

REMEDIAL ACTION REPORT

Dow Road Saltcake Cleanup Site
Port of Klickitat
Dallesport Industrial Park

Facility Site ID #8573210
Prepared by the Port of Klickitat
June 30, 2009

1. PURPOSE

The purpose of this Remedial Action Report is to provide adequate information regarding the cleanup actions taken by the Port of Klickitat in regard to its Dow Road Site to the Washington Department of Ecology's Voluntary Cleanup Program (VCP) in support of a "Request for Written Opinion".

2. SUMMARY

The Port of Klickitat contracted with James Dean Construction of Glenwood, Washington (also the contractor for the Washington Department of Ecology's RAMCO Aluminum Waste Disposal Site), to remove the material found at the Dow Road Saltcake Site in accordance with the requirements for the removal of similar material at the RAMCO Site and following all applicable procedures and protocols as stipulated by the Washington Department of Ecology (DOE). This material was removed utilizing a front-end loader and trackhoe, was crushed as required, and transported to the Wasco County (Oregon) Landfill for permanent disposal. A total of 1,262.53 tons of saltcake material were removed. Test pits were left open in accordance with direction from DOE and PBS Engineering & Environmental of Vancouver, Washington, took soil samples from these pits for laboratory analysis (the results of that analysis are included in this VCP packet).

3. BACKGROUND

The Recycled Aluminum Metals Company (RAMCO) occupied a building located at 102 Kreps Drive in the Port's Dallesport Industrial Park where it extracted aluminum from dross it received from primary aluminum smelters in the Northwest. Dross is a by-product from the primary smelting process that contains aluminum in recoverable amounts. RAMCO ceased operations in the Dallesport Industrial Park around 1993, leaving the larger RAMCO Site and, most likely, the Dow Road Site.

Possible contamination at what is now known as the Dow Road Saltcake Site was discovered by Jim Riley and reported to the Washington Department of Ecology (DOE) on December 27, 2006. Bob Swackhamer, of the DOE, notified the Port of Klickitat in a memo dated January 5, 2007 and later examined the site which included taking samples of the material found for laboratory analysis.

It is believed that the material found at the Dow Road Site is the same material as that found at the larger RAMCO Aluminum Waste Disposal Site and that it was placed in the early 1980s prior to the establishment of the RAMCO site.

4. SITE INVESTIGATION

A site investigation was conducted by Bob Swackhamer of the Washington Department of Ecology and documented in a letter to the Port dated June 11, 2007.

5. SITE LOCATION

The area in which the material was found and from which it was removed is located in south-central Washington State in Klickitat County. It is just east of US Hwy 197 and just south of Dow Road in the Port of Klickitat Dallesport Industrial Park on the Dallesport, Washington, peninsula. The satellite images below (supplied by Google Maps) show the site location with and without highlight. A binding site plan covering a portion of the Dallesport Industrial Park is included with this VCP packet and shows this same area (approximately). A portion of the area is in Parcel #32 and the remainder is in the Bonneville Power Administration (BPA) right-of-way between transmission line structures "SER AMA 15 BE CH1" and "SER AMB 15 BE C2".



Saltcake Contaminated Area (highlighted in red)



Saltcake Contaminated Area (in center of image)

The area was described by Bob Swackhamer (DOE) in 2007 as a “roughly circular flat area surrounded by more uneven terrain and currently covered with dry cheat grass.”

6. CONTAMINANTS

The waste contained at this site is believed to be relatively consistent with and similar to the waste placed at the larger RAMCO Aluminum Waste Disposal Site to the east. Material at that larger site contains up to 28 percent aluminum, up to 8 percent sodium, up to 2.8 percent magnesium, up to 2.1 percent calcium, up to 1.5 percent potassium, and lesser amounts of chromium, manganese, iron, copper, nickel, and zinc. A laboratory analysis of the material at the Dow Road Site was conducted by the Manchester Environmental Laboratory and the results reported to the Department of Ecology in a report from that laboratory dated September 18, 2007.

7. WASTE TYPE

The waste contained at this site is considered non-hazardous and non-dangerous as described by Brian Dick (DOE) in a letter dated February 24, 2009. This is based on the consistency and similarity of the Dow Road material to that of the RAMCO material and the analysis of the RAMCO material completed in 2006. That analysis showed that the aluminum waste in the RAMCO Disposal Site did not fail the Acute Fish Toxicity Test or the Toxicity Characteristic Leaching Procedure. While, in general, the RAMCO material was not considered reactive, some tests provided evidence of reactivity for at least small portions of the material.

