STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

April 28, 2011

Mr. Clint Hughes
Minerals Specialist
USFS – Nez Perce National Forest
104 Airport Road
Grangeville, ID 83530

Subject: Site Assessment of the Frank Peck Lode, Orogrande Area, Idaho County, Idaho

Dear Mr. Hughes

The Idaho Department of Environmental Quality (DEQ) has completed a review of historical mining data and geological information for the above referenced mixed ownership lands near Orogrande, Idaho, including the Frank Peck Lode. During the visit, mining site activities such as shafts, collapsed tunnels, adits, tailings pile/waste dump, and collapsed structures were observed and mapped in order to provide a comprehensive analysis necessary to complete an Abbreviated Preliminary Assessment (APA).

The APA is used to help site investigators determine if their findings result in a determination of No Remedial Action Planned (NRAP) or if additional analysis is warranted. The APA documents the rationale for the decision on whether further steps in the site investigation process are required under the Federal Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). If additional analysis was warranted, a Preliminary Assessment (PA) would have been prepared for this site.

PAs are conducted in accordance with CERCLA. The reasons to complete a PA include:

1) To identify those sites which are not Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) caliber because they do not pose a threat to public health or the environment (No Remedial Action Planned (NRAP));

2) To determine if there is a need for removal actions or other programmatic management of sites;

3) To determine if a Site Investigation, which is a more detailed site characterization, is needed; and/or

4) To gather data to facilitate later evaluation of the release of hazardous substances through the Hazard Ranking System (HRS).

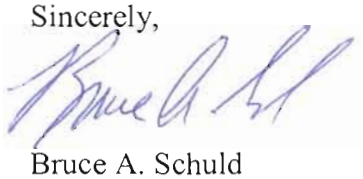
DEQ has also completed PAs under contract with the U.S. Environmental Protection Agency in order to identify risks to human health and the environment and make recommendations to land owners regarding how risks might be managed, if necessary.

A composite soil sample (FSUKWD1SS-1) was taken from the tailings pile/waste dump and analyzed for the Frank Peck Lode. The sample exceeded the Initial Default Target Levels (IDTLs) for chromium by 1.7 times and the IDTLs for manganese by 1.04 times. The sample exceeded the BLM Risk Factor for copper relative to the robin by 1.8 times. The sample did not exceed the Human Health Medium-Screening Levels (HHSLs). However, these values are not remarkable, and it is unlikely any human health risks or ecological health risks are associated with this area.

Attached is the Abbreviated Preliminary Assessment for the Frank Peck Lode. It contains the mine history, limited geological information, soil analysis results, site photographs, and maps of the property. Based on this information, DEQ is recommending the Frank Peck Lode property status be designated as NRAP.

If you have any comments or questions about this site, the report, DEQ's recommendations, or if I may be of any other assistance, contact me at (208) 373-0554.

Sincerely,



Bruce A. Schuld
Mine Waste Projects Coordinator
Waste Management and Remediation Division

Attachment

cc: Ken Marcy – U.S. Environmental Protection Agency
Frank Peck Lode File

ABBREVIATED PRELIMINARY ASSESSMENT

This is an Abbreviated Preliminary Assessment (APA) for the Frank Peck Lode near Orogrande, Idaho. This document provides the rationale for the determination of No Remedial Action Planned (NRAP) or if additional analysis or site investigation is necessary for the Frank Peck Lode. Additional sheets are attached which contain relevant information including historical data, site photographs, and maps generated during the site visits or desktop research.

Preparer: Daniel D. Stewart **Date:** 3/16/11
Idaho Department of Environmental Quality
300 West Main, Room 203
Grangeville, ID 83530
(208) 983-0808
daniel.stewart@deq.idaho.gov

Site Name: Frank Peck Lode (A new claim by the same name of Frank Peck Lode has been filed with the USFS and is presently being processed for this site.)

Previous Names (aka): Circ Twins Mine Group, Knob Hill Mine, Petsite Mine, Petzite Mine

Site Owner: United States Forest Service
Nez Perce National Forest

Address: 104 Airport Road
Grangeville, ID 83530

Site Location: Turn off Highway 14 towards Elk City. At Crooked River Road, go approximately 11.5 miles to Orogrande. At Orogrande, cross Crooked River and follow the Quartz Creek Road to access a new road system on private property, which ties in with an existing road to the Frank Peck Lode. The mine is approximately 1.5 miles from Orogrande. The Circ Twins Mine group is identified on the Nez Perce National Forest map.

Township 27 North, Range 7 East, Section 12

Latitude: 45.69447^{o}N **Longitude:** -115.53397^{o}W

Describe the release (or potential release) and its probable nature:

This site was investigated for potential releases of heavy metals and sediment from mine waste dumps and potential discharges of other deleterious materials, such as petroleum products and ore processing chemicals. No evidence or indications of these materials were located on site. See the site photographs in the attachments at the end of this report.

Part 1 - Superfund Eligibility Evaluation

If all answers are "no" go on to Part 2, otherwise proceed to Part 3.	**YES**	**NO**
1. Is the site currently in CERCLIS or an "alias" of another site?		**x**
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		**x**
3. Are the hazardous substances that may be released from the site regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?		**x**
4. Are the hazardous substances that may be released from the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		**x**
5. Is there sufficient documentation to demonstrate that there is no potential for a release that constitutes risk to human or ecological receptors? (*e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA approved risk assessment completed)?*	**x**	

Please explain all "yes" answer(s):

A site inspection involving direct observations confirmed contaminants of concern do not exist in concentrations that present a threat to human health or the environment. Frank Peck Lode is in close proximity to several mining claims and workings. Remnants of old buildings and structures remain. No standing structures were observed. Various mining related articles are on the site.

A soil sample (FSUKWD1SS-1) was taken and analyzed. See the attachments at the end of this report. Soil sample FSUKWD1SS-1 is a composite sample taken from the tailings pile/waste dump at the Frank Peck Lode. The sample exceeded the Initial Default Target Levels (IDTLs) for chromium by 1.7 times and the IDTLs for manganese by 1.04 times. The sample exceeded the BLM Risk Factor for copper relative to the robin by 1.8 times. The sample did not exceed the Human Health Medium-Screening Levels (HHSLs). These values are not remarkable, and it is unlikely any human health risks or ecological health risks are associated with this area.

Part 2 - Initial Site Evaluation

For Part 2, if information is not available to make a "yes" or "no" response, further investigation may be needed. In these cases, determine whether an APA is appropriate. Exhibit 1 parallels the questions in Part 2. Use Exhibit 1 to make decisions in Part 3.

If the answer is "no" to any of questions 1, 2, or 3, proceed directly to Part 3.	**YES**	**NO**
1. Does the site have a release or a potential to release?		**x**
2. Does the site have uncontained sources containing CERCLA eligible substances?		**x**
3. Does the site have documented on-site, adjacent, or nearby targets?		**x**

If the answers to questions 1, 2, and 3 above were all "yes" then answer the questions below before proceeding to Part 3.	**YES**	**NO**
4. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?		**x**
5. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site?		**x**
6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within one mile)?		**x**
7. Is there no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site?		**x**

Notes:

During the site assessment, DEQ used references from several different documents including USGS maps, county tax rolls, and historical reports that have spelled numerous claim names, town sites, and/or geographic features differently from one and another. DEQ's use of the different spellings is to remain in context with the reference used for each given section of text written in this report.

