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September 24, 2015

Martin McComb
On-Scene Coordinator
United States Environmental Protection Agency, Region VIII
Mail Code: 8EPR-ER
1595 Wynkoop Street
Denver, CO 80202

Re: Camp Bird – Final Letter Report
Ouray, Ouray County, CO
TDD: 0001/1503-07
DCN: W0219.1A.00621
WO#: 20408.012.001.0219.00

Dear Mr. McComb:

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc., (WESTON®) Superfund Technical Assessment and Response Team-4 (START-4) under Technical Direction Document (TDD) 0001/1503-07 to collect data to support a removal assessment at the Camp Bird site in Ouray, Ouray County, CO. The removal assessment will determine whether there exists immediate threats to human health and the environment due to mine tailings piles on the property (the Site).

SITE DESCRIPTION

The Camp Bird Mine and Mill site is located in the Imogene Basin at the headwaters of Canyon Creek southwest of Ouray on the northern border of the San Juan Mountains. The Site comprises 129 patented mining claims and occupies approximately 1,000 acres. The mine and mill produced gold and silver during its early operational period and later produced lead and zinc. The Site occupies two separate areas comprised of the Camp Bird Level 14 Portal and mill site and the Upper Camp Bird Mine workings (300 level). The Upper Camp Bird site is located at an elevation of approximately 11,200 amsl. The 1400 level portal served as the main entrance to the mine area and is located at the terminus of county road 361. A large tailings pond and associated mill buildings are present below the 1400 level portal. The tailings piles include the inactive tailings facility (265,360 cubic yards), the active tailings facility (60,935 cubic yards) and the historic tailings (146,225 cubic yards). The removal assessment described in this report is applicable to the 1400 level portal tailings piles.

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BACKGROUND

The Camp Bird Mine is located in the Imogene Basin at the headwaters of Canyon Creek. It is an actively permitted mine consisting of approximately 472,520 cubic yards of tailings divided into two impoundments, one remediated pile located on the north side of Canyon Creek and the other un-reclaimed on the south side of Canyon Creek. Additionally, the mine includes a discharging adit. At the time of the assessment, the mine owner has completed some work to evaluate the reopening of the mine for production, including reestablishment of the collapsed main portal and a sedimentation pond and the redirecting of the adit discharge to the pond. .

REMOVAL ASSESSMENT ACTIVITIES

On May 20, 2015 U.S. EPA On-Scene Coordinators (OSCs) Martin McComb and Hays Griswold, and START-4 members Jamie Miller, Megan Adamczyk, Tom Cartier and Moira Pryhoda mobilized to collect data on the Site. The objectives of this effort included:

- Capturing geospatial data for pile volume estimation;
- Sampling of surface water upstream and downstream of the piles from Canyon Creek and downstream of the site from Imogene Creek;
- Photo documentation of site and sampling activities;
- In-situ XRF screening of soil aliquots for composite soil sampling; and
- Composite soil sampling of pile material.

All site activities were photographically documented. The site photolog is presented in Attachment C.

Tailings Pile Geospatial Data Capture

START separated into 2 teams to capture pile geospatial data utilizing a Trimble Nomad datalogger connected to a Trimble ProXRT receiver. A tree break formed a natural division of the piles into north and south areas. The estimated volume of the north pile was 54,409 cubic yards and the estimated volume of the south pile was 109,979 cubic yards.

Surface Water Sampling

Surface water samples were collected from Imogene Creek and Canyon Creek at locations upstream and downstream of the tailings piles. A Horiba U50 monitor was utilized for collection of water quality parameters at each sampling location. The Horiba meter was calibrated daily with pH 4 buffer solution to prepare for surface water sampling. The water quality monitoring results for each of the sites are presented in Table 1. Surface water samples were collected for laboratory analysis at each of the creek sampling locations. The results of laboratory analysis of the samples are presented in Table 3 (Attachment A). At each sampling location, duplicate sets of samples

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were collected which were split with the responsible party's (RP) consultant. The split samples were relinquished to the RP under proper Chain of Custody protocol.

Table 1
Surface Water Sampling Descriptions

Sample Number	Location Description	Sample Date	Sample Time	pH	Temp °C	Cond mS/cm	TDS g/L	DO mg/L
CBSW01	Imogene Creek upstream of piles	5/20/2015	17:32	5.91	3.83	0.099	0.064	12.65
CBAD01	Adit drainage channel	5/20/2015	17:39	6.75	18.92	1.23	0.790	7.35
CBSW02	Canyon Creek upstream of piles	5/20/2015	18:01	7.39	5.64	0.172	0.112	14.03
CBSW03	Canyon Creek downstream of piles	5/21/2015	08:23	6.04	4.52	0.318	0.207	8.44
CBSW04	Seep emerging from north pile	5/21/2015	11:40	--	--	--	--	--

--: parameters could not be collected due to shallow depth of seep

Pile Screening and Sampling

On May 21, 2015 START separated into two teams to perform in situ XRF screening and sampling of the piles. The approach to pile sampling followed that used to capture the pile geospatial data on May 20, 2015. One team of two START members sampled the north pile and one team of two START members sampled the south pile. Samples were collected as 10- or 20-point composites, depending on the size of the pile section being sampled. At each aliquot location, in situ XRF screening was performed at the surface (0-2 inches) and subsurface (2-12 inches). XRF screening results for the contaminants of concern (lead, arsenic and manganese) are presented in Table 5 (Attachment A). The soil sampling information is presented in Table 2 below. The results of analysis of the composite soil samples by onsite XRF measurements are presented in Table 4 (Attachment A). At all sampling locations, split samples were also collected for and relinquished to the RP under proper Chain of Custody protocol.

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Table 2
Soil Sampling Descriptions

Sample Number	Sample Location	Sample Date	Sample Time	Sample Depth	Collection Method
CBSSNOA-02	North pile of NO AOI	5/21/2015	10:34	0-2 inches	20 point composite
CBSSNOA-12	North pile of NO AOI	5/21/2015	10:35	2-12 inches	20 point composite
CBSSNOB-02	Middle pile of NO AOI	5/21/2015	12:42	0-2 inches	10 point composite
CBSBNOB-12	Middle pile of NO AOI	5/21/2015	12:43	2-12 inches	10 point composite
CBSSNOC-02	South pile of NO AOI	5/21/2015	13:33	0-2 inches	20 point composite
CBSBNOC-12	South pile of NO AOI	5/21/2015	13:34	2-12 inches	20 point composite
CBSSSOA-02	Top bench by building	5/21/2015	11:54	0-2 inches	20 point composite
CBSBSOA-12	Top bench by building	5/21/2015	11:54	2-12 inches	20 point composite
CBSSSOB-02	Northern lobe head to toe	5/21/2015	14:10	0-2 inches	20 point composite
CBSBSOB-12	Northern lobe head to toe	5/21/2015	14:11	2-12 inches	20 point composite
CBSSSOC-02	Southern lobe head to toe	5/21/2015	15:26	0-2 inches	20 point composite
CBSBSOC-12	Southern lobe head to toe	5/21/2015	15:27	2-12 inches	20 point composite

Acid Base Accounting

OSC Griswold requested that START submit a representative sample from each pile for acid/base accounting. Acid base accounting includes analyses to determine the potential acidity of oxidized rock and the current (active) acidity. The values are added to determine what it takes to neutralize the rock. Acid base accounting lab results are presented in Attachment D.

DATA PRESENTATION

All sampling and monitoring data, as well as geospatial and photographic documentation, can be viewed on the site specific geospatial viewer found at <https://r8.ercloud.org/CampBird/>. Analytical results are also linked by sampling location and can be viewed.

