102	%Rec		9/28/17	5
7439896	Iron			NA	9/28/17	5
7439921	Lead	76	%Rec		9/28/17	5
7439954	Magnesium	111	%Rec		9/28/17	5
7439965	Manganese	104	%Rec		9/28/17	5
7440020	Nickel	92	%Rec		9/28/17	5
7782492	Selenium	97	%Rec		9/28/17	5
7440224	Silver	112	%Rec		9/28/17	5
7440280	Thallium	101	%Rec		9/28/17	5
7440622	Vanadium	102	%Rec		9/28/17	5
7440666	Zinc	98	%Rec		9/28/17	5

Sample : 17314053 Matrix Spike#2

Information : Townsite Road 11
Matrix : Soil
Collected : 8/2/2017 2:15:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	9/29/17	5
7440360	Antimony	23	%Rec		9/29/17	5
7440382	Arsenic	102	%Rec		9/29/17	5
7440393	Barium	108	%Rec		9/29/17	5
7440417	Beryllium	101	%Rec		9/29/17	5
7440439	Cadmium	89	%Rec		9/29/17	5
7440702	Calcium			NA	9/29/17	5
7440473	Chromium	98	%Rec		9/29/17	5
7440484	Cobalt	95	%Rec		9/29/17	5
7440508	Copper	89	%Rec		9/29/17	5
7439896	Iron			NA	9/29/17	5
7439921	Lead			NA	9/29/17	5
7439954	Magnesium	101	%Rec		9/29/17	5
7439965	Manganese			NA	9/29/17	5
7440020	Nickel	94	%Rec		9/29/17	5
7782492	Selenium	100	%Rec		9/29/17	5
7440224	Silver	105	%Rec		9/29/17	5
7440280	Thallium	98	%Rec		9/29/17	5
7440622	Vanadium	93	%Rec		9/29/17	5
7440666	Zinc			NA	9/29/17	5

Sample : 17314061 Matrix Spike#2

Information : BLM Property 2
Matrix : Soil
Collected : 8/3/2017 12:00:00PM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum			NA	10/ 2/17	5
7440360	Antimony	18	%Rec		10/ 2/17	5
7440382	Arsenic	101	%Rec		10/ 2/17	5
7440393	Barium	107	%Rec		10/ 2/17	5
7440417	Beryllium	100	%Rec		10/ 2/17	5
7440439	Cadmium	91	%Rec		10/ 2/17	5
7440702	Calcium	108	%Rec		10/ 2/17	5
7440473	Chromium	98	%Rec		10/ 2/17	5
7440484	Cobalt	101	%Rec		10/ 2/17	5
7440508	Copper	91	%Rec		10/ 2/17	5
7439896	Iron			NA	10/ 2/17	5
7439921	Lead			NA	10/ 2/17	5
7439954	Magnesium	82	%Rec		10/ 2/17	5
7439965	Manganese			NA	10/ 2/17	5
7440020	Nickel	100	%Rec		10/ 2/17	5
7782492	Selenium	99	%Rec		10/ 2/17	5
7440224	Silver	103	%Rec		10/ 2/17	5
7440280	Thallium	99	%Rec		10/ 2/17	5
7440622	Vanadium	92	%Rec		10/ 2/17	5
7440666	Zinc			NA	10/ 2/17	5

Sample : IS081117ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**20**	**mg/Kg**		10/ 2/17	1
7440360	Antimony	1.8	mg/Kg	U	10/ 2/17	1
7440382	Arsenic	3.6	mg/Kg	U	10/ 2/17	1
7440393	Barium	0.090	mg/Kg	U	10/ 2/17	1
7440417	Beryllium	0.090	mg/Kg	U	10/ 2/17	1
7440439	Cadmium	0.18	mg/Kg	U	10/ 2/17	1
7440702	**Calcium**	**131**	**mg/Kg**		10/ 2/17	1
7440473	**Chromium**	**0.56**	**mg/Kg**		10/ 2/17	1
7440484	**Cobalt**	**0.50**	**mg/Kg**		10/ 2/17	1
7440508	**Copper**	**1.6**	**mg/Kg**		10/ 2/17	1
7439896	**Iron**	**1610**	**mg/Kg**		10/ 2/17	1
7439921	Lead	2.2	mg/Kg	U	10/ 2/17	1
7439954	**Magnesium**	**51.6**	**mg/Kg**		10/ 2/17	1
7439965	**Manganese**	**1.02**	**mg/Kg**		10/ 2/17	1
7440020	**Nickel**	**1.7**	**mg/Kg**		10/ 2/17	1
7782492	Selenium	4.5	mg/Kg	U	10/ 2/17	1
7440224	Silver	0.90	mg/Kg	U	10/ 2/17	1
7440280	Thallium	4.5	mg/Kg	U	10/ 2/17	1
7440622	Vanadium	0.45	mg/Kg	U	10/ 2/17	1
7440666	Zinc	0.45	mg/Kg	U	10/ 2/17	1