Exhibit 1 – Site Assessment Decision Guidelines for a Site

Exhibit 1 identifies different types of site information and provides some possible recommendations for further site assessment activities based on that information. The assessor should use Exhibit 1 in determining the need for further action at the site, based on the answers to the questions in Part 2. Please use your professional judgment when evaluating a site. Your judgment may be different from the general recommendations for a site given below. **(Circle or highlight responses)**

Suspected/Documented Site Conditions		**APA**	**Full PA**	**PA/SI**	**SI**
1. Releases or potential to release are not documented at the site.		Yes			
2. Uncontained sources with CERCLA-eligible substances have not been documented as being present on the site. (i.e., they do exist at site)		Yes			
3. On-site, adjacent, or nearby receptors are not present.		Yes			
4. There is no documentation or observations made leading to the conclusion that a sensitive receptor is present or may have been exposed (e.g., drinking water system user inside four mile TDL)	Option 1: APA	Yes			
5. There is documentation that a sensitive receptor has been exposed to a hazardous substance released from the site.	Option 2: Full PA or PA/SI	No			
6. There is an apparent release at the site with no documentation of targets, but there are targets on site or immediately adjacent to the site.	Option 1: APA SI	No			
	Option 2: PA/SI	No			
7. There is an apparent release and no documented on-site targets and no documented targets immediately adjacent to the site, but there are nearby targets. Nearby targets are those targets that are located within one mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site.		No			
8. There are: no indications of a hazardous substance release; uncontained sources containing CERCLA hazardous substances; but there is a potential to release with targets present on site or in proximity to the site.		No			

Part 3 - EPA Site Assessment Decision

When completing Part 3, use Part 2 and Exhibit 1 to select the appropriate decision. For example, if the answer to question 1 in Part 2 was "no," then an APA may be performed and the "NRAP" box below should be checked. Additionally, if the answer to question 4 in Part 2 is "yes," then you have two options (as indicated in Exhibit 1): Option 1 -- conduct an APA and check the "Lower Priority SI" or "Higher Priority SI" box below; or Option 2 -- proceed with a combined PA/SI assessment.

Check the box that applies based on the conclusions of the APA:

x	No Remedial Action Planned (NRAP)		Defer to NRC
	Higher Priority SI		Refer to Removal Program
	Lower Priority SI		Site is being addressed as part of another CERCLIS site
	Defer to RCRA Subtitle C		Other: _____

DEQ Reviewer:

Bruce A. Schuld — 4/28/11

Bruce A. Schuld — Date

Please Explain the Rationale for Your Decision:

There were no direct airborne, surface or ground water pathways to any potable water sources or residences. The closest residence is 1.5 miles away. No significant evidence of mineralization remains at the Frank Peck Lode site. As shown in the photographs in the attachments of this report, the tailings pile/waste dump is not heavily vegetated on the top and sides. All areas around the tailings pile/waste dump are well vegetated, trapping any sediment movement from the site.

As a result of our observations, DEQ is recommending this site be designated as "No Remedial Action Planned" (NRAP).

Attachments:

Historical Information
Soil Analysis Results
Site Photographs
Maps

Historical Information

Mine History: The following history of the Pasadena Mine is from *Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Forest Service Lands (Region 1), Nez Perce National Forest, Vol. III: Elk City, Orogrande, Buffalo Hump, and Surrounding Areas, Idaho County, Idaho, Section A. Idaho Geological Survey (IGS), 2001, Prepared for the U.S. Forest Service, Region 1, Under Participating Agreement No. FS-01-96-14-2800*:

A new claim by the name of the Pasadena Mine has been filed and is being processed by the USFS. Due to the close proximity of this mine to the Circ Twins mine group it can be assumed the new Pasadena Mine was part of the Circ Twins mining operation.

> *In the early 1900s, the Knob Hill group had eight claims that were owned by Orrin Lamb, Bob Puelz, J. H. Colgrove, and the Hockenson Brothers. There were about 250 feet of tunnels on the property (Jellum, 1909). By 1918, the property had at least six shallow shafts, two tunnels, and numerous pits and trenches (IGS mineral property files). The property was relocated as the Petsite in 1917 (Rains, 1991). Frank Peck owned the property in 1918 (IGS mineral property files) and still held the claims in 1934 (Shenon and Reed, 1934). Ross Brattain produced ore from the property in 1942. The Circ Twins Mining Corporation (Ross Brattain, president) was incorporated in 1943. The company held the property under lease and bond from Frank Peck's estate. In 1956, the property had four main tunnels (100 feet, 450 feet, 600 feet, and 700 feet), as well as many short tunnels, shafts, pits, and trenches. The company's plans called for developing the property as an open pit operation. Circ Twins forfeited its corporate charter in 1961 (IGS mineral property files).*
>
> *Amax Inc., examined the property in the 1960s, and Henrietta Mines drilled the property in the mid-1970s for molybdenum and copper. Cypress Minerals drilled sixteen holes centered on the mine in 1996. The following year, Cypress drilled about eighty-five holes near the Petsite stock and along the Orogrande shear zone. In 1998, the property was drilled by Kinross Gold, operating in a joint venture with Idaho Consolidated Metals Corporation. This drilling delineated a resource of 532,000 ounces of gold, with substantial widths showing grades of over 1.1 grams per ton. In September 2000, Idaho Consolidated Metals bought out Kinross Gold's share of the project.*

Geologic Features: The following is taken from *Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Forest Service Lands (Region 1), Nez Perce National Forest, Vol. III: Elk City, Orogrande, Buffalo Hump, and Surrounding Areas, Idaho County, Idaho, Section A. Idaho Geological Survey (IGS), 2001, Prepared for the U.S. Forest Service, Region 1, Under Participating Agreement No. FS-01-96-14-2800*:

> *Rains (1991, p. 17) described the geology of the Circ Twins Mine as follows:*
>
> *The Petsite Mine (misspelling of petzite, a silver-gold tellurium mineral) is a disseminated gold deposit unlike other mineral deposits in the area. It is associated with an Eocene, felsic, volcanic stock which has intruded along the contact of Cretaceous biotite*

granodiorite and Precambrian quartzite and schist. Variously labeled as rhyolite or dacite (Thomson and Ballard, 1924; Shenon and Reed, 1934) the porphyritic rhyolite stock, about 5 acres in size, contains phenocrysts of quartz and orthoclase feldspar up to 3/8 in., but more commonly 1/4 in., in diameter. The stock is locally silicified; the contact and surrounding country rock are intensely silicified and hydrothermally altered, especially along the northern edge. The rhyolite varies from fresh and unaltered to a dull, white, chalky texture with brown iron oxide spots from altered pyrite. Thomson and Ballard (1924) reported that four quartz veins 0.5-ft to 3-ft thick crosscut the stock and extend into the country rock. Also, numerous quartz veinlets are in the rhyolite. Minor disseminated pyrite and traces of chalcopyrite and tetradymite [bismuth tellurium sulfide] were observed; galena, molybdenite, free gold, wolframite, and scheelite have been reported (Shenon and Reed, 1934). The more common oxidation products are malachite, pyrolusite, hematite, and other iron oxides.

Soil Analysis Results

Table 1. Soil Sample Analysis
Frank Peck Mine, Orogrande Mining District

Metals	IDTLs (mg/kg)	HHSLs (mg/kg)	Frank Peck Mine Orogrande Mining District Sample FSUKWD1SS-1
Antimony	4.77	31	<2.0
Arsenic	0.391	23	<2.5
Barium	896	1600	15.2
Cadmium	1.35	39	<0.02
Chromium (Total)	7.9	210	13.7
Copper	921	2900	**12.7**
Iron		55000	8680
Lead	49.6		1.61
Manganese	223	3600	233
Selenium	2.03	23	<4.0
Silver	0.189	390	<0.5
Zinc	886	390	29.1
Mercury	0.00509	23	<0.033

Gold = Exceeds Idaho Initial Default Target Levels (IDTLs)
Bold = Exceeds BLM Ecological Risk Benchmarks

Table 2. Wildlife and Livestock Risk Management Criteria for Metals in Soils (mg/kg)
BLM Technical Note 390 Rev. 2004 "Risk Management Criteria for Metals at BLM Mining Sites"

Frank Peck Mine, Orogrande Mining District

Metals	Elk	Mule Deer	Big Horn Sheep	Deer Mice	Cottontail Rabbits	Canada Goose	Mallard	Robin	Cattle	Sheep	Median Values
Antimony											
Arsenic	328	200	387	230	438	61	116	4	419	275	275
Barium											
Cadmium	3	3	9	7	6	2	1	0.3	15	12	8
Chromium											
Copper	131	102	64	640	358	161	141	7	413	136	136
Iron											
Lead	127	106	152	142	172	34	59	6	244	125	125
Manganese											
Selenium											
Silver											
Zinc	275	222	369	419	373	271	196	43	1082	545	307
Mercury	11	11	6	2	15	6	4	1	45	8	8

Site Photographs



Photo 1. Looking up from creek at Frank Peck Lode tailings pile/waste dump. Note all areas around the tailings pile/waste dump are well vegetated, trapping any sediment movement from the site.

