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Analytical Data Report of Grab Samples Collected From BP-5 Operable Unit G Well (C5853)

Michael Lindberg

August 2009

Pacific Northwest
NATIONAL LABORATORY

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To: Dale Dyekman

From: Michael J. Lindberg

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

Subject: Analytical Data Report for Sediment Samples Collected From Borehole C5853 (BP 5 G Well), Sample Delivery Group ESL080018, SAF Number F08-050

This letter contains the following information for sample delivery group ESL080018

- Cover Sheet
- Narrative
- Analytical Results
- Quality Control
- Geologic Logs
- Geologic Photos
- Chain of Custodies

Introduction

Between April 29, 2008 and July 17, 2008 sediment samples were received from Borehole C5853 (BP 5 G Well) for geochemical studies.

Analytical Results/Methodology

The analyses for this project were performed at the 325 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 could not be met. The statement of work requires samples to be selected at the completion of the borehole. All applicable hold times were started from the time of preparation and not the time of sampling.

Preparation Blank (PB):

No diiscrepancies noted.

Duplicate (DUP):

No diiscrepancies noted.

Laboratory Control Samples (LCS):

The ICV is considered the blank spike for alkalinity, electric conductivity and pH measurements. The value measured for the ICV is maintained at the laboratory and not reported.

LCS recovery for Sodium (ND) was outside acceptance limits (75-125) in 8L08007-BS1 for ICP-OES Vadose-AE.
The due to the dilution performed on the LCS, the sodium concentration is below the detection limits. All other QC for sodium was in control. There should be no impact to data as reported.

Post Spike (PS):

Post-Spike Recovery for Calcium (NR) was outside acceptance limits (75-125) in 8L08007-PS1 for ICP-OES Vadose-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.

Post-Spike Recovery for Iron (NR) was outside acceptance limits (75-125) in 8L08007-PS1 for ICP-OES Vadose-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.

Post-Spike Recovery for Magnesium (NR) was outside acceptance limits (75-125) in 8L08007-PS1 for ICP-OES Vadose-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.

Post-Spike Recovery for Sodium (10.8%) was outside acceptance limits (75-125) in 8L08007-PS1 for ICP-OES Vadose-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):

Not Applicable

Other QC Criteria:

No discrepancies noted.

Case Narrative Report

DISCLAIMER

SAMPLES INCLUDED IN THIS REPORT

200 BP 5 OU, C5853 G-Well VZ

HEIS No.	Laboratory ID	Matrix	Date Collected	Date Received
B1TTN5	0804026-05	SOIL	4/21/08 14:25	4/29/08 13:00
B1TTN8	0804026-08	SOIL	4/22/08 08:05	4/29/08 13:00
B1TTN9	0804026-11	SOIL	6/24/08 10:05	7/1/08 14:15
B1TTP0	0804026-12	SOIL	6/24/08 10:55	7/1/08 14:15
B1TTP3	0804026-15	SOIL	6/26/08 14:40	7/1/08 14:15
B1TTR2	0804026-21	SOIL	7/10/08 11:30	7/16/08 11:15
B1TTR6	0804026-25	SOIL	7/11/08 10:20	7/16/08 11:15
B1WDD5	0804026-32	SOIL	7/15/08 12:30	7/17/08 13:30

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

Metals 1:1 DI Water Extract by ICPMS

Metals Acid Extract by ICPMS

AGG-TOC-001

Alkalinity, Titrimetic (pH 4.5)

Anions By Ion Chromatography

Carbon, Total, Combustion or Oxidation

Cyanide by Mircodistillation/Colorimetric

GEA No Preparation

Geological Description

Inorganic Carbon, Total, Combustion or Oxidation

Metals 1:1 Water Extract by ICPOES

Metals Acid Extract by ICPOES

Moisture Content

Nitric Acid Digestion

pH of Waters By Electrode

Specific Conductance

Tc_U Acid Extract by ICPMS

Tc_U 1:1 DI Water Extract by ICPMS

SAMPLES ANALYZED IN THIS REPORT

HEIS No.	Laboratory ID	Matrix	Date Collected	Date Received
B1TTN5	0804026-05	SOIL	4/21/08 14:25	4/29/08 13:00
B1TTN8	0804026-08	SOIL	4/22/08 08:05	4/29/08 13:00
B1TTN9	0804026-11	SOIL	6/24/08 10:05	7/1/08 14:15
B1TTP0	0804026-12	SOIL	6/24/08 10:55	7/1/08 14:15
B1TTP3	0804026-15	SOIL	6/26/08 14:40	7/1/08 14:15
B1TTR2	0804026-21	SOIL	7/10/08 11:30	7/16/08 11:15
B1TTR6	0804026-25	SOIL	7/11/08 10:20	7/16/08 11:15
B1WDD5	0804026-32	SOIL	7/15/08 12:30	7/17/08 13:30

Wet Chemistry

Alkalinity as CaCO3 (ug/g dry) by Standard Methods 2320B

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	3.86E1	2.33E1	12/05/08	8L05016
0804026-08	B1TTN8	4.98E1	2.32E1	12/05/08	8L05016
0804026-11	B1TTN9	9.78E1	2.35E1	12/05/08	8L05016
0804026-12	B1TTP0	2.68E1	2.35E1	12/05/08	8L05016
0804026-15	B1TTP3	3.37E2	2.35E1	12/05/08	8L05016
0804026-21	B1TTR2	9.02E1	2.35E1	12/05/08	8L05016
0804026-25	B1TTR6	5.59E1	2.42E1	12/05/08	8L05016
0804026-32	B1WDD5	5.74E1	2.35E1	12/08/08	8L05016

Wet Chemistry

Specific Conductance (EC) (mS/cm) by EPA 120.1

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	1.43E-1	1.00E-2	12/04/08	8L04017
0804026-08	B1TTN8	1.37E-1	1.00E-2	12/04/08	8L04017
0804026-11	B1TTN9	4.57E-1	1.00E-2	12/04/08	8L04017
0804026-12	B1TTP0	<1.00E-2	1.00E-2	12/04/08	8L04017
0804026-15	B1TTP3	1.63E0	1.00E-2	12/04/08	8L04017
0804026-21	B1TTR2	1.85E-1	1.00E-2	12/04/08	8L04017
0804026-25	B1TTR6	1.82E-1	1.00E-2	12/04/08	8L04017
0804026-32	B1WDD5	2.84E-1	1.00E-2	12/04/08	8L04017

Wet Chemistry

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	4.39E0	N/A	8/14/08	8F11009
0804026-08	B1TTN8	9.14E0	N/A	8/14/08	8F11009
0804026-11	B1TTN9	1.94E1	N/A	8/14/08	8F11009
0804026-12	B1TTP0	3.88E1	N/A	8/14/08	8F11009
0804026-15	B1TTP3	9.32E1	N/A	8/14/08	8F11009
0804026-21	B1TTR2	4.19E1	N/A	8/14/08	8F11009
0804026-25	B1TTR6	4.48E1	N/A	8/14/08	8F11009
0804026-32	B1WDD5	6.40E1	N/A	8/14/08	8F11009

Wet Chemistry

pH (pH Units) by AGG-pH-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	8.09E0	N/A	12/04/08	8L04001
0804026-08	B1TTN8	8.00E0	N/A	12/04/08	8L04001
0804026-11	B1TTN9	8.29E0	N/A	12/04/08	8L04001
0804026-12	B1TTP0	7.73E0	N/A	12/04/08	8L04001
0804026-15	B1TTP3	8.30E0	N/A	12/04/08	8L04001
0804026-21	B1TTR2	8.19E0	N/A	12/04/08	8L04001
0804026-25	B1TTR6	8.00E0	N/A	12/04/08	8L04001
0804026-32	B1WDD5	7.92E0	N/A	12/04/08	8L04001

Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
16984-48-8	Fluoride	5.12E-1	ug/g dry	1.98E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	6.42E0	ug/g dry	4.95E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<9.90E-1	ug/g dry	9.90E-1	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	4.22E0	ug/g dry	9.90E-1	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	4.12E1	ug/g dry	1.49E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.49E0	ug/g dry	1.49E0	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
16984-48-8	Fluoride	4.45E-1	ug/g dry	1.97E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	5.17E0	ug/g dry	4.93E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<9.87E-1	ug/g dry	9.87E-1	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	<9.87E-1	ug/g dry	9.87E-1	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	3.37E1	ug/g dry	1.48E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.48E0	ug/g dry	1.48E0	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
16984-48-8	Fluoride	6.88E-1	ug/g dry	2.00E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	1.01E1	ug/g dry	5.00E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	<1.00E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	1.74E2	ug/g dry	1.50E1	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
16984-48-8	Fluoride	8.75E-1	ug/g dry	2.00E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	6.04E0	ug/g dry	5.00E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	3.82E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	2.39E1	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
16984-48-8	Fluoride	<2.00E0	ug/g dry	2.00E0	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	4.55E1	ug/g dry	5.01E0	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<1.00E1	ug/g dry	1.00E1	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	<1.00E1	ug/g dry	1.00E1	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	5.97E2	ug/g dry	1.50E1	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.50E1	ug/g dry	1.50E1	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
16984-48-8	Fluoride	5.22E-1	ug/g dry	2.00E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	6.00E0	ug/g dry	5.00E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	<1.00E0	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	2.34E1	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
16984-48-8	Fluoride	2.45E-1	ug/g dry	2.06E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	5.91E0	ug/g dry	5.15E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	<1.03E0	ug/g dry	1.03E0	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	2.98E1	ug/g dry	1.03E0	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	2.83E1	ug/g dry	1.54E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.54E0	ug/g dry	1.54E0	12/04/08	8L03001	AGG-IC-001

Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
16984-48-8	Fluoride	4.36E-1	ug/g dry	2.00E-1	12/04/08	8L03001	AGG-IC-001
16887-00-6	Chloride	1.30E1	ug/g dry	5.01E-1	12/04/08	8L03001	AGG-IC-001
14797-65-0	Nitrite	3.05E1	ug/g dry	1.00E0	12/04/08	8L03001	AGG-IC-001
14797-55-8	Nitrate	1.11E2	ug/g dry	1.00E1	12/04/08	8L03001	AGG-IC-001
14808-79-8	Sulfate	5.16E1	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001
l4265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	12/04/08	8L03001	AGG-IC-001

Cyanide by Mircodistillation/Colorimetric

Cyanide (ug/g dry) by MICRODIST Cyanide Method

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	<2.09E-1	2.09E-1	12/10/08	9H06005
0804026-12	B1TTP0	<2.78E-1	2.78E-1	12/10/08	9H06005
0804026-15	B1TTP3	4.08E-1	3.86E-1	12/10/08	9H06005
0804026-25	B1TTR6	<2.90E-1	2.90E-1	12/10/08	9H06005
0804026-32	B1WDD5	<3.28E-1	3.28E-1	12/10/08	9H06008