8. REMOVAL

On March 9, 2009, the Port of Klickitat contracted with James Dean Construction of Glenwood, Washington (also the contractor for the Washington Department of Ecology's RAMCO Aluminum Waste Disposal Site), to remove the material found at the Dow Road Saltcake Site in accordance with the requirements for the removal of similar material at the RAMCO Site and following all applicable procedures and protocols as stipulated by the Washington Department of Ecology (DOE).

The saltcake material is light gray to white in color and distinctive from the surrounding basalt and soil, both of which are light brown to brown in color. All light gray to white material was removed including loose soil significantly commingled with saltcake material utilizing a front-end loader and trackhoe. A total of 1,262.53 tons of saltcake material were removed and the property restored to its approximate, and generally level, condition prior to excavation. See Image #1 through Image #3.

9. DISPOSAL

The saltcake material removed was crushed when necessary for disposal (as required) and transported via truck to the Wasco County (Oregon) Landfill for permanent disposal. All saltcake material was transported and no significant quantity of this material was left at the site. Test pits were left open in accordance with direction from Mark Dunbar (DOE). See Image #4 through Image #7.

10. TESTING

On May 20, 2009, the Port contracted with PBS Engineering & Environmental of Vancouver, Washington, to test the soil below the area excavated. On June 3, 2009, PBS took soil samples from the test pits left open and sent them to TestAmerica, a Washington accredited laboratory, for analysis (the results of that analysis are included in this VCP packet). See Image #8 through Image #12. The samples were logged on a chain-of-custody document, sealed, and delivered to the laboratory in an ice chest cooled to 4 degrees Fahrenheit. General laboratory quality control measures were performed, but no specific quality control measures were requested. Additional photographs, field notebook, and chain-of-custody documents will be provided upon request.

Dirt Cap Over Saltcake Material Removed
Image #1 (← top of picture)