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CONCLUSIONS

Surface water samples were collected from both Imogene and Canyon Creeks upstream of the Site, from Canyon Creek downstream of the Site, from the adit itself and from a seep passing through the north pile. As anticipated, the sample results for the seep sample contained higher concentrations of a number of total inorganic analytes than the other 3 water samples. Analyte specific standards have been calculated based on specific hardness of each sample and are included in Table 3 for comparison.

Analytes which exceeded the EPA Industrial Soil Regional Screening Levels (RSLs) in samples collected from the piles include arsenic, lead and manganese. Results and Industrial Soil RSLs are presented in Table 4. Exceedances were found for these analytes in both the north and south piles.

The preparation of this draft letter report precedes a final report, to include the sample analytical data when they are available. The final report will be the final TDD deliverable, per the request of OSC McComb. If there are any questions or comments regarding this report, please do not hesitate to contact me at 720.302.3387.

Very truly yours,

WESTON SOLUTIONS, INC.

Jamie Miller
START Project Leader

Attachment:

- A - Tables
- B - Figures
- C - Photolog
- D - Acid Base Accounting Results

cc: Joyce Ackerman, U.S. EPA Project Officer
Dave Robinson, Project Manager
START DCN File

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Attachment A

Tables

Table 3
Surface Water Sampling Results

Analyte	CAS_NO	Result_Units			CBAD01 (hardness: 664 D mg/L)	
			CO Reg 31 Table Value Standards ¹		Adit sample	
			Actue	Chronic	Total	Dissolved
Aluminum	7429-90-5	ug/L	--	--	171 DJ	193 DJ
Antimony	7440-36-0	ug/L	--	--	2 U	2 U
Arsenic	7440-38-2	ug/L	340	150	1.5 U	0.836 J
Barium	7440-39-3	ug/L	--	--	19.2	19
Beryllium	7440-41-7	ug/L	--	--	0.5 U	0.5 U
Cadmium	7440-43-9	ug/L	--	--	2.5 U	2.5 U
Calcium	7440-70-2	ug/L	--	--	260000 D	255000 D
Chromium	7440-47-3	ug/L	--	--	1 U	1 U
Cobalt	7440-48-4	ug/L	--	--	2.5 U	2.5 U
Copper	7440-50-8	ug/L	--	--	3.93	2 U
Iron	7439-89-6	ug/L	--	1000 (T)	192	41.6
Lead	7439-92-1	ug/L	--	--	3.44	0.75 MU
Magnesium	7439-95-4	ug/L	--	--	3310	3310
Manganese	7439-96-5	ug/L	--	--	134	123
Mercury	7439-97-6	ug/L	--	--	0.16 U	0.16 U
Nickel	7440-02-0	ug/L	--	--	1.5 U	1.5 U
Potassium	7440-09-7	ug/L	--	--	940 J	962 J
Selenium	7782-49-2	ug/L	18.4	4.6	6.25 U	6.25 U
Silver	7440-22-4	ug/L	--	--	0.5 MU	0.5 MU
Sodium	7440-23-5	ug/L	--	--	13300	13100
Thallium	7440-28-0	ug/L	--	--	1 U	1 U
Vanadium	7440-62-2	ug/L	--	--	2.5 U	2.5 U
Zinc	7440-66-6	ug/L	--	--	240 D	205 D

D: sample run at dilution

J: estimated value

U: analyte not detected at or above Reporting Limit

M: matrix interference

N: MS/MSD accuracy outside criteria

--sample run at dilution so hardness value too high to be used for standard calculation

*standards based on estimated hardness via Table IV Regulation 31

NA: no standard available

(T) standard applicable to Total Rec Metals

1: Standards are applicable to Dissolved Metals unless otherwise specified

Table 3
Surface Water Sampling Results

Analyte	CAS_NO	Result_Units	CO Reg 31 Table Value Standards ¹ (hardness: 50 mg/L)		CBSW01 (hardness: 42.3 mg/L)		CO Reg 31 Table Value Standards ¹ (hardness: 75 mg/L)		CBSW02 (hardness: 73.6 mg/L)	
					Imogene Creek upstream				Canyon Creek upstream	
			Acute*	Chronic*	Total	Dissolved	Acute*	Chronic*	Total	Dissolved
Aluminum	7429-90-5	ug/L	1324 (T)	189 (T)	104	64.4	2307 (T)	329 (T)	782	44.4 J
Antimony	7440-36-0	ug/L	NA	NA	2 U	2 U	NA	NA	2 U	1.4 J
Arsenic	7440-38-2	ug/L	340	150	1.5 U	1.5 U	340	150	1.85 J	1.12 J
Barium	7440-39-3	ug/L	NA	NA	24.7	24.2	NA	NA	55.5	39
Beryllium	7440-41-7	ug/L	NA	NA	0.5 U	0.5 U	NA	NA	0.5 U	0.5 U
Cadmium	7440-43-9	ug/L	1.5	0.25	0.714 J	0.678 J	2.1	0.34	0.5 U	0.5 U
Calcium	7440-70-2	ug/L	NA	NA	15300	14900	NA	NA	25800	25500
Chromium	7440-47-3	ug/L	NA	NA	1 U	1 U	NA	NA	1 U	1 U
Cobalt	7440-48-4	ug/L	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U
Copper	7440-50-8	ug/L	7	5	8.55	6.98	10	7	3.89	2.82
Iron	7439-89-6	ug/L	NA	1000 (T)	63.8	31.7	NA	1000 (T)	596	11.6 J
Lead	7439-92-1	ug/L	30	1.2	1.84	0.694 J	47	1.8	35.6	1.72
Magnesium	7439-95-4	ug/L	NA	NA	969 J	949 J	NA	NA	2210	1930
Manganese	7439-96-5	ug/L	2370	1310	6.02	3.84	2713	1499	98	20.8
Mercury	7439-97-6	ug/L	NA	NA	0.16 U	0.16 U	NA	NA	0.16 U	0.16 U
Nickel	7440-02-0	ug/L	260	29	1.5 U	1.5 U	367	41	1.5 U	1.5 U
Potassium	7440-09-7	ug/L	NA	NA	307 J	298 J	NA	NA	737 J	437 J
Selenium	7782-49-2	ug/L	18.4	4.6	1.25 U	1.25 U	18.4	4.6	1.25 MU	1.25 U
Silver	7440-22-4	ug/L	0.62	0.1	0.5 U	0.5 U	1.2	0.2	0.416 J	0.5 U
Sodium	7440-23-5	ug/L	NA	NA	1330 N	1260 N	NA	NA	2120	2090
Thallium	7440-28-0	ug/L	NA	NA	1 U	1 U	NA	NA	1 U	1 U
Vanadium	7440-62-2	ug/L	NA	NA	2.5 U	2.5 U	NA	NA	2.5 U	2.5 U
Zinc	7440-66-6	ug/L	85	65	193 N	186 N	123	93	109	80.3

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--sample run at dilution so hardness value too high to be used for standard

*standards based on estimated hardness via Table IV Regulation 31

NA: no standard available

(T) standard applicable to Total Rec Metals

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Table 3
Surface Water Sampling Results

