Preliminary Assessment and Site Inspection

J.E.T. Business Park Subdivision

State of Idaho, Department of Environmental Quality

Alta Science and Engineering, Inc.

January 2020

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Acknowledgments

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Table of Contents

List of Tables

List of Figures

Abbreviations, Acronyms, and Symbols

bgs	below ground surface
DEQ	Idaho Department of Environmental Quality
EPA	United States Environmental Protection Agency
ITD	Idaho Transportation Department
kg	kilogram
L	liter
lb	pound
mg	milligram
oz	ounce
PA	preliminary assessment
PPE	probable point of entry
PWS	public water system
QA	quality assurance
QC	quality control
ROW	right-of-way
RSL	regional screening level
QAPP	quality assurance project plan
SAP	sampling and analysis plan
SI	site inspection
TCLP	toxicity characteristic leaching procedure
TDL	target distance limit
XRF	X-ray fluorescence

1 Introduction

This report presents the results of the preliminary assessment and site inspection (PA/SI) for the J.E.T. Business Park Subdivision located in Bellevue, Idaho. The United States Environmental Protection Agency (EPA) Region 10 has a cooperative agreement with the Idaho Department of Environmental Quality (DEQ) to provide technical support for completing preliminary assessments at various mine and industrial sites located on private, state, or mixed ownership (public and private) lands. These sites include abandoned mines, rural airfields that have served as bases for aerial spraying, old landfills, illegal dumps, and abandoned industrial facilities with known or suspected releases.

In February 2002, DEQ initiated a Preliminary Assessment Program to evaluate and prioritize assessment of potentially contaminated sites (*http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities*). Due to accessibility and funding considerations, priority is given to sites where potential contamination poses substantial threat to human health or the environment. In recent years, this priority directed DEQ's efforts to areas where residential and recreational developments are encroaching on historic mining districts.

A PA/SI assesses the threat posed to human health and the environment and determines the need for additional investigation. The PA/SI at the J.E.T. Business Park Subdivision focused on soil sampling on the property and adjacent Idaho Transportation Department (ITD) right-of-way (ROW) to determine contaminant levels and the extent of contamination to a depth of 12 inches. The information obtained determined that additional investigation was needed to advise property owners of the contaminants on their property.

The J.E.T. Business Park Subdivision is located on private property in Bellevue, Blaine County, Idaho, and is associated with parcel numbers RPB03990000010, RPB03990000020, and RPB03990000030 (Figure 1).

The subdivision site includes a vacant lot along the east side of Highway 75 (South Main Street in Figure 1). The ITD ROW is a gravel strip with a paved bike path along the east side of the site. The site assessment was conducted on the gravel/dirt portion of the ROW adjacent to the vacant lot and did not include any portion of the paved bike path. On May 23, 2019, DEQ and their subcontractor visited the property and performed a site assessment. During the site assessment, DEQ referenced several documents, including United States Geological Survey maps, county tax rolls, and historical reports. DEQ and the subcontractor did not purposely or knowingly trespass on any private holdings.

Figure 1. Project location map.

2 Ownership

The J.E.T. Business Park Subdivision (Lots 1, 2, and 3) is owned by Edgar Redman, and ITD owns the adjacent ROW. Sampling for this site assessment was conducted on private property where permission was granted by Edgar Redman and on the adjacent ITD ROW under ITD Encroachment Permit # 4-19-140. DEQ does not warrant the ownership research or location of property boundaries contained in this report. Information on ownership and property boundaries was obtained from the Blaine County parcel maps (Idaho State Tax Commission 2019).

3 Location

The J.E.T. Business Park Subdivision lots and ITD ROW are located in Township 2N, Range 18E, and the south one-half of Section 36.The subdivision is located at latitude 43°27′28.37″N longitude 114°15′26.41″W.

To access the J.E.T. Business Park Subdivision, enter from the east side of South Main Street (Highway 75) at the south end of Bellevue. The ITD ROW is located adjacent to the east side of the target property.

4 Site History

DEQ uses historical research to identify potential contaminants of concern, the magnitude of waste sites, and potentially dangerous physical hazards such as open adits and shafts. DEQ also uses the information to properly identify mine/mill or industrial facilities, unravel inconsistencies in property boundaries and ownership, and identify historical land uses.

The history of mining districts and their workings are evaluated from an economics, multiple land use, human health, and ecological risk perspective. This historical information helps DEQ understand the levels of production, commodities, and potential waste types necessary to prepare for the site assessment field work.

Numerous research sources were used before visiting the site. Historical reports indicate that a ramp for loading ore onto rail cars was located on the J.E.T. Business Park Subdivision property. Several long-term residents interviewed during the Phase I stated that ore came from the Minnie Moore Mine, Silver Star Queen Mine, Queen of the Hills Mine, and Federal Resources Mill (ACS 2018a). A report on the history of the Minnie Moore Mine discusses a railcar shipment of ore from this mine combined with ore from other area mines under the same ownership, but no other information on the location of the loading dock or eventual destination of the ore was found. Key documents containing information on the history of the property include the following:

- *Phase 1 Environmental Site Assessment of Lots 1, 2, 3 J.E.T. Business Park Subdivision Bellevue, Idaho* (ACS 2018a)
- *Summary of Soil Sampling Near Historic Ore Loading Operation at the J.E.T. Business Park, Bellevue, Idaho* (ACS 2018b)

- *Historic Mines of Blaine County, Idaho* (BLM and BCCC no date)
- *History of the Minnie Moore Mine, Blaine County, Idaho* (IGS 2000)

A summary of commodities and production for some of the larger, more productive mines in Blaine County is shown in Table 1.

Table 1. Commodities and production summary.

Mine	Commodities (Production)
Muldoon (alias Solid Muldoon)	Copper (5.001-10,000 pounds [lb]), gold (0–50 ounces [oz]), iron, lead (100,001–500,000 lb), silver (10,001–50,000 oz), zinc (10,001–50,000 lb)
Minnie Moore (alias Silver Star Queen, Queen of the Hills)	Copper (10,001–50,000 lb), gold (101–500 oz), lead (15,000,001–20,000,000 lb), silver (500,001–2,000,000 oz), zinc (500,001–2,000,000 lb)
Site of Federal Resources Mill (1964–1965)	250 tons per day flotation mill: processed tailings from the Minnie Moore
Croesus	Copper (50,001–100,000 lb), gold (1,001–5,000 oz), lead (500,001–2,000,000 lb), silver (10,001–50,000 oz)
Elkhorn	Gold, lead, silver, zinc (10,001–50,000 lb)
Bullion	Copper (501–1,000 lb), germanium, gold (101–500 oz), lead (100,001–500,000 lb), silver (10,001–50,000 oz), zinc (501–1,000 lb)
Jay Gould (alias Apache)	Copper (101–500 lb), gold (0–50 oz), lead (100,001–500,000 lb), silver (10,001–50,000 oz), zinc
Independence (alias Triumph)	Antimony, copper (100,001–500,000 lb), gold (1,001–5,000 oz), lead (15,000,001–20,000,000 lb), silver (2,000,001–4,000,000 oz), zinc (10,001–50,000 lb)
North Star (alias Carboniferous, Triumph)	Antimony, copper (500,001–2,000,000 lb), gold (10,001–50,000 oz), lead (30,000,001–40,000,000 lb), silver (2,000,001–4,000,000 oz), zinc (50,000,001–75,000,000 lb)
Camas (alias Camas No. 2, Daisy Mine)	Copper (10,001–50,000 lb), gold (1,001–5,000 oz), lead (10,001–50,000 lb), silver (10,001–50,000 oz), uranium
Hattie (alias Treasure Vault)	Copper (1,001–5,000 lb), gold (101–500 oz), lead (5,001–10,000 lb), quartz, silver (1,001–5,000 oz), zinc (101–500 lb)

5 Climatology

The climatology of the area is summarized by the Western Regional Climate Center (WRCC 2019).The nearest climatic data are from Hailey 3 NNW, IDAHO weather station 103942, which is approximately 8.2 air miles from Bellevue, Idaho. The weather station is at an elevation of 5,420 feet. Based on data collected from 1893 to 1988, the mean annual high temperature is 57.7 °F, the mean annual low temperature is 28.8 °F, and the mean annual precipitation is 15.4 inches of rain with a total annual snowfall average of 80.1 inches.

6 Current and Potential Future Land Uses

The project area of the current J.E.T. Business Park Subdivision (Figure 1) is a vacant lot. The property is zoned as light industrial and could be developed for industrial or commercial business use. The adjacent ITD ROW currently contains a paved bike path.

7 Site Conditions

The project site includes a vacant lot located on level ground vegetated primarily with grass, weeds, and shrubs. Site photographs showing the site conditions during the field visit on May 23, 2019, are presented in Appendix A.

8 Sample Collection and Analysis

Under contract with DEQ, Alta Science and Engineering, Inc. (Alta) personnel visited the J.E.T. Business Park Subdivision and adjacent ITD ROW and collected soil samples on May 23, 2019. Alta personnel were accompanied by the property owner, Edgar Redman, and DEQ's representative, Derek Young. The field crew did not purposely or knowingly trespass on any private holdings during the field work.

Sampling and laboratory analysis were conducted according to the *Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) for J.E.T. Business Park Subdivision in Bellevue, Idaho Preliminary Assessment and Site Investigation (PA/SI)* (Alta 2019). All samples were collected, handled, and stored according to the SAP/QAPP and submitted to SVL Analytical, Inc. in Kellogg, Idaho, on May 30, 2019. Laboratory data reports are included in Appendix B.

