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Prepared for the U.S. Department of Energy  
under Contract DE-AC05-76RL01830

# Analytical Data Report for Sediment Samples Collected From 100-NR-2 Operable Unit

Michael Lindberg

October 2011



**Pacific Northwest**  
NATIONAL LABORATORY

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# **Analytical Data Report for Sediment Samples Collected From 100-NR-2 Operable Unit**

MJ Lindberg

October 2011

Prepared for the U.S. Department of Energy  
under Contract DE-AC05-76RL01830

Pacific Northwest National Laboratory  
Richland, Washington 99352

09/30/11 09:44

To: Anna Radloff

From: Michael J. Lindberg

A handwritten signature in black ink, appearing to read 'MJL', with a stylized flourish at the end.

Environmental Sciences Laboratory  
Energy and Environment Directorate, Pacific Northwest National Laboratory

Subject: Analytical Data Report for Sediment Samples Collected From 100-NR-2 Operable Unit, Sample Delivery Group ESL090023, SAF Number F11-057

This letter contains the following information for sample delivery group ESL090023

- Cover Sheet
- Narrative
- Analytical Results
- Quality Control
- Chain of Custodies

## **Introduction**

Between April 7, 2011 and September 20, 2011 sediment samples were received from the 100-NR-2 Operable Unit for geochemical studies.

## **Analytical Results/Methodology**

The analyses for this project were performed at the 331 building located in the 300 Area of the Hanford Site. The analyses were performed according to Pacific Northwest National Laboratory (PNNL) approved procedures and/or nationally recognized test procedures. The data sets include the sample identification numbers, analytical results, estimated quantification limits (EQL), and quality control data.

## **Quality Control**

The preparatory and analytical quality control requirements, calibration requirements, acceptance criteria, and failure actions are defined in the on-line QA plan “Conducting Analytical Work in Support of Regulatory Programs” (CAW). This QA plan implements the Hanford Analytical Services Quality Assurance Requirements Documents (HASQARD) for PNNL.

## **Definitions**

Dup	Duplicate
RPD	Relative Percent Difference
NR	No Recovery (percent recovery less than zero)
ND	Non-Detectable
%REC	Percent Recovery

## **Sample Receipt**

Samples were received with a chain of custody (COC) and were analyzed according to the sample identification numbers supplied by the client. All Samples were refrigerated upon receipt until prepared for analysis.

All samples were received with custody seals intact unless noted in the Case Narrative.

## **Holding Times**

Holding time is defined as the time from sample preparation to the time of analyses. The prescribed holding times were met for all analytes unless noted in the Case Narrative.

## **Analytical Results**

All reported analytical results meet the requirements of the CAW or client specified SOW unless noted in the case narrative.

## Case Narrative Report

### **Hold Time:**

Due to the requirements of the statement of work and sampling events in the field, the 28 day and the 48 hr requirements cannot be met. The statement of work requires samples to be selected at the completion of the borehole. It is not always possible to complete a borehole and have the samples shipped to the laboratory within the hold time requirements.

### **Preparation Blank (PB):**

No discrepancies noted.

### **Duplicate (DUP):**

Duplicate RPD for Barium (37.8%) was above the acceptance limit (35) in 1I26009-DUP1 for ICPMS-RCRA-AE  
All other duplicates and QC associated with the batch were in limits. Duplicate failure may be due to sample heterogeneity. There should be no impact to sample data as reported.

### **Laboratory Control Samples (LCS):**

No discrepancies noted.

### **Post Spike (PS):**

Post-Spike Recovery for Barium (140%) was outside acceptance limits (75-125) in 1I26009-PS1 for ICPMS-RCRA-AE  
The native sample concentration of the sample was greater than 5 times the spike concentration. There should be not impact to data as reported.

### **Matrix Spike (MS):**

Matrix Spike Recovery for Chromium, Hexavalent (41.6%) was outside acceptance limits (75-125) in 1H18007-MS1 for Hexavalent Chromium/Soil  
Potential Matrix interference. Sample results associated with this batch are below the EQL. There should be no impact to the data as reported.

### **Other QC Criteria:**

No discrepancies noted.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager as verified by this signature.

Michael Lindberg

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*under Contract DE-AC05-76RLOJ830*

The following analyses were performed on the following samples included in this report:

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Metals 1:1 DI Water Extract by ICPMS

Metals 1:2.5 DI Water Extract by ICPMS

Metals 1:5 DI Water Extract by ICPMS

Metals Acid Extract by ICPMS

Hexavalent Chromium by Colorimetric Determination

Moisture Content

Strontium 90 1:2.5 DI Water Extract by LSC

Strontium 90 1:5 DI Water Extract by LSC

Strontium 90 Acid Extract by LSC

Strontium 90 Water Extract by LSC

### **SAMPLES ANALYZED IN THIS REPORT**

<b>HEIS No.</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
B2C4B3	1108002-01	SOIL	3/31/11 11:25	4/7/11 13:00
B2C4B4	1108002-02	SOIL	4/4/11 09:20	4/7/11 13:00
B2C4B5	1108002-03	SOIL	4/6/11 13:30	4/7/11 13:00
B2D4K4	1108002-04	SOIL	4/26/11 13:55	5/4/11 10:00
B2D1X0	1108002-05	SOIL	7/7/11 10:15	7/11/11 13:00
B2D1X1	1108002-06	SOIL	7/12/11 13:40	7/13/11 13:00
B2C4W2	1108002-07	SOIL	7/18/11 10:30	7/18/11 13:00
B2C4W3	1108002-08	SOIL	7/14/11 14:00	7/18/11 13:00
B2C414	1108002-09	SOIL	9/16/11 10:35	9/20/11 13:30
B2C415	1108002-10	SOIL	9/19/11 10:10	9/20/11 13:30



### Wet Chemistry

#### Moisture Content (% by Weight) by AGG-WC-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
1108002-01	B2C4B3	2.86E1	N/A	8/10/11	1H08013
1108002-02	B2C4B4	2.73E1	N/A	8/10/11	1H08013
1108002-03	B2C4B5	3.56E1	N/A	8/10/11	1H08013
1108002-04	B2D4K4	1.02E1	N/A	8/10/11	1H08013
1108002-05	B2D1X0	1.80E1	N/A	8/10/11	1H08013
1108002-06	B2D1X1	2.42E1	N/A	8/10/11	1H08013
1108002-07	B2C4W2	3.82E1	N/A	8/10/11	1H08013
1108002-08	B2C4W3	2.23E1	N/A	8/10/11	1H08013
1108002-09	B2C414	1.18E1	N/A	9/22/11	1I20006
1108002-10	B2C415	2.42E1	N/A	9/22/11	1I20006

## Hexavalent Chromium/Soil

### Chromium, Hexavalent (ug/g dry) by Colorimetric Determination

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
1108002-01	B2C4B3	<6.39E-1	6.39E-1	8/18/11	1H18007
1108002-02	B2C4B4	<6.37E-1	6.37E-1	8/18/11	1H18007
1108002-03	B2C4B5	<6.78E-1	6.78E-1	8/18/11	1H18007
1108002-04	B2D4K4	<5.50E-1	5.50E-1	8/18/11	1H18007
1108002-05	B2D1X0	<5.92E-1	5.92E-1	8/18/11	1H18007
1108002-06	B2D1X1	<6.16E-1	6.16E-1	8/18/11	1H18007
1108002-07	B2C4W2	<6.95E-1	6.95E-1	8/18/11	1H18007
1108002-08	B2C4W3	<6.09E-1	6.09E-1	8/18/11	1H18007
1108002-09	B2C414	<5.60E-1	5.60E-1	9/27/11	1I26012
1108002-10	B2C415	<6.22E-1	6.22E-1	9/27/11	1I26012

## Hexavalent Chromium/1:1 Water Extract

### Chromium, Hexavalent (ug/g dry) by Colorimetric Determination

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
1108002-01	B2C4B3	<4.99E-2	4.99E-2	8/16/11	1H16001
1108002-02	B2C4B4	<5.00E-2	5.00E-2	8/16/11	1H16001
1108002-03	B2C4B5	<5.21E-2	5.21E-2	8/16/11	1H16001
1108002-04	B2D4K4	<5.15E-2	5.15E-2	8/16/11	1H16001
1108002-05	B2D1X0	<5.00E-2	5.00E-2	8/16/11	1H16001
1108002-06	B2D1X1	<5.00E-2	5.00E-2	8/16/11	1H16001
1108002-07	B2C4W2	<5.08E-2	5.08E-2	8/16/11	1H16001
1108002-08	B2C4W3	<5.08E-2	5.08E-2	8/16/11	1H16001
1108002-09	B2C414	<5.08E-2	5.08E-2	9/26/11	1I26001
1108002-10	B2C415	<5.00E-2	5.00E-2	9/26/11	1I26001

### Hexavalent Chromium/1:2.5 Water Extract

#### Chromium, Hexavalent (ug/g dry) by Colorimetric Determination

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
1108002-01	B2C4B3	<1.24E-1	1.24E-1	8/16/11	1H16002
1108002-02	B2C4B4	<1.25E-1	1.25E-1	8/16/11	1H16002
1108002-03	B2C4B5	<1.25E-1	1.25E-1	8/16/11	1H16002
1108002-04	B2D4K4	<1.25E-1	1.25E-1	8/16/11	1H16002
1108002-05	B2D1X0	<1.29E-1	1.29E-1	8/16/11	1H16002
1108002-06	B2D1X1	<1.25E-1	1.25E-1	8/16/11	1H16002
1108002-07	B2C4W2	<1.27E-1	1.27E-1	8/16/11	1H16002
1108002-08	B2C4W3	<1.24E-1	1.24E-1	8/16/11	1H16002
1108002-09	B2C414	<1.25E-1	1.25E-1	9/26/11	1I26002
1108002-10	B2C415	<1.25E-1	1.25E-1	9/26/11	1I26002

## Hexavalent Chromium/1:5 Water Extract

### Chromium, Hexavalent (ug/g dry) by Colorimetric Determination

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
1108002-01	B2C4B3	<2.50E-1	2.50E-1	8/16/11	1H16003
1108002-02	B2C4B4	<2.50E-1	2.50E-1	8/16/11	1H16003
1108002-03	B2C4B5	<2.50E-1	2.50E-1	8/16/11	1H16003
1108002-04	B2D4K4	<2.50E-1	2.50E-1	8/16/11	1H16003
1108002-05	B2D1X0	<2.51E-1	2.51E-1	8/16/11	1H16003
1108002-06	B2D1X1	<2.49E-1	2.49E-1	8/16/11	1H16003
1108002-07	B2C4W2	<2.49E-1	2.49E-1	8/16/11	1H16003
1108002-08	B2C4W3	<2.48E-1	2.48E-1	8/16/11	1H16003
1108002-09	B2C414	<2.42E-1	2.42E-1	9/26/11	1I26003
1108002-10	B2C415	<2.50E-1	2.50E-1	9/26/11	1I26003