Analyte	CAS_NO	Result_Units	CO Reg 31 Table Value Standards ¹ (hardness: 150 mg/L)		CBSW03 (hardness: 138 mg/L)		CO Reg 31 Table Value Standards ¹		CBSW04 (hardness: 2450 D mg/L)	
					Canyon Creek downstream				Seep coming off of North pile	
			Acute*	Chronic*	Total	Dissolved	Actue	Chronic	Total	Dissolved
Aluminum	7429-90-5	ug/L	5960 (T)	851 (T)	334	115	--	--	105000 D	233 DJ
Antimony	7440-36-0	ug/L	NA	NA	2 U	2 U	--	--	200 U	10 U
Arsenic	7440-38-2	ug/L	340	150	1 J	0.845 J	340	150	616 D	7.5 U
Barium	7440-39-3	ug/L	NA	NA	38.9	35	--	--	332 DJ	84.4 D
Beryllium	7440-41-7	ug/L	NA	NA	0.5 U	0.5 U	--	--	33.4 DJ	2.5 U
Cadmium	7440-43-9	ug/L	3.9	0.58	1.03 J	0.905 J	--	--	342 D	69.7 D
Calcium	7440-70-2	ug/L	NA	NA	51600	53400	--	--	906000 D	283000 D
Chromium	7440-47-3	ug/L	NA	NA	1 U	1 U	--	--	107 DJ	5 U
Cobalt	7440-48-4	ug/L	NA	NA	2.5 U	2.5 U	--	--	240 DJ	30.2 D
Copper	7440-50-8	ug/L	20	13	12.6	5.51	--	--	13000 D	26.8 D
Iron	7439-89-6	ug/L	NA	1000 (T)	351	50.1	--	1000 (T)	372000 D	75 U
Lead	7439-92-1	ug/L	100	3.9	36.7	2.67	--	--	41500 D	20.4 D
Magnesium	7439-95-4	ug/L	NA	NA	2130	2150	--	--	70100 DJ	16200 D
Manganese	7439-96-5	ug/L	3417	1888	244	159	--	--	218000 D	22100 D
Mercury	7439-97-6	ug/L	NA	NA	0.16 U	0.16 U	--	--	0.129 J	0.16 U
Nickel	7440-02-0	ug/L	660	72	1.5 U	1.5 U	--	--	150 U	12.1 DJ
Potassium	7440-09-7	ug/L	NA	NA	598 J	537 J	--	--	19800 D	4810
Selenium	7782-49-2	ug/L	18.4	4.6	1.25 U	1.25 U	18.4	4.6	125 U	6.25 U
Silver	7440-22-4	ug/L	4.1	0.64	0.5 U	0.5 U	--	--	219 DJ	1.38 DJ
Sodium	7440-23-5	ug/L	NA	NA	3080	3190	--	--	3750 U	257 J
Thallium	7440-28-0	ug/L	NA	NA	1 U	1 U	--	--	100 U	5 U
Vanadium	7440-62-2	ug/L	NA	NA	2.5 U	2.5 U	--	--	148 DJ	12.5 U
Zinc	7440-66-6	ug/L	231	175	382	342	--	--	67800 D	9770 D

D: sample run at dilution

J: estimated value

U: analyte not detected at or above Reporting Limit

M: matrix interference

N: MS/MSD accuracy outside criteria

--sample run at dilution so hardness value too high to be used for standan

*standards based on estimated hardness via Table IV Regulation 31

NA: no standard available

(T) standard applicable to Total Rec Metals

1: Standards are applicable to Dissolved Metals unless otherwise specifie

Table 4
Soil Sampling Results
[mg/kg]

			CBSSNOA-02	CBSSNOA-12	CBSSSOA-02	CBSBSOA-12	CBSSNOB-02
		Sample Date:	5/21/2015	5/21/2015	5/21/2015	5/21/2015	5/21/2015
		Sample Time:	10:34	10:35	11:51	11:51	12:42
Analyte	CAS_NO	Industrial Soil RSL	XRF Metals	XRF Metals	XRF Metals	XRF Metals	XRF Metals
Aluminum	7429-90-5	1100000	NA	NA	NA	NA	NA
Antimony	7440-36-0	470	45.8 U	45.8 U	45.8 U	45.8 U	45.8 U
Arsenic	7440-38-2	3	71*	58*	5*	7*	93*
Barium	7440-39-3	220000	269 U	501 J	269 U	279 J	269 U
Beryllium	7440-41-7	2300	NA	NA	NA	NA	NA
Cadmium	7440-43-9	980	28.9 U	28.9 U	28.9 U	37 J	28.9 U
Calcium	7440-70-2		NA	NA	NA	NA	NA
Chromium	7440-47-3		109 U	109 U	109 U	109 U	109 U
Cobalt	7440-48-4	350	266 J	127 U	181 J	195 J	200 J
Copper	7440-50-8	47000	392	357	479	540	287
Iron	7439-89-6	820000	40693	44806	32163	35736	46603
Lead	7439-92-1	800	1398	1582	1980	2344	1750
Magnesium	7439-95-4		NA	NA	NA	NA	NA
Manganese	7439-96-5	26000	24088	28083	27648	28085	15529
Molybdenum	7439-98-7	5800	23	23	18	22	29
Nickel	7440-02-0	22000	25.7 U	25.7 U	25.7 U	25.7 U	25.7 U
Rubidium	7440-17-7		127	118	103	107	119
Selenium	7782-49-2	5800	4 J	2.45 U	8 J	6 J	4 J
Silver	7440-22-4	5800	15 U	33 J	23 J	38 J	22 J
Strontium	7440-24-6	700000	125	132	139	135	115
Tin	7440-31-5	700000	49.2 U	49.2 U	49.2 U	49.2 U	49.2 U
Titanium	7440-32-6		2481	2275	1997 J	1843 J	2272
Zinc	7440-66-6	350000	1158	1656	4236	4462	856

*: Raw XRF Metals value, due to high arsenic detection limit related to lead spectral interference

U: analyte not detected at or above MDL

J: estimated value

Bold: result exceeds EPA Industrial Soil RSL

Table 4
Soil Sampling Results
[mg/kg]

			CBSBNOB-12		CBSSNOC-02	CBSBNOC-12	CBSSSOB-02
		Sample Date:	5/21/2015		5/21/2015	5/21/2015	5/21/2015
		Sample Time:	12:43		13:33	13:34	14:10
Analyte	CAS_NO	Industrial Soil RSL	XRF Metals	Lab	XRF Metals	XRF Metals	XRF Metals
Aluminum	7429-90-5	1100000	NA	862	NA	NA	NA
Antimony	7440-36-0	470	45.8 U	0.259 U	45.8 U	45.8 U	45.8 U
Arsenic	7440-38-2	3	3.46 U	6.66	21*	41*	29*
Barium	7440-39-3	220000	269 U	19.4	269 U	374 J	322 J
Beryllium	7440-41-7	2300	NA	0.109 J	NA	NA	NA
Cadmium	7440-43-9	980	28.9 U	1.15	28.9 U	28.9 U	28.9 U
Calcium	7440-70-2		NA	9270 D	NA	NA	NA
Chromium	7440-47-3		109 U	0.786	109 U	109 U	109 U
Cobalt	7440-48-4	350	267 J	1.27	286 J	150 J	154 J
Copper	7440-50-8	47000	718	96.3	295	347	393
Iron	7439-89-6	820000	38346	3850	37667	34197	37762
Lead	7439-92-1	800	3430	395	1367	1338	1496
Magnesium	7439-95-4		NA	292	NA	NA	NA
Manganese	7439-96-5	26000	19069	479	27031	26992	38285
Molybdenum	7439-98-7	5800	26	NA	19	21	22
Nickel	7440-02-0	22000	25.7 U	0.282 JB	25.7 U	25.7 U	25.7 U
Rubidium	7440-17-7		134	NA	112	113	116
Selenium	7782-49-2	5800	5 J	0.268 J	5 J	7 J	5 J
Silver	7440-22-4	5800	31 J	2.16	23 J	20 J	16 J
Strontium	7440-24-6	700000	109	NA	135	126	108
Tin	7440-31-5	700000	49.2 U	NA	49.2 U	49.2 U	49.2 U
Titanium	7440-32-6		1554 J	NA	1742 J	1622 J	1692 J
Zinc	7440-66-6	350000	2205	270 B	1728	1642	4280