Total Metals by PNNL-AGG-ICP-AES/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
7429-90-5	Aluminum	2.01E-1	ug/g dry	1.42E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	3.64E-2	ug/g dry	1.45E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.17E1	ug/g dry	6.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.35E-1	ug/g dry	2.35E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	5.32E0	ug/g dry	3.84E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.22E0	ug/g dry	1.38E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.83E-2	ug/g dry	2.83E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.54E-1	ug/g dry	1.54E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.69E0	ug/g dry	1.69E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.44E1	ug/g dry	1.10E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.04E0	ug/g dry	1.04E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
7429-90-5	Aluminum	<1.41E-1	ug/g dry	1.41E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	2.85E-2	ug/g dry	1.45E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.57E1	ug/g dry	6.36E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.34E-1	ug/g dry	2.34E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.76E0	ug/g dry	3.83E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.31E0	ug/g dry	1.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.82E-2	ug/g dry	2.82E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.53E-1	ug/g dry	1.53E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.69E0	ug/g dry	1.69E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.77E0	ug/g dry	1.10E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.04E0	ug/g dry	1.04E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
7429-90-5	Aluminum	<1.43E-1	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	5.03E-2	ug/g dry	1.47E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.98E1	ug/g dry	6.45E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.37E-1	ug/g dry	2.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	6.85E0	ug/g dry	3.88E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	6.26E0	ug/g dry	1.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.86E-2	ug/g dry	2.86E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.56E-1	ug/g dry	1.56E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.71E0	ug/g dry	1.71E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	8.35E1	ug/g dry	1.12E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.06E0	ug/g dry	1.06E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
7429-90-5	Aluminum	1.17E0	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	<1.47E-2	ug/g dry	1.47E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.26E0	ug/g dry	6.46E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.37E-1	ug/g dry	2.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.85E0	ug/g dry	3.88E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.64E0	ug/g dry	1.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.86E-2	ug/g dry	2.86E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.56E-1	ug/g dry	1.56E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.71E0	ug/g dry	1.71E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.67E0	ug/g dry	1.12E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.06E0	ug/g dry	1.06E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			

Total Metals by PNNL-AGG-ICP-AES/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
7429-90-5	Aluminum	<1.43E-1	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	4.36E-2	ug/g dry	1.47E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.09E2	ug/g dry	6.46E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.37E-1	ug/g dry	2.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.40E1	ug/g dry	3.89E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.17E1	ug/g dry	1.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.34E0	ug/g dry	2.86E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.56E-1	ug/g dry	1.56E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.71E0	ug/g dry	1.71E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.47E2	ug/g dry	1.12E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.06E0	ug/g dry	1.06E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
7429-90-5	Aluminum	<1.43E-1	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	4.10E-2	ug/g dry	1.47E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.21E1	ug/g dry	6.45E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.37E-1	ug/g dry	2.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	5.40E0	ug/g dry	3.88E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.68E0	ug/g dry	1.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	9.51E-2	ug/g dry	2.86E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.56E-1	ug/g dry	1.56E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.71E0	ug/g dry	1.71E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.71E1	ug/g dry	1.12E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.06E0	ug/g dry	1.06E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
7429-90-5	Aluminum	<1.47E-1	ug/g dry	1.47E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	7.00E-2	ug/g dry	1.51E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.88E1	ug/g dry	6.64E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.44E-1	ug/g dry	2.44E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.22E0	ug/g dry	4.00E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	5.76E0	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.94E-2	ug/g dry	2.94E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.60E-1	ug/g dry	1.60E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.76E0	ug/g dry	1.76E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.22E1	ug/g dry	1.15E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.09E0	ug/g dry	1.09E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
7429-90-5	Aluminum	<1.43E-1	ug/g dry	1.43E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-39-3	Barium	1.27E-1	ug/g dry	1.47E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-70-2	Calcium	4.16E1	ug/g dry	6.46E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-89-6	Iron	<2.37E-1	ug/g dry	2.37E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.00E1	ug/g dry	3.89E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.28E1	ug/g dry	1.39E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<2.86E-2	ug/g dry	2.86E-2	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<1.56E-1	ug/g dry	1.56E-1	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.71E0	ug/g dry	1.71E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.10E1	ug/g dry	1.12E0	12/10/08	8L08005	PNNL-AGG-ICP-AES
7440-36-0	Antimony	<1.06E0	ug/g dry	1.06E0	12/10/08	8L08005	PNNL-AGG-ICP-AES

Total Metals by PNNL-AGG-ICP-AES/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
7429-90-5	Aluminum	5.37E3	ug/g dry	8.15E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	6.19E1	ug/g dry	7.76E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	4.18E3	ug/g dry	3.03E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	9.11E0	ug/g dry	6.77E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.33E4	ug/g dry	2.07E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	8.01E2	ug/g dry	1.92E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.14E3	ug/g dry	6.41E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.00E2	ug/g dry	2.42E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	6.83E0	ug/g dry	1.67E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.15E0	ug/g dry	9.15E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	4.71E2	ug/g dry	2.17E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
7429-90-5	Aluminum	3.91E3	ug/g dry	9.33E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	4.67E1	ug/g dry	8.88E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	3.36E3	ug/g dry	3.46E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.85E0	ug/g dry	7.75E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.28E4	ug/g dry	2.37E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	5.44E2	ug/g dry	2.20E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.08E3	ug/g dry	7.34E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.72E2	ug/g dry	2.78E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	9.25E0	ug/g dry	1.91E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.05E1	ug/g dry	1.05E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.90E2	ug/g dry	2.48E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
7429-90-5	Aluminum	1.25E4	ug/g dry	1.00E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	6.76E1	ug/g dry	9.52E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.08E4	ug/g dry	3.71E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.19E1	ug/g dry	8.31E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	2.43E4	ug/g dry	2.54E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.38E3	ug/g dry	2.36E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	5.19E3	ug/g dry	7.86E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.82E2	ug/g dry	2.98E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	6.56E0	ug/g dry	2.04E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.12E1	ug/g dry	1.12E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	6.02E2	ug/g dry	2.66E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
7429-90-5	Aluminum	1.53E4	ug/g dry	1.19E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	9.32E1	ug/g dry	1.14E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.67E3	ug/g dry	4.44E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	4.98E0	ug/g dry	9.93E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	7.10E3	ug/g dry	3.04E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	2.20E3	ug/g dry	2.82E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	7.13E3	ug/g dry	9.40E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.15E2	ug/g dry	3.56E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	3.07E0	ug/g dry	2.44E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.34E1	ug/g dry	1.34E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	<3.18E2	ug/g dry	3.18E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			

Total Metals by PNNL-AGG-ICP-AES/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
7429-90-5	Aluminum	1.05E4	ug/g dry	1.66E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	7.28E1	ug/g dry	1.58E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.52E3	ug/g dry	6.18E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	6.76E0	ug/g dry	1.38E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.11E4	ug/g dry	4.23E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.11E3	ug/g dry	3.92E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	4.73E3	ug/g dry	1.31E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.31E2	ug/g dry	4.95E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<3.40E0	ug/g dry	3.40E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.87E1	ug/g dry	1.87E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.76E2	ug/g dry	4.43E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
7429-90-5	Aluminum	8.21E3	ug/g dry	1.15E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	4.23E1	ug/g dry	1.09E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	4.14E3	ug/g dry	4.26E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.19E1	ug/g dry	9.54E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.23E4	ug/g dry	2.92E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	6.80E2	ug/g dry	2.71E1	12/12/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.43E3	ug/g dry	9.02E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.15E2	ug/g dry	3.41E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	1.21E1	ug/g dry	2.35E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.29E1	ug/g dry	1.29E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	6.09E2	ug/g dry	3.06E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
7429-90-5	Aluminum	1.89E4	ug/g dry	1.17E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	1.05E2	ug/g dry	1.11E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	4.92E3	ug/g dry	4.34E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.07E1	ug/g dry	9.71E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.56E4	ug/g dry	2.97E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.00E3	ug/g dry	2.76E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	4.61E3	ug/g dry	9.19E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.05E2	ug/g dry	3.48E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	5.48E0	ug/g dry	2.39E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.31E1	ug/g dry	1.31E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	<3.11E2	ug/g dry	3.11E2	12/10/08	8L08007	PNNL-AGG-ICP-AES
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
7429-90-5	Aluminum	2.63E4	ug/g dry	1.34E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-39-3	Barium	2.16E2	ug/g dry	1.28E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.24E3	ug/g dry	4.98E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.13E1	ug/g dry	1.11E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.92E4	ug/g dry	3.40E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-09-7	Potassium	2.94E3	ug/g dry	3.16E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	8.20E3	ug/g dry	1.05E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.95E2	ug/g dry	3.99E-1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-02-0	Nickel	1.21E1	ug/g dry	2.74E0	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.51E1	ug/g dry	1.51E1	12/10/08	8L08007	PNNL-AGG-ICP-AES
7440-23-5	Sodium	<3.57E2	ug/g dry	3.57E2	12/10/08	8L08007	PNNL-AGG-ICP-AES

Radionuclides by ICP-MS/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
14133-76-7	Technetium-99	<3.93E-3	ug/g dry	3.93E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	3.40E-1	ug/g dry	2.85E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
14133-76-7	Technetium-99	<4.49E-3	ug/g dry	4.49E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	2.99E-1	ug/g dry	3.26E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
14133-76-7	Technetium-99	<4.82E-3	ug/g dry	4.82E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	1.44E0	ug/g dry	3.50E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
14133-76-7	Technetium-99	<5.76E-3	ug/g dry	5.76E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	1.00E0	ug/g dry	4.18E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
14133-76-7	Technetium-99	<8.02E-3	ug/g dry	8.02E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	1.14E0	ug/g dry	5.82E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
14133-76-7	Technetium-99	<5.53E-3	ug/g dry	5.53E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	3.32E-1	ug/g dry	4.01E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
14133-76-7	Technetium-99	<5.63E-3	ug/g dry	5.63E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	8.88E-1	ug/g dry	4.09E-2	12/08/08	8L08006	PNNL-AGG-415
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
14133-76-7	Technetium-99	<6.46E-3	ug/g dry	6.46E-3	12/08/08	8L08006	PNNL-AGG-415
	Uranium 238	1.48E0	ug/g dry	2.34E-1	12/08/08	8L08006	PNNL-AGG-415