## RCRA Metals By PNNL-AGG-415/1:1 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4B3</b>	<b>Lab ID: 1108002-01</b>					
14092-98-9	Chromium	<6.87E-3	ug/g dry	6.87E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	1.64E-2	ug/g dry	5.66E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.58E-2	ug/g dry	1.58E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.24E-3	ug/g dry	6.24E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.14E-3	ug/g dry	1.14E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.32E-3	ug/g dry	2.32E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.61E-2	ug/g dry	6.22E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B4</b>	<b>Lab ID: 1108002-02</b>					
14092-98-9	Chromium	<6.89E-3	ug/g dry	6.89E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	1.24E-2	ug/g dry	5.67E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.58E-2	ug/g dry	1.58E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.25E-3	ug/g dry	6.25E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.15E-3	ug/g dry	1.15E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.32E-3	ug/g dry	2.32E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.51E-2	ug/g dry	6.24E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B5</b>	<b>Lab ID: 1108002-03</b>					
14092-98-9	Chromium	<7.18E-3	ug/g dry	7.18E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	6.99E-3	ug/g dry	5.91E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.65E-2	ug/g dry	1.65E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.52E-3	ug/g dry	6.52E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.19E-3	ug/g dry	1.19E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.42E-3	ug/g dry	2.42E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.25E-2	ug/g dry	6.51E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D4K4</b>	<b>Lab ID: 1108002-04</b>					
14092-98-9	Chromium	<7.10E-3	ug/g dry	7.10E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	<5.85E-3	ug/g dry	5.85E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.63E-2	ug/g dry	1.63E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.45E-3	ug/g dry	6.45E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.18E-3	ug/g dry	1.18E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.40E-3	ug/g dry	2.40E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.04E-2	ug/g dry	6.44E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X0</b>	<b>Lab ID: 1108002-05</b>					
14092-98-9	Chromium	<6.89E-3	ug/g dry	6.89E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	1.48E-2	ug/g dry	5.67E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.58E-2	ug/g dry	1.58E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.25E-3	ug/g dry	6.25E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.15E-3	ug/g dry	1.15E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.32E-3	ug/g dry	2.32E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	3.04E-3	ug/g dry	6.24E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X1</b>	<b>Lab ID: 1108002-06</b>					
14092-98-9	Chromium	<6.89E-3	ug/g dry	6.89E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	7.92E-3	ug/g dry	5.67E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.58E-2	ug/g dry	1.58E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.26E-3	ug/g dry	6.26E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.15E-3	ug/g dry	1.15E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.32E-3	ug/g dry	2.32E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	9.04E-3	ug/g dry	6.24E-4	8/24/11	1H22004	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/1:1 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4W2</b>	<b>Lab ID: 1108002-07</b>					
14092-98-9	Chromium	<7.00E-3	ug/g dry	7.00E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	1.21E-2	ug/g dry	5.76E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.61E-2	ug/g dry	1.61E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.35E-3	ug/g dry	6.35E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.16E-3	ug/g dry	1.16E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.36E-3	ug/g dry	2.36E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.47E-2	ug/g dry	6.34E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4W3</b>	<b>Lab ID: 1108002-08</b>					
14092-98-9	Chromium	<7.00E-3	ug/g dry	7.00E-3	8/22/11	1H22004	PNNL-AGG-415
7440-38-2	Arsenic	1.20E-2	ug/g dry	5.76E-3	8/22/11	1H22004	PNNL-AGG-415
14687-58-2	Selenium	<1.61E-2	ug/g dry	1.61E-2	8/22/11	1H22004	PNNL-AGG-415
14378-37-1	Silver	<6.35E-3	ug/g dry	6.35E-3	8/22/11	1H22004	PNNL-AGG-415
14336-64-2	Cadmium	<1.16E-3	ug/g dry	1.16E-3	8/22/11	1H22004	PNNL-AGG-415
13966-28-4	Lead	<2.36E-3	ug/g dry	2.36E-3	8/22/11	1H22004	PNNL-AGG-415
13981-97-0	Barium	1.08E-2	ug/g dry	6.34E-4	8/24/11	1H22004	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C414</b>	<b>Lab ID: 1108002-09</b>					
14092-98-9	Chromium	<7.00E-3	ug/g dry	7.00E-3	9/26/11	1I26008	PNNL-AGG-415
7440-38-2	Arsenic	<5.76E-3	ug/g dry	5.76E-3	9/26/11	1I26008	PNNL-AGG-415
14687-58-2	Selenium	<1.61E-2	ug/g dry	1.61E-2	9/26/11	1I26008	PNNL-AGG-415
14378-37-1	Silver	<6.36E-3	ug/g dry	6.36E-3	9/26/11	1I26008	PNNL-AGG-415
14336-64-2	Cadmium	<1.16E-3	ug/g dry	1.16E-3	9/26/11	1I26008	PNNL-AGG-415
13966-28-4	Lead	<2.36E-3	ug/g dry	2.36E-3	9/26/11	1I26008	PNNL-AGG-415
13981-97-0	Barium	1.75E-2	ug/g dry	6.34E-4	9/27/11	1I26008	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C415</b>	<b>Lab ID: 1108002-10</b>					
14092-98-9	Chromium	<6.88E-3	ug/g dry	6.88E-3	9/26/11	1I26008	PNNL-AGG-415
7440-38-2	Arsenic	<5.67E-3	ug/g dry	5.67E-3	9/26/11	1I26008	PNNL-AGG-415
14687-58-2	Selenium	<1.58E-2	ug/g dry	1.58E-2	9/26/11	1I26008	PNNL-AGG-415
14378-37-1	Silver	<6.25E-3	ug/g dry	6.25E-3	9/26/11	1I26008	PNNL-AGG-415
14336-64-2	Cadmium	<1.15E-3	ug/g dry	1.15E-3	9/26/11	1I26008	PNNL-AGG-415
13966-28-4	Lead	<2.32E-3	ug/g dry	2.32E-3	9/26/11	1I26008	PNNL-AGG-415
13981-97-0	Barium	5.42E-2	ug/g dry	6.24E-4	9/27/11	1I26008	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/1:2.5 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4B3</b>	<b>Lab ID: 1108002-01</b>					
14092-98-9	Chromium	<1.71E-2	ug/g dry	1.71E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	3.19E-2	ug/g dry	1.41E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.93E-2	ug/g dry	3.93E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.55E-2	ug/g dry	1.55E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.84E-3	ug/g dry	2.84E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.77E-3	ug/g dry	5.77E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	1.91E-2	ug/g dry	1.55E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B4</b>	<b>Lab ID: 1108002-02</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	1.57E-2	ug/g dry	1.42E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.95E-2	ug/g dry	3.95E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.86E-3	ug/g dry	2.86E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.80E-3	ug/g dry	5.80E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	2.16E-2	ug/g dry	1.56E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B5</b>	<b>Lab ID: 1108002-03</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	<1.42E-2	ug/g dry	1.42E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.96E-2	ug/g dry	3.96E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.86E-3	ug/g dry	2.86E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.81E-3	ug/g dry	5.81E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	1.63E-2	ug/g dry	1.56E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D4K4</b>	<b>Lab ID: 1108002-04</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	<1.42E-2	ug/g dry	1.42E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.96E-2	ug/g dry	3.96E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.57E-2	ug/g dry	1.57E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.87E-3	ug/g dry	2.87E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.82E-3	ug/g dry	5.82E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	1.56E-2	ug/g dry	1.56E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X0</b>	<b>Lab ID: 1108002-05</b>					
14092-98-9	Chromium	<1.78E-2	ug/g dry	1.78E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	4.22E-2	ug/g dry	1.47E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<4.09E-2	ug/g dry	4.09E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.62E-2	ug/g dry	1.62E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.96E-3	ug/g dry	2.96E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<6.00E-3	ug/g dry	6.00E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	2.78E-3	ug/g dry	1.61E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X1</b>	<b>Lab ID: 1108002-06</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	<1.42E-2	ug/g dry	1.42E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.96E-2	ug/g dry	3.96E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.87E-3	ug/g dry	2.87E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.81E-3	ug/g dry	5.81E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	1.15E-2	ug/g dry	1.56E-3	8/24/11	1H22003	PNNL-AGG-415