*: Raw XRF Metals value, due to high arsenic detection limit related to lc

U: analyte not detected at or above MDL

J: estimated value

Bold: result exceeds EPA Industrial Soil RSL

Table 4
Soil Sampling Results
[mg/kg]

			CBSBSOB-12		CBSSSOC-02	CBSBSOC-12
		Sample Date:	5/21/2015		5/21/2015	5/21/2015
		Sample Time:	14:11		15:26	15:27
Analyte	CAS_NO	Industrial Soil RSL	XRF Metals	Lab	XRF Metals	XRF Metals
Aluminum	7429-90-5	1100000	NA	647	NA	NA
Antimony	7440-36-0	470	45.8 U	0.245 U	45.8 U	45.8 U
Arsenic	7440-38-2	3	4*	5.99	3.46 U	3.46 U
Barium	7440-39-3	220000	357 J	6.47	307 J	443 J
Beryllium	7440-41-7	2300	NA	0.0756 J	NA	NA
Cadmium	7440-43-9	980	28.9 U	2.48	28.9 U	28.9 U
Calcium	7440-70-2		NA	4560	NA	NA
Chromium	7440-47-3		109 U	0.387 J	109 U	109 U
Cobalt	7440-48-4	350	127 U	1.59	248 J	191 J
Copper	7440-50-8	47000	305	68	573	445
Iron	7439-89-6	820000	24298	3190	36480	37865
Lead	7439-92-1	800	1195	177	1678	1841
Magnesium	7439-95-4		NA	264	NA	NA
Manganese	7439-96-5	26000	28922	284	28721	26401
Molybdenum	7439-98-7	5800	16	NA	20	18
Nickel	7440-02-0	22000	25.7 U	0.195 JB	25.7 U	25.7 U
Rubidium	7440-17-7		118	NA	101	105
Selenium	7782-49-2	5800	2.45 U	0.21 J	7 J	4 J
Silver	7440-22-4	5800	15 U	1.97	19 J	22 J
Strontium	7440-24-6	700000	131	NA	126	119
Tin	7440-31-5	700000	49.2 U	NA	49.2 U	49.2 U
Titanium	7440-32-6		1736 J	NA	1637 J	1835 J
Zinc	7440-66-6	350000	3347	294 B	3504	3867

*: Raw XRF Metals value, due to high arsenic detection limit related to lc

U: analyte not detected at or above MDL

J: estimated value

Bold: result exceeds EPA Industrial Soil RSL

Table 5
In Situ XRF Results
[mg/kg]

Location	Date/Time	As	Pb	Mn
CBSSNOA-01-02	5/21/2015 09:19:00	99	2327	8391
CBSSNOA-01-12	5/21/2015 09:20:00	36	1531	6722
CBSSNOA-02-02	5/21/2015 09:25:00	12	807	3602
CBSSNOA-02-12	5/21/2015 09:26:00	19	1011	5898
CBSSNOA-03-02	5/21/2015 09:28:00	27	987	5518
CBSSNOA-03-12	5/21/2015 09:29:00	29	1092	6167
CBSSNOA-04-02	5/21/2015 09:32:00	7	923	5421
CBSSNOA-04-12	5/21/2015 09:33:00	10	791	5233
CBSSNOA-05-02	5/21/2015 09:36:00	87	1373	3288
CBSSNOA-05-12	5/21/2015 09:37:00	64	1064	2899
CBSSNOA-06-02	5/21/2015 09:40:00	76	1113	1617
CBSSNOA-06-12	5/21/2015 09:40:00	31	1236	1850
CBSSNOA-07-02	5/21/2015 09:44:00		1751	5326
CBSSNOA-07-12	5/21/2015 09:45:00	8	1435	5825
CBSSNOA-08-02	5/21/2015 09:48:00	10	767	4225
CBSSNOA-08-12	5/21/2015 09:49:00	17	980	4734
CBSSNOA-09-02	5/21/2015 09:53:00		1190	6321
CBSSNOA-09-12	5/21/2015 09:54:00	15	1157	5735
CBSSNOA-10-02	5/21/2015 09:57:00	19	1252	5367
CBSSNOA-10-12	5/21/2015 09:58:00	15	976	4670
CBSSNOA-11-02	5/21/2015 10:00:00		890	5341
CBSSNOA-11-12	5/21/2015 10:01:00	27	707	4775
CBSSNOA-12-02	5/21/2015 10:04:00	18	1022	6717
CBSSNOA-12-12	5/21/2015 10:05:00	13	1226	5540
CBSSNOA-13-02	5/21/2015 10:09:00	16	919	7932
CBSSNOA-13-12	5/21/2015 10:09:00	17	959	5528
CBSSNOA-14-02	5/21/2015 10:12:00	17	733	5235
CBSSNOA-14-12	5/21/2015 10:13:00		521	3689
CBSSNOA-15-02	5/21/2015 10:16:00	18	844	5087
CBSSNOA-15-12	5/21/2015 10:17:00	22	713	4597
CBSSNOA-16-02	5/21/2015 10:20:00	31	784	1918
CBSSNOA-16-12	5/21/2015 10:21:00	29	687	5003
CBSSNOA-17-02	5/21/2015 10:23:00		1078	5563
CBSSNOA-17-12	5/21/2015 10:24:00	12	1600	4928
CBSSNOA-18-02	5/21/2015 10:28:00	17	1910	5823
CBSSNOA-18-12	5/21/2015 10:29:00	78	1568	1004
CBSSNOA-19-02	5/21/2015 10:32:00	25	1405	5064
CBSSNOA-19-12	5/21/2015 10:33:00		2017	3081
CBSSNOA-20-02	5/21/2015 10:36:00	42	1865	2281
CBSSNOA-20-12	5/21/2015 10:37:00	85	1445	1393
CBSSNOB-01-02	5/21/2015 12:03:00		1333	4317
CBSSNOB-01-12	5/21/2015 12:04:00		2857	4350
CBSSNOB-02-02	5/21/2015 12:06:00	75	1478	1784
CBSSNOB-02-12	5/21/2015 12:07:00	38	4006	5642
CBSSNOB-03-02	5/21/2015 12:11:00	64	1524	1877
CBSSNOB-03-12	5/21/2015 12:13:00		5140	5429

Table 5
In Situ XRF Results
[mg/kg]