Radionuclides by ICP-MS/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
14133-76-7	Technetium-99	<2.28E-5	ug/g dry	2.28E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	<5.58E-4	ug/g dry	5.58E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
14133-76-7	Technetium-99	<2.27E-5	ug/g dry	2.27E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	<5.56E-4	ug/g dry	5.56E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
14133-76-7	Technetium-99	<2.30E-5	ug/g dry	2.30E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	4.99E-3	ug/g dry	5.64E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
14133-76-7	Technetium-99	<2.30E-5	ug/g dry	2.30E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	<5.64E-4	ug/g dry	5.64E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
14133-76-7	Technetium-99	9.95E-5	ug/g dry	2.30E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	2.22E-2	ug/g dry	5.64E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
14133-76-7	Technetium-99	<2.30E-5	ug/g dry	2.30E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	1.41E-3	ug/g dry	5.64E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
14133-76-7	Technetium-99	<2.37E-5	ug/g dry	2.37E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	<5.80E-4	ug/g dry	5.80E-4	12/08/08	8L08001	PNNL-AGG-415
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
14133-76-7	Technetium-99	4.90E-5	ug/g dry	2.30E-5	12/08/08	8L08001	PNNL-AGG-415
	Uranium 238	6.60E-4	ug/g dry	5.64E-4	12/08/08	8L08001	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
14092-98-9	Chromium	<2.04E-3	ug/g dry	2.04E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.19E-3	ug/g dry	6.19E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.09E-2	ug/g dry	1.09E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.16E-4	ug/g dry	9.16E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.92E-4	ug/g dry	2.92E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.13E-4	ug/g dry	7.13E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
14092-98-9	Chromium	<2.03E-3	ug/g dry	2.03E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.17E-3	ug/g dry	6.17E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.09E-2	ug/g dry	1.09E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.13E-4	ug/g dry	9.13E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.91E-4	ug/g dry	2.91E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.10E-4	ug/g dry	7.10E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
14092-98-9	Chromium	<2.06E-3	ug/g dry	2.06E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.25E-3	ug/g dry	6.25E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.11E-2	ug/g dry	1.11E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.25E-4	ug/g dry	9.25E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.95E-4	ug/g dry	2.95E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.20E-4	ug/g dry	7.20E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
14092-98-9	Chromium	4.73E-3	ug/g dry	2.06E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.26E-3	ug/g dry	6.26E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.11E-2	ug/g dry	1.11E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.26E-4	ug/g dry	9.26E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.95E-4	ug/g dry	2.95E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.21E-4	ug/g dry	7.21E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
14092-98-9	Chromium	<2.06E-3	ug/g dry	2.06E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.26E-3	ug/g dry	6.26E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.11E-2	ug/g dry	1.11E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.26E-4	ug/g dry	9.26E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.95E-4	ug/g dry	2.95E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.21E-4	ug/g dry	7.21E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
14092-98-9	Chromium	<2.06E-3	ug/g dry	2.06E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.25E-3	ug/g dry	6.25E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.11E-2	ug/g dry	1.11E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.25E-4	ug/g dry	9.25E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.95E-4	ug/g dry	2.95E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.20E-4	ug/g dry	7.20E-4	12/10/08	8L10001	PNNL-AGG-415
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
14092-98-9	Chromium	<2.12E-3	ug/g dry	2.12E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.44E-3	ug/g dry	6.44E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.14E-2	ug/g dry	1.14E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.53E-4	ug/g dry	9.53E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<3.04E-4	ug/g dry	3.04E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.42E-4	ug/g dry	7.42E-4	12/10/08	8L10001	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
14092-98-9	Chromium	<2.06E-3	ug/g dry	2.06E-3	12/10/08	8L10001	PNNL-AGG-415
7440-38-2	Arsenic	<6.26E-3	ug/g dry	6.26E-3	12/10/08	8L10001	PNNL-AGG-415
14687-58-2	Selenium	<1.11E-2	ug/g dry	1.11E-2	12/10/08	8L10001	PNNL-AGG-415
14378-37-1	Silver	<9.26E-4	ug/g dry	9.26E-4	12/10/08	8L10001	PNNL-AGG-415
14336-64-2	Cadmium	<2.95E-4	ug/g dry	2.95E-4	12/10/08	8L10001	PNNL-AGG-415
13966-27-3	Lead	<7.21E-4	ug/g dry	7.21E-4	12/10/08	8L10001	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**			
7440-38-2	Arsenic	4.80E-1	ug/g dry	3.96E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.08E0	ug/g dry	1.08E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<6.56E-2	ug/g dry	6.56E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<4.65E-2	ug/g dry	4.65E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<7.52E-2	ug/g dry	7.52E-2	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	1.84E0	ug/g dry	3.50E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**			
7440-38-2	Arsenic	<4.53E-1	ug/g dry	4.53E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.24E0	ug/g dry	1.24E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<7.51E-2	ug/g dry	7.51E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<5.32E-2	ug/g dry	5.32E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<8.61E-2	ug/g dry	8.61E-2	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	1.92E0	ug/g dry	4.00E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**			
7440-38-2	Arsenic	<4.86E-1	ug/g dry	4.86E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.33E0	ug/g dry	1.33E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<8.06E-2	ug/g dry	8.06E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<5.71E-2	ug/g dry	5.71E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<9.23E-2	ug/g dry	9.23E-2	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	2.47E0	ug/g dry	4.29E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**			
7440-38-2	Arsenic	<5.80E-1	ug/g dry	5.80E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.59E0	ug/g dry	1.59E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<9.63E-2	ug/g dry	9.63E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<6.82E-2	ug/g dry	6.82E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<1.10E-1	ug/g dry	1.10E-1	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	7.98E0	ug/g dry	5.13E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**			
7440-38-2	Arsenic	<8.08E-1	ug/g dry	8.08E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<2.21E0	ug/g dry	2.21E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<1.34E-1	ug/g dry	1.34E-1	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<9.50E-2	ug/g dry	9.50E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<1.54E-1	ug/g dry	1.54E-1	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	5.17E0	ug/g dry	7.14E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**			
7440-38-2	Arsenic	<5.57E-1	ug/g dry	5.57E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.52E0	ug/g dry	1.52E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<9.25E-2	ug/g dry	9.25E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<6.55E-2	ug/g dry	6.55E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<1.06E-1	ug/g dry	1.06E-1	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	2.59E0	ug/g dry	4.92E-2	12/11/08	8L10011	PNNL-AGG-415
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**			
7440-38-2	Arsenic	<5.68E-1	ug/g dry	5.68E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.55E0	ug/g dry	1.55E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<9.41E-2	ug/g dry	9.41E-2	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<6.67E-2	ug/g dry	6.67E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<1.08E-1	ug/g dry	1.08E-1	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	3.99E0	ug/g dry	5.01E-2	12/11/08	8L10011	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**			
7440-38-2	Arsenic	6.57E-1	ug/g dry	6.51E-1	12/11/08	8L10011	PNNL-AGG-415
14687-58-2	Selenium	<1.78E0	ug/g dry	1.78E0	12/11/08	8L10011	PNNL-AGG-415
14378-37-1	Silver	<1.08E-1	ug/g dry	1.08E-1	12/11/08	8L10011	PNNL-AGG-415
14336-64-2	Cadmium	<7.65E-2	ug/g dry	7.65E-2	12/11/08	8L10011	PNNL-AGG-415
14265-72-6	Antimony	<1.24E-1	ug/g dry	1.24E-1	12/11/08	8L10011	PNNL-AGG-415
13966-28-4	Lead	1.34E1	ug/g dry	2.88E-1	12/11/08	8L10011	PNNL-AGG-415

Carbon Analysis/Soil

Total Organic Carbon (ug/g) by AGG-TOC-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	<2.00E2	2.00E2	1/29/09	[CALC]
0804026-08	B1TTN8	<2.00E2	2.00E2	1/29/09	[CALC]
0804026-11	B1TTN9	9.53E2	2.00E2	1/29/09	[CALC]
0804026-12	B1TTP0	<2.00E2	2.00E2	1/29/09	[CALC]
0804026-15	B1TTP3	1.96E3	2.00E2	1/29/09	[CALC]
0804026-21	B1TTR2	<2.00E2	2.00E2	1/29/09	[CALC]
0804026-25	B1TTR6	2.67E2	2.00E2	1/29/09	[CALC]
0804026-32	B1WDD5	<2.00E2	2.00E2	1/29/09	[CALC]

Carbon Analysis/Soil

Total Carbon (ug/g) by AGG-TOC-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	4.65E2	2.00E2	1/28/09	9A28004
0804026-08	B1TTN8	6.96E2	2.00E2	1/28/09	9A28004
0804026-11	B1TTN9	1.41E3	2.00E2	1/28/09	9A28004
0804026-12	B1TTP0	<2.00E2	2.00E2	1/28/09	9A28004
0804026-15	B1TTP3	2.78E3	2.00E2	1/28/09	9A28004
0804026-21	B1TTR2	<2.00E2	2.00E2	1/28/09	9A28004
0804026-25	B1TTR6	2.67E2	2.00E2	1/28/09	9A28004
0804026-32	B1WDD5	<2.00E2	2.00E2	1/28/09	9A28004

Carbon Analysis/Soil

Total Inorganic Carbon (ug/g) by AGG-TOC-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804026-05	B1TTN5	3.79E2	2.00E2	1/29/09	9A29007
0804026-08	B1TTN8	5.50E2	2.00E2	1/29/09	9A29007
0804026-11	B1TTN9	4.57E2	2.00E2	1/29/09	9A29007
0804026-12	B1TTP0	<2.00E2	2.00E2	1/29/09	9A29007
0804026-15	B1TTP3	8.17E2	2.00E2	1/29/09	9A29007
0804026-21	B1TTR2	<2.00E2	2.00E2	1/29/09	9A29007
0804026-25	B1TTR6	<2.00E2	2.00E2	1/29/09	9A29007
0804026-32	B1WDD5	<2.00E2	2.00E2	1/29/09	9A29007

GEA/Soil

CAS #	Analyte	Results	Units	MDA	UNC	Analyzed	Batch	Method
HEIS No.	**B1TTN5**		**Lab ID:**	**0804026-05**				
10198-40-0	Cobalt-60	<1.53E-1	pCi/g dry	1.53E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<1.81E-1	pCi/g dry	1.81E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<6.18E-1	pCi/g dry	6.18E-1		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<3.96E-1	pCi/g dry	3.96E-1		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<6.15E-1	pCi/g dry	6.15E-1		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTN8**		**Lab ID:**	**0804026-08**				
10198-40-0	Cobalt-60	<1.88E-1	pCi/g dry	1.88E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<2.14E-1	pCi/g dry	2.14E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<7.95E-1	pCi/g dry	7.95E-1		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<4.59E-1	pCi/g dry	4.59E-1		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<7.69E-1	pCi/g dry	7.69E-1		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTN9**		**Lab ID:**	**0804026-11**				
10198-40-0	Cobalt-60	<1.84E-1	pCi/g dry	1.84E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<2.38E-1	pCi/g dry	2.38E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<8.29E-1	pCi/g dry	8.29E-1		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<5.15E-1	pCi/g dry	5.15E-1		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<8.17E-1	pCi/g dry	8.17E-1		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTP0**		**Lab ID:**	**0804026-12**				
10198-40-0	Cobalt-60	<4.10E-1	pCi/g dry	4.10E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<4.97E-1	pCi/g dry	4.97E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<1.75E0	pCi/g dry	1.75E0		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<1.14E0	pCi/g dry	1.14E0		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<2.03E0	pCi/g dry	2.03E0		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTP3**		**Lab ID:**	**0804026-15**				
10198-40-0	Cobalt-60	<3.61E-1	pCi/g dry	3.61E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<4.21E-1	pCi/g dry	4.21E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<1.61E0	pCi/g dry	1.61E0		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<9.57E-1	pCi/g dry	9.57E-1		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<1.62E0	pCi/g dry	1.62E0		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTR2**		**Lab ID:**	**0804026-21**				
10198-40-0	Cobalt-60	<2.14E-1	pCi/g dry	2.14E-1		12/03/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<2.38E-1	pCi/g dry	2.38E-1		12/03/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<9.25E-1	pCi/g dry	9.25E-1		12/03/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<5.15E-1	pCi/g dry	5.15E-1		12/03/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<8.67E-1	pCi/g dry	8.67E-1		12/03/08	8L01001	AGG-RRL-001
HEIS No.	**B1TTR6**		**Lab ID:**	**0804026-25**				
10198-40-0	Cobalt-60	<2.66E-1	pCi/g dry	2.66E-1		12/04/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<3.36E-1	pCi/g dry	3.36E-1		12/04/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<1.14E0	pCi/g dry	1.14E0		12/04/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<7.10E-1	pCi/g dry	7.10E-1		12/04/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<1.12E0	pCi/g dry	1.12E0		12/04/08	8L01001	AGG-RRL-001
HEIS No.	**B1WDD5**		**Lab ID:**	**0804026-32**				
10198-40-0	Cobalt-60	<3.03E-1	pCi/g dry	3.03E-1		12/04/08	8L01001	AGG-RRL-001
10045-97-3	Cesium-137	<3.87E-1	pCi/g dry	3.87E-1		12/04/08	8L01001	AGG-RRL-001
14683-23-9	Europium-152	<1.45E0	pCi/g dry	1.45E0		12/04/08	8L01001	AGG-RRL-001
15585-10-1	Europium-154	<8.64E-1	pCi/g dry	8.64E-1		12/04/08	8L01001	AGG-RRL-001
14391-16-3	Europium-155	<1.55E0	pCi/g dry	1.55E0		12/04/08	8L01001	AGG-RRL-001