8.1 X-Ray Fluorescence Analysis

X-ray fluorescence (XRF) analysis was conducted using a Thermo Scientific Niton XL3t portable XRF analyzer. Analytical methods followed EPA Method 6200 (EPA 2007), and system checks and QA/QC procedures were followed as described in EPA Method 6200 and the manufacturer's instructions. XRF samples were screened *in-situ*.

XRF screening was conducted on site to determine contaminant-level boundaries and to identify soil sample locations for laboratory analysis. XRF readings were collected in a systematic manner along transects across the subject property (e.g., Appendix B, photo 1071) from a portion of the adjacent ITD ROW and from additional field-selected locations to further refine the contaminated area boundary.

XRF screening indicates the contaminant area is primarily located in the southeast corner of the subject property. A small waste pile was also identified near trees on the northeast corner of the subject property. Contaminated soils are also present on the adjacent ITD ROW. XRF lead results are presented in Figure 2.

8.2 Soil Sampling

Soil samples were collected for laboratory analysis from the J.E.T. Business Park Subdivision property and the adjacent ITD ROW (Figure 3). The laboratory results are summarized in Table 2 and Table 3. All soil samples were analyzed for total metals (antimony, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, silver, and zinc). Two of the soil samples were submitted for Toxicity Characteristic Leaching procedure (TCLP) analysis, and the extract was analyzed for total metals (arsenic, cadmium, and lead; Table 3). A

copy of the laboratory report is included in Appendix B. Field observations and laboratory results concerning migration/exposure pathways and targets are discussed in section 9.

Figure 2. XRF lead results.

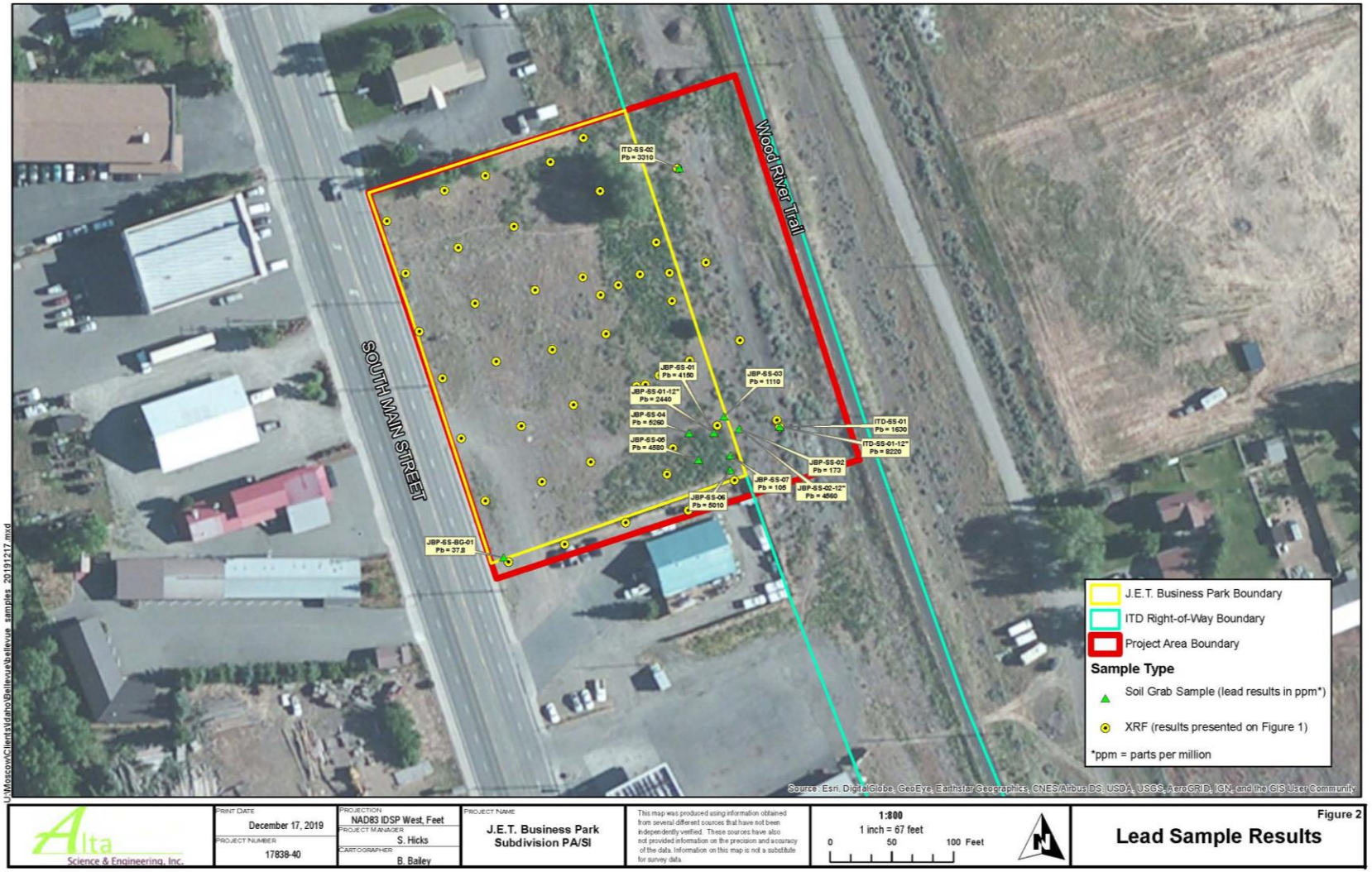

Figure 3. Lead sample results.

Table 2. J.E.T. Business Park Subdivision soil sample analysis.

Location Description	Sample ID	Sample Type	Sample Date	Analyte (mg/kg)												
				Antimony	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Selenium	Mercury	Silver	Zinc
Idaho Transportation Department Right-of-Way																
South end of ROW (XRF Shot #115)	ITD-SS-01	Grab-soil	5/23/2019	**213**	**2,060**	286 *J+*	**62.6**	54.4	**588**	**41,600**	**1,630**	**1,840**	<4.0	**1.42**	**76.8**	**814**
South end of ROW (XRF Shot #120, 12-inch depth)	ITD-SS-01-12"	Grab-soil	5/23/2019	**134**	**518**	236 *J+*	**22.9**	22.7	**198**	20,800	**8,220**	**710**	<4.0	**0.563**	**35.6**	**1,980**
North end of ROW (XRF Shot #119)	ITD-SS-02	Grab-soil	5/23/2019	**68.8**	**227**	235 *J+*	**22.8**	44.3	100	32,500	**3,310**	**1,140**	<4.0	**0.958**	**18.5**	**2,230**
J.E.T. Business Park Subdivision Lot																
Waste Material Area (XRF Shot #90)	JBP-SS-01	Grab-soil	5/23/2019	**142**	**690**	200 *J+*	**46.5**	33.3	**145**	27,500	**4,150**	**1,380**	<4.0	**1.10**	**29.9**	**4,250**
Waste Material Area (XRF Shot #91, 12-inch depth)	JBP-SS-01-12"	Grab-soil	5/23/2019	**93.6**	**365**	195 *J+*	**22.7**	37.6	94.8	24,900	**2,440**	**1,050**	<4.0	**0.632**	**15.2**	**2,460**
Waste Material Area (XRF Shot #93)	JBP-SS-02	Grab-soil	5/23/2019	4.6	**20.7**	170 *J+*	**4.19**	27.4	34.3	17,000	**173**	416	<4.0	0.057	<1.00	347 *J*
Waste Material Area (XRF Shot #92, 12-inch depth)	JBP-SS-02-12"	Grab-soil	5/23/2019	**148**	**316**	176 *J+*	**97.6**	39.1	**146**	25,800	**4,560**	**892**	<4.0	**1.53**	**31.0**	**514** ***J***
Waste Material Area (XRF Shot #94)	JBP-SS-03	Grab-soil	5/23/2019	**318**	**978**	192 *J+*	**114**	35.1	**347**	33,900	**1,110**	**1,470**	<4.0	**3.03**	**72.8**	**1,150**
Waste Material Area (XRF Shot #95)	JBP-SS-04	Grab-soil	5/23/2019	**220**	**707**	187 *J+*	**47.4**	35.3	**203**	32,000	**5,260**	**1,600**	<4.0	**1.15** ***J***	**42.2**	**4,280**
Waste Material Area (XRF Shot #96)	JBP-SS-05	Grab-soil	5/23/2019	**171**	**595**	215 *J+*	**45.4**	36.7	**168**	29,000	**4,580**	**1,380**	<4.0	**1.42**	**32.7**	**516** ***J***
Waste Material Area (XRF Shot #97)	JBP-SS-06	Grab-soil	5/23/2019	**198**	**689**	385 *J+*	**57.5**	39.1	**220**	30,600	**5,010**	**1,540**	<4.0	**1.35**	**39.0**	**638** ***J***
Waste Material Area (XRF Shot #98)	JBP-SS-07	Grab-soil	5/23/2019	<4.0	14.0	151 *J+*	**2.45**	31.0	29.9	16,700	105	397	<4.0	0.040	<1.00	220 *J*
Background Southwest Corner (XRF Shot #11)	JBP-SS-BG-01	Grab-soil	5/23/2019	<4.0	5.4	97.5 *J+*	0.78	34.4	39.6	12,500	37.8	231	<4.0	<0.033	<1.00	146 *J*
EPA RSL for resident soil[a] (mg/kg)				31	0.68	15,000	71	NA	3,100	55,000	400	1,800	390	11	390	23,000
EPA RSL for industrial soil[a] (mg/kg)				470	3	220,000	980	NA	47,000	820,000	800	26,000	5,800	46	5,800	350,000

Notes:

a. Based on a target hazard quotient of 1.0. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables (November 2019)

mg/kg = milligrams per kilogram

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 the soil sample to the background value at JBP-SS-BG-01. Where the background value is not detected, the limit of detection is used as the background value for calculation purposes.