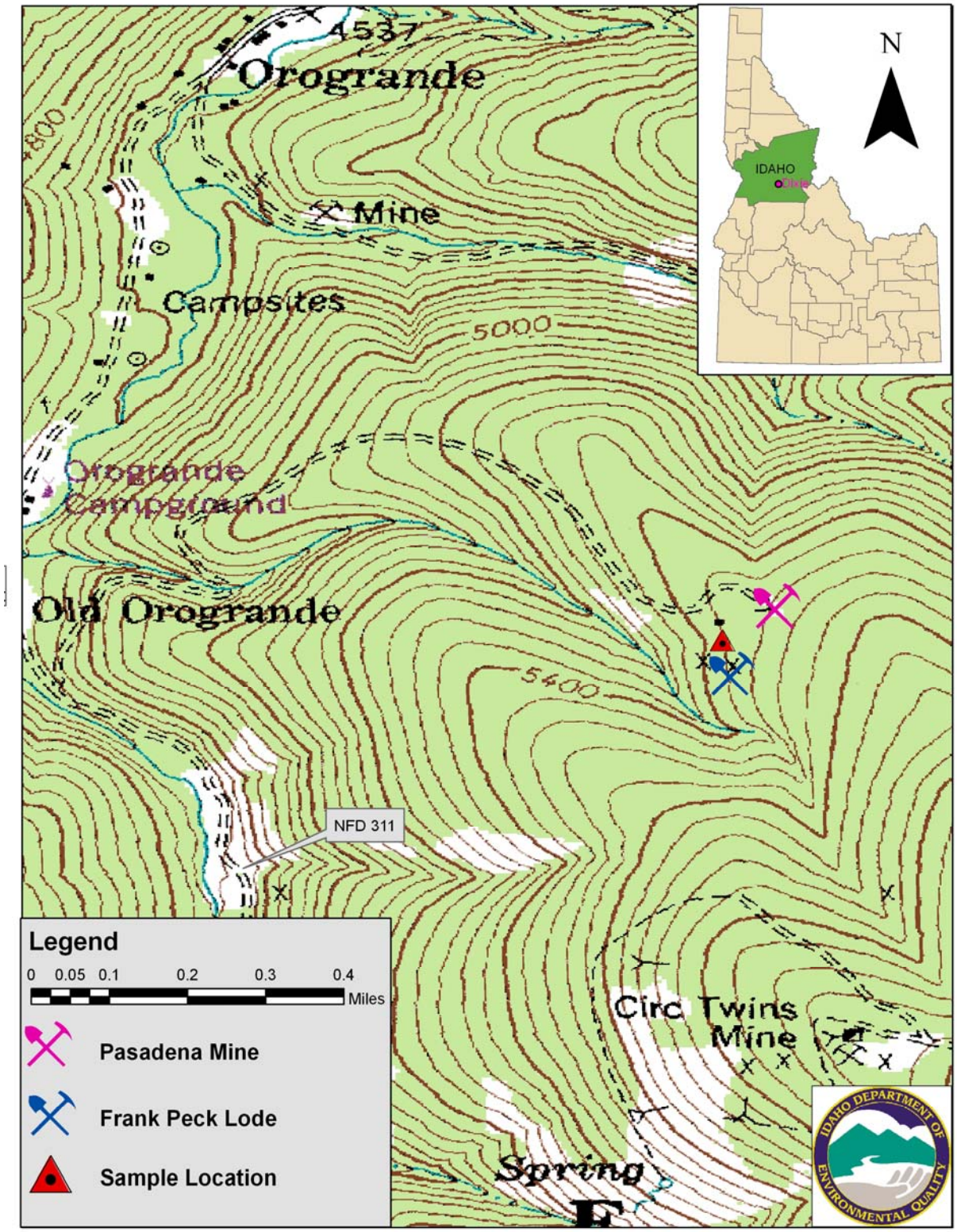


Photo 2. Top of Frank Peck Lode tailings pile/waste dump

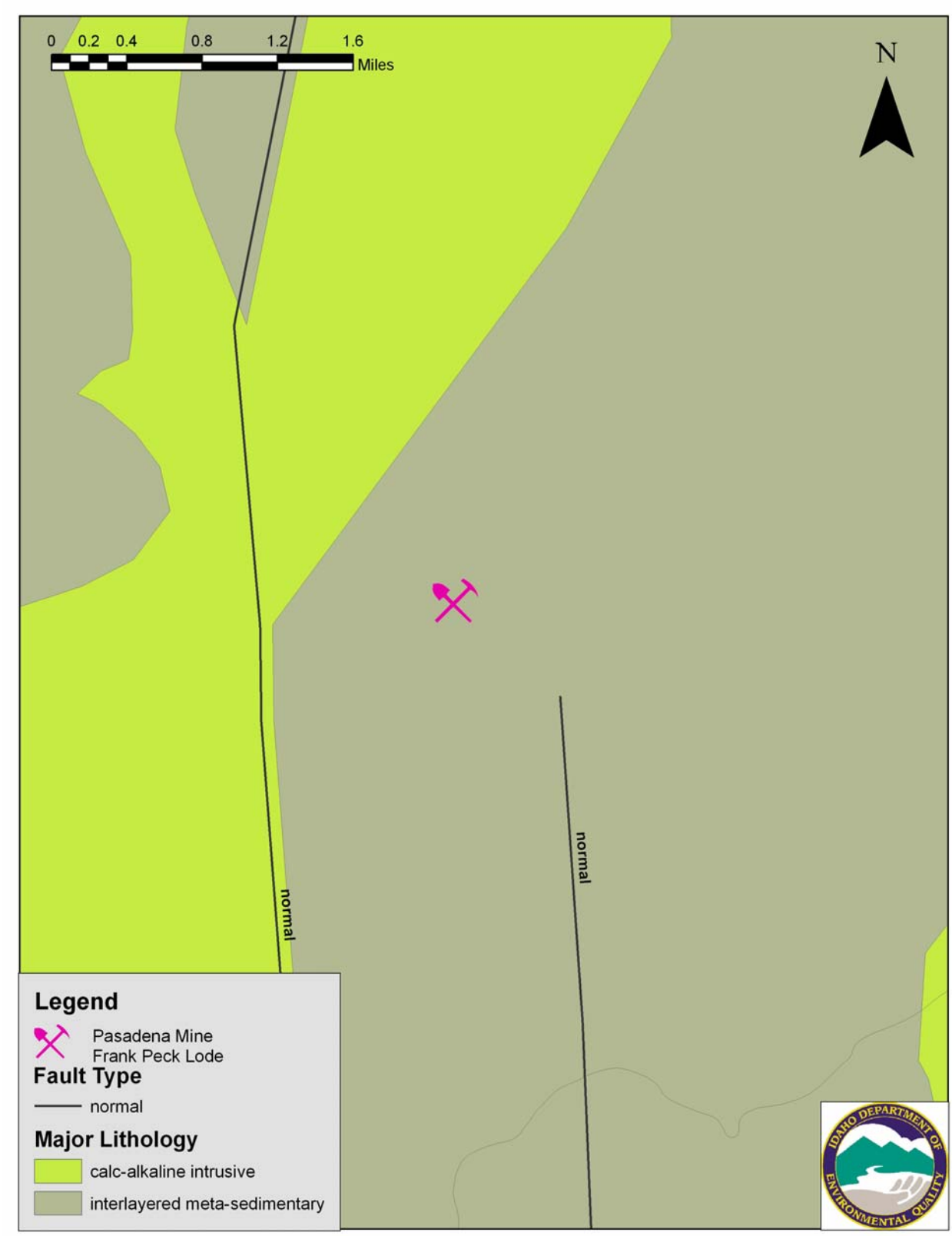


Photo 3. Top of Frank Peck Lode tailings pile/waste dump. Composite soil sample FSUKWD1SS1 was collected from various areas of the tailings pile/waste dump.