Wet Chemistry - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L04001 - 1:1 Water Extract (pH_EC_Alk)										
Duplicate (8L04001-DUP1)		**Source: 0804026-21**		Prepared: 12/03/08 Analyzed: 12/04/08						
pH	8.12E0	N/A	pH Units		8.19E0			0.858	35	
Duplicate (8L04001-DUP2)		**Source: 0804026-12**		Prepared: 12/03/08 Analyzed: 12/04/08						
pH	7.90E0	N/A	pH Units		7.73E0			2.18	35	
Batch 8L04017 - 1:1 Water Extract (pH_EC_Alk)										
Blank (8L04017-BLK1)				Prepared & Analyzed: 12/04/08						
Specific Conductance (EC)	<1.00E-2	1.00E-2	mS/cm							
Duplicate (8L04017-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/04/08						
Specific Conductance (EC)	2.07E-1	1.00E-2	mS/cm		1.85E-1			11.3	35	
Batch 8L05016 - 1:1 Water Extract (pH_EC_Alk)										
Blank (8L05016-BLK1)				Prepared & Analyzed: 12/05/08						
Alkalinity as CaCO3	<2.35E1	2.35E1	ug/g wet							
Duplicate (8L05016-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/05/08						
Alkalinity as CaCO3	9.62E1	2.35E1	ug/g dry		9.02E1			6.51	35	

Anions by Ion Chromatography - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L03001 - 1:1 Water Extract (IC)										
Blank (8L03001-BLK1)				Prepared: 12/03/08 Analyzed: 12/04/08						
Fluoride	<2.00E-1	2.00E-1	ug/g wet							
Chloride	<5.00E-1	5.00E-1	"							
Nitrite	<1.00E0	1.00E0	"							
Nitrate	<1.00E0	1.00E0	"							
Sulfate	<1.50E0	1.50E0	"							
Phosphate	<1.50E0	1.50E0	"							
LCS (8L03001-BS1)				Prepared: 12/03/08 Analyzed: 12/04/08						
Fluoride	2.21E0	2.00E-1	ug/g wet	2.00E0		110	80-120			
Chloride	5.31E0	5.00E-1	"	5.00E0		106	80-120			
Nitrite	1.10E1	1.00E0	"	1.00E1		110	80-120			
Nitrate	1.12E1	1.00E0	"	1.00E1		112	80-120			
Sulfate	1.73E1	1.50E0	"	1.50E1		115	80-120			
Phosphate	1.62E1	1.50E0	"	1.50E1		108	80-120			
Duplicate (8L03001-DUP1)		**Source: 0804026-21**		Prepared: 12/03/08 Analyzed: 12/04/08						
Fluoride	4.48E-1	2.00E-1	ug/g dry		5.22E-1			15.3	35	D
Chloride	5.92E0	5.00E-1	"		6.00E0			1.29	35	D
Nitrite	<1.00E0	1.00E0	"		ND				35	
Nitrate	<1.00E0	1.00E0	"		ND				35	
Sulfate	2.98E1	1.50E0	"		2.34E1			24.0	35	D
Phosphate	<1.50E0	1.50E0	"		ND				35	
Post Spike (8L03001-PS1)		**Source: 0804026-05**		Prepared: 12/03/08 Analyzed: 12/04/08						
Fluoride	1.36E0	N/A	ug/mL	7.69E-1	5.17E-1	109	75-125			D
Chloride	8.32E0	N/A	"	1.92E0	6.48E0	95.3	75-125			D
Nitrite	3.80E0	N/A	"	3.85E0	ND	98.8	75-125			D
Nitrate	8.10E0	N/A	"	3.85E0	4.26E0	100	75-125			D
Sulfate	4.66E1	N/A	"	5.77E0	4.16E1	85.8	75-125			D
Phosphate	5.87E0	N/A	"	5.77E0	4.00E-1	94.7	75-125			D

Cyanide by Mircodistillation/Colorimetric - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9H06005 - NO PREP										
Blank (9H06005-BLK1)				Prepared & Analyzed: 12/10/08						
Cyanide	<2.00E-1	2.00E-1	ug/g wet							
LCS (9H06005-BS1)				Prepared & Analyzed: 12/10/08						
Cyanide	8.78E-1	N/A	ug/g	1.00E0		87.8	80-120			
Duplicate (9H06005-DUP1)	**Source: 0803017-94**			Prepared & Analyzed: 12/10/08						
Cyanide	<2.09E-1	2.09E-1	ug/g dry		ND				20	
Batch 9H06008 - NO PREP										
Blank (9H06008-BLK1)				Prepared & Analyzed: 12/10/08						
Cyanide	<2.00E-1	2.00E-1	ug/g wet							
LCS (9H06008-BS1)				Prepared & Analyzed: 12/10/08						
Cyanide	9.74E-1	N/A	ug/g	1.00E0		97.4	80-120			

Total Metals by PNNL-AGG-ICP-AES/Water Extract - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08005 - 1:1 Water Extract (ICP/ICPMS)										
Blank (8L08005-BLK1)				Prepared: 12/03/08 Analyzed: 12/15/08						
Aluminum	<1.43E-1	1.43E-1	ug/g wet							
Barium	<1.46E-2	1.46E-2	"							
Calcium	<6.45E-1	6.45E-1	"							
Iron	<2.37E-1	2.37E-1	"							
Potassium	<3.88E0	3.88E0	"							
Magnesium	<1.39E-1	1.39E-1	"							
Manganese	<2.86E-2	2.86E-2	"							
Nickel	<1.56E-1	1.56E-1	"							
Thallium	<1.71E0	1.71E0	"							
Sodium	<1.12E0	1.12E0	"							
Antimony	<1.06E0	1.06E0	"							
LCS (8L08005-BS1)				Prepared: 12/03/08 Analyzed: 12/10/08						
Aluminum	4.68E0	1.43E-1	ug/g wet	5.00E0		93.5	80-120			
Barium	4.84E0	1.46E-2	"	5.00E0		96.7	80-120			
Calcium	4.78E0	6.45E-1	"	5.00E0		95.6	80-120			
Iron	4.96E0	2.37E-1	"	5.00E0		99.2	80-120			
Potassium	4.80E1	3.88E0	"	5.00E1		96.0	80-120			
Magnesium	4.76E0	1.39E-1	"	5.00E0		95.2	80-120			
Manganese	5.04E0	2.86E-2	"	5.00E0		101	80-120			
Nickel	4.87E0	1.56E-1	"	5.00E0		97.3	80-120			
Thallium	4.91E0	1.71E0	"	5.00E0		98.2	80-120			
Sodium	4.88E0	1.12E0	"	5.00E0		97.7	80-120			
Antimony	4.83E0	1.06E0	"	5.00E0		96.7	80-120			
Duplicate (8L08005-DUP1)	**Source: 0804026-21**			Prepared: 12/03/08 Analyzed: 12/10/08						
Aluminum	<1.43E-1	1.43E-1	ug/g dry		ND				35	
Barium	5.47E-2	1.46E-2	"		4.10E-2			28.6	35	
Calcium	1.50E1	6.45E-1	"		1.21E1			21.6	35	
Iron	<2.37E-1	2.37E-1	"		ND				35	
Potassium	6.20E0	3.88E0	"		5.40E0			13.8	35	
Magnesium	4.45E0	1.39E-1	"		3.68E0			19.0	35	
Manganese	1.34E-1	2.85E-2	"		9.51E-2			34.3	35	
Nickel	<1.55E-1	1.55E-1	"		ND				35	
Thallium	<1.71E0	1.71E0	"		ND				35	
Sodium	2.86E1	1.11E0	"		2.71E1			5.40	35	
Antimony	<1.05E0	1.05E0	"		ND				35	

Total Metals by PNNL-AGG-ICP-AES/Water Extract - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08005 - 1:1 Water Extract (ICP/ICPMS)										
Post Spike (8L08005-PS1)		**Source: 0804026-21**		Prepared: 12/08/08		Analyzed: 12/10/08				
Aluminum	4.99E2	N/A	ug/L	5.00E2	1.39E1	97	75-125			
Barium	2.51E2	N/A	"	2.50E2	8.20E0	97	75-125			
Calcium	2.92E3	N/A	"	5.00E2	2.42E3	101	75-125			
Iron	5.19E2	N/A	"	5.00E2	5.38E0	103	75-125			
Potassium	2.34E3	N/A	"	1.25E3	1.08E3	101	75-125			
Magnesium	1.26E3	N/A	"	5.00E2	7.35E2	105	75-125			
Manganese	2.84E2	N/A	"	2.50E2	1.90E1	106	75-125			
Nickel	5.05E2	N/A	"	5.00E2	ND	101	75-125			
Thallium	5.05E2	N/A	"	5.00E2	ND	106	75-125			
Sodium	5.93E3	N/A	"	5.00E2	5.43E3	101	75-125			
Antimony	4.95E2	N/A	"	5.00E2	1.73E1	95.6	75-125			

Total Metals by PNNL-AGG-ICP-AES/Acid Extract - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08007 - ASTM D 5198 (ICP/ICPMS)										
Blank (8L08007-BLK1)				Prepared: 12/04/08 Analyzed: 12/10/08						
Aluminum	<2.47E0	2.47E0	ug/g wet							
Barium	<2.35E-1	2.35E-1	"							
Calcium	<9.18E0	9.18E0	"							
Chromium	<2.05E-1	2.05E-1	"							
Iron	<6.28E0	6.28E0	"							
Potassium	<5.82E0	5.82E0	"							
Magnesium	<1.94E0	1.94E0	"							
Manganese	<7.35E-2	7.35E-2	"							
Nickel	<5.05E-1	5.05E-1	"							
Thallium	<2.78E0	2.78E0	"							
Sodium	<6.58E1	6.58E1	"							
LCS (8L08007-BS1)				Prepared: 12/04/08 Analyzed: 12/10/08						
Aluminum	5.56E0	4.94E-1	ug/g wet	5.99E0		92.8	80-120			
Barium	5.91E0	4.70E-2	"	5.99E0		98.5	80-120			
Calcium	5.91E0	1.84E0	"	5.99E0		98.5	80-120			
Chromium	5.92E0	4.10E-2	"	5.99E0		98.7	80-120			
Iron	6.06E0	1.26E0	"	5.99E0		101	80-120			
Potassium	5.77E1	1.16E0	"	5.99E1		96.3	80-120			
Magnesium	5.54E0	3.88E-1	"	5.99E0		92.4	80-120			
Manganese	6.06E0	1.47E-2	"	5.99E0		101	80-120			
Nickel	5.75E0	1.01E-1	"	5.99E0		95.9	80-120			
Thallium	6.29E0	5.55E-1	"	5.99E0		105	80-120			
Sodium	<1.32E1	1.32E1	"	5.99E0			80-120			
Duplicate (8L08007-DUP1)	**Source: 0804026-21**			Prepared: 12/04/08 Analyzed: 12/10/08						
Aluminum	7.50E3	1.12E1	ug/g dry		8.21E3			8.98	35	
Barium	4.14E1	1.07E0	"		4.23E1			2.20	35	
Calcium	3.94E3	4.18E1	"		4.14E3			5.01	35	
Chromium	1.04E1	9.34E-1	"		1.19E1			14.0	35	
Iron	1.14E4	2.86E1	"		1.23E4			7.85	35	
Potassium	6.46E2	2.65E1	"		6.80E2			5.02	35	
Magnesium	2.17E3	8.84E0	"		2.43E3			11.2	35	
Manganese	1.05E2	3.35E-1	"		1.15E2			9.04	35	
Nickel	1.13E1	2.30E0	"		1.21E1			7.05	35	
Thallium	<1.26E1	1.26E1	"		ND				35	
Sodium	5.80E2	3.00E2	"		6.09E2			4.88	35	