<value = Result is below the detection limit shown.

NA = Total chromium not available. Cr(III) and Cr(VI) RSLs are as follows: Cr(III) Residential = 120,000 and Industrial = 1,800,000; Cr(VI) Residential = 0.3 and Industrial = 6.3.

J = The result is an estimated quantity.

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

Table 3. TCLP sample results.

Location Description	Sample ID	Sample Type	Sample Date	Analyte (mg/L)		
				Arsenic	Cadmium	Lead
Idaho Transportation Department Right-of-Way						
XRF Shot #115	ITD-SS-01	TCLP extract	5/23/2019	0.064	0.378	33.0
J.E.T. Business Park Subdivision Lot						
XRF Shot #94	JBP-SS-03	TCLP extract	5/23/2019	0.112	0.979	17.2
Toxicity Characteristic Regulatory Level[a] (mg/L)				5.0	1.0	5.0

Notes:
a. 40 CFR 261.24 Toxicity characteristic. Table 1 - Maximum Concentration of Contaminants for the Toxicity Characteristic. *https://www.ecfr.gov/cgi-bin/text-idx?SID=4e568bc969242a3a468c7b317ebf1095&mc=true&node=se40.28.261_124&rgn=div8*
mg/L = milligrams per liter
Gray-shaded values exceed the toxicity characteristic regulatory level.

9 Migration/Exposure Pathways and Receptors

The J.E.T. Business Park Subdivision was evaluated to determine if any sources of contamination are present that may migrate to environmental media and result in exposures to site receptors. This PA/SI determined the need for additional investigation.

Migration pathways that may lead to exposures to human or ecological receptors include ground water, surface water, air, and soil. This section identifies environmental hazards associated with the pathways and types of exposures to the receptors.

9.1 Ground Water Pathways

In areas where historical mines, mine waste, or soils impacted from mining are close to residential areas, contamination of drinking water systems may occur along three ground water pathways, illustrated by three scenarios:

1. Heavy metals can leach from tailing piles, waste rock dumps, or other residual waste sources (including contaminated soils), enter ephemeral or perennial drains, and contaminate the area's shallow ground water system.
2. Heavy metals can leach from the local ore bodies and be transported through the geologic structure to the shallow ground water.
3. Heavy metals can leach out of the ore bodies and be discharged from the underground workings as adit water, which is then conveyed through ephemeral and perennial drains to the shallow ground water system.

The J.E.T. Business Park Subdivision contains residual mine waste spilled during loading of ore onto railcars. Potential heavy metals leaching from residual waste to shallow ground water is the only likely pathway to ground water at this site.

A total of 542 ground water wells are located within a 4-mile radius of the target property and include the following well usage types (DEQ 2018): domestic, fire protection, heating, industrial, injection, irrigation, monitoring, municipal, test, and other (Figure 4). The field crew did not observe any ground water wells on the site.

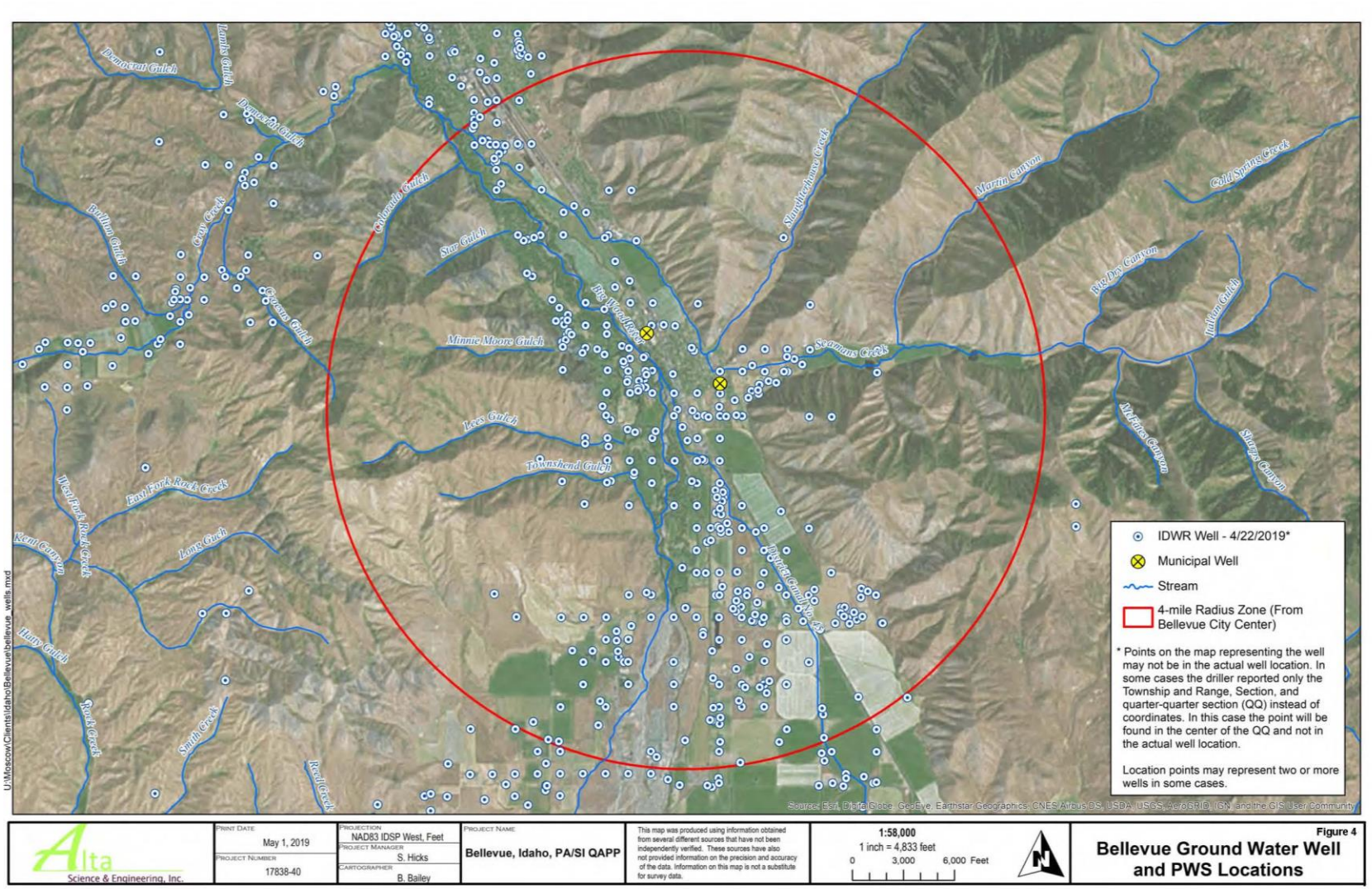

Figure 4. Bellevue ground water wells and public water system locations.

9.2 Surface Water Pathways

The surface water migration pathway target distance limit (TDL) begins at the probable point of entry (PPE) of surface water runoff from a site to a surface water body and extends downstream for 15 miles. Figure 5 shows the source water delineation, including the 15-mile surface water TDL for the J.E.T. Business Park Subdivision.

On the subdivision site, the selected PPE for the surface water migration pathway is the Big Wood River. Surface water flows overland to Big Wood River to Magic Reservoir, and the 15-mile TDL is completed at Magic Reservoir.

The field crew did not observe any erosional features or any direct flow paths to Big Wood River. Heavy precipitation occurred the day before the field work resulting in wet surficial soil and some standing water; however, no off-site flow of surface water was observed.

The public water system (PWS) for the city of Bellevue (section 9.3) includes surface water sourced from three springs upgradient of the J.E.T. Business Park Subdivision site. Due to the upstream location of the PWS source springs, no impact to Bellevue's drinking water through this pathway is expected.