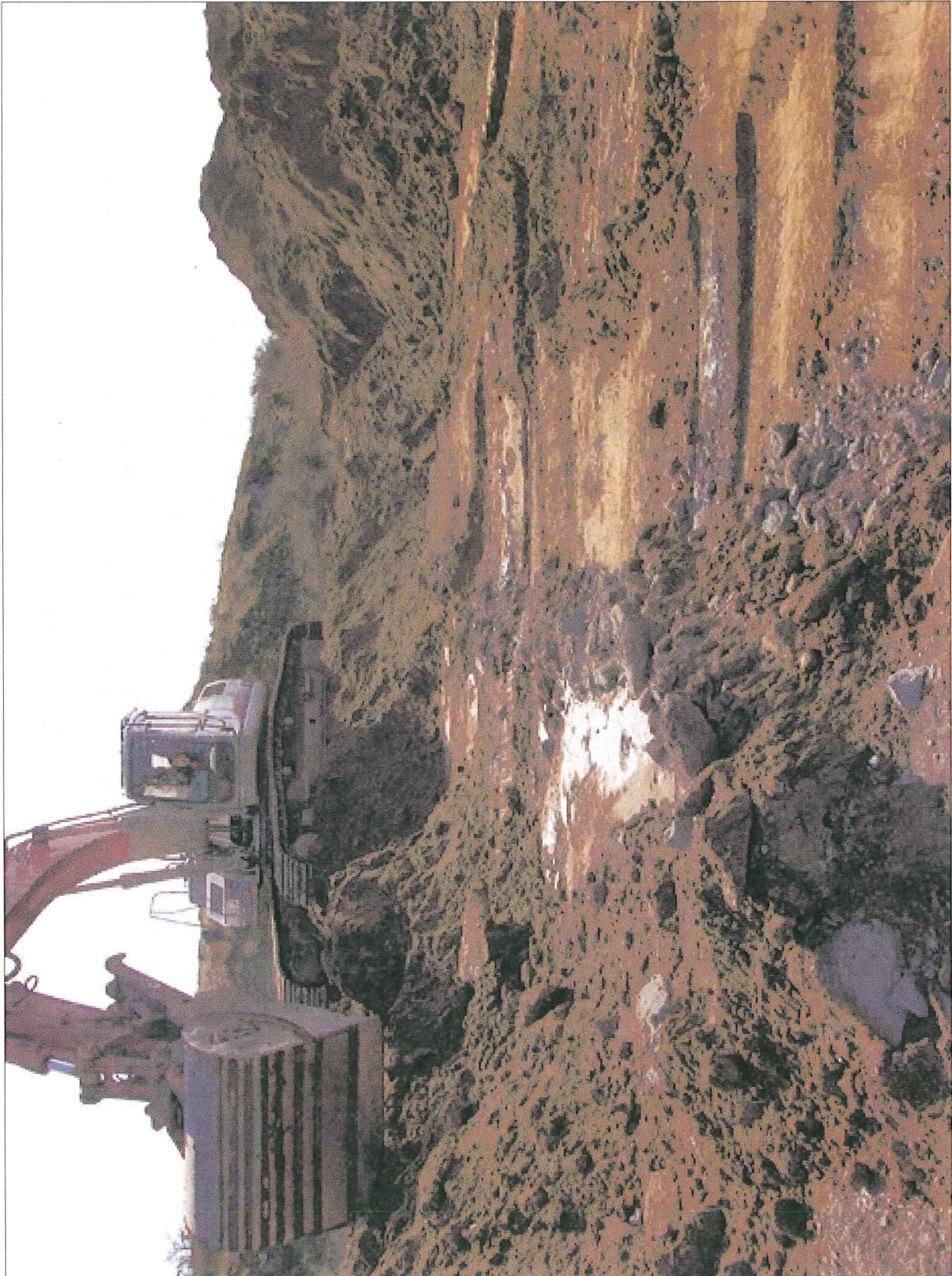


Saltcake Material Exposed

Image #2 (← top of picture)



Removal of Saltcake Material
Image #3 (← top of picture)



Crushing Saltcake Material
Image #4 (← top of picture)



Completed Removal – At Ground Level

Image #5 (← top of picture)



Completed Removal – From Above
Image #6 (← top of picture)



Site Leveled With Open Test Pits – Before Sampling
Image #7 (← top of picture – north is toward left side of image)



Example Test Pit Before Sampling

Image #8 (← top of picture)



Background Sample Site
Image #9 (← top of picture)



Sample Taken – Test Pit #1
Image #10 (← top of picture)



Sample Taken – Test Pit #3
Image #11 (← top of picture)



Sample Taken – Test Pit #5
Image #12 (← top of picture)