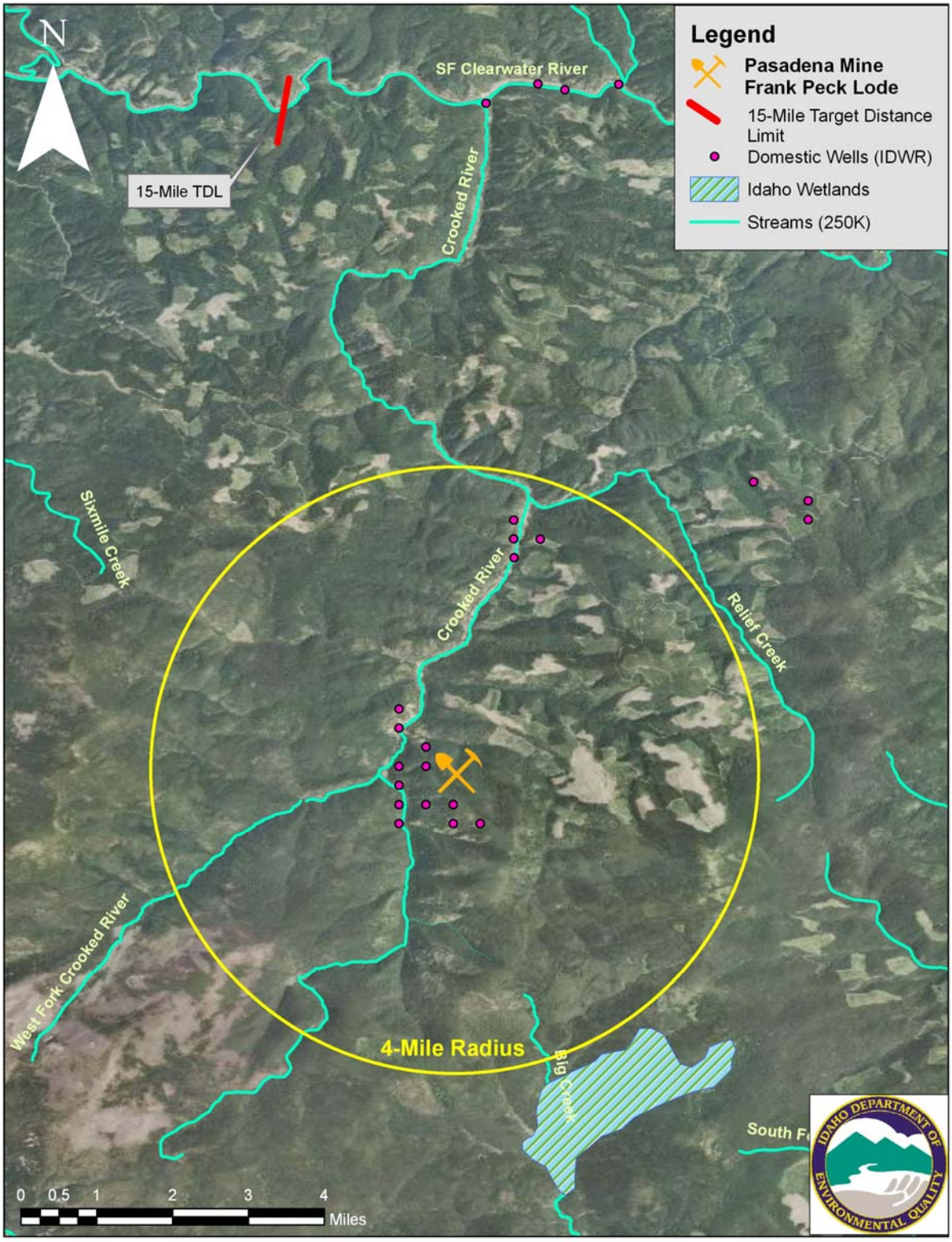
Maps



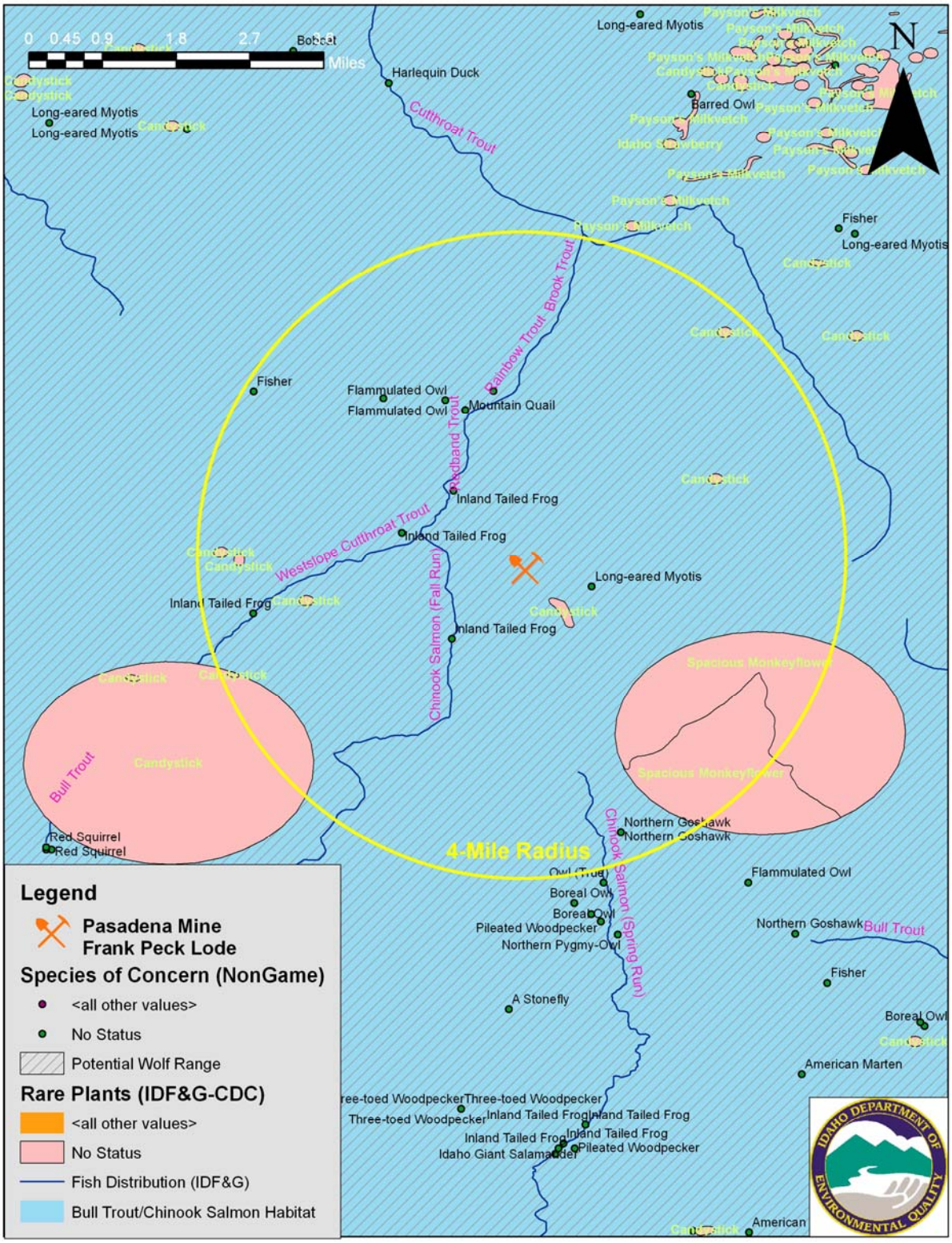
Map 1. Location of the Pasadena Mine and Frank Peck Lode. Sample location for FSUKWD1SS1 identified on map. (Map Source: USGS 24k Quads)