Location	Date/Time	As	Pb	Mn
CBSSNOB-04-02	5/21/2015 12:17:00	87	1499	1982
CBSSNOB-04-12	5/21/2015 12:18:00		6499	4501
CBSSNOB-05-02	5/21/2015 12:21:00		1391	2115
CBSSNOB-05-12	5/21/2015 12:22:00		4609	9304
CBSSNOB-06-02	5/21/2015 12:26:00	5	2170	3899
CBSSNOB-06-12	5/21/2015 12:27:00		2049	4086
CBSSNOB-07-02	5/21/2015 12:30:00	80	1637	2130
CBSSNOB-07-12	5/21/2015 12:31:00		4993	6277
CBSSNOB-08-02	5/21/2015 12:34:00	3	978	3559
CBSSNOB-08-12	5/21/2015 12:40:00	32	1051	4710
CBSSNOB-09-02	5/21/2015 12:43:00	5	888	3893
CBSSNOB-09-12	5/21/2015 12:44:00	26	1153	1227
CBSSNOB-10-02	5/21/2015 12:46:00	60	1112	1485
CBSSNOB-10-12	5/21/2015 12:47:00	305	13901	39055
CBSSNOC-01-02	5/21/2015 12:54:00		920	4400
CBSSNOC-01-12	5/21/2015 12:55:00	10	1004	4990
CBSSNOC-02-02	5/21/2015 13:01:00		909	5137
CBSSNOC-02-12	5/21/2015 13:02:00		1025	4641
CBSSNOC-03-02	5/21/2015 13:07:00		950	4859
CBSSNOC-03-12	5/21/2015 13:09:00	3	867	4047
CBSSNOC-04-02	5/21/2015 13:13:00	9	688	2481
CBSSNOC-04-12	5/21/2015 13:13:00	42	1146	1715
CBSSNOC-05-02	5/21/2015 13:17:00	42	1319	6142
CBSSNOC-05-12	5/21/2015 13:18:00	24	853	4730
CBSSNOC-06-02	5/21/2015 13:21:00	40	1062	2458
CBSSNOC-06-12	5/21/2015 13:22:00	15	993	3360
CBSSNOC-07-02	5/21/2015 13:25:00		3347	3883
CBSSNOC-07-12	5/21/2015 13:26:00		1108	2753
CBSSNOC-08-02	5/21/2015 13:30:00	19	865	4839
CBSSNOC-08-12	5/21/2015 13:31:00		2871	3765
CBSSNOC-09-02	5/21/2015 13:35:00	26	1374	3568
CBSSNOC-09-12	5/21/2015 13:36:00		6219	3977
CBSSNOC-10-02	5/21/2015 13:39:00	18	997	2527
CBSSNOC-10-12	5/21/2015 13:40:00		2394	3129
CBSSNOC-11-02	5/21/2015 13:45:00		2592	3145
CBSSNOC-11-12	5/21/2015 13:46:00		991	3140
CBSSNOC-12-02	5/21/2015 13:54:00		2227	4797
CBSSNOC-12-12	5/21/2015 13:56:00		3769	3293
CBSSNOC-13-02	5/21/2015 13:59:00	19	1544	3745
CBSSNOC-13-12	5/21/2015 14:00:00	374	8427	13407
CBSSNOC-14-02	5/21/2015 14:02:00	5	918	3362
CBSSNOC-14-12	5/21/2015 14:03:00	306	5638	14814
CBSSNOC-15-02	5/21/2015 14:06:00	61	1013	6110
CBSSNOC-15-12	5/21/2015 14:07:00	2	1152	4083
CBSSNOC-16-02	5/21/2015 14:12:00	71	1305	7276
CBSSNOC-16-12	5/21/2015 14:13:00	44	1133	6192

Table 5
In Situ XRF Results
[mg/kg]

Location	Date/Time	As	Pb	Mn
CBSSNOC-17-02	5/21/2015 14:16:00		993	5816
CBSSNOC-17-12	5/21/2015 14:17:00	5	924	4326
CBSSNOC-18-02	5/21/2015 14:21:00		1594	6336
CBSSNOC-18-12	5/21/2015 14:22:00		945	4250
CBSSNOC-19-02	5/21/2015 14:27:00	81	1243	3508
CBSSNOC-19-12	5/21/2015 14:28:00	66	1868	6247
CBSSNOC-20-02	5/21/2015 14:31:00	42	1352	6636
CBSSNOC-20-12	5/21/2015 14:32:00	21	1161	6430
CBSSSOA-0102	5/21/2015 11:14:00		3645	17417
CBSSSOA-0112	5/21/2015 11:26:00		3295	21356
CBSSSOA-0202	5/21/2015 11:30:00		1763	17255
CBSSSOA-0212	5/21/2015 11:37:00		1045	32101
CBSSSOA-0302	5/21/2015 11:40:00		1179	19898
CBSSSOA-0312	5/21/2015 11:43:00		1999	21767
CBSSSOA-0402	5/21/2015 11:48:00		1028	20355
CBSSSOA-0412	5/21/2015 11:55:00	10	1939	24980
CBSSSOA-0502	5/21/2015 12:00:00	4	1991	13916
CBSSSOA-0512	5/21/2015 12:02:00		1576	12910
CBSSSOA-0602	5/21/2015 12:12:00	76	3828	16913
CBSSSOA-0702	5/21/2015 12:14:00	56	2525	2830
CBSSSOA-0712	5/21/2015 12:18:00	95	4677	5335
CBSSSOA-0802	5/21/2015 12:26:00	21		
CBSSSOA-0802	5/21/2015 12:28:00	71	2240	5474
CBSSSOA-0902	5/21/2015 12:34:00		1467	20970
CBSSSOA-0912	5/21/2015 12:35:00		1741	22679
CBSSSOA-1002	5/21/2015 12:40:00		2621	20910
CBSSSOA-1012	5/21/2015 12:41:00		1568	23623
CBSSSOA-1102	5/21/2015 12:46:00		1266	24075
CBSSSOA-1112	5/21/2015 12:47:00		1349	19314
CBSSSOA-1202	5/21/2015 12:50:00		1457	28034
CBSSSOA-1212	5/21/2015 12:51:00		1770	25235
CBSSSOA-1302	5/21/2015 12:54:00		1702	17838
CBSSSOA-1312	5/21/2015 12:57:00	9	1420	18868
CBSSSOA-1402	5/21/2015 13:01:00	19	1547	32734
CBSSSOA-1412	5/21/2015 13:03:00		1648	24342
CBSSSOA-1502	5/21/2015 13:08:00		1036	23576
CBSSSOA-1512	5/21/2015 13:09:00	11	483	10596
CBSSSOA-1602	5/21/2015 13:16:00	8	1785	19975
CBSSSOA-1612	5/21/2015 13:17:00	33	785	14264
CBSSSOA-1702	5/21/2015 13:28:00	6	2155	18584
CBSSSOA-1712	5/21/2015 13:38:00	34	1941	22606
CBSSSOA-1802	5/21/2015 13:39:00	43	1402	17794
CBSSSOA-1812	5/21/2015 13:40:00	12	2371	19422
CBSSSOA-1902	5/21/2015 13:48:00		2598	18212
CBSSSOA-1912	5/21/2015 13:49:00	78	2972	16133
CBSSSOA-2002	5/21/2015 13:53:00	15	1227	26729

Table 5
In Situ XRF Results
[mg/kg]