Sample : IS082117ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**15**	**mg/Kg**		10/ 2/17	1
7440360	Antimony	1.6	mg/Kg	U	10/ 2/17	1
7440382	Arsenic	3.2	mg/Kg	U	10/ 2/17	1
7440393	Barium	0.081	mg/Kg	U	10/ 2/17	1
7440417	Beryllium	0.081	mg/Kg	U	10/ 2/17	1
7440439	Cadmium	0.16	mg/Kg	U	10/ 2/17	1
7440702	**Calcium**	**131**	**mg/Kg**		10/ 2/17	1
7440473	Chromium	0.41	mg/Kg	U	10/ 2/17	1
7440484	**Cobalt**	**0.72**	**mg/Kg**		10/ 2/17	1
7440508	**Copper**	**1.7**	**mg/Kg**		10/ 2/17	1
7439896	**Iron**	**1470**	**mg/Kg**		10/ 2/17	1
7439921	Lead	2.0	mg/Kg	U	10/ 2/17	1
7439954	**Magnesium**	**60.6**	**mg/Kg**		10/ 2/17	1
7439965	**Manganese**	**0.920**	**mg/Kg**		10/ 2/17	1
7440020	**Nickel**	**2.32**	**mg/Kg**		10/ 2/17	1
7782492	Selenium	4.1	mg/Kg	U	10/ 2/17	1
7440224	Silver	0.81	mg/Kg	U	10/ 2/17	1
7440280	Thallium	4.1	mg/Kg	U	10/ 2/17	1
7440622	Vanadium	0.41	mg/Kg	U	10/ 2/17	1
7440666	Zinc	0.41	mg/Kg	U	10/ 2/17	1

Sample : IS091417ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	**Aluminum**	**23**	**mg/Kg**		9/29/17	1
7440360	Antimony	1.8	mg/Kg	U	9/29/17	1
7440382	Arsenic	3.6	mg/Kg	U	9/29/17	1
7440393	Barium	0.091	mg/Kg	U	9/29/17	1
7440417	Beryllium	0.091	mg/Kg	U	9/29/17	1
7440439	Cadmium	0.18	mg/Kg	U	9/29/17	1
7440702	**Calcium**	**83.3**	**mg/Kg**		9/29/17	1
7440473	Chromium	0.45	mg/Kg	U	9/29/17	1
7440484	Cobalt	0.45	mg/Kg	U	9/29/17	1
7440508	**Copper**	**2.1**	**mg/Kg**		9/29/17	1
7439896	**Iron**	**1370**	**mg/Kg**		9/29/17	1
7439921	**Lead**	**2.7**	**mg/Kg**		9/29/17	1
7439954	**Magnesium**	**11**	**mg/Kg**		9/29/17	1
7439965	**Manganese**	**0.66**	**mg/Kg**		9/29/17	1
7440020	**Nickel**	**1.1**	**mg/Kg**		9/29/17	1
7782492	Selenium	4.5	mg/Kg	U	9/29/17	1
7440224	Silver	0.91	mg/Kg	U	9/29/17	1
7440280	Thallium	4.5	mg/Kg	U	9/29/17	1
7440622	Vanadium	0.45	mg/Kg	U	9/29/17	1
7440666	Zinc	0.45	mg/Kg	U	9/29/17	1

Sample : IS091817ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	9/28/17	1
7440360	Antimony	2.0	mg/Kg	U	9/28/17	1
7440382	Arsenic	4.0	mg/Kg	U	9/28/17	1
7440393	Barium	0.10	mg/Kg	U	9/28/17	1
7440417	Beryllium	0.10	mg/Kg	U	9/28/17	1
7440439	Cadmium	0.20	mg/Kg	U	9/28/17	1
7440702	Calcium	5.0	mg/Kg	U	9/28/17	1
7440473	Chromium	0.50	mg/Kg	U	9/28/17	1
7440484	Cobalt	0.50	mg/Kg	U	9/28/17	1
7440508	Copper	0.50	mg/Kg	U	9/28/17	1
7439896	Iron	2.0	mg/Kg	U	9/28/17	1
7439921	Lead	2.5	mg/Kg	U	9/28/17	1
7439954	Magnesium	5.0	mg/Kg	U	9/28/17	1
7439965	Manganese	0.20	mg/Kg	U	9/28/17	1
7440020	Nickel	0.50	mg/Kg	U	9/28/17	1
7782492	Selenium	5.0	mg/Kg	U	9/28/17	1
7440224	Silver	1.0	mg/Kg	U	9/28/17	1
7440280	Thallium	5.0	mg/Kg	U	9/28/17	1
7440622	Vanadium	0.50	mg/Kg	U	9/28/17	1
7440666	Zinc	0.50	mg/Kg	U	9/28/17	1

Sample : IS092017ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	9/29/17	1
7440360	Antimony	2.0	mg/Kg	U	9/29/17	1
7440382	Arsenic	4.0	mg/Kg	U	9/29/17	1
7440393	Barium	0.10	mg/Kg	U	9/29/17	1
7440417	Beryllium	0.10	mg/Kg	U	9/29/17	1
7440439	Cadmium	0.20	mg/Kg	U	9/29/17	1
7440702	Calcium	5.0	mg/Kg	U	9/29/17	1
7440473	Chromium	0.50	mg/Kg	U	9/29/17	1
7440484	Cobalt	0.50	mg/Kg	U	9/29/17	1
7440508	Copper	0.50	mg/Kg	U	9/29/17	1
7439896	Iron	2.0	mg/Kg	U	9/29/17	1
7439921	Lead	2.5	mg/Kg	U	9/29/17	1
7439954	Magnesium	5.0	mg/Kg	U	9/29/17	1
7439965	Manganese	0.20	mg/Kg	U	9/29/17	1
7440020	Nickel	0.50	mg/Kg	U	9/29/17	1
7782492	Selenium	5.0	mg/Kg	U	9/29/17	1
7440224	Silver	1.0	mg/Kg	U	9/29/17	1
7440280	Thallium	5.0	mg/Kg	U	9/29/17	1
7440622	Vanadium	0.50	mg/Kg	U	9/29/17	1
7440666	Zinc	0.50	mg/Kg	U	9/29/17	1