## RCRA Metals By PNNL-AGG-415/1:2.5 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4W2</b>	<b>Lab ID: 1108002-07</b>					
14092-98-9	Chromium	<1.74E-2	ug/g dry	1.74E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	2.84E-2	ug/g dry	1.44E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<4.01E-2	ug/g dry	4.01E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.58E-2	ug/g dry	1.58E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.90E-3	ug/g dry	2.90E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.88E-3	ug/g dry	5.88E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	1.84E-2	ug/g dry	1.58E-3	8/24/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4W3</b>	<b>Lab ID: 1108002-08</b>					
14092-98-9	Chromium	<1.71E-2	ug/g dry	1.71E-2	8/22/11	1H22003	PNNL-AGG-415
7440-38-2	Arsenic	2.66E-2	ug/g dry	1.41E-2	8/22/11	1H22003	PNNL-AGG-415
14687-58-2	Selenium	<3.94E-2	ug/g dry	3.94E-2	8/22/11	1H22003	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	8/22/11	1H22003	PNNL-AGG-415
14336-64-2	Cadmium	<2.85E-3	ug/g dry	2.85E-3	8/22/11	1H22003	PNNL-AGG-415
13966-28-4	Lead	<5.78E-3	ug/g dry	5.78E-3	8/22/11	1H22003	PNNL-AGG-415
13981-97-0	Barium	<1.55E-3	ug/g dry	1.55E-3	8/22/11	1H22003	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C414</b>	<b>Lab ID: 1108002-09</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	9/26/11	1I26007	PNNL-AGG-415
7440-38-2	Arsenic	<1.42E-2	ug/g dry	1.42E-2	9/26/11	1I26007	PNNL-AGG-415
14687-58-2	Selenium	<3.95E-2	ug/g dry	3.95E-2	9/26/11	1I26007	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	9/26/11	1I26007	PNNL-AGG-415
14336-64-2	Cadmium	<2.86E-3	ug/g dry	2.86E-3	9/26/11	1I26007	PNNL-AGG-415
13966-28-4	Lead	<5.80E-3	ug/g dry	5.80E-3	9/26/11	1I26007	PNNL-AGG-415
13981-97-0	Barium	2.78E-2	ug/g dry	1.56E-3	9/27/11	1I26007	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C415</b>	<b>Lab ID: 1108002-10</b>					
14092-98-9	Chromium	<1.72E-2	ug/g dry	1.72E-2	9/26/11	1I26007	PNNL-AGG-415
7440-38-2	Arsenic	1.95E-2	ug/g dry	1.42E-2	9/26/11	1I26007	PNNL-AGG-415
14687-58-2	Selenium	<3.96E-2	ug/g dry	3.96E-2	9/26/11	1I26007	PNNL-AGG-415
14378-37-1	Silver	<1.56E-2	ug/g dry	1.56E-2	9/26/11	1I26007	PNNL-AGG-415
14336-64-2	Cadmium	<2.86E-3	ug/g dry	2.86E-3	9/26/11	1I26007	PNNL-AGG-415
13966-28-4	Lead	<5.81E-3	ug/g dry	5.81E-3	9/26/11	1I26007	PNNL-AGG-415
13981-97-0	Barium	1.87E-1	ug/g dry	1.56E-3	9/27/11	1I26007	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/1:5 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4B3</b>	<b>Lab ID: 1108002-01</b>					
14092-98-9	Chromium	<3.44E-2	ug/g dry	3.44E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	5.06E-2	ug/g dry	2.83E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.90E-2	ug/g dry	7.90E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.12E-2	ug/g dry	3.12E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.72E-3	ug/g dry	5.72E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	4.17E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	4.48E-2	ug/g dry	3.12E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B4</b>	<b>Lab ID: 1108002-02</b>					
14092-98-9	Chromium	<3.44E-2	ug/g dry	3.44E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	<2.83E-2	ug/g dry	2.83E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.91E-2	ug/g dry	7.91E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.12E-2	ug/g dry	3.12E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.72E-3	ug/g dry	5.72E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	3.05E-2	ug/g dry	3.12E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B5</b>	<b>Lab ID: 1108002-03</b>					
14092-98-9	Chromium	<3.45E-2	ug/g dry	3.45E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	<2.84E-2	ug/g dry	2.84E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.93E-2	ug/g dry	7.93E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.13E-2	ug/g dry	3.13E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.74E-3	ug/g dry	5.74E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	2.45E-2	ug/g dry	3.13E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D4K4</b>	<b>Lab ID: 1108002-04</b>					
14092-98-9	Chromium	<3.44E-2	ug/g dry	3.44E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	<2.83E-2	ug/g dry	2.83E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.90E-2	ug/g dry	7.90E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.12E-2	ug/g dry	3.12E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.72E-3	ug/g dry	5.72E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	2.18E-2	ug/g dry	3.12E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X0</b>	<b>Lab ID: 1108002-05</b>					
14092-98-9	Chromium	<3.45E-2	ug/g dry	3.45E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	6.02E-2	ug/g dry	2.84E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.93E-2	ug/g dry	7.93E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.13E-2	ug/g dry	3.13E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.74E-3	ug/g dry	5.74E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	<3.13E-3	ug/g dry	3.13E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X1</b>	<b>Lab ID: 1108002-06</b>					
14092-98-9	Chromium	<3.43E-2	ug/g dry	3.43E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	<2.83E-2	ug/g dry	2.83E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.89E-2	ug/g dry	7.89E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.12E-2	ug/g dry	3.12E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.71E-3	ug/g dry	5.71E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	1.79E-2	ug/g dry	3.11E-3	8/24/11	1H22002	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/1:5 Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4W2</b>	<b>Lab ID: 1108002-07</b>					
14092-98-9	Chromium	<3.43E-2	ug/g dry	3.43E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	4.40E-2	ug/g dry	2.82E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.88E-2	ug/g dry	7.88E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.11E-2	ug/g dry	3.11E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.70E-3	ug/g dry	5.70E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	3.06E-2	ug/g dry	3.11E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4W3</b>	<b>Lab ID: 1108002-08</b>					
14092-98-9	Chromium	<3.41E-2	ug/g dry	3.41E-2	8/22/11	1H22002	PNNL-AGG-415
7440-38-2	Arsenic	3.72E-2	ug/g dry	2.81E-2	8/22/11	1H22002	PNNL-AGG-415
14687-58-2	Selenium	<7.85E-2	ug/g dry	7.85E-2	8/22/11	1H22002	PNNL-AGG-415
14378-37-1	Silver	<3.10E-2	ug/g dry	3.10E-2	8/22/11	1H22002	PNNL-AGG-415
14336-64-2	Cadmium	<5.68E-3	ug/g dry	5.68E-3	8/22/11	1H22002	PNNL-AGG-415
13966-28-4	Lead	<1.15E-2	ug/g dry	1.15E-2	8/22/11	1H22002	PNNL-AGG-415
13981-97-0	Barium	2.31E-2	ug/g dry	3.09E-3	8/24/11	1H22002	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C414</b>	<b>Lab ID: 1108002-09</b>					
14092-98-9	Chromium	<3.33E-2	ug/g dry	3.33E-2	9/26/11	1I26006	PNNL-AGG-415
7440-38-2	Arsenic	<2.74E-2	ug/g dry	2.74E-2	9/26/11	1I26006	PNNL-AGG-415
14687-58-2	Selenium	<7.65E-2	ug/g dry	7.65E-2	9/26/11	1I26006	PNNL-AGG-415
14378-37-1	Silver	<3.02E-2	ug/g dry	3.02E-2	9/26/11	1I26006	PNNL-AGG-415
14336-64-2	Cadmium	<5.54E-3	ug/g dry	5.54E-3	9/26/11	1I26006	PNNL-AGG-415
13966-28-4	Lead	<1.12E-2	ug/g dry	1.12E-2	9/26/11	1I26006	PNNL-AGG-415
13981-97-0	Barium	4.00E-2	ug/g dry	3.02E-3	9/27/11	1I26006	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C415</b>	<b>Lab ID: 1108002-10</b>					
14092-98-9	Chromium	<3.45E-2	ug/g dry	3.45E-2	9/26/11	1I26006	PNNL-AGG-415
7440-38-2	Arsenic	5.39E-2	ug/g dry	2.84E-2	9/26/11	1I26006	PNNL-AGG-415
14687-58-2	Selenium	<7.92E-2	ug/g dry	7.92E-2	9/26/11	1I26006	PNNL-AGG-415
14378-37-1	Silver	<3.13E-2	ug/g dry	3.13E-2	9/26/11	1I26006	PNNL-AGG-415
14336-64-2	Cadmium	<5.73E-3	ug/g dry	5.73E-3	9/26/11	1I26006	PNNL-AGG-415
13966-28-4	Lead	<1.16E-2	ug/g dry	1.16E-2	9/26/11	1I26006	PNNL-AGG-415
13981-97-0	Barium	3.25E-1	ug/g dry	3.12E-3	9/27/11	1I26006	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4B3</b>	<b>Lab ID: 1108002-01</b>					
14092-98-9	Chromium	1.20E1	ug/g dry	8.46E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	1.01E0	ug/g dry	3.68E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<7.12E-1	ug/g dry	7.12E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	1.07E-1	ug/g dry	2.30E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	2.02E-1	ug/g dry	6.08E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	7.75E0	ug/g dry	2.31E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	3.44E1	ug/g dry	2.80E-2	8/24/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B4</b>	<b>Lab ID: 1108002-02</b>					
14092-98-9	Chromium	7.80E0	ug/g dry	8.33E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	1.34E0	ug/g dry	3.63E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<7.01E-1	ug/g dry	7.01E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	4.90E-2	ug/g dry	2.27E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	8.69E-2	ug/g dry	5.99E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	3.75E0	ug/g dry	2.27E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	8.94E1	ug/g dry	1.38E-1	9/02/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4B5</b>	<b>Lab ID: 1108002-03</b>					
14092-98-9	Chromium	8.03E0	ug/g dry	8.75E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	2.18E0	ug/g dry	3.81E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<7.37E-1	ug/g dry	7.37E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	4.54E-2	ug/g dry	2.38E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	<6.29E-2	ug/g dry	6.29E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	4.18E0	ug/g dry	2.39E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	4.65E1	ug/g dry	2.90E-2	8/24/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D4K4</b>	<b>Lab ID: 1108002-04</b>					
14092-98-9	Chromium	6.14E0	ug/g dry	7.17E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	1.05E0	ug/g dry	3.12E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<6.04E-1	ug/g dry	6.04E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	4.75E-2	ug/g dry	1.95E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	<5.16E-2	ug/g dry	5.16E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	1.37E0	ug/g dry	1.95E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	3.17E1	ug/g dry	2.38E-2	8/24/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X0</b>	<b>Lab ID: 1108002-05</b>					
14092-98-9	Chromium	9.05E0	ug/g dry	7.73E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	2.05E0	ug/g dry	3.36E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<6.50E-1	ug/g dry	6.50E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	2.72E-2	ug/g dry	2.10E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	<5.55E-2	ug/g dry	5.55E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	2.65E0	ug/g dry	2.11E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	2.28E1	ug/g dry	2.56E-2	8/24/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2D1X1</b>	<b>Lab ID: 1108002-06</b>					
14092-98-9	Chromium	1.53E1	ug/g dry	7.93E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	2.13E0	ug/g dry	3.45E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<6.67E-1	ug/g dry	6.67E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	7.20E-2	ug/g dry	2.16E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	1.55E-1	ug/g dry	5.70E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	4.89E0	ug/g dry	2.16E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	7.10E1	ug/g dry	1.31E-1	9/02/11	1H22005	PNNL-AGG-415

## RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B2C4W2</b>	<b>Lab ID: 1108002-07</b>					
14092-98-9	Chromium	6.94E0	ug/g dry	8.91E-1	8/22/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	1.35E0	ug/g dry	3.88E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<7.50E-1	ug/g dry	7.50E-1	8/22/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	6.17E-2	ug/g dry	2.43E-2	8/22/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	2.42E-1	ug/g dry	6.40E-2	8/22/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	4.70E0	ug/g dry	2.43E-1	8/22/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	5.91E1	ug/g dry	2.95E-2	8/24/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C4W3</b>	<b>Lab ID: 1108002-08</b>					
14092-98-9	Chromium	1.19E1	ug/g dry	7.88E-1	8/23/11	1H22005	PNNL-AGG-415
7440-38-2	Arsenic	2.08E0	ug/g dry	3.43E-1	9/07/11	1H22005	PNNL-AGG-415
14687-58-2	Selenium	<6.63E-1	ug/g dry	6.63E-1	8/23/11	1H22005	PNNL-AGG-415
14378-37-1	Silver	3.13E-2	ug/g dry	2.15E-2	8/23/11	1H22005	PNNL-AGG-415
14336-64-2	Cadmium	2.32E-1	ug/g dry	5.66E-2	8/23/11	1H22005	PNNL-AGG-415
13966-28-4	Lead	7.11E0	ug/g dry	2.15E-1	8/31/11	1H22005	PNNL-AGG-415
13981-97-0	Barium	8.01E1	ug/g dry	1.31E-1	9/02/11	1H22005	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C414</b>	<b>Lab ID: 1108002-09</b>					
14092-98-9	Chromium	6.71E0	ug/g dry	7.42E-1	9/27/11	1I26009	PNNL-AGG-415
7440-38-2	Arsenic	3.75E-1	ug/g dry	3.23E-1	9/28/11	1I26009	PNNL-AGG-415
14687-58-2	Selenium	<6.25E-1	ug/g dry	6.25E-1	9/26/11	1I26009	PNNL-AGG-415
14378-37-1	Silver	4.15E-2	ug/g dry	2.02E-2	9/26/11	1I26009	PNNL-AGG-415
14336-64-2	Cadmium	<5.34E-2	ug/g dry	5.34E-2	9/26/11	1I26009	PNNL-AGG-415
13966-28-4	Lead	1.19E0	ug/g dry	2.02E-1	9/26/11	1I26009	PNNL-AGG-415
13981-97-0	Barium	2.92E1	ug/g dry	1.23E-1	9/27/11	1I26009	PNNL-AGG-415
<b>HEIS No.</b>	<b>B2C415</b>	<b>Lab ID: 1108002-10</b>					
14092-98-9	Chromium	1.35E1	ug/g dry	8.31E-1	9/27/11	1I26009	PNNL-AGG-415
7440-38-2	Arsenic	3.76E0	ug/g dry	3.62E-1	9/28/11	1I26009	PNNL-AGG-415
14687-58-2	Selenium	<7.00E-1	ug/g dry	7.00E-1	9/26/11	1I26009	PNNL-AGG-415
14378-37-1	Silver	6.67E-2	ug/g dry	2.26E-2	9/26/11	1I26009	PNNL-AGG-415
14336-64-2	Cadmium	2.24E-1	ug/g dry	5.98E-2	9/26/11	1I26009	PNNL-AGG-415
13966-28-4	Lead	6.43E0	ug/g dry	2.27E-1	9/26/11	1I26009	PNNL-AGG-415
13981-97-0	Barium	2.52E2	ug/g dry	1.38E-1	9/27/11	1I26009	PNNL-AGG-415

## Strontium 90/Acid Extract

### Strontium-90 (pCi/g dry) by AGG-RRL-002

Lab ID	HEIS No.	Results	MDA	UNC	Analyzed	Batch
1108002-01	B2C4B3	<5.89E-1	5.89E-1		9/06/11	1H26006
1108002-02	B2C4B4	<5.86E-1	5.86E-1		9/06/11	1H26006
1108002-03	B2C4B5	<5.78E-1	5.78E-1		9/06/11	1H26006
1108002-04	B2D4K4	<5.83E-1	5.83E-1		9/06/11	1H26006
1108002-05	B2D1X0	<5.86E-1	5.86E-1		9/06/11	1H26006
1108002-06	B2D1X1	<5.72E-1	5.72E-1		9/06/11	1H26006
1108002-07	B2C4W2	<5.77E-1	5.77E-1		9/06/11	1H26006
1108002-08	B2C4W3	<5.77E-1	5.77E-1		9/06/11	1H26006
1108002-09	B2C4I4	<6.81E-1	6.81E-1		9/28/11	1I23004
1108002-10	B2C4I5	<6.87E-1	6.87E-1		9/28/11	1I23004