Total Metals by PNNL-AGG-ICP-AES/Acid Extract - Quality Control

Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08007 - ASTM D 5198 (ICP/ICPMS)										
Post Spike (8L08007-PS1)	**Source: 0804026-21**			Prepared: 12/08/08		Analyzed: 12/10/08				
Aluminum	6.65E4	N/A	ug/L	5.00E2	7.07E4	NR	75-125			
Barium	5.84E2	N/A	"	2.50E2	3.64E2	87.7	75-125			
Calcium	3.39E4	N/A	"	5.00E2	3.56E4	NR	75-125			
Chromium	2.27E2	N/A	"	1.25E2	1.03E2	99.7	75-125			
Iron	9.90E4	N/A	"	5.00E2	1.06E5	NR	75-125			
Potassium	7.06E3	N/A	"	1.25E3	5.85E3	96.5	75-125			
Magnesium	2.00E4	N/A	"	5.00E2	2.09E4	NR	75-125			
Manganese	1.22E3	N/A	"	2.50E2	9.88E2	93.7	75-125			
Nickel	5.80E2	N/A	"	5.00E2	1.05E2	95.1	75-125			
Thallium	4.60E2	N/A	"	5.00E2	ND	92.9	75-125			
Sodium	5.30E3	N/A	"	5.00E2	5.25E3	10.8	75-125			

Radionuclides by ICP-MS/Acid Extract - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08006 - ASTM D 5198 (ICP/ICPMS)										
Blank (8L08006-BLK1)				Prepared & Analyzed: 12/08/08						
Technetium-99	<1.19E-3	1.19E-3	ug/g wet							
Uranium 238	<8.64E-3	8.64E-3	"							
Duplicate (8L08006-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/08/08						
Technetium-99	<5.42E-3	5.42E-3	ug/g dry		ND				35	
Uranium 238	2.95E-1	3.93E-2	"		3.32E-1			11.8	35	
Post Spike (8L08006-PS1)		**Source: 0804026-21**		Prepared & Analyzed: 12/08/08						
Technetium-99	5.17E-1	N/A	ug/L	5.00E-1	3.23E-3	103	75-125			
Uranium 238	1.19E0	N/A	"	5.00E-1	7.14E-1	94.8	75-125			

Radionuclides by ICP-MS/Water Extract - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L08001 - 1:1 Water Extract (ICP/ICPMS)										
Blank (8L08001-BLK1)				Prepared & Analyzed: 12/08/08						
Technetium-99	<2.30E-5	2.30E-5	ug/g wet							
Uranium 238	<5.64E-4	5.64E-4	"							
Duplicate (8L08001-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/08/08						
Technetium-99	<2.30E-5	2.30E-5	ug/g dry		ND				35	
Uranium 238	1.36E-3	5.63E-4	"		1.41E-3			3.52	35	
Post Spike (8L08001-PS1)		**Source: 0804026-21**		Prepared & Analyzed: 12/08/08						
Technetium-99	5.24E-1	N/A	ug/L	5.00E-1	2.39E-3	104	75-125			
Uranium 238	8.01E-1	N/A	"	5.00E-1	2.82E-1	104	75-125			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8L10001 - 1:1 Water Extract (ICP/ICPMS)										
Blank (8L10001-BLK1)				Prepared: 12/10/08 Analyzed: 12/15/08						
Chromium	<2.06E-3	2.06E-3	ug/g wet							
Arsenic	<6.25E-3	6.25E-3	"							
Selenium	<1.10E-2	1.10E-2	"							
Silver	<9.25E-4	9.25E-4	"							
Cadmium	<2.95E-4	2.95E-4	"							
Lead	<7.20E-4	7.20E-4	"							
LCS (8L10001-BS1)				Prepared & Analyzed: 12/10/08						
Chromium	4.49E0	2.06E-1	ug/g wet	5.00E0		89.9	80-120			
Arsenic	4.60E0	6.25E-1	"	5.00E0		92.1	80-120			
Selenium	4.66E0	1.10E0	"	5.00E0		93.2	80-120			
Silver	4.38E0	9.25E-2	"	5.00E0		87.6	80-120			
Cadmium	4.59E0	2.95E-2	"	5.00E0		91.8	80-120			
Lead	4.31E0	7.20E-2	"	5.00E0		86.2	80-120			
Duplicate (8L10001-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/10/08						
Chromium	<2.05E-3	2.05E-3	ug/g dry		ND				35	
Arsenic	<6.25E-3	6.25E-3	"		ND				35	
Selenium	<1.10E-2	1.10E-2	"		ND				35	
Silver	<9.25E-4	9.25E-4	"		ND				35	
Cadmium	5.74E-4	2.95E-4	"		ND				35	
Lead	9.91E-4	7.20E-4	"		ND				35	
Post Spike (8L10001-PS1)		**Source: 0804026-21**		Prepared & Analyzed: 12/10/08						
Chromium	4.46E0	N/A	ug/L	5.00E0	7.94E-2	87.5	75-125			
Arsenic	5.16E0	N/A	"	5.00E0	ND	104	75-125			
Selenium	5.28E0	N/A	"	5.00E0	ND	107	75-125			
Silver	4.73E0	N/A	"	5.00E0	3.57E-3	94.6	75-125			
Cadmium	5.02E0	N/A	"	5.00E0	ND	100	75-125			
Lead	4.82E0	N/A	"	5.00E0	1.63E-2	96.2	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
Batch 8L10011 - ASTM D 5198 (ICP/ICPMS)										
Blank (8L10011-BLK1)				Prepared & Analyzed: 12/11/08						
Arsenic	<1.20E-1	1.20E-1	ug/g wet							
Selenium	<3.28E-1	3.28E-1	"							
Silver	<1.99E-2	1.99E-2	"							
Cadmium	<1.41E-2	1.41E-2	"							
Antimony	<2.28E-2	2.28E-2	"							
Lead	<1.06E-2	1.06E-2	"							
LCS (8L10011-BS1)				Prepared & Analyzed: 12/11/08						
Arsenic	6.10E0	6.00E-1	ug/g wet	5.99E0		102	80-120			
Selenium	5.82E0	1.64E0	"	5.99E0		97.1	80-120			
Silver	5.97E0	9.95E-2	"	5.99E0		99.5	80-120			
Cadmium	5.98E0	7.05E-2	"	5.99E0		99.7	80-120			
Antimony	5.64E0	1.14E-1	"	5.99E0		94.1	80-120			
Lead	5.79E0	5.30E-2	"	5.99E0		96.6	80-120			
Duplicate (8L10011-DUP1)		**Source: 0804026-21**		Prepared & Analyzed: 12/11/08						
Arsenic	<5.46E-1	5.46E-1	ug/g dry		ND				35	
Selenium	<1.49E0	1.49E0	"		ND				35	
Silver	<9.06E-2	9.06E-2	"		ND				35	
Cadmium	<6.42E-2	6.42E-2	"		ND				35	
Antimony	<1.04E-1	1.04E-1	"		ND				35	
Lead	2.30E0	4.82E-2	"		2.59E0			11.9	35	
Post Spike (8L10011-PS1)		**Source: 0804026-21**		Prepared & Analyzed: 12/11/08						
Arsenic	5.38E0	N/A	ug/L	5.00E0	9.42E-1	88.8	75-125			
Selenium	4.65E0	N/A	"	5.00E0	ND	93.5	75-125			
Silver	4.75E0	N/A	"	5.00E0	4.80E-2	94	75-125			
Cadmium	4.86E0	N/A	"	5.00E0	1.64E-2	96.8	75-125			
Antimony	4.65E0	N/A	"	5.00E0	5.05E-2	92.1	75-125			
Lead	1.06E1	N/A	"	5.00E0	5.57E0	100	75-125			

Pacific Northwest National Laboratory	CORE LOG	Boring/Well No C5853 (299-E33-340) Depth 0-305 Date 8-12-08 Location 200-BP-5 (200 E Area) Project Vadose Zone	Sheet 1 of 4

Logged by B N Bjornstad (Print / Sign) — Drilling Contractor
Reviewed by (Print / Sign) Date — Driller
Lithologic Class. Scheme Folk-Wentworth Procedure Rev — Drill Method

DEPTH (ft)	SAMPLES TYPE	SAMPLES ID NUMBER	MOISTURE	GRAPHIC LOG C Z S G	LITHOLOGIC DESCRIPTION (particle size distribution, sorting, mineralogy, roundness, color, reaction to HCl, maximum grain size, consolidation, structure, etc.)	COMMENTS
0	Grab	BITTN2	SM		zsG, silty sandy gravel, 30%G, 60%S, 10% z, mod. sorted, loose, max part. size = 15mm, 50% gravel clasts fragmented, unbroken clasts subangular to subrounded, S=30% basalt, 2.5Y6/2 (lt. brn. gray)	Duplicate sample from surface (0')
	Grab	BITTN3	D			
		Break				
210						Grab samples in 1 liter poly bottles
	Grab	BITTN4	M		zsG, silty sandy gravel, 40% granule to pebble gravel, 50% fn-v. crs sand, 10% silt, loose, poorly sorted, sand = 50% basalt, angular to subangular, 2.5Y5/2 (grayish brn), max. part size = 2cm	
215	Grab	BITTN5	SM		no rxn w/ HCl; G = 40-50% basalt	
	Grab	BITTN6	SM			
220	Grab	BITTN7	W		zsG, silty sandy gravel, 70% G, 25% S, 5% z, poorly sorted, S = 60% basalt, G = 70% basalt, unbroken clasts subangular to subrounded, 2.5Y4/1 (dk gray); darker, more gravel + basalt compared to previous	
	Grab	BITTN8	W		same as 213'.	
225	Grab	BIVBW9	W			
300					Break	
	Grab	BITTN9	W		S, crs-vcrs, v. basaltic (~80%), mod. sorted, 2.5Y3/1 (v. dk. gray), C, v. hard clay aggregates, 2.5Y6/2 (lt. brn. gray), ~30% of sample	drilled thru Hanford contact?
305	Grab	BITTP0	SM		z, silt w/ up to 5-10% fn sand, few hard clay aggregates, well sorted, 2.5Y7/3 (pale yel.), max part. size = fn sand, wk rxn w/ HCl,	

W = Wet, M = Moist, SM = Slightly Moist, D = Dry cohesive

Pacific Northwest National Laboratory	**CORE LOG**	Boring/Well No C5853 (299-E33-340) Depth 305-325 Date 8-12-08 Location 200-BP-5 (200 E. Area) Project Vadose Zone	Sheet 2 of 4

Logged by BN Bjornstad (Print / Sign) — Drilling Contractor
Reviewed by (Print / Sign) Date — Driller
Lithologic Class. Scheme Folk-Wentworth Procedure Rev — Drill Method

DEPTH (ft)	SAMPLES TYPE	SAMPLES ID NUMBER	MOISTURE	GRAPHIC LOG C	Z	S	G	LITHOLOGIC DESCRIPTION (particle size distribution, sorting, mineralogy, roundness, color, reaction to HCl, maximum grain size, consolidation, structure, etc.)	COMMENTS
	Grab	BITTP1	S ↓					SZ, fine sandy silt slurry, 30-40% fn sand, 60-70% silt and clay, mod sorted, 5Y6/2 (lt. olive gray), 10-15% mafic grains, difficult to identify what original character this sediment consists of.	slurry from hard tool?
310	Grab	BITTP2	S						
	Grab	BITTP3							
310									
315	Grab	BITTP4	S ↓						
	Grab	BITTP5	S ↓						
320									
	Grab	BITTP7	S ↓						
325									

W = Wet, M = Moist, SM = Slightly Moist, D = Dry, S = slurry

Pacific Northwest National Laboratory	CORE LOG	Boring/Well No C5853 (299-E33-340) Depth 325-355 Date 8-12-08 Location 200-BP-5 (200 East Area) Project Vadose Zone	Sheet 3 of 4

Logged by BN Bjornstad (Print / Sign) — Drilling Contractor
Reviewed by (Print / Sign) Date — Driller
Lithologic Class. Scheme Folk-Wentworth Procedure Rev — Drill Method