Sample	Sample Name	Specific Method	Analyte	Result	Background	MTC/Units	Qualifier	Limit	Prepared	Analyzed	Analysis	Sort Order	Lab
07	BG-1	NCA SOP	% Solids	93.7		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000007-0001	Test/America Portland
01	TP-1	NCA SOP	% Solids	85.6		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000001-0001	Test/America Portland
02	TP-2	NCA SOP	% Solids	79		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000002-0001	Test/America Portland
03	TP-3	NCA SOP	% Solids	87		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000003-0001	Test/America Portland
04	TP-4	NCA SOP	% Solids	90.4		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000004-0001	Test/America Portland
05	TP-5	NCA SOP	% Solids	88.5		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000005-0001	Test/America Portland
06	TP-6	NCA SOP	% Solids	84.9		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000006-0001	Test/America Portland
08	TP-7	NCA SOP	% Solids	79.3		% by Weight		0.0100	6/5/2009 11:54 AM	6/5/2009 11:54 AM	Solids, Dry Weight	000008-0001	Test/America Portland
07	BG-1	EPA 6010B	Aluminum	10800	37200	mg/kg dry		26.4	6/8/2009 9:33 AM	6/9/2009 2:45 PM	Total ICP 6010B	000007-0010	Test/America Portland
01	TP-1	EPA 6010B	Aluminum	8020	37200	mg/kg dry		28.1	6/8/2009 9:33 AM	6/9/2009 2:07 PM	Total ICP 6010B	000001-0010	Test/America Portland
02	TP-2	EPA 6010B	Aluminum	8230	37200	mg/kg dry		31.3	6/8/2009 9:33 AM	6/9/2009 2:14 PM	Total ICP 6010B	000002-0010	Test/America Portland
03	TP-3	EPA 6010B	Aluminum	10400	37200	mg/kg dry		28.7	6/8/2009 9:33 AM	6/9/2009 2:20 PM	Total ICP 6010B	000003-0010	Test/America Portland
04	TP-4	EPA 6010B	Aluminum	11900	37200	mg/kg dry		26.8	6/8/2009 9:33 AM	6/9/2009 2:26 PM	Total ICP 6010B	000004-0010	Test/America Portland
05	TP-5	EPA 6010B	Aluminum	8020	37200	mg/kg dry		28.0	6/8/2009 9:33 AM	6/9/2009 2:32 PM	Total ICP 6010B	000005-0010	Test/America Portland
06	TP-6	EPA 6010B	Aluminum	8270	37200	mg/kg dry		28.9	6/8/2009 9:33 AM	6/9/2009 2:39 PM	Total ICP 6010B	000006-0010	Test/America Portland
08	TP-7	EPA 6010B	Aluminum	8790	37200	mg/kg dry		30.9	6/8/2009 9:33 AM	6/9/2009 2:51 PM	Total ICP 6010B	000008-0010	Test/America Portland
07	BG-1	EPA 6010B	Antimony	ND		mg/kg dry		2.11	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Total ICP 6010B	000007-0030	Test/America Portland
01	TP-1	EPA 6010B	Antimony	ND		mg/kg dry		2.25	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Total ICP 6010B	000001-0020	Test/America Portland
02	TP-2	EPA 6010B	Antimony	ND		mg/kg dry		2.51	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Total ICP 6010B	000002-0020	Test/America Portland
03	TP-3	EPA 6010B	Antimony	ND		mg/kg dry		2.30	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Total ICP 6010B	000003-0020	Test/America Portland
04	TP-4	EPA 6010B	Antimony	ND		mg/kg dry		2.15	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Total ICP 6010B	000004-0020	Test/America Portland
05	TP-5	EPA 6010B	Antimony	ND		mg/kg dry		2.24	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Total ICP 6010B	000005-0020	Test/America Portland
06	TP-6	EPA 6010B	Antimony	ND		mg/kg dry		2.31	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Total ICP 6010B	000006-0020	Test/America Portland
08	TP-7	EPA 6010B	Antimony	ND		mg/kg dry		2.47	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Total ICP 6010B	000008-0020	Test/America Portland
07	BG-1	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		26.4	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Total ICP 6010B	000007-0030	Test/America Portland
01	TP-1	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		28.1	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Total ICP 6010B	000001-0030	Test/America Portland
02	TP-2	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		31.3	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Total ICP 6010B	000002-0030	Test/America Portland
03	TP-3	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		28.7	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Total ICP 6010B	000003-0030	Test/America Portland