**Strontium 90/1:1 Water Extract****Strontium-90 (pCi/g dry) by AGG-RRL-002**

Lab ID	HEIS No.	Results	MDA	UNC	Analyzed	Batch
1108002-01	B2C4B3	<5.89E-1	5.89E-1		9/06/11	1H26003
1108002-02	B2C4B4	<5.90E-1	5.90E-1		9/06/11	1H26003
1108002-03	B2C4B5	<6.15E-1	6.15E-1		9/06/11	1H26003
1108002-04	B2D4K4	<6.09E-1	6.09E-1		9/06/11	1H26003
1108002-05	B2D1X0	<5.90E-1	5.90E-1		9/06/11	1H26003
1108002-06	B2D1X1	<5.91E-1	5.91E-1		9/06/11	1H26003
1108002-07	B2C4W2	<6.00E-1	6.00E-1		9/06/11	1H26003
1108002-08	B2C4W3	<6.00E-1	6.00E-1		9/06/11	1H26003
1108002-09	B2C414	<6.87E-1	6.87E-1		9/28/11	1I23001
1108002-10	B2C415	<6.76E-1	6.76E-1		9/28/11	1I23001

## Strontium 90/1:2.5 Water Extract

### Strontium-90 (pCi/g dry) by AGG-RRL-002

Lab ID	HEIS No.	Results	MDA	UNC	Analyzed	Batch
1108002-01	B2C4B3	<1.47E0	1.47E0		9/06/11	1H26004
1108002-02	B2C4B4	<1.47E0	1.47E0		9/06/11	1H26004
1108002-03	B2C4B5	<1.48E0	1.48E0		9/06/11	1H26004
1108002-04	B2D4K4	<1.48E0	1.48E0		9/06/11	1H26004
1108002-05	B2D1X0	<1.53E0	1.53E0		9/06/11	1H26004
1108002-06	B2D1X1	<1.48E0	1.48E0		9/06/11	1H26004
1108002-07	B2C4W2	<1.49E0	1.49E0		9/06/11	1H26004
1108002-08	B2C4W3	<1.47E0	1.47E0		9/06/11	1H26004
1108002-09	B2C414	<1.69E0	1.69E0		9/28/11	1I23002
1108002-10	B2C415	<1.69E0	1.69E0		9/28/11	1I23002



## Strontium 90/1:5 Water Extract

### Strontium-90 (pCi/g dry) by AGG-RRL-002

Lab ID	HEIS No.	Results	MDA	UNC	Analyzed	Batch
1108002-01	B2C4B3	<2.95E0	2.95E0		9/06/11	1H26005
1108002-02	B2C4B4	<2.95E0	2.95E0		9/06/11	1H26005
1108002-03	B2C4B5	<2.96E0	2.96E0		9/06/11	1H26005
1108002-04	B2D4K4	<2.95E0	2.95E0		9/06/11	1H26005
1108002-05	B2D1X0	<2.96E0	2.96E0		9/06/11	1H26005
1108002-06	B2D1X1	<2.94E0	2.94E0		9/06/11	1H26005
1108002-07	B2C4W2	<2.94E0	2.94E0		9/06/11	1H26005
1108002-08	B2C4W3	<2.93E0	2.93E0		9/06/11	1H26005
1108002-09	B2C414	<3.27E0	3.27E0		9/28/11	1I23003
1108002-10	B2C415	<3.38E0	3.38E0		9/28/11	1I23003

## Equilibrium Kd 1:1 Calculations

1108002-01		B2C4B3		1108002-02		B2C4B4		1108002-03		B2C4B5	
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	6.06E-02	Arsenic	1.07E-01	Arsenic	1.07E-01	Arsenic	1.07E-01	Arsenic	3.11E-01	Arsenic	3.11E-01
Barium	2.14E+00	Barium	5.92E+00	Barium	5.92E+00	Barium	5.92E+00	Barium	3.72E+00	Barium	3.72E+00
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-04		B2D4K4		1108002-05		B2D1X0		1108002-06		B2D1X1	
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND
Barium	3.05E+00	Barium	7.50E+00	Barium	7.50E+00	Barium	7.50E+00	Barium	7.85E+00	Barium	7.85E+00
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-07		B2C4W2		1108002-08		B2C4W3		1108002-09			
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	1.11E-01	Arsenic	1.72E-01	Arsenic	1.72E-01	Arsenic	1.72E-01	Arsenic	ND	Arsenic	ND
Barium	4.02E+00	Barium	7.42E+00	Barium	7.42E+00	Barium	7.42E+00	Barium	1.67E+00	Barium	1.67E+00
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-10	
Analyte	Kd (L/g)
Arsenic	ND
Barium	4.65E+00
Cadmium	ND
Chromium (Total)	ND
Chromium, Hexavalent	ND
Lead	ND
Selenium	ND
Silver	ND
Strontium-90	ND

### Equilibrium Kd 1:2.5 Calculations

<b>1108002-01</b>		<b>B2C4B3</b>		<b>1108002-02</b>		<b>B2C4B4</b>		<b>1108002-03</b>		<b>B2C4B5</b>	
Analyte		Kd (L/g)		Analyte		Kd (L/g)		Analyte		Kd (L/g)	
Arsenic		3.07E-02		Arsenic		8.44E-02		Arsenic		ND	
Barium		1.80E+00		Barium		4.14E+00		Barium		2.85E+00	
Cadmium		ND		Cadmium		ND		Cadmium		ND	
Chromium (Total)		ND		Chromium (Total)		ND		Chromium (Total)		ND	
Chromium, Hexavalent		ND		Chromium, Hexavalent		ND		Chromium, Hexavalent		ND	
Lead		ND		Lead		ND		Lead		ND	
Selenium		ND		Selenium		ND		Selenium		ND	
Silver		ND		Silver		ND		Silver		ND	
Strontium-90		ND		Strontium-90		ND		Strontium-90		ND	

<b>1108002-04</b>		<b>B2D4K4</b>		<b>1108002-05</b>		<b>B2D1X0</b>		<b>1108002-06</b>		<b>B2D1X1</b>	
Analyte		Kd (L/g)		Analyte		Kd (L/g)		Analyte		Kd (L/g)	
Arsenic		ND		Arsenic		ND		Arsenic		ND	
Barium		2.03E+00		Barium		8.20E+00		Barium		6.17E+00	
Cadmium		ND		Cadmium		ND		Cadmium		ND	
Chromium (Total)		ND		Chromium (Total)		ND		Chromium (Total)		ND	
Chromium, Hexavalent		ND		Chromium, Hexavalent		ND		Chromium, Hexavalent		ND	
Lead		ND		Lead		ND		Lead		ND	
Selenium		ND		Selenium		ND		Selenium		ND	
Silver		ND		Silver		ND		Silver		ND	
Strontium-90		ND		Strontium-90		ND		Strontium-90		ND	

<b>1108002-07</b>		<b>B2C4W2</b>		<b>1108002-08</b>		<b>B2C4W3</b>		<b>1108002-09</b>			
Analyte		Kd (L/g)		Analyte		Kd (L/g)		Analyte		Kd (L/g)	
Arsenic		4.65E-02		Arsenic		7.72E-02		Arsenic		ND	
Barium		3.21E+00		Barium		ND		Barium		1.05E+00	
Cadmium		ND		Cadmium		ND		Cadmium		ND	
Chromium (Total)		ND		Chromium (Total)		ND		Chromium (Total)		ND	
Chromium, Hexavalent		ND		Chromium, Hexavalent		ND		Chromium, Hexavalent		ND	
Lead		ND		Lead		ND		Lead		ND	
Selenium		ND		Selenium		ND		Selenium		ND	
Silver		ND		Silver		ND		Silver		ND	
Strontium-90		ND		Strontium-90		ND		Strontium-90		ND	

<b>1108002-10</b>			
Analyte		Kd (L/g)	
Arsenic		1.92E-01	
Barium		1.35E+00	
Cadmium		ND	
Chromium (Total)		ND	
Chromium, Hexavalent		ND	
Lead		ND	
Selenium		ND	
Silver		ND	
Strontium-90		ND	

## Equilibrium Kd 1:5 Calculations

1108002-01		B2C4B3		1108002-02		B2C4B4		1108002-03		B2C4B5	
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	1.90E-02	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND
Barium	7.67E-01	Barium	2.93E+00	Barium	2.93E+00	Barium	2.93E+00	Barium	1.90E+00	Barium	1.90E+00
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	1.85E-01	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-04		B2D4K4		1108002-05		B2D1X0		1108002-06		B2D1X1	
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND	Arsenic	ND
Barium	1.45E+00	Barium	ND	Barium	ND	Barium	ND	Barium	3.97E+00	Barium	3.97E+00
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-07		B2C4W2		1108002-08		B2C4W3		1108002-09			
Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)	Analyte	Kd (L/g)
Arsenic	2.97E-02	Arsenic	5.49E-02	Arsenic	5.49E-02	Arsenic	5.49E-02	Arsenic	ND	Arsenic	ND
Barium	1.93E+00	Barium	3.47E+00	Barium	3.47E+00	Barium	3.47E+00	Barium	7.29E-01	Barium	7.29E-01
Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND	Cadmium	ND
Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND	Chromium (Total)	ND
Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND	Chromium, Hexavalent	ND
Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND	Lead	ND
Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND	Selenium	ND
Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND	Silver	ND
Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND	Strontium-90	ND

1108002-10	
Analyte	Kd (L/g)
Arsenic	6.88E-02
Barium	7.74E-01
Cadmium	ND
Chromium (Total)	ND
Chromium, Hexavalent	ND
Lead	ND
Selenium	ND
Silver	ND
Strontium-90	ND

## Hexavalent Chromium/Soil - Quality Control

### Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H18007 - Hexavalent Chromium Digest</b>										
<b>Blank (1H18007-BLK1)</b>				Prepared & Analyzed: 08/18/11						
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet							
<b>LCS (1H18007-BS1)</b>				Prepared & Analyzed: 08/18/11						
Chromium, Hexavalent	4.13E-1	5.00E-2	ug/g wet	5.01E-1		82.5	80-120			
<b>Duplicate (1H18007-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/18/11				
Chromium, Hexavalent	<5.84E-1	5.84E-1	ug/g dry		ND				20	
<b>Matrix Spike (1H18007-MS1)</b>				<b>Source: 1108002-04</b>		Prepared & Analyzed: 08/18/11				
Chromium, Hexavalent	2.08E-1	5.46E-1	ug/g dry	5.00E-1	5.00E-3	40.6	75-125			
<b>Batch 1I26012 - Hexavalent Chromium Digest</b>										
<b>Blank (1I26012-BLK1)</b>				Prepared: 09/26/11 Analyzed: 09/27/11						
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet							
<b>LCS (1I26012-BS1)</b>				Prepared: 09/26/11 Analyzed: 09/27/11						
Chromium, Hexavalent	4.40E-1	5.00E-2	ug/g wet	5.01E-1		87.9	80-120			
<b>Duplicate (1I26012-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared: 09/26/11 Analyzed: 09/27/11				
Chromium, Hexavalent	<6.22E-1	6.22E-1	ug/g dry		ND				20	
<b>Matrix Spike (1I26012-MS1)</b>				<b>Source: 1108002-10</b>		Prepared: 09/26/11 Analyzed: 09/27/11				
Chromium, Hexavalent	3.93E-1	6.20E-1	ug/g dry	5.00E-1	8.00E-3	76.9	75-125			