DEPTH (ft)	SAMPLES TYPE	SAMPLES ID NUMBER	MOISTURE	GRAPHIC LOG C Z S G	LITHOLOGIC DESCRIPTION (particle size distribution, sorting, mineralogy, roundness, color, reaction to HCl, maximum grain size, consolidation, structure, etc.)	COMMENTS
330						
	Grab	BITTR0	S		zS, silty fn-md sand slurry, 15-20% mafic, 10YR 7/4 (v. pale brn), well sorted	
	Grab	BITTR1	W		S, mostly md-crs sand, loose, well sorted, 25% mafic grains, 5Y5/2 (olive gray), max. part. size = 8mm, trace pebble gravel	
335	Grab	BITTR2			z, silt aggregates, 10YR 8/4 (v. pale brn)	
	Grab	BITTR3	M		silt aggregates + hard cemented Fe oxide silt/clay aggregates zS, silty fn-crs sand, mod. sorted, 10YR 6/4 (lt. yel. brn), sand mostly md-crs, 20% mafic, loose, no rxn w/ HCl	
340	Grab	BITTR4	M		gsZ, 80% Z, 15% S, 5% G, mixture of multiple lithogies? poorly sorted, cohesive, 10YR 6/6 (brnish yel.), no rxn w/ HCl	
	Grab	BITTR5	W		zS, silty fn-md sand, sl. cohesive, mod sorted, 10YR 7/4 (v. pale brn)	
345	Grab	BITTR6	M		like above but with cemented nodules (non-calcareous) 1-2 cm wide, 10YR 8/4	
350	Grab Grab	BITTR7 BITTR8	M		zS, silty fn sand, 40% silt, 60% fn sand, rusty piece of steel in sample, well sorted, sl. cohesive, 10YR 7/4 (v. pale brn) micaceous, cemented nodules below (non calcareous)	
	Grab	BIWOD3	M			

W = Wet, M = Moist, SM = Slightly Moist, D = Dry

Pacific Northwest National Laboratory	CORE LOG	Boring/Well No C5853 (299-E33-340) Depth 355-360' Date 8-12-08 Location 200-BP-5 (200 East Area) Project Vadose Zone	Sheet 4 of 4

Logged by B N Bjornstad (Print / Sign)
Reviewed by _____ (Print / Sign) Date _____
Lithologic Class. Scheme Folk-Wentworth Procedure _____ Rev _____

Drilling Contractor _____
Driller _____
Drill Method _____

DEPTH (ft)	SAMPLES TYPE	SAMPLES ID NUMBER	MOISTURE	GRAPHIC LOG C	Z	S	G	LITHOLOGIC DESCRIPTION (particle size distribution, sorting, mineralogy, roundness, color, reaction to HCl, maximum grain size, consolidation, structure, etc.)	COMMENTS
5	Grab	B1WDD4	M					SZ, fine sandy silt, well sorted, cohesive, compact, 2.5Y7/4 (pale yel.), wk rxn w/ HCl	
	Grab	B1WDD5							
360									

W = Wet, M = Moist, SM = Slightly Moist, D = Dry

C5853 B1TTN2 0 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN3 0 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN4 212.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN5 215 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN6 218 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN7 220 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN8 222.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1VBW9 225 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTN9 302 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP0 305 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP1 307 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP2 310 ft Grab

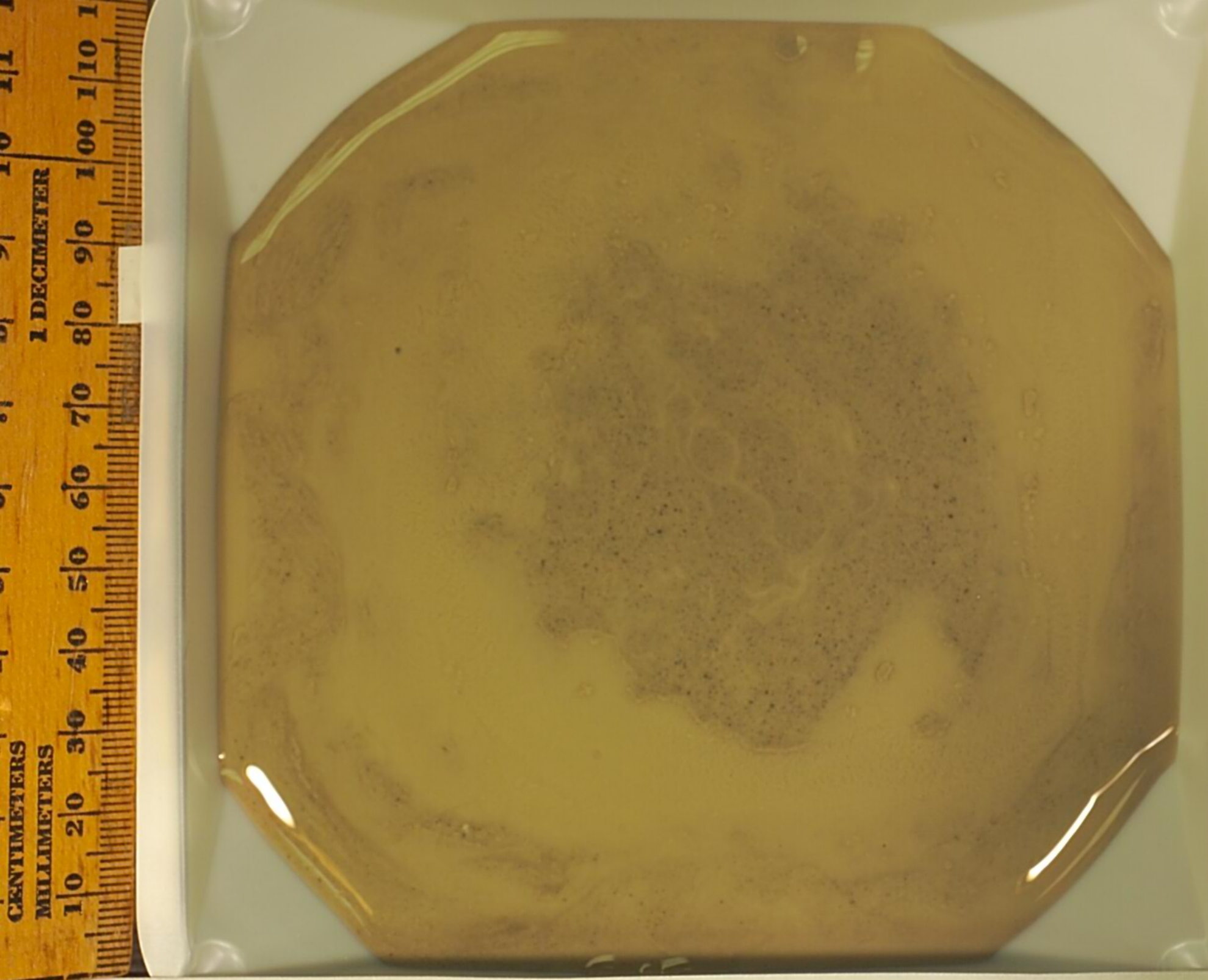
Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP3 312 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP4 315 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample



C5853 B1TTP5 318 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTP7 322.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR0 331 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR1 333 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR2 335 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR3 337.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR4 340 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR5 342.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR6 345 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR7 349.8 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1TTR8 350.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1WDD3 352.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1WDD4 355 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

C5853 B1WDD5 356.5 ft Grab

Borehole ID Sample Number Depth from Chain-of-Custody Sample

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-001 PAGE 1 OF 2

COLLECTOR
NCO SAMPLER BAILEY

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5853, ~~1001~~ JKB 4-21-08 WHEEL BARROW

PROJECT DESIGNATION
200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par

SAF NO.
F08-050

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-488-1

ACTUAL SAMPLE DEPTH
N/A

COA
123516ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ1

PRESERVATION	None	None					
TYPE OF CONTAINER	G/P	Moisture Resistant Cont					
NO. OF CONTAINER(S)	1	1					
VOLUME	1L	200g					
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;					
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**				
B1TTN2	SOIL	4-21-08	1305	✓	✓		

LOT NO. 029420

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY	4-21-08 1530	M0745 REF # (	4-21-08 1530
M0745 Ref #(	4-24-08 1100	D. Parch	4-24-08 1100
D. Parch	4-24-08 1300	~~D. Parch~~	~~4-24-08~~ 1300
~~M0745 Ref #1~~	~~4-24-08~~	M0745 Ref #1	4-24-08 1300
M0745 Ref #1	4-29-08 1200	D. Parch	4-29-08 1200
D Parch	4-27-08	D Smith	4-24-08 1300
Steve Baum	7-24-08 0854	A Chico	7-24-08 0854

LABORATORY SECTION — RECEIVED BY

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

TITLE — DATE/TIME

DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-001	PAGE 2 OF 2
COLLECTOR NCO SAMPLER BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, ~~T 001 JKB 421-8~~ WHEEL BARROW	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-002 PAGE 1 OF 2

COLLECTOR
NCO SAMPLER BAILEY

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

SAMPLING LOCATION
C5853, ~~1 002~~ JKB 4-21-08 WHEEL BARROW

PROJECT DESIGNATION
200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par

SAF NO.
F08-050

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-488-1

ACTUAL SAMPLE DEPTH
N/A

COA
123516ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ1

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTN3	SOIL	4-21-08	1310	✓	✓

LOT NO. 29420

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY / JKBail	4-21-08 1530	M0745 REF# /	4-21-08 1530
M0745 Ref#1	4-24-08 1100	D. Parish	4-24-08 1100
D. Parish	4-24-08 1300	M0745 Ref#1	4-24-08 1300
M0745 Ref#1	4-29-08 1200	D. Parish	4-29-08 1200
D. Parish	4-29-08 1300	DSmith	4-29-08 1300
Steven Baum / Steven Baum	7-24-09 0837		7-24-09 0837

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD DISPOSED BY DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-050-002	PAGE 2 OF 2
COLLECTOR NCO SAMPLER BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, ~~T 002~~ JKH 4-21-08 WHEEL BARROW	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc. | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F08-050-003 | PAGE 1 OF 2

COLLECTOR NCO SAMPLER BAILEY	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C5853, I-003	PROJECT DESIGNATION 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		SAF NO. F08-050	AIR QUALITY ☐	45 Days / 45 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-488-1	ACTUAL SAMPLE DEPTH 212.5'	COA 123516ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ1

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTN4	SOIL	4-21-08	1318	✓	✓
LOT NO.				29420	

CHAIN OF POSSESSION | SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY / JKBailey	4-21-08 1530	MO745 REF#1	4-21-08 1530
MO745 Ref #1	4-24-08 1100	D. Parch [signature]	4-24-08
D. Parch [signature]	4-24-08 1300	MO745 Ref #1	4-24-08 1300
MO745 Ref #1	4-29-08 1200	D. Parch [signature]	4-29-08 1200
D. Parch [signature]	4-29-08 1300	D Smith [signature]	4-29-08 1300
Steven Baum / [signature]	7-24-09 0858	A Chacon [signature]	7-24-09 0858

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-050-003	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-003	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc. | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F08-050-004 | PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
NCO SAMPLER BAILEY	TRENT, SJ	373-5869	WIDRIG, DL	8N	45 Days / 45 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	AIR QUALITY
C5853, I-004	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par	F08-050	☐

ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT
	HNF-N-488-1	215'	123516ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Environmental Sciences Laboratory	N/A	N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ1

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216; SAB 7-21-09	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1TTN5	SOIL	4-21-08	1425	✓	✓	