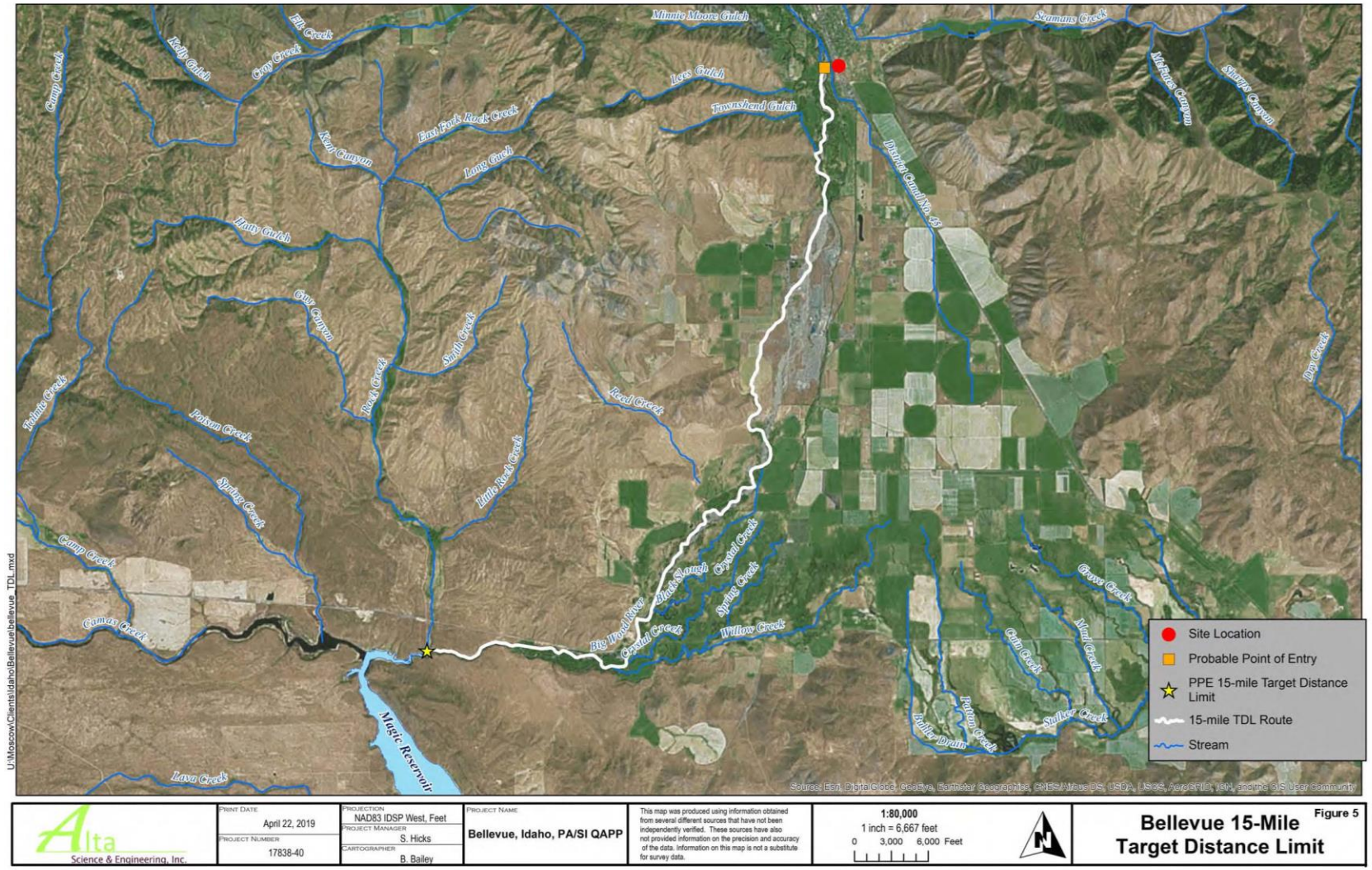

Figure 5. Bellevue 15-mile target distance limit.

9.3 Domestic Wells and Public Water Supplies

Ground water within a 4-mile radius of the J.E.T. Business Park Subdivision in Bellevue supplies one PWS, sourced from two wells and three springs. Two wells, Chestnut Well #A0004264 and Chantrelle Well #A0018529, provide water for PWS #5070004, which serves approximately 2,287 people through 943 connections. The ground water wells for the PWS are shown on Figure 4.

9.4 Air Quality Pathways

Soils contaminated with heavy metals from past railcar loading activities remain at the site. The site is primarily covered with grass and weeds with some bare patches of soil. The site soils were slightly wet during the site assessment due to recent, heavy rains, and it was not possible to evaluate the likelihood of fugitive dust. The estimated population within a 4-mile radius of the site is 6,419 people (MCDC 2019).

9.5 Soil Exposures

Laboratory analytical results for the soil samples collected on site were compared to the following criteria: (1) EPA regional screening levels (RSLs) for residential and industrial soils, and (2) background metals concentrations from the background soil sample collected at JBP-SS-BG-01 (Table 2). TCLP extract analytical results were compared to the toxicity characteristic regulatory level (Table 3).

The following observations are based on the analytical laboratory results:

- Ten samples (excluding quality control samples) were collected from the J.E.T. Business Park Subdivision property including eight surface samples and two subsurface samples collected at 12 inches below ground surface (bgs). Antimony (at seven locations) and cadmium (at two locations) were above RSLs for residential soil, and arsenic (at all sample locations) and lead (at seven locations) were above RSLs for both residential and industrial soils (Table 2). Constituent results more than three times the background sample concentration were as follows: antimony (seven samples), arsenic (eight samples), cadmium (nine samples), copper (six samples), lead (eight samples), manganese (seven samples), silver (seven samples), zinc (seven samples), and mercury (seven samples) (Table 2).
- Three samples were collected from the ITD ROW including two surface samples and one subsurface sample collected at 12 inches bgs. Antimony (all locations) and manganese (one location) were above RSLs for residential soil, and arsenic and lead at all locations were above RSLs for both residential and industrial soils (Table 2). Results more than three times the background sample include all results for antimony, arsenic, cadmium, lead, manganese, mercury, silver, and zinc; copper at two locations; and iron at one location (Table 2).

One sample from the J.E.T. Business Park Subdivision property and one sample from the ITD ROW were submitted for TCLP analysis. TCLP extract results for both samples exceeded the

toxicity characteristic regulatory level for lead (Table 3). Based on these results, the likelihood of human exposures to on-site soils exists.

9.6 Residences, Schools, and Day Care Facilities

The estimated population within a 1-mile radius of the site is 2,079 people (MCDC 2019). Two elementary/middle schools and 15 preschools/child care facilities were identified within Bellevue.

9.7 Wetlands

Numerous wetlands are located within a 4-mile radius of the site including freshwater emergent, freshwater forest/shrub, freshwater pond, and riverine wetlands (Figure 6).

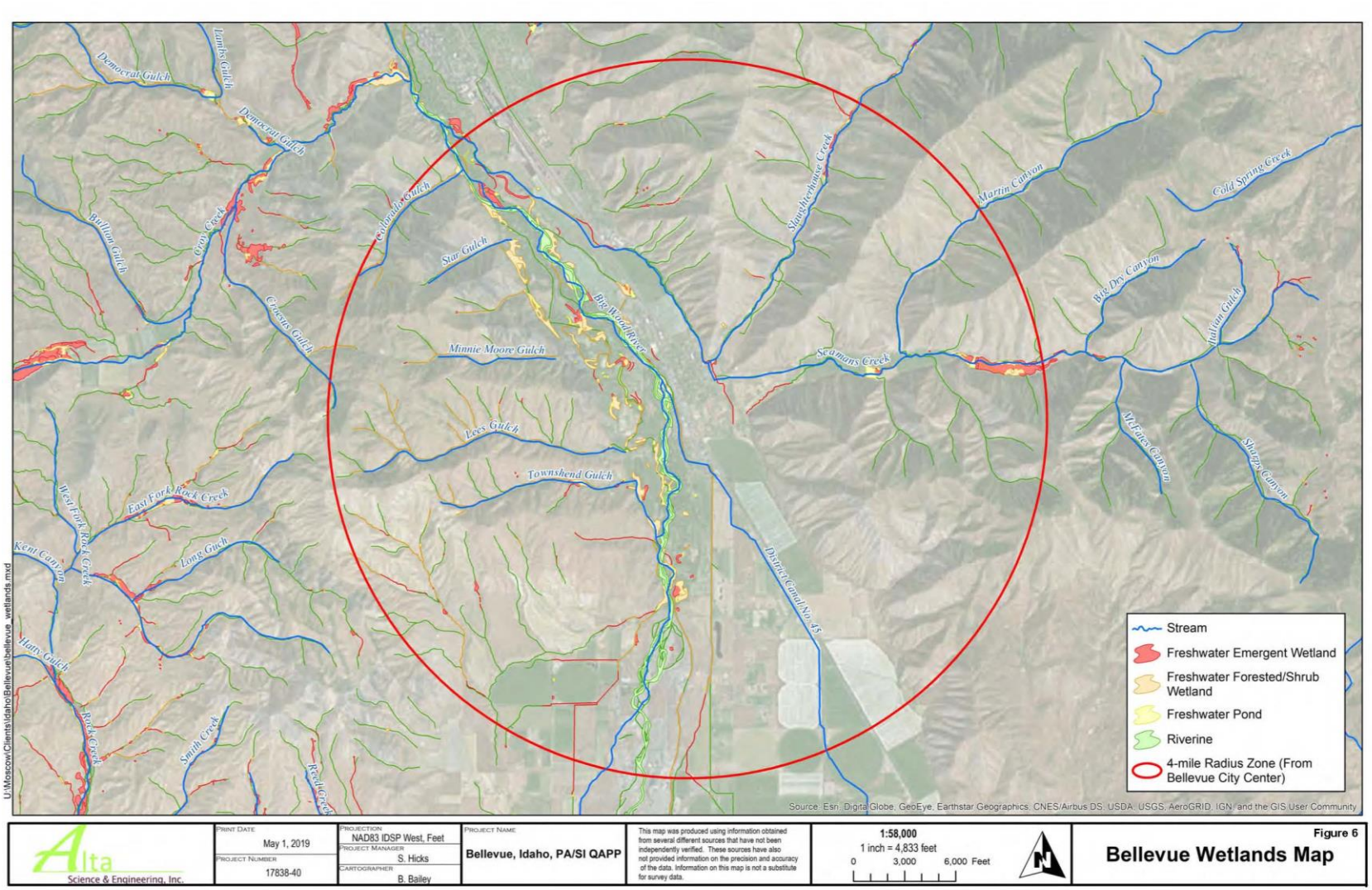

Figure 6. Bellevue wetlands map.