Location	Date/Time	As	Pb	Mn
CBSSSOA-2012	5/21/2015 13:54:00	49	794	21570
CBSSSOB-0102	5/21/2015 14:22:00		1305	30280
CBSSSOB-0112	5/21/2015 14:23:00	46	834	20968
CBSSSOB-0202	5/21/2015 14:27:00		1827	15725
CBSSSOB-0212	5/21/2015 14:28:00	34	627	9215
CBSSSOB-0302	5/21/2015 14:51:00	19	693	16958
CBSSSOB-0312	5/21/2015 14:52:00	13	95	7352
CBSSSOB-0402	5/21/2015 14:55:00		1268	43443
CBSSSOB-0412	5/21/2015 14:56:00		1381	44740
CBSSSOB-0502	5/21/2015 14:58:00		1632	30414
CBSSSOB-0512	5/21/2015 14:59:00		1357	34959
CBSSSOB-0602	5/21/2015 15:01:00	14	955	9201
CBSSSOB-0612	5/21/2015 15:02:00	11	931	39320
CBSSSOB-0702	5/21/2015 15:05:00		1340	32503
CBSSSOB-0712	5/21/2015 15:06:00		1228	32423
CBSSSOB-0802	5/21/2015 15:13:00	17	981	37341
CBSSSOB-0902	5/21/2015 15:14:00		2431	7770
CBSSSOB-0912	5/21/2015 15:15:00	44	907	30341
CBSSSOB-1002	5/21/2015 15:19:00		1455	43504
CBSSSOB-1102	5/21/2015 15:21:00	32		42950
CBSSSOB-1102	5/21/2015 15:22:00		1988	
CBSSSOB-1202	5/21/2015 15:25:00		1313	25109
CBSSSOB-1212	5/21/2015 15:26:00		1288	30918
CBSSSOB-1302	5/21/2015 15:31:00	56	2101	13798
CBSSSOB-1312	5/21/2015 15:32:00	57	1944	36356
CBSSSOB-1402	5/21/2015 15:35:00		1713	40546
CBSSSOB-1412	5/21/2015 15:37:00	21	1725	39687
CBSSSOB-1502	5/21/2015 15:40:00	15	1507	33908
CBSSSOB-1512	5/21/2015 15:41:00		1649	31398
CBSSSOB-1602	5/21/2015 15:44:00	40	778	20540
CBSSSOB-1612	5/21/2015 15:45:00	6	869	24828
CBSSSOB-1702	5/21/2015 16:00:00	2	927	22335
CBSSSOB-1712	5/21/2015 16:01:00		852	18833
CBSSSOB-1802	5/21/2015 16:03:00	17	1429	10058
CBSSSOB-1812	5/21/2015 16:05:00	21	1266	23100
CBSSSOB-1902	5/21/2015 16:08:00	121	1659	6032
CBSSSOB-1912	5/21/2015 16:09:00	98	1645	15057
CBSSSOB-2002	5/21/2015 16:14:00	10	875	35925
CBSSSOB-2012	5/21/2015 16:15:00		721	27965
CBSSSOC-0102	5/21/2015 16:35:00		1756	31192
CBSSSOC-0112	5/21/2015 16:36:00		1950	35964
CBSSSOC-0202	5/21/2015 16:37:00		1574	25671
CBSSSOC-0212	5/21/2015 16:38:00	29	1282	25768
CBSSSOC-0302	5/21/2015 16:39:00	18	1302	32004
CBSSSOC-0312	5/21/2015 16:40:00		1358	29936
CBSSSOC-0402	5/21/2015 16:42:00	15	1398	35586

Table 5
In Situ XRF Results
[mg/kg]

Location	Date/Time	As	Pb	Mn
CBSSSOC-0412	5/21/2015 16:42:00		1691	31471
CBSSSOC-0502	5/21/2015 16:44:00		1007	19490
CBSSSOC-0512	5/21/2015 16:45:00		1090	20939
CBSSSOC-0612	5/21/2015 16:57:00	15	1124	12625
CBSSSOC-0702	5/21/2015 17:00:00		1488	25486
CBSSSOC-0712	5/21/2015 17:01:00	59	270	6140
CBSSSOC-0802	5/21/2015 17:03:00		1862	29610
CBSSSOC-0812	5/21/2015 17:04:00		1590	39781
CBSSSOC-0902	5/21/2015 17:05:00		1670	24262
CBSSSOC-0912	5/21/2015 17:13:00		1886	26497
CBSSSOC-1002	5/21/2015 17:14:00	14	482	16117
CBSSSOC-1012	5/21/2015 17:15:00		1031	23280
CBSSSOC-1102	5/21/2015 17:16:00		452	15057
CBSSSOC-1112	5/21/2015 17:17:00		1086	25936
CBSSSOC-1202	5/21/2015 17:18:00		917	6407
CBSSSOC-1212	5/21/2015 17:19:00	42	1068	6213
CBSSSOC-1302	5/21/2015 17:21:00	26	657	21674
CBSSSOC-1312	5/21/2015 17:21:00	12	636	22128
CBSSSOC-1402	5/21/2015 17:23:00	67	1105	18821
CBSSSOC-1412	5/21/2015 17:24:00	64	596	11531
CBSSSOC-1502	5/21/2015 17:27:00	17	1723	28236
CBSSSOC-1512	5/21/2015 17:28:00		1652	24683
CBSSSOC-1602	5/21/2015 17:30:00		1264	29853
CBSSSOC-1612	5/21/2015 17:31:00	26	2481	22100
CBSSSOC-1702	5/21/2015 17:33:00		1848	28051
CBSSSOC-1712	5/21/2015 17:34:00		1944	20319
CBSSSOC-1802	5/21/2015 17:35:00		1162	24335
CBSSSOC-1812	5/21/2015 17:36:00		1041	19824
CBSSSOC-1902	5/21/2015 17:37:00		2110	15475
CBSSSOC-1912	5/21/2015 17:38:00	22	1887	15160
CBSSSOC-2002	5/21/2015 17:39:00	3	1440	16237
CBSSSOC-2012	5/21/2015 17:40:00		1227	15591

CBSSN prefix indicates northpile

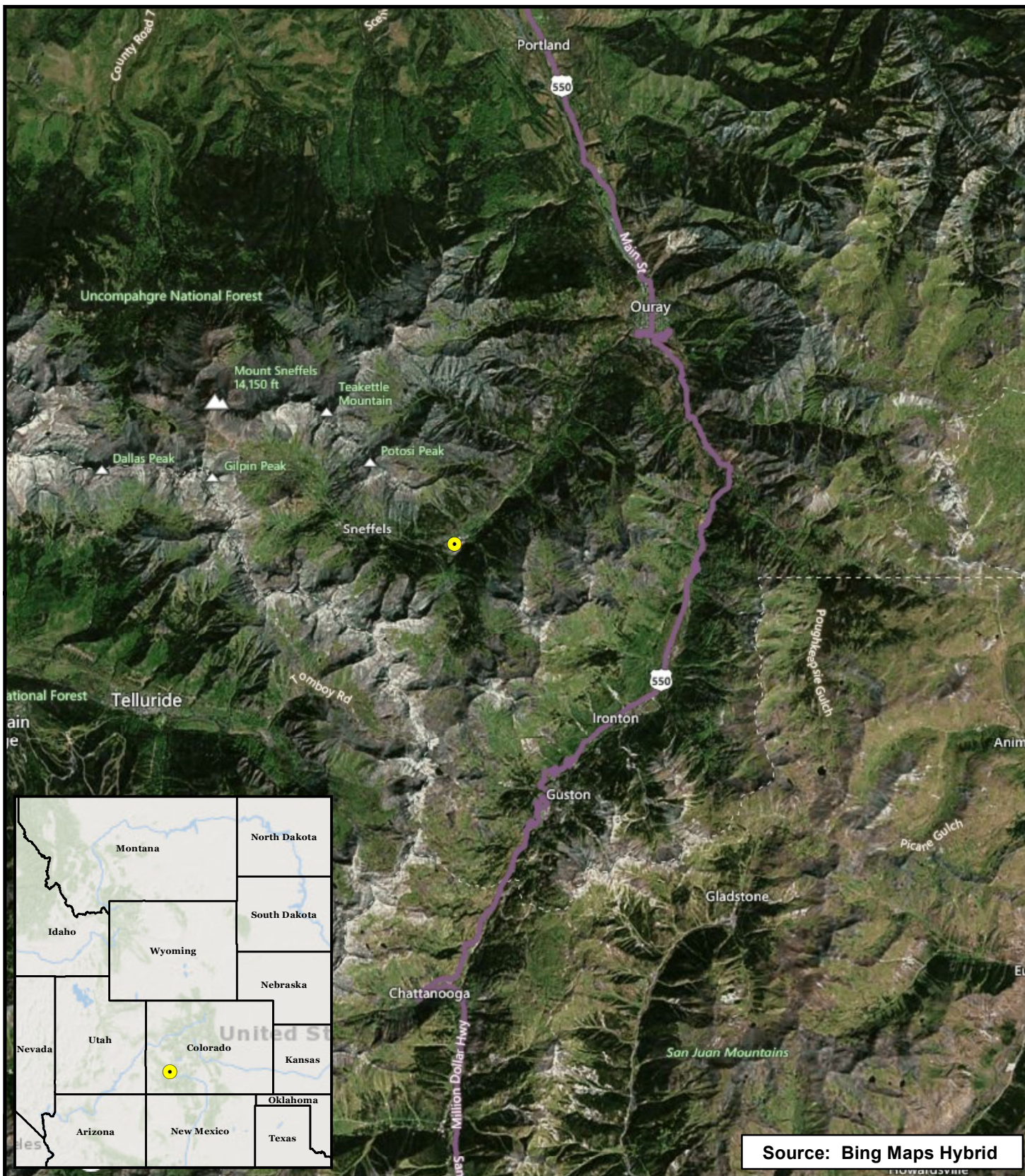
CBSSS prefix indicates south pile



Blank result fields indicate non detect

Last 2 digits indicate monitoring depth (02: 0-2 inches, 12: 2-12 inches)