## Hexavalent Chromium/1:1 Water Extract - Quality Control

### Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H16001 - 1:1 Water Extract (Cr6)</b>									
<b>Blank (1H16001-BLK1)</b>				Prepared & Analyzed: 08/16/11					
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet						
<b>LCS (1H16001-BS1)</b>				Prepared & Analyzed: 08/16/11					
Chromium, Hexavalent	4.92E-1	5.00E-2	ug/g wet	5.01E-1		98.3	70-130		
<b>Duplicate (1H16001-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/16/11			
Chromium, Hexavalent	<4.99E-2	4.99E-2	ug/g dry		ND			20	
<b>Post Spike (1H16001-PS1)</b>				<b>Source: 1108002-03</b>		Prepared & Analyzed: 08/16/11			
Chromium, Hexavalent	5.11E-1	N/A	ug/mL	4.96E-1	ND	104	75-125		
<b>Batch 1I26001 - 1:1 Water Extract (Cr6)</b>									
<b>Blank (1I26001-BLK1)</b>				Prepared & Analyzed: 09/26/11					
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet						
<b>LCS (1I26001-BS1)</b>				Prepared & Analyzed: 09/26/11					
Chromium, Hexavalent	5.07E-1	5.00E-2	ug/g wet	5.01E-1		101	70-130		
<b>Duplicate (1I26001-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11			
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g dry		ND			20	
<b>Post Spike (1I26001-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11			
Chromium, Hexavalent	5.25E-1	N/A	ug/mL	4.96E-1	2.00E-3	106	75-125		

## Hexavalent Chromium/1:2.5 Water Extract - Quality Control

### Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H16002 - 1:2.5 Water Extract (Cr6)</b>									
<b>Blank (1H16002-BLK1)</b>				Prepared & Analyzed: 08/16/11					
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet						
<b>LCS (1H16002-BS1)</b>				Prepared & Analyzed: 08/16/11					
Chromium, Hexavalent	4.99E-1	5.00E-2	ug/g wet	5.01E-1		99.7	70-130		
<b>Duplicate (1H16002-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/16/11			
Chromium, Hexavalent	<1.29E-1	1.29E-1	ug/g dry		ND			20	
<b>Post Spike (1H16002-PS1)</b>				<b>Source: 1108002-03</b>		Prepared & Analyzed: 08/16/11			
Chromium, Hexavalent	5.03E-1	N/A	ug/mL	4.96E-1	ND	102	75-125		
<b>Batch 1I26002 - 1:2.5 Water Extract (Cr6)</b>									
<b>Blank (1I26002-BLK1)</b>				Prepared & Analyzed: 09/26/11					
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet						
<b>LCS (1I26002-BS1)</b>				Prepared & Analyzed: 09/26/11					
Chromium, Hexavalent	4.99E-1	5.00E-2	ug/g wet	5.01E-1		99.7	70-130		
<b>Duplicate (1I26002-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11			
Chromium, Hexavalent	<1.25E-1	1.25E-1	ug/g dry		ND			20	
<b>Post Spike (1I26002-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11			
Chromium, Hexavalent	5.14E-1	N/A	ug/mL	4.96E-1	1.00E-3	104	75-125		

## Hexavalent Chromium/1:5 Water Extract - Quality Control

### Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H16003 - 1:5 Water Extract (Cr6)</b>										
<b>Blank (1H16003-BLK1)</b>				Prepared & Analyzed: 08/16/11						
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet							
<b>LCS (1H16003-BS1)</b>				Prepared & Analyzed: 08/16/11						
Chromium, Hexavalent	4.99E-1	5.00E-2	ug/g wet	5.01E-1		99.7	70-130			
<b>Duplicate (1H16003-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/16/11				
Chromium, Hexavalent	<2.02E-1	2.02E-1	ug/g dry		ND				20	
<b>Post Spike (1H16003-PS1)</b>				<b>Source: 1108002-03</b>		Prepared & Analyzed: 08/16/11				
Chromium, Hexavalent	5.08E-1	N/A	ug/mL	4.96E-1	ND	103	75-125			
<b>Batch 1I26003 - 1:5 Water Extract (Cr6)</b>										
<b>Blank (1I26003-BLK1)</b>				Prepared & Analyzed: 09/26/11						
Chromium, Hexavalent	<5.00E-2	5.00E-2	ug/g wet							
<b>LCS (1I26003-BS1)</b>				Prepared & Analyzed: 09/26/11						
Chromium, Hexavalent	5.07E-1	5.00E-2	ug/g wet	5.01E-1		101	70-130			
<b>Duplicate (1I26003-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium, Hexavalent	<2.50E-1	2.50E-1	ug/g dry		ND				20	
<b>Post Spike (1I26003-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium, Hexavalent	5.42E-1	N/A	ug/mL	4.96E-1	1.00E-3	109	75-125			



**RCRA Metals By PNNL-AGG-415/1:1 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H22004 - 1:1 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1H22004-BLK1)</b>				Prepared & Analyzed: 08/22/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1H22004-BS1)</b>				Prepared & Analyzed: 08/22/11						
Chromium	5.07E0	3.44E-1	ug/g wet	4.99E0		102	80-120			
Arsenic	5.10E0	2.84E-1	"	4.99E0		102	80-120			
Selenium	4.94E0	7.92E-1	"	4.99E0		99.0	80-120			
Silver	4.84E0	3.13E-1	"	4.99E0		97.0	80-120			
Cadmium	4.87E0	5.73E-2	"	4.99E0		97.6	80-120			
Lead	4.98E0	1.16E-1	"	4.99E0		99.7	80-120			
Barium	5.11E0	3.12E-2	"	4.99E0		102	80-120			
<b>Duplicate (1H22004-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/22/11				
Chromium	<6.88E-3	6.88E-3	ug/g dry		ND					35
Arsenic	1.93E-2	5.66E-3	"		1.48E-2			26.5		35
Selenium	<1.58E-2	1.58E-2	"		ND					35
Silver	<6.25E-3	6.25E-3	"		ND					35
Cadmium	<1.14E-3	1.14E-3	"		ND					35
Lead	<2.32E-3	2.32E-3	"		ND					35
Barium	2.98E-3	6.23E-4	"		3.04E-3			1.90		35
<b>Post Spike (1H22004-PS1)</b>				<b>Source: 1108002-08</b>		Prepared & Analyzed: 08/22/11				
Chromium	5.26E0	N/A	ug/L	5.00E0	1.15E-1	103	75-125			
Arsenic	6.22E0	N/A	"	5.00E0	1.18E0	101	75-125			
Selenium	5.24E0	N/A	"	5.00E0	ND	108	75-125			
Silver	4.84E0	N/A	"	5.00E0	2.28E-3	96.7	75-125			
Cadmium	4.93E0	N/A	"	5.00E0	4.77E-3	98.4	75-125			
Lead	5.01E0	N/A	"	5.00E0	2.98E-3	100	75-125			
Barium	6.13E0	N/A	"	5.00E0	1.06E0	101	75-125			

**RCRA Metals By PNNL-AGG-415/1:1 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1I26008 - 1:1 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1I26008-BLK1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1I26008-BS1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	5.12E0	3.44E-1	ug/g wet	4.99E0		103	80-120			
Arsenic	4.66E0	2.84E-1	"	4.99E0		93.4	80-120			
Selenium	5.01E0	7.92E-1	"	4.99E0		101	80-120			
Silver	4.88E0	3.13E-1	"	4.99E0		97.9	80-120			
Cadmium	4.75E0	5.73E-2	"	4.99E0		95.4	80-120			
Lead	4.92E0	1.16E-1	"	4.99E0		98.8	80-120			
Barium	5.01E0	3.12E-2	"	4.99E0		101	80-120			
<b>Duplicate (1I26008-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	<6.89E-3	6.89E-3	ug/g dry		ND					35
Arsenic	<5.67E-3	5.67E-3	"		ND					35
Selenium	<1.58E-2	1.58E-2	"		ND					35
Silver	<6.25E-3	6.25E-3	"		ND					35
Cadmium	<1.15E-3	1.15E-3	"		ND					35
Lead	<2.32E-3	2.32E-3	"		ND					35
Barium	6.59E-2	6.24E-4	"		5.42E-2			19.5		35
<b>Post Spike (1I26008-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	5.40E0	N/A	ug/L	5.00E0	2.55E-1	103	75-125			
Arsenic	5.51E0	N/A	"	5.00E0	5.28E-1	99.7	75-125			
Selenium	5.07E0	N/A	"	5.00E0	ND	105	75-125			
Silver	4.80E0	N/A	"	5.00E0	3.93E-3	96	75-125			
Cadmium	4.92E0	N/A	"	5.00E0	1.68E-2	98	75-125			
Lead	5.11E0	N/A	"	5.00E0	1.56E-2	102	75-125			
Barium	1.05E1	N/A	"	5.00E0	5.42E0	101	75-125			

**RCRA Metals By PNNL-AGG-415/1:2.5 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H22003 - 1:2.5 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1H22003-BLK1)</b>				Prepared & Analyzed: 08/22/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1H22003-BS1)</b>				Prepared & Analyzed: 08/22/11						
Chromium	4.93E0	3.44E-1	ug/g wet	4.99E0		98.8	80-120			
Arsenic	4.80E0	2.84E-1	"	4.99E0		96.1	80-120			
Selenium	5.02E0	7.92E-1	"	4.99E0		101	80-120			
Silver	4.75E0	3.13E-1	"	4.99E0		95.2	80-120			
Cadmium	4.69E0	5.73E-2	"	4.99E0		94.0	80-120			
Lead	4.95E0	1.16E-1	"	4.99E0		99.1	80-120			
Barium	5.15E0	3.12E-2	"	4.99E0		103	80-120			
<b>Duplicate (1H22003-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/22/11				
Chromium	<1.78E-2	1.78E-2	ug/g dry		ND					35
Arsenic	3.14E-2	1.46E-2	"		4.22E-2			29.2		35
Selenium	<4.09E-2	4.09E-2	"		ND					35
Silver	<1.61E-2	1.61E-2	"		ND					35
Cadmium	<2.96E-3	2.96E-3	"		ND					35
Lead	<6.00E-3	6.00E-3	"		ND					35
Barium	2.05E-3	1.61E-3	"		2.78E-3			30.5		35
<b>Post Spike (1H22003-PS1)</b>				<b>Source: 1108002-08</b>		Prepared & Analyzed: 08/22/11				
Chromium	5.25E0	N/A	ug/L	5.00E0	4.97E-2	104	75-125			
Arsenic	6.07E0	N/A	"	5.00E0	1.07E0	100	75-125			
Selenium	5.40E0	N/A	"	5.00E0	8.66E-2	106	75-125			
Silver	4.83E0	N/A	"	5.00E0	8.39E-4	96.5	75-125			
Cadmium	4.89E0	N/A	"	5.00E0	4.09E-3	97.8	75-125			
Lead	4.97E0	N/A	"	5.00E0	7.55E-3	99.2	75-125			
Barium	5.69E0	N/A	"	5.00E0	6.38E-1	101	75-125			

**RCRA Metals By PNNL-AGG-415/1:2.5 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1I26007 - 1:2.5 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1I26007-BLK1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1I26007-BS1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	4.92E0	3.44E-1	ug/g wet	4.99E0		98.7	80-120			
Arsenic	4.63E0	2.84E-1	"	4.99E0		92.8	80-120			
Selenium	4.95E0	7.92E-1	"	4.99E0		99.2	80-120			
Silver	4.74E0	3.13E-1	"	4.99E0		95.1	80-120			
Cadmium	4.69E0	5.73E-2	"	4.99E0		93.9	80-120			
Lead	4.90E0	1.16E-1	"	4.99E0		98.2	80-120			
Barium	5.07E0	3.12E-2	"	4.99E0		102	80-120			
<b>Duplicate (1I26007-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	<1.72E-2	1.72E-2	ug/g dry		ND					35
Arsenic	1.94E-2	1.42E-2	"		1.95E-2			0.345		35
Selenium	<3.96E-2	3.96E-2	"		ND					35
Silver	<1.56E-2	1.56E-2	"		ND					35
Cadmium	<2.86E-3	2.86E-3	"		ND					35
Lead	<5.81E-3	5.81E-3	"		ND					35
Barium	1.93E-1	1.56E-3	"		1.87E-1			3.34		35
<b>Post Spike (1I26007-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	5.50E0	N/A	ug/L	5.00E0	1.39E-1	107	75-125			
Arsenic	6.10E0	N/A	"	5.00E0	7.80E-1	106	75-125			
Selenium	5.56E0	N/A	"	5.00E0	ND	112	75-125			
Silver	4.83E0	N/A	"	5.00E0	3.01E-3	96.6	75-125			
Cadmium	5.00E0	N/A	"	5.00E0	1.03E-2	99.8	75-125			
Lead	5.10E0	N/A	"	5.00E0	2.68E-2	101	75-125			
Barium	1.25E1	N/A	"	5.00E0	7.48E0	101	75-125			