Sample : IS092517ABL Blank

Information : Blank

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7429905	Aluminum	10	mg/Kg	U	10/ 2/17	1
7440360	Antimony	2.0	mg/Kg	U	10/ 2/17	1
7440382	Arsenic	4.0	mg/Kg	U	10/ 2/17	1
7440393	Barium	0.10	mg/Kg	U	10/ 2/17	1
7440417	Beryllium	0.10	mg/Kg	U	10/ 2/17	1
7440439	Cadmium	0.20	mg/Kg	U	10/ 2/17	1
7440702	Calcium	5.0	mg/Kg	U	10/ 2/17	1
7440473	Chromium	0.50	mg/Kg	U	10/ 2/17	1
7440484	Cobalt	0.50	mg/Kg	U	10/ 2/17	1
7440508	Copper	0.50	mg/Kg	U	10/ 2/17	1
7439896	Iron	2.0	mg/Kg	U	10/ 2/17	1
7439921	Lead	2.5	mg/Kg	U	10/ 2/17	1
7439954	Magnesium	5.0	mg/Kg	U	10/ 2/17	1
7439965	Manganese	0.20	mg/Kg	U	10/ 2/17	1
7440020	Nickel	0.50	mg/Kg	U	10/ 2/17	1
7782492	Selenium	5.0	mg/Kg	U	10/ 2/17	1
7440224	Silver	1.0	mg/Kg	U	10/ 2/17	1
7440280	Thallium	5.0	mg/Kg	U	10/ 2/17	1
7440622	Vanadium	0.50	mg/Kg	U	10/ 2/17	1
7440666	Zinc	0.50	mg/Kg	U	10/ 2/17	1

Sample : IS091817AL1 Lab Control Std

Information : Lab Control Standard

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	104	%Rec		9/28/17	1
7440360	Antimony	94	%Rec		9/28/17	1
7440382	Arsenic	100	%Rec		9/28/17	1
7440393	Barium	98	%Rec		9/28/17	1
7440417	Beryllium	96	%Rec		9/28/17	1
7440439	Cadmium	96	%Rec		9/28/17	1
7440702	Calcium	99	%Rec		9/28/17	1
7440473	Chromium	94	%Rec		9/28/17	1
7440484	Cobalt	98	%Rec		9/28/17	1
7440508	Copper	95	%Rec		9/28/17	1
7439896	Iron	99	%Rec		9/28/17	1
7439921	Lead	96	%Rec		9/28/17	1
7439954	Magnesium	96	%Rec		9/28/17	1
7439965	Manganese	91	%Rec		9/28/17	1
7440020	Nickel	93	%Rec		9/28/17	1
7782492	Selenium	101	%Rec		9/28/17	1
7440224	Silver	100	%Rec		9/28/17	1
7440280	Thallium	98	%Rec		9/28/17	1
7440622	Vanadium	94	%Rec		9/28/17	1
7440666	Zinc	95	%Rec		9/28/17	1

Sample : IS092017AL1 Lab Control Std

Information : Lab Control Standard

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	104	%Rec		9/29/17	1
7440360	Antimony	98	%Rec		9/29/17	1
7440382	Arsenic	100	%Rec		9/29/17	1
7440393	Barium	97	%Rec		9/29/17	1
7440417	Beryllium	94	%Rec		9/29/17	1
7440439	Cadmium	97	%Rec		9/29/17	1
7440702	Calcium	98	%Rec		9/29/17	1
7440473	Chromium	95	%Rec		9/29/17	1
7440484	Cobalt	96	%Rec		9/29/17	1
7440508	Copper	95	%Rec		9/29/17	1
7439896	Iron	99	%Rec		9/29/17	1
7439921	Lead	95	%Rec		9/29/17	1
7439954	Magnesium	98	%Rec		9/29/17	1
7439965	Manganese	89	%Rec		9/29/17	1
7440020	Nickel	98	%Rec		9/29/17	1
7782492	Selenium	109	%Rec		9/29/17	1
7440224	Silver	93	%Rec		9/29/17	1
7440280	Thallium	98	%Rec		9/29/17	1
7440622	Vanadium	91	%Rec		9/29/17	1
7440666	Zinc	100	%Rec		9/29/17	1

Sample : IS092517AL1 Lab Control Std

Information : Lab Control Standard

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	105	%Rec		10/ 2/17	1
7440360	Antimony	98	%Rec		10/ 2/17	1
7440382	Arsenic	98	%Rec		10/ 2/17	1
7440393	Barium	98	%Rec		10/ 2/17	1
7440417	Beryllium	95	%Rec		10/ 2/17	1
7440439	Cadmium	95	%Rec		10/ 2/17	1
7440702	Calcium	102	%Rec		10/ 2/17	1
7440473	Chromium	93	%Rec		10/ 2/17	1
7440484	Cobalt	97	%Rec		10/ 2/17	1
7440508	Copper	94	%Rec		10/ 2/17	1
7439896	Iron	101	%Rec		10/ 2/17	1
7439921	Lead	96	%Rec		10/ 2/17	1
7439954	Magnesium	96	%Rec		10/ 2/17	1
7439965	Manganese	96	%Rec		10/ 2/17	1
7440020	Nickel	98	%Rec		10/ 2/17	1
7782492	Selenium	103	%Rec		10/ 2/17	1
7440224	Silver	90	%Rec		10/ 2/17	1
7440280	Thallium	98	%Rec		10/ 2/17	1
7440622	Vanadium	93	%Rec		10/ 2/17	1
7440666	Zinc	98	%Rec		10/ 2/17	1