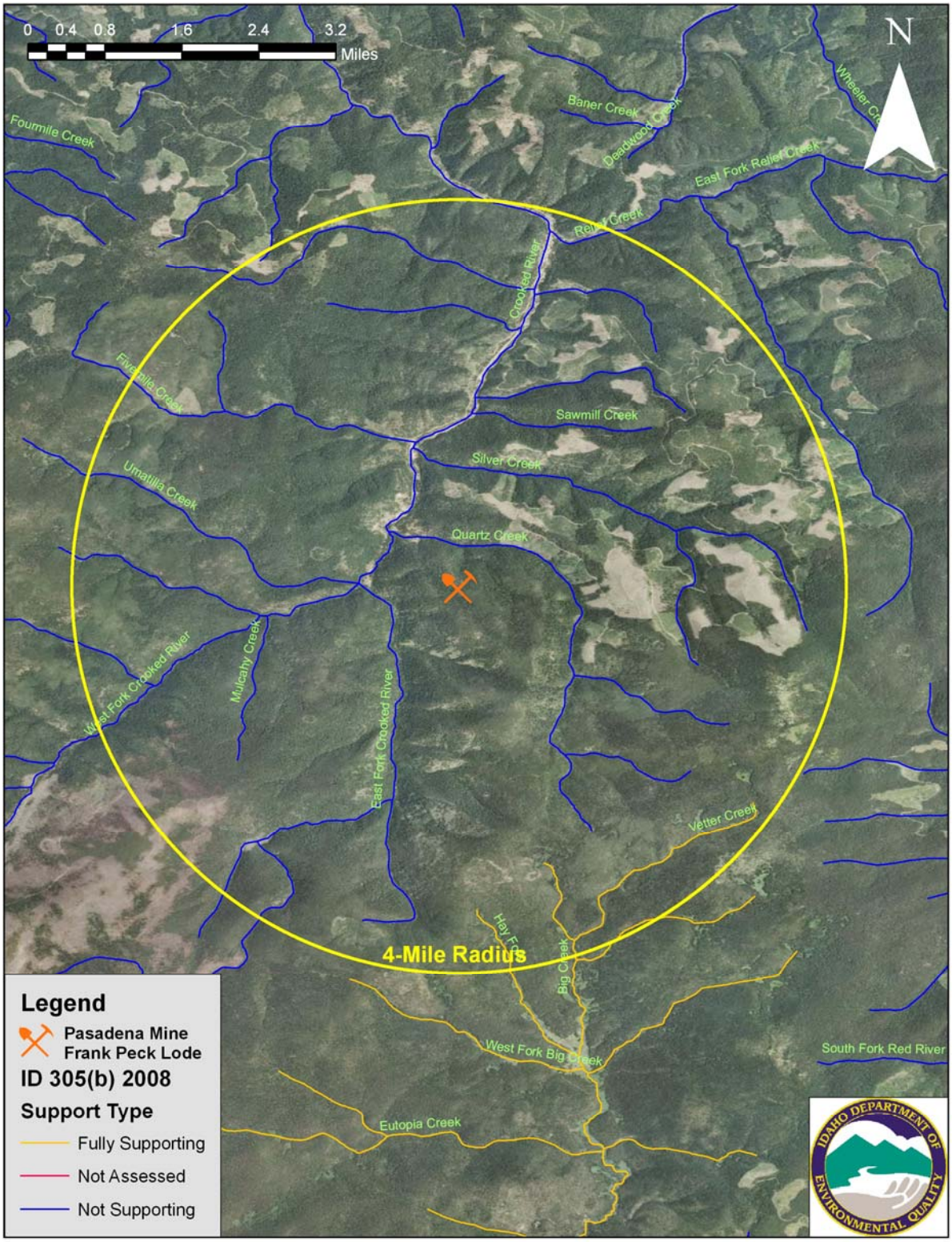
Map 2. Major Lithology of the Pasadena Mine and Frank Peck Lode (Map Sources: SDE Feature Class, USGS 1995 and Idaho DEQ GIS ArcSDE 9.2 Geodatabase)



Map 3. Domestic Well Locations. There are no public water systems within the four mile radius or the 15 mile target distance limit (TDL). Wetlands run along Big Creek, however they are segregated by structural geology. (Map Source: 2009 Natural Color 1-meter National Agricultural Imagery Program (NAIP) Idaho Map)



Map 4. Sensitive Species within Four Mile Radius and Surrounding Area (Map Sources: SDE Feature Dataset, Animal Conservation Database and Idaho DEQ GIS ArcSDE 9.2 Geodatabase)



Map 5. Sensitive Waterways within Four Mile Radius and Surrounding Area (Map Sources: SDE Feature Dataset, Idaho DEQ GIS ArcSDE 9.2 Geodatabase, 305(b) List. 2009 Natural Color 1-meter NAIP Idaho Map)

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
ICSD2	W0G0216-01	Soil	29-Jun-10 08:30	BS	09-Jul-2010
ICSD3	W0G0216-02	Soil	29-Jun-10 09:00	BS	09-Jul-2010
CRSD1	W0G0216-03	Soil	29-Jun-10 08:00	BS	09-Jul-2010
ICSD4	W0G0216-04	Soil	29-Jun-10 09:35	BS	09-Jul-2010
ICSD1	W0G0216-05	Soil	29-Jun-10 10:00	BS	09-Jul-2010
CRSD2	W0G0216-06	Soil	29-Jun-10 10:30	BS	09-Jul-2010
CCWD1SS-1	W0G0216-07	Soil	29-Jun-10 15:00	BS	09-Jul-2010
FSUKWD1SS-1	W0G0216-08	Soil	29-Jun-10 13:00	BS	09-Jul-2010
ICSW1	W0G0216-09	Surface Water	29-Jun-10 10:05	BS	09-Jul-2010
CRSW1	W0G0216-10	Surface Water	29-Jun-10 08:05	BS	09-Jul-2010
ICSW2	W0G0216-11	Surface Water	29-Jun-10 08:35	BS	09-Jul-2010
CRSW2	W0G0216-12	Surface Water	29-Jun-10 10:35	BS	09-Jul-2010
ICSW3	W0G0216-13	Surface Water	29-Jun-10 09:05	BS	09-Jul-2010
ICSW4	W0G0216-14	Surface Water	29-Jun-10 09:40	BS	09-Jul-2010

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.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSD2**
SVL Sample ID: **W0G0216-01 (Soil)**

Sampled: 29-Jun-10 08:30
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:20	
EPA 6010B	**Arsenic**	3.4	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:20	
EPA 6010B	**Barium**	66.7	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:20	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:20	
EPA 6010B	**Chromium**	4.54	mg/kg	0.60	0.07		W030408	AS	07/26/10 15:27	
EPA 6010B	**Copper**	2.46	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:20	
EPA 6010B	**Iron**	8030	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:19	
EPA 6010B	**Lead**	1.73	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:20	
EPA 6010B	**Manganese**	128	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:19	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:20	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:20	
EPA 6010B	**Zinc**	10.0	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:20	
EPA 7471A	Mercury	< 0.033	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:35	
Percent Solids										
Percent Solids	**% Solids**	97.8	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSD3**
SVL Sample ID: **W0G0216-02 (Soil)**

Sampled: 29-Jun-10 09:00
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:25	
EPA 6010B	**Arsenic**	2.5	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:25	
EPA 6010B	**Barium**	88.2	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:25	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:25	
EPA 6010B	**Chromium**	4.12	mg/kg	0.60	0.07		W030408	AS	07/26/10 15:46	
EPA 6010B	**Copper**	3.19	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:25	
EPA 6010B	**Iron**	8450	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:24	
EPA 6010B	**Lead**	3.79	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:25	
EPA 6010B	**Manganese**	142	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:24	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:25	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:25	
EPA 6010B	**Zinc**	7.96	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:25	
EPA 7471A	**Mercury**	0.065	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:37	
Percent Solids										
Percent Solids	**% Solids**	99.4	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **CRSD1**
SVL Sample ID: **W0G0216-03 (Soil)**