LOT NO. 29420

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY / JFB	4-21-08 1530	MO745 REF#1	4-21-08 1530
MO745 Ref#1	4-24-08 1100	D. Parch	4-24-08 1100
D. Parch	4-24-08 1130	MO745 Ref#1	4-24-08 1130
MO745 Ref#1	4-29-08 1200	D. Parch	4-29-08 1200
D. Parch	4-29-08 1300	D Smith	4.29.08 1300
Steven Baum / Steven Baum	7-24-09 0858	[illegible]	7-24-09 0858
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-004	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5853, I-004	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-005 PAGE 1 OF 2

COLLECTOR NCO SAMPLER BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C5853, I-005	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** ~~217.5'~~ 218.0' JKB 4-21-08	**COA** [illegible]516ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ1

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTN6	SOIL	4-21-08	1440	✓	✓

UDT NO. 29420

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY/JKB	4-21-08 1530	M0745 REF#	4-21-08 1530
M0745 Ref#1	4-24-08 1110	D. Parch	4-24-08 1100
D. Parch	4-24-08 1300	M0745 Ref#1	4-24-08 1300
M0745 Ref#1	4-29-08 1200	D. Parch	4-29-08 1200
D. Parch	4-29-08 1310	D Smith	4-24-08 1300
Steven Baum/Steve Baum	7-24-09 0834	[illegible]	7-24-09 0836
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-005	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-005	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-006 PAGE 1 OF 2

COLLECTOR NCO SAMPLER BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5853, I-006	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 220'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A	**DATA TURNAROUND** 45 Days / 45 Days

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
~~Radioactive Tie To: B1TV91~~ JKB 4-21-08
RAD TIE TO B1TV91

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTN7	SOIL	4-21-08	1455	✓	✓

LOT NO. 29420

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY/JKBailey	4-21-08 1530	M0745 REF#1	4-21-08 1520
M0 745 Ref #1	4-24-08 1100	D. Parch	4-24-08 1100
D. Parch	4-24-08 1300	M0 745 Ref #1	4-24-08 1300
M0 745 Ref #1	4-29-08 1200	D. Parch	4-29-08 1200
D. Parch	4-29-08 1300	D Smith	4-29-08 1302
Steven Baum/Steve Baum	7-24-09 0536	M Chacon	7-24-09 0536
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO SAMPLER	TRENT, SJ	373-5869	WIDRIG, DL		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
C5853, I-006	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
			123516ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Environmental Sciences Laboratory	N/A		N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-024	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-028	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-025 PAGE 1 OF 2

COLLECTOR NCO SAMPLER Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C5853, I-029	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 345'	**COA** 123516ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ4

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216; 7-24-09	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1TTR6	SOIL	7-11-08	1020	✓	✓	
	LOT #			031204		

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	7-11-08 1420	MO 413 Fridge	7-11-08 1420
MO 413 Fridge	7/16/08 0715	J Helms	7/16/08 0715
Larry Rosane / Jerry Lasone	7-16-08 1115	C. Irwin	7/16/08 1115
Steven Baum	7/24/08 0835	RD Hammond	7/24/08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-025	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-029	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-050-026	PAGE 1 OF 2
COLLECTOR: NCO SAMPLER Pope	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8N; AIR QUALITY ☐; DATA TURNAROUND: 45 Days / 45 Days
SAMPLING LOCATION: C5853, I-031	PROJECT DESIGNATION: 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		SAF NO.: F08-050	
ICE CHEST NO.:	FIELD LOGBOOK NO.:	ACTUAL SAMPLE DEPTH: 349.8	COA: 123516ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
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=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ7

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - DATES;

(Moisture column lined out, initialed ... 7-14-08)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTR7	SOIL	7-14-08	0816	X	X

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Pope / [signature]	7-14-08 1200	MO-413 FRIDGE	7-14-08 1200
MO413 Fridge	7-17-8 1100	D Connolly [signature]	7-17-8 1100
D Connolly [signature]	7-17-8 1330	C Alvari [signature]	7-17-8 1330
Steve Baum / [signature]	7/24/08 0835	RD Hammond [signature]	7/24/08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

NO MOISTURE TIN COLLECTED PER GEO.

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-026	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-031	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 349.8'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-027 PAGE 1 OF 2

COLLECTOR NCO SAMPLER POPE	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N / **DATA TURNAROUND**
SAMPLING LOCATION C5853, I-032	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐ / 45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 350.5'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ7

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TTR8	SOIL	7-14-08	1050	X

LOT# 031204

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J POPE	7-14-08 1200	M0413 Fridge #1	7-14-08 1200
M0413 Fridge #1	7-17-8 1100	DConnolly DC	7-17-8 1100
DConnolly DC	7-17-8 1330	CATOUR	7-17-8 1330
Steven Baum	7/24/08 0835	RD Hanson ND	7/24/08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-027	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-032	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

BP5 G Wen

Fluor Hanford Inc. **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** F08-050-028

COLLECTOR NCO SAMPLER Fulton / Webb	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐ **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-008	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 302.5	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ5

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	2
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TTR9	SOIL	6-24-08	1005	✓

CHAIN OF POSSESSION **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton / [signature]	6-24-08 1300	Fridge MO 413	6/24/08 1300
Fridge MO 413	7-1-8 1100	D Connolly [signature]	7-1-8 1100
D Connolly [signature]	7-1-8 1410	[signature] @ Tom	7-1-8 1410
Steven Baum / [signature]	7/2/08 [illegible]	[signature]	7/2/08 [illegible]

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; CATIONEXCH_TR; Generic Testing; SPECIAL STUDIES; KD - Batch;

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

A-6003-618(01/06)

Fluor Hanford Inc. | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F08-050-030** | **PAGE 1 OF 1**

COLLECTOR NCO SAMPLER POPE	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5853, I-030	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par	**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 349.8'	**COA** 123516ES10
METHOD OF SHIPMENT GOVERNMENT VEHICLE			
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ7

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	2
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TTT1	SOIL	7-14-08	0816	X

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. POPE / [signature]	7-14-08 1200	M04-413 Fridge	7-14-08 1200
M04-13 Fridge	7-17-8 1100	DConnolly [signature]	7-17-8 1100
DConnolly COC	7-17-8 1330	C. Govoni [signature]	7-17-8 1330
Steven Baum / [signature]	7/24/08 0855	[signature]	7/24/08 0855

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; CATIONEXCH_TR; Generic Testing; SPECIAL STUDIES; KD - Batch;

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F08-050-035	PAGE 1 OF 2

COLLECTOR NCO SAMPLER - MOELLER/CHACON	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐ **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, Add in Interval 1	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 225'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ2

PRESERVATION	None	None								
TYPE OF CONTAINER	G/P	Moisture Resistant Cont								
NO. OF CONTAINER(S)	1	1								
VOLUME	1L	200g								
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;								

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1VBW9	SOIL	4/23/8	0825	✓	✓								

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Mueller	4/23/8 1000	MO745 REF #1	4/23/8 1000
MO 745 Ref #1	4-24-08 1100	D. Parchi	4-24-08 1100
D. Parchi	4-24-08 1130	MO 745 Ref #1	4-24-08 1700
MO 745 Ref #1	4-29-08 1200	D. Parchi	4-29-08 1200
D. Parchi	4-29-08 1300	D Smith	4-24-08 1300
Steven Baum / Steven Baum	7/24/09 0835	RD Hammond / RD Hammond	7/24/09 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-035	PAGE 2 OF 2
COLLECTOR NCO SAMPLER - MOORE / CHASON	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, Add in Interval 1	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488 1	**ACTUAL SAMPLE DEPTH** 225'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate Ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-019 PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO SAMPLER Fulton	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5853, I-023	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-488-1	331	123516ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Environmental Sciences Laboratory	N/A		N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ9

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1TTR0	SOIL	6-27-08	1321	✓	✓	

0286688

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton/	6-27-08 1400	M0413 Fridge #2	6-27-08 1400
M0413 Fridge #2	7-10-8 1130	DConnolly	7-10-8 1130
DConnolly	7-10-8 1330	DSmith	7-10-8 1330
Steven Baum/	7/24/08 0835	RD Hammond	7/24/08 0835
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

Note - Sample is mostly water

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-019	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-023	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-042	PAGE 1 OF 2
COLLECTOR NCO SAMPLER KAUER, ROSANE	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-003-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** pg 1 HNF-N-585-12	**ACTUAL SAMPLE DEPTH** 356.5	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
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=Vegitation
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)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ7

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1WDD5	SOIL	7-15-08	1230

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Ed Kauer	7-15-08 1500	MO 413 Ref	7-15-08 1500
MO 413 Ref	7-17-8 1100	D Connelly	7-17-8 1100
D Connelly	7-17-8 1330	C Johnson	7-17-8 1330
Steven Baum	7/24/08 0835	PT Hammond	7/24/08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-042	PAGE 2 OF 2
COLLECTOR NCO SAMPLER KAUER, ROSANE	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-003-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-585-12 pg 1	**ACTUAL SAMPLE DEPTH** 356.5	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_BETA_AE {Gross alpha, Gross beta} ALPHA_BETA_WE {Gross alpha, Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-041	PAGE 1 OF 2
COLLECTOR NCO SAMPLER KAUER, Rosanne	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-002-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-585-12 pg 1	**ACTUAL SAMPLE DEPTH** 355'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
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=Vegitation
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)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ7

PRESERVATION	None	None												
TYPE OF CONTAINER	G/P	Moisture Resistant Cont												
NO. OF CONTAINER(S)	1	1												
VOLUME	1L	200g												
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216												
SAMPLE NO.	**MATRIX***	**SAMPLE DATE**	**SAMPLE TIME**											
B1WDD4	SOIL	7-15-08	1154	✓										

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Ed KAUER / Ed Kauer	7-15-08	M0413 Ref	7-15-08
M0413 Ref	7-17-8 1100	DConnolly DC	7-178 1100
DConnolly DC	7-178 1330	CJOVni	7-178 1330
Steven Barnes / Steven Barnes	7/24/08 0835	RD Hammond RDH	7/24/08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6002-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-041	PAGE 2 OF 2
COLLECTOR NCO SAMPLER Kent / Roxane	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-002-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-585-12 Pg 1	**ACTUAL SAMPLE DEPTH** 355'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_BETA_AE {Gross alpha, Gross beta} ALPHA_BETA_WE {Gross alpha, Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F08-050-040	PAGE 1 OF 2

COLLECTOR NCO SAMPLER K. Patterson	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N; **AIR QUALITY** ☐; **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-001-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 352.5'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation
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)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: BLTVJ7

PRESERVATION	None	~~None~~										
TYPE OF CONTAINER	G/P	~~Moisture Resistant Cont~~										
NO. OF CONTAINER(S)	1	~~1~~										
VOLUME	1L	~~200g~~										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	~~Moisture Content - D2216;~~ *										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1WDD3	SOIL	7-14-08	1410	✓										

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K. Patterson [signature]	7-17-8 1100	D Connolly [signature]	7-17-8 1100
D Connolly [signature]	7-17-8 1320	C. Jovin [signature]	7-17-8 1330
Steven Baum / [signature]	7/24/08 0845	RD Hammond [signature]	7/24/08 0845

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

* No moisture tin collected per Geo.