Sample : IS091817AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	106	%Rec		9/28/17	1
7440360	Antimony	95	%Rec		9/28/17	1
7440382	Arsenic	101	%Rec		9/28/17	1
7440393	Barium	98	%Rec		9/28/17	1
7440417	Beryllium	96	%Rec		9/28/17	1
7440439	Cadmium	97	%Rec		9/28/17	1
7440702	Calcium	101	%Rec		9/28/17	1
7440473	Chromium	96	%Rec		9/28/17	1
7440484	Cobalt	99	%Rec		9/28/17	1
7440508	Copper	96	%Rec		9/28/17	1
7439896	Iron	101	%Rec		9/28/17	1
7439921	Lead	97	%Rec		9/28/17	1
7439954	Magnesium	98	%Rec		9/28/17	1
7439965	Manganese	91	%Rec		9/28/17	1
7440020	Nickel	94	%Rec		9/28/17	1
7782492	Selenium	101	%Rec		9/28/17	1
7440224	Silver	102	%Rec		9/28/17	1
7440280	Thallium	100	%Rec		9/28/17	1
7440622	Vanadium	94	%Rec		9/28/17	1
7440666	Zinc	96	%Rec		9/28/17	1

Sample : IS092017AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	103	%Rec		9/29/17	1
7440360	Antimony	97	%Rec		9/29/17	1
7440382	Arsenic	99	%Rec		9/29/17	1
7440393	Barium	99	%Rec		9/29/17	1
7440417	Beryllium	93	%Rec		9/29/17	1
7440439	Cadmium	96	%Rec		9/29/17	1
7440702	Calcium	97	%Rec		9/29/17	1
7440473	Chromium	94	%Rec		9/29/17	1
7440484	Cobalt	96	%Rec		9/29/17	1
7440508	Copper	95	%Rec		9/29/17	1
7439896	Iron	99	%Rec		9/29/17	1
7439921	Lead	95	%Rec		9/29/17	1
7439954	Magnesium	97	%Rec		9/29/17	1
7439965	Manganese	89	%Rec		9/29/17	1
7440020	Nickel	98	%Rec		9/29/17	1
7782492	Selenium	106	%Rec		9/29/17	1
7440224	Silver	93	%Rec		9/29/17	1
7440280	Thallium	98	%Rec		9/29/17	1
7440622	Vanadium	90	%Rec		9/29/17	1
7440666	Zinc	99	%Rec		9/29/17	1

Sample : IS092517AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B-MIS - Acid Digestion of Sediments, Sludges, and Soils, Incremental Subsampling

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7429905	Aluminum	104	%Rec		10/ 2/17	1
7440360	Antimony	99	%Rec		10/ 2/17	1
7440382	Arsenic	99	%Rec		10/ 2/17	1
7440393	Barium	101	%Rec		10/ 2/17	1
7440417	Beryllium	96	%Rec		10/ 2/17	1
7440439	Cadmium	95	%Rec		10/ 2/17	1
7440702	Calcium	102	%Rec		10/ 2/17	1
7440473	Chromium	94	%Rec		10/ 2/17	1
7440484	Cobalt	98	%Rec		10/ 2/17	1
7440508	Copper	94	%Rec		10/ 2/17	1
7439896	Iron	102	%Rec		10/ 2/17	1
7439921	Lead	97	%Rec		10/ 2/17	1
7439954	Magnesium	96	%Rec		10/ 2/17	1
7439965	Manganese	96	%Rec		10/ 2/17	1
7440020	Nickel	99	%Rec		10/ 2/17	1
7782492	Selenium	106	%Rec		10/ 2/17	1
7440224	Silver	88	%Rec		10/ 2/17	1
7440280	Thallium	98	%Rec		10/ 2/17	1
7440622	Vanadium	93	%Rec		10/ 2/17	1
7440666	Zinc	99	%Rec		10/ 2/17	1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

MEMORANDUM

SUBJECT: Data Release for Inorganics Results from the Region 10 USEPA Laboratory

PROJECT NAME: Gilmore Mine Waste Piles Integrated Assessment

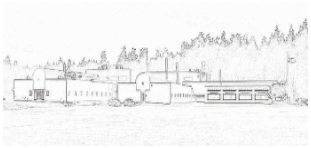
PROJECT CODE: SFP-122A

FROM: Gerald Dodo, Supervisory Chemist
Office of Environmental Review and Assessment
USEPA Region 10 Laboratory

TO: Ken Marcy, Project Manager
Office of Environmental Cleanup,
Assessment and Brownfields Unit, USEPA Region 10

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

I have authorized release of this data package. Attached you will find the Lead results for the Gilmore Mine Wast Piles Integrated Assessment Lead Bioavailability Study for the samples received 8/11/2017. For further information regarding the attached data, contact Stephanie Le at 360-871-8715.



US EPA Region 10 Laboratory

Multi-Analyte Final Report

Project Code : SFP-122A
Site : GILMORE MINE WASTE PILES
Contact : Ken Marcy
Account : 2017T10P303DD210ZZLA00

Sample : 17314069

Information : BLM Property 5
Matrix : Soil
Weight Basis : Dry
Collected : 8/3/2017 8:15:00AM

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**19400**	**mg/Kg**		10/12/17	10

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**29300**	**mg/Kg**		10/17/17	5

Sample : 17314070

Information : BLM Property 4
Matrix : Soil
Collected : 8/3/2017 9:00:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**11700**	**mg/Kg**		10/12/17	10

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**17900**	**mg/Kg**		10/17/17	5

Sample : 17314069 Sample Duplicate

Information : BLM Property 5
Matrix : Soil
Collected : 8/3/2017 8:15:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**19900**	**mg/Kg**		10/12/17	10

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	**Lead**	**30100**	**mg/Kg**		10/17/17	5

Sample : 17314069 Matrix Spike

Information : BLM Property 5
Matrix : Soil
Collected : 8/3/2017 8:15:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	102	%Rec		10/12/17	10

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead			NA	10/17/17	5

Sample : 17314069 Matrix Spike#2

Information : BLM Property 5
Matrix : Soil
Collected : 8/3/2017 8:15:00AM
Weight Basis : Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	98	%Rec		10/12/17	10