Sampled: 29-Jun-10 08:00
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:31	
EPA 6010B	**Arsenic**	6.0	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:31	
EPA 6010B	**Barium**	58.3	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:30	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:31	
EPA 6010B	**Chromium**	6.08	mg/kg	0.60	0.07		W030408	AS	07/26/10 15:52	
EPA 6010B	**Copper**	5.29	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:30	
EPA 6010B	**Iron**	8750	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:29	
EPA 6010B	**Lead**	5.87	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:31	
EPA 6010B	**Manganese**	92.4	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:29	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:31	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:30	
EPA 6010B	**Zinc**	16.0	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:31	
EPA 7471A	**Mercury**	0.045	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:41	
Percent Solids										
Percent Solids	**% Solids**	92.4	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSD4**
SVL Sample ID: **W0G0216-04 (Soil)**

Sampled: 29-Jun-10 09:35
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:36	
EPA 6010B	**Arsenic**	9.9	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:36	
EPA 6010B	**Barium**	87.5	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:36	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:36	
EPA 6010B	**Chromium**	4.71	mg/kg	0.60	0.07		W030408	AS	07/26/10 15:58	
EPA 6010B	**Copper**	4.36	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:36	
EPA 6010B	**Iron**	14800	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:34	
EPA 6010B	**Lead**	26.1	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:36	
EPA 6010B	**Manganese**	293	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:34	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:36	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:36	
EPA 6010B	**Zinc**	9.92	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:36	
EPA 7471A	**Mercury**	0.408	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:43	
Percent Solids										
Percent Solids	**% Solids**	99.7	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSD1**
SVL Sample ID: **W0G0216-05 (Soil)**

Sampled: 29-Jun-10 10:00
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:41	
EPA 6010B	**Arsenic**	3.6	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:41	
EPA 6010B	**Barium**	140	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:41	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:41	
EPA 6010B	**Chromium**	12.9	mg/kg	0.60	0.07		W030408	AS	07/26/10 16:04	
EPA 6010B	**Copper**	9.00	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:41	
EPA 6010B	**Iron**	22600	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:40	
EPA 6010B	**Lead**	5.32	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:41	
EPA 6010B	**Manganese**	393	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:40	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:41	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:41	
EPA 6010B	**Zinc**	24.3	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:41	
EPA 7471A	**Mercury**	0.063	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:45	
Percent Solids										
Percent Solids	**% Solids**	92.0	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **CRSD2**
SVL Sample ID: **W0G0216-06 (Soil)**

Sampled: 29-Jun-10 10:30
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:46	
EPA 6010B	Arsenic	< 2.5	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:46	
EPA 6010B	**Barium**	77.6	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:46	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:46	
EPA 6010B	**Chromium**	11.6	mg/kg	0.60	0.07		W030408	AS	07/26/10 16:10	
EPA 6010B	**Copper**	5.36	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:46	
EPA 6010B	**Iron**	10300	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:45	
EPA 6010B	**Lead**	2.99	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:46	
EPA 6010B	**Manganese**	108	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:45	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:46	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:46	
EPA 6010B	**Zinc**	15.7	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:46	
EPA 7471A	**Mercury**	0.103	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:46	
Percent Solids										
Percent Solids	**% Solids**	99.2	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **CCWD1SS-1**
SVL Sample ID: **W0G0216-07 (Soil)**

Sampled: 29-Jun-10 15:00
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	**Antimony**	2.1	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:52	
EPA 6010B	**Arsenic**	77.9	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:52	
EPA 6010B	**Barium**	26.7	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:51	
EPA 6010B	**Cadmium**	0.30	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:51	
EPA 6010B	**Chromium**	2.35	mg/kg	0.60	0.07		W030408	AS	07/26/10 16:27	
EPA 6010B	**Copper**	1300	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:51	
EPA 6010B	**Iron**	13500	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:50	
EPA 6010B	**Lead**	1820	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:51	
EPA 6010B	**Manganese**	529	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:50	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:52	
EPA 6010B	**Silver**	18.9	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:51	
EPA 6010B	**Zinc**	26.9	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:51	
EPA 7471A	**Mercury**	0.870	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:48	
Percent Solids										
Percent Solids	**% Solids**	95.2	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **FSUKWD1SS-1**
SVL Sample ID: **W0G0216-08 (Soil)**

Sampled: 29-Jun-10 13:00
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	< 2.0	mg/kg	2.0	0.3		W029026	DG	07/23/10 16:57	
EPA 6010B	Arsenic	< 2.5	mg/kg	2.5	0.5		W029026	DG	07/23/10 16:57	
EPA 6010B	**Barium**	15.2	mg/kg	0.20	0.02		W029026	DG	07/23/10 16:57	
EPA 6010B	Cadmium	< 0.20	mg/kg	0.20	0.03		W029026	DG	07/23/10 16:57	
EPA 6010B	**Chromium**	13.7	mg/kg	0.60	0.07		W030408	AS	07/26/10 16:32	
EPA 6010B	**Copper**	12.7	mg/kg	1.00	0.21		W029026	DG	07/23/10 16:57	
EPA 6010B	**Iron**	8680	mg/kg	6.0	1.0		W029026	DG	07/23/10 16:55	
EPA 6010B	**Lead**	1.61	mg/kg	0.75	0.36		W029026	DG	07/23/10 16:57	
EPA 6010B	**Manganese**	233	mg/kg	0.40	0.06		W029026	DG	07/23/10 16:56	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	1.4		W029026	DG	07/23/10 16:57	
EPA 6010B	Silver	< 0.50	mg/kg	0.50	0.04		W029026	DG	07/23/10 16:57	
EPA 6010B	**Zinc**	29.1	mg/kg	1.00	0.22		W029026	DG	07/23/10 16:57	
EPA 7471A	Mercury	< 0.033	mg/kg	0.033	0.010		W028187	JAA	07/12/10 13:49	
Percent Solids										
Percent Solids	**% Solids**	95.7	%	0.1			W029029	DP	07/13/10 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

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSW1**
SVL Sample ID: **W0G0216-09 (Surface Water)**

Sampled: 29-Jun-10 10:05
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 10:59	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 13:27	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 13:27	
EPA 6010B	**Barium**	0.0243	mg/L	0.0020	0.0007		W029021	DG	07/24/10 13:27	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 13:27	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 13:27	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 13:27	
EPA 6010B	**Iron**	0.292	mg/L	0.060	0.018		W029021	DG	07/24/10 13:26	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 13:27	
EPA 6010B	Manganese	< 0.0040	mg/L	0.0040	0.0019		W029021	DG	07/24/10 13:26	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 13:27	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 13:27	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0016		W029021	DG	07/24/10 13:27	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **CRSW1**
SVL Sample ID: **W0G0216-10 (Surface Water)**

Sampled: 29-Jun-10 08:05
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 11:04	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 13:43	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 13:43	
EPA 6010B	**Barium**	0.0165	mg/L	0.0020	0.0007		W029021	DG	07/24/10 13:43	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 13:43	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 13:43	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 13:43	
EPA 6010B	**Iron**	0.209	mg/L	0.060	0.018		W029021	DG	07/24/10 13:42	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 13:43	
EPA 6010B	**Manganese**	0.0053	mg/L	0.0040	0.0019		W029021	DG	07/24/10 13:42	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 13:43	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 13:43	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0016		W029021	DG	07/24/10 13:43	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSW2**
SVL Sample ID: **W0G0216-11 (Surface Water)**