04	TP-4	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		26.8	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Total ICP 6010B	000004-0030	Test/America Portland
05	TP-5	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		28.0	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Total ICP 6010B	000005-0030	Test/America Portland
06	TP-6	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		28.9	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Total ICP 6010B	000006-0030	Test/America Portland
08	TP-7	EPA 6010B	Arsenic	ND	7	20 A mg/kg dry		30.9	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Total ICP 6010B	000008-0030	Test/America Portland
07	BG-1	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.64	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Total ICP 6010B	000007-0050	Test/America Portland
01	TP-1	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.81	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Total ICP 6010B	000001-0050	Test/America Portland
02	TP-2	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		3.13	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Total ICP 6010B	000002-0050	Test/America Portland
03	TP-3	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.87	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Total ICP 6010B	000003-0050	Test/America Portland
04	TP-4	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.68	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Total ICP 6010B	000004-0050	Test/America Portland
05	TP-5	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.80	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Total ICP 6010B	000005-0050	Test/America Portland
06	TP-6	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		2.89	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Total ICP 6010B	000006-0050	Test/America Portland
08	TP-7	EPA 6010B	Beryllium	ND	2	160 B mg/kg dry		3.09	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Total ICP 6010B	000008-0050	Test/America Portland
07	BG-1	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.17	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Total ICP 6010B	000007-0080	Test/America Portland
01	TP-1	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.37	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Total ICP 6010B	000001-0080	Test/America Portland
02	TP-2	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.76	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Total ICP 6010B	000002-0080	Test/America Portland
03	TP-3	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.45	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Total ICP 6010B	000003-0080	Test/America Portland
04	TP-4	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.22	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Total ICP 6010B	000004-0080	Test/America Portland
05	TP-5	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.36	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Total ICP 6010B	000005-0080	Test/America Portland
06	TP-6	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.46	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Total ICP 6010B	000006-0080	Test/America Portland
08	TP-7	EPA 6010B	Cadmium	ND	2	2 B mg/kg dry		3.71	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Total ICP 6010B	000008-0080	Test/America Portland
07	BG-1	EPA 6010B	Calcium	3130		mg/kg dry		10.6	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Total ICP 6010B	000007-0090	Test/America Portland
01	TP-1	EPA 6010B	Calcium	2100		mg/kg dry		11.2	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Total ICP 6010B	000001-0090	Test/America Portland
02	TP-2	EPA 6010B	Calcium	2720		mg/kg dry		12.5	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Total ICP 6010B	000002-0090	Test/America Portland
03	TP-3	EPA 6010B	Calcium	2900		mg/kg dry		11.5	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Total ICP 6010B	000003-0090	Test/America Portland
04	TP-4	EPA 6010B	Calcium	2850		mg/kg dry		10.7	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Total ICP 6010B	000004-0090	Test/America Portland
05	TP-5	EPA 6010B	Calcium	2680		mg/kg dry		11.2	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Total ICP 6010B	000005-0090	Test/America Portland