Attachment B

Figures



<p>Legend</p> <p>● Site Location</p> <p>0 0.75 1.5 3 Miles</p> <p>N</p>	<p>Prepared for: U.S. EPA Region 8</p> <p>Contract No.: EP-S8-13-01</p> <p>TDD: 1503-07</p> <p>TO: 0001</p> 	<p>Prepared By: Weston Solutions, Inc. START IV</p> <p>Suite 100 1435 Garrison Street Lakewood, CO 80215</p> 	<p>FIGURE 1 SITE LOCATION MAP CAMP BIRD OURAY COUNTY, COLORADO</p> <p>Date: 4/21/2015</p>
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<p>Legend</p> <p>● Site Location</p> <p>0 0.05 0.1 0.2 Miles</p> <p>N</p>	<p>Prepared for: U.S. EPA Region 8</p> <p>Contract No.: EP-S8-13-01</p> <p>TDD: 1503-07</p> <p>TO: 0001</p> 	<p>Prepared By: Weston Solutions, Inc. START IV</p> <p>Suite 100 1435 Garrison Street Lakewood, CO 80215</p> 	<p>FIGURE 2 SITE FEATURES MAP CAMP BIRD OURAY COUNTY, COLORADO</p> <p>Date: 4/23/2015</p>
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Attachment C

Photolog

Camp Bird Mine

Photo Log

Description: Top of North pile AOI

Category: Assessment

Latitude: 37.97300833

Date Taken: 5/20/2015

Longitude: -107.7243417

Tags:



Description: North pile AOI overview

Category: Assessment

Latitude: 37.97295278

Date Taken: 5/20/2015

Longitude: -107.7241139

Tags:



Description: Pond and historic building on site

Category: Assessment

Latitude: 37.97179444

Date Taken: 5/20/2015

Longitude: -107.726325

Tags:



Description: START sampling adit

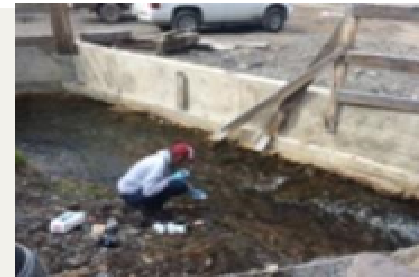
Category: Assessment

Latitude: 37.971375

Date Taken: 5/20/2015

Longitude: -107.7265861

Tags:



Description: Man made pond on site

Category: Assessment

Latitude: 37.97103889

Date Taken: 5/20/2015

Longitude: -107.7267389

Tags:



Description: Site overview

Category: Assessment

Latitude: 37.97276389

Date Taken: 5/20/2015

Longitude: -107.7247556

Tags:



Description: Remediated historic tailings on slope

Category: Assessment

Latitude: 37.97201944

Date Taken: 5/20/2015

Longitude: -107.7252417

Tags:



Description: Site overview

Category: Site Photo

Latitude: 37.97022222

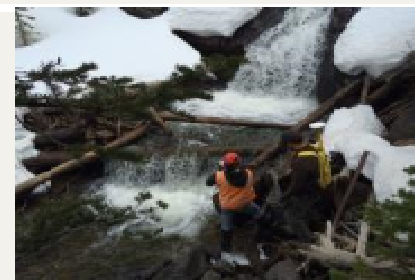
Date Taken: 5/20/2015

Longitude: -107.7263806

Tags:



Description: START performing water sampling on Imogene Creek
Category: Assessment Latitude: 37.97006667
Date Taken: 5/20/2015 Longitude: -107.7265694
Tags:



Description: Creek at bottom of South pile AOI
Category: Assessment Latitude: 37.97006667
Date Taken: 5/21/2015 Longitude: -107.7265694
Tags:



Description: Drainage cutting through North pile AOI
Category: Assessment Latitude:
Date Taken: 5/21/2015 Longitude:
Tags:



Description: START collecting GPS coordinates at North pile AOI
Category: Assessment Latitude: 37.97239167
Date Taken: 5/21/2015 Longitude: -107.7241444
Tags:



Description: cross section of layered tailings

Category: Assessment

Latitude: 37.97270833

Date Taken: 5/21/2015

Longitude: -107.7239694

Tags:



Description: START sampling seep from North pile AOI

Category: Assessment

Latitude: 37.97343333

Date Taken: 5/21/2015

Longitude: -107.7238611

Tags:



Description: START performing sampling on the South pile AOI

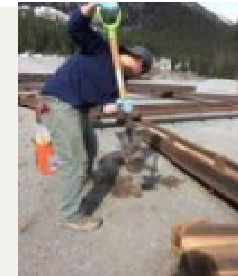
Category: Assessment

Latitude: 37.97126111

Date Taken: 5/21/2015

Longitude: -107.7250222

Tags:



Description: START performing in situ XRF screening on South pile AOI

Category: Assessment

Latitude: 37.97163889

Date Taken: 5/21/2015

Longitude: -107.7254472

Tags:



Description: Site overview

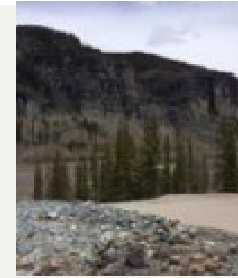
Category: Site Photo

Latitude: 37.97150556

Date Taken: 5/21/2015

Longitude: -107.7247778

Tags:



Description: Site overview

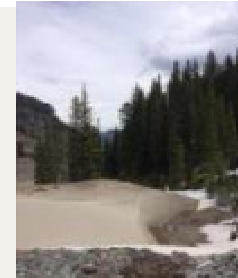
Category: Site Photo

Latitude: 37.97160833

Date Taken: 5/21/2015

Longitude: -107.7246861

Tags:



Description: START performing sampling at North pile AOI

Category: Assessment

Latitude: 37.97328611

Date Taken: 5/21/2015

Longitude: -107.723275

Tags:



Description: Erosion tracks on North pile AOI

Category: Assessment

Latitude: 37.973075

Date Taken: 5/21/2015

Longitude: -107.7235722

Tags:



Description: Close up view of tailings material

Category: Assessment

Latitude: 37.97278889

Date Taken: 5/21/2015

Longitude: -107.7235556

Tags:



Attachment D

Acid Base Accounting Results

July 06, 2015

Report to:

Jamie Miller
Weston Solutions, Inc.
1435 Garrison St
Suite 100
Lakewood, CO 80215

Bill to:

Jamie Miller
Weston Solutions, Inc.
1435 Garrison St
Suite 100
Lakewood, CO 80215

Project ID:

ACZ Project ID: L24913

Jamie Miller:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 16, 2015. This project has been assigned to ACZ's project number, L24913. Please reference this number in all future inquiries.

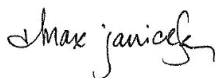
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L24913. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 05, 2015. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Weston Solutions, Inc.