Sampled: 29-Jun-10 08:35
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 11:09	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 13:49	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 13:49	
EPA 6010B	**Barium**	0.0548	mg/L	0.0020	0.0007		W029021	DG	07/24/10 13:49	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 13:49	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 13:48	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 13:48	
EPA 6010B	**Iron**	0.808	mg/L	0.060	0.018		W029021	DG	07/24/10 13:47	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 13:49	
EPA 6010B	**Manganese**	0.0170	mg/L	0.0040	0.0019		W029021	DG	07/24/10 13:47	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 13:49	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 13:48	
EPA 6010B	**Zinc**	0.0135	mg/L	0.0100	0.0016		W029021	DG	07/24/10 13:49	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **CRSW2**
SVL Sample ID: **W0G0216-12 (Surface Water)**

Sampled: 29-Jun-10 10:35
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 11:10	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 14:10	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 14:10	
EPA 6010B	**Barium**	0.0156	mg/L	0.0020	0.0007		W029021	DG	07/24/10 14:10	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 14:10	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 14:10	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 14:10	
EPA 6010B	**Iron**	0.278	mg/L	0.060	0.018		W029021	DG	07/24/10 14:09	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 14:10	
EPA 6010B	**Manganese**	0.0061	mg/L	0.0040	0.0019		W029021	DG	07/24/10 14:09	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 14:10	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 14:10	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0016		W029021	DG	07/24/10 14:10	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSW3**
SVL Sample ID: **W0G0216-13 (Surface Water)**

Sampled: 29-Jun-10 09:05
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 11:12	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 14:16	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 14:16	
EPA 6010B	**Barium**	0.0519	mg/L	0.0020	0.0007		W029021	DG	07/24/10 14:16	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 14:16	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 14:16	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 14:16	
EPA 6010B	**Iron**	0.688	mg/L	0.060	0.018		W029021	DG	07/24/10 14:15	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 14:16	
EPA 6010B	**Manganese**	0.0144	mg/L	0.0040	0.0019		W029021	DG	07/24/10 14:15	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 14:16	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 14:16	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0016		W029021	DG	07/24/10 14:16	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Client Sample ID: **ICSW4**
SVL Sample ID: **W0G0216-14 (Surface Water)**

Sampled: 29-Jun-10 09:40
Received: 09-Jul-10
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	< 0.00020	mg/L	0.00020	0.000065		W029003	JAA	07/14/10 11:14	
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.005		W029021	DG	07/24/10 14:22	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.005		W029021	DG	07/24/10 14:22	
EPA 6010B	**Barium**	0.0776	mg/L	0.0020	0.0007		W029021	DG	07/24/10 14:22	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0005		W029021	DG	07/24/10 14:22	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0009		W029021	DG	07/24/10 14:21	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.005		W029021	DG	07/24/10 14:21	
EPA 6010B	**Iron**	1.44	mg/L	0.060	0.018		W029021	DG	07/24/10 14:20	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0040		W029021	DG	07/24/10 14:22	
EPA 6010B	**Manganese**	0.0574	mg/L	0.0040	0.0019		W029021	DG	07/24/10 14:20	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.013		W029021	DG	07/24/10 14:22	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0012		W029021	DG	07/24/10 14:21	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0016		W029021	DG	07/24/10 14:22	

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



John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total)								
EPA 7470A	Mercury	mg/L	<0.00020	0.000065	0.00020	W029003	14-Jul-10	
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010B	Antimony	mg/kg	<2.0	0.3	2.0	W029026	23-Jul-10	
EPA 6010B	Arsenic	mg/kg	<2.5	0.5	2.5	W029026	23-Jul-10	
EPA 6010B	Barium	mg/kg	<0.20	0.02	0.20	W029026	23-Jul-10	
EPA 6010B	Cadmium	mg/kg	<0.20	0.03	0.20	W029026	23-Jul-10	
EPA 6010B	Chromium	mg/kg	<0.60	0.07	0.60	W030408	26-Jul-10	
EPA 6010B	Copper	mg/kg	<1.00	0.21	1.00	W029026	23-Jul-10	
EPA 6010B	Iron	mg/kg	7.9	1.0	6.0	W029026	23-Jul-10	B7
EPA 6010B	Lead	mg/kg	<0.75	0.36	0.75	W029026	23-Jul-10	
EPA 6010B	Manganese	mg/kg	<0.40	0.06	0.40	W029026	23-Jul-10	
EPA 6010B	Selenium	mg/kg	<4.0	1.4	4.0	W029026	23-Jul-10	
EPA 6010B	Silver	mg/kg	<0.50	0.04	0.50	W029026	23-Jul-10	
EPA 6010B	Zinc	mg/kg	<1.00	0.22	1.00	W029026	23-Jul-10	
EPA 7471A	Mercury	mg/kg	<0.033	0.010	0.033	W028187	12-Jul-10	
Metals (Total Recoverable)								
EPA 6010B	Antimony	mg/L	<0.020	0.005	0.020	W029021	24-Jul-10	
EPA 6010B	Arsenic	mg/L	<0.025	0.005	0.025	W029021	24-Jul-10	
EPA 6010B	Barium	mg/L	<0.0020	0.0007	0.0020	W029021	24-Jul-10	
EPA 6010B	Cadmium	mg/L	<0.0020	0.0005	0.0020	W029021	24-Jul-10	
EPA 6010B	Chromium	mg/L	<0.0060	0.0009	0.0060	W029021	24-Jul-10	
EPA 6010B	Copper	mg/L	<0.010	0.005	0.010	W029021	24-Jul-10	
EPA 6010B	Iron	mg/L	<0.060	0.018	0.060	W029021	24-Jul-10	
EPA 6010B	Lead	mg/L	<0.0075	0.0040	0.0075	W029021	24-Jul-10	
EPA 6010B	Manganese	mg/L	<0.0040	0.0019	0.0040	W029021	24-Jul-10	
EPA 6010B	Selenium	mg/L	<0.040	0.013	0.040	W029021	24-Jul-10	
EPA 6010B	Silver	mg/L	<0.0050	0.0012	0.0050	W029021	24-Jul-10	
EPA 6010B	Zinc	mg/L	<0.0100	0.0016	0.0100	W029021	24-Jul-10	

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	0.00481	0.00500	96.2	80 - 120	W029003	14-Jul-10	
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010B	Antimony	mg/kg	96.2	100	96.2	80 - 120	W029026	23-Jul-10	
EPA 6010B	Arsenic	mg/kg	93.7	100	93.7	80 - 120	W029026	23-Jul-10	
EPA 6010B	Barium	mg/kg	93.6	100	93.6	80 - 120	W029026	23-Jul-10	
EPA 6010B	Cadmium	mg/kg	92.4	100	92.4	80 - 120	W029026	23-Jul-10	
EPA 6010B	Chromium	mg/kg	99.3	100	99.3	80 - 120	W030408	26-Jul-10	
EPA 6010B	Copper	mg/kg	100	100	100	80 - 120	W029026	23-Jul-10	
EPA 6010B	Iron	mg/kg	981	1000	98.1	80 - 120	W029026	23-Jul-10	
EPA 6010B	Lead	mg/kg	93.6	100	93.6	80 - 120	W029026	23-Jul-10	
EPA 6010B	Manganese	mg/kg	97.5	100	97.5	80 - 120	W029026	23-Jul-10	
EPA 6010B	Selenium	mg/kg	85.6	100	85.6	80 - 120	W029026	23-Jul-10	
EPA 6010B	Silver	mg/kg	4.43	5.00	88.6	80 - 120	W029026	23-Jul-10	
EPA 6010B	Zinc	mg/kg	89.5	100	89.5	80 - 120	W029026	23-Jul-10	
EPA 7471A	Mercury	mg/kg	0.890	0.833	107	80 - 120	W028187	12-Jul-10	
Metals (Total Recoverable)									
EPA 6010B	Antimony	mg/L	1.02	1.00	102	80 - 120	W029021	24-Jul-10	