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead			NA	10/17/17	5

Sample : IS101117ABL Blank

Information : Blank
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	Lead	25	mg/Kg	U	10/12/17	10

Sample : IS101117BBL Blank

Information : Blank
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	Lead	25	mg/Kg	U	10/12/17	10

Sample : IS101617ABL Blank

Information : Blank
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Target Analyte Results:						
7439921	Lead	2.5	mg/Kg	U	10/17/17	1

Sample : IS101117AL1 Lab Control Std

Information : Lab Control Standard
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	104	%Rec		10/12/17	10

Sample : IS101617AL1 Lab Control Std

Information : Lab Control Standard
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	97	%Rec		10/17/17	1

Sample : IS101117AL2 Lab Control Std#2

Information : Lab Control Standard Dup.
Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS
Fraction : Total
Prep Method: 1340 - In Vitro Bioaccessibility Assay for Lead in Soil
Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	104	%Rec		10/12/17	10

Sample : IS101617AL2 Lab Control Std#2

Information : Lab Control Standard Dup.

Matrix : Soil **Weight Basis :** Dry

Parameter : ICP-SAS

Fraction : Total

Prep Method: 3050B - Acid Digestion of Sediments, Sludges, and Soils, SW-846

Analysis Method: 6010D - Inductively Coupled Plasma-Atomic Emission Spectrometry, SW-846

Analyte Code	Analyte Name	Result	Unit	Qual.	Analysis Date	Dilution
Spiked Compounds:						
7439921	Lead	97	%Rec		10/17/17	1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR INORGANIC CHEMICAL ANALYSES

Date: October 18, 2017

To: Ken Marcy; Project Manager
Office of Environmental Cleanup, US EPA Region 10

From: Stephanie Le, Chemist
Office of Environmental Review and Assessment, US EPA Region 10 Laboratory

Subject: Quality Assurance Review of the Gilmore Mine Waste Piles Integrated Assessment Project
For Metals, High Priority samples

Project Code: SFP-122A
Account Code: 2018T10P303DD210ZZLA00

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

The following is a quality assurance review of the results of the analysis of 45 soil samples (prepared by Incremental Sampling Methodology, ISM) for metals and percent solids. These samples were submitted for the Gilmore Mine Waste Piles Integrated Assessment Project. The analyses were performed by EPA Region 10 ESAT Contractors at the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

This review was conducted for the following samples:

17314001	17314019	17314021	17314022	17314024	17314026	17314027
17314028	17314029	17314030	17314031	17314032	17314033	17314034
17314035	17314037	17314038	17314039	17314040	17314041	17314042
17314044	17314045	17314046	17314047	17314048	17314049	17314050
17314051	17314052	17314053	17314054	17314056	17314057	17314058
17314059	17314060	17314061	17314062	17314063	17314064	17314065
17314066	17314067	17314068				

Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

The quality control measures which did not meet Laboratory/QAPP criteria are annotated in the title of each affected subsection with "Laboratory/QAPP Criteria Not Met".

For those tests for which the USEPA Region 10 Laboratory has been accredited by The NELAC Institute (TNI), all requirements of the current TNI Standard have been met.

1. Sample Transport and Receipt

Upon sample receipt, all conditions met Laboratory/QAPP requirements for this project.

2. Sample Holding Times

The concentration of an analyte in a sample or sample extract may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples. The samples covered by this review met method holding time recommendations.

3. Sample Preparation

Samples were prepared according to the method outlined in the SOP for these analytes in this type of matrix. No qualification of the data was required based on sample preparation.

4. Initial Calibration and Calibration Verification

The standardizations generated for the initial calibrations met method criteria. The Minimum Reporting Level (MRL) of the method is verified on each day of analysis by including it as the low point on the calibration curve, and/or by measuring it as a QC standard. All calibration verification checks met the frequency and recovery criteria on the day of analysis. No qualification was required based on calibration or calibration verification.

5. Laboratory Control Samples

All laboratory control sample results met the recovery acceptance criteria for the method. No qualification was required based on laboratory control sample analysis.

6. Blank Analysis – Laboratory/QAPP Criteria Not Met

The method blanks did not contain detectable levels of analyte which would require data qualification.

The results for each analyte in the ISM processed sand blanks (IS081117ABL and IS082117ABL) were compared to the results of an unprocessed sand blank (IS091417ABL) to determine the contamination introduced during the processing. Analytes that were present in the samples at a level greater than 10 times the introduced amount were not considered to be impacted by processing. To reflect that results may be elevated as a result of processing contamination, the following results were qualified (J), estimated: copper in sample 17314056; nickel in samples 17314028, 17314049, 17314053, 17314053DU and 17314056; and cobalt in samples 17314053, 17314056 and 17314059.

No other qualification was required based on blank analysis.

7. Internal Standards

All internal standards met instrument response criteria.

8. Duplicate Analysis

Duplicate analysis was performed on samples 17314024, 17314053, and 17314061. Sample results which were greater than five times the MRL level were within the +/- 35% relative percent difference (RPD) requirement specified in the QAPP. No qualification was required based on duplicate analysis.

9. Matrix Spike/Matrix Spike Duplicate Analysis -Laboratory/QAPP Criteria Not Met

Matrix spike analyses were performed on samples 17314024, 17314053, and 17314061. For results where the spike added was less than one-fourth of the native sample concentration (and thus difficult to effectively evaluate), spike results may be designated "NA" with no numerical value given. Applicable spike results were within the 75-125% recovery requirements, with the exception of antimony (which had recoveries of 20%/24%, 26%/23%, and 43%/18%). All sample results for antimony were qualified (J), estimated.