06	TP-6	EPA 6010B	Calcium	2420		mg/kg dry	11.5	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Ca	Total	ICP 6010B	000006-0090	Test/America	Portland
07	TP-7	EPA 6010B	Calcium	3030		mg/kg dry	12.4	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Ca	Total	ICP 6010B	000008-0090	Test/America	Portland
08	BG-1	EPA 6010B	Chromium	16.3		mg/kg dry	1.59	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Cr	Total	ICP 6010B	000007-0120	Test/America	Portland
01	TP-1	EPA 6010B	Chromium	10.7		mg/kg dry	1.68	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Cr	Total	ICP 6010B	000001-0120	Test/America	Portland
02	TP-2	EPA 6010B	Chromium	11		mg/kg dry	1.88	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Cr	Total	ICP 6010B	000002-0120	Test/America	Portland
03	TP-3	EPA 6010B	Chromium	12.7		mg/kg dry	1.72	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Cr	Total	ICP 6010B	000003-0120	Test/America	Portland
04	TP-4	EPA 6010B	Chromium	12.7		mg/kg dry	1.61	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Cr	Total	ICP 6010B	000004-0120	Test/America	Portland
05	TP-5	EPA 6010B	Chromium	12.6		mg/kg dry	1.68	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Cr	Total	ICP 6010B	000005-0120	Test/America	Portland
06	TP-6	EPA 6010B	Chromium	10.9		mg/kg dry	1.73	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Cr	Total	ICP 6010B	000006-0120	Test/America	Portland
08	TP-7	EPA 6010B	Chromium	11.9		mg/kg dry	1.85	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Cr	Total	ICP 6010B	000008-0120	Test/America	Portland
07	BG-1	EPA 6010B	Copper	11.2		3000 B mg/kg dry	1.59	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Cu	Total	ICP 6010B	000007-0140	Test/America	Portland
01	TP-1	EPA 6010B	Copper	8.57		3000 B mg/kg dry	1.68	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Cu	Total	ICP 6010B	000001-0140	Test/America	Portland
02	TP-2	EPA 6010B	Copper	8.73		3000 B mg/kg dry	1.88	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Cu	Total	ICP 6010B	000002-0140	Test/America	Portland
03	TP-3	EPA 6010B	Copper	8.88		3000 B mg/kg dry	1.72	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Cu	Total	ICP 6010B	000003-0140	Test/America	Portland
04	TP-4	EPA 6010B	Copper	16.5		3000 B mg/kg dry	1.61	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Cu	Total	ICP 6010B	000004-0140	Test/America	Portland
05	TP-5	EPA 6010B	Copper	8.73		3000 B mg/kg dry	1.68	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Cu	Total	ICP 6010B	000005-0140	Test/America	Portland
06	TP-6	EPA 6010B	Copper	7.58		3000 B mg/kg dry	1.73	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Cu	Total	ICP 6010B	000006-0140	Test/America	Portland
08	TP-7	EPA 6010B	Copper	9.48		3000 B mg/kg dry	1.85	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Cu	Total	ICP 6010B	000008-0140	Test/America	Portland
07	BG-1	EPA 6010B	Lead	ND		250 mg/kg dry	10.6	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Pb	Total	ICP 6010B	000007-0190	Test/America	Portland
01	TP-1	EPA 6010B	Lead	ND		250 mg/kg dry	11.2	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Pb	Total	ICP 6010B	000001-0190	Test/America	Portland
02	TP-2	EPA 6010B	Lead	ND		250 mg/kg dry	12.5	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Pb	Total	ICP 6010B	000002-0190	Test/America	Portland
03	TP-3	EPA 6010B	Lead	ND		250 mg/kg dry	11.5	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Pb	Total	ICP 6010B	000003-0190	Test/America	Portland
04	TP-4	EPA 6010B	Lead	ND		250 mg/kg dry	10.7	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Pb	Total	ICP 6010B	000004-0190	Test/America	Portland
05	TP-5	EPA 6010B	Lead	ND		250 mg/kg dry	11.2	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Pb	Total	ICP 6010B	000005-0190	Test/America	Portland
06	TP-6	EPA 6010B	Lead	ND		250 mg/kg dry	11.5	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Pb	Total	ICP 6010B	000006-0190	Test/America	Portland
08	TP-7	EPA 6010B	Lead	ND		250 mg/kg dry	12.4	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Pb	Total	ICP 6010B	000008-0190	Test/America	Portland
07	BG-1	EPA 6010B	Magnesium	4170		mg/kg dry	10.6	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Mg	Total	ICP 6010B	000007-0210	Test/America	Portland