Project ID:

Sample ID: CBSOSOB

ACZ Sample ID: **L24913-01**

Date Sampled: 05/21/15 14:11

Date Received: 06/16/15

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		55.9			t CaCO3/Kt	0.31	3.1	07/06/15 9:22	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		27.0			t CaCO3/Kt	1	5	07/06/15 9:22	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-28.9			t CaCO3/Kt			07/06/15 9:22	calc
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	2.7		*	%	0.1	0.5	07/01/15 12:33	pta
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	250		*	um			06/26/15 0:00	pta
pH		1	7.5		*	units	0.1	0.1	06/26/15 0:00	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	1.53		*	%	0.01	0.1	07/01/15 0:00	cra
Sulfur HNO3 Residue		1	0.04	B	*	%	0.01	0.1	07/01/15 0:00	cra
Sulfur Organic Residual		1	0.04	B	*	%	0.01	0.1	07/01/15 0:00	cra
Sulfur Pyritic Sulfide		1	1.49		*	%	0.01	0.1	07/01/15 0:00	cra
Sulfur Sulfate		1	0.26		*	%	0.01	0.1	07/01/15 0:00	cra
Sulfur Total		1	1.79		*	%	0.01	0.1	07/01/15 0:00	cra
Total Sulfur minus Sulfate		1	1.53		*	%	0.01	0.1	07/01/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/18/15 15:03	mjj
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/22/15 12:30	pta
Saturated Paste Extraction	USDA No. 60 (2)								06/24/15 1:30	pta

Weston Solutions, Inc.

Project ID:

Sample ID: CBSONOB

ACZ Sample ID: **L24913-02**

Date Sampled: 05/21/15 12:42

Date Received: 06/16/15

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		48.1			t CaCO3/Kt	0.31	3.1	07/06/15 9:22	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		27.0			t CaCO3/Kt	1	5	07/06/15 9:22	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-21.1			t CaCO3/Kt			07/06/15 9:22	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	2.7		*	%	0.1	0.5	07/01/15 12:52	pta
Max Particle Size	EPA 600/2-78-054 section 3.2.2	1	250		*	um			06/26/15 0:00	pta
pH		1	7.2		*	units	0.1	0.1	06/26/15 0:00	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	0.99		*	%	0.01	0.1	07/02/15 0:00	cra
Sulfur HNO3 Residue		1	0.01	B	*	%	0.01	0.1	07/02/15 0:00	cra
Sulfur Organic Residual		1	0.01	B	*	%	0.01	0.1	07/02/15 0:00	cra
Sulfur Pyritic Sulfide		1	0.98		*	%	0.01	0.1	07/02/15 0:00	cra
Sulfur Sulfate		1	0.55		*	%	0.01	0.1	07/02/15 0:00	cra
Sulfur Total		1	1.54		*	%	0.01	0.1	07/02/15 0:00	cra
Total Sulfur minus Sulfate		1	0.99		*	%	0.01	0.1	07/02/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/18/15 15:07	mjj
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/22/15 12:55	pta
Saturated Paste Extraction	USDA No. 60 (2)								06/24/15 4:40	pta



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.
(5)	Standard Methods for the Examination of Water and Wastewater.

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5)	If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

Weston Solutions, Inc.

ACZ Project ID: **L24913**

Neutralization Potential as CaCO₃

M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385765													
WG385765PBS	PBS	07/01/15 11:53				U	%		-0.2	0.2			
WG385765LCSS	LCSS	07/01/15 12:13	PCN47543	4.96		5	%	101	80	120			
L24913-02DUP	DUP	07/01/15 13:12			2.7	2.58	%				5	20	
L24915-02MS	MS	07/01/15 14:11	SI141024-1	1	1.4	2.3	%	90	70	130			

pH, Saturated Paste

EPA 600/2-78-054 section 3.2.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385792													
WG385792ICV	ICV	06/26/15 11:36	PCN46630	4		4	units	100	3.9	4.1			
L25001-01DUP	DUP	06/26/15 12:14			6.2	6.2	units				0	20	

Sulfur Organic Residual

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386171													
L24913-01DUP	DUP	07/02/15 2:24			.04	.05	%				22	20	RA

Sulfur Pyritic Sulfide

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386171													
L24913-01DUP	DUP	07/02/15 2:24			1.49	1.46	%				2	20	

Sulfur Sulfate

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386171													
L24913-01DUP	DUP	07/02/15 2:24			.26	.27	%				4	20	

Sulfur Total

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386171													
WG386171PBS	PBS	07/01/15 9:36				U	%		-0.03	0.03			
WG386171LCSS	LCSS	07/01/15 13:48	PCN44492	4.07		4.31	%	106	80	120			
L24913-01MS	MS	07/01/15 22:12	PCN47988	1.1	1.79	2.9	%	101	80	120			
L24913-01DUP	DUP	07/02/15 2:24			1.79	1.78	%				1	20	

Total Sulfur Minus Sulfate

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386171													
L24913-01DUP	DUP	07/02/15 2:24			1.53	1.51	%				1	20	

Weston Solutions, Inc.

ACZ Project ID: **L24913**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24913-01	WG386171	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L24913-02	WG386171	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Weston Solutions, Inc.

ACZ Project ID: **L24913**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

Weston Solutions, Inc.

ACZ Project ID: L24913

Date Received: 06/16/2015 10:45

Received By: ear

Date Printed: 6/16/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A change was made in the sample information and invoice section prior to ACZ custody.			

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits? ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA21974	18.9	15	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Weston Solutions, Inc.

ACZ Project ID: L24913

Date Received: 06/16/2015 10:45

Received By: ear

Date Printed: 6/16/2015

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



September 10, 2015

Report to:

Jamie Miller
Weston Solutions, Inc.
1435 Garrison St
Suite 100
Lakewood, CO 80215

Bill to:

Jamie Miller
Weston Solutions, Inc.
1435 Garrison St
Suite 100
Lakewood, CO 80215

Project ID:

ACZ Project ID: L25882

Jamie Miller:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 06, 2015. This project has been assigned to ACZ's project number, L25882. Please reference this number in all future inquiries.

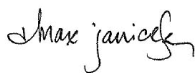
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L25882. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after October 10, 2015. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Weston Solutions, Inc.

Project ID:

Sample ID: CBSOSOB

ACZ Sample ID: **L25882-01**

Date Sampled: 05/21/15 14:11

Date Received: 08/06/15

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
SMP Single Buffer Lime Requirement	ASA No.9, 12-3.4.4 Single Buffer	1	0		*	m ton/ha	2.4	2.4	09/09/15 14:49	cra

Note: This report is for additional analysis of the sample previously reported as ACZ project L24913-01

Weston Solutions, Inc.

Project ID:

Sample ID: CBSONOB

ACZ Sample ID: **L25882-02**

Date Sampled: 05/21/15 12:42

Date Received: 08/06/15

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
SMP Single Buffer Lime Requirement	ASA No.9, 12-3.4.4 Single Buffer	1	0		*	m ton/ha	2.4	2.4	09/09/15 15:12	cra

Note: This report is for additional analysis of the sample previously reported as ACZ project L24913-02



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

Weston Solutions, Inc.

ACZ Project ID: **L25882**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Weston Solutions, Inc.

ACZ Project ID: **L25882**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

SMP Single Buffer Lime Requirement ASA No.9, 12-3.4.4 Single Buffer

Weston Solutions, Inc.

ACZ Project ID: L25882

Date Received: 08/06/2015 16:02

Received By: kmo

Date Printed: 8/7/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits? ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
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UNKNOWN			

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Weston Solutions, Inc.

ACZ Project ID: L25882

Date Received: 08/06/2015 16:02

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¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

WLG 645



25882 Chain of Custody