No additional qualification was required based on matrix spike analyses.

10. Reference Materials

A reference material was prepared and analyzed with these samples. Analytical values for this sample were within the range of acceptable results. No qualification was necessary based on analysis of the reference material.

11. Interferences

Serial dilution and inter-element correction checks were analyzed to demonstrate that interferences were under control. All results of these checks met laboratory acceptance criteria.

12. Reporting Limits

All sample results that fall below the MRL are assigned the value of the MRL and the 'U' qualifier is attached. MRL values for some analytes have been elevated to reflect dilutions which were performed to mitigate interferences, or to bring analyte concentrations within the method calibration range.

Sample results above the MRL but below the LRS are reported to two significant figures; results above the LRS level are reported to three significant figures.

13. Data Qualifiers

The (U) qualifier was attached to all sample results that fall below the MRL.

The (J) qualifier was attached to all antimony results due to low matrix spike recoveries.

The (J) qualifier was attached to copper result for sample 17314056 based on possible contamination during sample processing steps.

The (J) qualifier was attached to nickel results for samples 17314028, 17314049, 17314053, 17314053DU, and 17314056 based on possible contamination during sample processing steps.

The (J) qualifier was attached to cobalt results for samples 17314059, 17314053, and 17314056 based on possible contamination during sample processing steps.

No other qualification was required.

Below are the definitions for the codes used qualifying data from these analyses. When more than one quality issue was involved, the most restrictive qualifier has been attached to the data.

U - The analyte was not detected at or above the reported value.

J - The identification of the analyte is acceptable; however, the reported value is an estimate.

UJ - The analyte was not detected at or above the reported value. The reported value is an estimate.

NA - Not Applicable; the parameter was not included in the analysis, or there is no analytical result for this parameter. No value is reported with this qualification.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Stephanie Le at the Region 10 Laboratory, phone number (360) 871-8715.

14. Definitions

Accuracy - the degree of conformity of a measured or calculated quantity to its actual value.

Duplicate Analysis – when a duplicate of a sample (DU), a matrix spike (MSD), or a laboratory control sample (LCSD) is analyzed, it is possible to use the comparison of the results in terms of relative percent difference (RPD) to calculate precision.

Internal standards – Compounds used to help evaluate instrument analytical performance for individual samples. Internal standards provide an instrument response for reference to accurately quantify the analytes for all associated instrumental analyses.

Laboratory Control Sample (LCS) – a clean matrix spiked with known quantities of analytes. The LCS is processed with samples through every step of preparation and analysis. Measuring percent recovery of each analyte in the LCS provides a measurement of accuracy for the analyte in the project samples. A laboratory control sample is prepared and analyzed at a frequency no less than one for every 20 project samples.

Low Range Standard (LRS) – A level (often 5 times the MRL) where it has been demonstrated that the instrument achieves defined levels of accuracy and precision (more stringent than at the MRL), as checked with the Low Range Standard during analysis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Sample analyses performed to provide information about the effect of the sample matrix on analyte recovery and measurement within the project samples. To create the MS/MSD, a project sample is spiked with known quantities of analytes and the percent recoveries of the analytes are determined.

Method Blank – An analytical control that is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background and reagent contamination. A method blank is prepared and analyzed for every batch of samples at a minimum frequency of one per every 20 samples. To produce unqualified data, the result of the method blank analysis is required to be less than the MRL and less than 10 times the amount of analyte found in any project sample.

Minimum Reporting Level (MRL) – the smallest measured concentration of a substance that can be reliably measured using a given analytical method.

Precision – the degree of mutual agreement or repeatability among a series of individual results.

Reference materials – Samples with analyte values that are homogeneous and well established. This allows the reference material to be used to assess the accuracy of the measurement method.

Relative Percent Difference – The difference between two sample results divided by their mean and expressed as a percentage.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR INORGANIC CHEMICAL ANALYSES

Date: September 27, 2017

To: Ken Marcy; Project Manager
Office of Environmental Cleanup, US EPA Region 10

From: Katie Adams, Chemist
Office of Environmental Review and Assessment, US EPA Region 10 Laboratory

Subject: Quality Assurance Review of the Gilmore Mine Waste Piles Integrated Assessment Project
For Metals, High Priority samples

Project Code: SFP-122A
Account Code: 2017T10P303DD210ZZLA00

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

The following is a quality assurance review of the results of the analysis of 24 soil samples (prepared by Incremental Sampling Methodology, ISM) for metals. These samples were submitted for the Gilmore Mine Waste Piles Integrated Assessment Project. The analyses were performed by EPA Region 10 ESAT Contractors at the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

This review was conducted for the following samples:

17314000	17314002	17314003	17314004	17314005	17314006	17314007
17314008	17314009	17314010	17314011	17314012	17314013	17314014
17314015	17314016	17314017	17314018	17314020	17314023	17314025
17314036	17314043	17314055				

Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

The quality control measures which did not meet Laboratory/QAPP criteria are annotated in the title of each affected subsection with "Laboratory/QAPP Criteria Not Met".

For those tests for which the USEPA Region 10 Laboratory has been accredited by The NELAC Institute (TNI), all requirements of the current TNI Standard have been met.

1. Sample Transport and Receipt

Upon sample receipt, all conditions met Laboratory/QAPP requirements for this project.

2. Sample Holding Times

The concentration of an analyte in a sample or sample extract may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples. The samples covered by this review met method holding time recommendations.

3. Sample Preparation

Samples were prepared according to the method outlined in the SOP for these analytes in this type of matrix. No qualification of the data was required based on sample preparation.