**RCRA Metals By PNNL-AGG-415/1:5 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H22002 - 1:5 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1H22002-BLK1)</b>				Prepared: 08/22/11 Analyzed: 08/31/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1H22002-BS1)</b>				Prepared: 08/22/11 Analyzed: 08/31/11						
Chromium	5.06E0	3.44E-1	ug/g wet	4.99E0		101	80-120			
Arsenic	4.69E0	2.84E-1	"	4.99E0		94.1	80-120			
Selenium	4.92E0	7.92E-1	"	4.99E0		98.6	80-120			
Silver	4.67E0	3.13E-1	"	4.99E0		93.6	80-120			
Cadmium	4.81E0	5.73E-2	"	4.99E0		96.3	80-120			
Lead	4.85E0	1.16E-1	"	4.99E0		97.1	80-120			
Barium	5.08E0	3.12E-2	"	4.99E0		102	80-120			
<b>Duplicate (1H22002-DUP1)</b>				<b>Source: 1108002-05</b>		Prepared & Analyzed: 08/22/11				
Chromium	<2.79E-2	2.79E-2	ug/g dry		ND				35	
Arsenic	4.86E-2	2.30E-2	"		6.02E-2			21.4	35	
Selenium	<6.41E-2	6.41E-2	"		ND				35	
Silver	<2.53E-2	2.53E-2	"		ND				35	
Cadmium	<4.64E-3	4.64E-3	"		ND				35	
Lead	<9.41E-3	9.41E-3	"		ND				35	
Barium	<2.53E-3	2.53E-3	"		ND				35	
<b>Post Spike (1H22002-PS1)</b>				<b>Source: 1108002-08</b>		Prepared & Analyzed: 08/22/11				
Chromium	5.13E0	N/A	ug/L	5.00E0	3.20E-2	102	75-125			
Arsenic	5.69E0	N/A	"	5.00E0	7.50E-1	98.8	75-125			
Selenium	5.11E0	N/A	"	5.00E0	ND	107	75-125			
Silver	4.82E0	N/A	"	5.00E0	1.54E-3	96.3	75-125			
Cadmium	4.89E0	N/A	"	5.00E0	6.32E-4	97.7	75-125			
Lead	5.04E0	N/A	"	5.00E0	3.07E-3	101	75-125			
Barium	5.62E0	N/A	"	5.00E0	4.65E-1	103	75-125			

**RCRA Metals By PNNL-AGG-415/1:5 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1I26006 - 1:5 Water Extract (ICP/ICPMS)</b>										
<b>Blank (1I26006-BLK1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	<6.89E-3	6.89E-3	ug/g wet							
Arsenic	<5.67E-3	5.67E-3	"							
Selenium	<1.58E-2	1.58E-2	"							
Silver	<6.26E-3	6.26E-3	"							
Cadmium	<1.15E-3	1.15E-3	"							
Lead	<2.32E-3	2.32E-3	"							
Barium	<6.24E-4	6.24E-4	"							
<b>LCS (1I26006-BS1)</b>				Prepared & Analyzed: 09/26/11						
Chromium	5.04E0	3.44E-1	ug/g wet	5.00E0		101	80-120			
Arsenic	4.62E0	2.84E-1	"	5.00E0		92.5	80-120			
Selenium	4.74E0	7.92E-1	"	5.00E0		94.9	80-120			
Silver	4.89E0	3.13E-1	"	5.00E0		98.0	80-120			
Cadmium	4.78E0	5.73E-2	"	5.00E0		95.7	80-120			
Lead	4.95E0	1.16E-1	"	5.00E0		99.1	80-120			
Barium	5.28E0	3.12E-2	"	5.00E0		106	80-120			
<b>Duplicate (1I26006-DUP1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	<3.44E-2	3.44E-2	ug/g dry		ND				35	
Arsenic	4.76E-2	2.84E-2	"		5.39E-2			12.5	35	
Selenium	<7.92E-2	7.92E-2	"		ND				35	
Silver	<3.13E-2	3.13E-2	"		ND				35	
Cadmium	<5.73E-3	5.73E-3	"		ND				35	
Lead	<1.16E-2	1.16E-2	"		ND				35	
Barium	3.71E-1	3.12E-3	"		3.25E-1			13.2	35	
<b>Post Spike (1I26006-PS1)</b>				<b>Source: 1108002-10</b>		Prepared & Analyzed: 09/26/11				
Chromium	5.35E0	N/A	ug/L	5.00E0	1.16E-1	105	75-125			
Arsenic	6.04E0	N/A	"	5.00E0	1.08E0	99.2	75-125			
Selenium	4.96E0	N/A	"	5.00E0	3.04E-1	93.2	75-125			
Silver	4.95E0	N/A	"	5.00E0	4.05E-3	98.9	75-125			
Cadmium	4.99E0	N/A	"	5.00E0	6.83E-3	99.6	75-125			
Lead	5.07E0	N/A	"	5.00E0	4.82E-3	101	75-125			
Barium	1.15E1	N/A	"	5.00E0	6.49E0	99.2	75-125			

**RCRA Metals By PNNL-AGG-415/Acid Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1H22005 - ASTM D 5198 (ICP/ICPMS)**

**Blank (1H22005-BLK1)**

Prepared & Analyzed: 08/22/11

Chromium	<1.88E-1	1.88E-1	ug/g wet
Arsenic	<8.20E-2	8.20E-2	"
Selenium	<1.59E-1	1.59E-1	"
Silver	<5.13E-3	5.13E-3	"
Cadmium	<1.35E-2	1.35E-2	"
Lead	<5.13E-2	5.13E-2	"
Barium	<6.24E-3	6.24E-3	"

**LCS (1H22005-BS1)**

Prepared & Analyzed: 08/22/11

Chromium	6.04E0	9.42E-1	ug/g wet	5.90E0	102	80-120
Arsenic	5.79E0	4.10E-1	"	5.90E0	98.2	80-120
Selenium	6.10E0	7.93E-1	"	5.90E0	103	80-120
Silver	5.65E0	2.56E-2	"	5.90E0	95.7	80-120
Cadmium	5.84E0	6.77E-2	"	5.90E0	99.0	80-120
Lead	6.05E0	2.57E-1	"	5.90E0	103	80-120
Barium	6.13E0	3.12E-2	"	5.90E0	104	80-120

**Duplicate (1H22005-DUP1)**

Source: 1108002-05

Prepared & Analyzed: 08/22/11

Chromium	1.19E1	7.65E-1	ug/g dry	9.05E0	27.5	35
Arsenic	2.43E0	3.33E-1	"	2.05E0	17.3	35
Selenium	<6.44E-1	6.44E-1	"	ND		35
Silver	2.66E-2	2.08E-2	"	2.72E-2	2.27	35
Cadmium	<5.50E-2	5.50E-2	"	ND		35
Lead	3.24E0	2.08E-1	"	2.65E0	19.8	35
Barium	2.84E1	2.53E-2	"	2.28E1	21.9	35

**Post Spike (1H22005-PS1)**

Source: 1108002-08

Prepared: 08/22/11 Analyzed: 08/23/11

Chromium	3.27E1	N/A	ug/L	5.00E0	2.86E1	82.3	75-125
Arsenic	1.00E1	N/A	"	5.00E0	4.97E0	101	75-125
Selenium	5.04E0	N/A	"	5.00E0	2.53E-1	95.7	75-125
Silver	4.32E0	N/A	"	5.00E0	7.49E-2	84.8	75-125
Cadmium	5.01E0	N/A	"	5.00E0	5.55E-1	89.1	75-125
Lead	2.09E1	N/A	"	5.00E0	1.70E1	78.5	75-125
Barium	4.25E1	N/A	"	5.00E0	3.83E1	84.0	75-125

**RCRA Metals By PNNL-AGG-415/Acid Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1I26009 - ASTM D 5198 (ICP/ICPMS)**

**Blank (1I26009-BLK1)**

Prepared: 09/26/11 Analyzed: 09/27/11

Chromium	<1.88E-1	1.88E-1	ug/g wet
Arsenic	<8.20E-2	8.20E-2	"
Selenium	<1.59E-1	1.59E-1	"
Silver	<5.13E-3	5.13E-3	"
Cadmium	<1.35E-2	1.35E-2	"
Lead	<5.13E-2	5.13E-2	"
Barium	<3.12E-2	3.12E-2	"

**LCS (1I26009-BS1)**

Prepared: 09/26/11 Analyzed: 09/27/11

Chromium	5.88E0	9.42E-1	ug/g wet	5.73E0	103	80-120
Arsenic	5.67E0	4.10E-1	"	5.73E0	98.8	80-120
Selenium	5.99E0	7.93E-1	"	5.73E0	105	80-120
Silver	5.68E0	2.56E-2	"	5.73E0	99.1	80-120
Cadmium	5.74E0	6.77E-2	"	5.73E0	100	80-120
Lead	5.98E0	2.57E-1	"	5.73E0	104	80-120
Barium	6.21E0	3.12E-2	"	5.73E0	108	80-120

**Duplicate (1I26009-DUP1)**

Source: 1108002-10

Prepared: 09/26/11 Analyzed: 09/27/11

Chromium	1.34E1	8.10E-1	ug/g dry	1.35E1	0.791	35
Arsenic	4.68E0	3.53E-1	"	3.76E0	21.8	35
Selenium	<6.82E-1	6.82E-1	"	ND		35
Silver	6.57E-2	2.21E-2	"	6.67E-2	1.46	35
Cadmium	2.50E-1	5.82E-2	"	2.24E-1	10.9	35
Lead	5.97E0	2.21E-1	"	6.43E0	7.40	35
Barium	1.72E2	1.34E-1	"	2.52E2	37.8	35

**Post Spike (1I26009-PS1)**

Source: 1108002-10

Prepared: 09/26/11 Analyzed: 09/27/11

Chromium	3.49E1	N/A	ug/L	5.00E0	3.05E1	87.7	75-125
Arsenic	1.30E1	N/A	"	5.00E0	8.51E0	89.5	75-125
Selenium	5.15E0	N/A	"	5.00E0	6.14E-1	90.7	75-125
Silver	4.95E0	N/A	"	5.00E0	1.51E-1	96	75-125
Cadmium	5.39E0	N/A	"	5.00E0	5.07E-1	97.7	75-125
Lead	1.87E1	N/A	"	5.00E0	1.46E1	81.6	75-125
Barium	1.21E2	N/A	"	5.00E0	1.14E2	140	75-125