9.8 Sensitive, Rare, and Threatened Plant and Animal Species

Most of the sensitive species have large ranges that overlap onto the J.E.T. Business Park Subdivision. Due to the size of those ranges, these species may not receive significant exposure time or doses to heavy metals from this site.

No rare or sensitive plant species exist within the 4-mile radius of the J.E.T. Business Park Subdivision (USFWS 2019). Animals of concern listed within the 4-mile radius of the J.E.T. Business Park Subdivision (USFWS 2019) include the North American Wolverine (*Gulo gulo luscus*) (proposed threatened).

9.9 Fisheries

The following fish species have been observed by the Idaho Department of Fish and Game in Big Wood River, which passes within a 4-mile radius of the J.E.T. Business Park Subdivision (IDFG 2019).

- Bridgelip Sucker (*Catostomus columbianus*)
- Brook Trout (*Salvelinus fontinalis*)
- Brown Trout (*Salmo trutta*)
- Catostomus sp. (*Catostomus*)
- Cottus sp. (*Cottus*)
- Cutbow - Cutthroat x Rainbow Trout (*Oncorhynchus clarkii x O. mykiss*)
- Cutthroat Trout (*Oncorhynchus clarkii*)
- Longnose Dace (*Rhinichthys cataractae*)
- Mottled Sculpin (*Cottus bairdii*)
- Mountain Sucker (*Catostomus platyrhynchus*)
- Mountain Whitefish (*Prosopium williamsoni*)
- Rainbow Trout (*Oncorhynchus mykiss*)
- Redband Trout (*Oncorhynchus mykiss gairdneri*)
- Redside Shiner (*Richardsonius balteatus*)
- Salmon and trout (*Salmonidae*)
- Speckled Dace (*Rhinichthys osculus*)
- Wood River Sculpin (*Cottus leiopomus*)
- Yellow Perch (*Perca flavescens*)

9.10 Sensitive Waterways

The Clean Water Act requires the State of Idaho to prepare a report that lists (1) the current conditions of all state waters (§305(b)) and (2) those waters that are impaired and need a total maximum daily load (§303(d)). Combined, the §305(b) and §303(d) lists are known as the Integrated Report. These lists are maintained and presented separately in the Integrated Report. Because impaired waters are only some of the state's waters, waters on the §303(d) list are a subset of those on the §305(b) list.

As listed in the EPA-approved 2016 Integrated Report, the Big Wood River (ID17040219SL004_05) from Seamans Creek to Magic Reservoir is identified as not supporting for cold water aquatic life, primary contact recreation, and salmonid spawning. Big Wood River from Seamans Creek to Magic Reservoir has not been assessed for aesthetic, agricultural water supply, domestic water supply, industrial water supply, or wildlife habitat (DEQ 2016).

10 Summary and Conclusions

This PA/SI assessed if contamination is present that may migrate to environmental media resulting in exposures to site receptors and determined additional investigation is needed at the J.E.T. Business Park Subdivision. This PA/SI provides the property owner with information about the levels of metals concentrations, possible exposure pathways when recreating or working in the area, and health and safety education about how to reduce exposure.

The detections of arsenic, lead, and other metals in soils and the presence of lead above toxicity characteristic regulatory levels in sample leachate, shown in Tables 1 and 2 and discussed in sections 8 and 9, identify a concern for human health and the environment. DEQ recommends **Additional Actions** to further sample and characterize this site. The sample results in the PA/SI do not represent the extent of contamination, and additional characterization and sampling are necessary to (1) determine the depth of contamination at the J.E.T. Business Park Subdivision, (2) determine the extent of contamination sources and distribution on the adjacent ITD ROW, and (3) identify potential alternatives to address the contamination.

DEQ recommends the J.E.T. Business Park Subdivision landowner work with a contractor to complete additional sampling and characterization at the site. The results of additional characterization and sampling will be used to determine potential alternatives to address contamination.

Persons accessing this area should be aware of the hazards of contaminated soils associated with historical site activities, especially health risks associated with prolonged exposure to metals. The following safety procedures are recommended:

- Wash hands after any on-site activity and before eating or drinking. Use a nail scrub brush to get dirt out from under and around fingernails.
- Do not let children play in loose soil, dust, and muddy areas. Keep children's cuts and scrapes clean and covered. Wash children's toys after playing outside.
- After on-site activity, remove shoes, dust off clothing, and wash clothing separately from other laundry. Wash off dust from any equipment. Avoid tracking dust offsite.

11 References

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Appendix A. Site Photographs

Photo 1065. Property overview facing north, taken from south edge of vacant lot.

Photo 1066. Property overview facing east, taken from southwest corner.

Photo 1067. Property overview facing northeast, taken from southwest corner.

Photo 1068. Property overview taken from northwest corner facing east.

Photo 1069. Property overview taken from northwest corner facing south.

Photo 1070. Property overview facing west, taken from southwest corner of vacant lot, adjacent to Valley Co-Op building.

Photo 1071. Facing north from southeast corner looking along XRF transect.

Photo 1072. Facing north from south edge of parcel showing sample locations marked with pin flags.

Photo 1074. Sample location JBP-SS-06.

Photo 1075. Sample location JBP-SS-01.

Photo 1076. Facing east from center of vacant lot showing sample locations marked with pin flags.

Photo 1077. Facing south from center of vacant lot showing sample locations marked with pin flags.

Appendix B. Analytical Laboratory Report

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www.svl.net

Alta Science and Engineering - Kellogg
108 W. Idaho Street
Kellogg, ID 83837

Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
JBP-SS-01-12"	X9F0010-01	Soil	23-May-19 14:45	TJ	30-May-2019	
JBP-SS-01	X9F0010-02	Soil	23-May-19 14:48	TJ	30-May-2019	
JBP-SS-02-12"	X9F0010-03	Soil	23-May-19 15:00	TJ	30-May-2019	
JBP-SS-02	X9F0010-04	Soil	23-May-19 15:04	TJ	30-May-2019	
JBP-SS-03	X9F0010-05	Soil	23-May-19 15:10	TJ	30-May-2019	
JBP-SS-04	X9F0010-06	Soil	23-May-19 15:14	TJ	30-May-2019	
JBP-SS-05	X9F0010-07	Soil	23-May-19 15:18	TJ	30-May-2019	
JBP-SS-06	X9F0010-08	Soil	23-May-19 15:24	TJ	30-May-2019	
JBP-SS-07	X9F0010-09	Soil	23-May-19 15:28	TJ	30-May-2019	
ITD-SS-01-12"	X9F0010-10	Soil	23-May-19 16:55	TJ	30-May-2019	
ITD-SS-01	X9F0010-11	Soil	23-May-19 16:45	TJ	30-May-2019	
ITD-SS-02	X9F0010-12	Soil	23-May-19 16:18	TJ	30-May-2019	
JBP-SS-BG-01	X9F0010-13	Soil	23-May-19 17:00	TJ	30-May-2019	
JBP-SS-04-FD	X9F0010-14	Soil	23-May-19 15:14	TJ	30-May-2019	
JBP-RB-01	X9F0010-15	Rinsate	23-May-19 17:10	TJ	30-May-2019	

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.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9F0010

06/14/19 - HB - Samples were air dried and sieved to -80 for metals analysis.

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-01-12"**
SVL Sample ID: **X9F0010-01 (Soil)**

Sampled: 23-May-19 14:45
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	93.6	mg/kg	4.0	0.8		X923178	DJS	06/13/19 13:53	
EPA 6010D	**Arsenic**	365	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Barium**	195	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Cadmium**	22.7	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Chromium**	37.6	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Copper**	94.8	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Iron**	24900	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Lead**	2440	mg/kg	1.5	0.3		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Manganese**	1050	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 13:16	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Silver**	15.2	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:28	
EPA 6010D	**Zinc**	2460	mg/kg	1.0	0.3		X923174	DJS	06/17/19 08:28	
EPA 7471B	**Mercury**	0.632	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:08	

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

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Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-01**
SVL Sample ID: **X9F0010-02 (Soil)**

Sampled: 23-May-19 14:48
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	142	mg/kg	4.0	0.8		X923178	DJS	06/13/19 13:57	
EPA 6010D	**Arsenic**	690	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:32	M3
EPA 6010D	**Barium**	200	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:32	M1
EPA 6010D	**Cadmium**	46.5	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:32	
EPA 6010D	**Chromium**	33.3	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:32	
EPA 6010D	**Copper**	145	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:32	
EPA 6010D	**Iron**	27500	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:32	M3
EPA 6010D	**Lead**	4150	mg/kg	1.5	0.3		X923174	DJS	06/17/19 08:32	M3
EPA 6010D	**Manganese**	1380	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 13:20	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:32	
EPA 6010D	**Silver**	29.9	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:32	M3
EPA 6010D	**Zinc**	4250	mg/kg	1.0	0.3		X923174	DJS	06/17/19 08:32	M3
EPA 7471B	**Mercury**	1.10	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:44	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-02-12"**
SVL Sample ID: **X9F0010-03 (Soil)**