01	TP-1	EPA 6010B	Magnesium	3560		mg/kg dry	11.2	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Mg	Total	ICP 6010B	000001-0210	Test/America	Portland
02	TP-2	EPA 6010B	Magnesium	4480		mg/kg dry	12.5	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Mg	Total	ICP 6010B	000002-0210	Test/America	Portland
03	TP-3	EPA 6010B	Magnesium	3330		mg/kg dry	11.5	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Mg	Total	ICP 6010B	000003-0210	Test/America	Portland
04	TP-4	EPA 6010B	Magnesium	3280		mg/kg dry	10.7	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Mg	Total	ICP 6010B	000004-0210	Test/America	Portland
05	TP-5	EPA 6010B	Magnesium	3520		mg/kg dry	11.2	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Mg	Total	ICP 6010B	000005-0210	Test/America	Portland
06	TP-6	EPA 6010B	Magnesium	3520		mg/kg dry	11.5	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Mg	Total	ICP 6010B	000006-0210	Test/America	Portland
08	TP-7	EPA 6010B	Magnesium	4910		mg/kg dry	12.4	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Mg	Total	ICP 6010B	000008-0210	Test/America	Portland
07	BG-1	EPA 7471A	Mercury	ND		mg/kg dry	9.84E-05	6/12/2009 11:02 AM	6/12/2009 2:22 PM	Hg	Total	7471A	000007-0230	Test/America	Portland
01	TP-1	EPA 7471A	Mercury	ND		mg/kg dry	0.000113	6/12/2009 11:02 AM	6/12/2009 2:01 PM	Hg	Total	7471A	000001-0230	Test/America	Portland
02	TP-2	EPA 7471A	Mercury	ND		mg/kg dry	0.000106	6/12/2009 11:02 AM	6/12/2009 2:03 PM	Hg	Total	7471A	000002-0230	Test/America	Portland
03	TP-3	EPA 7471A	Mercury	ND		mg/kg dry	0.000109	6/12/2009 11:02 AM	6/12/2009 2:13 PM	Hg	Total	7471A	000003-0230	Test/America	Portland
04	TP-4	EPA 7471A	Mercury	ND		mg/kg dry	0.000106	6/12/2009 11:02 AM	6/12/2009 2:15 PM	Hg	Total	7471A	000004-0230	Test/America	Portland
05	TP-5	EPA 7471A	Mercury	ND		mg/kg dry	0.000109	6/12/2009 11:02 AM	6/12/2009 2:17 PM	Hg	Total	7471A	000005-0230	Test/America	Portland
06	TP-6	EPA 7471A	Mercury	ND		mg/kg dry	0.000105	6/12/2009 11:02 AM	6/12/2009 2:19 PM	Hg	Total	7471A	000006-0230	Test/America	Portland
08	TP-7	EPA 7471A	Mercury	ND		mg/kg dry	0.000119	6/12/2009 11:02 AM	6/12/2009 2:24 PM	Hg	Total	7471A	000008-0230	Test/America	Portland
07	BG-1	EPA 6010B	Nickel	12.6		mg/kg dry	1.32	6/8/2009 9:33 AM	6/8/2009 5:26 PM	Ni	Total	ICP 6010B	000007-0250	Test/America	Portland
01	TP-1	EPA 6010B	Nickel	9.19		mg/kg dry	1.40	6/8/2009 9:33 AM	6/8/2009 4:05 PM	Ni	Total	ICP 6010B	000001-0250	Test/America	Portland
02	TP-2	EPA 6010B	Nickel	9.66		mg/kg dry	1.57	6/8/2009 9:33 AM	6/8/2009 4:55 PM	Ni	Total	ICP 6010B	000002-0250	Test/America	Portland
03	TP-3	EPA 6010B	Nickel	10.1		mg/kg dry	1.44	6/8/2009 9:33 AM	6/8/2009 5:01 PM	Ni	Total	ICP 6010B	000003-0250	Test/America	Portland
04	TP-4	EPA 6010B	Nickel	9.43		mg/kg dry	1.34	6/8/2009 9:33 AM	6/8/2009 5:07 PM	Ni	Total	ICP 6010B	000004-0250	Test/America	Portland
05	TP-5	EPA 6010B	Nickel	10.2		mg/kg dry	1.40	6/8/2009 9:33 AM	6/8/2009 5:14 PM	Ni	Total	ICP 6010B	000005-0250	Test/America	Portland
06	TP-6	EPA 6010B	Nickel	9.73		mg/kg dry	1.44	6/8/2009 9:33 AM	6/8/2009 5:20 PM	Ni	Total	ICP 6010B	000006-0250	Test/America	Portland
08	TP-7	EPA 6010B	Nickel	10.6		mg/kg dry	1.55	6/8/2009 9:33 AM	6/8/2009 5:45 PM	Ni	Total	ICP 6010B	000008-0250	Test/America	Portland
07	BG-1	EPA 6010B	Potassium	1410		mg/kg dry	52.8	6/8/2009 9:33 AM	6/8/2009 5:26 PM	K	Total	ICP 6010B	000007-0300	Test/America	Portland
01	TP-1	EPA 6010B	Potassium	2470		mg/kg dry	56.2	6/8/2009 9:33 AM	6/8/2009 4:05 PM	K	Total	ICP 6010B	000001-0300	Test/America	Portland
02	TP-2	EPA 6010B	Potassium	2940		mg/kg dry	62.7	6/8/2009 9:33 AM	6/8/2009 4:55 PM	K	Total	ICP 6010B	000002-0300	Test/America	Portland
03	TP-3	EPA 6010B	Potassium	1680		mg/kg dry	57.5	6/8/2009 9:33 AM	6/8/2009 5:01 PM	K	Total	ICP 6010B	000003-0300	Test/America	Portland
04	TP-4	EPA 6010B	Potassium	3000		mg/kg dry	53.7	6/8/2009 9:33 AM	6/8/2009 5:07 PM	K	Total	ICP 6010B	000004-0300	Test/America	Portland
05	TP-5	EPA 6010B	Potassium	1010		mg/kg dry	55.9	6/8/2009 9:33 AM	6/8/2009 5:14 PM	K	Total	ICP 6010B	000005-0300	Test/America	Portland