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable) (Continued)									
EPA 6010B	Arsenic	mg/L	1.00	1.00	100	80 - 120	W029021	24-Jul-10	
EPA 6010B	Barium	mg/L	0.965	1.00	96.5	80 - 120	W029021	24-Jul-10	
EPA 6010B	Cadmium	mg/L	0.979	1.00	97.9	80 - 120	W029021	24-Jul-10	
EPA 6010B	Chromium	mg/L	0.988	1.00	98.8	80 - 120	W029021	24-Jul-10	
EPA 6010B	Copper	mg/L	0.997	1.00	99.7	80 - 120	W029021	24-Jul-10	
EPA 6010B	Iron	mg/L	10.1	10.0	101	80 - 120	W029021	24-Jul-10	
EPA 6010B	Lead	mg/L	0.987	1.00	98.7	80 - 120	W029021	24-Jul-10	
EPA 6010B	Manganese	mg/L	0.980	1.00	98.0	80 - 120	W029021	24-Jul-10	
EPA 6010B	Selenium	mg/L	0.976	1.00	97.6	80 - 120	W029021	24-Jul-10	
EPA 6010B	Silver	mg/L	0.0462	0.0500	92.3	80 - 120	W029021	24-Jul-10	
EPA 6010B	Zinc	mg/L	0.991	1.00	99.1	80 - 120	W029021	24-Jul-10	

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 7470A	Mercury	mg/L	0.00104	<0.00020	0.00100	104	70 - 130	W029003	14-Jul-10	
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	mg/kg	49.0	4.6	100	44.4	75 - 125	W029026	23-Jul-10	M2
EPA 6010B	Arsenic	mg/kg	126	28.7	100	97.4	75 - 125	W029026	23-Jul-10	
EPA 6010B	Barium	mg/kg	106	13.6	100	92.9	75 - 125	W029026	23-Jul-10	
EPA 6010B	Cadmium	mg/kg	85.8	0.64	100	85.2	75 - 125	W029026	23-Jul-10	
EPA 6010B	Chromium	mg/kg	105	4.54	100	100	75 - 125	W030408	26-Jul-10	
EPA 6010B	Copper	mg/kg	1900	1780	100	124	75 - 125	W029026	23-Jul-10	
EPA 6010B	Iron	mg/kg	37500	37700	1000	R > 4S	75 - 125	W029026	23-Jul-10	M3
EPA 6010B	Lead	mg/kg	92.8	11.9	100	80.9	75 - 125	W029026	23-Jul-10	
EPA 6010B	Manganese	mg/kg	2200	1980	100	R > 4S	75 - 125	W029026	23-Jul-10	M3
EPA 6010B	Selenium	mg/kg	89.4	<4.0	100	89.4	75 - 125	W029026	23-Jul-10	
EPA 6010B	Silver	mg/kg	7.45	2.22	5.00	105	75 - 125	W029026	23-Jul-10	
EPA 6010B	Zinc	mg/kg	217	141	100	76.0	75 - 125	W029026	23-Jul-10	
EPA 7471A	Mercury	mg/kg	0.513	0.337	0.167	106	70 - 130	W028187	12-Jul-10	
Metals (Total Recoverable)										
EPA 6010B	Antimony	mg/L	1.04	<0.020	1.00	104	75 - 125	W029021	24-Jul-10	
EPA 6010B	Arsenic	mg/L	1.03	<0.025	1.00	103	75 - 125	W029021	24-Jul-10	
EPA 6010B	Barium	mg/L	1.01	0.0243	1.00	98.7	75 - 125	W029021	24-Jul-10	
EPA 6010B	Cadmium	mg/L	1.01	<0.0020	1.00	101	75 - 125	W029021	24-Jul-10	
EPA 6010B	Chromium	mg/L	1.02	<0.0060	1.00	102	75 - 125	W029021	24-Jul-10	
EPA 6010B	Copper	mg/L	1.02	<0.010	1.00	102	75 - 125	W029021	24-Jul-10	
EPA 6010B	Iron	mg/L	10.5	0.292	10.0	102	75 - 125	W029021	24-Jul-10	
EPA 6010B	Lead	mg/L	1.01	<0.0075	1.00	101	75 - 125	W029021	24-Jul-10	
EPA 6010B	Manganese	mg/L	0.993	<0.0040	1.00	99.1	75 - 125	W029021	24-Jul-10	
EPA 6010B	Selenium	mg/L	0.996	<0.040	1.00	99.6	75 - 125	W029021	24-Jul-10	
EPA 6010B	Silver	mg/L	0.0470	<0.0050	0.0500	94.1	75 - 125	W029021	24-Jul-10	
EPA 6010B	Zinc	mg/L	1.03	<0.0100	1.00	102	75 - 125	W029021	24-Jul-10	

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total)										
EPA 7470A	Mercury	mg/L	0.00094	0.00104	0.00100	10.1	20	W029003	14-Jul-10	
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	mg/kg	50.7	49.0	100	3.3	20	W029026	23-Jul-10	
EPA 6010B	Arsenic	mg/kg	128	126	100	1.2	20	W029026	23-Jul-10	
EPA 6010B	Barium	mg/kg	105	106	100	1.4	20	W029026	23-Jul-10	
EPA 6010B	Cadmium	mg/kg	85.6	85.8	100	0.3	20	W029026	23-Jul-10	
EPA 6010B	Chromium	mg/kg	106	105	100	1.1	20	W030408	26-Jul-10	
EPA 6010B	Copper	mg/kg	1880	1900	100	1.3	20	W029026	23-Jul-10	
EPA 6010B	Iron	mg/kg	36600	37500	1000	2.4	20	W029026	23-Jul-10	
EPA 6010B	Lead	mg/kg	94.2	92.8	100	1.4	20	W029026	23-Jul-10	
EPA 6010B	Manganese	mg/kg	2170	2200	100	1.6	20	W029026	23-Jul-10	
EPA 6010B	Selenium	mg/kg	90.1	89.4	100	0.7	20	W029026	23-Jul-10	
EPA 6010B	Silver	mg/kg	7.32	7.45	5.00	1.7	20	W029026	23-Jul-10	
EPA 6010B	Zinc	mg/kg	226	217	100	3.8	20	W029026	23-Jul-10	
EPA 7471A	Mercury	mg/kg	0.502	0.513	0.167	2.3	20	W028187	12-Jul-10	
Metals (Total Recoverable)										
EPA 6010B	Antimony	mg/L	1.01	1.04	1.00	2.8	20	W029021	24-Jul-10	
EPA 6010B	Arsenic	mg/L	1.00	1.03	1.00	2.8	20	W029021	24-Jul-10	
EPA 6010B	Barium	mg/L	0.997	1.01	1.00	1.4	20	W029021	24-Jul-10	
EPA 6010B	Cadmium	mg/L	0.980	1.01	1.00	2.7	20	W029021	24-Jul-10	
EPA 6010B	Chromium	mg/L	0.988	1.02	1.00	2.9	20	W029021	24-Jul-10	
EPA 6010B	Copper	mg/L	0.987	1.02	1.00	3.2	20	W029021	24-Jul-10	
EPA 6010B	Iron	mg/L	10.2	10.5	10.0	2.6	20	W029021	24-Jul-10	
EPA 6010B	Lead	mg/L	0.985	1.01	1.00	2.6	20	W029021	24-Jul-10	
EPA 6010B	Manganese	mg/L	0.982	0.993	1.00	1.2	20	W029021	24-Jul-10	
EPA 6010B	Selenium	mg/L	0.970	0.996	1.00	2.6	20	W029021	24-Jul-10	
EPA 6010B	Silver	mg/L	0.0461	0.0470	0.0500	2.0	20	W029021	24-Jul-10	
EPA 6010B	Zinc	mg/L	0.990	1.03	1.00	4.1	20	W029021	24-Jul-10	

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 6010B	Antimony	mg/kg	98.6	4.6	100	94.0	75 - 125	W029026	23-Jul-10	

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

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

Project Name: Boise
Work Order: **W0G0216**
Reported: 27-Jul-10 09:49

Notes and Definitions

B7	Target analyte in method blank exceeded method QC limits, but concentrations in samples were at least 10x the blank concentration.
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