# Strontium 90/Acid Extract - Quality Control

## Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H26006 - ASTM D 5198 (RadChem)</b>										
<b>Blank (1H26006-BLK1)</b>					Prepared: 08/26/11		Analyzed: 09/06/11			
Strontium-90	<1.69E-1	1.69E-1	pCi/g wet							
<b>LCS (1H26006-BS1)</b>					Prepared: 08/26/11		Analyzed: 09/06/11			
Strontium-90	6.07E1	1.69E-1	pCi/g wet	6.02E1		101	80-120			
<b>Duplicate (1H26006-DUP1)</b>					Source: 1108002-05		Prepared: 08/26/11		Analyzed: 09/06/11	
Strontium-90	<5.80E-1	5.80E-1	pCi/g dry		ND				35	
<b>Matrix Spike (1H26006-MS1)</b>					Source: 1108002-05		Prepared: 08/26/11		Analyzed: 09/06/11	
Strontium-90	6.16E1	1.69E-1	pCi/g dry	6.50E1	ND	97.9	75-125			
<b>Batch 1I23004 - ASTM D 5198 (RadChem)</b>										
<b>Blank (1I23004-BLK1)</b>					Prepared: 09/23/11		Analyzed: 09/28/11			
Strontium-90	<1.93E-1	1.93E-1	pCi/g wet							
<b>LCS (1I23004-BS1)</b>					Prepared: 09/23/11		Analyzed: 09/28/11			
Strontium-90	9.05E1	1.93E-1	pCi/g wet	8.04E1		113	80-120			
<b>Duplicate (1I23004-DUP1)</b>					Source: 1108002-10		Prepared: 09/23/11		Analyzed: 09/28/11	
Strontium-90	<6.69E-1	6.69E-1	pCi/g dry		ND				35	
<b>Matrix Spike (1I23004-MS1)</b>					Source: 1108002-10		Prepared: 09/23/11		Analyzed: 09/28/11	
Strontium-90	9.23E1	1.93E-1	pCi/g dry	8.04E1	ND	118	75-125			

**Strontium 90/1:1 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H26003 - 1:1 Water Extract (RadChem)</b>									
<b>Blank (1H26003-BLK1)</b>					Prepared: 08/26/11	Analyzed: 09/06/11			
Strontium-90	<5.90E-1	5.90E-1	pCi/g wet						
<b>LCS (1H26003-BS1)</b>					Prepared: 08/26/11	Analyzed: 09/06/11			
Strontium-90	6.15E1	5.90E-1	pCi/g wet	6.02E1		102	80-120		
<b>Duplicate (1H26003-DUP1)</b>					Source: 1108002-05	Prepared: 08/26/11	Analyzed: 09/06/11		
Strontium-90	<5.90E-1	5.90E-1	pCi/g dry		ND			35	
<b>Matrix Spike (1H26003-MS1)</b>					Source: 1108002-05	Prepared: 08/26/11	Analyzed: 09/06/11		
Strontium-90	6.13E1	8.03E-1	pCi/g dry	6.50E1	ND	97.5	75-125		
<b>Batch 1I23001 - 1:1 Water Extract (RadChem)</b>									
<b>Blank (1I23001-BLK1)</b>					Prepared: 09/23/11	Analyzed: 09/28/11			
Strontium-90	<6.76E-1	6.76E-1	pCi/g wet						
<b>LCS (1I23001-BS1)</b>					Prepared: 09/23/11	Analyzed: 09/28/11			
Strontium-90	9.07E1	6.76E-1	pCi/g wet	8.04E1		113	80-120		
<b>Duplicate (1I23001-DUP1)</b>					Source: 1108002-10	Prepared: 09/23/11	Analyzed: 09/28/11		
Strontium-90	<6.76E-1	6.76E-1	pCi/g dry		ND			35	
<b>Matrix Spike (1I23001-MS1)</b>					Source: 1108002-10	Prepared: 09/23/11	Analyzed: 09/28/11		
Strontium-90	8.97E1	1.00E0	pCi/g dry	8.04E1	ND	115	75-125		

# Strontium 90/1:2.5 Water Extract - Quality Control

## Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H26004 - 1:2.5 Water Extract (RadChem)</b>										
<b>Blank (1H26004-BLK1)</b>					Prepared: 08/26/11		Analyzed: 09/06/11			
Strontium-90	<5.90E-1	5.90E-1	pCi/g wet							
<b>LCS (1H26004-BS1)</b>					Prepared: 08/26/11		Analyzed: 09/06/11			
Strontium-90	6.23E1	5.90E-1	pCi/g wet	6.02E1		103	80-120			
<b>Duplicate (1H26004-DUP1)</b>					Source: 1108002-05		Prepared: 08/26/11		Analyzed: 09/06/11	
Strontium-90	<1.52E0	1.52E0	pCi/g dry		ND				35	
<b>Matrix Spike (1H26004-MS1)</b>					Source: 1108002-05		Prepared: 08/26/11		Analyzed: 09/06/11	
Strontium-90	6.26E1	8.03E-1	pCi/g dry	6.50E1	ND	99.4	75-125			
<b>Batch 1I23002 - 1:2.5 Water Extract (RadChem)</b>										
<b>Blank (1I23002-BLK1)</b>					Prepared: 09/23/11		Analyzed: 09/28/11			
Strontium-90	<6.76E-1	6.76E-1	pCi/g wet							
<b>LCS (1I23002-BS1)</b>					Prepared: 09/23/11		Analyzed: 09/28/11			
Strontium-90	8.98E1	6.76E-1	pCi/g wet	8.04E1		112	80-120			
<b>Duplicate (1I23002-DUP1)</b>					Source: 1108002-10		Prepared: 09/23/11		Analyzed: 09/28/11	
Strontium-90	<1.69E0	1.69E0	pCi/g dry		ND				35	
<b>Matrix Spike (1I23002-MS1)</b>					Source: 1108002-10		Prepared: 09/23/11		Analyzed: 09/28/11	
Strontium-90	9.15E1	1.00E0	pCi/g dry	8.04E1	ND	118	75-125			

**Strontium 90/1:5 Water Extract - Quality Control**  
**Environmental Science Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1H26005 - 1:5 Water Extract (RadChem)</b>									
<b>Blank (1H26005-BLK1)</b>					Prepared: 08/26/11	Analyzed: 09/06/11			
Strontium-90	<5.90E-1	5.90E-1	pCi/g wet						
<b>LCS (1H26005-BS1)</b>					Prepared: 08/26/11	Analyzed: 09/06/11			
Strontium-90	6.14E1	5.90E-1	pCi/g wet	6.02E1		102	80-120		
<b>Duplicate (1H26005-DUP1)</b>					Source: 1108002-05	Prepared: 08/26/11	Analyzed: 09/06/11		
Strontium-90	<2.39E0	2.39E0	pCi/g dry		ND			35	
<b>Matrix Spike (1H26005-MS1)</b>					Source: 1108002-05	Prepared: 08/26/11	Analyzed: 09/06/11		
Strontium-90	6.24E1	8.03E-1	pCi/g dry	6.50E1	ND	99	75-125		
<b>Batch 1I23003 - 1:5 Water Extract (RadChem)</b>									
<b>Blank (1I23003-BLK1)</b>					Prepared: 09/23/11	Analyzed: 09/28/11			
Strontium-90	<6.76E-1	6.76E-1	pCi/g wet						
<b>LCS (1I23003-BS1)</b>					Prepared: 09/23/11	Analyzed: 09/28/11			
Strontium-90	9.27E1	6.76E-1	pCi/g wet	8.04E1		115	80-120		
<b>Duplicate (1I23003-DUP1)</b>					Source: 1108002-10	Prepared: 09/23/11	Analyzed: 09/28/11		
Strontium-90	<3.38E0	3.38E0	pCi/g dry		ND			35	
<b>Matrix Spike (1I23003-MS1)</b>					Source: 1108002-10	Prepared: 09/23/11	Analyzed: 09/28/11		
Strontium-90	9.32E1	1.00E0	pCi/g dry	8.04E1	ND	119	75-125		

<b>Strontium 90 - Quality Control</b>		
<b>ASTM D 5198 (RadChem)</b>		
Sample ID	HEIS ID	Tracer Recovery
1108002-01	B2C4B3	94.1%
1108002-02	B2C4B4	92.3%
1108002-03	B2C4B5	93.7%
1108002-04	B2D4K4	92.2%
1108002-05	B2D1X0	92.7%
1108002-06	B2D1X1	94.6%
1108002-07	B2C4W2	95.1%
1108002-08	B2C4W3	94.3%
1108002-09	B2C414	90.3%
1108002-10	B2C415	94.1%
<b>Strontium 90 - Quality Control</b>		
<b>1:1 Water Extract (RadChem)</b>		
Sample ID	HEIS ID	Tracer Recovery
1108002-01	B2C4B3	91.2%
1108002-02	B2C4B4	91.2%
1108002-03	B2C4B5	89.7%
1108002-04	B2D4K4	90.6%
1108002-05	B2D1X0	92.0%
1108002-06	B2D1X1	91.9%
1108002-07	B2C4W2	90.7%
1108002-08	B2C4W3	92.6%
1108002-09	B2C414	92.6%
1108002-10	B2C415	93.5%
<b>Strontium 90 - Quality Control</b>		
<b>1:2.5 Water Extract (RadChem)</b>		
Sample ID	HEIS ID	Tracer Recovery
1108002-01	B2C4B3	93.4%
1108002-02	B2C4B4	93.2%
1108002-03	B2C4B5	95.6%
1108002-04	B2D4K4	91.6%
1108002-05	B2D1X0	93.8%
1108002-06	B2D1X1	92.2%
1108002-07	B2C4W2	93.5%
1108002-08	B2C4W3	92.4%
1108002-09	B2C414	92.0%
1108002-10	B2C415	93.6%
<b>Strontium 90 - Quality Control</b>		
<b>1:5 Water Extract (RadChem)</b>		
Sample ID	HEIS ID	Tracer Recovery
1108002-01	B2C4B3	90.6%
1108002-02	B2C4B4	93.8%
1108002-03	B2C4B5	92.1%
1108002-04	B2D4K4	90.5%
1108002-05	B2D1X0	92.1%
1108002-06	B2D1X1	91.0%
1108002-07	B2C4W2	93.0%
1108002-08	B2C4W3	89.8%
1108002-09	B2C414	93.4%
1108002-10	B2C415	92.6%

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-057-058	PAGE 1 OF 1
COLLECTOR <i>Turner</i>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8187 (199-N-185); I-017		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>N/A</i>		FIELD LOGBOOK NO. <i>HNF-N-486-1 pg 36</i>	ACTUAL SAMPLE DEPTH <i>49.7-52.3 ft</i>	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	<b>ORIGINAL</b>
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	6 Months
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		SPECIAL HANDLING AND/OR STORAGE	VOLUME
		SAMPLE ANALYSIS	KD - Batch {No CAS};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2C4B3	SOIL	3-31-11	1125	<i>X</i>

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>3-31-11 1240</i>	RECEIVED BY/STORED IN <i>MO 413 SS4 R1</i>	DATE/TIME <i>3-31-11 1240</i>	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. <input type="checkbox"/>  <i>BRM # 13564</i>	
RELINQUISHED BY/REMOVED FROM <i>MO 413 SS4 R1</i>	DATE/TIME <i>4-7-11 1200</i>	RECEIVED BY/STORED IN <i>MAWHITZMAW</i>	DATE/TIME <i>4-7-11 1200</i>		
RELINQUISHED BY/REMOVED FROM <i>MAWHITZMAW</i>	DATE/TIME <i>4-7-11 1300</i>	RECEIVED BY/STORED IN <i>J. Kufnyakov</i>	DATE/TIME <i>4-7-11 1300</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-057-061	PAGE 1 OF 1
COLLECTOR <i>Turner</i>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8187 (199-N-185); I-018		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>N/A</i>		FIELD LOGBOOK NO. <i>HNF-N-486-1 pg 37</i>	ACTUAL SAMPLE DEPTH <i>69.7-72.2 Ft</i>	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		HOLDING TIME	6 Months
		TYPE OF CONTAINER	G/P
		NO. OF CONTAINER(S)	1
		VOLUME	1L
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	KD - Batch (No CAS);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2C4B4	SOIL	4-4-11	0920	<i>1</i>