04	TP-4	EPA 6010B	Potassium	3000					6/8/2009 9:33 AM	6/8/2009 5:07 PM	K	Total	ICP	6010B	000004-0300	Test/America Portland
05	TP-5	EPA 6010B	Potassium	1010					6/8/2009 9:33 AM	6/8/2009 5:14 PM	K	Total	ICP	6010B	000005-0300	Test/America Portland
06	TP-6	EPA 6010B	Potassium	3180					6/8/2009 9:33 AM	6/8/2009 5:20 PM	K	Total	ICP	6010B	000006-0300	Test/America Portland
08	TP-7	EPA 6010B	Potassium	3270					6/8/2009 9:33 AM	6/8/2009 5:45 PM	K	Total	ICP	6010B	000008-0300	Test/America Portland
07	BG-1	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:26 PM	Se	Total	ICP	6010B	000007-0310	Test/America Portland
01	TP-1	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 4:05 PM	Se	Total	ICP	6010B	000001-0310	Test/America Portland
02	TP-2	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 4:55 PM	Se	Total	ICP	6010B	000002-0310	Test/America Portland
03	TP-3	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:01 PM	Se	Total	ICP	6010B	000003-0310	Test/America Portland
04	TP-4	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:07 PM	Se	Total	ICP	6010B	000004-0310	Test/America Portland
05	TP-5	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:14 PM	Se	Total	ICP	6010B	000005-0310	Test/America Portland
06	TP-6	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:20 PM	Se	Total	ICP	6010B	000006-0310	Test/America Portland
08	TP-7	EPA 6010B	Selenium	ND					6/8/2009 9:33 AM	6/8/2009 5:45 PM	Se	Total	ICP	6010B	000008-0310	Test/America Portland
07	BG-1	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:26 PM	Ag	Total	ICP	6010B	000007-0330	Test/America Portland
01	TP-1	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 4:05 PM	Ag	Total	ICP	6010B	000001-0330	Test/America Portland
02	TP-2	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 4:55 PM	Ag	Total	ICP	6010B	000002-0330	Test/America Portland
03	TP-3	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:01 PM	Ag	Total	ICP	6010B	000003-0330	Test/America Portland
04	TP-4	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:07 PM	Ag	Total	ICP	6010B	000004-0330	Test/America Portland
05	TP-5	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:14 PM	Ag	Total	ICP	6010B	000005-0330	Test/America Portland
06	TP-6	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:20 PM	Ag	Total	ICP	6010B	000006-0330	Test/America Portland
08	TP-7	EPA 6010B	Silver	ND					6/8/2009 9:33 AM	6/8/2009 5:45 PM	Ag	Total	ICP	6010B	000008-0330	Test/America Portland
07	BG-1	EPA 6010B	Sodium	131					6/8/2009 9:33 AM	6/8/2009 5:26 PM	Na	Total	ICP	6010B	000007-0340	Test/America Portland
01	TP-1	EPA 6010B	Sodium	434					6/8/2009 9:33 AM	6/8/2009 4:05 PM	Na	Total	ICP	6010B	000001-0340	Test/America Portland
02	TP-2	EPA 6010B	Sodium	820					6/8/2009 9:33 AM	6/8/2009 4:55 PM	Na	Total	ICP	6010B	000002-0340	Test/America Portland
03	TP-3	EPA 6010B	Sodium	258					6/8/2009 9:33 AM	6/8/2009 5:01 PM	Na	Total	ICP	6010B	000003-0340	Test/America Portland
04	TP-4	EPA 6010B	Sodium	481					6/8/2009 9:33 AM	6/8/2009 5:07 PM	Na	Total	ICP	6010B	000004-0340	Test/America Portland
05	TP-5	EPA 6010B	Sodium	97.1					6/8/2009 9:33 AM	6/8/2009 5:14 PM	Na	Total	ICP	6010B	000005-0340	Test/America Portland
06	TP-6	EPA 6010B	Sodium	524					6/8/2009 9:33 AM	6/8/2009 5:20 PM	Na	Total	ICP	6010B	000006-0340	Test/America Portland
08	TP-7	EPA 6010B	Sodium	907					6/8/2009 9:33 AM	6/8/2009 5:45 PM	Na	Total	ICP	6010B	000008-0340	Test/America Portland
07	BG-1	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:26 PM	Tl	Total	ICP	6010B	000007-0380	Test/America Portland
01	TP-1	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 4:05 PM	Tl	Total	ICP	6010B	000001-0380	Test/America Portland
02	TP-2	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 4:55 PM	Tl	Total	ICP	6010B	000002-0380	Test/America Portland
03	TP-3	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:01 PM	Tl	Total	ICP	6010B	000003-0380	Test/America Portland
04	TP-4	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:07 PM	Tl	Total	ICP	6010B	000004-0380	Test/America Portland
05	TP-5	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:14 PM	Tl	Total	ICP	6010B	000005-0380	Test/America Portland
06	TP-6	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:20 PM	Tl	Total	ICP	6010B	000006-0380	Test/America Portland
08	TP-7	EPA 6010B	Thallium	ND					6/8/2009 9:33 AM	6/8/2009 5:45 PM	Tl	Total	ICP	6010B	000008-0380	Test/America Portland
07	BG-1	EPA 6010B	Zinc	43.8					6/8/2009 9:33 AM	6/8/2009 5:26 PM	Zn	Total	ICP	6010B	000007-0460	Test/America Portland
01	TP-1	EPA 6010B	Zinc	36.9					6/8/2009 9:33 AM	6/8/2009 4:05 PM	Zn	Total	ICP	6010B	000001-0460	Test/America Portland
02	TP-2	EPA 6010B	Zinc	38.1					6/8/2009 9:33 AM	6/8/2009 4:55 PM	Zn	Total	ICP	6010B	000002-0460	Test/America Portland
03	TP-3	EPA 6010B	Zinc	40.6					6/8/2009 9:33 AM	6/8/2009 5:01 PM	Zn	Total	ICP	6010B	000003-0460	Test/America Portland
04	TP-4	EPA 6010B	Zinc	45.9					6/8/2009 9:33 AM	6/8/2009 5:07 PM	Zn	Total	ICP	6010B	000004-0460	Test/America Portland
05	TP-5	EPA 6010B	Zinc	33.8					6/8/2009 9:33 AM	6/8/2009 5:14 PM	Zn	Total	ICP	6010B	000005-0460	Test/America Portland
06	TP-6	EPA 6010B	Zinc	37.4					6/8/2009 9:33 AM	6/8/2009 5:20 PM	Zn	Total	ICP	6010B	000006-0460	Test/America Portland
08	TP-7	EPA 6010B	Zinc	41.4					6/8/2009 9:33 AM	6/8/2009 5:45 PM	Zn	Total	ICP	6010B	000008-0460	Test/America Portland