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-040	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-001-Add On	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_BETA_AE {Gross alpha, Gross beta} ALPHA_BETA_WE {Gross alpha, Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-007 PAGE 1 OF 2

COLLECTOR NCO SAMPLER S. Mueller / D. Cano	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C5853, I-007 200.5	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 2-2' 5"	**COA** 123516ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ2

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TTN8	SOIL	4/22/08	0805

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
S. Mueller / D. Cano	4/22/08 1031	mo 745 Ref #1	4/22/08 1031
mo 745 Ref #1	4-24-08 1100	D. Parch	4-24-08 1100
D. Parch	4-24-08 1300	mo 745 Ref #1	4-24-08 1300
mo 745 Ref #1	4-29-08 1200	D. Parch	4-29-08 1200
D. Parch	4-29-08 1300	D Smith	4-29-08 1300
Shawn Bauman / Shawn Bauman	7-24-09 0837	M Mason	7-24-09 0837
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-007	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-007	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc. | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F08-050-008** | **PAGE 1 OF 2**

COLLECTOR
NCO SAMPLER Fulton/Webb

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

SAMPLING LOCATION
C5853, I-009

PROJECT DESIGNATION
200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par

SAF NO.
F08-050

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-484-1

ACTUAL SAMPLE DEPTH
302'

COA
123516ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ5

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content D2216; 7-21-09

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTN9	SOIL	6-24-08	1005	✓	✓

CHAIN OF POSSESSION | **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton	6-24-08 1300	MO 413 Fridge	6-24-08 1300
MO413 Fridge	7-1-8 1100	D Connolly	7-1-8 1100
D Connolly	7-1-8 1410	C Finn	7-1-8 1410
Steven Burns	7-24-09 0856	A Chang	7-24-09 0856

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD | DISPOSED BY | DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-008	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-009	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-009

COLLECTOR NCO SAMPLER Fulton/Webb	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐ **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-010	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-498-1	**ACTUAL SAMPLE DEPTH** 305'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ5

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216; (struck through, initialed 7-21-09)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP0	SOIL	6-24-08	1055	✓	✓

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton / [signature]	6-24-08 1300	MO 413 Fridge	6-24-08 1300
MO 413 Fridge	7-1-8 1100	D Connolly [signature]	7-1-8 1100
D Connolly [signature]	7-1-8 1410	[signature] C. Town	7-1-8 1410
Steven Baum / [signature]	7-24-09 0838	[signature]	7-24-09 0838

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-009	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-010	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc. — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F08-050-010

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
NCO SAMPLER Fulton	TRENT, SJ	373-5869	WIDRIG, DL	8N	45 Days / 45 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	AIR QUALITY
C5853, I-012	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par	F08-050	☐

ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT
	HNF-N-498-1	307	123516ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Environmental Sciences Laboratory	N/A	N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ8

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP1	SOIL	6-26-08	1316	✓	✓

028688

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM: Chris Fulton / [signature]	6-26-08 1521	MO 413 Fridge #2	6-26-08 1521
RELINQUISHED BY/REMOVED FROM: MO413 Fridge #2	7-1-8 1100	DConnolly [signature]	7-1-8 1100
RELINQUISHED BY/REMOVED FROM: DConnolly [signature]	7-1-8 1410	[signature] C-JOW	7-1-8 1410
RELINQUISHED BY/REMOVED FROM: Steve Baum / [signature]	7-24-09 0838	[signature] Alcoa	7-24-09 0838
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

Note - Sample is mostly Water Taken from a bucket

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-010	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5853, I-012	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

COLLECTOR NCO SAMPLER Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5853, I-013	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 310'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A	**DATA TURNAROUND** 45 Days / 45 Days

MATRIX* A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ8

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP2	SOIL	6-26-08	1330	✓	✓

028698

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton / [signature]	6-26-08 1521	MO 413 Fridge #2	6-26-08 1521
MO 413 Fridge #2	7-1-8 1100	D Connolly [signature]	7-1-8 1100
D Connolly [signature]	7-1-8 1410	[signature] C. [signature]	7-1-8 1410
Steven Baum / [signature]	7-24-09 0838	[signature]	7-24-09 0838

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

NOTE - Sample is mostly water taken from a bailer into a poly bucket

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-011	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5853, I-013	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

COLLECTOR NCO SAMPLER Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N / **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-014	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 312'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ8

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216; (EW 7-21-09)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP3	SOIL	6-26-08	1440	✓	✓

028687

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM: Chris Fulton / [signature]	6-21-08 1521	RECEIVED BY/STORED IN: MO 413 Fridge #2	6-21-08 1521
RELINQUISHED BY/REMOVED FROM: MO 413 Fridge #2	7-1-8 1100	RECEIVED BY/STORED IN: D Connolly [signature]	7-1-8 1100
RELINQUISHED BY/REMOVED FROM: D Connolly [signature]	7-1-8 1410	RECEIVED BY/STORED IN: [signature] C Fulton	7-1-8 1410
RELINQUISHED BY/REMOVED FROM: Steven Baum / [signature]	7-24-09 0838	RECEIVED BY/STORED IN: [signature]	7-24-09 0838
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Note - Sample is mostly water taken from bailer into poly Bucket

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F08-050-012	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-014	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-013 PAGE 1 OF 2

COLLECTOR NCO SAMPLER Fulton	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C5853, I-015	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 3 1/2	**COA** 123516ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N **DATA TURNAROUND** 45 Days / 45 Days

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ8

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP4	SOIL	6-26-08	1503	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton	6-26-08 1521	MO 413 Fridge #2	6-26-08 1521
MO 413 Fridge #2	7-1-8 1410	D Connolly	7-1-8 1410
D Connolly	7-1-8 1410		
Steven Baum	7-24-08 0835	A Chacon	7-24-08 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-013	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-015	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

Fluor Hanford Inc. | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F08-050-014** | **PAGE 1 OF 2**

COLLECTOR
NCO SAMPLER Fulton, Crow, Kruse

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

SAMPLING LOCATION
C5853, I-016

PROJECT DESIGNATION
200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par

SAF NO.
F08-050

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-488-1

ACTUAL SAMPLE DEPTH
318'

COA
123516ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ3

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1TTP5	SOIL	06-27-08	0710	✓	✓	

Lot # 0-28468 N/A

CHAIN OF POSSESSION | **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Ed Kruse / Ed Kruse	6-27-08 1400	MO 413 Fridge #2	6-27-08 1400
MO-413 Fridge #2	7/3/08 08:00	Brat Heeden	7/3/08 08:00
Brat Heeden	7/3/08 915	C Jones	7/4/08 915
Steven Baum / Steven Baum	7-24-09 0830	[illegible]	7-24-09 0830
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Note - Sample is mostly water

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD | DISPOSED BY | DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-014	PAGE 2 OF 2
COLLECTOR NCO SAMPLER Filter / Clow / Knoke	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-016	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 316	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryliium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryliium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc. — CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST — F08-050-016

COLLECTOR NCO SAMPLER Fulton / Kaver	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N / **DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-018	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-498-1	**ACTUAL SAMPLE DEPTH** 322.5	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
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=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ3

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTP7	SOIL	6-27-08	0755	✓	✓

028698

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton / [signature]	6-27-08 1400	MO 413 Fridge #2	6-27-08 1400
MO-413 Frig #2	7/2/08 08:00	Brothers / [signature]	7/2/08 08:00
Brothers / [signature]	7/2/08 915	C. Jon / [signature]	7/2/08 915
Steven Baum / [signature]	7-21-09 0857	[signature]	7-21-09 0858

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
Note - Sample is mostly water

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-016	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-018	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

COLLECTOR NCO SAMPLER	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 8N — DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C5853, I-024	PROJECT DESIGNATION 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		SAF NO. F08-050	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-488-1	ACTUAL SAMPLE DEPTH 333'	COA 123516ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
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=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ4

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTR1	SOIL	7-10-08	1030	✓	✓

LOT# 031204

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White / MA White	7-10-08 1545	MO413 Frig 1	7-10-08 1545
~~MO 413 #1~~	~~7-16-08 0700~~	~~J [illegible]~~	~~7-16-08 0700~~ [initials] 7-16-08
MO413 Fridge 1	7/16/08 0715	J Helms	7/16/08 0715
Larry Rosane / Larry Rosane	7-16-08/1115	C. Irvin [signature]	7/16/08 11:15
Steven Baum / Steven Baum	7-24-09 0835	[signature] / [signature]	7-24-09 0835

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-020	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-024	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-021 PAGE 1 OF 2

COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5853, I-025	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** 335'	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A	

DATA TURNAROUND 45 Days / 45 Days

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ4

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216; (struck through, initialed 7-21-09)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TTR2	SOIL	7-10-08	1130	✓	✓
	LOT#			031204	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White / MA White	7-10-08 1545	MO 413 Frig 1	7-10-08 1545
MO413 Fridge 1	7/16/08 0715	J Helms	7/16/08 0715
Larry Rosane / Larry Rosane	7-16-08 / 1115	C. Louin [signature]	7/16/08 11:15
Steven Baum / Steven Baum	7-24-08 0838	[signature] [signature]	7-24-08 0838
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-021	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5853, I-025	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-022 PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO SAMPLER	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5853, I-026	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		F08-050		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-488-1	337.5 '	123516ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Environmental Sciences Laboratory	N/A		N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ4

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TTR3	SOIL	7-10-08	1358
	LOT#		031204

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White MA White	7-10-08 1545	MO 413 Fridge 1	7-10-08 1545
MO413 Fridge 1	7/16/08 0715	J Helms	7/16/08 0715
Larry Rosane Larry Rosane	7-16-08/1115	C Jouin	7/16/08 1115
Steven Baum / Steve Baum	7-24-05 0836	[illegible]	7-24-05 0836
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-022	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-026	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-050-023 PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO SAMPLER	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	COA	METHOD OF SHIPMENT
C5853, I-027	200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par	F08-050	123516ES10	GOVERNMENT VEHICLE

ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH
	HNF-N-488-1	340'

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
Environmental Sciences Laboratory	N/A	N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVJ4

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				None	G/P	1	1L	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				None	Moisture Resistant Cont	1	200g	Moisture Content - D2216
B1TTR4	SOIL	7-10-08	1500	(1) Sat Taken				
		LOT#		031204				

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MA White MA White	7-10-08 1545	Mo 413 Fri 1	7-10-08 1545
MO413 Friday 1	7/16/08 0715	J Helms	7/16/08 0715
Larry Rosane Larry Rosane	7-16-08 1115	C Jo V.IV	07/16/08 1115
Steven Baum Steven Baum	7-24-09 0856	[illegible]	7-24-09 0856
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

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
(1) Per Jim Hogan

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD — DISPOSED BY — DATE/TIME

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-050-023	PAGE 2 OF 2
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5853, I-027	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Geochemical Modeling Par		**SAF NO.** F08-050	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** The laboratory is to achieve a detection limit of 1 pCi/g for Tc-99.
** Generic Testing and Special Studies refer to ESL methods for determination of unsaturated hydraulic conductivity, moisture retention determinations (using both methods D6836-01 and D6836-02), and distribution coefficient for uranium and technetium.
** ESL is to submit copies of all Chain of Custodies and associated sample login documentation to EIS-SDM within 24 hours of sample receipt. They may be sent via e-mail to ^CPP Sample Management.
(1)6010M_ICP_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_ICP_ASTM_AE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6010M_METALS_ICP_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc} 6010M_METALS_ICP_WE (Add-On) {Arsenic, Beryllium, Boron, Lead, Lithium, Selenium, Strontium, Thallium} 6020M_ICPMS_ASTM_AE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} 6020M_METALS_ICPMS_WE (TAL) {Aluminum, Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic, Beryllium, Lead, Selenium, Strontium, Thallium} RADISO_ICPMS_ASTM_AE {Technetium-99, Uranium-238} I-129 by ICPMS {Iodine-129} RADISO_ICPMS_WE {Iodine-129, Technetium-99, Uranium-238} ALPHA_AE {Gross alpha} BETA_AE {Gross beta} ALPHA_WE {Gross alpha} BETA_WE {Gross beta} 2320_ALKALINITY {Alkalinity, Bicarbonate, Calcium Carbonate, Carbonate ion} IC Anions - 9056_WE {Bromide, Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate} pH (Water) - 9045_WE; TOC - ASTME1915A {Total Inorganic Carbon, Total carbon, Total organic carbon}

A-6003-618(01/06)