Sampled: 23-May-19 15:00
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	148	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:06	
EPA 6010D	**Arsenic**	316	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Barium**	176	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Cadmium**	97.6	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Chromium**	39.1	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Copper**	146	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Iron**	25800	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Lead**	4560	mg/kg	1.5	0.3		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Manganese**	892	mg/kg	0.80	0.28		X923174	DJS	06/17/19 08:41	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Silver**	31.0	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:41	
EPA 6010D	**Zinc**	514	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:15	
EPA 7471B	**Mercury**	1.53	mg/kg	0.165	0.055	5	X924018	MWD	06/11/19 11:37	D2

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-02**
SVL Sample ID: **X9F0010-04 (Soil)**

Sampled: 23-May-19 15:04
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	4.6	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:10	
EPA 6010D	**Arsenic**	20.7	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Barium**	170	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Cadmium**	4.19	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Chromium**	27.4	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Copper**	34.3	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Iron**	17000	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Lead**	173	mg/kg	1.5	0.3		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Manganese**	416	mg/kg	0.80	0.28		X923174	DJS	06/17/19 08:44	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:44	
EPA 6010D	Silver	< 1.00	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:44	
EPA 6010D	**Zinc**	347	mg/kg	1.0	0.3		X923174	DJS	06/17/19 08:44	
EPA 7471B	**Mercury**	0.057	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:56	

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: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-03**
SVL Sample ID: **X9F0010-05 (Soil)**

Sampled: 23-May-19 15:10
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	318	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:13	
EPA 6010D	**Arsenic**	978	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Barium**	192	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Cadmium**	114	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Chromium**	35.1	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Copper**	347	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Iron**	33900	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Lead**	1110	mg/kg	1.5	0.3		X923174	DJS	06/17/19 10:18	
EPA 6010D	**Manganese**	1470	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 13:40	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Silver**	72.8	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:47	
EPA 6010D	**Zinc**	1150	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:18	
EPA 7471B	**Mercury**	3.03	mg/kg	0.165	0.055	5	X924018	MWD	06/11/19 11:39	D2
TCLP Extraction Parameters										
EPA 1311	**Final pH**	5.15	pH Units				X923132	ESB	06/11/19 09:00	
EPA 1311	**% Dry Solids**	92.9	%				X923132	ESB	06/11/19 09:00	
TCLP Leachates (Metals) Extracted: 06/11/19 09:00										
EPA 6010D	**Arsenic**	0.112	mg/L Extract	0.050	0.006		X924131	DJS	06/14/19 11:44	
EPA 6010D	**Cadmium**	0.979	mg/L Extract	0.0100	0.0016		X924131	DJS	06/14/19 11:44	
EPA 6010D	**Lead**	17.2	mg/L Extract	0.0500	0.0049		X924131	DJS	06/14/19 11:44	
EPA 6010D	Nickel	< 0.0500	mg/L Extract	0.0500	0.0023		X924282	DJS	06/14/19 13:07	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-04**
SVL Sample ID: **X9F0010-06 (Soil)**

Sampled: 23-May-19 15:14
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	220	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:17	
EPA 6010D	**Arsenic**	707	mg/kg	2.5	0.6		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Barium**	187	mg/kg	0.40	0.18		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Cadmium**	47.4	mg/kg	0.40	0.06		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Chromium**	35.3	mg/kg	0.60	0.20		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Copper**	203	mg/kg	1.00	0.52		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Iron**	32000	mg/kg	20.0	6.6		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Lead**	5260	mg/kg	1.5	0.3		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Manganese**	1600	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 13:44	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Silver**	42.2	mg/kg	1.00	0.20		X923174	DJS	06/17/19 08:51	
EPA 6010D	**Zinc**	4280	mg/kg	1.0	0.3		X923174	DJS	06/17/19 08:51	
EPA 7471B	**Mercury**	1.15	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:25	

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: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-05**
SVL Sample ID: **X9F0010-07 (Soil)**

Sampled: 23-May-19 15:18
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	171	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:28	
EPA 6010D	**Arsenic**	595	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Barium**	215	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Cadmium**	45.4	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Chromium**	36.7	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Copper**	168	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Iron**	29000	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Lead**	4580	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Manganese**	1380	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 14:05	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Silver**	32.7	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:02	
EPA 6010D	**Zinc**	516	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:22	
EPA 7471B	**Mercury**	1.42	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:27	

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: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-06**
SVL Sample ID: **X9F0010-08 (Soil)**

Sampled: 23-May-19 15:24
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	198	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:31	
EPA 6010D	**Arsenic**	689	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Barium**	385	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Cadmium**	57.5	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Chromium**	39.1	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Copper**	220	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Iron**	30600	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Lead**	5010	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Manganese**	1540	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 14:09	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Silver**	39.0	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:05	
EPA 6010D	**Zinc**	638	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:25	
EPA 7471B	**Mercury**	1.35	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:29	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-07**
SVL Sample ID: **X9F0010-09 (Soil)**

Sampled: 23-May-19 15:28
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	Antimony	< 4.0	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:34	
EPA 6010D	**Arsenic**	14.0	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Barium**	151	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Cadmium**	2.45	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Chromium**	31.0	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Copper**	29.9	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Iron**	16700	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Lead**	105	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Manganese**	397	mg/kg	0.80	0.28		X923174	DJS	06/17/19 09:08	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:08	
EPA 6010D	Silver	< 1.00	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:08	
EPA 6010D	**Zinc**	220	mg/kg	1.0	0.3		X923174	DJS	06/17/19 09:08	
EPA 7471B	**Mercury**	0.040	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:31	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **ITD-SS-01-12"**
SVL Sample ID: **X9F0010-10 (Soil)**

Sampled: 23-May-19 16:55
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	134	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:38	
EPA 6010D	**Arsenic**	518	mg/kg	2.5	0.6		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Barium**	236	mg/kg	0.40	0.18		X923174	DJS	06/17/19 10:42	
EPA 6010D	**Cadmium**	22.9	mg/kg	0.40	0.06		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Chromium**	22.7	mg/kg	0.60	0.20		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Copper**	198	mg/kg	1.00	0.52		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Iron**	20800	mg/kg	20.0	6.6		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Lead**	8220	mg/kg	1.5	0.3		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Manganese**	710	mg/kg	0.80	0.28		X923174	DJS	06/17/19 10:12	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Silver**	35.6	mg/kg	1.00	0.20		X923174	DJS	06/17/19 10:12	
EPA 6010D	**Zinc**	1980	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:12	
EPA 7471B	**Mercury**	0.563	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:33	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **ITD-SS-01**
SVL Sample ID: **X9F0010-11 (Soil)**

Sampled: 23-May-19 16:45
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	213	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:41	
EPA 6010D	**Arsenic**	2060	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Barium**	286	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Cadmium**	62.6	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Chromium**	54.4	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Copper**	588	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Iron**	41600	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Lead**	1630	mg/kg	1.5	0.3		X923174	DJS	06/17/19 10:28	
EPA 6010D	**Manganese**	1840	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 14:13	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Silver**	76.8	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:15	
EPA 6010D	**Zinc**	814	mg/kg	1.0	0.3		X923174	DJS	06/17/19 10:28	
EPA 7471B	**Mercury**	1.42	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:49	
TCLP Extraction Parameters										
EPA 1311	**Final pH**	5.58	pH Units				X923132	ESB	06/11/19 09:00	
EPA 1311	**% Dry Solids**	96.1	%				X923132	ESB	06/11/19 09:00	
TCLP Leachates (Metals) Extracted: 06/11/19 09:00										
EPA 6010D	**Arsenic**	0.064	mg/L Extract	0.050	0.006		X924131	DJS	06/14/19 13:43	
EPA 6010D	**Cadmium**	0.378	mg/L Extract	0.0100	0.0016		X924131	DJS	06/14/19 13:43	
EPA 6010D	**Lead**	33.0	mg/L Extract	0.0500	0.0049		X924131	DJS	06/14/19 13:43	
EPA 6010D	Nickel	< 0.0500	mg/L Extract	0.0500	0.0023		X924282	DJS	06/14/19 13:18	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **ITD-SS-02**
SVL Sample ID: **X9F0010-12 (Soil)**

Sampled: 23-May-19 16:18
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	68.8	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:44	
EPA 6010D	**Arsenic**	227	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Barium**	235	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Cadmium**	22.8	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Chromium**	44.3	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Copper**	100	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Iron**	32500	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Lead**	3310	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Manganese**	1140	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 14:17	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Silver**	18.5	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:18	
EPA 6010D	**Zinc**	2230	mg/kg	1.0	0.3		X923174	DJS	06/17/19 09:18	
EPA 7471B	**Mercury**	0.958	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:51	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-BG-01**
SVL Sample ID: **X9F0010-13 (Soil)**

Sampled: 23-May-19 17:00
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	Antimony	< 4.0	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:48	
EPA 6010D	**Arsenic**	5.4	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Barium**	97.5	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Cadmium**	0.78	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Chromium**	34.4	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Copper**	39.6	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Iron**	12500	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Lead**	37.8	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Manganese**	231	mg/kg	0.80	0.28		X923174	DJS	06/17/19 09:21	
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:21	
EPA 6010D	Silver	< 1.00	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:21	
EPA 6010D	**Zinc**	146	mg/kg	1.0	0.3		X923174	DJS	06/17/19 09:21	
EPA 7471B	Mercury	< 0.033	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:57	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-SS-04-FD**
SVL Sample ID: **X9F0010-14 (Soil)**