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>4-4-11 1510</i>	RECEIVED BY/STORED IN <i>MO413 SS4 R1</i>	DATE/TIME <i>4-4-11 1510</i>	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. <input type="checkbox"/>  <i>BR M # 13564</i>	
RELINQUISHED BY/REMOVED FROM <i>MO413 SS4 R1</i>	DATE/TIME <i>4-7-11 1200</i>	RECEIVED BY/STORED IN <i>Mawhite-Mazur</i>	DATE/TIME <i>4-7-11 1200</i>		
RELINQUISHED BY/REMOVED FROM <i>Mawhite-Mazur</i>	DATE/TIME <i>4-7-11 1300</i>	RECEIVED BY/STORED IN <i>Joe Kutnyak</i>	DATE/TIME <i>4-7-11 1300</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-057-064	PAGE 1 OF 1
COLLECTOR <i>Turner</i>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8187 (199-N-185); I-019		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>N/A</i>		FIELD LOGBOOK NO. <i>HNA-N-486-1 PG 38</i>	ACTUAL SAMPLE DEPTH <i>90-92.5 FT</i>	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>	
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION Cool~4C				
		HOLDING TIME 6 Months				
		TYPE OF CONTAINER G/P				
		NO. OF CONTAINER(S) 1				
		VOLUME 1L				
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS KD - Batch {No CAS};				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B2C4B5	SOIL	4-6-11	1330	<i>X</i>		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>4-6-11 1450</i>	RECEIVED BY/STORED IN <i>M0413 SS4 RI</i>	DATE/TIME <i>4-6-11 1450</i>	<b>** The 100 Area S&amp;GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. <input type="checkbox"/></b>  <i>BRM # 13564</i>	
RELINQUISHED BY/REMOVED FROM <i>M0413 SS4 RI</i>	DATE/TIME <i>4-7-11 1200</i>	RECEIVED BY/STORED IN <i>Mawhite Mawhite</i>	DATE/TIME <i>4-7-11 1200</i>		
RELINQUISHED BY/REMOVED FROM <i>Mawhite Mawhite</i>	DATE/TIME <i>4-7-11 1300</i>	RECEIVED BY/STORED IN <i>F. Kutnyakov</i>	DATE/TIME <i>4-7-11 1300</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-057-132	PAGE 1 OF 1
COLLECTOR <b>BAILON</b>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8185 (199-N-183); I-026		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. <b>N/A</b>		FIELD LOGBOOK NO. <b>HNF-N-585-15/72</b>	ACTUAL SAMPLE DEPTH <b>100.7' - 109.2'</b>	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C	
		HOLDING TIME	6 Months	
		TYPE OF CONTAINER	G/P	
		NO. OF CONTAINER(S)	1	
		VOLUME	1L	
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	KD - Batch (No CAS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2D4K4	SOIL	4-26-11	1355	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<b>** The 100 Area S&amp;GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.</b>  <b>BRM # 13564</b>	
<b>J. BAILON</b>	<b>4-26-11 1500</b>	<b>MOY, J. SSU R1</b>	<b>4-26-11 1500</b>		
<b>MOY, J. SSU R1</b>	<b>5-4-11 0800</b>	<b>Mawhin Marwhe</b>	<b>5-4-11 0800</b>		
<b>Mawhin Marwhe</b>	<b>5-4-11 1000</b>	<b>I. Kutnyakov</b>	<b>5-4-11 1000</b>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F11-057-119	PAGE 1 OF 1
<b>COLLECTOR</b> Turner, Crow, Billingsley		<b>COMPANY CONTACT</b> RADLOFF, AW		<b>TELEPHONE NO.</b> 376-4554	<b>PROJECT COORDINATOR</b> RADLOFF, AW	<b>PRICE CODE</b> 8H	<b>DATA TURNAROUND</b> 30 Days / 30 Days
<b>SAMPLING LOCATION</b> C8184 (199-N-182); I-002		<b>PROJECT DESIGNATION</b> 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment			<b>SAF NO.</b> F11-057	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b> N/A		<b>FIELD LOGBOOK NO.</b> HNF-N-585-15 PG 75	<b>ACTUAL SAMPLE DEPTH</b> 126-8' - 129.3' ±		<b>COA</b> 300104ES10	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE <b>ORIGINAL</b>	
<b>SHIPPED TO</b> Environmental Sciences Laboratory		<b>OFFSITE PROPERTY NO.</b> N/A			<b>BILL OF LADING/AIR BILL NO.</b> N/A		
<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)		<b>PRESERVATION</b>		Cool~4C		
			<b>HOLDING TIME</b>		6 Months		
			<b>TYPE OF CONTAINER</b>		G/P		
			<b>NO. OF CONTAINER(S)</b>		1		
	<b>SPECIAL HANDLING AND/OR STORAGE</b>		<b>VOLUME</b>		1L		
		<b>SAMPLE ANALYSIS</b>		KD - Batch (No CAS);			
<b>SAMPLE NO.</b>	<b>MATRIX*</b>	<b>SAMPLE DATE</b>	<b>SAMPLE TIME</b>				
B2D1X0	SOIL	7-7-11	1015	X			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  BRM #13564	
A. Turner	7-7-11 1200	M. J. SSS4 R1	7-7-11 1200		
SSU-R1	JUL 11 2011 0930	J.R. Aguilar	JUL 11 2011 0930		
J.R. Aguilar	JUL 11 2011 1300	I. Kudnyakov	07/11/11 1300		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

<b>LABORATORY SECTION</b>	<b>RECEIVED BY</b>	<b>TITLE</b>	<b>DATE/TIME</b>
<b>FINAL SAMPLE DISPOSITION</b>	<b>DISPOSAL METHOD</b>	<b>DISPOSED BY</b>	<b>DATE/TIME</b>

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F11-057-120	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow, Billingsley</i>		COMPANY CONTACT RADLOFF, AW		TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8184 (199-N-182); I-003		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment			SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>N/A</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 pgs 76</i>	ACTUAL SAMPLE DEPTH <i>151.5 - 154 ft</i>		COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>	
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C				
		HOLDING TIME	6 Months				
		TYPE OF CONTAINER	G/P				
		NO. OF CONTAINER(S)	1				
		VOLUME	1L				
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS		KD - Batch (No CAS);			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2D1X1	SOIL	7-12-11	1340	X			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>7-12-11 1500</i>	RECEIVED BY/STORED IN <i>MO 413 SSK R1</i>	DATE/TIME <i>7-12-11 1500</i>	** The CACN for all analytical work at WSCF laboratory is 402057ES20. ** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  <i>BRM # 13564</i>	
RELINQUISHED BY/REMOVED FROM <b>SSU-R1</b>	DATE/TIME <i>JUL 13 2011 0700</i>	RECEIVED BY/STORED IN <i>J.R. Aguilar</i>	DATE/TIME <i>JUL 13 2011 0700</i>		
RELINQUISHED BY/REMOVED FROM <i>J.R. Aguilar</i>	DATE/TIME <i>JUL 13 2011 1300</i>	RECEIVED BY/STORED IN <i>I. Kutyryga</i>	DATE/TIME <i>JUL 13 2011 1300</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-057-067	PAGE 1 OF 1
COLLECTOR <b>JK Bailey</b>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8191 (199-N-189); I-029		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-SSS-10/83	ACTUAL SAMPLE DEPTH 114.8' - 117.3'	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION		Cool~4C
		HOLDING TIME		6 Months
		TYPE OF CONTAINER		G/P
		NO. OF CONTAINER(S)		1
		VOLUME		1L
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		KD - Batch (No CAS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2C4W2	SOIL	JUL 18 2011	1030	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <b>JK Bailey</b>		DATE/TIME JUL 18 2011 1200		RECEIVED BY/STORED IN MO-413 SSU-R1	
RELINQUISHED BY/REMOVED FROM MO-413 SSU-R1		DATE/TIME 7-18-11 1220		RECEIVED BY/STORED IN am Aquilar am Qh	
RELINQUISHED BY/REMOVED FROM am Aquilar am Qh		DATE/TIME 7-18-11 1300		RECEIVED BY/STORED IN L. Kudnyakov	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN	
LABORATORY SECTION		RECEIVED BY		TITLE	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY	

\*\* The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

BRM # 13564

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-057-071	PAGE 1 OF 1
COLLECTOR <b>JK Bailey</b>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8191 (199-N-189); I-028		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. <i>N/A</i>		FIELD LOGBOOK NO. <i>HNE-N-585-10/82</i>	ACTUAL SAMPLE DEPTH <i>108.0'-110.5'</i>	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C	
		HOLDING TIME	6 Months	
		TYPE OF CONTAINER	G/P	
		NO. OF CONTAINER(S)	1	
		VOLUME	1L	
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	KD - Batch (No CAS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2C4W3	SOIL	JUL 14 2011	1400	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <b>JK Bailey</b>	DATE/TIME JUL 14 2011/1500	RECEIVED BY/STORED IN <b>MO-413 SS0411</b>	DATE/TIME JUL 14 2011/1500	<b>BRM # 13564</b>	
RELINQUISHED BY/REMOVED FROM <i>SSC 21</i>	DATE/TIME 7/12/11 0930	RECEIVED BY/STORED IN <i>JK Bailey</i>	DATE/TIME 7/12/11 0930		
RELINQUISHED BY/REMOVED FROM <i>JK Bailey</i>	DATE/TIME 7/12/11 1300	RECEIVED BY/STORED IN <i>I. Kudryakov</i>	DATE/TIME 7-18-11 1300		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-057-046	PAGE 1 OF 1
COLLECTOR <b>JK Bailey</b>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE C05	Data Turnaround 7 Days / 7 Days
SAMPLING LOCATION C8186 (199-N-184); I-029		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY <input type="checkbox"/>	ways KS 8/24/11
ICE CHEST NO. N/A		FIELD LOGBOOK NO. <i>PS</i> HNF-N- 585-14 46	ACTUAL SAMPLE DEPTH 105.5' - 108.0' FT	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>	
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C			
		HOLDING TIME	6 Months			
		TYPE OF CONTAINER	G/P			
		NO. OF CONTAINER(S)	1			
	VOLUME	1L				
	<b>SPECIAL HANDLING AND/OR STORAGE</b>	<b>SAMPLE ANALYSIS</b>	KD - Batch (No CAS);			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B2C415	SOIL	SEP 19 2011	1010	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <b>JK Bailey</b>	DATE/TIME SEP 19 2011 1100	RECEIVED BY/STORED IN MO-413 SSU-R1	DATE/TIME SEP 19 2011 1100		
RELINQUISHED BY/REMOVED FROM SSU-R1	DATE/TIME SEP 20 2011 0740	RECEIVED BY/STORED IN J.R. Aguilar	DATE/TIME SEP 20 2011 0740		
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME SEP 20 2011 1330	RECEIVED BY/STORED IN J. Kudnyak	DATE/TIME SEP 20 2011 1330		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-057-041	PAGE 1 OF 1
COLLECTOR <i>Turner, Webb, Southerland</i>		COMPANY CONTACT RADLOFF, AW	TELEPHONE NO. 376-4554	PROJECT COORDINATOR RADLOFF, AW	PRICE CODE C05	Data Turnaround 7 Days / 7 Days
SAMPLING LOCATION C8186 (199-N-184); I-028		PROJECT DESIGNATION 100 Area Remedial Investigation/Feasibility Analysis - 100-NR-2 - Sediment		SAF NO. F11-057	AIR QUALITY	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. <i>P5</i> HNF-N- 585-14 45	ACTUAL SAMPLE DEPTH 98-100.5 FT	COA 300104ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL	
SHIPPED TO Environmental Sciences Laboratory		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C			
HOLDING TIME		6 Months				
TYPE OF CONTAINER		G/P				
NO. OF CONTAINER(S)		1				
VOLUME		1L				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		KD - Batch (No CAS);		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B2C414	SOIL	9-16-11	1035	A		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME 9-16-11 1335	RECEIVED BY/STORED IN MO-413 SSU-R1	DATE/TIME SEP 16 2011 1335		
RELINQUISHED BY/REMOVED FROM SSU-R1	DATE/TIME SEP 20 2011 0740	RECEIVED BY/STORED IN J.R. Aguilar	DATE/TIME SEP 20 2011 0740		
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME SEP 20 2011 1330	RECEIVED BY/STORED IN J. Kuehner	DATE/TIME SEP 20 2011 1330		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	