4. Initial Calibration and Calibration Verification

The standardizations generated for the initial calibrations met method criteria. The Minimum Reporting Level (MRL) of the method is verified on each day of analysis by including it as the low point on the calibration curve, and/or by measuring it as a QC standard. All calibration verification checks met the frequency and recovery criteria on the day of analysis. No qualification was required based on calibration or calibration verification.

5. Laboratory Control Samples

All laboratory control sample results met the recovery acceptance criteria for the method. No qualification was required based on laboratory control sample analysis.

6. Blank Analysis

The method blanks did not contain detectable levels of analyte which would require data qualification.

7. Internal Standards

All internal standards met instrument response criteria.

8. Duplicate Analysis

Duplicate analysis was performed on samples 17314000 and 17314036. Sample results which were greater than five times the MRL level were within the +/- 35% relative percent difference (RPD) requirement specified in the QAPP. No qualification was required based on duplicate analysis.

9. Matrix Spike/Matrix Spike Duplicate Analysis -Laboratory/QAPP Criteria Not Met

Matrix spike analyses were performed on samples 17314000 and 17314036. For results where the spike added was less than one-fourth of the native sample concentration (and thus difficult to effectively evaluate), spike results may be designated "NA" with no numerical value given. Applicable spike results were within the 75-125% recovery requirements, with the exception of the results for antimony (which had recoveries of 25%/21% and 15%/15%). All sample results for antimony were qualified (J), estimated. No additional qualification was required based on matrix spike analyses.

10. Reference Materials

A reference material was prepared and analyzed with these samples. Analytical values for this sample were within the range of acceptable results. No qualification was necessary based on analysis of the reference material.

11. Interferences

Serial dilution and inter-element correction checks were analyzed to demonstrate that interferences were under control. All results of these checks met laboratory acceptance criteria.

12. Reporting Limits

All sample results that fall below the MRL are assigned the value of the MRL and the 'U' qualifier is attached. MRL values for some analytes have been elevated to reflect dilutions which were performed to mitigate interferences, or to bring analyte concentrations within the method calibration range.

Sample results above the MRL but below the LRS are reported to two significant figures; results above the LRS level are reported to three significant figures.

13. Data Qualifiers

The (U) qualifier was attached to all sample results that fall below the MRL.

The (J) qualifier was attached to all antimony results due to low matrix spike recoveries.

Below are the definitions for the codes used qualifying data from these analyses. When more than one quality issue was involved, the most restrictive qualifier has been attached to the data.

U - The analyte was not detected at or above the reported value.

J - The identification of the analyte is acceptable; however the reported value is an estimate.

UJ - The analyte was not detected at or above the reported value. The reported value is an estimate.

NA - Not Applicable; the parameter was not included in the analysis, or there is no analytical result for this parameter. No value is reported with this qualification.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Katie Adams at the Region 10 Laboratory, phone number (360) 871-8748.

14. Definitions

Accuracy - the degree of conformity of a measured or calculated quantity to its actual value.

Duplicate Analysis – when a duplicate of a sample (DU), a matrix spike (MSD), or a laboratory control sample (LCSD) is analyzed, it is possible to use the comparison of the results in terms of relative percent difference (RPD) to calculate precision.

Internal standards – Compounds used to help evaluate instrument analytical performance for individual samples. Internal standards provide an instrument response for reference to accurately quantify the analytes for all associated instrumental analyses.

Laboratory Control Sample (LCS) – a clean matrix spiked with known quantities of analytes. The LCS is processed with samples through every step of preparation and analysis. Measuring percent recovery of each analyte in the LCS provides a measurement of accuracy for the analyte in the project samples. A laboratory control sample is prepared and analyzed at a frequency no less than one for every 20 project samples.

Low Range Standard (LRS) – A level (often 5 times the MRL) where it has been demonstrated that the instrument achieves defined levels of accuracy and precision (more stringent than at the MRL), as checked with the Low Range Standard during analysis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Sample analyses performed to provide information about the effect of the sample matrix on analyte recovery and measurement within the project samples. To create the MS/MSD, a project sample is spiked with known quantities of analytes and the percent recoveries of the analytes are determined.

Method Blank – An analytical control that is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background and reagent contamination. A method blank is prepared and analyzed for every batch of samples at a minimum frequency of one per every 20 samples. To produce unqualified data, the result of the method blank analysis is required to be less than the MRL and less than 10 times the amount of analyte found in any project sample.

Minimum Reporting Level (MRL) – the smallest measured concentration of a substance that can be reliably measured using a given analytical method.

Precision – the degree of mutual agreement or repeatability among a series of individual results.

Reference materials – Samples with analyte values that are homogeneous and well established. This allows the reference material to be used to assess the accuracy of the measurement method.

Relative Percent Difference – The difference between two sample results divided by their mean and expressed as a percentage.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
7411 Beach Dr. East
Port Orchard, Washington 98366

QUALITY ASSURANCE MEMORANDUM FOR INORGANIC CHEMICAL ANALYSES

Date: October 24, 2017

To: Ken Marcy, Project Manager
Office of Environmental Cleanup, Assessment and Brownfields Unit, US EPA Region 10

From: Stephanie Le, Chemist
Office of Environmental Review and Assessment, US EPA Region 10 Laboratory

Subject: Quality Assurance Review of the Gilmore Mine Waste Piles Integrated Assessment Project For Extractable Lead

Project Code: SFP-122A
Account Code: 2018T10P303DD210ZZLA00

CC: Dana Swift, Idaho Department of Environmental Quality
Shelley Hicks, Alta

The following is a quality assurance review of the results of the analysis of 2 soil samples for IVBA extractable lead (by Methods 1340/6010D) and total lead (by Methods 3050B/6010D). These samples were submitted for the Gilmore Mine Waste Piles Integrated Assessment Project. The analyses were performed by EPA Region 10 ESAT Contractors at the US EPA Region 10 Laboratory in Port Orchard, WA, following US EPA and Laboratory guidelines.

This review was conducted for the following samples:

17314069 17314070

Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

All measures of quality control met Laboratory/QAPP criteria.

For those tests for which the USEPA Region 10 Laboratory has been accredited by The NELAC Institute (TNI), all requirements of the current TNI Standard have been met.

1. Sample Transport and Receipt

Upon sample receipt, all conditions met Laboratory/QAPP requirements for this project.

2. Sample Holding Times

The concentration of an analyte in a sample or sample extract may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples. The samples covered by this review met method holding time recommendations.

3. Sample Preparation

Samples were prepared according to the method outlined in the SOP for these analytes in this type of matrix. No qualification of the data was required based on sample preparation.

4. Initial Calibration and Calibration Verification

The standardizations generated for the initial calibrations met method criteria. The Minimum Reporting Level (MRL) of the method is verified on each day of analysis by including it as the low point on the calibration curve, and/or by measuring it as a QC standard. All calibration verification checks met the frequency and recovery criteria on the day of analysis. No qualification was required based on calibration or calibration verification.

5. Laboratory Control Samples

All laboratory control sample results met the recovery acceptance criteria for the methods. No qualification was required based on laboratory control sample analysis.

6. Blank Analysis

The method blanks did not contain detectable levels of analyte which would require data qualification. No qualification was required based on blank analysis.

7. Internal Standards

All internal standards met instrument response criteria.

8. Duplicate Analysis

Duplicate analysis was performed on sample 17314069 for both Methods (1340 & 3050B). Sample results which were greater than five times the MRL level were within the +/- 20% relative percent difference (RPD) requirement specified in the QAPP. No qualification was required based on duplicate analysis.

9. Matrix Spike/Matrix Spike Duplicate Analysis

Matrix spike/Matrix spike duplicate analyses were performed on sample 17314069 for both Methods (1340 & 3050B). The spikes for Method 1340 were created after sample rotation, as described in the method.

For results where the spike added was less than one-fourth of the native sample concentration (and thus difficult to effectively evaluate), spike results may be designated "NA" with no numerical value given. Applicable spike results were within the 75-125% recovery and relative percent difference requirements.

No qualification was required based on matrix spike analyses.

10. Reference Materials

The rotational batch for Method 1340 included a Standard Reference Material, NIST SRM 2710a. The analytical value for IVBA extractable lead in this sample was within the acceptable range of 60.7 – 74.2%.

The digestion batch for Method 3050B included a certified material, ERA Metals in Soil (cat# 540) which has certified values and recovery limits for metals by 3050B digestion. The analytical value for total lead in this sample was within the acceptable range. No qualification was necessary based on analysis of the reference materials.

11. Interferences

Serial dilution and inter-element correction checks were analyzed to demonstrate that interferences were under control. All results of these checks met laboratory acceptance criteria.

12. Reporting Limits

All sample results that fall below the MRL are assigned the value of the MRL and the 'U' qualifier is attached. MRL values for some analytes have been elevated to reflect dilutions which were performed to mitigate interferences, or to bring analyte concentrations within the method calibration range.

Sample results above the MRL but below the LRS are reported to two significant figures; results above the LRS level are reported to three significant figures.

13. Data Qualifiers

The (U) qualifier was attached to all sample results that fall below the MRL.

No other qualification was required.

Below are the definitions for the codes used qualifying data from these analyses. When more than one quality issue was involved, the most restrictive qualifier has been attached to the data.

U - The analyte was not detected at or above the reported value.

NA - Not Applicable; the parameter was not included in the analysis, or there is no analytical result for this parameter. No value is reported with this qualification.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Stephanie Le at the Region 10 Laboratory, phone number (360) 871-8715.

14. Definitions

Accuracy - the degree of conformity of a measured or calculated quantity to its actual value.

Duplicate Analysis – when a duplicate of a sample (DU), a matrix spike (MSD), or a laboratory control sample (LCSD) is analyzed, it is possible to use the comparison of the results in terms of relative percent difference (RPD) to calculate precision.

Internal standards – Compounds used to help evaluate instrument analytical performance for individual samples. Internal standards provide an instrument response for reference to accurately quantify the analytes for all associated instrumental analyses.

Laboratory Control Sample (LCS) – a clean matrix spiked with known quantities of analytes. The LCS is processed with samples through every step of preparation and analysis. Measuring percent recovery of each analyte in the LCS provides a measurement of accuracy for the analyte in the project samples. A laboratory control sample is prepared and analyzed at a frequency no less than one for every 20 project samples.

Low Range Standard (LRS) – A level (often 5 times the MRL) where it has been demonstrated that the instrument achieves defined levels of accuracy and precision (more stringent than at the MRL), as checked with the Low Range Standard during analysis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) – Sample analyses performed to provide information about the effect of the sample matrix on analyte recovery and measurement within the project samples. To create the MS/MSD, a project sample is spiked with known quantities of analytes and the percent recoveries of the analytes are determined.

Method Blank – An analytical control that is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background and reagent contamination. A method blank is prepared and analyzed for every batch of samples at a minimum frequency of one per every 20 samples. To produce unqualified data, the result of the method blank analysis is required to be less than the MRL and less than 10 times the amount of analyte found in any project sample.

Minimum Reporting Level (MRL) – the smallest measured concentration of a substance that can be reliably measured using a given analytical method.

Precision – the degree of mutual agreement or repeatability among a series of individual results.

Reference materials – Samples with analyte values that are homogeneous and well established. This allows the reference material to be used to assess the accuracy of the measurement method.

Relative Percent Difference – The difference between two sample results divided by their mean and expressed as a percentage.