Sampled: 23-May-19 15:14
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Sieved)										
EPA 6010D	**Antimony**	185	mg/kg	4.0	0.8		X923178	DJS	06/13/19 14:51	
EPA 6010D	**Arsenic**	616	mg/kg	2.5	0.6		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Barium**	182	mg/kg	0.40	0.18		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Cadmium**	45.6	mg/kg	0.40	0.06		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Chromium**	34.4	mg/kg	0.60	0.20		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Copper**	168	mg/kg	1.00	0.52		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Iron**	29300	mg/kg	20.0	6.6		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Lead**	4740	mg/kg	1.5	0.3		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Manganese**	1340	mg/kg	8.00	2.80	10	X923174	DJS	06/17/19 14:21	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Silver**	32.7	mg/kg	1.00	0.20		X923174	DJS	06/17/19 09:24	
EPA 6010D	**Zinc**	3970	mg/kg	1.0	0.3		X923174	DJS	06/17/19 09:24	
EPA 7471B	Mercury	< 0.033	mg/kg	0.033	0.011		X924018	MWD	06/11/19 10:59	

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Client Sample ID: **JBP-RB-01**
SVL Sample ID: **X9F0010-15 (Rinsate)**

Sampled: 23-May-19 17:10
Received: 30-May-19
Sampled By: TJ

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000093		X924122	MWD	06/12/19 13:35	
Metals (Total Recoverable)										
EPA 6010D	Antimony	< 0.040	mg/L	0.040	0.009		X923104	DJS	06/13/19 12:06	
EPA 6010D	Arsenic	< 0.025	mg/L	0.025	0.006		X923104	DJS	06/13/19 12:06	
EPA 6010D	Barium	< 0.0040	mg/L	0.0040	0.0019		X923104	DJS	06/13/19 12:06	
EPA 6010D	**Cadmium**	0.0066	mg/L	0.0040	0.0016		X923104	DJS	06/13/19 12:06	
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X923104	DJS	06/13/19 12:06	
EPA 6010D	Copper	< 0.0100	mg/L	0.0100	0.0027		X923104	DJS	06/13/19 12:06	
EPA 6010D	Iron	< 0.200	mg/L	0.200	0.056		X923104	DJS	06/13/19 12:06	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X923104	DJS	06/13/19 12:06	
EPA 6010D	**Manganese**	0.0080	mg/L	0.0080	0.0034		X923104	DJS	06/13/19 12:06	
EPA 6010D	Selenium	< 0.040	mg/L	0.040	0.012		X923104	DJS	06/13/19 12:06	
EPA 6010D	Silver	< 0.0100	mg/L	0.0100	0.0019		X923104	DJS	06/13/19 12:06	
EPA 6010D	**Zinc**	68.4	mg/L	1.00	0.540	100	X923104	DJS	06/13/19 13:19	D2

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Project Name: J.E.T. Business Park Subdivision 2019
Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 7470A	Mercury	mg/L	<0.00020	0.000093	0.00020	X924122	12-Jun-19	
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010D	Antimony	mg/kg	<4.0	0.8	4.0	X923178	13-Jun-19	
EPA 6010D	Arsenic	mg/kg	<2.5	0.6	2.5	X923174	17-Jun-19	
EPA 6010D	Barium	mg/kg	<0.40	0.18	0.40	X923174	17-Jun-19	
EPA 6010D	Cadmium	mg/kg	<0.40	0.06	0.40	X923174	17-Jun-19	
EPA 6010D	Chromium	mg/kg	<0.60	0.20	0.60	X923174	17-Jun-19	
EPA 6010D	Copper	mg/kg	<1.00	0.52	1.00	X923174	17-Jun-19	
EPA 6010D	Iron	mg/kg	<20.0	6.6	20.0	X923174	17-Jun-19	
EPA 6010D	Lead	mg/kg	<1.5	0.3	1.5	X923174	17-Jun-19	
EPA 6010D	Manganese	mg/kg	<0.80	0.28	0.80	X923174	17-Jun-19	
EPA 6010D	Selenium	mg/kg	<4.0	1.1	4.0	X923174	17-Jun-19	
EPA 6010D	Silver	mg/kg	<1.00	0.20	1.00	X923174	17-Jun-19	
EPA 6010D	Zinc	mg/kg	<1.0	0.3	1.0	X923174	17-Jun-19	
EPA 7471B	Mercury	mg/kg	<0.033	0.011	0.033	X924018	11-Jun-19	
Metals (Total Recoverable)								
EPA 6010D	Antimony	mg/L	<0.040	0.009	0.040	X923104	13-Jun-19	
EPA 6010D	Arsenic	mg/L	<0.025	0.006	0.025	X923104	13-Jun-19	
EPA 6010D	Barium	mg/L	<0.0040	0.0019	0.0040	X923104	13-Jun-19	
EPA 6010D	Cadmium	mg/L	<0.0040	0.0016	0.0040	X923104	13-Jun-19	
EPA 6010D	Chromium	mg/L	<0.0060	0.0020	0.0060	X923104	13-Jun-19	
EPA 6010D	Copper	mg/L	<0.0100	0.0027	0.0100	X923104	13-Jun-19	
EPA 6010D	Iron	mg/L	<0.200	0.056	0.200	X923104	13-Jun-19	
EPA 6010D	Lead	mg/L	<0.0150	0.0049	0.0150	X923104	13-Jun-19	
EPA 6010D	Manganese	mg/L	<0.0080	0.0034	0.0080	X923104	13-Jun-19	
EPA 6010D	Selenium	mg/L	<0.040	0.012	0.040	X923104	13-Jun-19	
EPA 6010D	Silver	mg/L	<0.0100	0.0019	0.0100	X923104	13-Jun-19	
EPA 6010D	Zinc	mg/L	<0.010	0.005	0.010	X923104	13-Jun-19	
TCLP Extraction Parameters								
EPA 1311	Final pH	pH Units	4.95			X923132	11-Jun-19	

Quality Control - EXTRACTION BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
TCLP Leachates (Metals) Extracted: 06/11/19 09:00 Batch: X923132								
EPA 6010D	Arsenic	mg/L Extract	<0.050	0.006	0.050	X924131	14-Jun-19	
EPA 6010D	Cadmium	mg/L Extract	<0.0100	0.0016	0.0100	X924131	14-Jun-19	
EPA 6010D	Lead	mg/L Extract	<0.0500	0.0049	0.0500	X924131	14-Jun-19	
EPA 6010D	Nickel	mg/L Extract	<0.0500	0.0023	0.0500	X924282	14-Jun-19	

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Work Order: **X9F0010**
Reported: 18-Jun-19 09:51

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)									
EPA 7470A	Mercury	mg/L	0.00502	0.00500	100	80 - 120	X924122	12-Jun-19	
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010D	Antimony	mg/kg	99.0	100	99.0	80 - 120	X923178	13-Jun-19	
EPA 6010D	Arsenic	mg/kg	105	100	105	80 - 120	X923174	17-Jun-19	
EPA 6010D	Barium	mg/kg	109	100	109	80 - 120	X923174	17-Jun-19	
EPA 6010D	Cadmium	mg/kg	104	100	104	80 - 120	X923174	17-Jun-19	
EPA 6010D	Chromium	mg/kg	105	100	105	80 - 120	X923174	17-Jun-19	
EPA 6010D	Copper	mg/kg	104	100	104	80 - 120	X923174	17-Jun-19	
EPA 6010D	Iron	mg/kg	1030	1000	103	80 - 120	X923174	17-Jun-19	
EPA 6010D	Lead	mg/kg	101	100	101	80 - 120	X923174	17-Jun-19	
EPA 6010D	Manganese	mg/kg	108	100	108	80 - 120	X923174	17-Jun-19	
EPA 6010D	Selenium	mg/kg	103	100	103	80 - 120	X923174	17-Jun-19	
EPA 6010D	Silver	mg/kg	5.23	5.00	105	80 - 120	X923174	17-Jun-19	
EPA 6010D	Zinc	mg/kg	102	100	102	80 - 120	X923174	17-Jun-19	
EPA 7471B	Mercury	mg/kg	0.842	0.833	101	80 - 120	X924018	11-Jun-19	
Metals (Total Recoverable)									
EPA 6010D	Antimony	mg/L	1.03	1.00	103	80 - 120	X923104	13-Jun-19	
EPA 6010D	Arsenic	mg/L	1.03	1.00	103	80 - 120	X923104	13-Jun-19	
EPA 6010D	Barium	mg/L	1.07	1.00	107	80 - 120	X923104	13-Jun-19	
EPA 6010D	Cadmium	mg/L	1.02	1.00	102	80 - 120	X923104	13-Jun-19	
EPA 6010D	Chromium	mg/L	1.03	1.00	103	80 - 120	X923104	13-Jun-19	
EPA 6010D	Copper	mg/L	1.05	1.00	105	80 - 120	X923104	13-Jun-19	
EPA 6010D	Iron	mg/L	9.44	10.0	94.4	80 - 120	X923104	13-Jun-19	
EPA 6010D	Lead	mg/L	1.00	1.00	100	80 - 120	X923104	13-Jun-19	
EPA 6010D	Manganese	mg/L	1.02	1.00	102	80 - 120	X923104	13-Jun-19	
EPA 6010D	Selenium	mg/L	1.04	1.00	104	80 - 120	X923104	13-Jun-19	
EPA 6010D	Silver	mg/L	0.0517	0.0500	103	80 - 120	X923104	13-Jun-19	
EPA 6010D	Zinc	mg/L	0.991	1.00	99.1	80 - 120	X923104	13-Jun-19	
TCLP Leachates (Metals)									
EPA 6010D	Arsenic	mg/L Extract	1.03	1.00	103	80 - 120	X924131	14-Jun-19	
EPA 6010D	Cadmium	mg/L Extract	0.214	0.200	107	80 - 120	X924131	14-Jun-19	
EPA 6010D	Lead	mg/L Extract	0.960	1.00	96.0	80 - 120	X924131	14-Jun-19	
EPA 6010D	Nickel	mg/L Extract	1.04	1.00	104	80 - 120	X924282	14-Jun-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	mg/L	0.00097	<0.00020	0.00100	97.5	75 - 125	X924122	12-Jun-19	
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010D	Antimony	mg/kg	224	142	100	82.1	75 - 125	X923178	13-Jun-19	
EPA 6010D	Arsenic	mg/kg	799	690	100	110	75 - 125	X923174	17-Jun-19	
EPA 6010D	Barium	mg/kg	329	200	100	129	75 - 125	X923174	17-Jun-19	M1
EPA 6010D	Cadmium	mg/kg	154	46.5	100	107	75 - 125	X923174	17-Jun-19	
EPA 6010D	Chromium	mg/kg	142	33.3	100	109	75 - 125	X923174	17-Jun-19	
EPA 6010D	Copper	mg/kg	249	145	100	104	75 - 125	X923174	17-Jun-19	
EPA 6010D	Iron	mg/kg	29100	27500	1000	0.30R>S	75 - 125	X923174	17-Jun-19	M3
EPA 6010D	Lead	mg/kg	4080	4150	100	0.30R>S	75 - 125	X923174	17-Jun-19	M3
EPA 6010D	Manganese	mg/kg	1470	1380	100	89.8	75 - 125	X923174	17-Jun-19	D2
EPA 6010D	Selenium	mg/kg	110	<4.0	100	108	75 - 125	X923174	17-Jun-19	

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Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods (Continued)										
EPA 6010D	Silver	mg/kg	32.9	29.9	5.00	0.30R>S	75 - 125	X923174	17-Jun-19	M3
EPA 6010D	Zinc	mg/kg	4160	4250	100	0.30R>S	75 - 125	X923174	17-Jun-19	M3
EPA 7471B	Mercury	mg/kg	1.00	0.632	0.333	111	75 - 125	X924018	11-Jun-19	
EPA 7471B	Mercury	mg/kg	1.26	0.958	0.333	90.0	75 - 125	X924018	11-Jun-19	
Metals (Total Recoverable)										
EPA 6010D	Antimony	mg/L	0.721	<0.400	1.00	72.1	75 - 125	X923104	13-Jun-19	D1,M4
EPA 6010D	Arsenic	mg/L	5.51	4.34	1.00	117	75 - 125	X923104	13-Jun-19	D2
EPA 6010D	Barium	mg/L	0.690	0.587	1.00	10.3	75 - 125	X923104	13-Jun-19	D1,M4
EPA 6010D	Cadmium	mg/L	7.67	6.40	1.00	0.30R>S	75 - 125	X923104	13-Jun-19	D2,M4
EPA 6010D	Chromium	mg/L	10.5	9.35	1.00	115	75 - 125	X923104	13-Jun-19	D2
EPA 6010D	Copper	mg/L	28.9	27.7	1.00	121	75 - 125	X923104	13-Jun-19	D2
EPA 6010D	Iron	mg/L	101	90.6	10.0	104	75 - 125	X923104	13-Jun-19	D1
EPA 6010D	Lead	mg/L	1.00	<0.150	1.00	100	75 - 125	X923104	13-Jun-19	D1
EPA 6010D	Manganese	mg/L	136	135	1.00	0.30R>S	75 - 125	X923104	13-Jun-19	D2,M4
EPA 6010D	Selenium	mg/L	1.02	<0.400	1.00	102	75 - 125	X923104	13-Jun-19	D1
EPA 6010D	Silver	mg/L	<0.100	<0.100	0.0500	72.2	75 - 125	X923104	13-Jun-19	D1,M4
EPA 6010D	Zinc	mg/L	341	335	1.00	0.30R>S	75 - 125	X923104	13-Jun-19	D2,M4
TCLP Leachates (Metals)										
EPA 6010D	Arsenic	mg/L Extract	1.02	<0.050	1.00	102	75 - 125	X924131	14-Jun-19	
EPA 6010D	Cadmium	mg/L Extract	0.234	0.0227	0.200	106	75 - 125	X924131	14-Jun-19	
EPA 6010D	Lead	mg/L Extract	0.956	<0.0500	1.00	93.5	75 - 125	X924131	14-Jun-19	
EPA 6010D	Nickel	mg/L Extract	1.08	<0.0500	1.00	103	75 - 125	X924282	14-Jun-19	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)											
EPA 7470A	Mercury	mg/L	0.00096	0.00097	0.00100	95.6	1.9	20	X924122	12-Jun-19	
Metals (Total) by EPA 6000/7000 Methods											
EPA 6010D	Antimony	mg/kg	236	224	100	94.5	5.4	20	X923178	13-Jun-19	
EPA 6010D	Arsenic	mg/kg	727	799	100	0.30R>S	9.5	20	X923174	17-Jun-19	M3
EPA 6010D	Barium	mg/kg	329	329	100	129	0.0	20	X923174	17-Jun-19	M1
EPA 6010D	Cadmium	mg/kg	149	154	100	102	3.4	20	X923174	17-Jun-19	
EPA 6010D	Chromium	mg/kg	140	142	100	106	2.0	20	X923174	17-Jun-19	
EPA 6010D	Copper	mg/kg	247	249	100	102	1.0	20	X923174	17-Jun-19	
EPA 6010D	Iron	mg/kg	28400	29100	1000	90.8	2.2	20	X923174	17-Jun-19	
EPA 6010D	Lead	mg/kg	3990	4080	100	0.30R>S	2.1	20	X923174	17-Jun-19	M3
EPA 6010D	Manganese	mg/kg	1480	1470	100	103	0.9	20	X923174	17-Jun-19	D2
EPA 6010D	Selenium	mg/kg	106	110	100	104	3.9	20	X923174	17-Jun-19	
EPA 6010D	Silver	mg/kg	32.2	32.9	5.00	0.30R>S	2.0	20	X923174	17-Jun-19	M3
EPA 6010D	Zinc	mg/kg	4100	4160	100	0.30R>S	1.4	20	X923174	17-Jun-19	M3
EPA 7471B	Mercury	mg/kg	0.963	1.00	0.333	99.5	3.7	20	X924018	11-Jun-19	
Metals (Total Recoverable)											
EPA 6010D	Antimony	mg/L	0.652	0.721	1.00	65.2	10.0	20	X923104	13-Jun-19	D1,M4
EPA 6010D	Arsenic	mg/L	5.36	5.51	1.00	101	2.9	20	X923104	13-Jun-19	D2
EPA 6010D	Barium	mg/L	0.632	0.690	1.00	4.59	8.7	20	X923104	13-Jun-19	D1,M4
EPA 6010D	Cadmium	mg/L	7.48	7.67	1.00	108	2.6	20	X923104	13-Jun-19	D2
EPA 6010D	Chromium	mg/L	10.3	10.5	1.00	97.6	1.6	20	X923104	13-Jun-19	D2
EPA 6010D	Copper	mg/L	28.2	28.9	1.00	0.30R>S	2.8	20	X923104	13-Jun-19	D2,M4

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Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total Recoverable) (Continued)											
EPA 6010D	Iron	mg/L	101	101	10.0	107	0.3	20	X923104	13-Jun-19	D1
EPA 6010D	Lead	mg/L	0.944	1.00	1.00	94.4	5.8	20	X923104	13-Jun-19	D1
EPA 6010D	Manganese	mg/L	135	136	1.00	0.30R>S	0.8	20	X923104	13-Jun-19	D2,M4
EPA 6010D	Selenium	mg/L	0.981	1.02	1.00	98.1	3.9	20	X923104	13-Jun-19	D1
EPA 6010D	Silver	mg/L	<0.100	<0.100	0.0500	63.2	13.3	20	X923104	13-Jun-19	D1,M4
EPA 6010D	Zinc	mg/L	336	341	1.00	0.30R>S	1.5	20	X923104	13-Jun-19	D2,M4
TCLP Leachates (Metals)											
EPA 6010D	Arsenic	mg/L Extract	1.04	1.02	1.00	104	2.1	20	X924131	14-Jun-19	
EPA 6010D	Cadmium	mg/L Extract	0.239	0.234	0.200	108	2.1	20	X924131	14-Jun-19	
EPA 6010D	Lead	mg/L Extract	0.964	0.956	1.00	94.3	0.8	20	X924131	14-Jun-19	
EPA 6010D	Nickel	mg/L Extract	1.08	1.08	1.00	103	0.0	20	X924282	14-Jun-19	

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 Recoverable)										
EPA 6010D	Antimony	mg/L	9.25	<0.400	10.0	92.5	75 - 125	X923104	14-Jun-19	

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.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable