ESL090009 RECEIVED JUNE 14, 2010 0093138

U.S. DEPARTMENT OF ENERGY

PNNL-19484

Prepared for the U.S. Department of Energy
under Contract DE-AC05-76RLO1830

Analytical Data Report for Sediment Samples Collected From 200 BP 5 OU, C5860 (299-E29-545) K-Well

Michael Lindberg

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06/14/10 15:07

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 200 BP 5 OU, C5860 (299-E29-545) K-Well, Sample Delivery Group ESL090009, SAF Number F10-010

This letter contains the following information for sample delivery group ESL090009

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

Introduction

Between November 23, 2009 and January 11, 2010 sediment samples were received from 200 BP 5 OU, C5860 (299-E29-545) K-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 can not be met. The statement of work requires samples to be selected at the completion of the borehole. It is not always possible to complete a borehole and have the samples shipped to the laboratory within the hold time requirements.

Preparation Blank (PB):

No discrepancies noted.

Duplicate (DUP):

No discrepancies noted.

Laboratory Control Samples (LCS):

LCS Recovery for Silver (59.9%) was outside acceptance limits (80-120) in 0C04001-BS1 for ICP-OES Vadose-AE
Samples results associated with this batch were not reported.

Post Spike (PS):

No Discrepancies noted.

Matrix Spike (MS):

No Discrepancies noted.

Other QC Criteria:

No discrepancies noted.

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

Michael Lindberg

DISCLAIMER

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SAMPLES INCLUDED IN THIS REPORT

200 BP 5 OU, C5860 (299-E29-54) K-Well

HEIS No.	Laboratory ID	Matrix	Date Collected	Date Received
B22N80	0911015-08	SOIL	11/24/09 14:30	11/30/09 11:15
B22N81	0911015-09	SOIL	11/30/09 08:33	12/2/09 12:30
B22N82	0911015-10	SOIL	11/30/09 12:41	12/2/09 12:30
B22N83	0911015-11	SOIL	11/30/09 14:10	12/2/09 12:30
B22N84	0911015-12	SOIL	11/30/09 14:53	12/2/09 12:30
B22N90	0911015-18	SOIL	12/1/09 13:31	12/2/09 12:30
B22N94	0911015-22	SOIL	12/4/09 14:23	12/8/09 11:15
B22NB3	0911015-33	SOIL	12/8/09 09:24	12/9/09 11:30
B22NC5	0911015-47	SOIL	12/9/09 09:02	12/9/09 11:30
B22NC8	0911015-50	SOIL	12/9/09 10:06	12/9/09 11:30
B22ND9	0911015-65	SOIL	12/14/09 07:58	12/14/09 11:50
B22NF6	0911015-84	SOIL	12/15/09 12:30	12/21/09 11:40
B22NH6	0911015-AE	SOIL	12/18/09 08:50	12/21/09 11:40
B22NL1	0911015-BP	SOIL	12/30/09 14:00	1/5/10 11:50

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
Hexavalent Chromium by Colorimetric
Inorganic Carbon, Total, Combustion or Oxidation
Iodine-129 1:1 DI Water Extract by ICPMS
Metals 1:1 Water Extract by ICPOES
Metals Acid Extract by ICPOES
Moisture Content
pH of Waters By Electrode
Specific Conductance
Tc_U Acid Extract by ICPMS
Tc_U 1:1 DI Water Extract by ICPMS
Total Alpha Total Beta 1:1 DI Water Extract By LSC
Total Alpha Total Beta Acid Extract By LSC

SAMPLES ANALYZED IN THIS REPORT

HEIS No.	Laboratory ID	Matrix	Date Collected	Date Received
B22N80	0911015-08	SOIL	11/24/09 14:30	11/30/09 11:15
B22N81	0911015-09	SOIL	11/30/09 08:33	12/2/09 12:30
B22N82	0911015-10	SOIL	11/30/09 12:41	12/2/09 12:30
B22N83	0911015-11	SOIL	11/30/09 14:10	12/2/09 12:30
B22N84	0911015-12	SOIL	11/30/09 14:53	12/2/09 12:30
B22N90	0911015-18	SOIL	12/1/09 13:31	12/2/09 12:30
B22N94	0911015-22	SOIL	12/4/09 14:23	12/8/09 11:15
B22NB3	0911015-33	SOIL	12/8/09 09:24	12/9/09 11:30
B22NC5	0911015-47	SOIL	12/9/09 09:02	12/9/09 11:30
B22NC8	0911015-50	SOIL	12/9/09 10:06	12/9/09 11:30
B22ND9	0911015-65	SOIL	12/14/09 07:58	12/14/09 11:50
B22NF6	0911015-84	SOIL	12/15/09 12:30	12/21/09 11:40
B22NH6	0911015-AE	SOIL	12/18/09 08:50	12/21/09 11:40
B22NL1	0911015-BP	SOIL	12/30/09 14:00	1/5/10 11:50

Wet Chemistry

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	3.50E1	2.35E1	4/08/10	0D01004
0911015-09	B22N81	2.53E1	2.37E1	4/08/10	0D01004
0911015-10	B22N82	3.95E1	2.35E1	4/08/10	0D01004
0911015-11	B22N83	9.06E1	2.35E1	4/08/10	0D01004
0911015-12	B22N84	3.67E1	2.35E1	4/08/10	0D01004
0911015-18	B22N90	3.95E1	2.35E1	4/08/10	0D01004
0911015-22	B22N94	4.36E1	2.35E1	4/08/10	0D01004
0911015-33	B22NB3	3.38E1	2.35E1	4/08/10	0D01004
0911015-47	B22NC5	3.79E1	2.35E1	4/08/10	0D01004
0911015-50	B22NC8	3.67E1	2.35E1	4/08/10	0D01004
0911015-65	B22ND9	4.16E1	2.35E1	4/08/10	0D01004
0911015-84	B22NF6	4.57E1	2.35E1	4/08/10	0D01004
0911015-AE	B22NH6	4.73E1	2.35E1	4/08/10	0D01004
0911015-BP	B22NL1	3.95E1	2.37E1	4/08/10	0D01004

Wet Chemistry

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	1.04E-1	1.00E-2	3/04/10	0C03002
0911015-09	B22N81	1.61E-1	1.00E-2	3/04/10	0C03002
0911015-10	B22N82	1.31E-1	1.00E-2	3/04/10	0C03002
0911015-11	B22N83	4.90E-1	1.00E-2	3/04/10	0C03002
0911015-12	B22N84	1.69E-1	1.00E-2	3/04/10	0C03002
0911015-18	B22N90	1.52E-1	1.00E-2	3/04/10	0C03002
0911015-22	B22N94	1.34E-1	1.00E-2	3/04/10	0C03002
0911015-33	B22NB3	8.83E-2	1.00E-2	3/04/10	0C03002
0911015-47	B22NC5	1.23E-1	1.00E-2	3/04/10	0C03002
0911015-50	B22NC8	1.16E-1	1.00E-2	3/04/10	0C03002
0911015-65	B22ND9	1.27E-1	1.00E-2	3/04/10	0C03002
0911015-84	B22NF6	1.26E-1	1.00E-2	3/04/10	0C03002
0911015-AE	B22NH6	1.15E-1	1.00E-2	3/04/10	0C03002
0911015-BP	B22NL1	1.62E-1	1.00E-2	3/04/10	0C03002

Wet Chemistry

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	3.75E0	N/A	2/10/10	0A26002
0911015-09	B22N81	2.12E1	N/A	2/10/10	0A26002
0911015-10	B22N82	3.34E0	N/A	2/10/10	0A26002
0911015-11	B22N83	3.97E0	N/A	2/10/10	0A26002
0911015-12	B22N84	7.21E0	N/A	2/10/10	0A26002
0911015-18	B22N90	7.55E0	N/A	2/10/10	0A26002
0911015-22	B22N94	9.02E0	N/A	2/10/10	0A26002
0911015-33	B22NB3	4.15E0	N/A	2/10/10	0A26002
0911015-50	B22NC8	5.84E0	N/A	2/10/10	0A26002
0911015-65	B22ND9	5.57E0	N/A	2/10/10	0A26002
0911015-84	B22NF6	5.84E0	N/A	2/10/10	0A26002
0911015-AE	B22NH6	4.33E0	N/A	2/10/10	0A26002
0911015-BP	B22NL1	3.66E0	N/A	2/10/10	0A26002

Wet Chemistry

pH (pH Units) by AGG-pH-001

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	8.96E0	N/A	3/04/10	0C02004
0911015-09	B22N81	7.86E0	N/A	3/04/10	0C02004
0911015-10	B22N82	7.90E0	N/A	3/04/10	0C02004
0911015-11	B22N83	7.89E0	N/A	3/04/10	0C02004
0911015-12	B22N84	8.11E0	N/A	3/04/10	0C02004
0911015-18	B22N90	8.12E0	N/A	3/04/10	0C02004
0911015-22	B22N94	8.35E0	N/A	3/04/10	0C02004
0911015-33	B22NB3	8.66E0	N/A	3/04/10	0C02004
0911015-47	B22NC5	8.49E0	N/A	3/04/10	0C02004
0911015-50	B22NC8	8.33E0	N/A	3/04/10	0C02004
0911015-65	B22ND9	8.55E0	N/A	3/04/10	0C02004
0911015-84	B22NF6	8.53E0	N/A	3/04/10	0C02004
0911015-AE	B22NH6	8.72E0	N/A	3/04/10	0C02004
0911015-BP	B22NL1	8.66E0	N/A	3/04/10	0C02004

Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
16984-48-8	Fluoride	2.96E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	2.21E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	2.63E0	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	4.99E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
16984-48-8	Fluoride	6.36E-1	ug/g dry	2.01E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	7.35E0	ug/g dry	5.04E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.01E0	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.01E0	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	1.08E1	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	2.27E1	ug/g dry	1.51E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	2.54E0	ug/g dry	1.51E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
16984-48-8	Fluoride	6.72E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	1.59E0	ug/g dry	4.99E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	3.58E0	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	1.45E1	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
16984-48-8	Fluoride	9.38E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	2.41E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	4.33E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	1.23E2	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
16984-48-8	Fluoride	7.32E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	3.80E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	5.27E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	2.82E1	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
16984-48-8	Fluoride	1.11E0	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	4.65E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	5.53E0	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	1.49E1	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			

Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
16984-48-8	Fluoride	5.58E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	2.95E0	ug/g dry	4.99E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	3.40E0	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	1.03E1	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
16984-48-8	Fluoride	3.62E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	1.01E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	1.12E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	3.70E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
16984-48-8	Fluoride	3.96E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	4.44E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	4.56E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	7.70E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
16984-48-8	Fluoride	3.53E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	4.79E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	5.43E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	5.98E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
16984-48-8	Fluoride	2.96E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	3.61E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	8.00E0	ug/g dry	1.00E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	6.43E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
16984-48-8	Fluoride	3.28E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	2.87E0	ug/g dry	5.00E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.99E-1	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	3.08E0	ug/g dry	9.99E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	6.58E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			

Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			
16984-48-8	Fluoride	4.61E-1	ug/g dry	2.00E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	5.09E-1	ug/g dry	4.99E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<9.98E-1	ug/g dry	9.98E-1	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<9.98E-1	ug/g dry	9.98E-1	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	1.15E0	ug/g dry	9.98E-1	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	7.57E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.50E0	ug/g dry	1.50E0	3/04/10	0C08001	AGG-IC-001
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**			
16984-48-8	Fluoride	5.68E-1	ug/g dry	2.02E-1	3/04/10	0C08001	AGG-IC-001
16887-00-6	Chloride	2.38E0	ug/g dry	5.05E-1	3/04/10	0C08001	AGG-IC-001
14797-65-0	Nitrite	<1.01E0	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
24959-67-9	Bromide	<1.01E0	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
14797-55-8	Nitrate	1.99E0	ug/g dry	1.01E0	3/04/10	0C08001	AGG-IC-001
14808-79-8	Sulfate	2.88E1	ug/g dry	1.52E0	3/04/10	0C08001	AGG-IC-001
14265-44-2	Phosphate	<1.52E0	ug/g dry	1.52E0	3/04/10	0C08001	AGG-IC-001

Cyanide by Mircodistillation/Colorimetric

Cyanide (ug/g dry) by MICRODIST Cyanide Method

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	<2.08E-1	2.08E-1	4/21/10	0D08004
0911015-09	B22N81	<2.40E-1	2.40E-1	4/21/10	0D08004
0911015-10	B22N82	<2.06E-1	2.06E-1	4/21/10	0D08004
0911015-11	B22N83	<2.11E-1	2.11E-1	4/21/10	0D08004
0911015-12	B22N84	<2.14E-1	2.14E-1	4/21/10	0D08004
0911015-18	B22N90	<2.18E-1	2.18E-1	4/21/10	0D08004
0911015-22	B22N94	<2.17E-1	2.17E-1	4/21/10	0D08004
0911015-33	B22NB3	<2.05E-1	2.05E-1	4/21/10	0D08004
0911015-47	B22NC5	<1.95E-1	1.95E-1	4/21/10	0D08004
0911015-50	B22NC8	<2.11E-1	2.11E-1	4/21/10	0D08004
0911015-65	B22ND9	<2.07E-1	2.07E-1	4/21/10	0D08004
0911015-84	B22NF6	<2.15E-1	2.15E-1	4/21/10	0D08004
0911015-AE	B22NH6	<1.87E-1	1.87E-1	4/21/10	0D08004
0911015-BP	B22NL1	<2.08E-1	2.08E-1	4/21/10	0D08004

Hexavalent Chromium/Soil

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	8.93E-1	5.07E-1	4/12/10	0D13002
0911015-09	B22N81	<6.05E-1	6.05E-1	4/12/10	0D13002
0911015-10	B22N82	<5.16E-1	5.16E-1	4/12/10	0D13002
0911015-11	B22N83	1.51E0	5.09E-1	4/12/10	0D13002
0911015-12	B22N84	<5.17E-1	5.17E-1	4/12/10	0D13002
0911015-18	B22N90	<5.38E-1	5.38E-1	4/12/10	0D13002
0911015-22	B22N94	<5.34E-1	5.34E-1	4/12/10	0D13002
0911015-33	B22NB3	7.52E-1	5.15E-1	4/12/10	0D13002
0911015-47	B22NC5	<5.04E-1	5.04E-1	4/12/10	0D13002
0911015-50	B22NC8	<5.21E-1	5.21E-1	4/12/10	0D13002
0911015-65	B22ND9	<5.18E-1	5.18E-1	4/12/10	0D13002
0911015-84	B22NF6	<1.00E-2	1.00E-2	4/12/10	0D13002
0911015-AE	B22NH6	<1.02E-2	1.02E-2	4/12/10	0D13002
0911015-BP	B22NL1	<1.02E-2	1.02E-2	4/12/10	0D13002

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**	**Lab ID:**		**0911015-08**			
7429-90-5	Aluminum	1.07E-1	ug/g dry	9.36E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	4.77E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.77E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.79E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.66E-2	ug/g dry	9.66E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.87E-1	ug/g dry	9.87E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.01E1	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.67E-2	ug/g dry	5.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N81**	**Lab ID:**		**0911015-09**			
7429-90-5	Aluminum	4.32E-1	ug/g dry	9.44E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.14E-1	ug/g dry	3.14E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	3.61E0	ug/g dry	4.56E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.86E-2	ug/g dry	2.86E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.85E-2	ug/g dry	8.85E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	3.55E-1	ug/g dry	1.06E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	2.30E0	ug/g dry	1.30E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.33E0	ug/g dry	4.92E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.29E-2	ug/g dry	6.29E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.74E-2	ug/g dry	9.74E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.62E-1	ug/g dry	1.62E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.21E0	ug/g dry	1.21E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.95E-1	ug/g dry	9.95E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.28E1	ug/g dry	8.03E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.72E-2	ug/g dry	5.72E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N82**	**Lab ID:**		**0911015-10**			
7429-90-5	Aluminum	9.83E-2	ug/g dry	9.36E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.03E1	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.83E-2	ug/g dry	2.83E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.77E-2	ug/g dry	8.77E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	2.14E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.22E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.66E-2	ug/g dry	9.66E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.87E-1	ug/g dry	9.87E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
7440-23-5	Sodium	9.36E0	ug/g dry	7.96E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.67E-2	ug/g dry	5.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
7429-90-5	Aluminum	<9.37E-2	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	5.44E1	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	5.12E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.08E1	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.90E1	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
7429-90-5	Aluminum	<9.37E-2	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.12E-1	ug/g dry	3.12E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.38E1	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.79E-2	ug/g dry	8.79E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.24E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.22E0	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.25E-2	ug/g dry	6.25E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	9.98E0	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
7429-90-5	Aluminum	1.13E-1	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.30E1	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.59E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.07E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N90**	**Lab ID:**	**0911015-18**				
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.87E-1	ug/g dry	9.87E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.55E0	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22N94**	**Lab ID:**	**0911015-22**				
7429-90-5	Aluminum	1.04E-1	ug/g dry	9.36E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	1.01E1	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.83E-2	ug/g dry	2.83E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.77E-2	ug/g dry	8.77E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.19E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.12E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.66E-2	ug/g dry	9.66E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.87E-1	ug/g dry	9.87E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.10E0	ug/g dry	7.96E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.67E-2	ug/g dry	5.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NB3**	**Lab ID:**	**0911015-33**				
7429-90-5	Aluminum	1.10E-1	ug/g dry	9.38E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.12E-1	ug/g dry	3.12E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.79E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.79E-2	ug/g dry	8.79E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.03E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.05E0	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.25E-2	ug/g dry	6.25E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.68E-2	ug/g dry	9.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	4.90E0	ug/g dry	7.98E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NC5**	**Lab ID:**	**0911015-47**				
7429-90-5	Aluminum	1.29E-1	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.12E-1	ug/g dry	3.12E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.40E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.33E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.10E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
7439-95-4	Magnesium	2.32E0	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.25E-2	ug/g dry	6.25E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	7.56E0	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
7429-90-5	Aluminum	1.47E-1	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.81E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.07E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.61E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.40E0	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	6.05E0	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
7429-90-5	Aluminum	<9.37E-2	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.08E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	3.98E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.07E0	ug/g dry	4.89E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.88E-1	ug/g dry	9.88E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.11E1	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
7429-90-5	Aluminum	1.44E-1	ug/g dry	9.37E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	7.25E0	ug/g dry	4.52E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.84E-2	ug/g dry	2.84E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NF6**	**Lab ID:**		**0911015-84**			
7440-50-8	Copper	<8.78E-2	ug/g dry	8.78E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.58E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.48E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.98E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.24E-2	ug/g dry	6.24E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.67E-2	ug/g dry	9.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.87E-1	ug/g dry	9.87E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.18E1	ug/g dry	7.97E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.68E-2	ug/g dry	5.68E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NH6**	**Lab ID:**		**0911015-AE**			
7429-90-5	Aluminum	1.61E-1	ug/g dry	9.35E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.11E-1	ug/g dry	3.11E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.32E0	ug/g dry	4.51E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.04E-1	ug/g dry	1.04E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.83E-2	ug/g dry	2.83E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.77E-2	ug/g dry	8.77E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.97E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	4.38E0	ug/g dry	1.29E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	1.89E0	ug/g dry	4.88E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.23E-2	ug/g dry	6.23E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.65E-2	ug/g dry	9.65E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.61E-1	ug/g dry	1.61E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.20E0	ug/g dry	1.20E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.86E-1	ug/g dry	9.86E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.18E1	ug/g dry	7.96E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.67E-2	ug/g dry	5.67E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
HEIS No.	**B22NL1**	**Lab ID:**		**0911015-BP**			
7429-90-5	Aluminum	2.21E-1	ug/g dry	9.47E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-38-2	Arsenic	<3.15E-1	ug/g dry	3.15E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	8.58E0	ug/g dry	4.57E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.05E-1	ug/g dry	1.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	<2.87E-2	ug/g dry	2.87E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<8.87E-2	ug/g dry	8.87E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.71E-1	ug/g dry	1.06E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	5.52E0	ug/g dry	1.30E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.37E0	ug/g dry	4.94E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	<6.31E-2	ug/g dry	6.31E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<9.77E-2	ug/g dry	9.77E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.63E-1	ug/g dry	1.63E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<1.21E0	ug/g dry	1.21E0	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<9.98E-1	ug/g dry	9.98E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.57E1	ug/g dry	8.05E-1	3/09/10	0C09001	PNNL-AGG-ICP-AES
7440-22-4	Silver	<5.74E-2	ug/g dry	5.74E-2	3/09/10	0C09001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**	**Lab ID:**		**0911015-08**			
7429-90-5	Aluminum	3.74E3	ug/g dry	2.25E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	7.73E3	ug/g dry	2.34E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.23E0	ug/g dry	1.23E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	5.71E0	ug/g dry	1.96E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.44E0	ug/g dry	6.44E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	9.21E3	ug/g dry	6.05E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.60E2	ug/g dry	8.61E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.25E3	ug/g dry	6.41E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.92E2	ug/g dry	2.01E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	7.11E0	ug/g dry	4.67E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.01E1	ug/g dry	1.01E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.71E1	ug/g dry	5.71E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.23E1	ug/g dry	3.23E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.28E2	ug/g dry	6.34E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N81**	**Lab ID:**		**0911015-09**			
7429-90-5	Aluminum	1.10E3	ug/g dry	2.71E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	5.21E2	ug/g dry	2.81E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.47E0	ug/g dry	1.47E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.02E1	ug/g dry	2.36E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<7.74E0	ug/g dry	7.74E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	2.44E3	ug/g dry	7.27E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	2.91E2	ug/g dry	1.04E2	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.66E2	ug/g dry	7.70E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.47E1	ug/g dry	2.42E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<5.61E0	ug/g dry	5.61E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.21E1	ug/g dry	1.21E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.86E1	ug/g dry	6.86E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.88E1	ug/g dry	3.88E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.03E2	ug/g dry	7.62E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N82**	**Lab ID:**		**0911015-10**			
7429-90-5	Aluminum	3.43E3	ug/g dry	2.30E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.49E3	ug/g dry	2.39E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.25E0	ug/g dry	1.25E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	5.44E0	ug/g dry	2.01E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.59E0	ug/g dry	6.59E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	8.04E3	ug/g dry	6.20E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.14E2	ug/g dry	8.82E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.86E3	ug/g dry	6.56E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.21E2	ug/g dry	2.06E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	7.65E0	ug/g dry	4.78E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.03E1	ug/g dry	1.03E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.85E1	ug/g dry	5.85E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.31E1	ug/g dry	3.31E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	8.29E1	ug/g dry	6.49E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N83**	**Lab ID:**		**0911015-11**			
7429-90-5	Aluminum	3.71E3	ug/g dry	2.34E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.07E3	ug/g dry	2.43E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.28E0	ug/g dry	1.28E0	3/04/10	0C04001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N83**	**Lab ID:**		**0911015-11**			
7440-47-3	Chromium	2.70E1	ug/g dry	2.05E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.71E0	ug/g dry	6.71E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	9.61E3	ug/g dry	6.31E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	8.34E2	ug/g dry	8.98E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.95E3	ug/g dry	6.68E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.16E2	ug/g dry	2.10E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	7.72E0	ug/g dry	4.86E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.05E1	ug/g dry	1.05E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.95E1	ug/g dry	5.95E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.36E1	ug/g dry	3.36E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.13E2	ug/g dry	6.61E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N84**	**Lab ID:**		**0911015-12**			
7429-90-5	Aluminum	4.20E3	ug/g dry	2.47E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	7.07E3	ug/g dry	2.56E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.34E0	ug/g dry	1.34E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.13E0	ug/g dry	2.15E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<7.05E0	ug/g dry	7.05E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.02E4	ug/g dry	6.63E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.92E2	ug/g dry	9.44E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.43E3	ug/g dry	7.02E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.69E2	ug/g dry	2.20E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	1.03E1	ug/g dry	5.11E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.10E1	ug/g dry	1.10E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.26E1	ug/g dry	6.26E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.54E1	ug/g dry	3.54E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.12E2	ug/g dry	6.95E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N90**	**Lab ID:**		**0911015-18**			
7429-90-5	Aluminum	4.21E3	ug/g dry	2.50E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.84E3	ug/g dry	2.59E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.36E0	ug/g dry	1.36E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	6.85E0	ug/g dry	2.18E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<7.15E0	ug/g dry	7.15E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	9.00E3	ug/g dry	6.72E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.17E3	ug/g dry	9.56E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.10E3	ug/g dry	7.12E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.24E2	ug/g dry	2.23E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	8.77E0	ug/g dry	5.18E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.12E1	ug/g dry	1.12E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.34E1	ug/g dry	6.34E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.59E1	ug/g dry	3.59E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.00E2	ug/g dry	7.04E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22N94**	**Lab ID:**		**0911015-22**			
7429-90-5	Aluminum	4.16E3	ug/g dry	2.52E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.88E3	ug/g dry	2.61E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.37E0	ug/g dry	1.37E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.64E0	ug/g dry	2.20E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<7.20E0	ug/g dry	7.20E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	8.98E3	ug/g dry	6.77E0	3/04/10	0C04001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N94**	**Lab ID:**		**0911015-22**			
7440-09-7	Potassium	1.10E3	ug/g dry	9.64E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.35E3	ug/g dry	7.17E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.20E2	ug/g dry	2.25E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	9.13E0	ug/g dry	5.22E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.13E1	ug/g dry	1.13E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.39E1	ug/g dry	6.39E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.61E1	ug/g dry	3.61E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	9.44E1	ug/g dry	7.10E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NB3**	**Lab ID:**		**0911015-33**			
7429-90-5	Aluminum	4.04E3	ug/g dry	2.36E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.99E3	ug/g dry	2.45E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.28E0	ug/g dry	1.28E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.67E0	ug/g dry	2.06E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.74E0	ug/g dry	6.74E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	8.75E3	ug/g dry	6.34E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	8.42E2	ug/g dry	9.02E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.30E3	ug/g dry	6.71E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.09E2	ug/g dry	2.11E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	9.91E0	ug/g dry	4.89E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.05E1	ug/g dry	1.05E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.98E1	ug/g dry	5.98E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.38E1	ug/g dry	3.38E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.04E2	ug/g dry	6.64E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NC5**	**Lab ID:**		**0911015-47**			
7429-90-5	Aluminum	4.29E3	ug/g dry	2.38E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.57E3	ug/g dry	2.47E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.30E0	ug/g dry	1.30E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	9.09E0	ug/g dry	2.08E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.82E0	ug/g dry	6.82E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.03E4	ug/g dry	6.41E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	8.64E2	ug/g dry	9.12E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.46E3	ug/g dry	6.79E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.12E2	ug/g dry	2.13E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	9.96E0	ug/g dry	4.94E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.07E1	ug/g dry	1.07E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.05E1	ug/g dry	6.05E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.42E1	ug/g dry	3.42E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.23E2	ug/g dry	6.72E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NC8**	**Lab ID:**		**0911015-50**			
7429-90-5	Aluminum	4.23E3	ug/g dry	2.38E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	6.33E3	ug/g dry	2.47E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.30E0	ug/g dry	1.30E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.87E0	ug/g dry	2.08E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.81E0	ug/g dry	6.81E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	9.00E3	ug/g dry	6.41E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	9.49E2	ug/g dry	9.12E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.33E3	ug/g dry	6.79E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.09E2	ug/g dry	2.13E0	3/04/10	0C04001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NC8**	**Lab ID:**		**0911015-50**			
7440-02-0	Nickel	9.69E0	ug/g dry	4.94E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.07E1	ug/g dry	1.07E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.05E1	ug/g dry	6.05E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.42E1	ug/g dry	3.42E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.11E2	ug/g dry	6.71E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22ND9**	**Lab ID:**		**0911015-65**			
7429-90-5	Aluminum	4.33E3	ug/g dry	2.35E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	7.53E3	ug/g dry	2.44E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.28E0	ug/g dry	1.28E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.33E0	ug/g dry	2.05E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.72E0	ug/g dry	6.72E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.11E4	ug/g dry	6.32E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	8.80E2	ug/g dry	8.99E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	3.21E3	ug/g dry	6.69E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	2.24E2	ug/g dry	2.10E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	7.94E0	ug/g dry	4.87E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.05E1	ug/g dry	1.05E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.96E1	ug/g dry	5.96E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.37E1	ug/g dry	3.37E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.45E2	ug/g dry	6.62E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NF6**	**Lab ID:**		**0911015-84**			
7429-90-5	Aluminum	3.77E3	ug/g dry	2.42E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	5.64E3	ug/g dry	2.52E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.32E0	ug/g dry	1.32E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	7.96E0	ug/g dry	2.11E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.93E0	ug/g dry	6.93E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.17E4	ug/g dry	6.52E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.21E2	ug/g dry	9.28E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.89E3	ug/g dry	6.90E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.99E2	ug/g dry	2.17E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	8.52E0	ug/g dry	5.03E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.08E1	ug/g dry	1.08E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.15E1	ug/g dry	6.15E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.48E1	ug/g dry	3.48E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.73E2	ug/g dry	6.83E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NH6**	**Lab ID:**		**0911015-AE**			
7429-90-5	Aluminum	3.93E3	ug/g dry	2.30E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	5.29E3	ug/g dry	2.38E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.25E0	ug/g dry	1.25E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	6.42E0	ug/g dry	2.00E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	<6.56E0	ug/g dry	6.56E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	9.99E3	ug/g dry	6.17E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	7.95E2	ug/g dry	8.79E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.83E3	ug/g dry	6.54E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.74E2	ug/g dry	2.05E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	6.71E0	ug/g dry	4.76E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.03E1	ug/g dry	1.03E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<5.82E1	ug/g dry	5.82E1	3/04/10	0C04001	PNNL-AGG-ICP-AES

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

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NH6**	**Lab ID:**		**0911015-AE**			
7440-28-0	Thallium	<3.29E1	ug/g dry	3.29E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	1.64E2	ug/g dry	6.47E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
HEIS No.	**B22NL1**	**Lab ID:**		**0911015-BP**			
7429-90-5	Aluminum	4.04E3	ug/g dry	2.37E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	3.52E3	ug/g dry	2.46E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-43-9	Cadmium	<1.29E0	ug/g dry	1.29E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-47-3	Chromium	1.38E1	ug/g dry	2.06E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-50-8	Copper	7.22E0	ug/g dry	6.77E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-89-6	Iron	1.04E4	ug/g dry	6.36E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	9.33E2	ug/g dry	9.06E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	2.67E3	ug/g dry	6.74E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.87E2	ug/g dry	2.11E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	8.72E0	ug/g dry	4.91E0	3/04/10	0C04001	PNNL-AGG-ICP-AES
7439-92-1	Lead	<1.06E1	ug/g dry	1.06E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7782-49-2	Selenium	<6.00E1	ug/g dry	6.00E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<3.40E1	ug/g dry	3.40E1	3/04/10	0C04001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.57E2	ug/g dry	6.67E1	3/04/10	0C04001	PNNL-AGG-ICP-AES

Radionuclides by ICP-MS/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
14133-76-7	Technetium-99	<4.89E-3	ug/g dry	4.89E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.36E-1	ug/g dry	3.33E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
14133-76-7	Technetium-99	<5.88E-3	ug/g dry	5.88E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	1.01E-1	ug/g dry	4.01E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
14133-76-7	Technetium-99	<5.01E-3	ug/g dry	5.01E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	5.60E-1	ug/g dry	3.41E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
14133-76-7	Technetium-99	<5.10E-3	ug/g dry	5.10E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	3.67E-1	ug/g dry	3.47E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
14133-76-7	Technetium-99	<5.36E-3	ug/g dry	5.36E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	4.08E-1	ug/g dry	3.65E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
14133-76-7	Technetium-99	<5.43E-3	ug/g dry	5.43E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	3.79E-1	ug/g dry	3.70E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
14133-76-7	Technetium-99	<5.48E-3	ug/g dry	5.48E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	4.91E-1	ug/g dry	3.73E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
14133-76-7	Technetium-99	<5.13E-3	ug/g dry	5.13E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.51E-1	ug/g dry	3.49E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
14133-76-7	Technetium-99	<5.18E-3	ug/g dry	5.18E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.48E-1	ug/g dry	3.53E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
14133-76-7	Technetium-99	<5.18E-3	ug/g dry	5.18E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.38E-1	ug/g dry	3.53E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
14133-76-7	Technetium-99	<5.11E-3	ug/g dry	5.11E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.10E-1	ug/g dry	3.48E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
14133-76-7	Technetium-99	<5.27E-3	ug/g dry	5.27E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.18E-1	ug/g dry	3.59E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			
14133-76-7	Technetium-99	<4.99E-3	ug/g dry	4.99E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.20E-1	ug/g dry	3.40E-2	3/22/10	0C03005	PNNL-AGG-415
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**			
14133-76-7	Technetium-99	<5.15E-3	ug/g dry	5.15E-3	4/04/10	0C03005	PNNL-AGG-415
	Uranium 238	2.18E-1	ug/g dry	3.50E-2	3/22/10	0C03005	PNNL-AGG-415

Radionuclides by ICP-MS/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
15046-84-1	Iodine-129	<5.00E-5	ug/g dry	5.00E-5	5/03/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
15046-84-1	Iodine-129	<1.01E-4	ug/g dry	1.01E-4	5/03/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
15046-84-1	Iodine-129	<4.99E-5	ug/g dry	4.99E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
15046-84-1	Iodine-129	<5.00E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
15046-84-1	Iodine-129	5.96E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
15046-84-1	Iodine-129	5.11E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
15046-84-1	Iodine-129	8.92E-5	ug/g dry	4.99E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
15046-84-1	Iodine-129	5.55E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
15046-84-1	Iodine-129	<5.00E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
15046-84-1	Iodine-129	<5.00E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
15046-84-1	Iodine-129	5.20E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
15046-84-1	Iodine-129	6.76E-5	ug/g dry	5.00E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			
15046-84-1	Iodine-129	<4.99E-5	ug/g dry	4.99E-5	5/04/10	0C05005	PNNL-AGG-415
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**			
15046-84-1	Iodine-129	9.09E-5	ug/g dry	5.05E-5	5/04/10	0C05005	PNNL-AGG-415

Radionuclides by ICP-MS/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	3.28E-4	ug/g dry	7.99E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
14133-76-7	Technetium-99	<3.93E-5	ug/g dry	3.93E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	<8.06E-5	ug/g dry	8.06E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
14133-76-7	Technetium-99	4.19E-5	ug/g dry	3.89E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	1.42E-3	ug/g dry	7.99E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	6.61E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	2.93E-3	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	2.20E-3	ug/g dry	7.99E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	2.59E-3	ug/g dry	7.99E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	8.05E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	2.84E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	3.36E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	7.02E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
14133-76-7	Technetium-99	<3.90E-5	ug/g dry	3.90E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	4.47E-4	ug/g dry	8.00E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			
14133-76-7	Technetium-99	<3.89E-5	ug/g dry	3.89E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	3.78E-4	ug/g dry	7.99E-5	3/04/10	0C04007	PNNL-AGG-415
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**			
14133-76-7	Technetium-99	<3.94E-5	ug/g dry	3.94E-5	3/04/10	0C04007	PNNL-AGG-415
	Uranium 238	1.88E-4	ug/g dry	8.08E-5	3/04/10	0C04007	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Water Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.53E-4	ug/g dry	6.53E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
14265-72-6	Antimony	9.89E-4	ug/g dry	6.63E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.59E-4	ug/g dry	6.59E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.53E-4	ug/g dry	6.53E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
14265-72-6	Antimony	<6.59E-4	ug/g dry	6.59E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.53E-4	ug/g dry	6.53E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
14265-72-6	Antimony	<6.59E-4	ug/g dry	6.59E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
14265-72-6	Antimony	<6.59E-4	ug/g dry	6.59E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
14265-72-6	Antimony	<6.58E-4	ug/g dry	6.58E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.54E-4	ug/g dry	6.54E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**			
14265-72-6	Antimony	<6.57E-4	ug/g dry	6.57E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.53E-4	ug/g dry	6.53E-4	3/10/10	0C10005	PNNL-AGG-415
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**			
14265-72-6	Antimony	<6.65E-4	ug/g dry	6.65E-4	3/10/10	0C10005	PNNL-AGG-415
15756-10-2	Mercury	<6.61E-4	ug/g dry	6.61E-4	3/10/10	0C10005	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**			
7440-38-2	Arsenic	2.16E0	ug/g dry	2.73E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.75E-1	ug/g dry	1.75E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.52E-1	ug/g dry	1.52E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**			
7440-38-2	Arsenic	8.73E-1	ug/g dry	3.28E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<2.11E-1	ug/g dry	2.11E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.83E-1	ug/g dry	1.83E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**			
7440-38-2	Arsenic	1.85E0	ug/g dry	2.79E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.79E-1	ug/g dry	1.79E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.56E-1	ug/g dry	1.56E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**			
7440-38-2	Arsenic	2.30E0	ug/g dry	2.84E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.83E-1	ug/g dry	1.83E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.59E-1	ug/g dry	1.59E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**			
7440-38-2	Arsenic	2.35E0	ug/g dry	2.99E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.92E-1	ug/g dry	1.92E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.67E-1	ug/g dry	1.67E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**			
7440-38-2	Arsenic	2.66E0	ug/g dry	3.03E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.95E-1	ug/g dry	1.95E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.69E-1	ug/g dry	1.69E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**			
7440-38-2	Arsenic	2.72E0	ug/g dry	3.05E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.96E-1	ug/g dry	1.96E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.71E-1	ug/g dry	1.71E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**			
7440-38-2	Arsenic	2.08E0	ug/g dry	2.86E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.83E-1	ug/g dry	1.83E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.60E-1	ug/g dry	1.60E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**			
7440-38-2	Arsenic	2.03E0	ug/g dry	2.89E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.86E-1	ug/g dry	1.86E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.61E-1	ug/g dry	1.61E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**			
7440-38-2	Arsenic	2.65E0	ug/g dry	2.89E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.85E-1	ug/g dry	1.85E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.61E-1	ug/g dry	1.61E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**			
7440-38-2	Arsenic	1.49E0	ug/g dry	2.85E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.83E-1	ug/g dry	1.83E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.59E-1	ug/g dry	1.59E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**			
7440-38-2	Arsenic	1.02E0	ug/g dry	2.94E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.89E-1	ug/g dry	1.89E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.64E-1	ug/g dry	1.64E-1	3/11/10	0C10009	PNNL-AGG-415

RCRA Metals By PNNL-AGG-415/Acid Extract

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
HEIS No.	**B22NH6**	**Lab ID:**		**0911015-AE**			
7440-38-2	Arsenic	7.11E-1	ug/g dry	2.78E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.79E-1	ug/g dry	1.79E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.55E-1	ug/g dry	1.55E-1	3/11/10	0C10009	PNNL-AGG-415
HEIS No.	**B22NL1**	**Lab ID:**		**0911015-BP**			
7440-38-2	Arsenic	7.27E-1	ug/g dry	2.87E-1	3/11/10	0C10009	PNNL-AGG-415
14265-72-6	Antimony	<1.84E-1	ug/g dry	1.84E-1	3/11/10	0C10009	PNNL-AGG-415
15756-10-2	Mercury	<1.60E-1	ug/g dry	1.60E-1	3/11/10	0C10009	PNNL-AGG-415

Carbon Analysis/Soil

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-09	B22N81	2.25E2	2.00E2	3/05/10	[CALC]
0911015-10	B22N82	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-11	B22N83	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-12	B22N84	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-18	B22N90	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-22	B22N94	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-33	B22NB3	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-47	B22NC5	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-50	B22NC8	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-65	B22ND9	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-84	B22NF6	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-AE	B22NH6	<2.00E2	2.00E2	3/05/10	[CALC]
0911015-BP	B22NL1	<2.00E2	2.00E2	3/05/10	[CALC]

Carbon Analysis/Soil

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	2.12E3	2.00E2	3/05/10	0C03003
0911015-09	B22N81	2.25E2	2.00E2	3/05/10	0C03003
0911015-10	B22N82	2.28E3	2.00E2	3/05/10	0C03003
0911015-11	B22N83	2.26E3	2.00E2	3/05/10	0C03003
0911015-12	B22N84	1.92E3	2.00E2	3/05/10	0C03003
0911015-18	B22N90	2.20E3	2.00E2	3/05/10	0C03003
0911015-22	B22N94	2.08E3	2.00E2	3/05/10	0C03003
0911015-33	B22NB3	1.51E3	2.00E2	3/05/10	0C03003
0911015-47	B22NC5	1.60E3	2.00E2	3/05/10	0C03003
0911015-50	B22NC8	1.68E3	2.00E2	3/05/10	0C03003
0911015-65	B22ND9	1.46E3	2.00E2	3/05/10	0C03003
0911015-84	B22NF6	1.26E3	2.00E2	3/05/10	0C03003
0911015-AE	B22NH6	1.50E3	2.00E2	3/05/10	0C03003
0911015-BP	B22NL1	4.97E2	2.00E2	3/05/10	0C03003

Carbon Analysis/Soil

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0911015-08	B22N80	2.25E3	2.00E2	3/05/10	0C03006
0911015-09	B22N81	<2.00E2	2.00E2	3/05/10	0C03006
0911015-10	B22N82	2.44E3	2.00E2	3/05/10	0C03006
0911015-11	B22N83	2.35E3	2.00E2	3/05/10	0C03006
0911015-12	B22N84	2.12E3	2.00E2	3/05/10	0C03006
0911015-18	B22N90	2.31E3	2.00E2	3/05/10	0C03006
0911015-22	B22N94	2.23E3	2.00E2	3/05/10	0C03006
0911015-33	B22NB3	1.48E3	2.00E2	3/05/10	0C03006
0911015-47	B22NC5	1.58E3	2.00E2	3/05/10	0C03006
0911015-50	B22NC8	1.68E3	2.00E2	3/05/10	0C03006
0911015-65	B22ND9	1.45E3	2.00E2	3/05/10	0C03006
0911015-84	B22NF6	1.22E3	2.00E2	3/05/10	0C03006
0911015-AE	B22NH6	1.49E3	2.00E2	3/05/10	0C03006
0911015-BP	B22NL1	3.84E2	2.00E2	3/05/10	0C03006

GEA/Soil

CAS #	Analyte	Results	Units	MDA	UNC	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**				
10198-40-0	Cobalt-60	<2.21E-1	pCi/g dry	2.21E-1		3/01/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.45E-1	pCi/g dry	2.45E-1		3/01/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<9.94E-1	pCi/g dry	9.94E-1		3/01/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<5.90E-1	pCi/g dry	5.90E-1		3/01/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<8.88E-1	pCi/g dry	8.88E-1		3/01/10	0C02001	AGG-RRL-001
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**				
10198-40-0	Cobalt-60	<3.30E-1	pCi/g dry	3.30E-1		3/01/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	1.14E3	pCi/g dry	5.74E0		3/01/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.42E0	pCi/g dry	1.42E0		3/01/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<1.01E0	pCi/g dry	1.01E0		3/01/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<6.92E0	pCi/g dry	6.92E0		3/01/10	0C02001	AGG-RRL-001
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**				
10198-40-0	Cobalt-60	<2.31E-1	pCi/g dry	2.31E-1		3/02/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.59E-1	pCi/g dry	2.59E-1		3/02/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.07E0	pCi/g dry	1.07E0		3/02/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<6.10E-1	pCi/g dry	6.10E-1		3/02/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<9.40E-1	pCi/g dry	9.40E-1		3/02/10	0C02001	AGG-RRL-001
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**				
10198-40-0	Cobalt-60	<2.46E-1	pCi/g dry	2.46E-1		3/02/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	4.67E0	pCi/g dry	4.29E-1		3/02/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.04E0	pCi/g dry	1.04E0		3/02/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<6.13E-1	pCi/g dry	6.13E-1		3/02/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<9.43E-1	pCi/g dry	9.43E-1		3/02/10	0C02001	AGG-RRL-001
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**				
10198-40-0	Cobalt-60	<2.14E-1	pCi/g dry	2.14E-1		3/02/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.55E-1	pCi/g dry	2.55E-1		3/02/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<9.83E-1	pCi/g dry	9.83E-1		3/02/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<5.90E-1	pCi/g dry	5.90E-1		3/02/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<9.36E-1	pCi/g dry	9.36E-1		3/02/10	0C02001	AGG-RRL-001
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**				
10198-40-0	Cobalt-60	<2.44E-1	pCi/g dry	2.44E-1		3/02/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.97E-1	pCi/g dry	2.97E-1		3/02/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.17E0	pCi/g dry	1.17E0		3/02/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<6.57E-1	pCi/g dry	6.57E-1		3/02/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<9.88E-1	pCi/g dry	9.88E-1		3/02/10	0C02001	AGG-RRL-001
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**				
10198-40-0	Cobalt-60	<2.44E-1	pCi/g dry	2.44E-1		3/02/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.76E-1	pCi/g dry	2.76E-1		3/02/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<9.92E-1	pCi/g dry	9.92E-1		3/02/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<5.37E-1	pCi/g dry	5.37E-1		3/02/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<8.62E-1	pCi/g dry	8.62E-1		3/02/10	0C02001	AGG-RRL-001
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**				
10198-40-0	Cobalt-60	<2.15E-1	pCi/g dry	2.15E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.72E-1	pCi/g dry	2.72E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.05E0	pCi/g dry	1.05E0		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<6.01E-1	pCi/g dry	6.01E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<8.90E-1	pCi/g dry	8.90E-1		3/03/10	0C02001	AGG-RRL-001

GEA/Soil

CAS #	Analyte	Results	Units	MDA	UNC	Analyzed	Batch	Method
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**				
10198-40-0	Cobalt-60	<1.97E-1	pCi/g dry	1.97E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.43E-1	pCi/g dry	2.43E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<8.98E-1	pCi/g dry	8.98E-1		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<4.59E-1	pCi/g dry	4.59E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<7.72E-1	pCi/g dry	7.72E-1		3/03/10	0C02001	AGG-RRL-001
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**				
10198-40-0	Cobalt-60	<2.04E-1	pCi/g dry	2.04E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.67E-1	pCi/g dry	2.67E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<1.04E0	pCi/g dry	1.04E0		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<6.25E-1	pCi/g dry	6.25E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<9.49E-1	pCi/g dry	9.49E-1		3/03/10	0C02001	AGG-RRL-001
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**				
10198-40-0	Cobalt-60	<2.27E-1	pCi/g dry	2.27E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.40E-1	pCi/g dry	2.40E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<8.90E-1	pCi/g dry	8.90E-1		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<4.44E-1	pCi/g dry	4.44E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<7.40E-1	pCi/g dry	7.40E-1		3/03/10	0C02001	AGG-RRL-001
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**				
10198-40-0	Cobalt-60	<2.00E-1	pCi/g dry	2.00E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.26E-1	pCi/g dry	2.26E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<9.27E-1	pCi/g dry	9.27E-1		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<5.44E-1	pCi/g dry	5.44E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<8.20E-1	pCi/g dry	8.20E-1		3/03/10	0C02001	AGG-RRL-001
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**				
10198-40-0	Cobalt-60	<2.00E-1	pCi/g dry	2.00E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.28E-1	pCi/g dry	2.28E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<8.19E-1	pCi/g dry	8.19E-1		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<4.42E-1	pCi/g dry	4.42E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<7.02E-1	pCi/g dry	7.02E-1		3/03/10	0C02001	AGG-RRL-001
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**				
10198-40-0	Cobalt-60	<1.72E-1	pCi/g dry	1.72E-1		3/03/10	0C02001	AGG-RRL-001
10045-97-3	Cesium-137	<2.18E-1	pCi/g dry	2.18E-1		3/03/10	0C02001	AGG-RRL-001
14683-23-9	Europium-152	<8.53E-1	pCi/g dry	8.53E-1		3/03/10	0C02001	AGG-RRL-001
15585-10-1	Europium-154	<4.92E-1	pCi/g dry	4.92E-1		3/03/10	0C02001	AGG-RRL-001
14391-16-3	Europium-155	<7.35E-1	pCi/g dry	7.35E-1		3/03/10	0C02001	AGG-RRL-001

Total Alpha Total Beta/Acid Extract

CAS #	Analyte	Results	Units	MDA	UNC	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**				
12587-47-2	Gross Beta	<4.64E1	pCi/g dry	4.64E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.36E1	pCi/g dry	1.36E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**				
12587-47-2	Gross Beta	8.58E2	pCi/g dry	5.60E1	1.07E1	3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	4.05E2	pCi/g dry	1.65E1	6.69E0	3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**				
12587-47-2	Gross Beta	<4.75E1	pCi/g dry	4.75E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.39E1	pCi/g dry	1.39E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**				
12587-47-2	Gross Beta	1.06E2	pCi/g dry	4.74E1	5.85E0	3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.39E1	pCi/g dry	1.39E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**				
12587-47-2	Gross Beta	<4.85E1	pCi/g dry	4.85E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.42E1	pCi/g dry	1.42E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**				
12587-47-2	Gross Beta	<4.82E1	pCi/g dry	4.82E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.42E1	pCi/g dry	1.42E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**				
12587-47-2	Gross Beta	<4.93E1	pCi/g dry	4.93E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.45E1	pCi/g dry	1.45E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**				
12587-47-2	Gross Beta	<4.74E1	pCi/g dry	4.74E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.39E1	pCi/g dry	1.39E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**				
12587-47-2	Gross Beta	<4.77E1	pCi/g dry	4.77E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.40E1	pCi/g dry	1.40E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**				
12587-47-2	Gross Beta	<4.88E1	pCi/g dry	4.88E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.43E1	pCi/g dry	1.43E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**				
12587-47-2	Gross Beta	<4.80E1	pCi/g dry	4.80E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.41E1	pCi/g dry	1.41E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**				
12587-47-2	Gross Beta	<4.81E1	pCi/g dry	4.81E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.41E1	pCi/g dry	1.41E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**				
12587-47-2	Gross Beta	<4.71E1	pCi/g dry	4.71E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.38E1	pCi/g dry	1.38E1		3/16/10	0C16003	AGG-RRL-002
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**				
12587-47-2	Gross Beta	<4.69E1	pCi/g dry	4.69E1		3/16/10	0C16003	AGG-RRL-002
12587-46-1	Gross Alpha	<1.38E1	pCi/g dry	1.38E1		3/16/10	0C16003	AGG-RRL-002

Total Alpha Total Beta/Water Extract

CAS #	Analyte	Results	Units	MDA	UNC	Analyzed	Batch	Method
HEIS No.	**B22N80**		**Lab ID:**	**0911015-08**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N81**		**Lab ID:**	**0911015-09**				
12587-47-2	Gross Beta	<1.39E1	pCi/g dry	1.39E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.29E0	pCi/g dry	4.29E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N82**		**Lab ID:**	**0911015-10**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N83**		**Lab ID:**	**0911015-11**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.26E0	pCi/g dry	4.26E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N84**		**Lab ID:**	**0911015-12**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.26E0	pCi/g dry	4.26E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N90**		**Lab ID:**	**0911015-18**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22N94**		**Lab ID:**	**0911015-22**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NB3**		**Lab ID:**	**0911015-33**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.26E0	pCi/g dry	4.26E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NC5**		**Lab ID:**	**0911015-47**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.26E0	pCi/g dry	4.26E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NC8**		**Lab ID:**	**0911015-50**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22ND9**		**Lab ID:**	**0911015-65**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NF6**		**Lab ID:**	**0911015-84**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NH6**		**Lab ID:**	**0911015-AE**				
12587-47-2	Gross Beta	<1.38E1	pCi/g dry	1.38E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.25E0	pCi/g dry	4.25E0		3/15/10	0C16002	AGG-RRL-002
HEIS No.	**B22NL1**		**Lab ID:**	**0911015-BP**				
12587-47-2	Gross Beta	<1.40E1	pCi/g dry	1.40E1		3/15/10	0C16002	AGG-RRL-002
12587-46-1	Gross Alpha	<4.30E0	pCi/g dry	4.30E0		3/15/10	0C16002	AGG-RRL-002

Wet Chemistry - Quality Control
Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C02004 - 1:1 Water Extract (pH_EC_Alk)										
Duplicate (0C02004-DUP1)		**Source: 0911015-09**		Prepared: 03/03/10		Analyzed: 03/04/10				
pH	7.95E0	N/A	pH Units		7.86E0			1.14	35	
Duplicate (0C02004-DUP2)		**Source: 0911015-22**		Prepared: 03/03/10		Analyzed: 03/04/10				
pH	7.83E0	N/A	pH Units		8.35E0			6.43	35	
Batch 0C03002 - 1:1 Water Extract (pH_EC_Alk)										
Blank (0C03002-BLK1)				Prepared: 03/03/10		Analyzed: 03/04/10				
Specific Conductance (EC)	<1.00E-2	1.00E-2	mS/cm							
Duplicate (0C03002-DUP1)		**Source: 0911015-09**		Prepared: 03/03/10		Analyzed: 03/04/10				
Specific Conductance (EC)	1.50E-1	1.00E-2	mS/cm		1.61E-1			6.81	35	
Batch 0D01004 - 1:1 Water Extract (pH_EC_Alk)										
Blank (0D01004-BLK1)				Prepared: 04/01/10		Analyzed: 04/08/10				
Alkalinity as CaCO3	<2.35E1	2.35E1	ug/g wet							
Duplicate (0D01004-DUP1)		**Source: 0911015-09**		Prepared: 04/01/10		Analyzed: 04/08/10				
Alkalinity as CaCO3	2.79E1	2.41E1	ug/g dry		2.53E1			9.87	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 0C08001 - 1:1 Water Extract (IC)										
Blank (0C08001-BLK1)				Prepared & Analyzed: 03/04/10						
Fluoride	<2.00E-1	2.00E-1	ug/g wet							
Chloride	<5.00E-1	5.00E-1	"							
Nitrite	<1.00E0	1.00E0	"							
Bromide	<1.00E0	1.00E0	"							
Nitrate	<1.00E0	1.00E0	"							
Sulfate	<1.50E0	1.50E0	"							
Phosphate	<1.50E0	1.50E0	"							
LCS (0C08001-BS1)				Prepared & Analyzed: 03/04/10						
Fluoride	2.09E0	2.00E-1	ug/g wet	2.00E0		105	80-120			
Chloride	4.98E0	5.00E-1	"	5.00E0		99.6	80-120			
Nitrite	9.86E0	1.00E0	"	1.00E1		98.6	80-120			
Bromide	9.86E0	1.00E0	"	1.00E1		98.5	80-120			
Nitrate	1.02E1	1.00E0	"	1.00E1		102	80-120			
Sulfate	1.51E1	1.50E0	"	1.50E1		101	80-120			
Phosphate	1.49E1	1.50E0	"	1.50E1		99.6	80-120			
Duplicate (0C08001-DUP1)		**Source: 0911015-09**		Prepared & Analyzed: 03/04/10						
Fluoride	6.54E-1	2.06E-1	ug/g dry		6.36E-1			2.79	35	D
Chloride	7.23E0	5.14E-1	"		7.35E0			1.66	35	D
Nitrite	<1.03E0	1.03E0	"		ND				35	
Bromide	<1.03E0	1.03E0	"		ND				35	
Nitrate	1.08E1	1.03E0	"		1.08E1			0.262	35	D
Sulfate	2.28E1	1.54E0	"		2.27E1			0.626	35	D
Phosphate	2.75E0	1.54E0	"		2.54E0			7.69	35	D
Post Spike (0C08001-PS1)		**Source: 0911015-47**		Prepared & Analyzed: 03/04/10						
Fluoride	1.15E0	N/A	ug/mL	7.69E-1	3.96E-1	98.5	75-125			D
Chloride	6.29E0	N/A	"	1.92E0	4.44E0	96.3	75-125			D
Nitrite	3.69E0	N/A	"	3.85E0	ND	96	75-125			D
Bromide	3.77E0	N/A	"	3.85E0	ND	97.9	75-125			D
Nitrate	8.51E0	N/A	"	3.85E0	4.56E0	103	75-125			D
Sulfate	1.35E1	N/A	"	5.77E0	7.70E0	100	75-125			D
Phosphate	5.88E0	N/A	"	5.77E0	5.38E-2	101	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 0D08004 - NO PREP										
Blank (0D08004-BLK1)				Prepared: 04/08/10		Analyzed: 04/21/10				
Cyanide	<2.00E-1	2.00E-1	ug/g wet							
LCS (0D08004-BS1)				Prepared: 04/08/10		Analyzed: 04/21/10				
Cyanide	1.00E0	1.00E0	ug/g wet	1.01E0		99.5	80-120			
Duplicate (0D08004-DUP1)		**Source: 0911015-08**		Prepared: 04/08/10		Analyzed: 04/21/10				
Cyanide	<2.10E-1	2.10E-1	ug/g dry		ND				20	

Hexavalent Chromium/Soil - Quality Control

Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0D13002 - Hexavalent Chromium Digest										
Blank (0D13002-BLK1)				Prepared: 04/08/10		Analyzed: 04/12/10				
Chromium, Hexavalent	<2.50E0	2.50E0	ug/g wet							
LCS (0D13002-BS1)				Prepared: 04/08/10		Analyzed: 04/12/10				
Chromium, Hexavalent	2.49E1	2.50E0	ug/g wet	2.50E1		99.6	70-130			
Duplicate (0D13002-DUP1)		**Source: 0911015-08**		Prepared: 04/08/10		Analyzed: 04/12/10				
Chromium, Hexavalent	<5.17E-1	5.17E-1	ug/g dry		8.93E-1				20	
Matrix Spike (0D13002-MS1)		**Source: 0911015-09**		Prepared: 04/08/10		Analyzed: 04/12/10				
Chromium, Hexavalent	4.64E-1	5.99E-1	ug/g dry	5.00E-1	1.50E-2	89.8	75-125			

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 0C09001 - 1:1 Water Extract (ICP/ICPMS)										
Blank (0C09001-BLK1)				Prepared: 03/03/10		Analyzed: 03/09/10				
Aluminum	<9.37E-2	9.37E-2	ug/g wet							
Arsenic	<3.12E-1	3.12E-1	"							
Calcium	<4.52E-1	4.52E-1	"							
Cadmium	<1.04E-1	1.04E-1	"							
Chromium	<2.84E-2	2.84E-2	"							
Copper	<8.78E-2	8.78E-2	"							
Iron	<1.05E-1	1.05E-1	"							
Potassium	<1.29E0	1.29E0	"							
Magnesium	<4.89E-2	4.89E-2	"							
Manganese	<6.25E-2	6.25E-2	"							
Nickel	<9.67E-2	9.67E-2	"							
Lead	<1.61E-1	1.61E-1	"							
Selenium	<1.20E0	1.20E0	"							
Thallium	<9.88E-1	9.88E-1	"							
Sodium	<7.97E-1	7.97E-1	"							
Silver	<5.68E-2	5.68E-2	"							
LCS (0C09001-BS1)				Prepared: 03/03/10		Analyzed: 03/09/10				
Aluminum	4.49E0	9.37E-2	ug/g wet	5.00E0		89.8	80-120			
Arsenic	4.59E0	3.12E-1	"	5.00E0		91.8	80-120			
Calcium	4.72E0	4.52E-1	"	5.00E0		94.4	80-120			
Cadmium	4.73E0	1.04E-1	"	5.00E0		94.7	80-120			
Chromium	4.78E0	2.84E-2	"	5.00E0		95.5	80-120			
Copper	4.69E0	8.78E-2	"	5.00E0		93.7	80-120			
Iron	4.57E0	1.05E-1	"	5.00E0		91.4	80-120			
Potassium	4.65E1	1.29E0	"	5.00E1		93.1	80-120			
Magnesium	4.64E0	4.89E-2	"	5.00E0		92.7	80-120			
Manganese	4.69E0	6.25E-2	"	5.00E0		93.8	80-120			
Nickel	4.63E0	9.67E-2	"	5.00E0		92.5	80-120			
Lead	4.65E0	1.61E-1	"	5.00E0		93.0	80-120			
Selenium	4.54E0	1.20E0	"	5.00E0		90.8	80-120			
Thallium	4.65E0	9.88E-1	"	5.00E0		93.0	80-120			
Sodium	4.96E0	7.97E-1	"	5.00E0		99.2	80-120			
Silver	4.69E0	5.68E-2	"	5.00E0		93.7	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 0C09001 - 1:1 Water Extract (ICP/ICPMS)										
Duplicate (0C09001-DUP1)		**Source: 0911015-09**		Prepared: 03/03/10		Analyzed: 03/09/10				
Aluminum	4.74E-1	9.63E-2	ug/g dry		4.32E-1			9.36	35	
Arsenic	<3.20E-1	3.20E-1	"		ND				35	
Calcium	3.57E0	4.65E-1	"		3.61E0			1.09	35	
Cadmium	<1.07E-1	1.07E-1	"		ND				35	
Chromium	<2.92E-2	2.92E-2	"		ND				35	
Copper	<9.03E-2	9.03E-2	"		ND				35	
Iron	3.81E-1	1.08E-1	"		3.55E-1			7.14	35	
Potassium	2.28E0	1.33E0	"		2.30E0			1.02	35	
Magnesium	1.35E0	5.02E-2	"		1.33E0			1.18	35	
Manganese	<6.42E-2	6.42E-2	"		ND				35	
Nickel	<9.94E-2	9.94E-2	"		ND				35	
Lead	<1.65E-1	1.65E-1	"		ND				35	
Selenium	<1.23E0	1.23E0	"		ND				35	
Thallium	<1.02E0	1.02E0	"		ND				35	
Sodium	2.26E1	8.19E-1	"		2.28E1			0.767	35	
Silver	<5.84E-2	5.84E-2	"		ND				35	
Post Spike (0C09001-PS1)		**Source: 0911015-09**		Prepared & Analyzed: 03/09/10						
Aluminum	6.89E2	N/A	ug/L	5.00E2	1.43E2	109	75-125			
Arsenic	4.95E2	N/A	"	5.00E2	1.10E1	96.7	75-125			
Calcium	1.67E3	N/A	"	5.00E2	1.19E3	95.9	75-125			
Cadmium	2.43E2	N/A	"	2.50E2	ND	98.4	75-125			
Chromium	1.25E2	N/A	"	1.25E2	ND	101	75-125			
Copper	5.16E2	N/A	"	5.00E2	3.47E-1	103	75-125			
Iron	6.68E2	N/A	"	5.00E2	1.17E2	110	75-125			
Potassium	2.00E3	N/A	"	1.25E3	7.63E2	99.2	75-125			
Magnesium	9.50E2	N/A	"	5.00E2	4.41E2	102	75-125			
Manganese	2.55E2	N/A	"	2.50E2	ND	105	75-125			
Nickel	4.93E2	N/A	"	5.00E2	ND	99.4	75-125			
Lead	4.92E2	N/A	"	5.00E2	ND	100	75-125			
Selenium	5.23E2	N/A	"	5.00E2	3.51E1	97.7	75-125			
Thallium	4.81E2	N/A	"	5.00E2	ND	101	75-125			
Sodium	8.07E3	N/A	"	5.00E2	7.53E3	107	75-125			
Silver	5.14E2	N/A	"	5.00E2	ND	103	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 0C04001 - ASTM D 5198 (ICP/ICPMS)										
Blank (0C04001-BLK1)				Prepared: 03/01/10	Analyzed: 03/04/10					
Aluminum	<6.76E0	6.76E0	ug/g wet							
Calcium	<7.02E0	7.02E0	"							
Cadmium	<3.68E-1	3.68E-1	"							
Chromium	<5.90E-1	5.90E-1	"							
Copper	<1.93E0	1.93E0	"							
Iron	<1.82E0	1.82E0	"							
Potassium	<2.59E1	2.59E1	"							
Magnesium	<1.92E0	1.92E0	"							
Manganese	<6.04E-1	6.04E-1	"							
Nickel	<1.40E0	1.40E0	"							
Lead	<3.02E0	3.02E0	"							
Selenium	<1.72E1	1.72E1	"							
Thallium	<9.70E0	9.70E0	"							
Sodium	<1.90E1	1.90E1	"							
LCS (0C04001-BS1)				Prepared: 03/01/10	Analyzed: 03/04/10					
Aluminum	5.61E0	6.76E-1	ug/g wet	5.94E0		94.4	80-120			
Calcium	6.52E0	7.02E-1	"	5.94E0		110	80-120			
Cadmium	5.89E0	3.68E-2	"	5.94E0		99.1	80-120			
Chromium	6.23E0	5.90E-2	"	5.94E0		105	80-120			
Copper	5.95E0	1.93E-1	"	5.94E0		100	80-120			
Iron	5.94E0	1.82E-1	"	5.94E0		100	80-120			
Potassium	6.30E1	2.59E0	"	5.94E1		106	80-120			
Magnesium	5.67E0	1.92E-1	"	5.94E0		95.5	80-120			
Manganese	5.98E0	6.04E-2	"	5.94E0		101	80-120			
Nickel	5.94E0	1.40E-1	"	5.94E0		100	80-120			
Lead	5.97E0	3.02E-1	"	5.94E0		100	80-120			
Selenium	5.41E0	1.72E0	"	5.94E0		91.1	80-120			
Thallium	6.03E0	9.70E-1	"	5.94E0		101	80-120			
Sodium	6.69E0	1.90E0	"	5.94E0		113	80-120			

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 0C04001 - ASTM D 5198 (ICP/ICPMS)										
Duplicate (0C04001-DUP1)		**Source: 0911015-09**		Prepared: 03/01/10	Analyzed: 03/04/10					
Aluminum	1.11E3	2.67E1	ug/g dry		1.10E3			1.03	35	
Calcium	5.32E2	2.77E1	"		5.21E2			2.18	35	
Cadmium	<1.45E0	1.45E0	"		ND				35	
Chromium	9.99E0	2.33E0	"		1.02E1			2.47	35	
Copper	<7.62E0	7.62E0	"		ND				35	
Iron	2.48E3	7.17E0	"		2.44E3			1.40	35	
Potassium	2.88E2	1.02E2	"		2.91E2			0.994	35	
Magnesium	3.66E2	7.59E0	"		3.66E2			0.0750	35	
Manganese	1.49E1	2.38E0	"		1.47E1			1.16	35	
Nickel	<5.53E0	5.53E0	"		ND				35	
Lead	<1.19E1	1.19E1	"		ND				35	
Selenium	<6.77E1	6.77E1	"		ND				35	
Thallium	<3.83E1	3.83E1	"		ND				35	
Sodium	1.03E2	7.51E1	"		1.03E2			0.133	35	
Post Spike (0C04001-PS1)		**Source: 0911015-09**		Prepared & Analyzed: 03/04/10						
Aluminum	6.03E3	N/A	ug/L	5.00E2	5.51E3	106	75-125			
Calcium	3.17E3	N/A	"	5.00E2	2.60E3	113	75-125			
Cadmium	2.49E2	N/A	"	2.50E2	ND	101	75-125			
Chromium	1.79E2	N/A	"	1.25E2	5.12E1	102	75-125			
Copper	5.02E2	N/A	"	5.00E2	5.09E0	99.3	75-125			
Iron	1.28E4	N/A	"	5.00E2	1.22E4	111	75-125			
Potassium	2.80E3	N/A	"	1.25E3	1.46E3	108	75-125			
Magnesium	2.31E3	N/A	"	5.00E2	1.83E3	97.1	75-125			
Manganese	3.31E2	N/A	"	2.50E2	7.34E1	103	75-125			
Nickel	5.07E2	N/A	"	5.00E2	1.75E0	101	75-125			
Lead	5.32E2	N/A	"	5.00E2	1.28E1	104	75-125			
Selenium	5.18E2	N/A	"	5.00E2	7.12E0	102	75-125			
Thallium	5.15E2	N/A	"	5.00E2	ND	104	75-125			
Sodium	1.03E3	N/A	"	5.00E2	5.12E2	104	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 0C03005 - ASTM D 5198 (ICP/ICPMS)										
Blank (0C03005-BLK1)				Prepared: 03/22/10		Analyzed: 04/04/10				
Technetium-99	<1.47E-3	1.47E-3	ug/g wet							
Uranium 238	<1.00E-2	1.00E-2	"							
Duplicate (0C03005-DUP1)		**Source: 0911015-09**		Prepared: 03/22/10		Analyzed: 04/04/10				
Technetium-99	<2.90E-2	2.90E-2	ug/g dry		ND				35	
Uranium 238	9.83E-2	3.95E-2	"		1.01E-1			2.88	35	
Post Spike (0C03005-PS1)		**Source: 0911015-09**		Prepared: 03/22/10		Analyzed: 04/04/10				
Technetium-99	6.14E-1	N/A	ug/L	5.00E-1	ND	123	75-125			
Uranium 238	7.09E-1	N/A	"	5.00E-1	2.53E-1	91.2	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 0C04007 - 1:1 Water Extract (ICP/ICPMS)										
Blank (0C04007-BLK1)				Prepared & Analyzed: 03/04/10						
Technetium-99	<7.80E-6	7.80E-6	ug/g wet							
Uranium 238	<1.60E-5	1.60E-5	"							
Duplicate (0C04007-DUP1)		**Source: 0911015-09**		Prepared & Analyzed: 03/04/10						
Technetium-99	<4.01E-5	4.01E-5	ug/g dry		ND				35	
Uranium 238	<8.22E-5	8.22E-5	"		ND				35	
Post Spike (0C04007-PS1)		**Source: 0911015-09**		Prepared & Analyzed: 03/04/10						
Technetium-99	5.63E-1	N/A	ug/L	5.00E-1	ND	113	75-125			
Uranium 238	4.93E-1	N/A	"	5.00E-1	ND	100	75-125			
Batch 0C05005 - 1:1 Water Extract (ICP/ICPMS)										
Blank (0C05005-BLK1)				Prepared & Analyzed: 05/03/10						
Iodine-129	<5.00E-5	5.00E-5	ug/g wet							
Duplicate (0C05005-DUP1)		**Source: 0911015-09**		Prepared & Analyzed: 05/03/10						
Iodine-129	<1.03E-4	1.03E-4	ug/g dry		ND				35	
Post Spike (0C05005-PS1)		**Source: 0911015-09**		Prepared: 05/03/10 Analyzed: 05/04/10						
Iodine-129	9.60E-2	N/A	ug/L	1.00E-1	ND	97.6	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 0C10005 - 1:1 Water Extract (ICP/ICPMS)										
Blank (0C10005-BLK1)				Prepared & Analyzed: 03/10/10						
Antimony	<6.58E-4	6.58E-4	ug/g wet							
Mercury	<6.54E-4	6.54E-4	"							
Duplicate (0C10005-DUP1)		**Source: 0911015-09**		Prepared & Analyzed: 03/10/10						
Antimony	9.37E-4	6.77E-4	ug/g dry		9.89E-4			5.38	35	
Mercury	<6.72E-4	6.72E-4	"		ND				35	
Post Spike (0C10005-PS1)		**Source: 0911015-09**		Prepared & Analyzed: 03/10/10						
Antimony	5.31E0	N/A	ug/L	5.00E0	1.96E-1	102	75-125			
Mercury	5.33E0	N/A	"	5.00E0	1.56E-3	107	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 0C10009 - ASTM D 5198 (ICP/ICPMS)										
Blank (0C10009-BLK1)				Prepared & Analyzed: 03/11/10						
Arsenic	<8.20E-2	8.20E-2	ug/g wet							
Antimony	<5.26E-2	5.26E-2	"							
Mercury	<4.58E-2	4.58E-2	"							
LCS (0C10009-BS1)				Prepared & Analyzed: 03/11/10						
Arsenic	6.64E0	4.10E-1	ug/g wet	5.94E0		112	80-120			
Duplicate (0C10009-DUP1)		**Source: 0911015-09**		Prepared & Analyzed: 03/11/10						
Arsenic	1.12E0	3.23E-1	ug/g dry		8.73E-1			24.6	35	
Antimony	<2.08E-1	2.08E-1	"		ND				35	
Mercury	<1.81E-1	1.81E-1	"		ND				35	
Post Spike (0C10009-PS1)		**Source: 0911015-09**		Prepared & Analyzed: 03/11/10						
Arsenic	7.23E0	3.28E1	ug/g dry	5.00E0	2.18E0	101	75-125			
Antimony	5.37E0	2.11E1	"	5.00E0	1.59E-1	104	75-125			
Mercury	5.48E0	1.83E1	"	5.00E0	1.35E-1	107	75-125			

Total Alpha Total Beta/Acid Extract - Quality Control

Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C16003 - ASTM D 5198 (RadChem)										
Blank (0C16003-BLK1)				Prepared: 03/15/10		Analyzed: 03/16/10				
Gross Beta	<1.35E1	1.35E1	pCi/g wet							
Gross Alpha	<3.95E0	3.95E0	"							
Duplicate (0C16003-DUP1)		**Source: 0911015-09**		Prepared: 03/15/10		Analyzed: 03/16/10				
Gross Beta	8.61E2	5.59E1	pCi/g dry		8.58E2			0.404	35	
Gross Alpha	4.35E2	1.64E1	"		4.05E2			7.07	35	

Total Alpha Total Beta/Water Extract - Quality Control

Environmental Science Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C16002 - 1:1 Water Extract (RadChem)										
Blank (0C16002-BLK1)				Prepared: 03/14/10		Analyzed: 03/15/10				
Gross Beta	<1.38E1	1.38E1	pCi/g wet							
Gross Alpha	<4.26E0	4.26E0	"							
Duplicate (0C16002-DUP1)		**Source: 0911015-09**		Prepared: 03/14/10		Analyzed: 03/15/10				
Gross Beta	<1.42E1	1.42E1	pCi/g dry		ND				35	
Gross Alpha	<4.37E0	4.37E0	"		ND				35	

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5810 / 299-E29-54	Depth 64.5'-78'	Date 2/2/10	Sheet 1 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valdez (Print) Michelle Valdez (Sign) (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
64.5	G	B22N77	SM		(g)S - Slightly gravelly sand. 10% G, 90% med. to v. coarse sand. loose. poorly sorted. max size = 17mm. 2.5Y 6/2 (light brownish gray). S - 30% mafic. G - 80% basalt. no rxn to HCl.	Grab samples came in 1L poly bottles, poured in weigh boats for photos + geologic descrip.
67.5	G	B22N78	SM		(g)S - Slightly gravelly sand. 5-10% G. 90% med. to v. coarse sand. loose. mod-sorted. max size = 5mm. 2.5Y 5/2 (grayish brown). S - 30% mafic.	
70	G	B22N79	SM		(g)S - same as at 64.5' max size = 8mm.	treated rad
72	G	B22N80	SM		(g)S - 5% G. 95% med. to coarse sand. 2.5Y 5/2 (grayish brown). more moisture (holding together some of the sand). mod. sorted.	treated rad
74.7	G	B22N81	M		(m)S - Slightly muddy sand. 90% v. fine to fine sand, 10% ≥ max size = coarse sand. mod-sorted. loose w/ some mod. consol. (~20%) 2.5Y 6/2 (lt. brownish gray). no rxn to HCl.	came in as rad
78	G	B22N82	M		S - sand. fine to v. coarse sand. loose. mod-sorted - max size = v. coarse sand. 2.5Y 5/3 (lt. olive brown). ~30% mafic. small spots containing iron staining (orange/brown). weak rxn to HCl.	treated rad

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 80-92'	Date 2/2/10	Sheet 2 of 16
		Location	Project BR-5 K well		

Logged by Michelle Valenta (Print) Michelle Valenta (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
80	G	B22N83	SM					S- fine to v. coarse sand. trace fines. max size = v. coarse sand. loose w/ some (~20%) mod. consol. - contain orange/brown iron stains. 2.5Y 6/3 (lt. yellowish brown). some consol. w/ iron staining contain Z, some consol. sand contains laminations.	treated as rad
82	G	B22N84	SM					S - fine to v. coarse sand. trace G. max size = 3mm. loose w/ some mod. consol. (~40-50%) mod-sorted. 2.5Y 5/2 (grayish brown). ~20% mafic. S- weak to no rxn to HCl. consol- shard - strong rxn to HCl.	
85	G	B22N85	SM					S-sand. med to coarse sand. trace G. max size = 3mm. loose mod-sorted. 2.5Y 6/2 (lt. brownish gray). ~20% mafic. weak rxn to HCl.	
87	G	B22N86	SM					same as above	
90	G	B22N87	SM					same as above 2.5Y 5/3 (lt. olive brown). weak to no rxn to HCl.	
92	G	B22N88	SM					S- fine to coarse sand. trace Z. max size = v. coarse sand. loose w/ some (~10%) mod. consol. mod-sorted. 2.5Y 6/3 (lt. yellowish brown). S- weak rxn to HCl. consol- mod. rxn HCl.	N88-depth over-laps (89-92')

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-5A	Depth 95-107.5'	Date 2/2-2/2/10	Sheet 3 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valerio Michelle Valerio
Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
95	G	B22N89	SM		S- same as above, more coarse and v. coarse sand. trace G. max size = 3mm. 2.5Y 5/3 (lt. olive brown). loose. mod-sorted.	
97	G	B22N90	M		S- v. fine to med. sand, trace Z + G. max size = 5mm. loose. some weak consol. due to moisture. ~10% mafic 2.5Y 6/3 (lt. yellowish brown). poorly sorted. weak rxn to HCl.	
98.8	G	B22N91	SM		(G)S Slightly gravelly sand. 5% G, 95% fine to v. coarse sand. max size = 14mm. loose. poorly sorted. 2.5Y 6/2 (lt. brownish gray). weak rxn to HCl.	
102.5	G	B22N92	SM		S- fine to v. coarse sand. trace G. max size = 3mm. loose. poorly sorted. 2.5Y 6/2 (lt. brownish gray). S ~20% mafic	N92 depth given from 98.8-102.5
105.7	G	B22N93	SM		S- sand. v fine to coarse sand, trace G. max size = 3mm. loose. poorly sorted. 2.5Y 5/3 (lt. olive brown). more fine grained sand than above. weak rxn to HCl.	
107.5	G	B22N94	M		S- fine sand. w/ lesser amts of v fine + medium sand. max size = med. sand. 2.5Y 5/2 (grayish brown). loose - some consolidation due to moisture. trace Z. well-sorted. weak to mod rxn to HCl.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 110 – 122'	Date 2/3/10	Sheet 4 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valenta (Print) Michelle Valenta (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
110'	G	B22N95	SM		S- med to v. coarse sand, trace G. max size = 3mm. loose - poorly sorted. 2.5Y 5/2 (grayish brown). weak to no rxn to HCl.	
112.5	G	B22N96	SM		S- same as above. 2.5Y 6/2 (lt. brownish gray).	
115.5	G	B22N97	M		S- fine to coarse sand. max size = v. coarse sand. loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray). weak to no rxn to HCl	
117.5	G	B22N98	SM		S- fine to v. coarse sand. max - v. coarse sand. loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray) weak to no rxn to HCl	
119.1 – 119.5	G	B22N99	SM		Same as above - trace G (max = 3mm). higher % coarser sand.	
122	G	B22N30	SM		same as above. max = 3mm.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 125.3 - 135.7	Date 2/2/10	Sheet 5 of 16
		Location	Project BR-5 K well		

Logged by Michelle Valenta Michelle Valenta
Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
125.3	G	B22NB1	SM		S- fine to coarse sand. max = v. coarse sand, loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray). weak to no rxn to HCl.	
127.8	G	B22NB2	M		same as above - more moisture (darker color). 2.5Y 5/2 (grayish brown). weak to no rxn to HCl.	
130.2	G	B22NB3	M		same as above	
133	G	B22NB4	M		S- fine to v. coarse sand. trace G. max size = 3mm loose. poorly sorted. 2.5Y 5/2 (grayish brown). weak rxn to HCl.	
135.7	G	B22NB5 B22NB6	M SM		same as above.	NB5 + NB6 are same depths
					med to v. coarse sand. trace G. max = 3mm. loose. poorly sorted. N 4th mafic. 2.5Y 5/2. no rxn to HCl.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 141-154.8'	Date 2/2/10	Sheet 6 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valenta Michelle Valko
Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
141	G	B22NB7	SM		S- fine to coarse sand. loose. max size = v. coarse sand. 2.5Y 6/2 (lt. brownish gray). N 20% mafic. weak rxn to HCl.	
142.5	G	B22NB8	SM		(g) S- [illegible] max size = 7mm. 2.5Y 5/2 (grayish brown). Slightly gravelly sand. fine to very coarse sand) ~10% G. loose. poorly sorted	
145	G	B22NB9	SM		S- fine to coarse sand. max = v. coarse sand. loose. well-sorted. 2.5Y 5/2 (grayish brown). N 20% mafic. weak to no rxn to HCl.	
147.5	G	B22NC0	SM		same as above.	
149.4	G	B22NC1	SM		S- 70% fine to med sand, 30% coarse to v. coarse sand. trace G. max = 3mm. loose. mod. sorted. 2.5Y 5/2 (grayish brown). N 30% mafic. visible mica. weak to no rxn to HCl.	
151.9	G	B22NC2	SM		S- v. fine to med. sand. trace G. max = 3mm. loose. poorly sorted. ~10% mafic. 2.5Y 6/2 (lt. brownish gray). weak rxn to HCl.	
154.8	G	B22NC3	M		S- fine to coarse sand - 95%, 5% G. max = 4mm. loose. poorly sorted. N 30% mafic. 2.5Y 5/2 (grayish brown). weak rxn to HCl	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E23-5A	Depth 157.1-169.5'	Date 2/22/90	Sheet 7 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valenta Michelle Valenta (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
157.1	G	B22NC4	M		same as above. trace G. max = 3mm. consol. due to moisture	
159.5	G	B22NC5	M		same as above. no gravel. max = v. coarse sand.	
162	G	B22NC6	SM		S- v. fine to med sand. max = v. coarse sand. loose. mod sorted. ~10% mafic. 2.5Y 6/2 (lt brownish gray). weak rxn to HCl.	
164.8	G	B22NC7	M		S- fine to med. sand. max = v. coarse sand. loose. well sorted. ~10% mafic. 2.5Y 5/2 (grayish brown). weak to mod. rxn to HCl.	
167.5	G	B22NC8	M		same as above	
169.5	G	B22NC9	M		Same as above. small % higher of coarse/v. coarse sand. weak rxn to HCl.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860/299-E29-54	Depth 172-185'	Date 2/3/10	Sheet 8 of 16
		Location	Project BP-5 K well		

Logged by Michele Valenta Michelle Valeo (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
172.0	G	B22ND0	SM		S- fine to v. coarse sand. (fine - 30 med - 50% coarse/v. coarse 20%) loose. mod-sorted. max size = 5mm. trace G. 2.5Y 6/2 (lt. brownish gray). ~30% mafic. weak rxn to HCl.	
175.0	G	B22ND1	SM		S- sand fine (10%) med. 30%, coarse/v. coarse 60%. sand max = v. coarse. loose. mod-sorted. ~40% mafic. 2.5Y 5/2 (grayish brown). no rxn to HCl.	
178.0	G	B22ND2	SM		(g)S- Slightly gravelly sand. 10% G, 90% fine to v. coarse sand. max size = 12mm. poorly sorted. G - 90% basalt, sub-round to well round. S - 40% mafic. 2.5Y 5/2 (grayish brown). no rxn to HCl.	
179.9	G	B22ND3	SM		(g)S- same as above. higher % of coarse sand. max = 4mm.	
182.4	G	B22ND4	SM		(S) - fine to coarse sand. max = v. coarse sand. loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray). 20% mafic.	
185	G	B22ND5	SM		S med. to v. coarse sand. max = v. coarse sand. loose. mod-sorted. trace G. max = 3mm. 2.5Y 5/2 (grayish brown). 40% mafic. weak rxn to HCl.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-5A	Depth 187.5 - 199'	Date 2/3/10	Sheet 9 of 16
		Location	Project B-5 K well		

Logged by Michelle Valenta Michelle Valenta

Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
187.5	G	B22ND6	SM		Same as above. Weak rxn to HCl.	
189.3	G	B22ND7	SM		(g)S - Slightly gravelly sand. 10% G. 90% med (50%) coarse (40%) + v. coarse (10%) max = 4mm. loose. mod-sorted. 2.5Y 5/2 (grayish brown). 4% mafic.	
191.8	G	B22ND8	SM		Same as above. G decreased to 5%. max = 3mm	
194.3	G	B22ND9	M		(g)S - Slightly gravelly sand. 15% G. 85% med. to coarse sand, max = 8mm. loose. 2.5Y 6/2 (dark grayish brown). 6% mafic weak to no rxn to HCl.	
196.3	G	B22NF0	SM		(g)S - Slightly gravelly sand. 10% G. 90% fine (50%) med (30%) coarse (10%) v. coarse (10%). max = 8mm. loose w/ some mod consolidation (NS-10% consol.). trace % (in consol.). G - 70% basalt, sub-ang. to rounded. S - 20% mafic. 2.5Y 6/2 (lt. brownish gray). S - weak rxn to HCl. consol S - mod rxn to HCl.	
199	G	B22NF1	SM		(g)S - Same as above. NS% G. max = 6mm. 95% sand (50% fine, 40% med, 10% coarse sand. some mod consol. 20% mafic (S) 2.5Y 6/2 mod rxn to HCl.	

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

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 201.1-215.1'	Date 2/3/10	Sheet 10 of 16
		Location	Project BP-5 K well		

Logged by Michelle Valenta Michelle Valenta (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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
201.1	G	B22NF2	SM		(g)S- Slightly gravelly sand. 5% G, 95% V. fine to med sand. max = 11mm. loose w/ some (N 20%) mod consol. trace Z. 2.5Y 6/2 (lt. brownish gray). consol-strong rxn to HCl. S mod rxn to HCl	
203.1	G	B22NF3	SM		gS- gravelly sand. 20% G, 80% V. fine to med sand (90%), coarse sand (10%). trace Z. loose w/ some strong consol. (N 20%). G- sub-round to well-rounded basalt. S- 30% mafic. 2.5Y 4/2 (dark grayish brown). mod rxn to HCl. V. poorly sorted.	
205.7	G	B22NF4	SM		same as above. max size = 5mm. less consol. (<10%)	
208.9	G	B22NF5	SM		(g)S- Slightly gravelly sand. 10% G, 90% fine to coarse sand. loose. poorly sorted. 2.5Y 5/2 (grayish brown). S- 40% mafic. weak rxn to HCl.	
211.2	G	B22NF6	M		Same as above - more moisture + more consol. (10%). 2.5Y 4/2 (dark grayish brown).	
213.2	G	B22NF7	SM		S- V. fine to med sand (90%), 10% coarse sand. max = V. coarse sand. loose w/ some strong consol. (N10%). ~20% mafic. mod sorted. 2.5Y 6/2 (lt. brownish gray).	
215.1	G	B22NF8	M		S- 5% G, 95% fine to coarse sand. max = 4mm. loose. mod-sorted. 2.5Y 5/2 (grayish brown). 20% mafic. no rxn to HCl.	

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

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 217.5 - 232'	Date 2/3/10	Sheet 11 of 16
		Location	Project BP-5 KWCH		

Logged by Michelle Valenta Michelle Valo
Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
217.5	G	B22NF9	SM		G- fine to v. coarse sand, trace G. max size = 3mm. loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray). 30% mafic. weak to no rxn to HCl.	
219.8	G	B22NH0	SM		S- Sand. fine to coarse sand, trace G. max = 4mm, loose. mod-sorted 2.5Y 5/2 (grayish brown)	
223.3	G	B22NH1	SM		S- same as above - some coarse sand, max = 3mm 2.5Y 6/2 (lt. brownish gray).	
225.7	G	B22NH2	SM		(G)S- Slightly gravelly sand. 10% G. 90% v. fine to v. coarse sand. max = 5mm. loose. mod-sorted. 2.5Y 6/1 (gray). mod. rxn to HCl. 30% mafic. G-90% basalt.	
229.5	G	B22NH3	SM		Same as above max = 7mm. 2.5Y 6/2 (lt. brownish gray).	
232	G	B22NH4	SM		S- fine to coarse sand. trace G. max = 3mm. loose. mod-sorted. 2.5Y 6/2 (lt. brownish gray) 80% mafic.	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 235-247.5	Date 2/4/10	Sheet 12 of No.
		Location	Project RP-5 Kwell		

Logged by Nicholas Valenta Michelle Valdez

Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
235	G	B22NH5	SM		S-sand fine to v. coarse sand, trace G. max = 3mm. loose. mod-sorted. 2.5Y 5/2 (grayish brown). mica visible. 1% mafic. weak rxn to HCl.	
237.5	G	B22NH6	SM		S-sand. 5% G, 95% v. fine to coarse sand. max = 3mm. loose, mod-sorted. 20% mafic. 2.5Y 6/2 (lt. brownish gray) weak rxn to HCl	
240.3	G	B22NH7	SM		(G)S- Slightly gravelly sand- 10% G. 90% fine to v. coarse sand. max = 10mm. loose, poorly sorted. 2.5Y 5/2 (grayish brown). 80% mafic. G- 90% basalt, sub-round to rounded. weak rxn to HCl.	
242.8	G	B22NH8	SM		gS- gravelly sand. v. fine to medium sand (80%), coarse to v. coarse sand (20%) - 85% sand, 15% G. max = 6mm. loose w/some mod. consol./cementation. poorly sorted. 2.5Y 6/2 (lt. brownish gray). 10% mafic. mod. rxn to HCl	
245	G	B22NH9	SM		gS- gravelly sand. 15% G, 85% fine to coarse sand. max = 14mm poorly-sorted. loose. 2.5Y 5/2 (grayish brown). strong rxn to HCl. 30% mafic.	
247.5	G	B22NJ0	D		gS- gravelly sand. 30% G, 70% v. fine to med sand. max = 8mm. poorly-sorted. loose. 2.5Y 6/2 (lt. brownish gray). 10% mafic. strong rxn to HCl	

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

2008/DCL/FORMS/GeoLog/DOT (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 249.9-262.5'	Date 2/4-2/8/10	Sheet 13 of 16
		Location	Project BP-5 Kwell		

Logged by Michele Vaunta Mynell Valo (Print / Sign / 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
249.9	G	B22NJ1	D	G	SG- sandy gravel. 60% G, 40% v. fine to coarse sand. max = 22mm. loose. poorly sorted. G- 70% basalt, sub-round to well-rounded, some fragments/broken. S- 20% mafic. 2.5Y 5/2 (grayish brown).	
254	G	B22NJ2	D		same as above. 50% G, 50% sand. max = 11mm.	
255	G	B22NJ3	SM		SG. 40% G, 60% v. fine to medium sand. max = 16mm. more small G (<5mm). loose. poorly sorted. G- ang. to rounded, broken, 60% basalt. 2.5Y 6/2 (lt. brownish gray). fizzes no to HCl.	
258	G	B22NJ4	SM		gS: gravelly sand. 20% G, 80% fine to coarse sand. max = 11mm. loose. poorly sorted. some med. consol. - found some dark red staining in some consol. pieces. 2.5Y 6/2 (lt. brownish gray). G- ang. to sub-round, 80% basalt.	
259.5	G	B22NJ5	D		same as 255'. poor recovery. broken gravel (<10mm).	poor recovery
262.5	G	B22NJ6	D		same as above. max = 20mm.	

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

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No 058L0 / 299-E29-54	Depth 265-278'	Date 8/8/10	Sheet 14 of 16
		Location	Project BP-5 V well		

Logged by Michelle Valenta (Print) Michelle Valenta (Sign) (Print)

Reviewed by (Print) (Sign) Date (Sign)

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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
265	G	B22N57	SM		SG - sandy gravel. G = 20%, fine to coarse sand 70%. poorly sorted. loose w/ some mod. consol. (<10%). 2.5Y 5/2 (grayish brown). G - max = 80mm, sub-ang. to round, 80% basalt.	
267.5	G	B22N58	SM		same as above. max = 18mm. G - 40%, sub to well rounded, 90% basalt mod. rxn to HCl	
270	G	B22N59	SM		same as above. max = 16mm.	
272.3	G	B22NK0	SM		same as above. 20% G, 80% v. fine to coarse sand. max = 22mm. G - broken, 80% basalt. 2.5Y 6/2 (lt. brownish gray).	
275	G	B22NK1	SM		(m)gS - Slightly muddy gravelly sand. 20% G, 70% v. fine to med sand, 10% Z. loose, poorly sorted. 2.5Y 5/2 (grayish brown). max = 18mm. G sub-ang - round, 80% basalt. weak to mod. rxn to HCl.	
278	G	B22NK2	SM		gS - gravelly sand. 30% G, 70% v. fine to med. sand. max = 17mm. loose, poorly sorted. G - sub-ang. to round. 70% basalt, broken fragments. 2.5Y 6/1 (gray). mod. rxn to HCl.	

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

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860 / 299-E29-54	Depth 280-292.5'	Date 2/8/10	Sheet 15 of 16
		Location	Project BP-5 K well		

Logged by Michael Valenta Michelle Valeo
Reviewed by _____ 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 (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
280	G	B22NK3	SM		sG sandy gravel. 60% G, 40% v. fine to med. sand. max = 15mm. G - aq. basalt, subrang to sub-round. 2.5Y 6/1 (gray). loose, poorly sorted.	
282.7	G	B22NK4	SM		sG - same as above higher % of med. sand. 2.5Y 5/2 (grayish brown). G - lots of broken/fragmented pieces.	
285	G	B22NK5	SM		same as above. 40% G, 60% sand. max = 17mm.	
287.5	G	B22NK6	SM		same as above. max = 15mm.	
290	G	B22NK7	SM		same as above. max = 17mm. 2.5Y 6/2 (lt. brownish gray).	
292.5	G	B22NK8	SM		same as above. max = 16mm. 2.5Y 5/2 (grayish brown).	

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

2008/DCL/FORMS/GeoLog/001 (03/18)

Pacific Northwest National Laboratory	GEOLOGIC LOG	Boring/Well No C5860/299-E29-54	Depth 295-305.5' Date 2/8/10	Sheet 16 of 16
		Location	Project BP-5 Kuch	

Logged by Michael Valenta Michelle Valle

Reviewed by _____ Date _____

Lithologic Class. Scheme Folk-Wentworth Procedure _____ Rev _____

Drilling Contractor _____

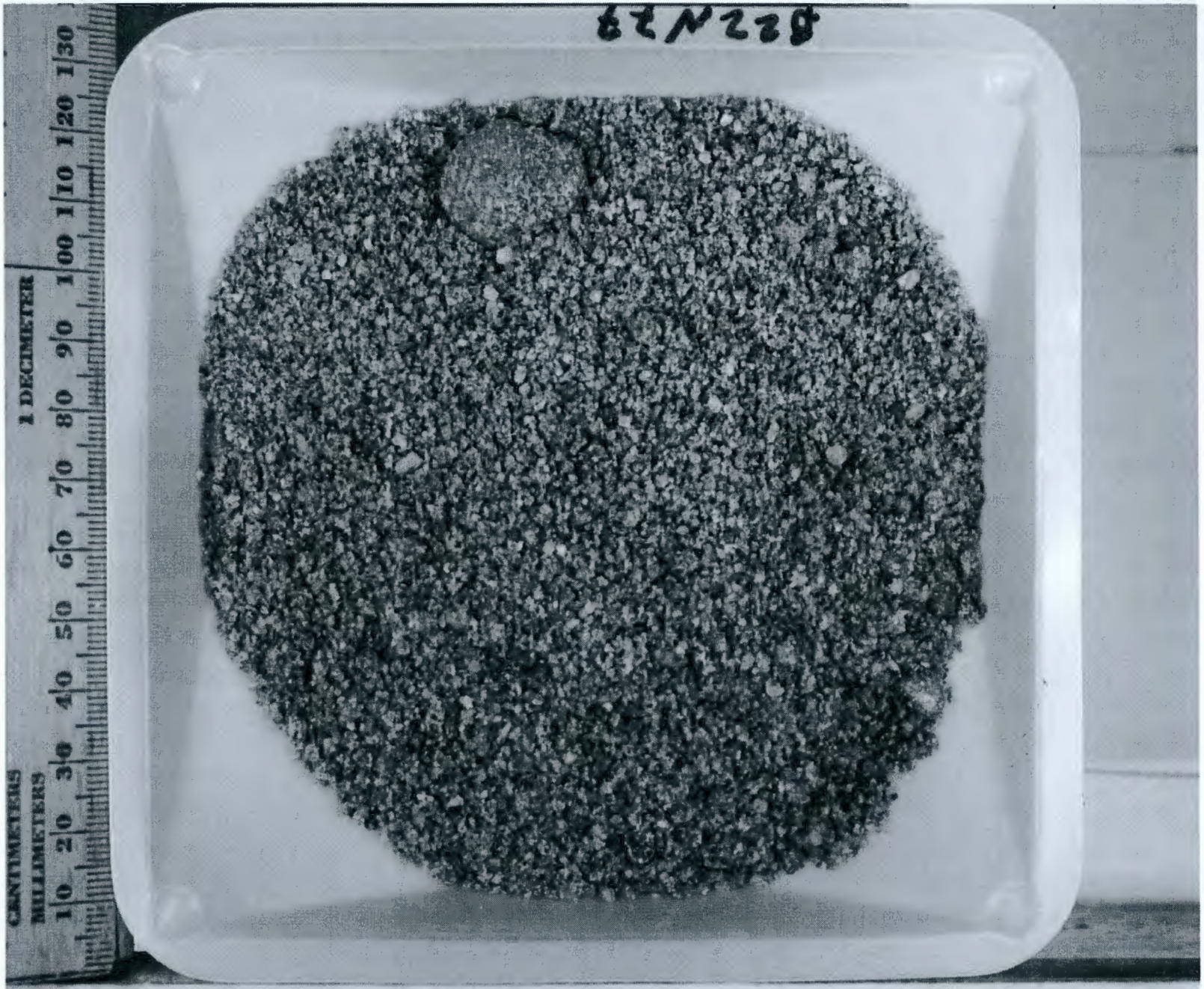
Driller _____

Drill Method _____

DEPTH (ft)	SAMPLES TYPE	SAMPLES ID NUMBER	MOISTURE	GRAPHIC LOG C Z S G	LITHOLOGIC DESCRIPTION (sediment class, range in particle size, maximum particle size, mafic %, sorting, roundness, color, consolidation, reaction to 10% HCl, structure, fabric, and any other characteristics)	COMMENTS
295	G	B22N49	SM		Same as above. S - v. fine + fine sand. max = 25mm. G - 60% basalt.	
297.5	G	B22N40	SM		same as above. max = 18mm. 2.5Y 6/2 (lt. brownish gray)	
301	G	B22N41	SM		Same as above. max = 15mm 30% G, 70% S.	
305.5	G	B22N42	SM		Same as above. 2.5Y 6/3 (lt. yellowish brown). Weak rxn to HCl.	

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

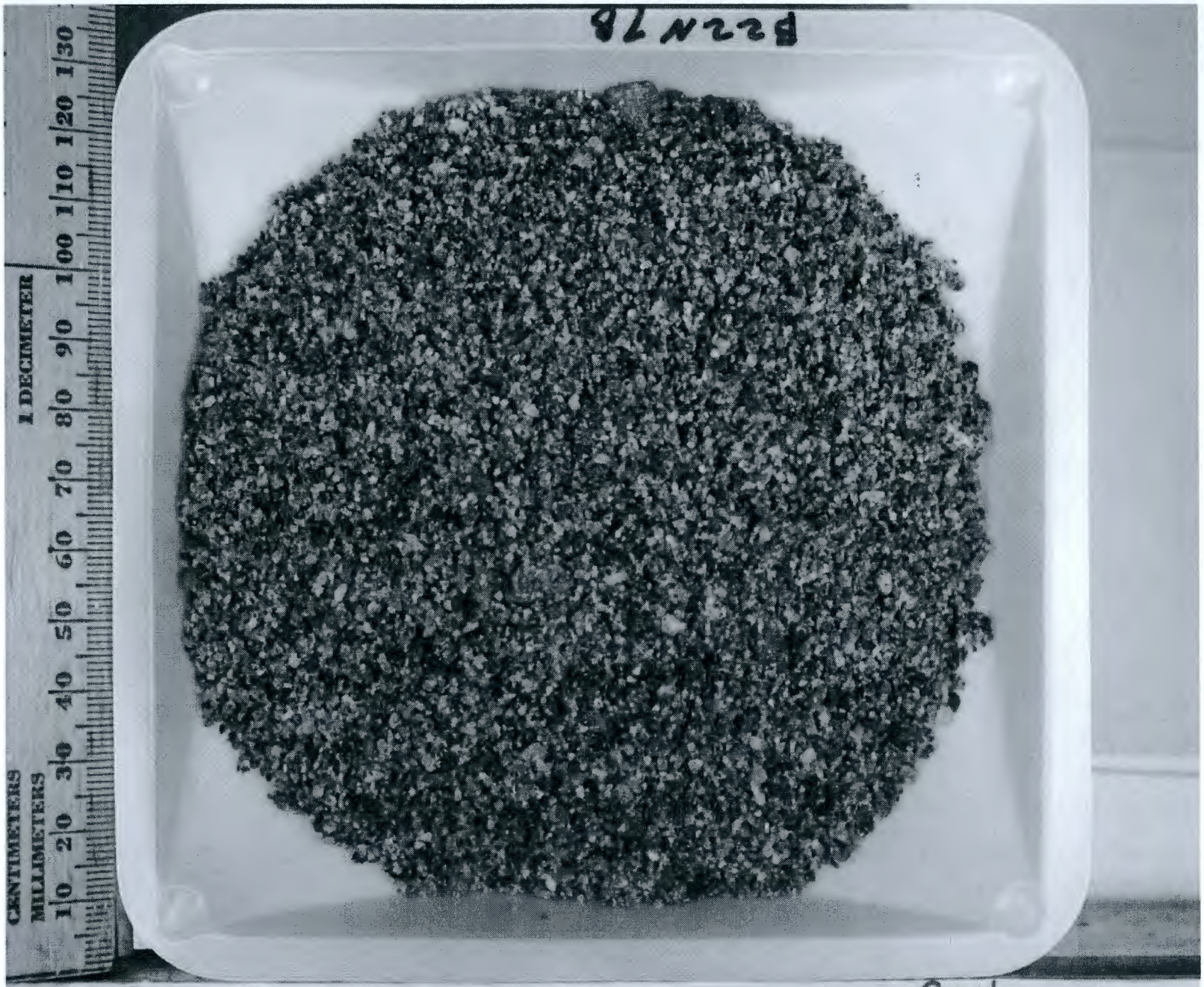
2008/DCL/FORMS/GeoLog/001 (03/18)



Grab

C5860 B22N77 64.5 ft Sample

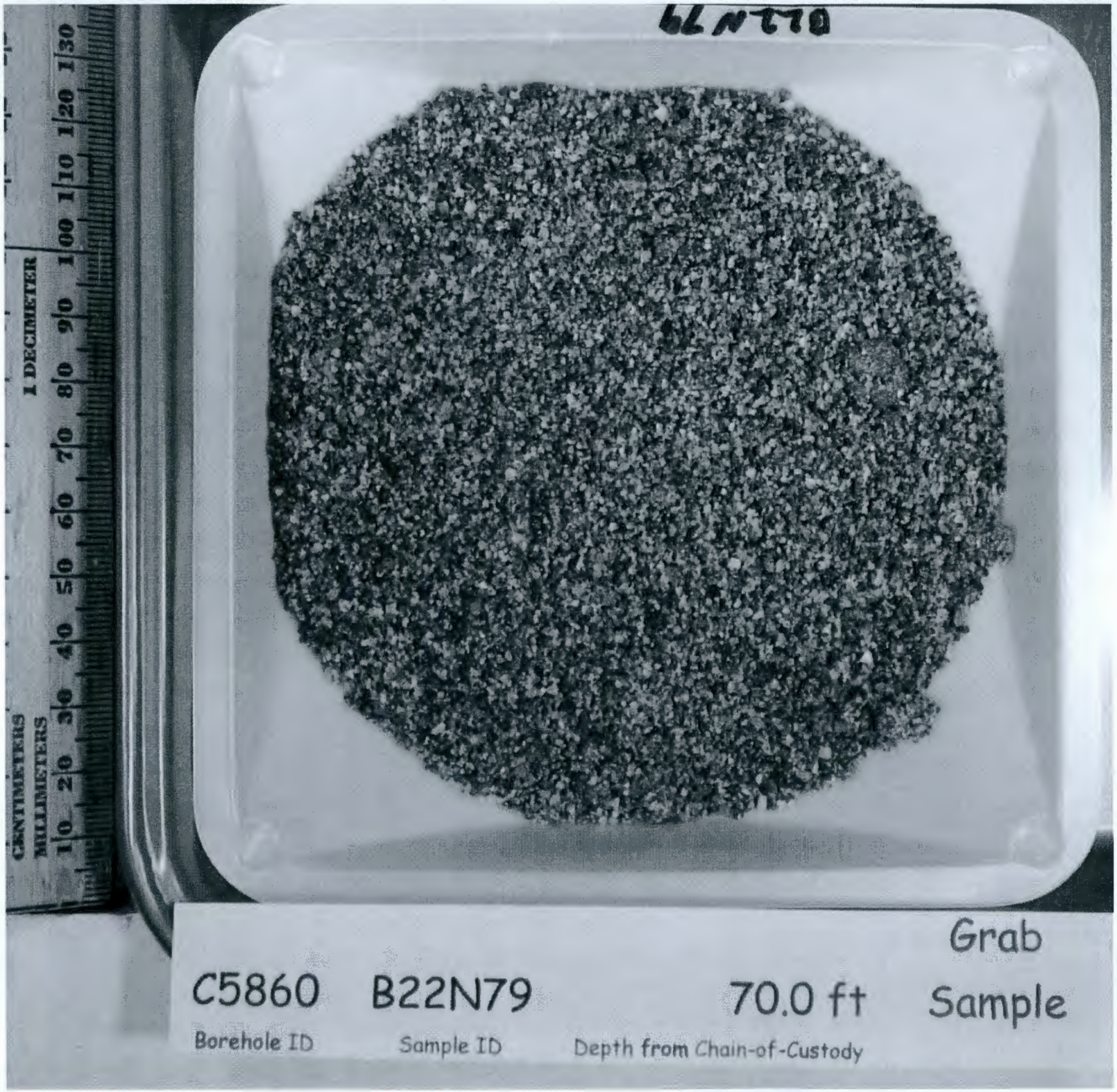
Borehole ID Sample ID Depth from Chain-of-Custody

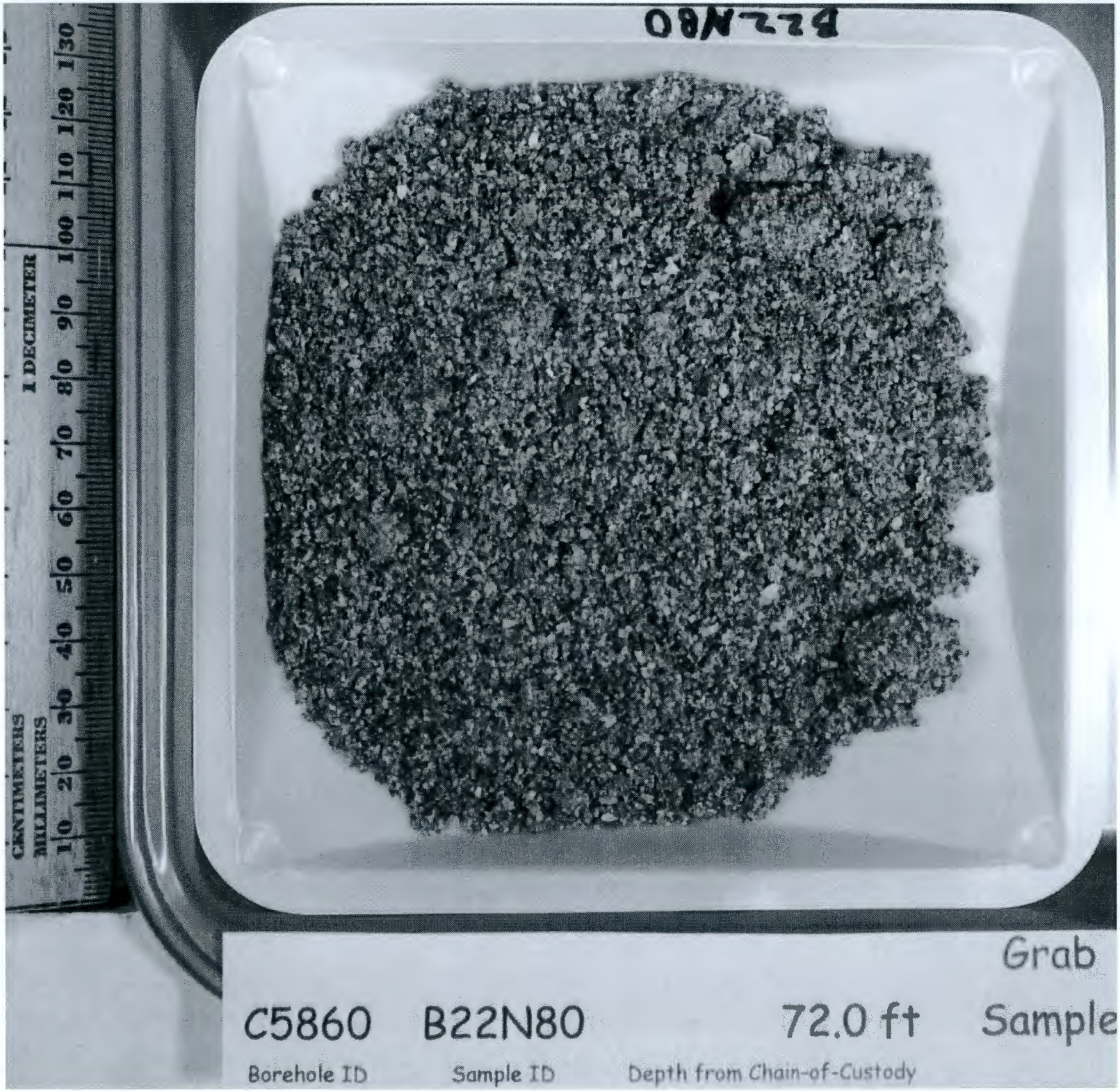


Grab

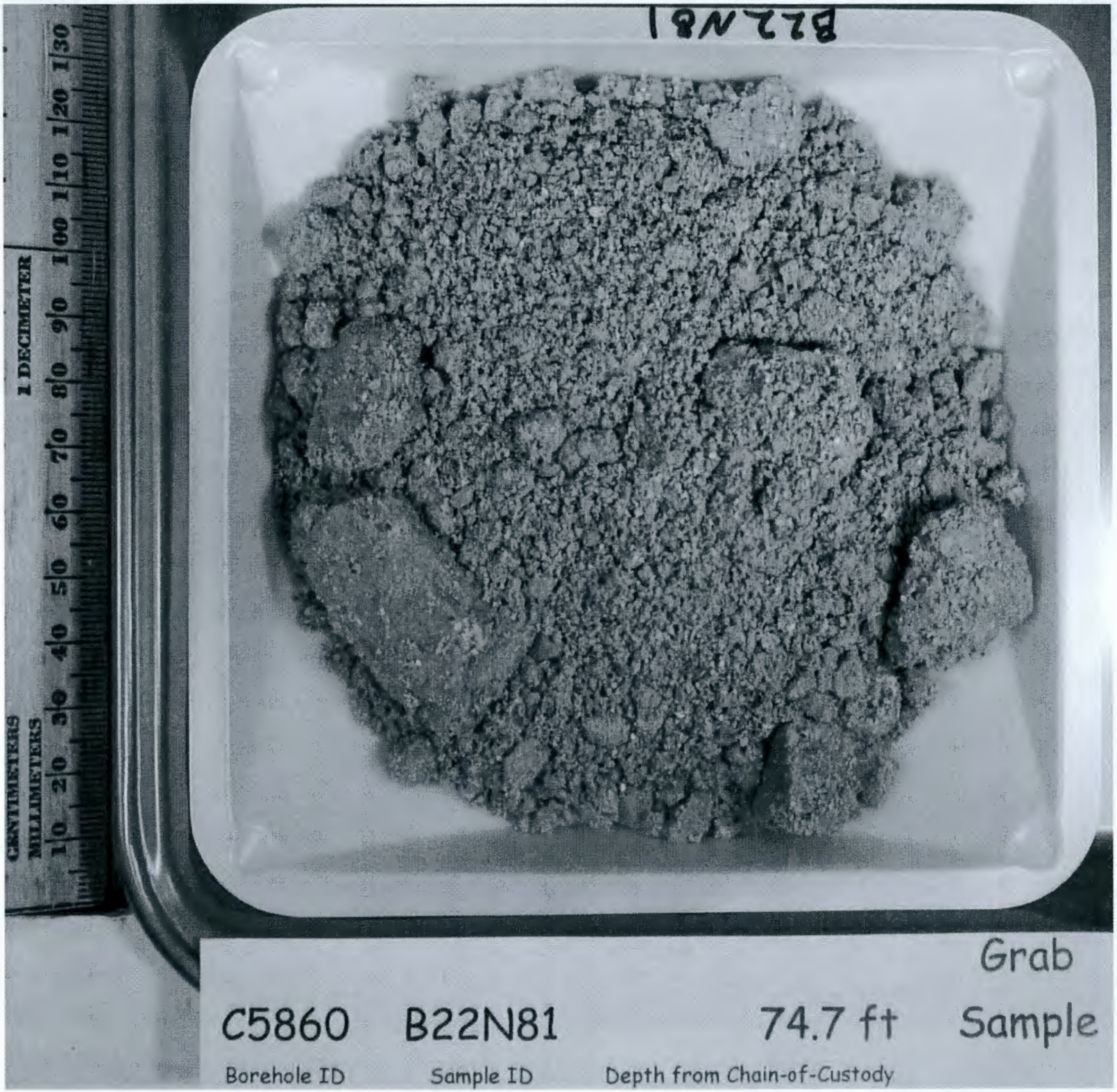
C5860 B22N78 67.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

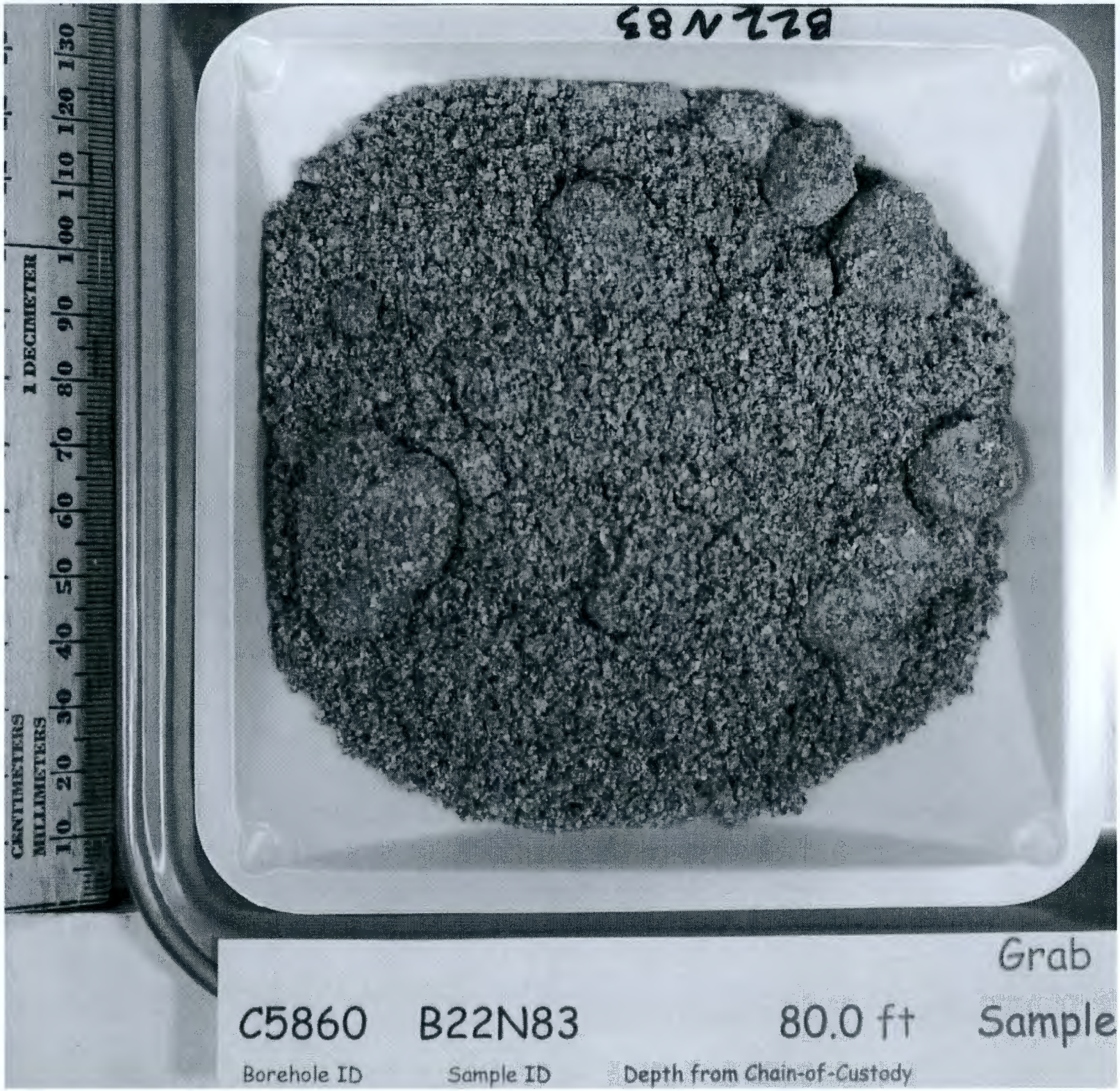

B22N79
CENTIMETERS
MILLIMETERS
1 DECIMETER
Grab
C5860
B22N79
70.0 ft
Sample
Borehole ID
Sample ID
Depth from Chain-of-Custody



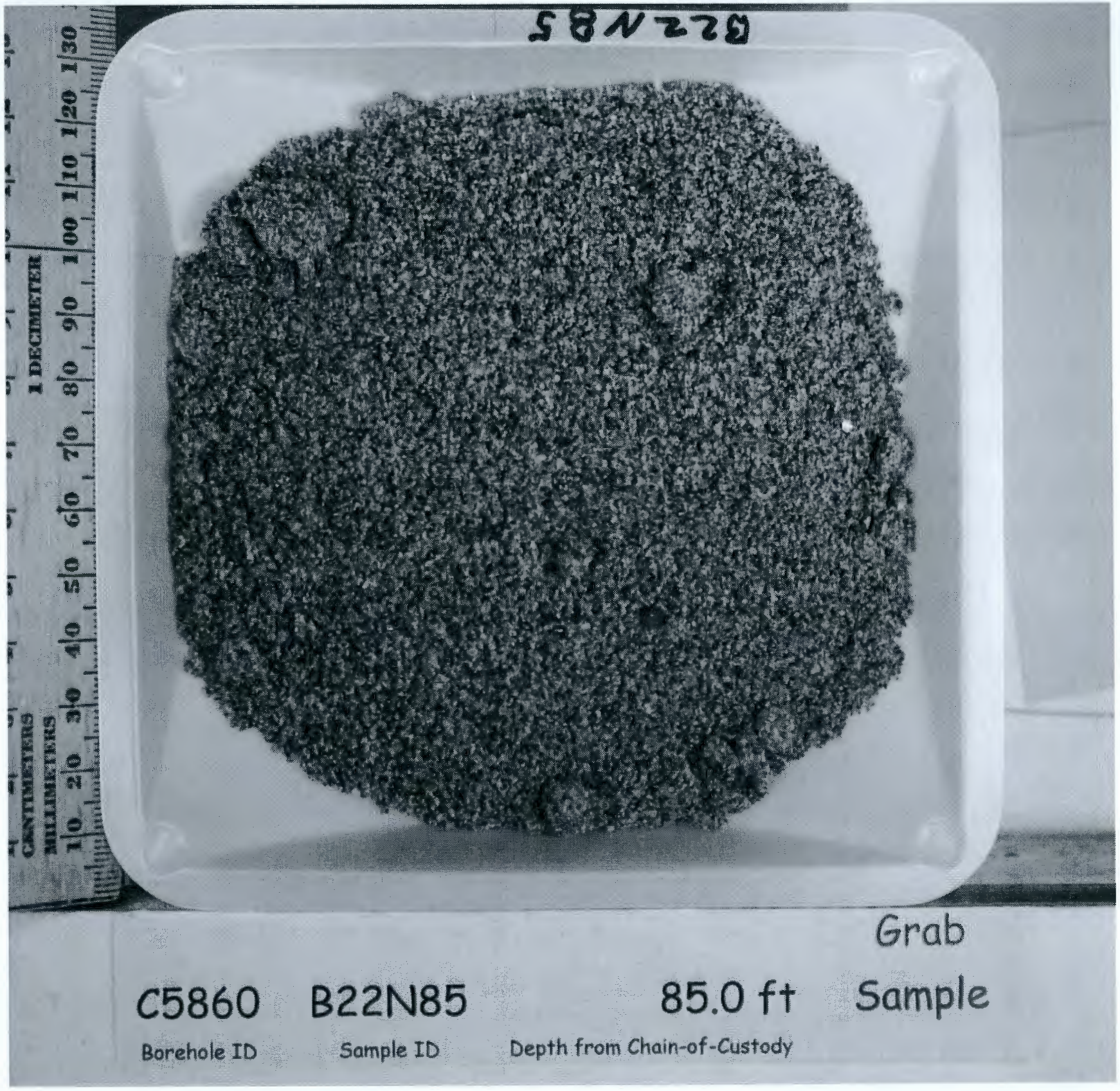
C5860	B22N80	72.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

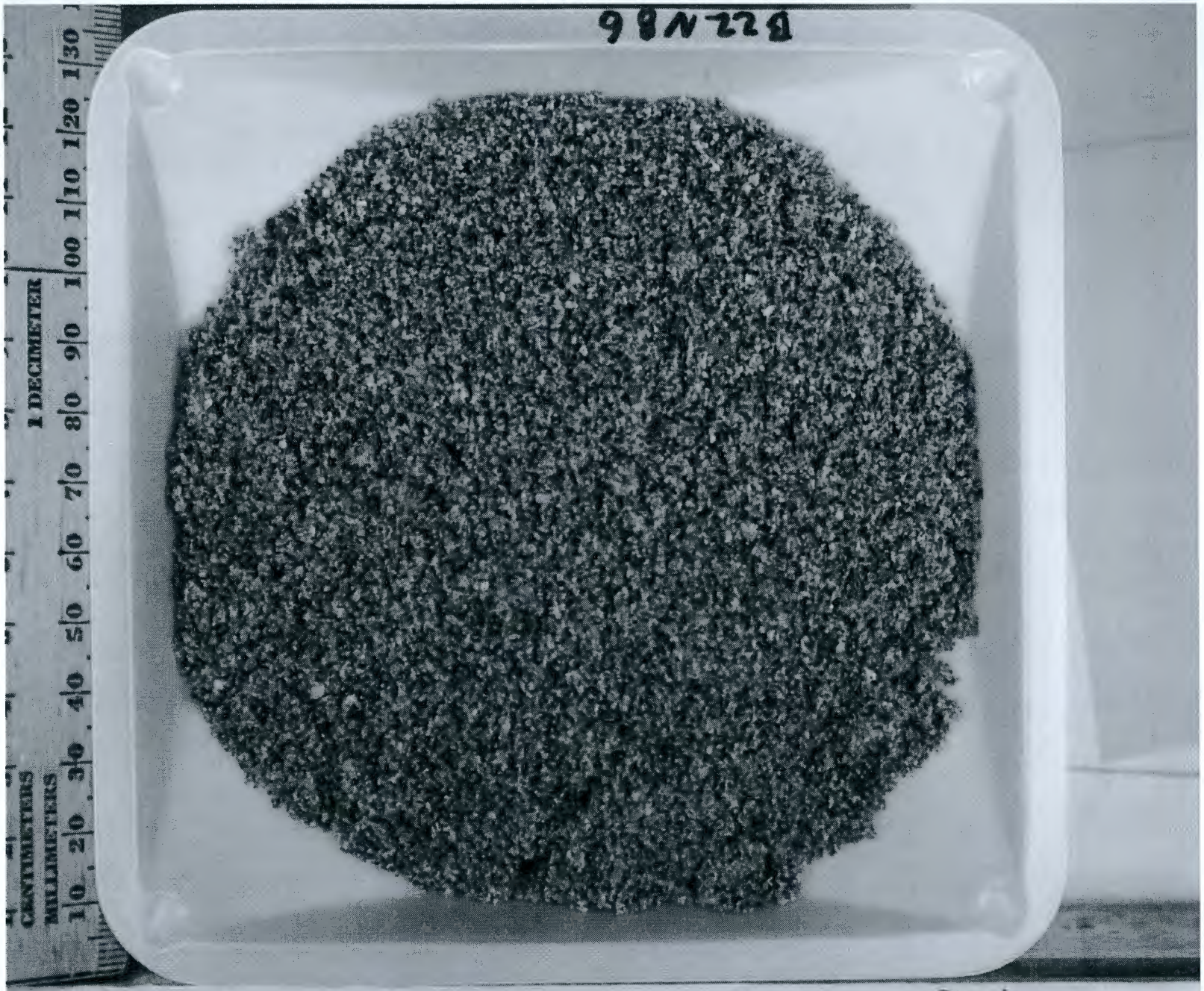

B22N81
CENTIMETERS
MILLIMETERS
1 DECIMETER
Grab
Sample
C5860
B22N81
74.7 ft
Borehole ID
Sample ID
Depth from Chain-of-Custody

B22N82
CENTIMETERS
MILLIMETERS
1 DECIMETER
Grab
C5860
B22N82
78.0 ft
Sample
Borehole ID
Sample ID
Depth from Chain-of-Custody


B22N83
CENTIMETERS
MILLIMETERS
1 DECIMETER
Grab
Sample
C5860
B22N83
80.0 ft
Borehole ID
Sample ID
Depth from Chain-of-Custody

C5860	B22N84	82.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

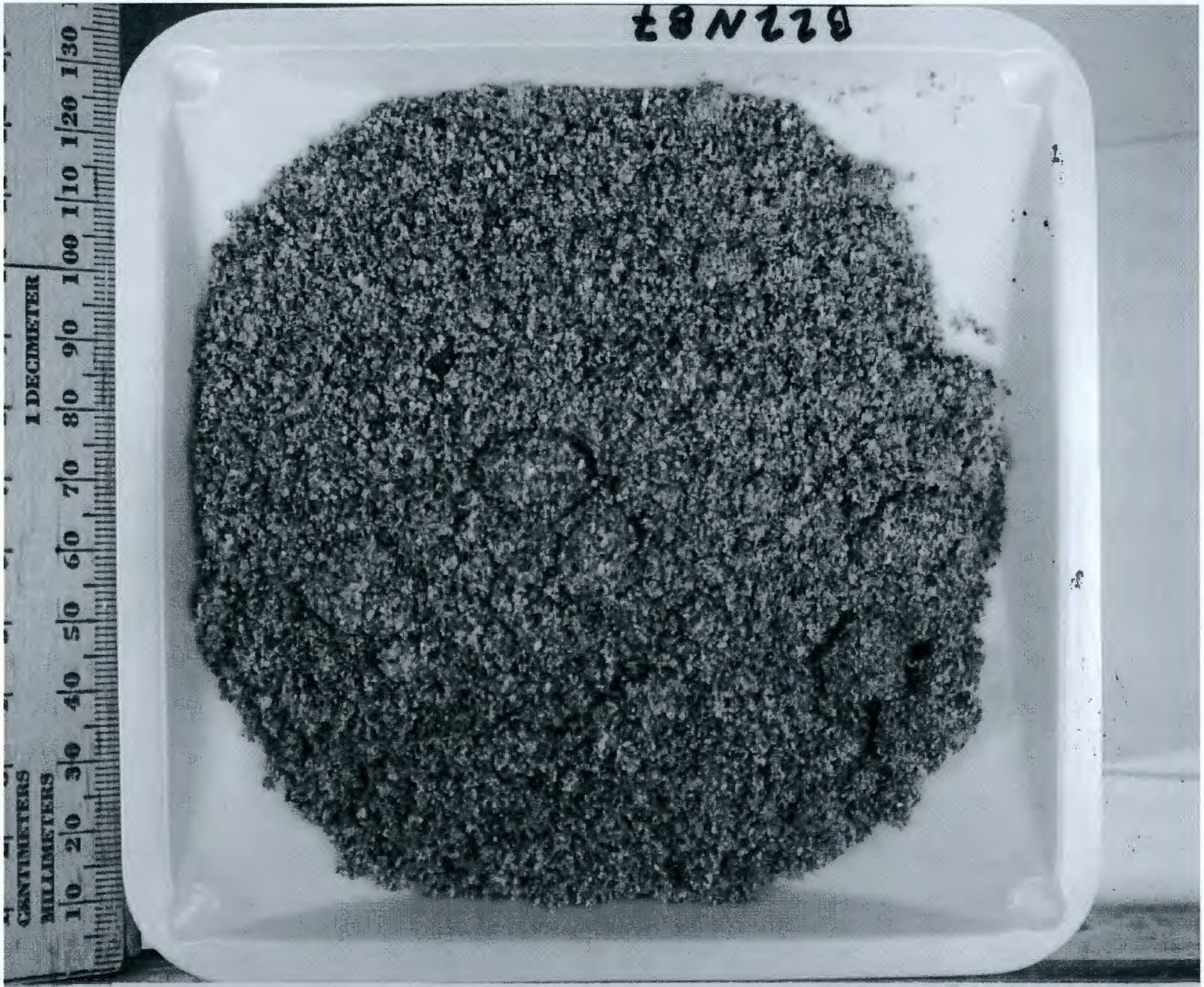

B22N85
1 DECIMETER
CENTIMETERS
MILLIMETERS
Grab
C5860
B22N85
85.0 ft
Sample
Borehole ID
Sample ID
Depth from Chain-of-Custody



Grab

C5860 B22N86 87.0 ft Sample

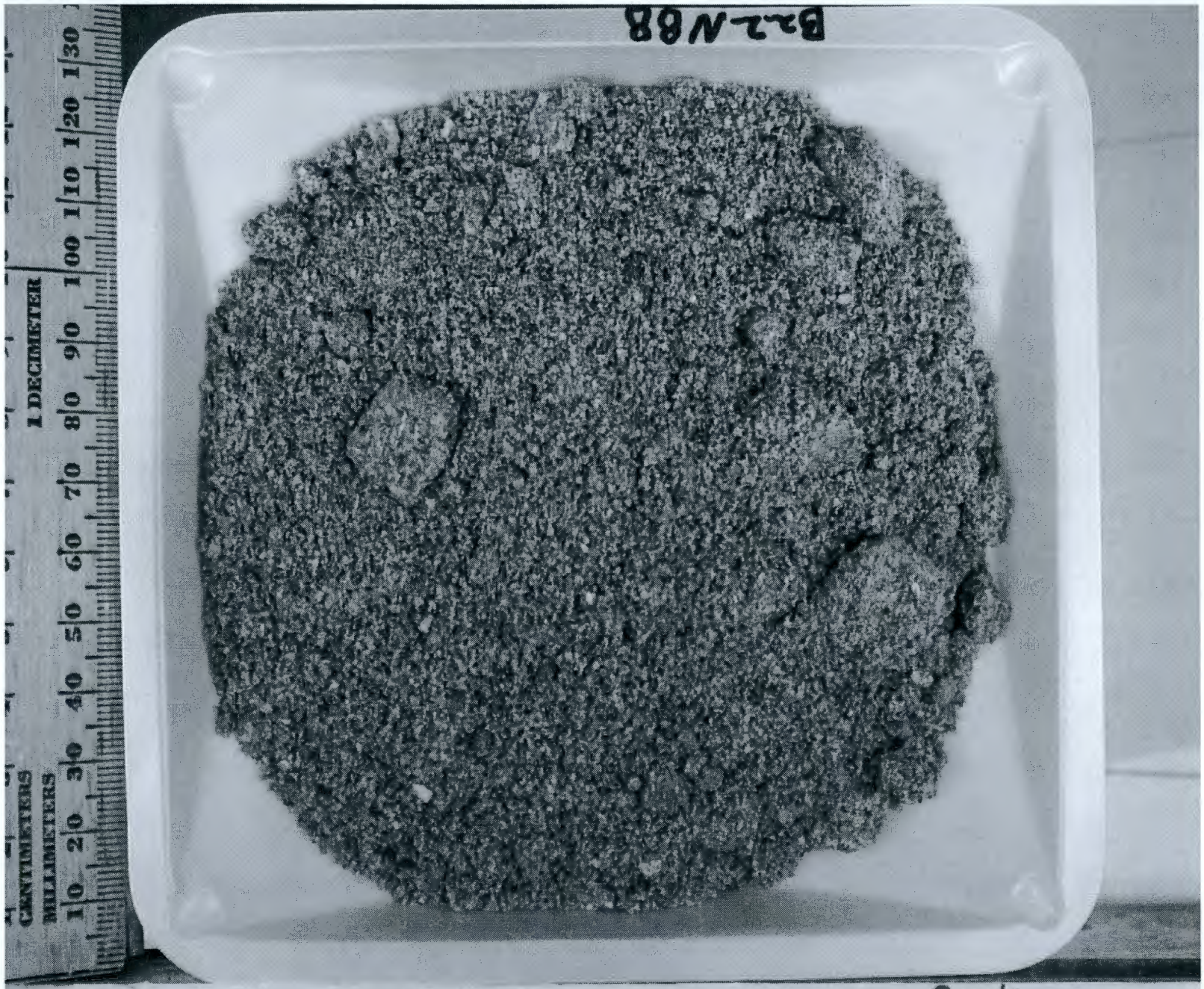
Borehole ID Sample ID Depth from Chain-of-Custody



Grab

C5860 B22N87 90.0 ft Sample

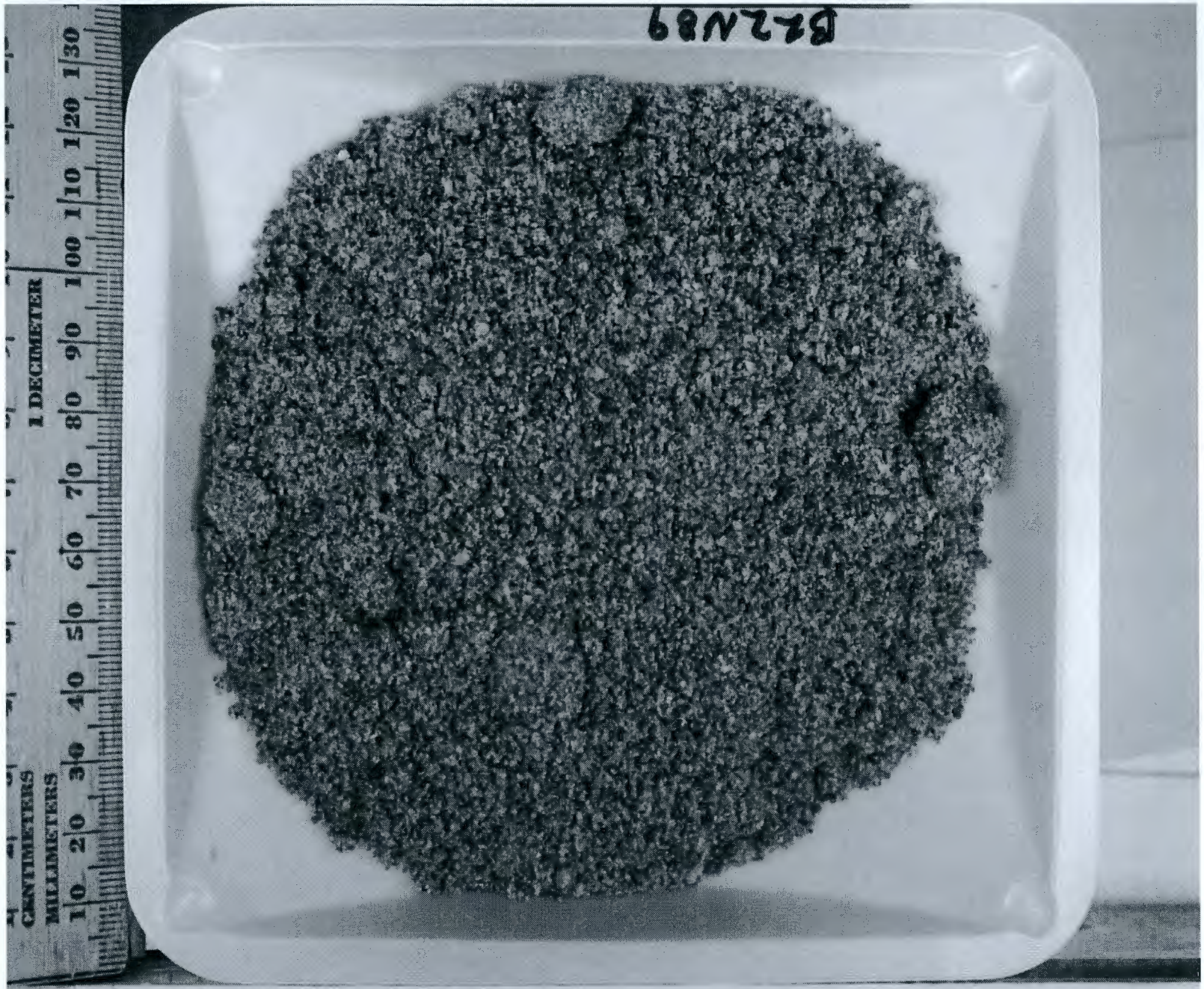
Borehole ID Sample ID Depth from Chain-of-Custody



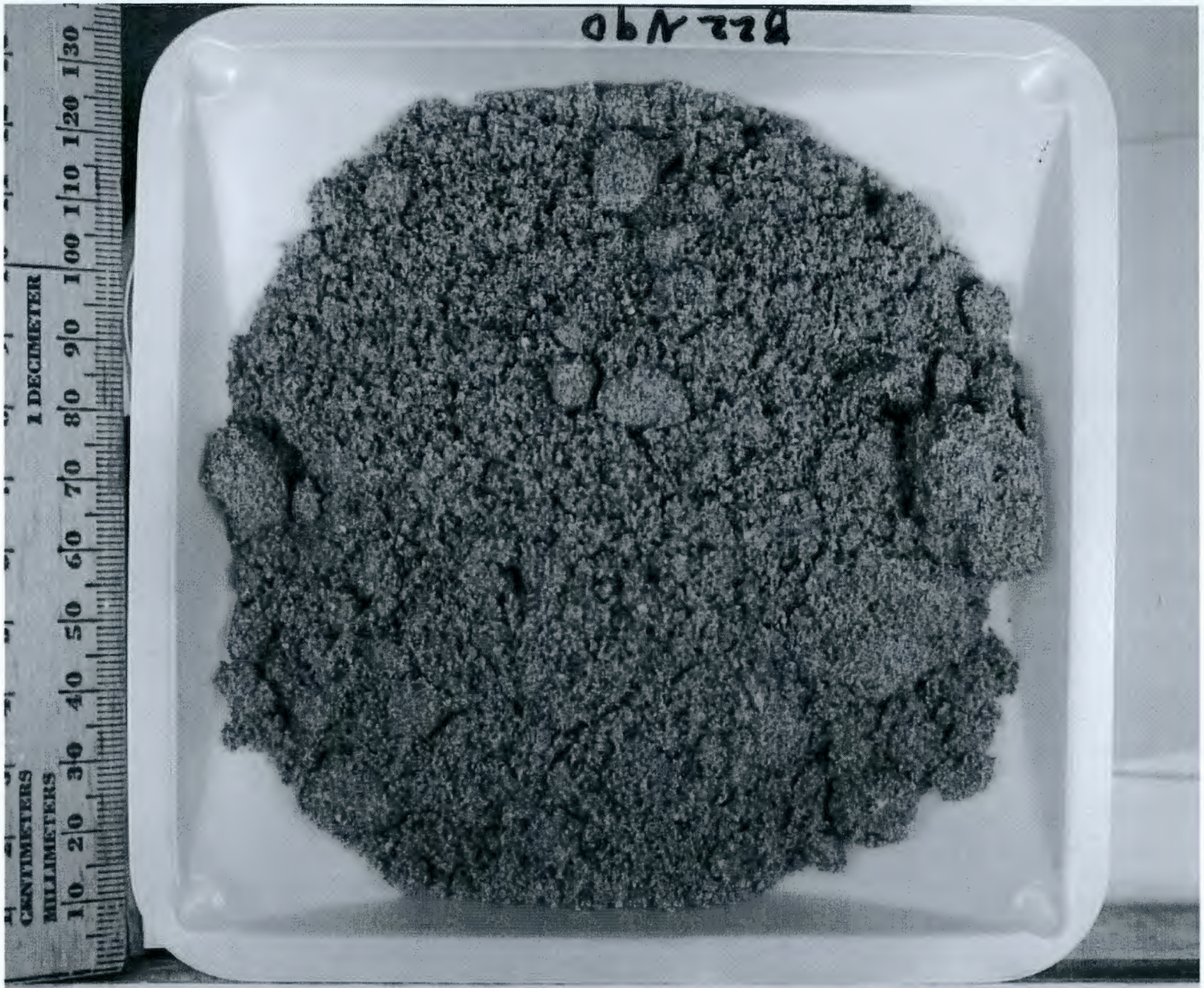
Grab

C5860 B22N88 89.0-92.0 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

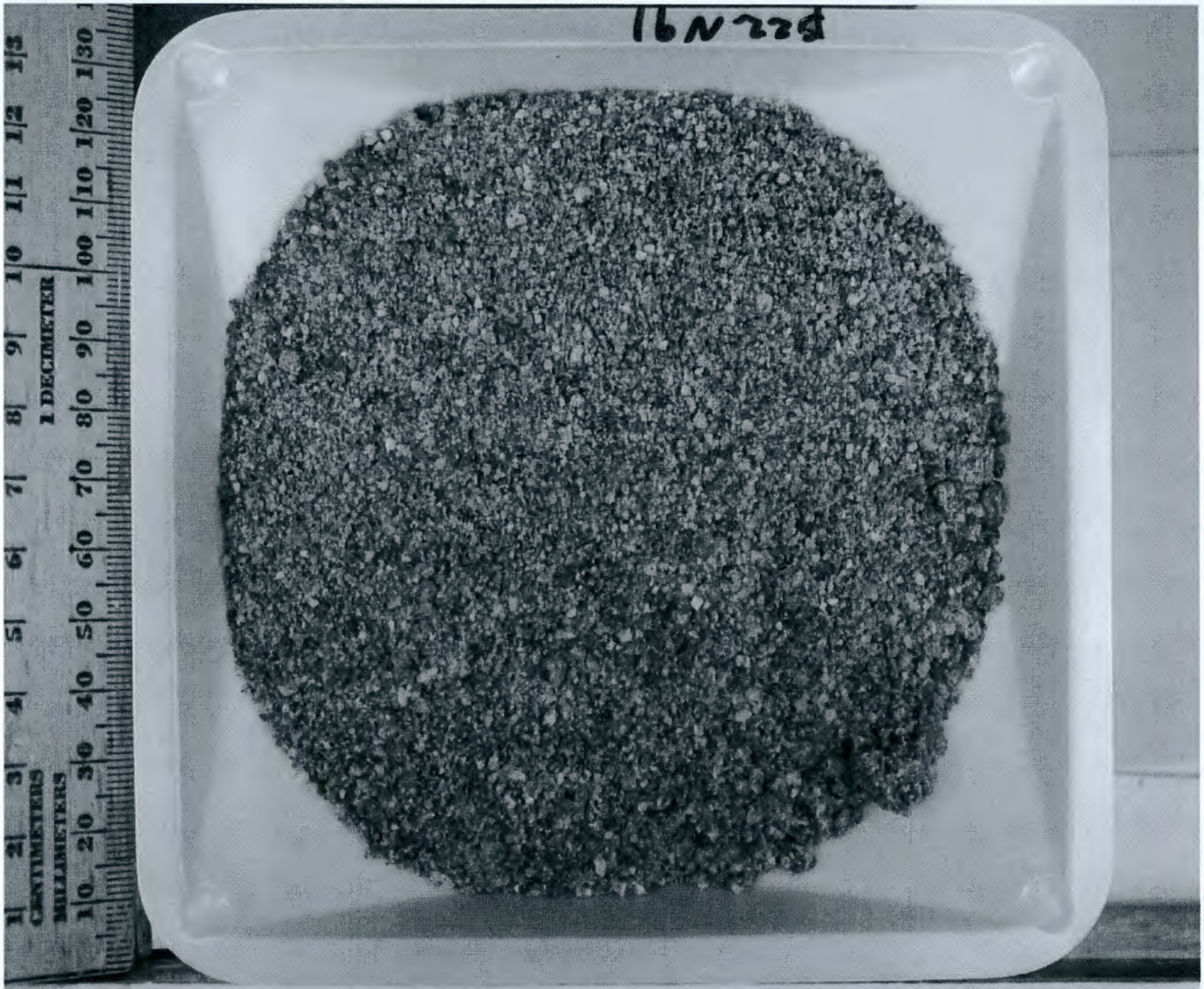


C5860	B22N89	95.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



Grab Sample

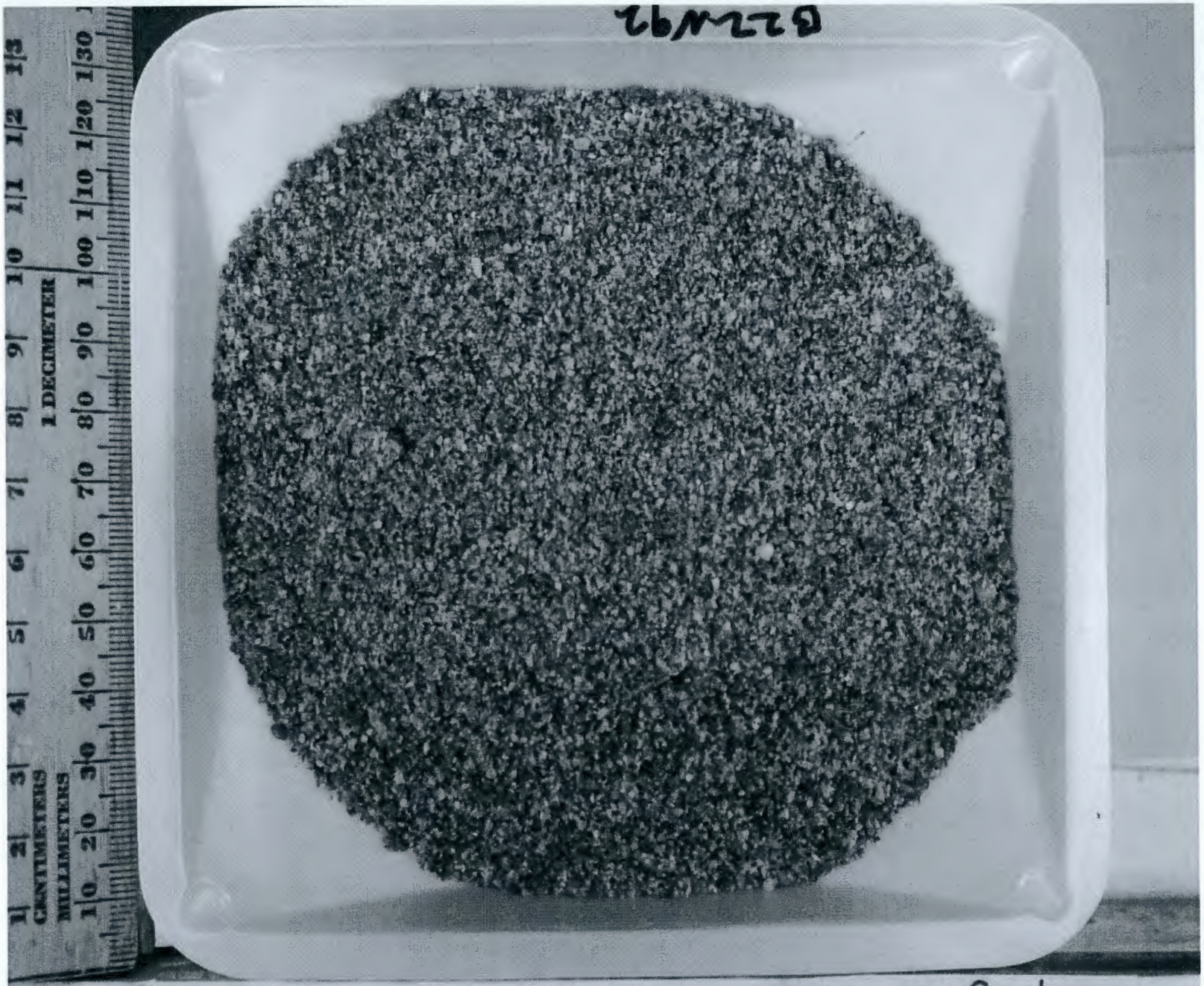
C5860	B22N90	97.0 ft
Borehole ID	Sample ID	Depth from Chain-of-Custody



Grab

C5860 B22N91 98.8-100.0 ft Sample

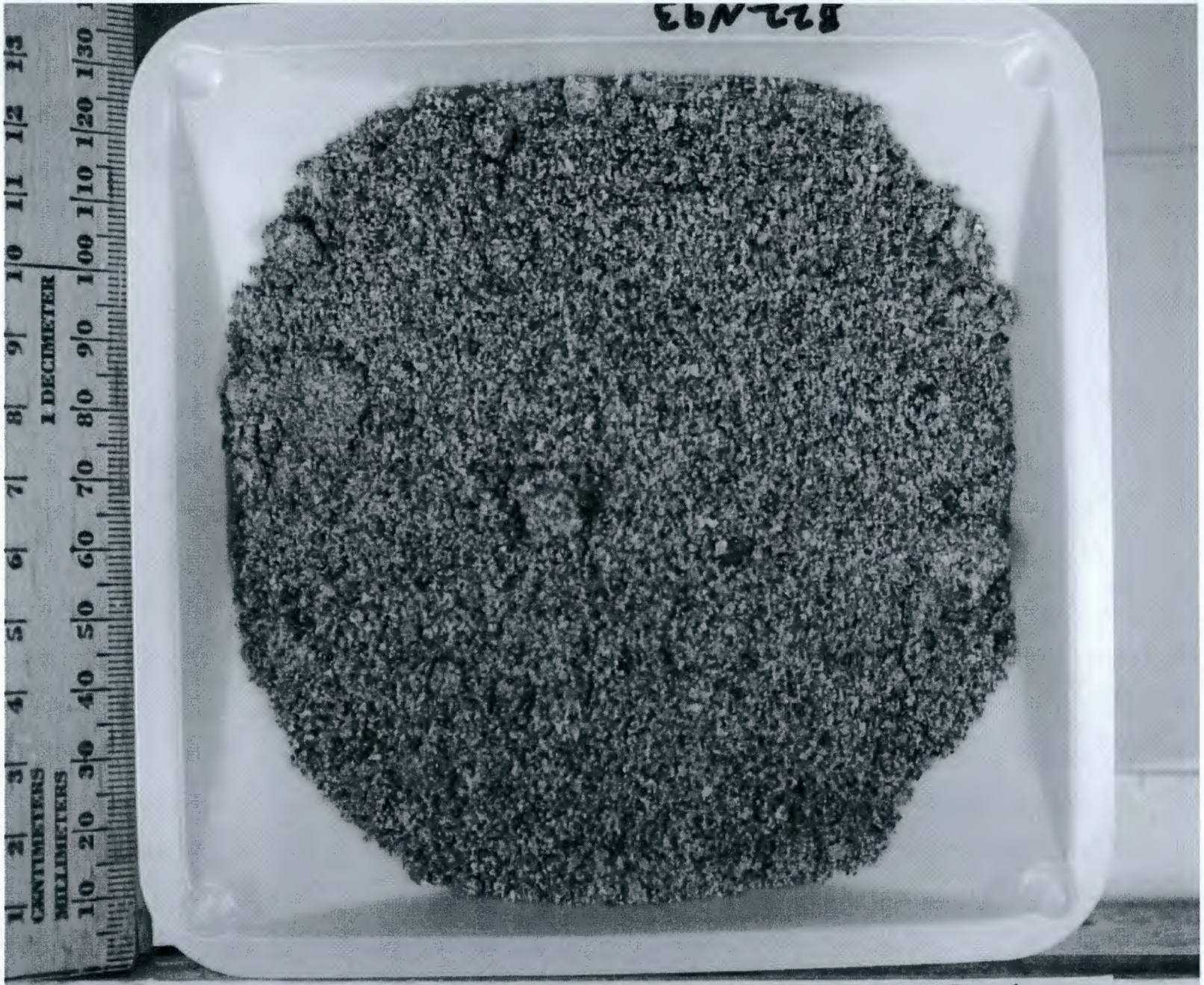
Borehole ID Sample ID Depth from Chain-of-Custody



Grab

C5860 B22N92 98.8-102.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody



Grab

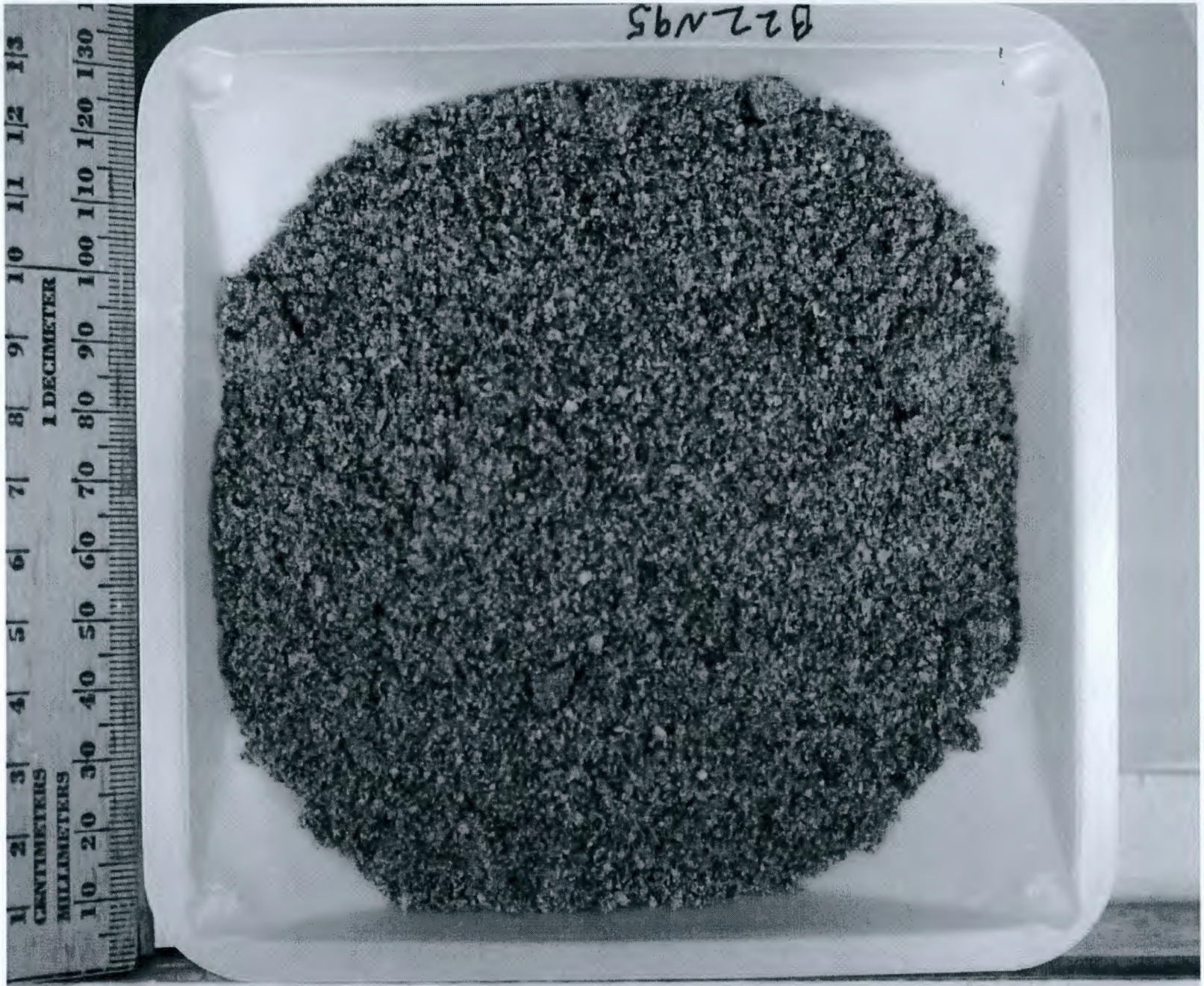
C5860 B22N93 105.7 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

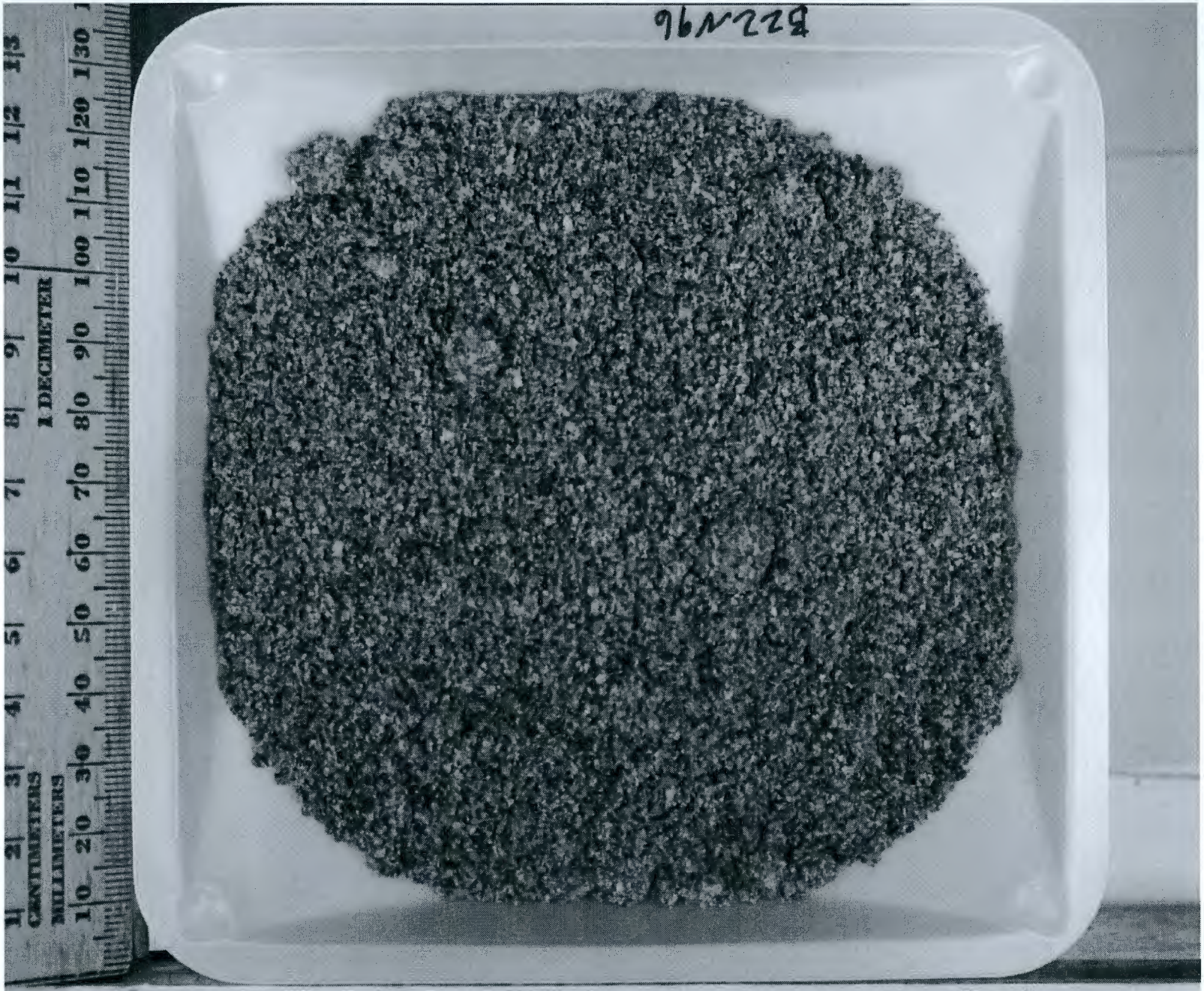
Grab Sample

C5860 B22N94 107.5 ft

Borehole ID Sample ID Depth from Chain-of-Custody



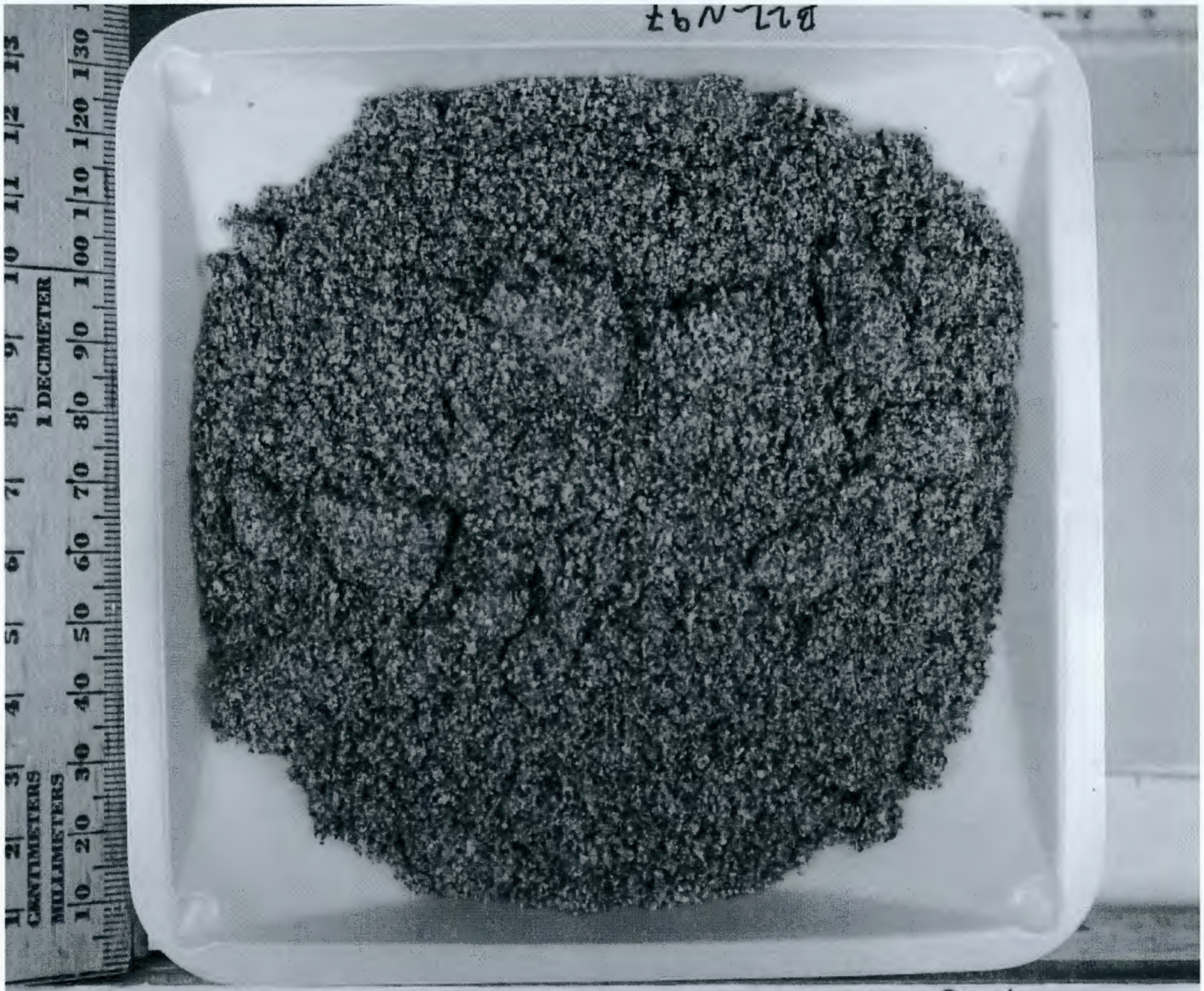
C5860	B22N95	110.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



Grab

C5860 B22N96 112.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

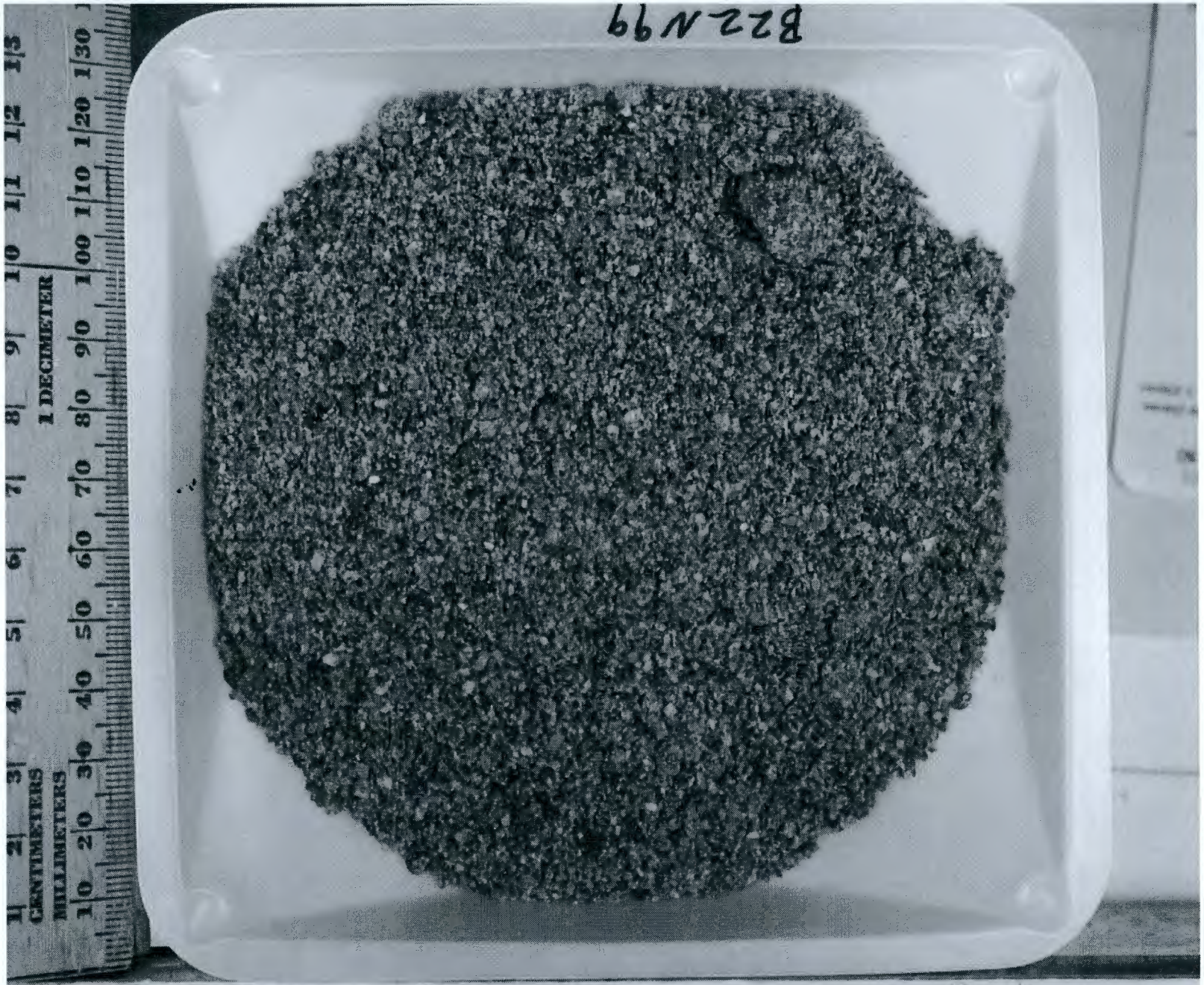


Grab

C5860 B22N97 115.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

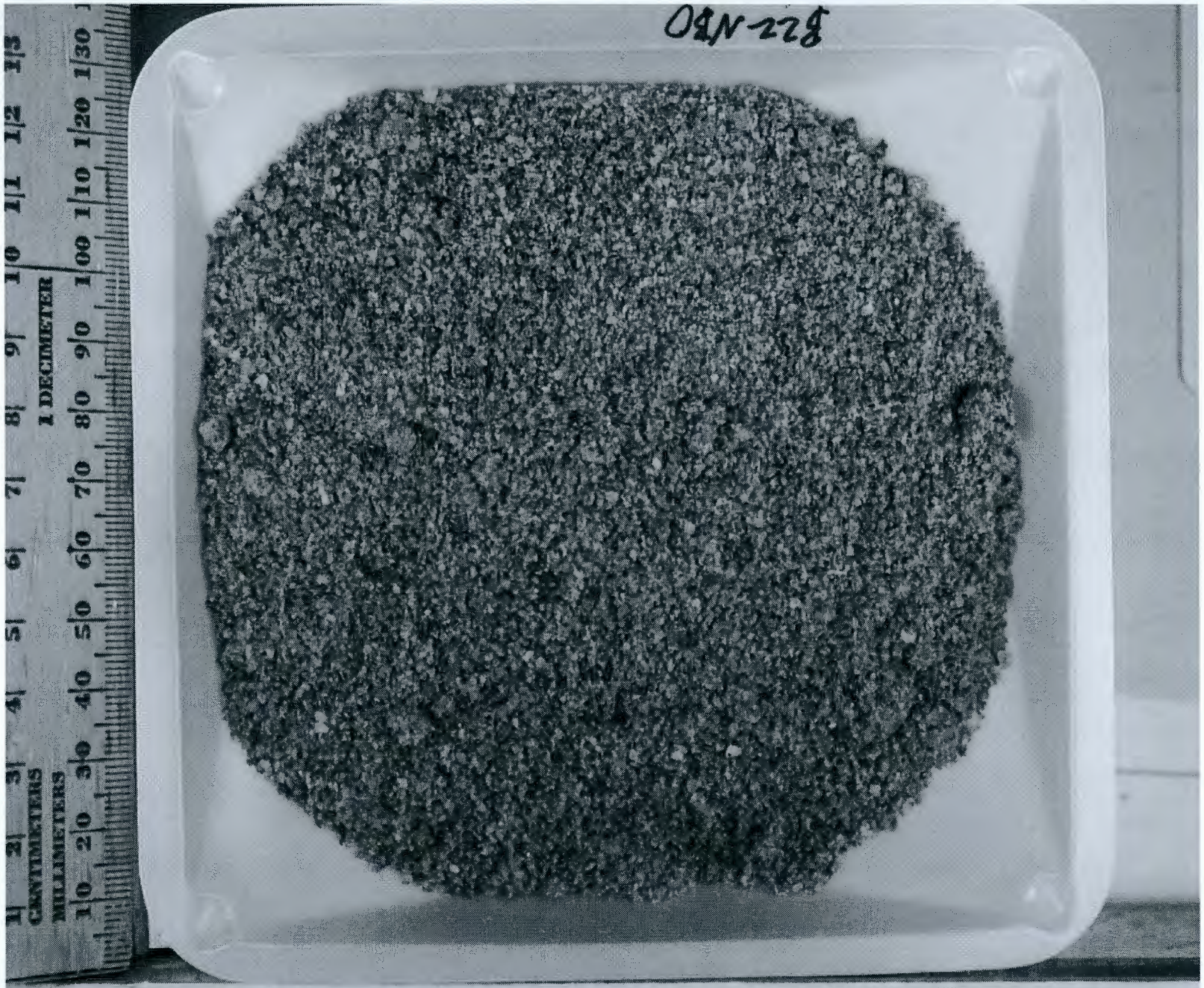
C5860	B22N98	117.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



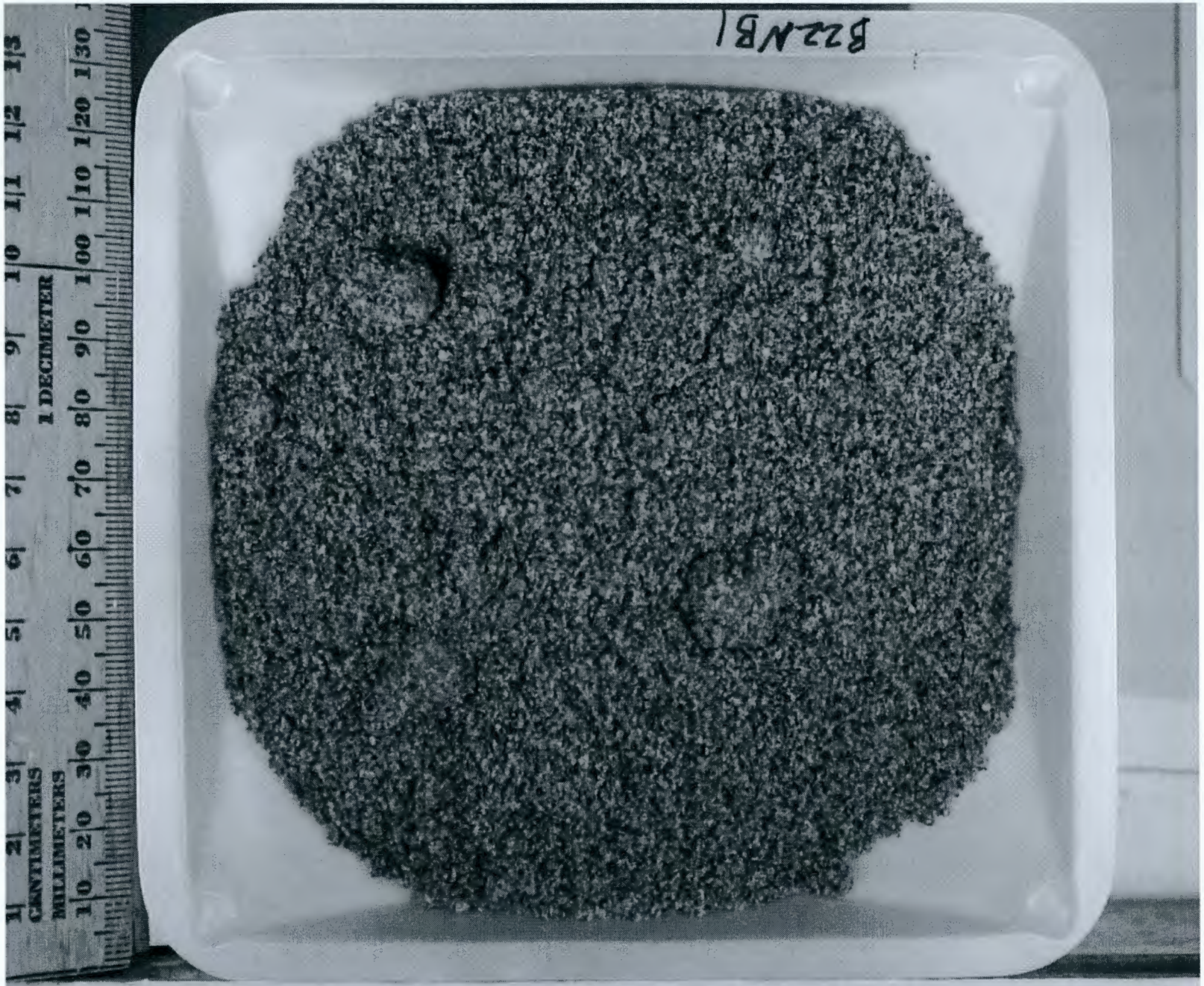
Grab

C5860 B22N99 119.1-119.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody



C5860	B22NB0	122.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

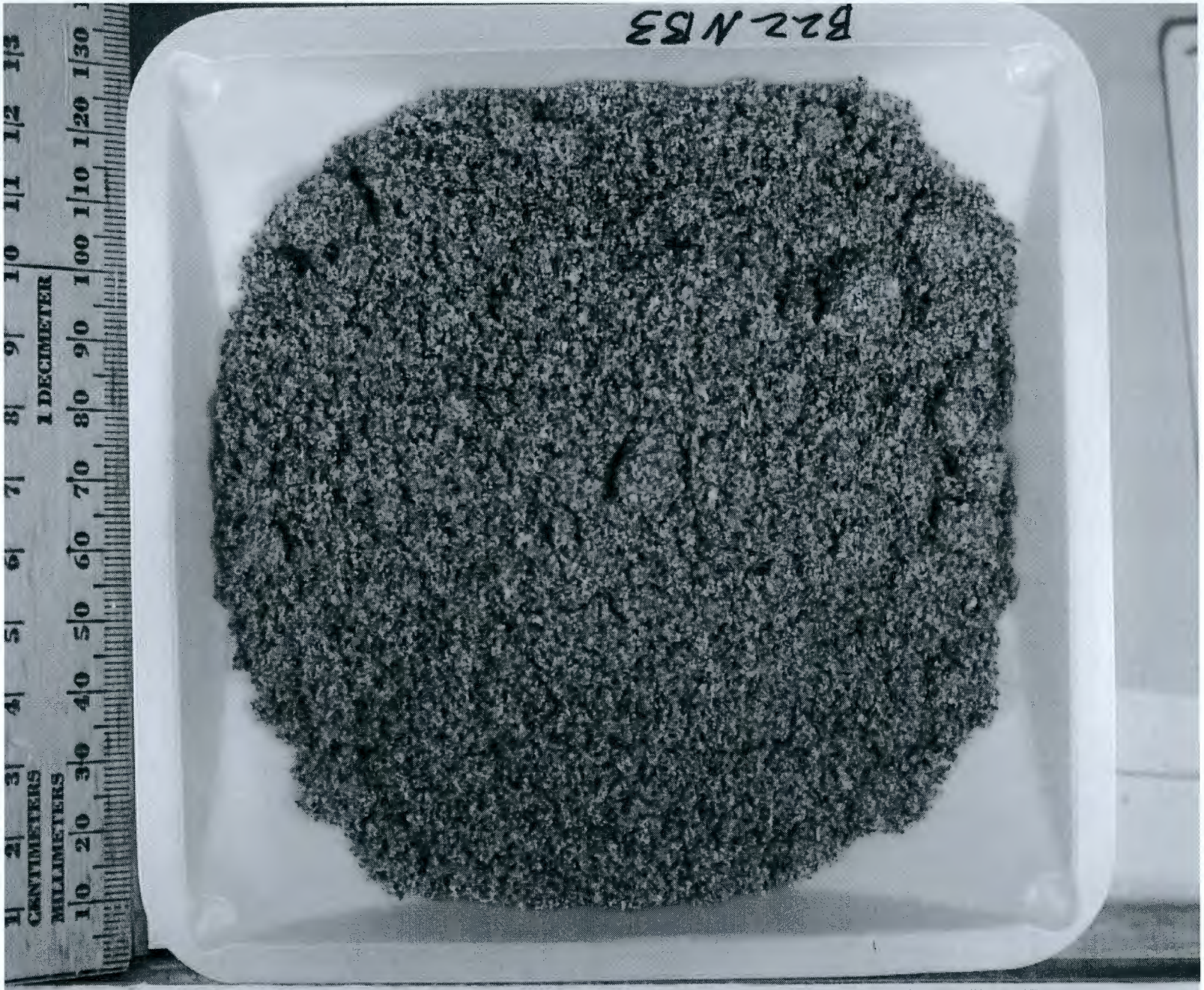


C5860	B22NB1	125.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

Grab

C5860 B22NB2 127.8 ft Sample

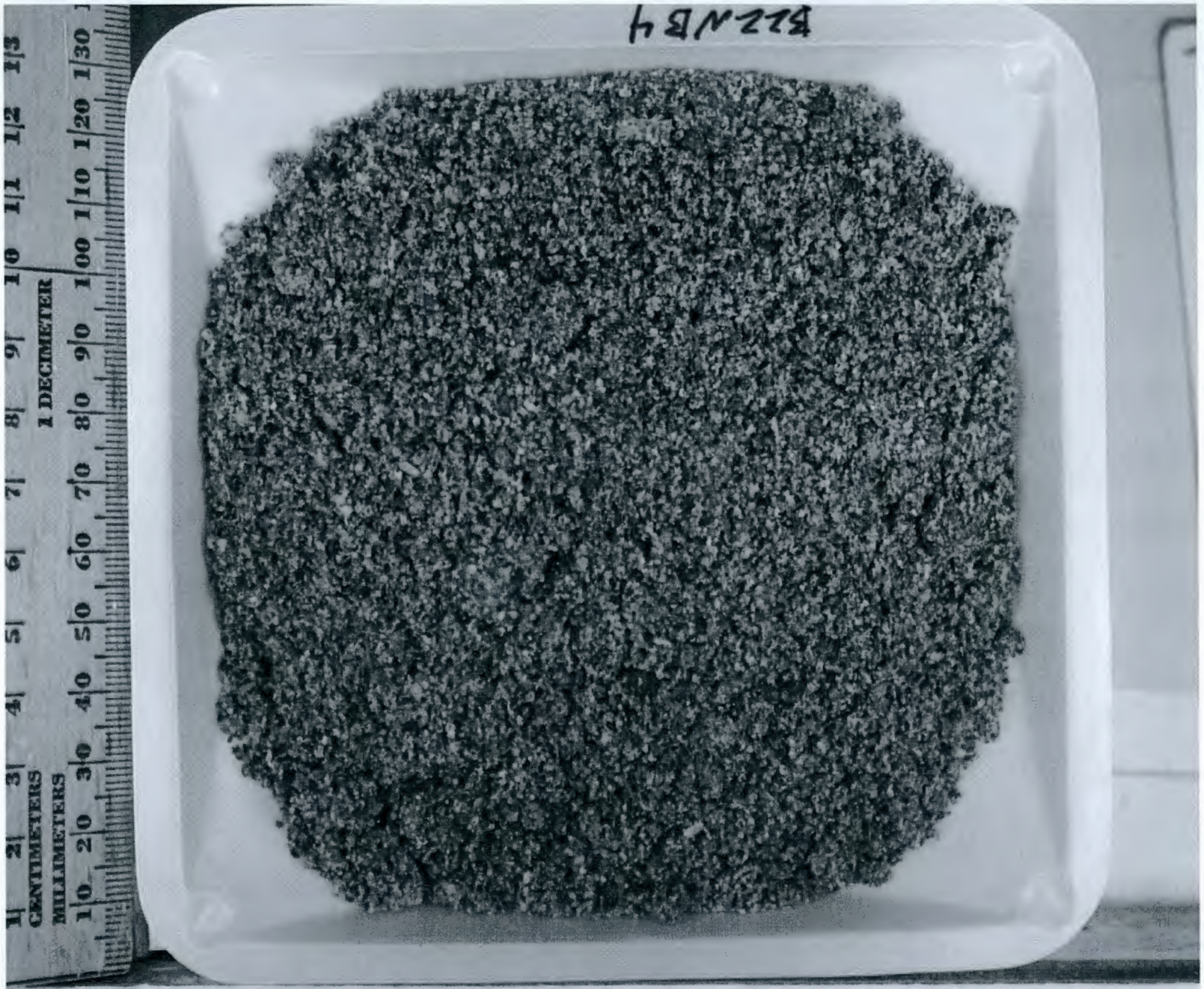
Borehole ID Sample ID Depth from Chain-of-Custody



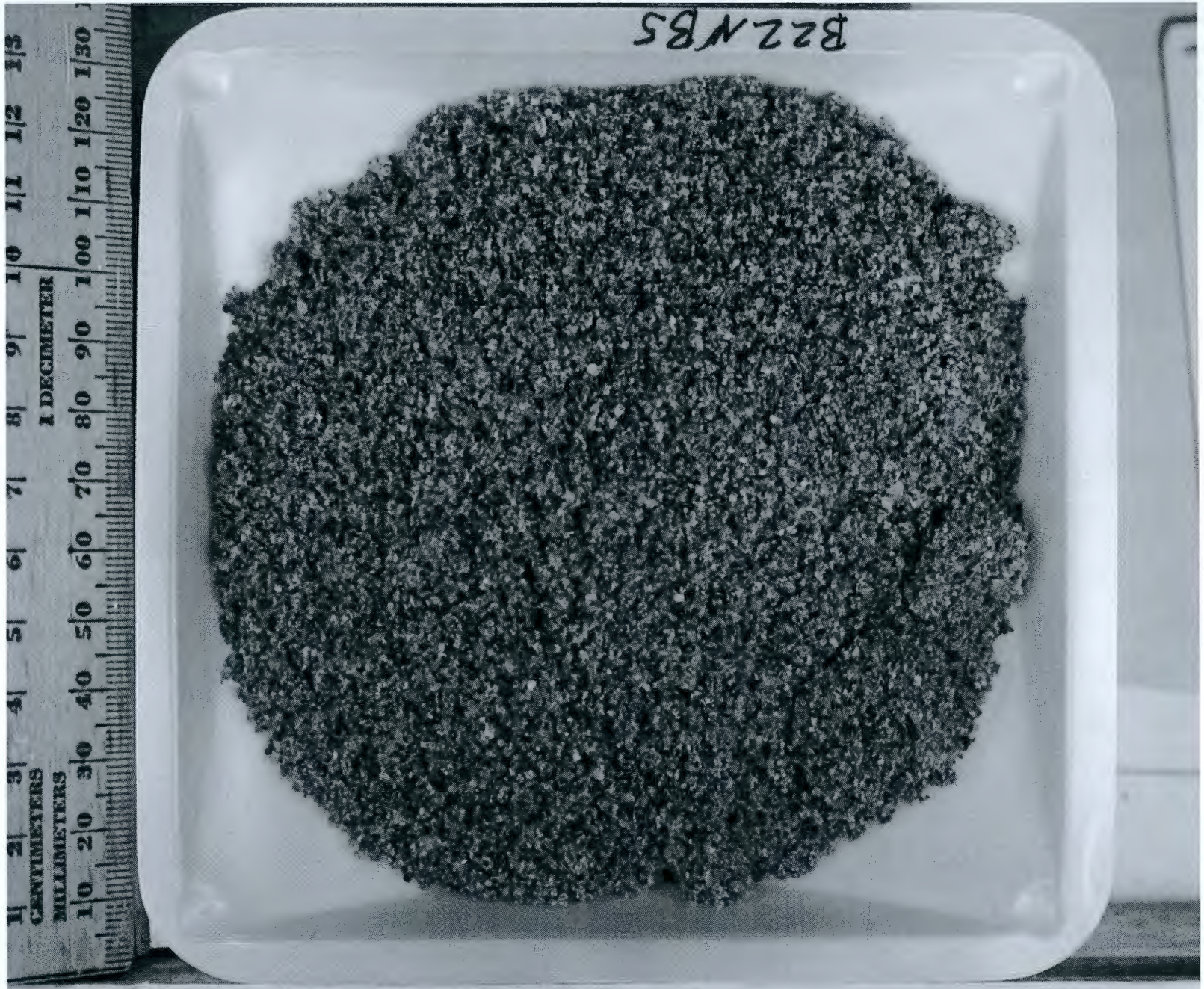
Grab

C5860 B22NB3 130.2 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody



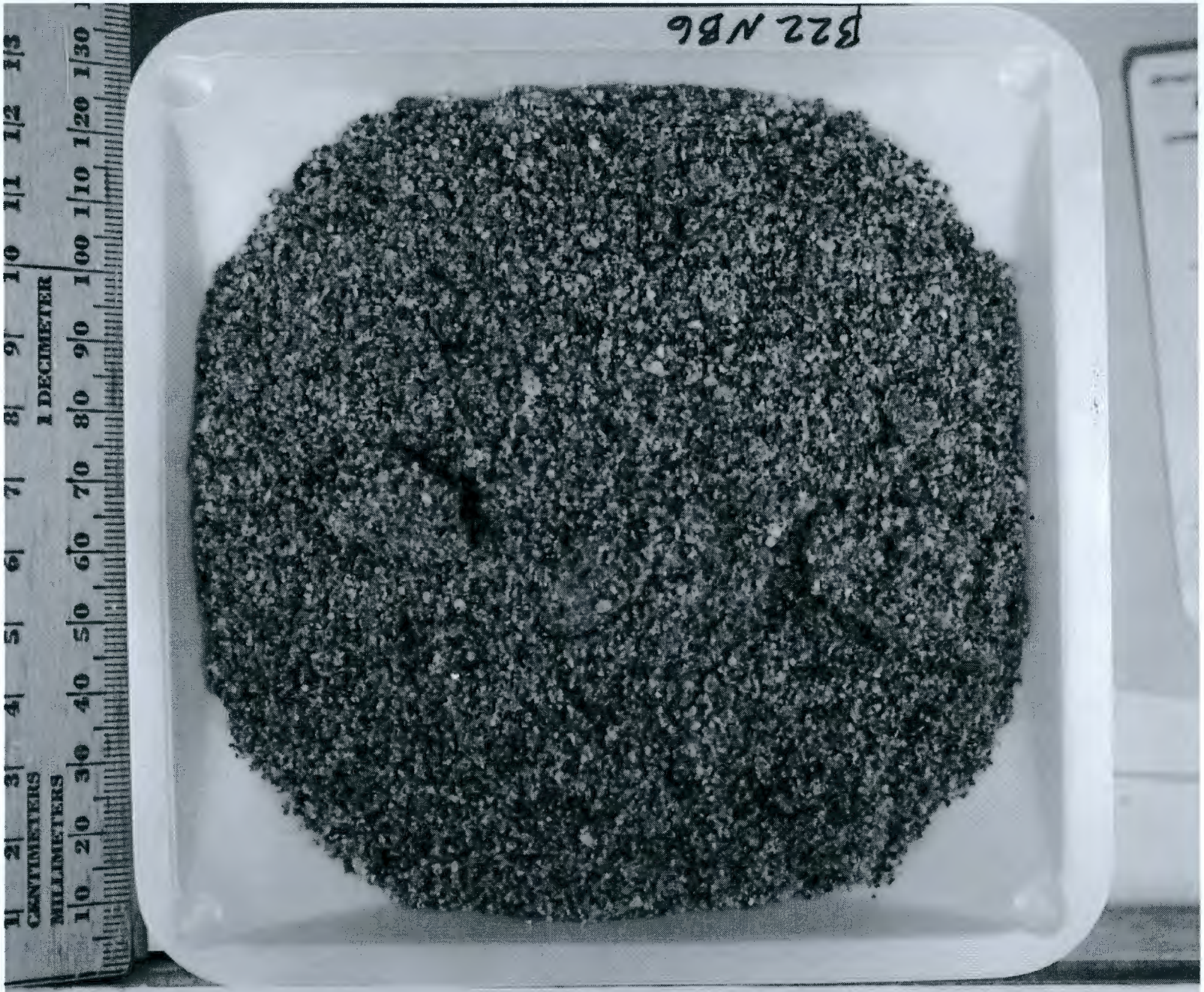
C5860	B22NB4	133.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



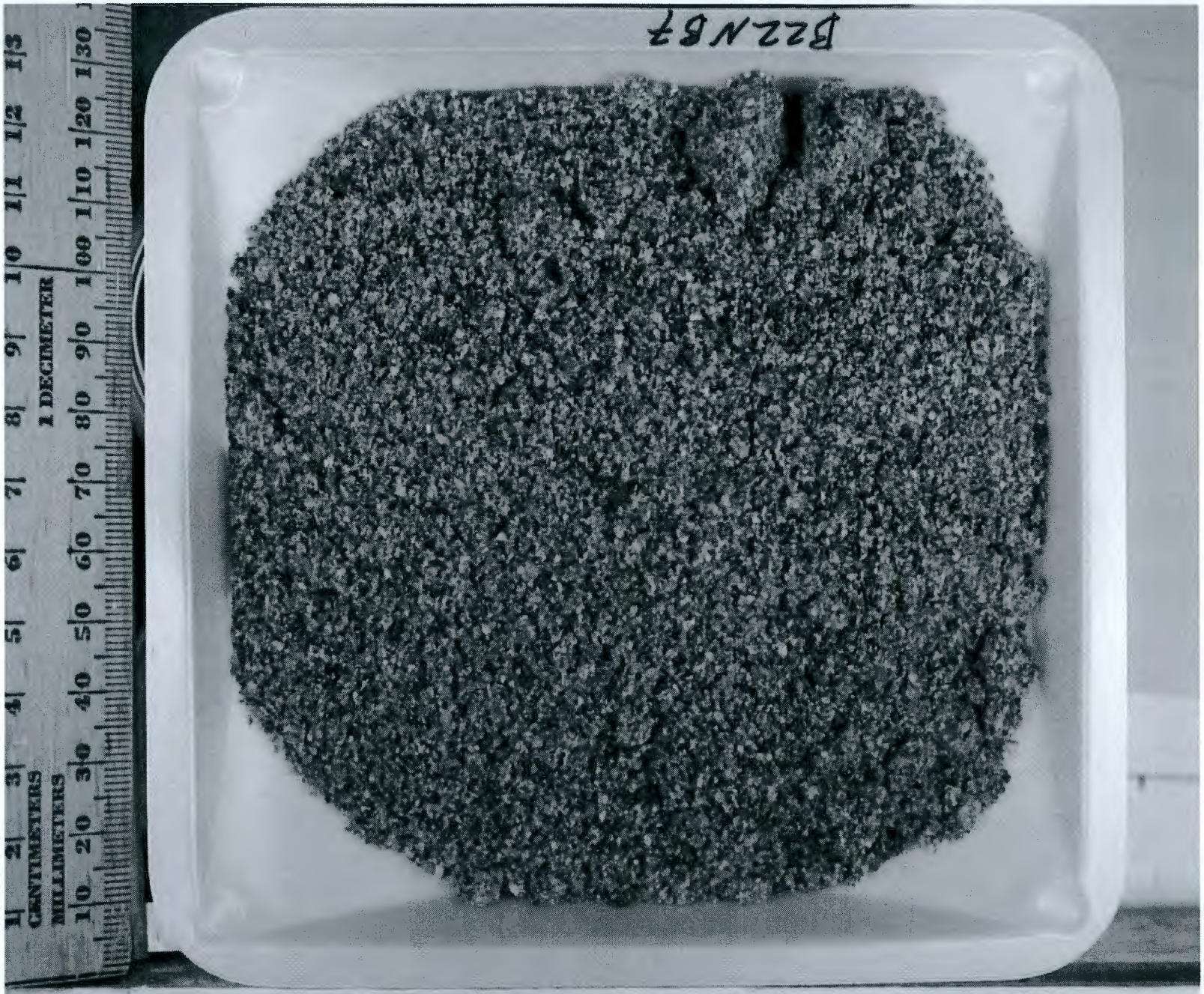
Grab

C5860 B22NB5 135.7 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody



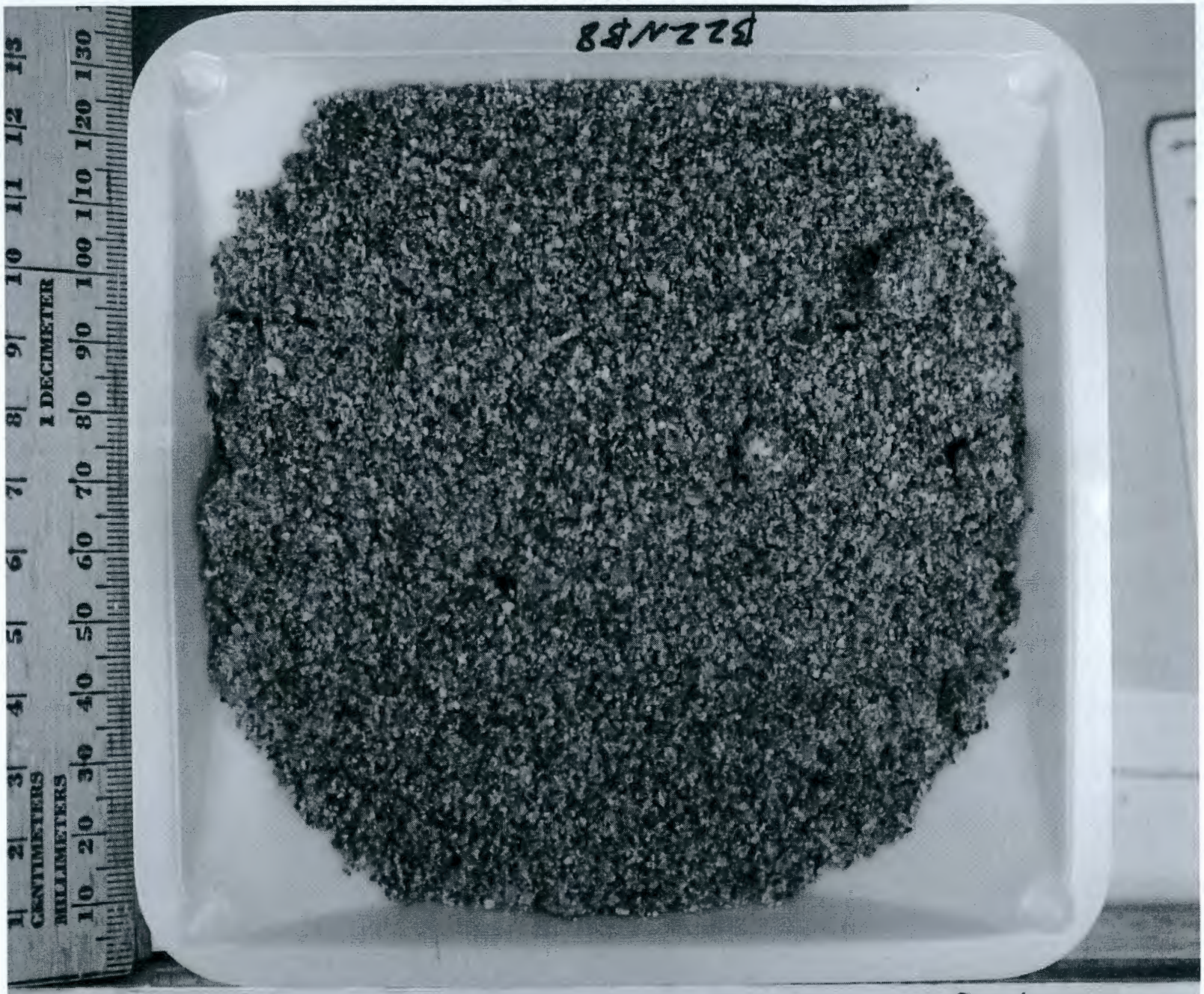
C5860	B22NB6	135.7 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



Grab

C5860 B22NB7 141.0 ft Sample

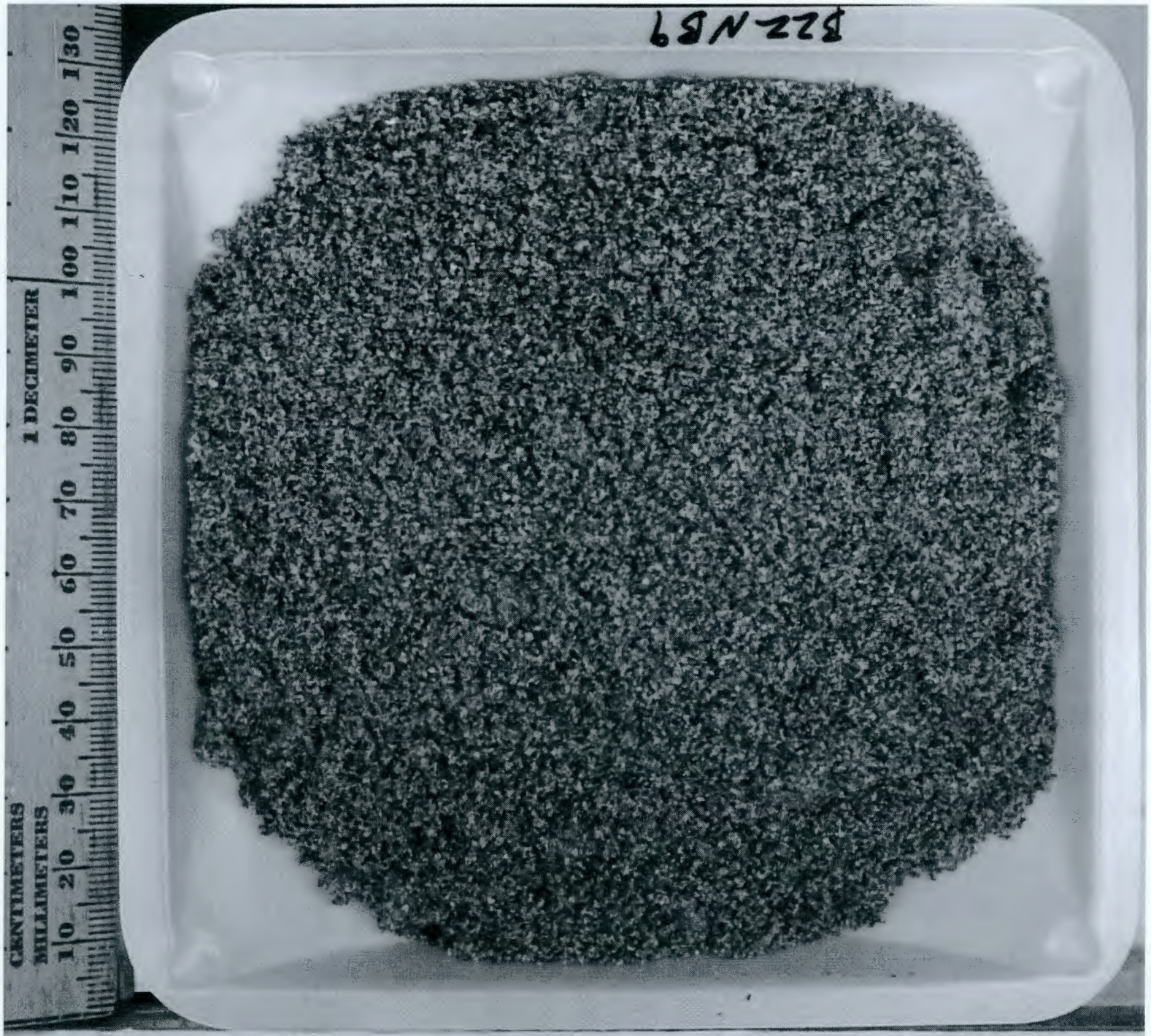
Borehole ID Sample ID Depth from Chain-of-Custody



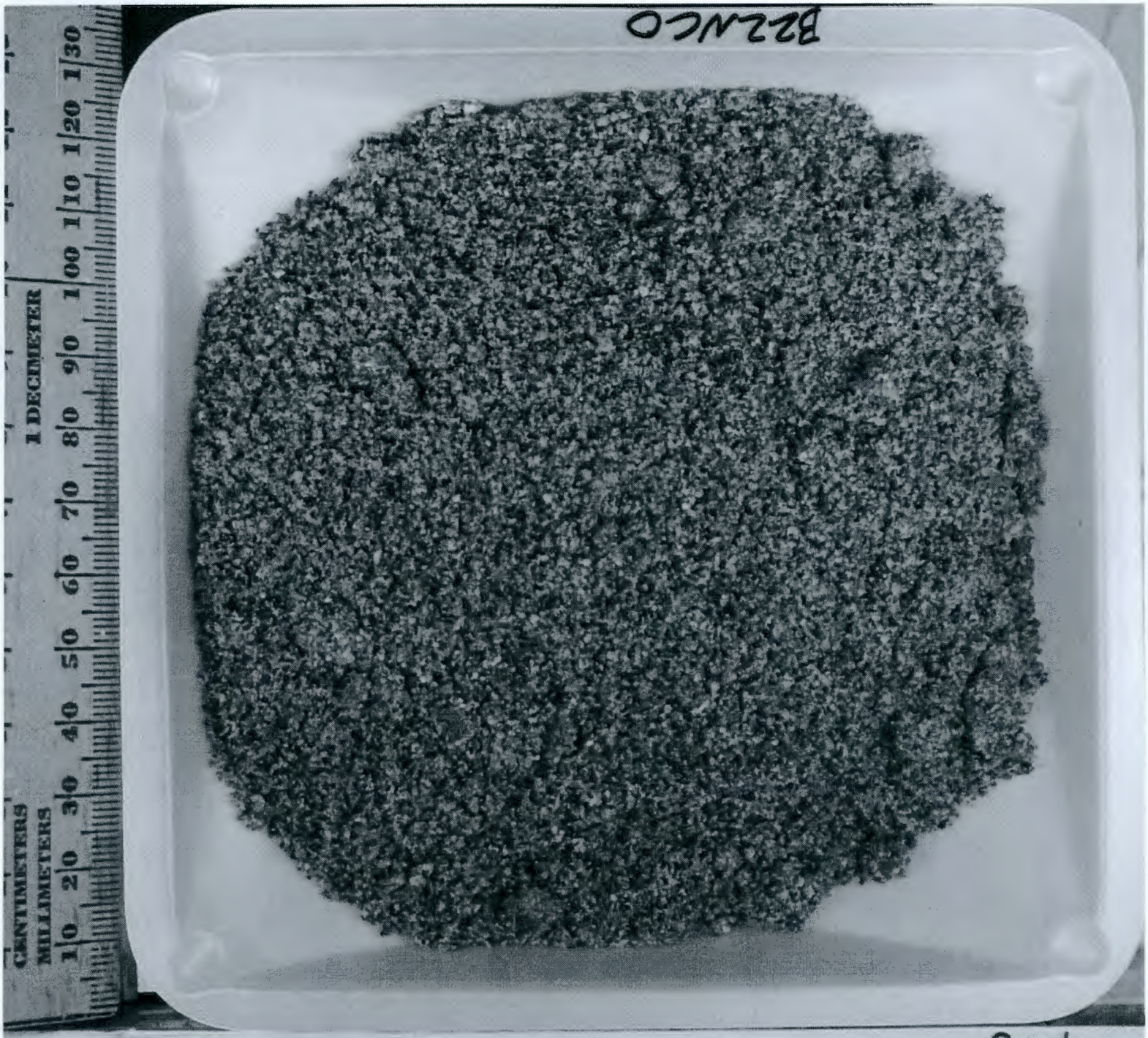
Grab

C5860 B22NB8 142.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody



C5860	B22NB9	145.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

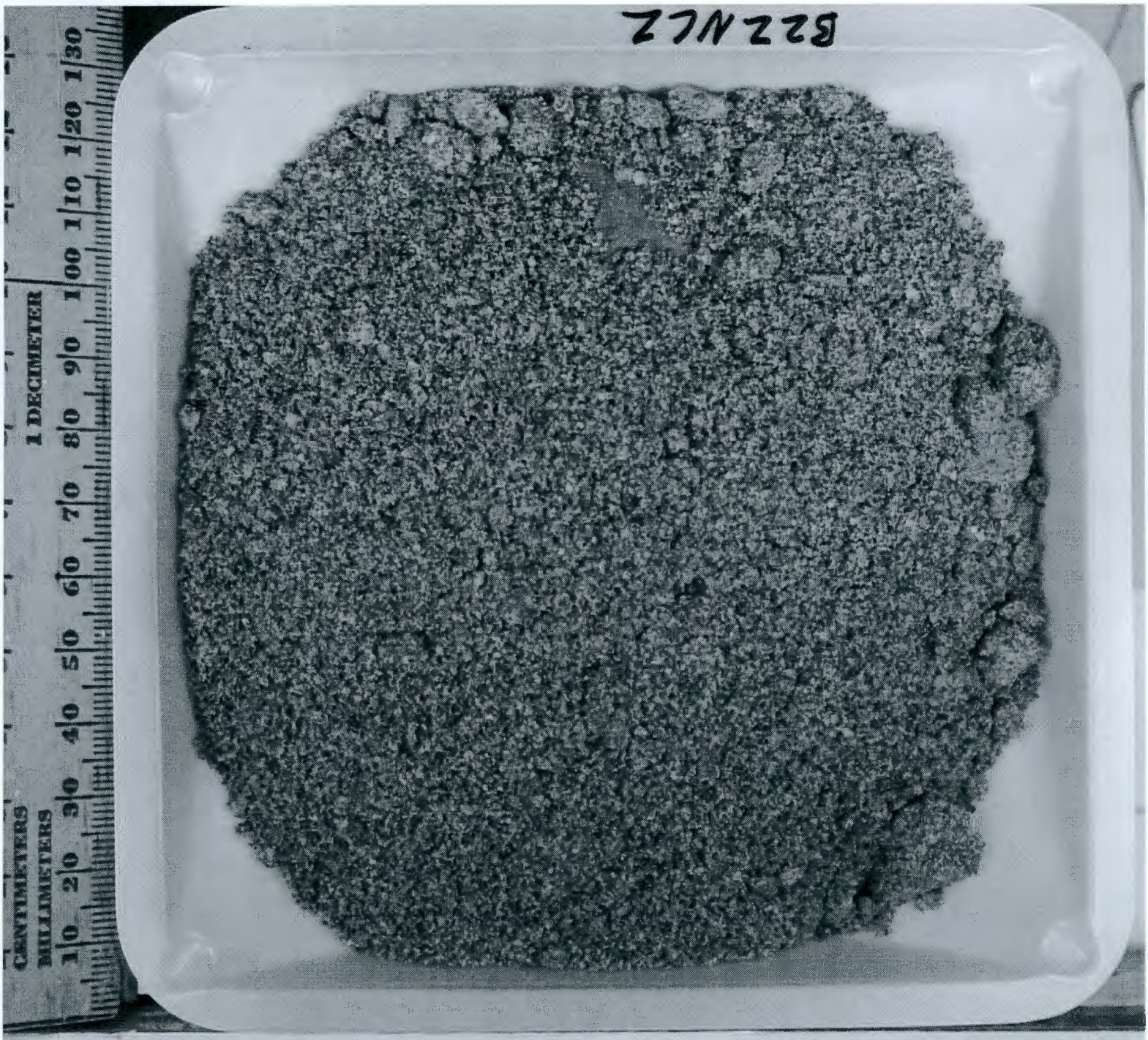


Grab

C5860 B22NC0 147.5 ft Sample

Borehole ID Sample ID Depth from Chain-of-Custody

C5860	B22NC1	149.4 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

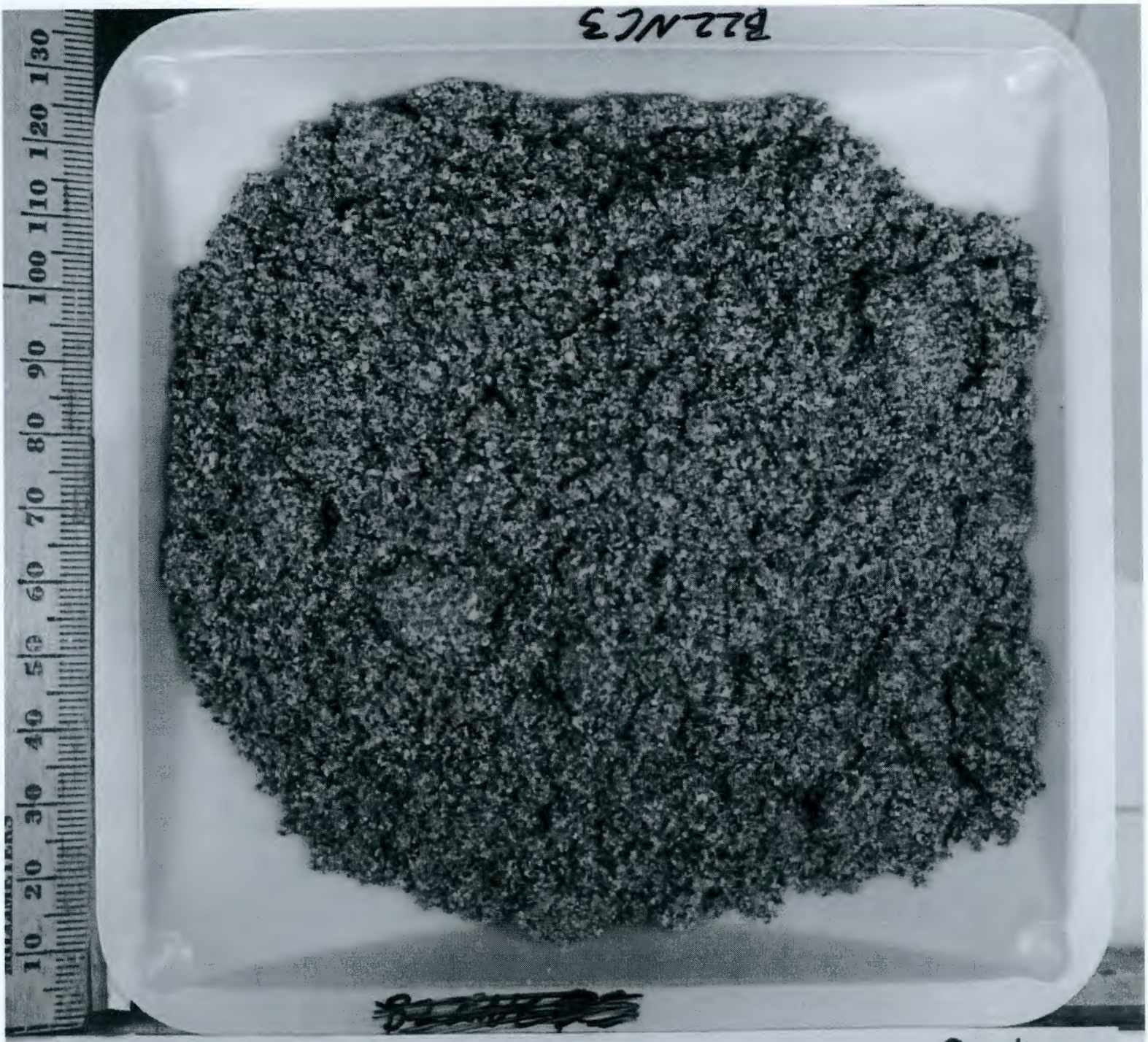


Grab Sample

C5860 — Borehole ID

B22NC2 — Sample ID

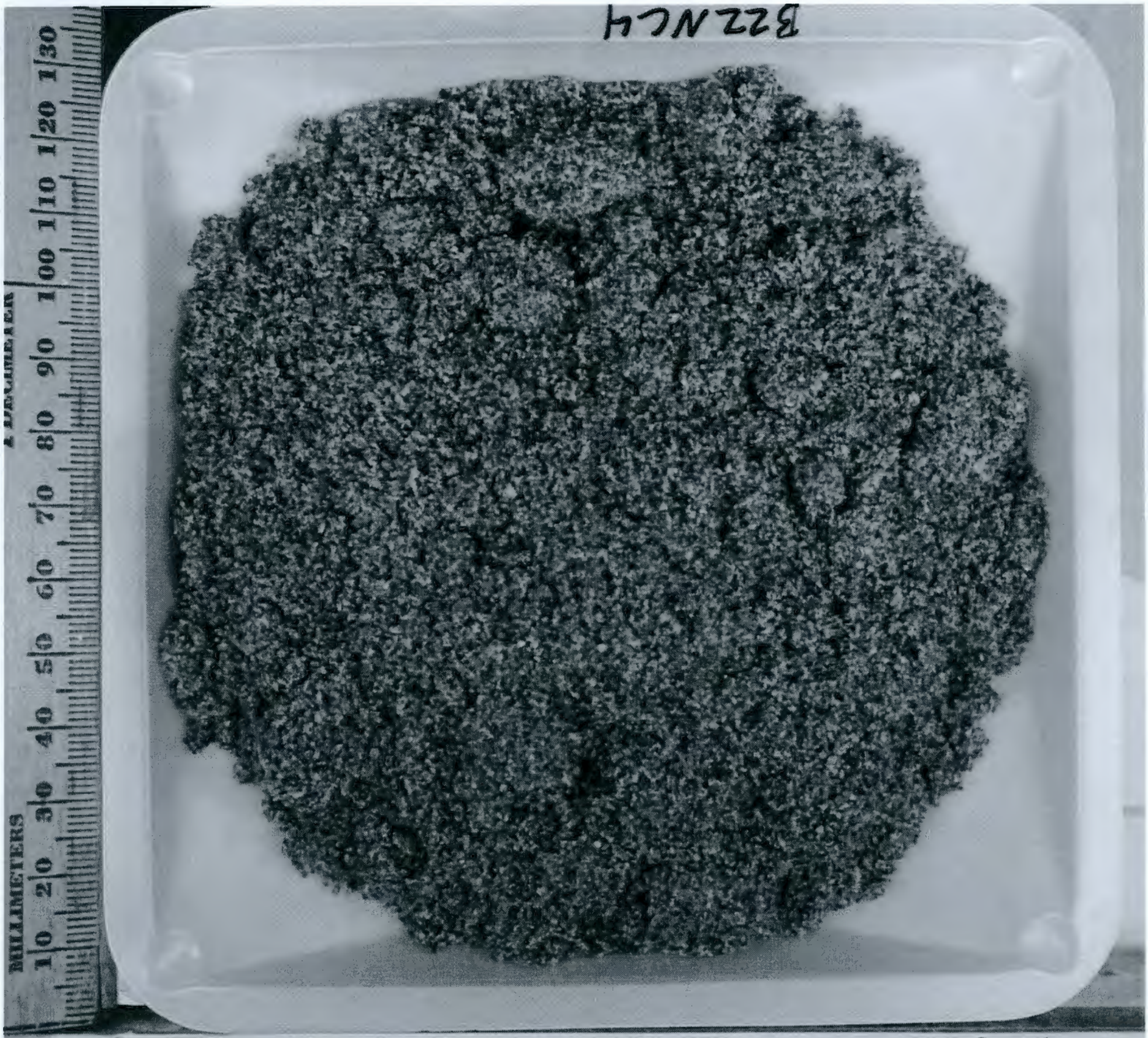
151.90 ft — Depth from Chain-of-Custody



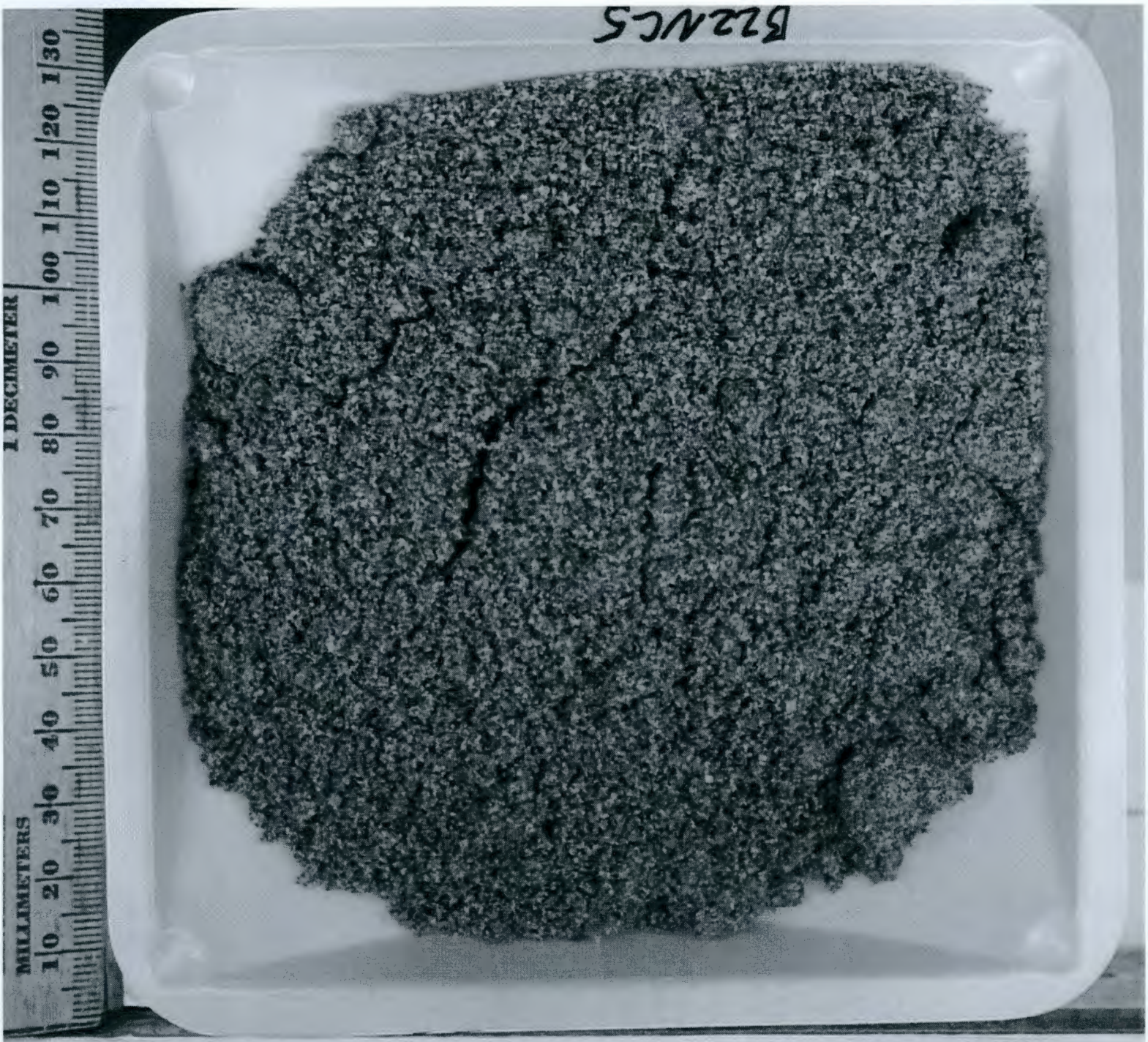
Grab

C5860 B22NC3 154.8 ft Sample

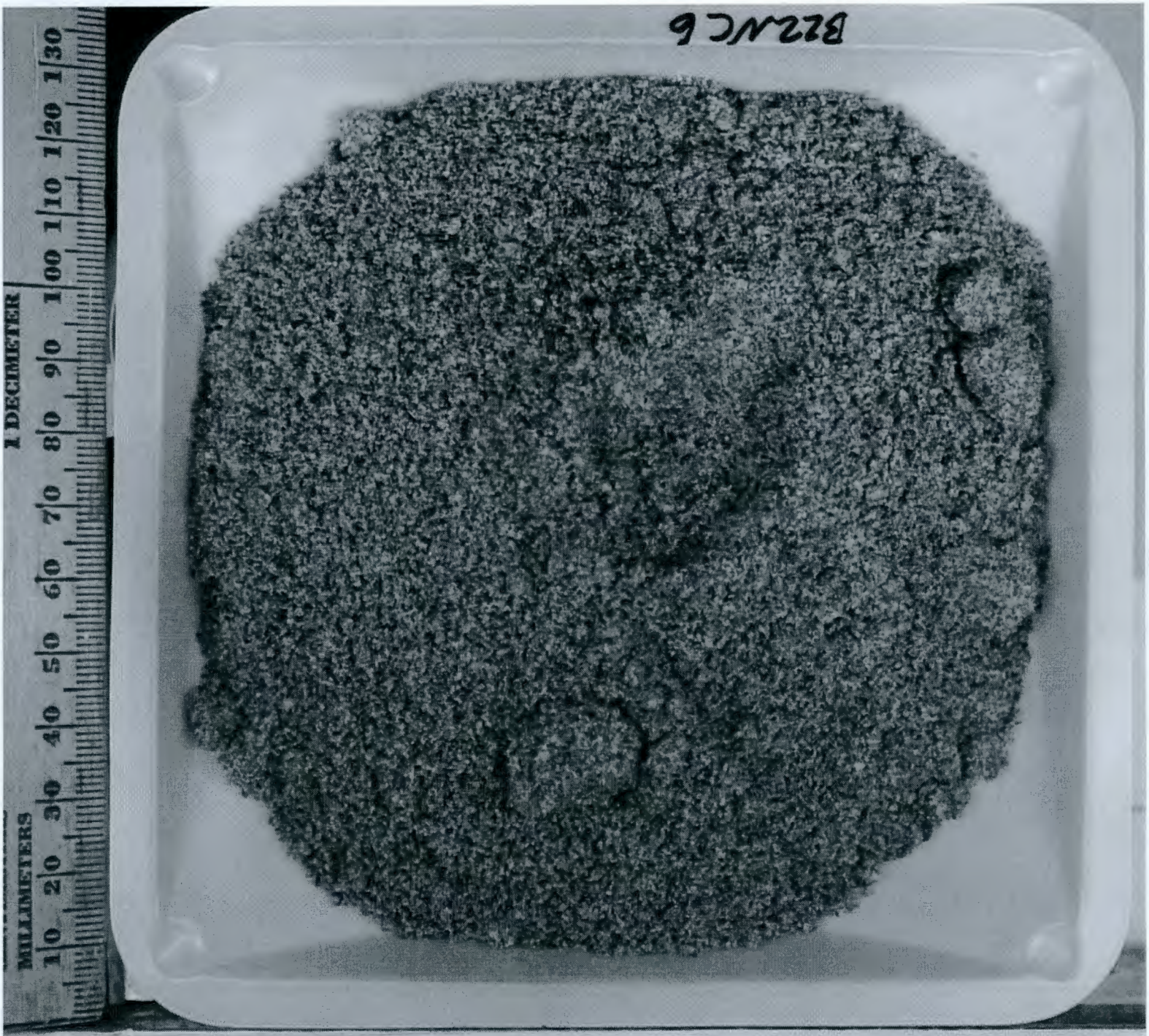
Borehole ID Sample ID Depth from Chain-of-Custody



C5860	B22NC4	157.1 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



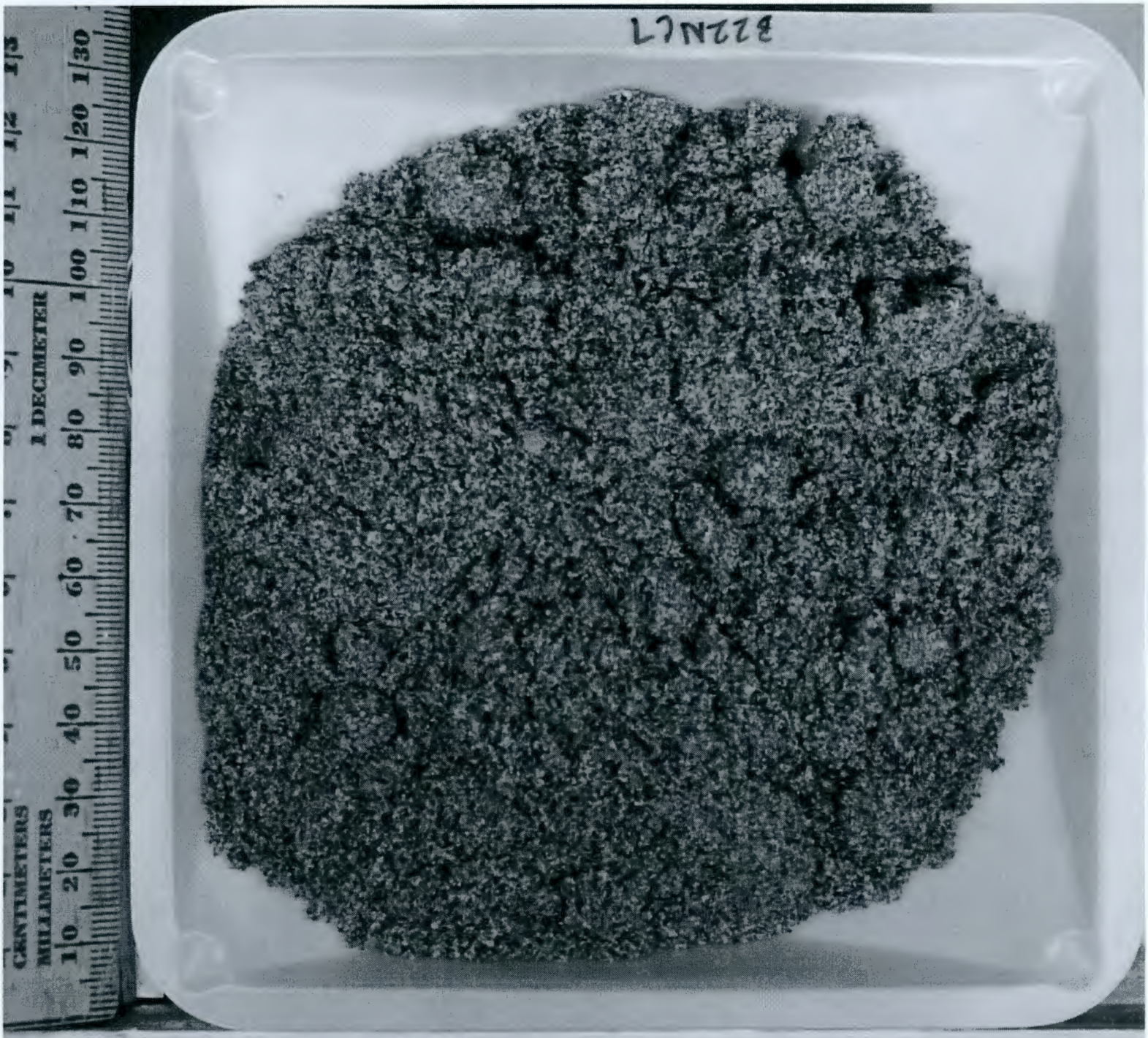
C5860	B22NC5	159.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



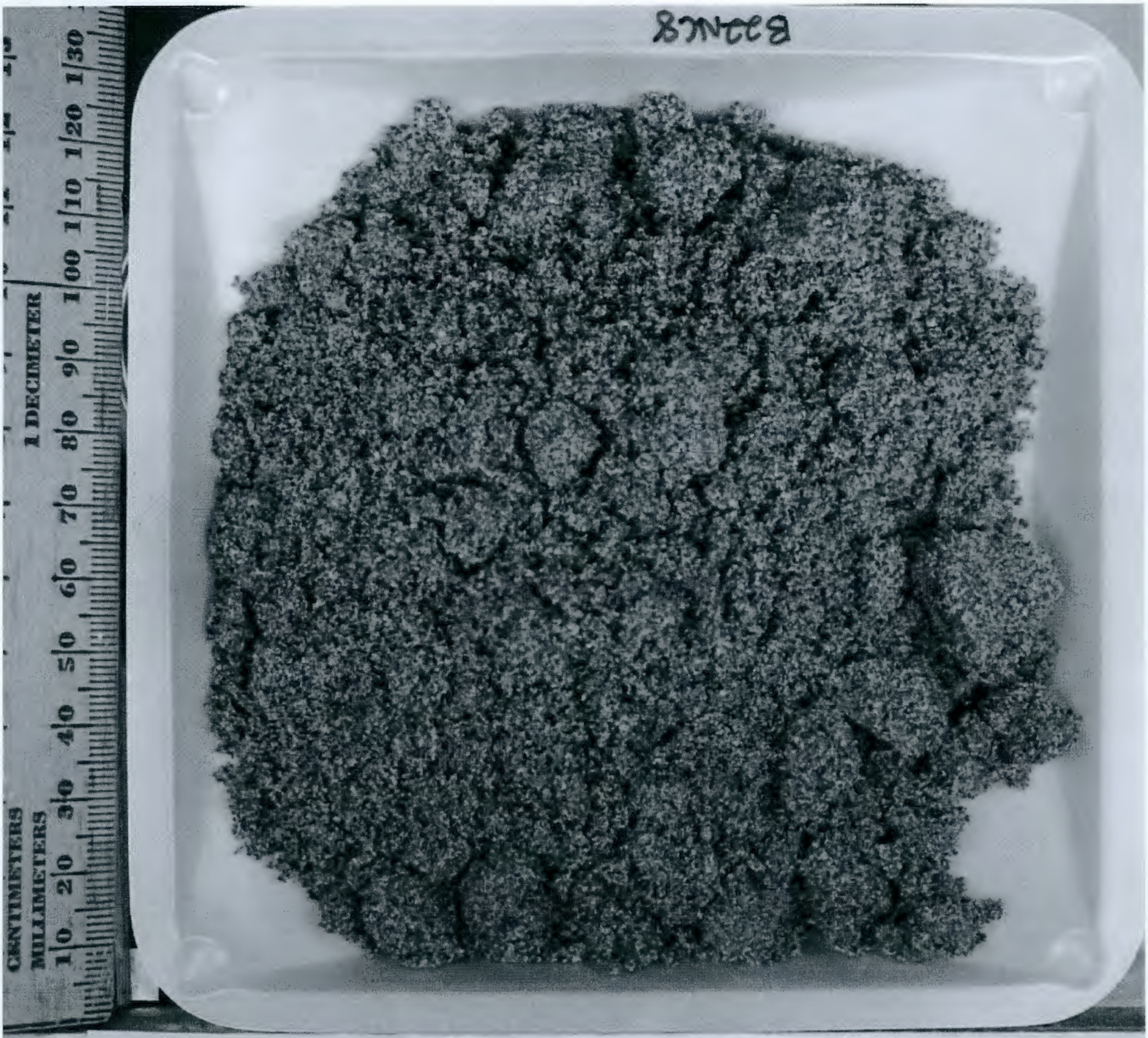
Grab

C5860 B22NC6 162.0 ft Sample

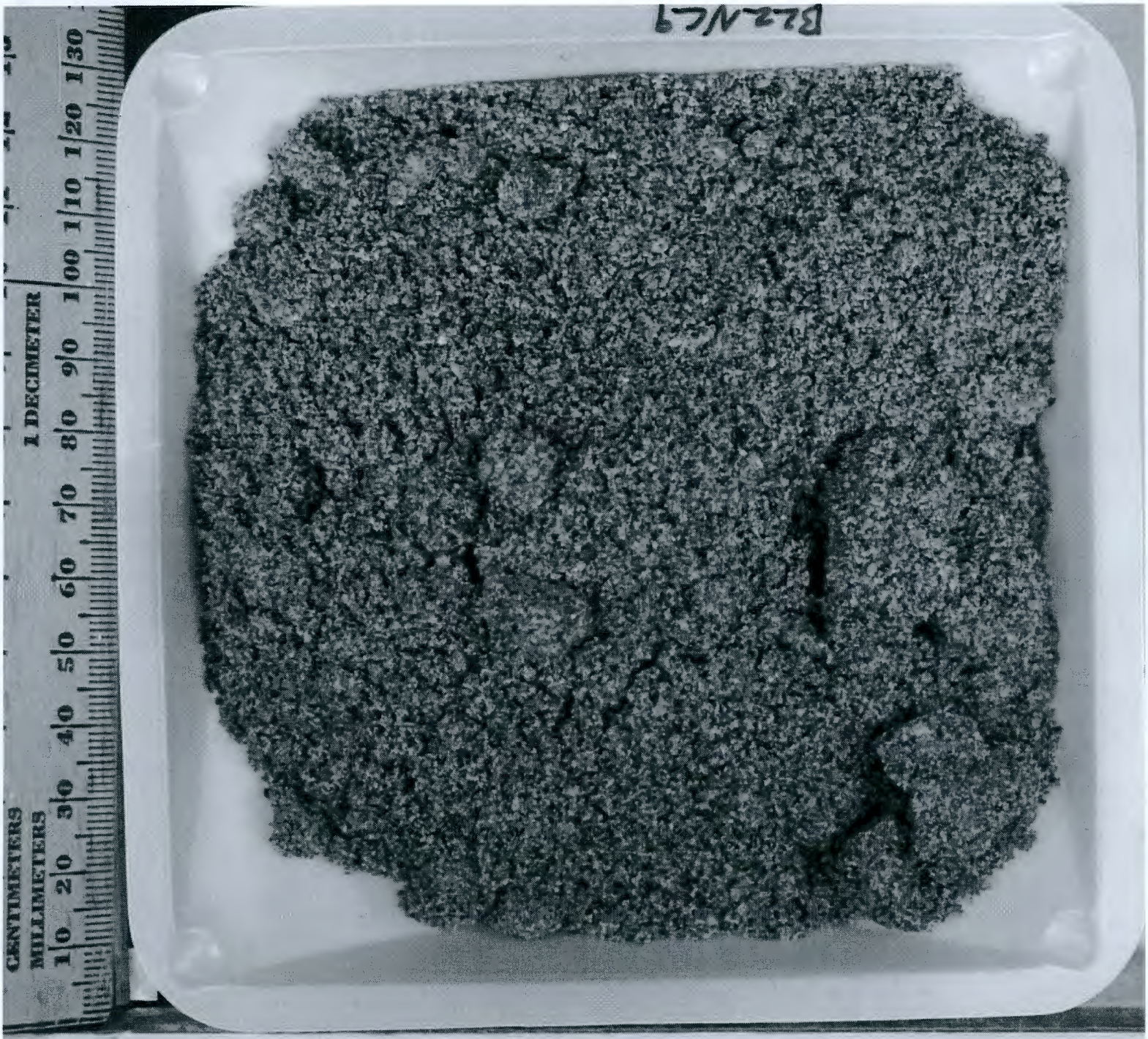
Borehole ID Sample ID Depth from Chain-of-Custody



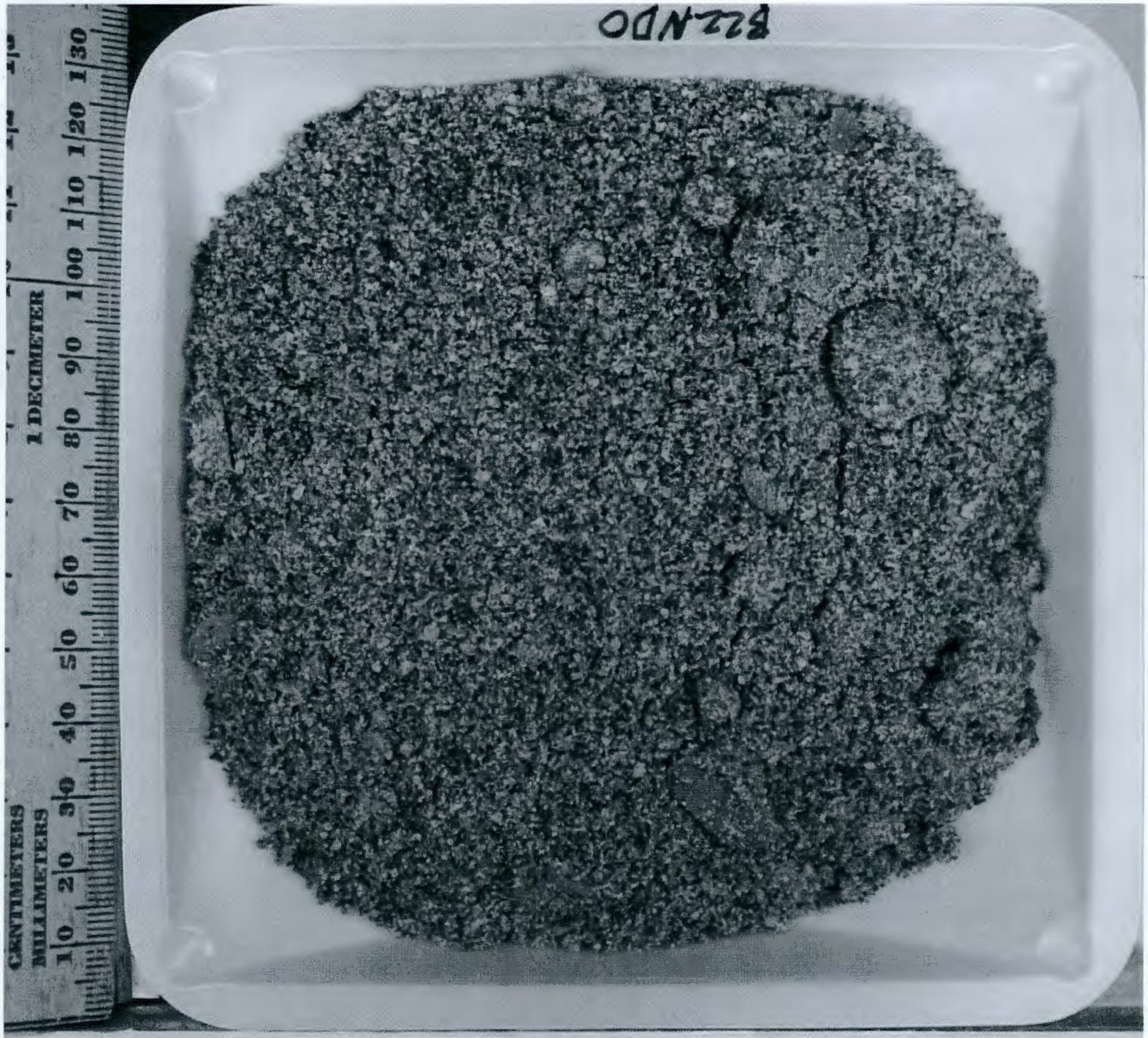
C5860	B22NC7	164.8 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



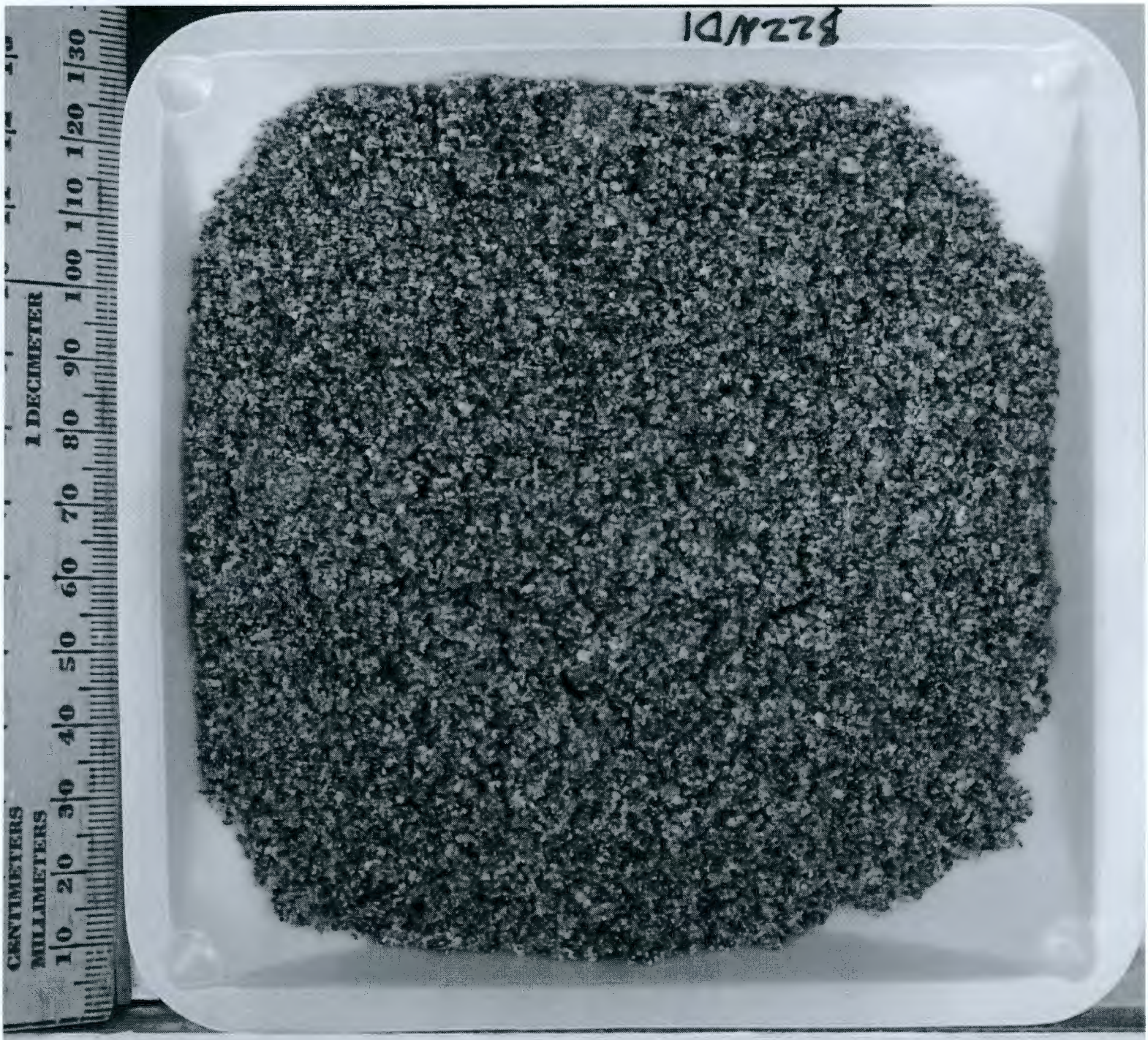
C5860	B22NC8	167.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



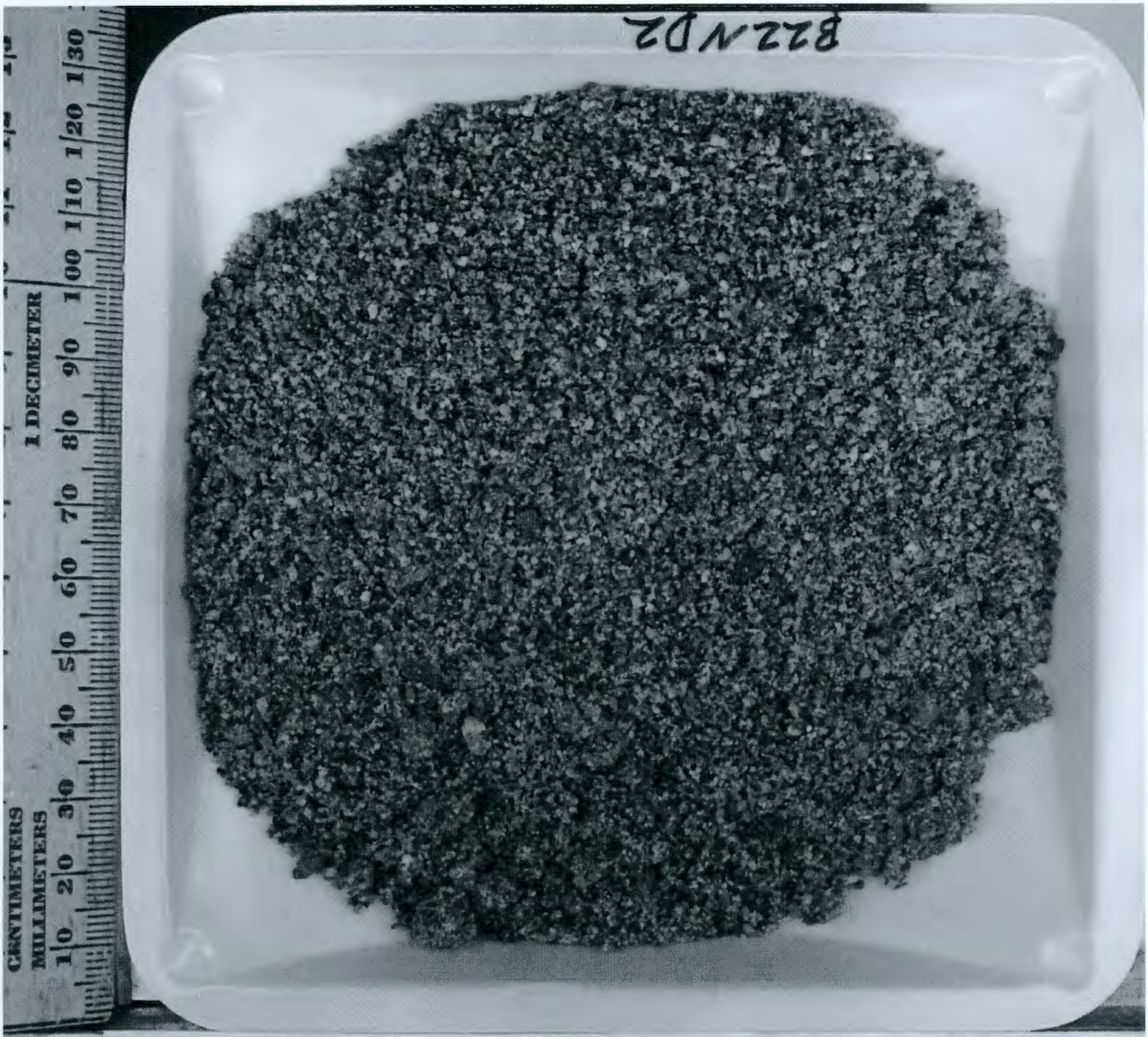
C5860	B22NC9	169.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



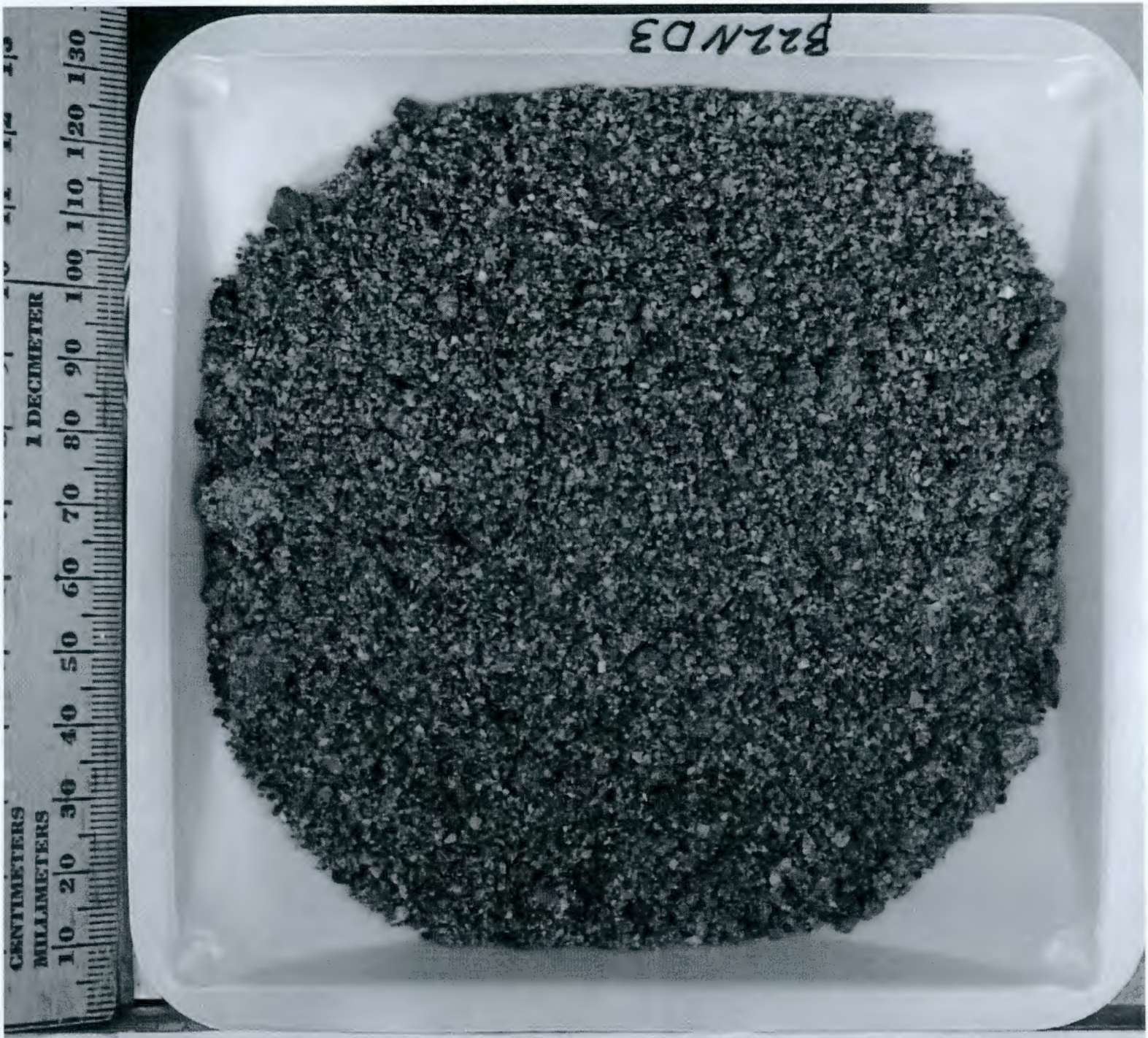
C5860	B22ND0	172.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



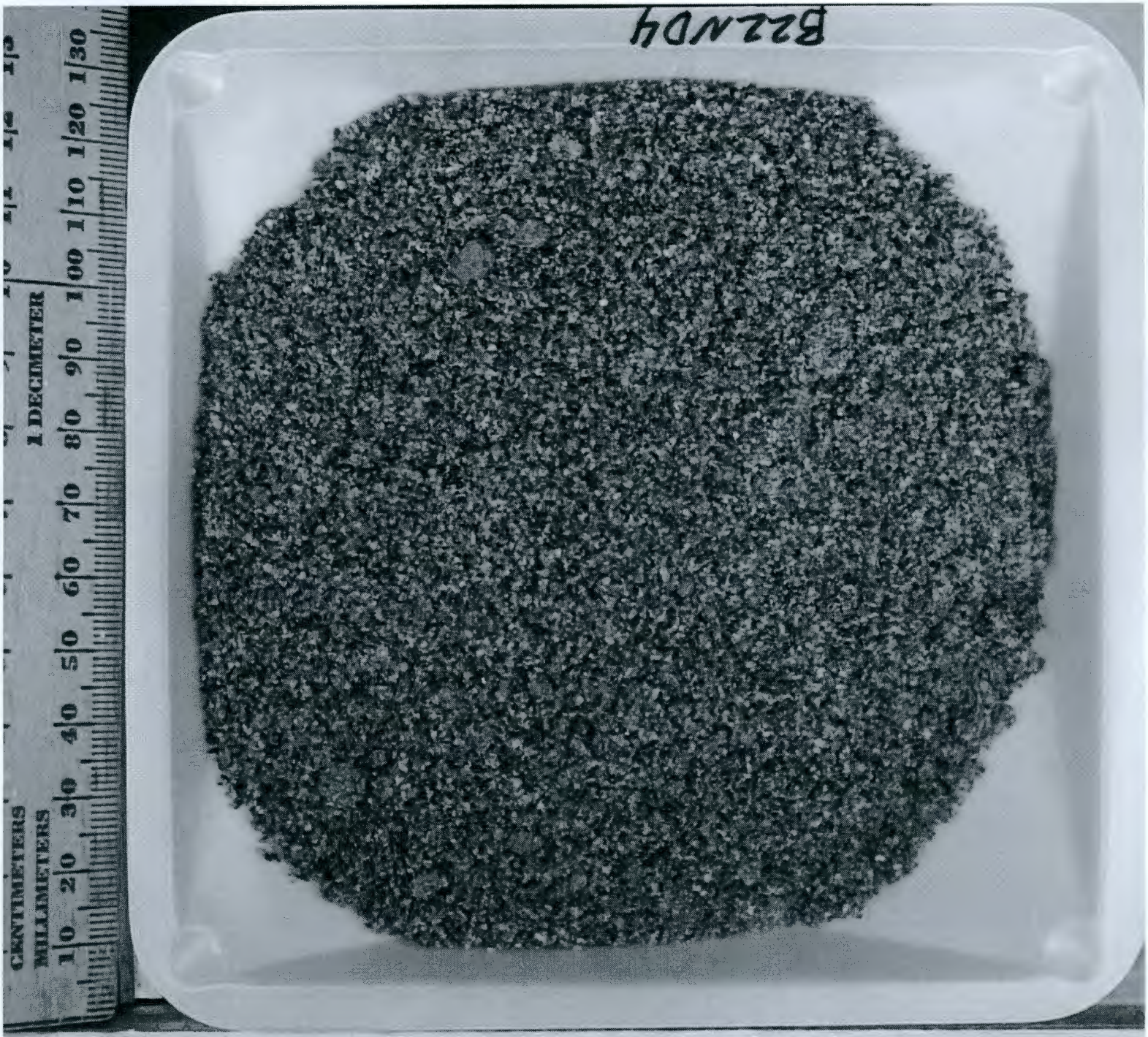
C5860	B22ND1	175.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



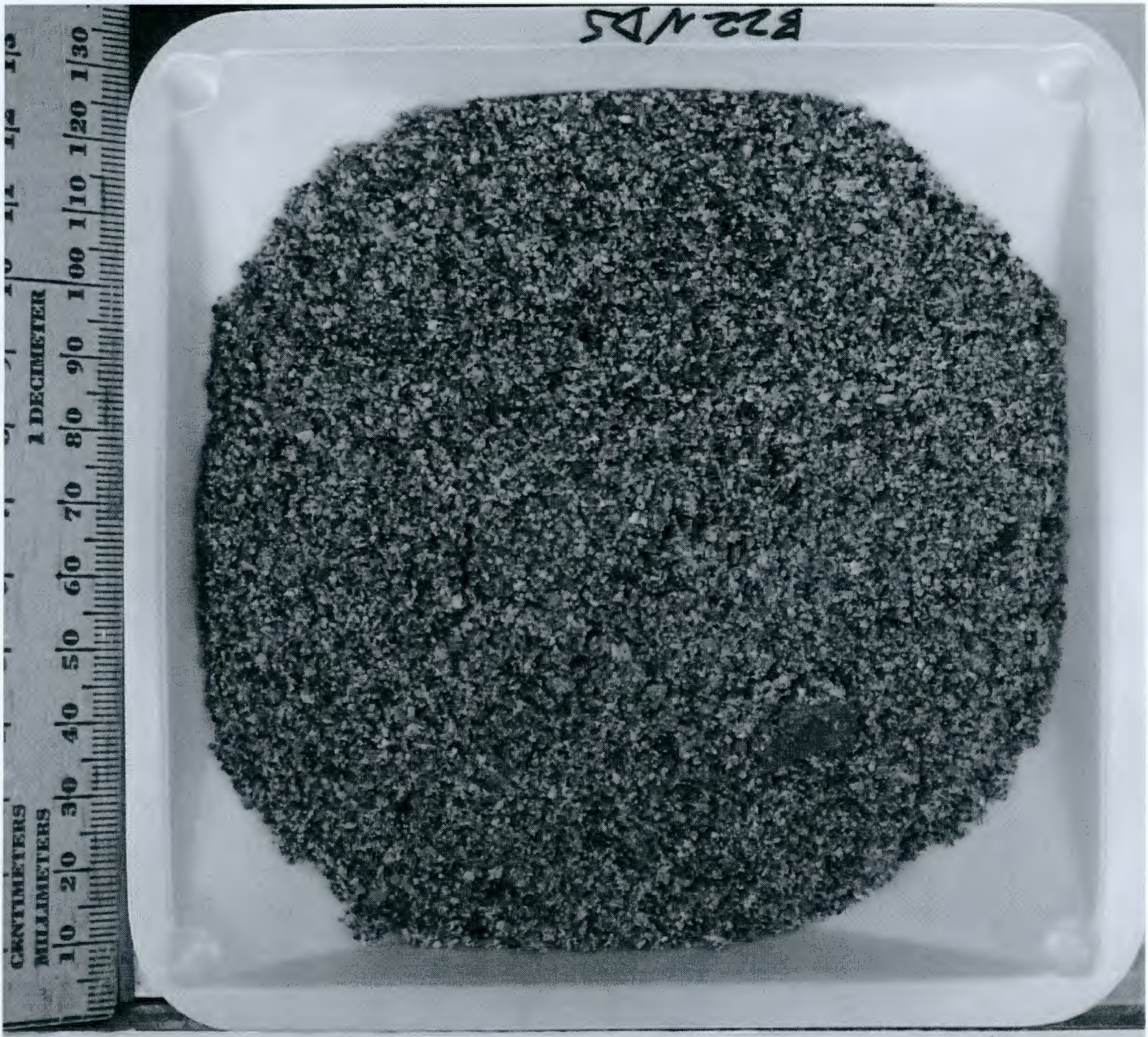
C5860	B22ND2	178.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



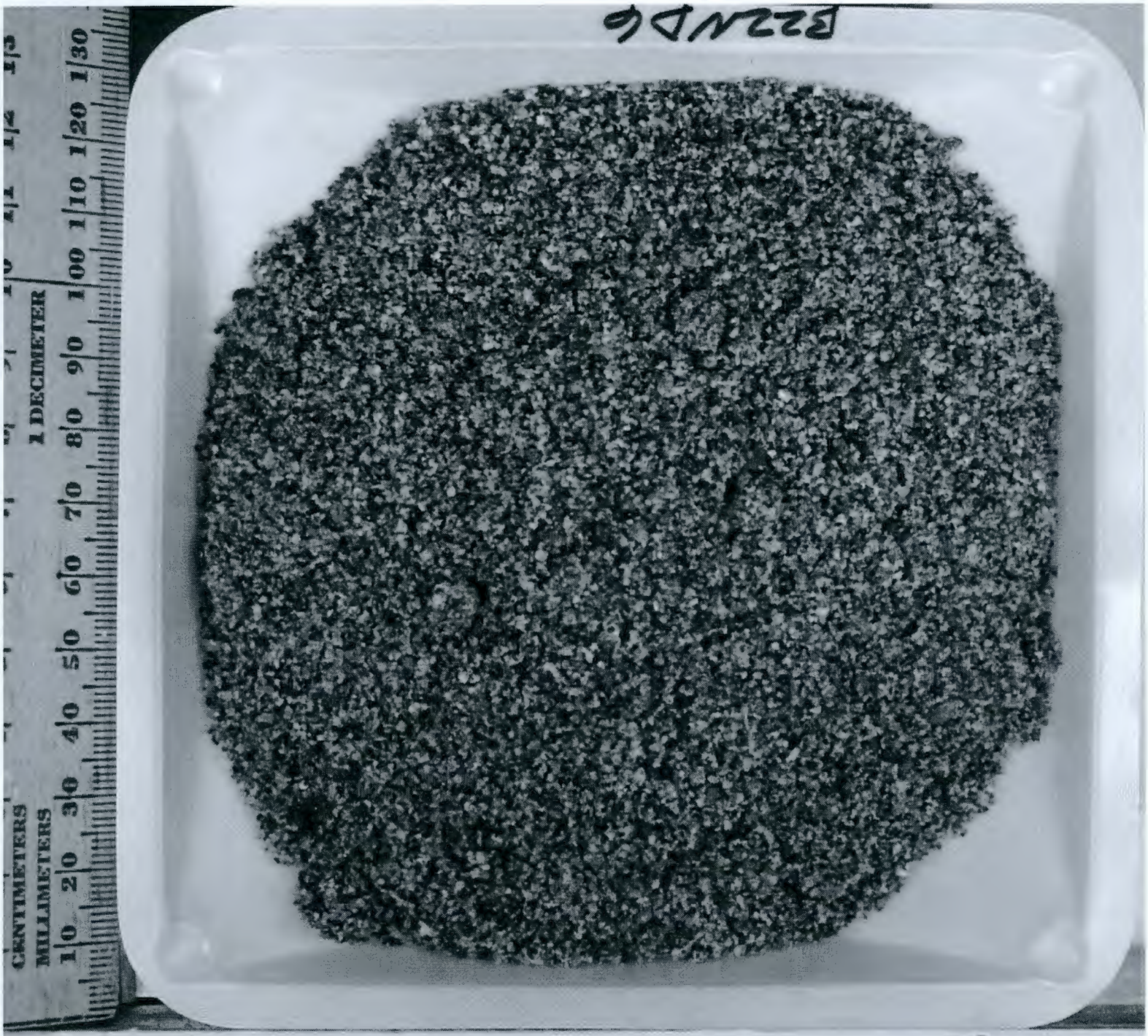
C5860	B22ND3	179.9 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



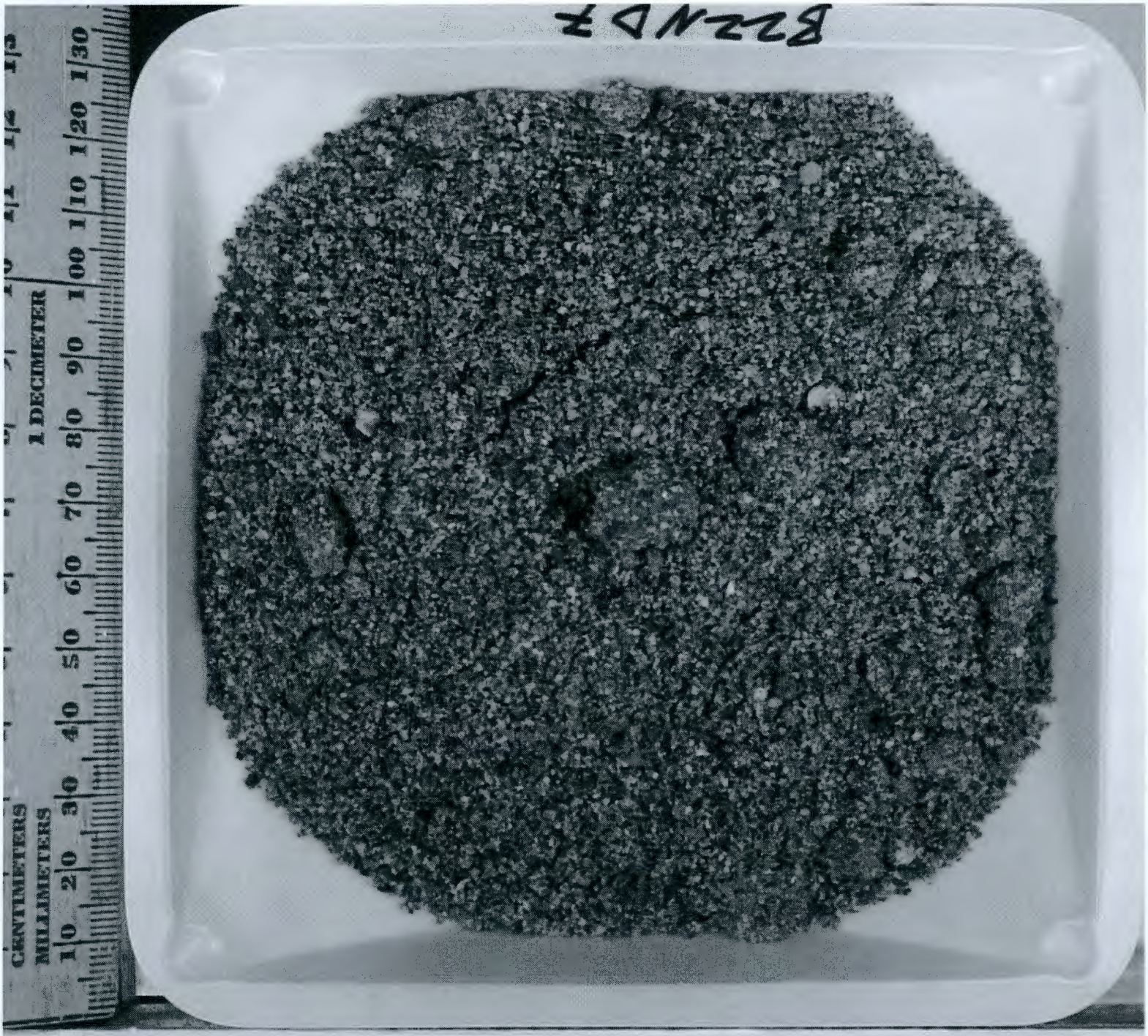
C5860	B22ND4	182.4 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



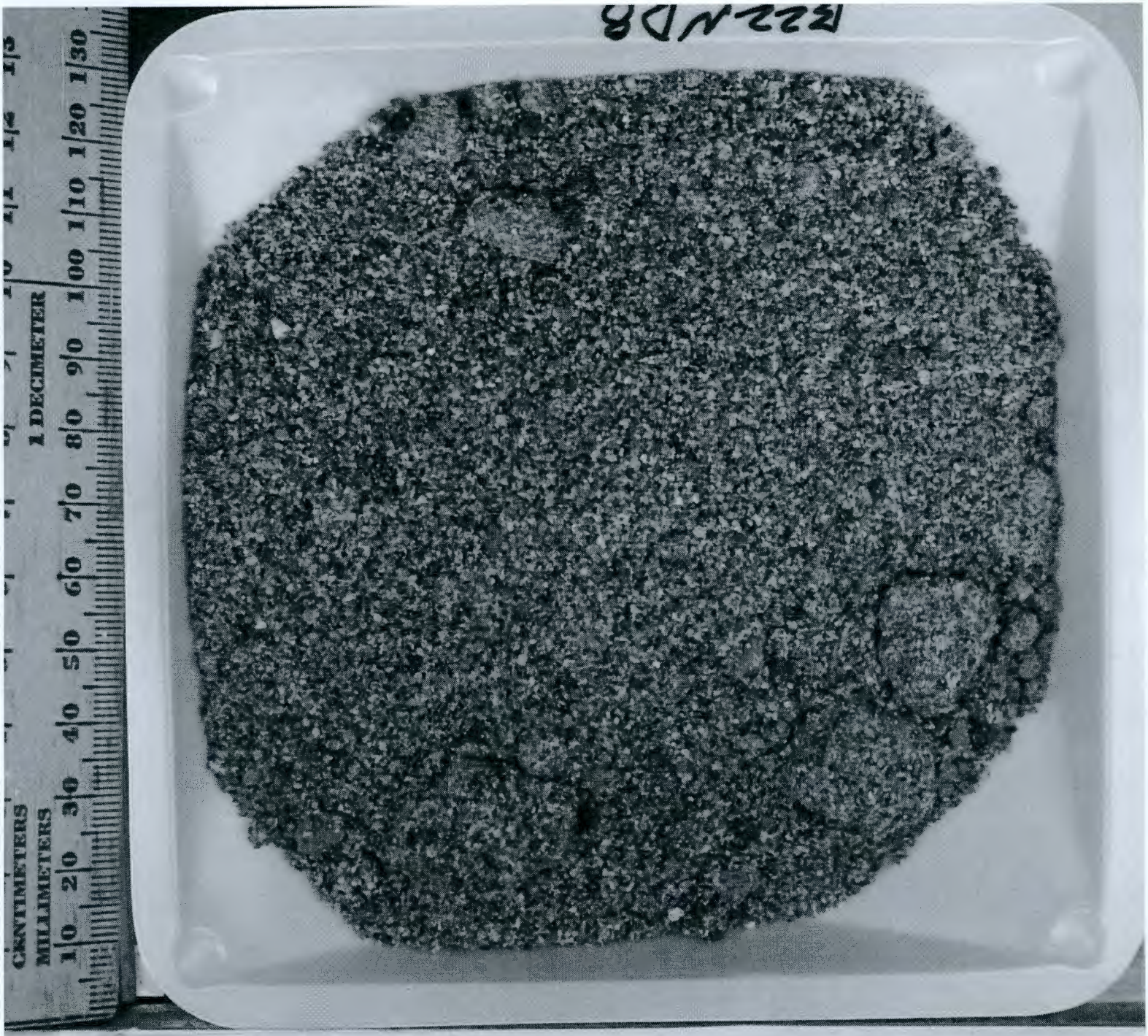
C5860	B22ND5	185.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



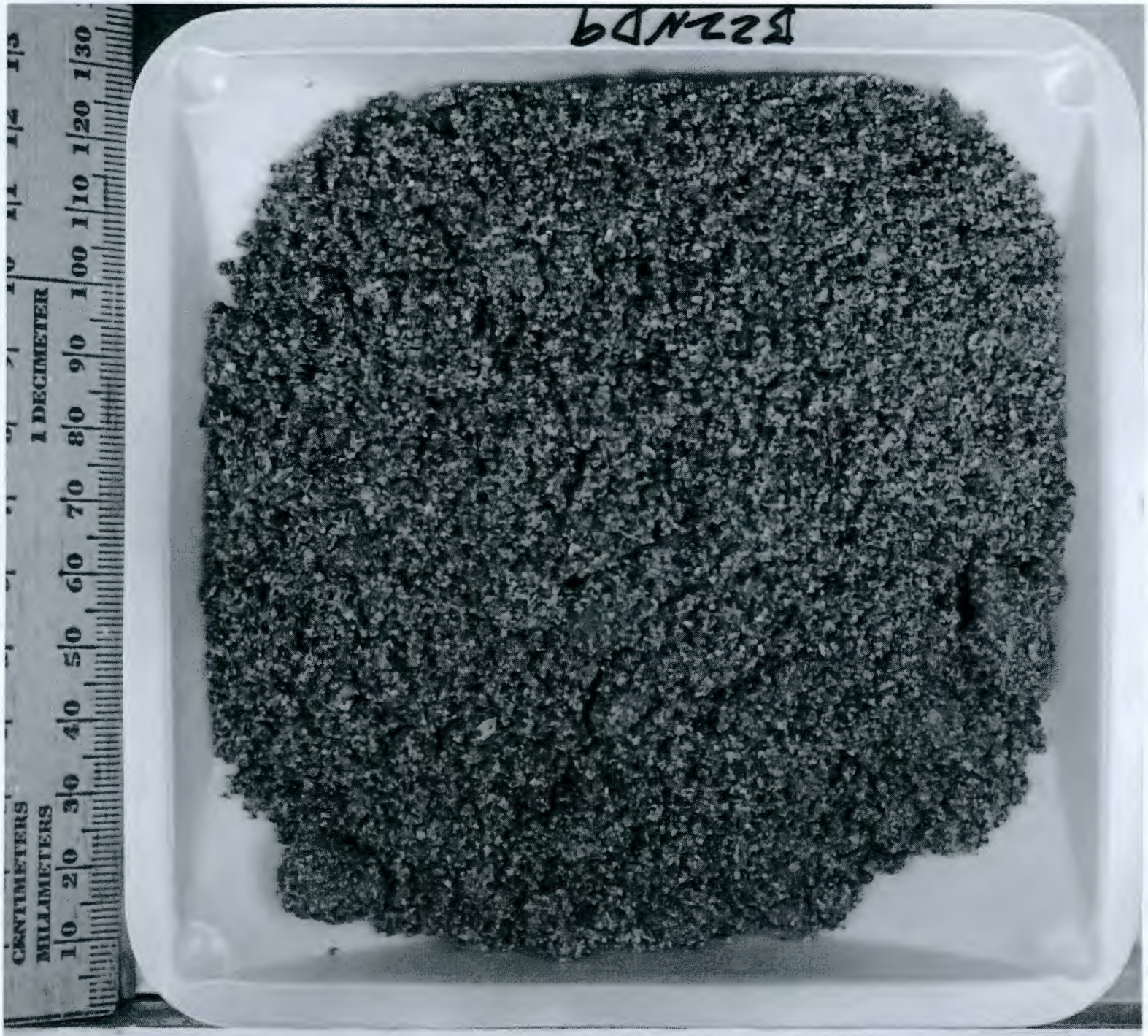
C5860	B22ND6	187.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22ND7	189.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

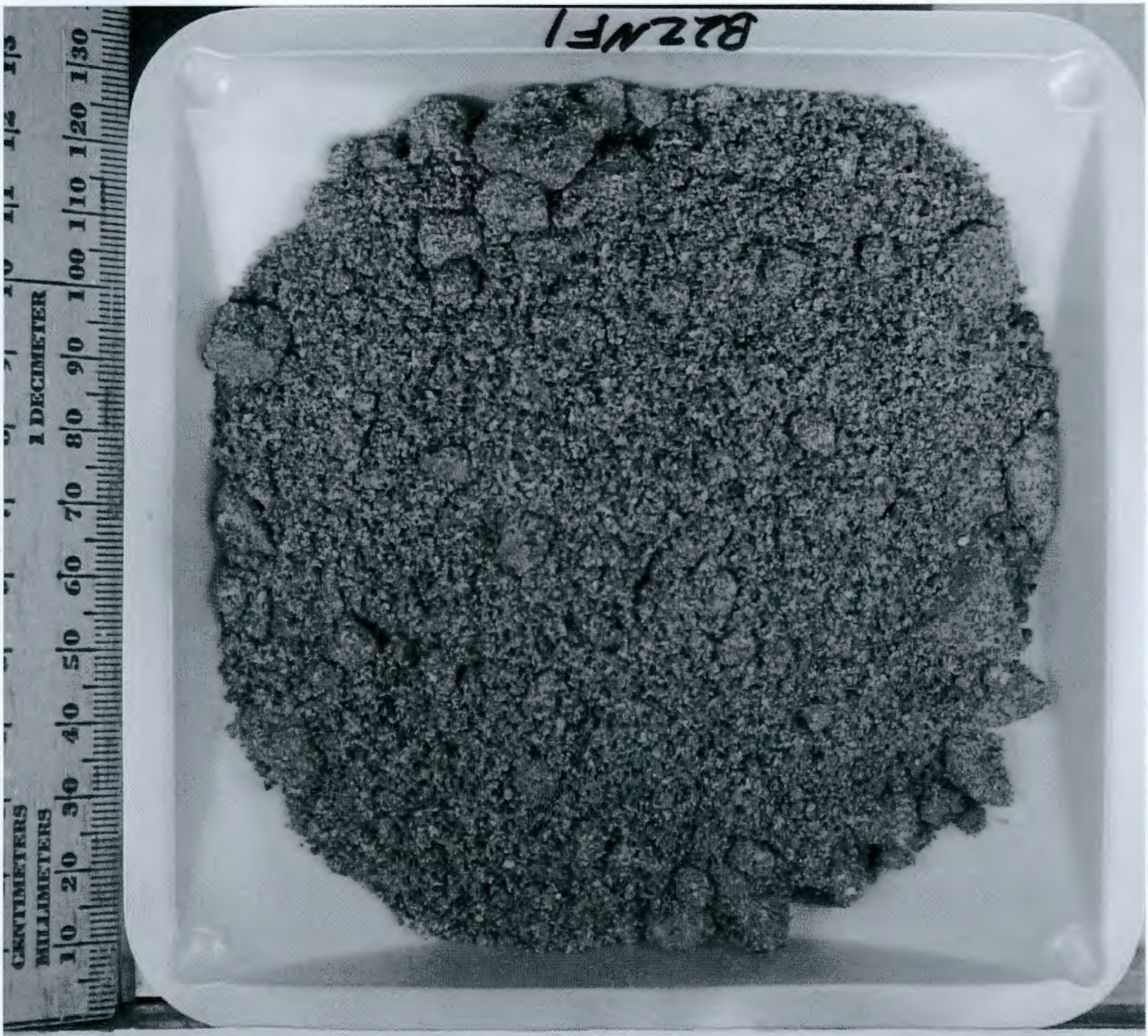


C5860	B22ND8	191.8 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

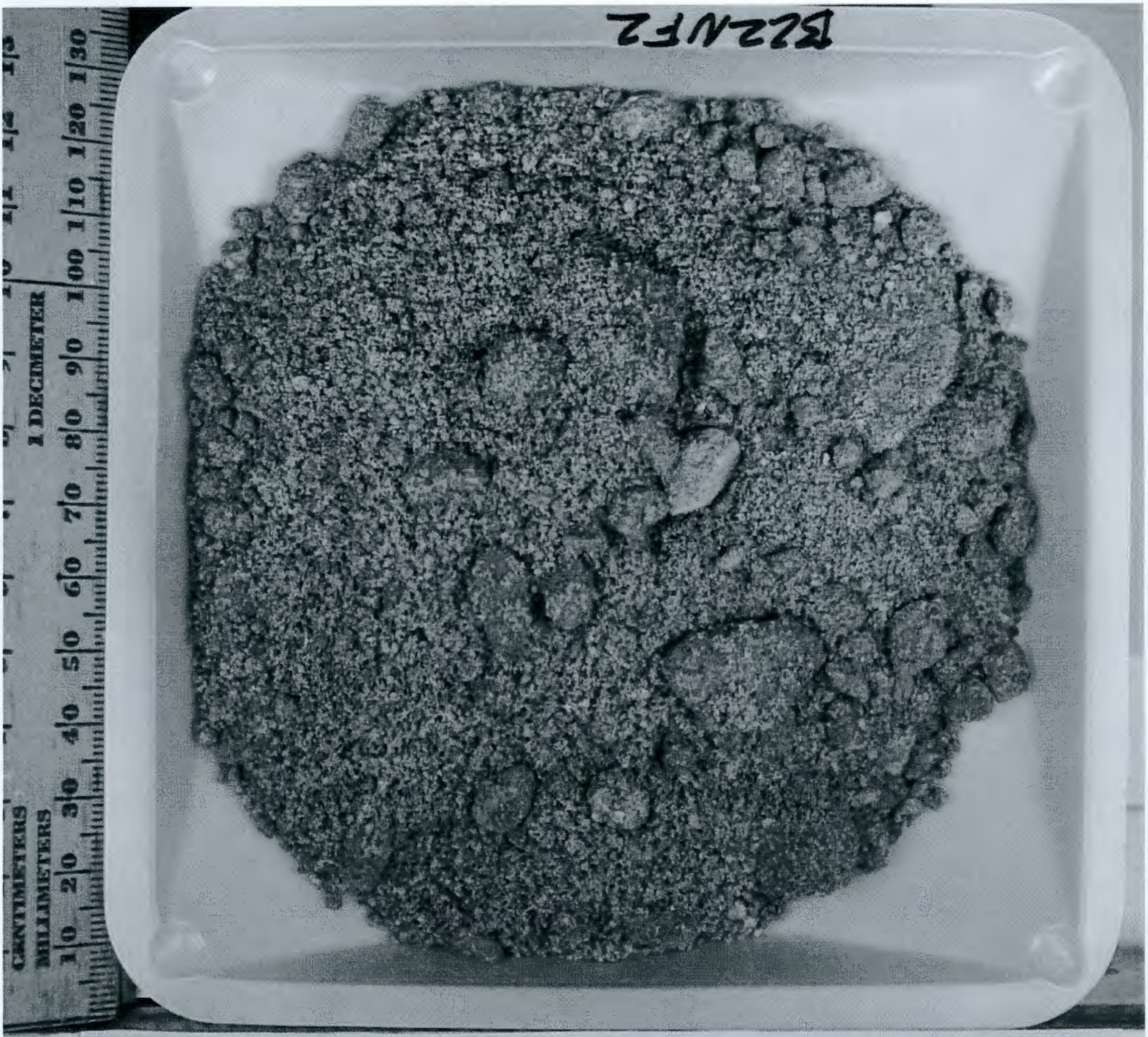


C5860	B22ND9	194.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NF0	196.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



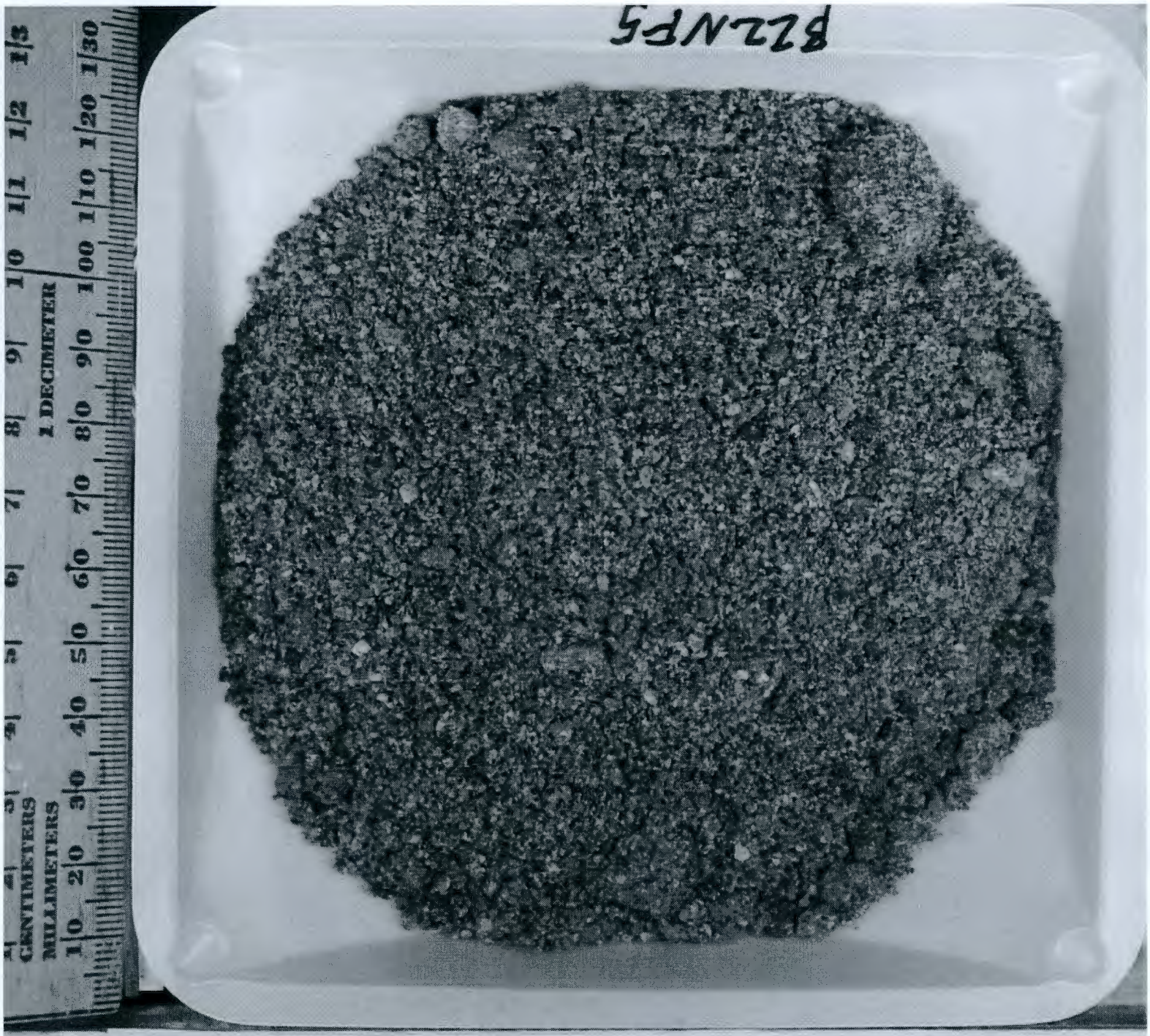
C5860	B22NF1	199.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



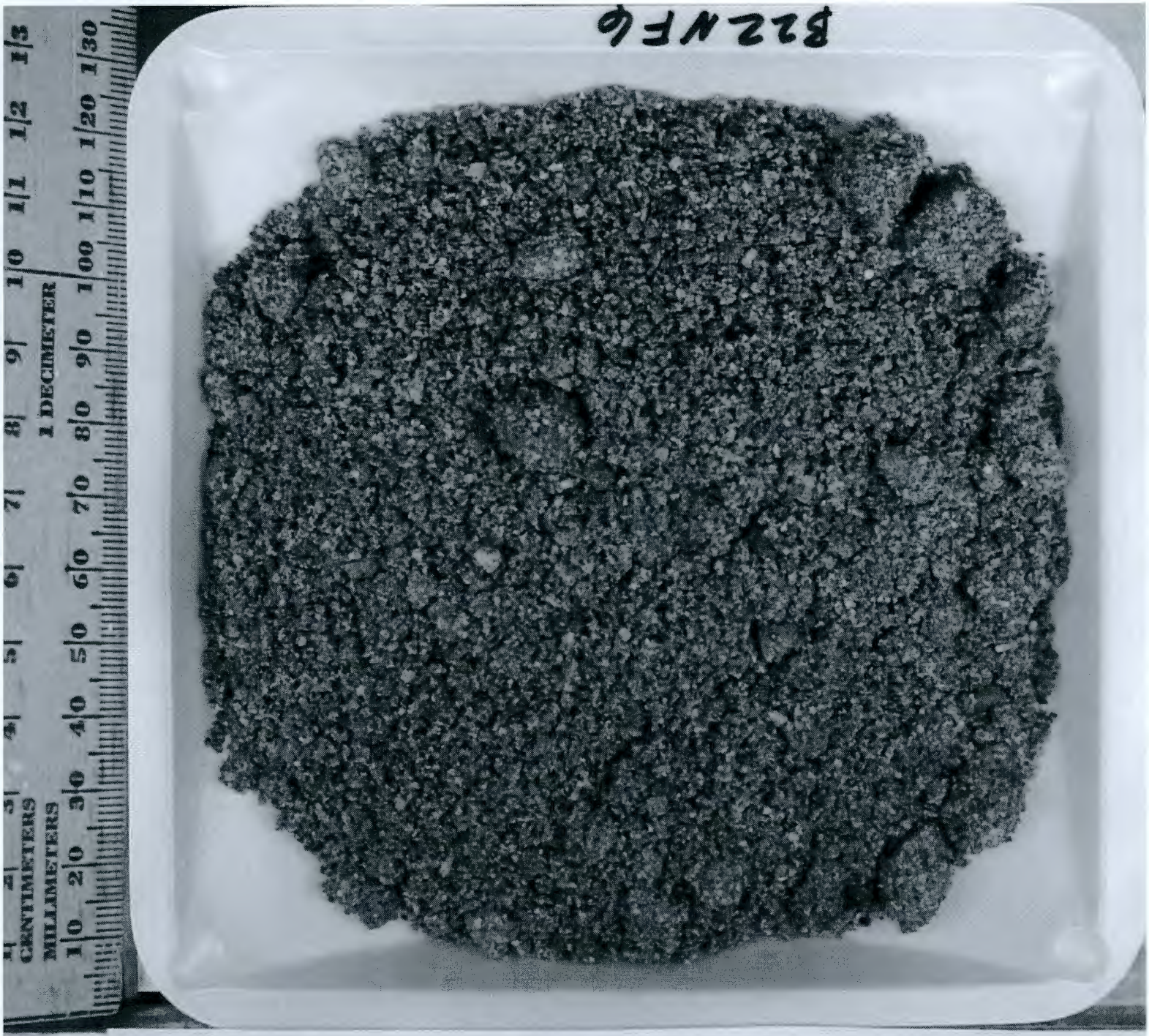
C5860	B22NF2	201.1 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NF3	203.4 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

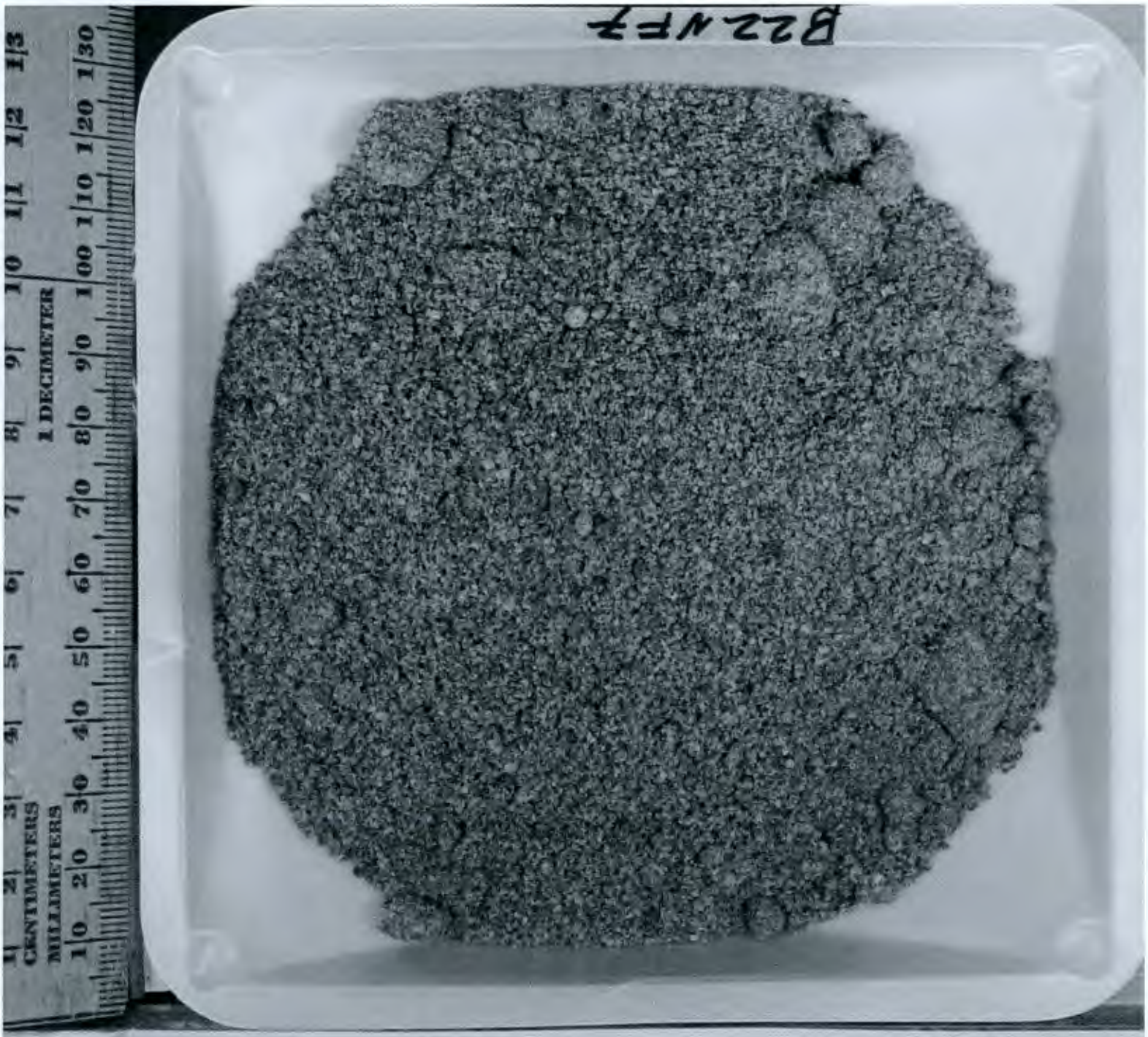
C5860	B22NF4	205.7 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



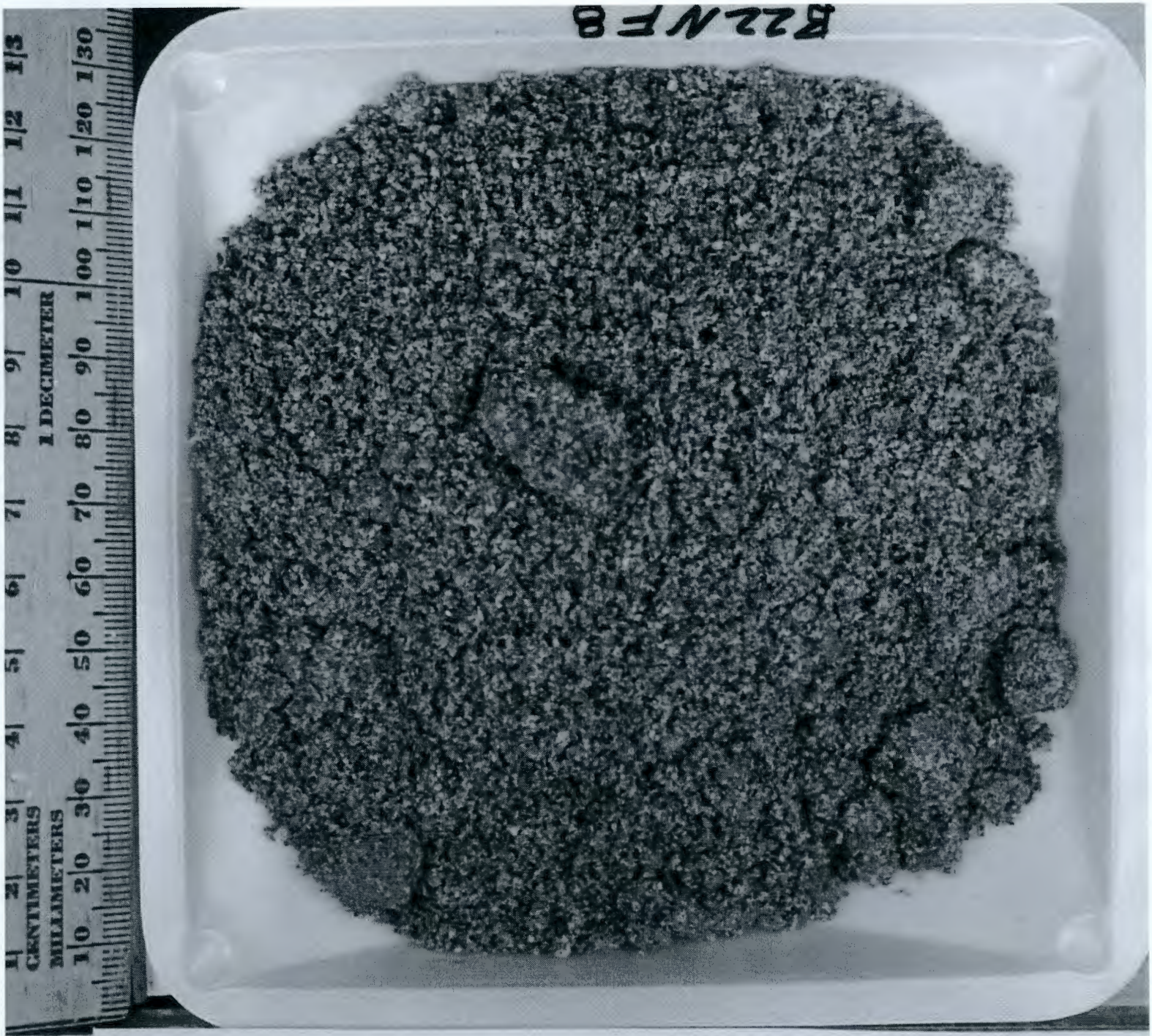
C5860	B22NF5	208.9 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



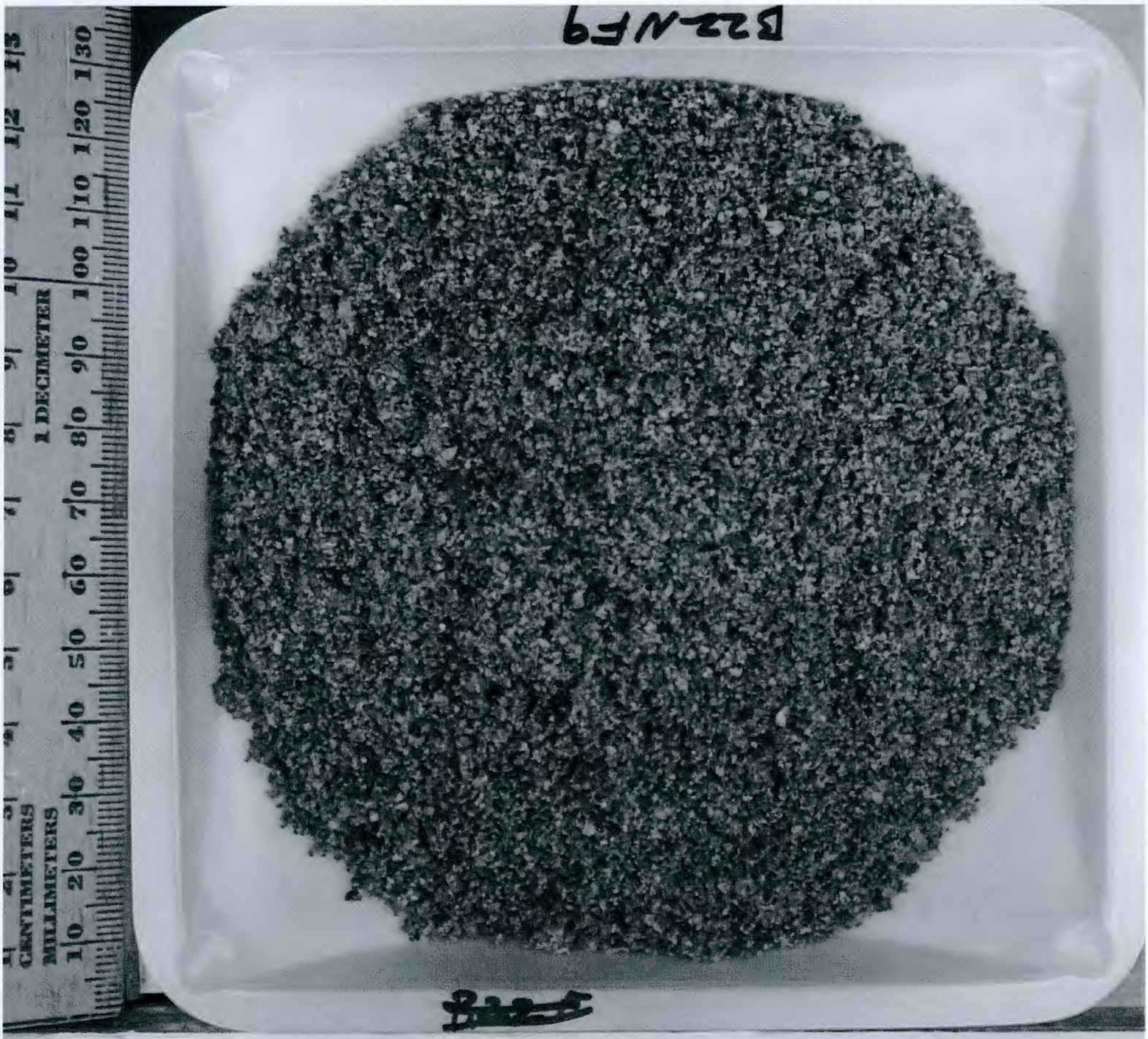
C5860	B22NF6	211.2 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



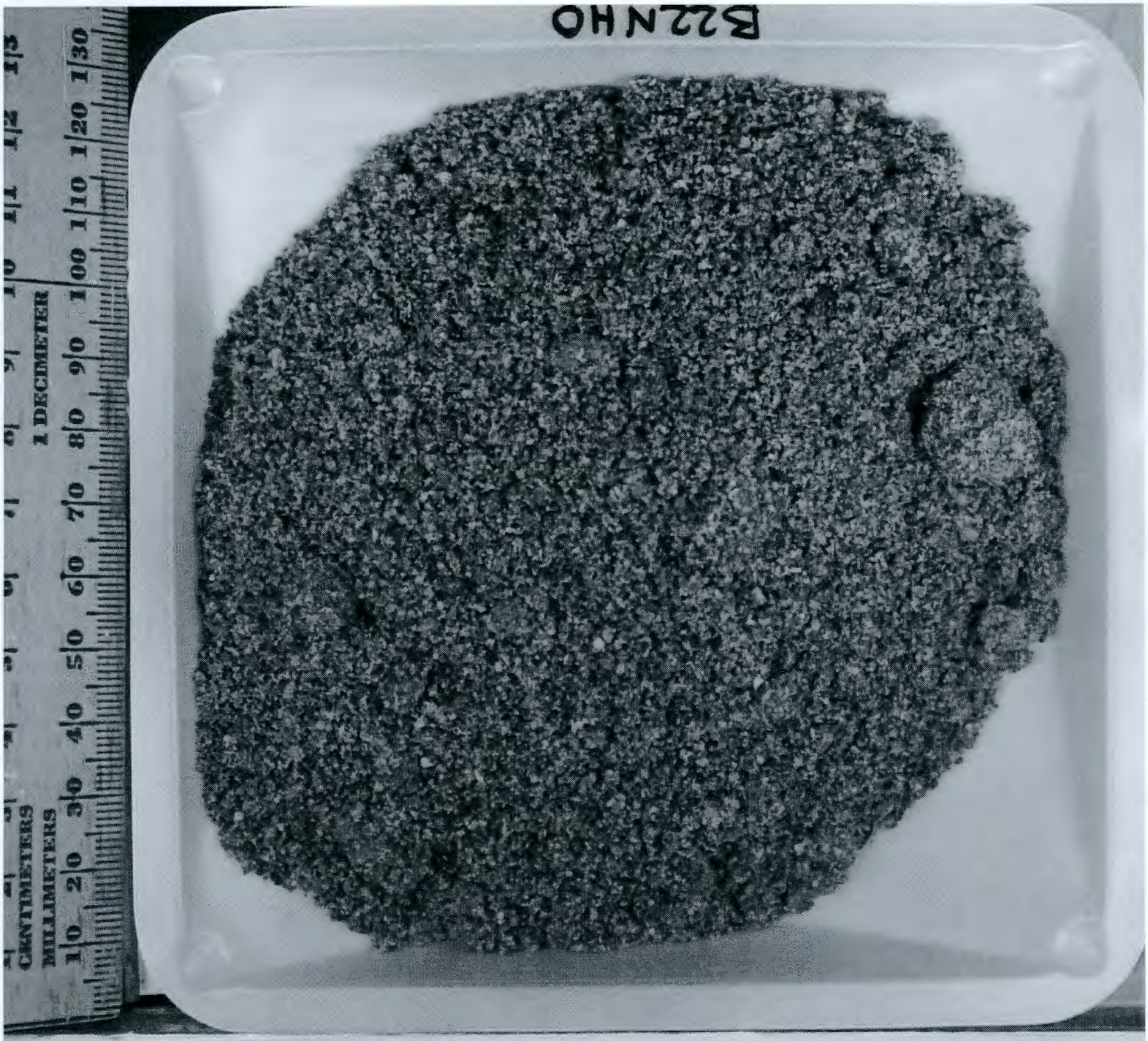
C5860	B22NF7	213.2 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22NF8	215.1 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

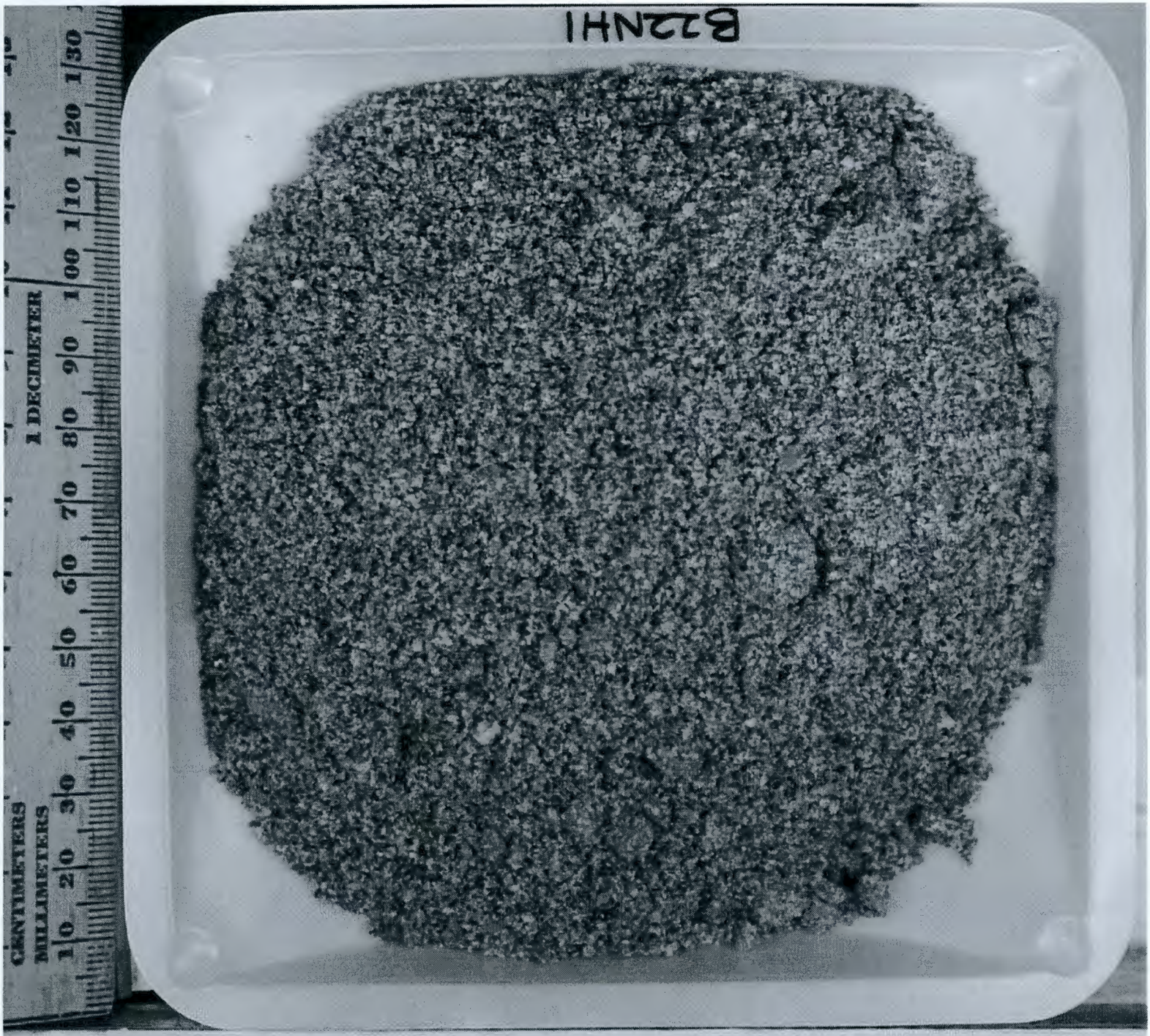


C5860	B22NF9	217.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

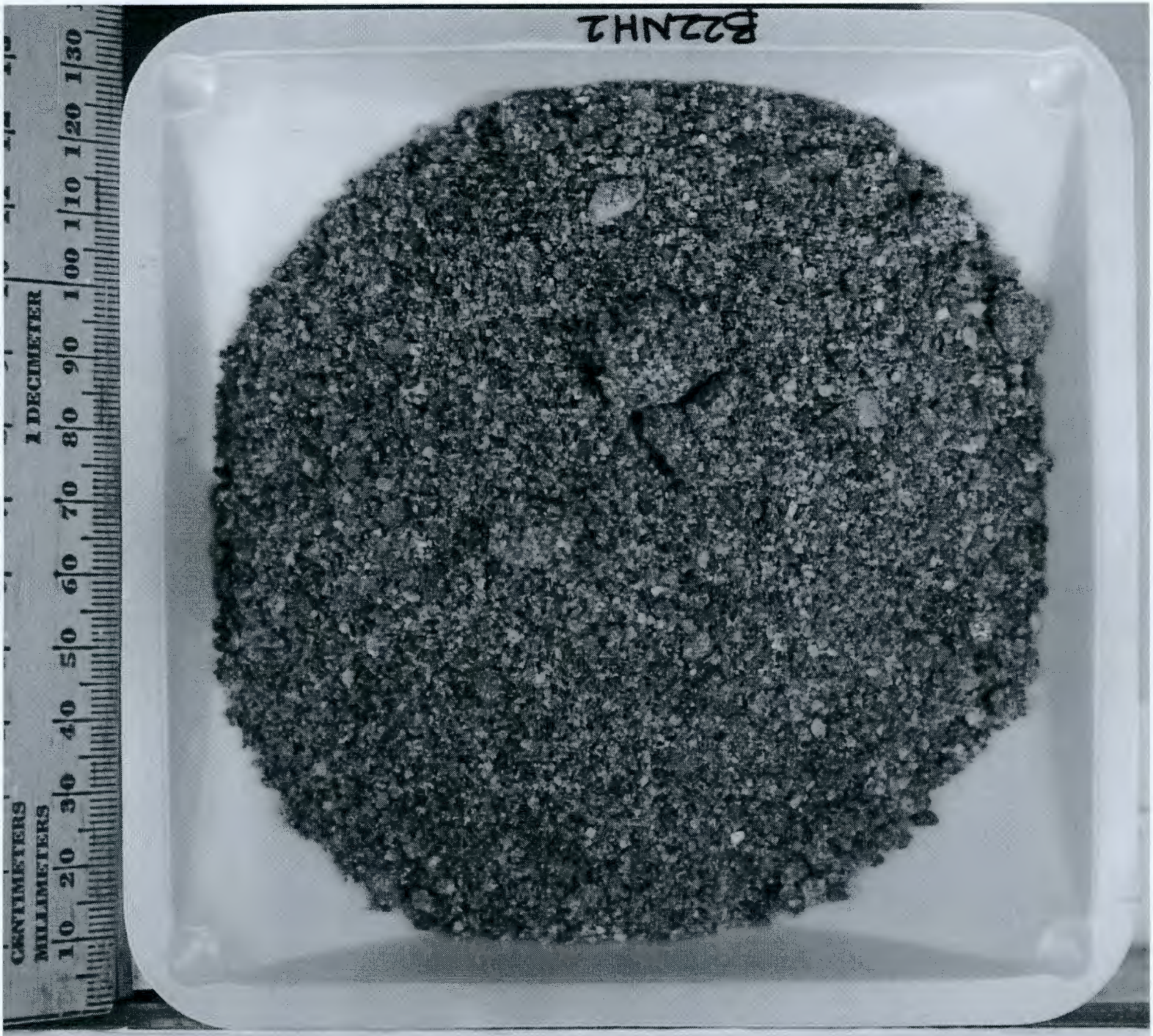


C5860 B22NH0 219.8 ft Grab Sample

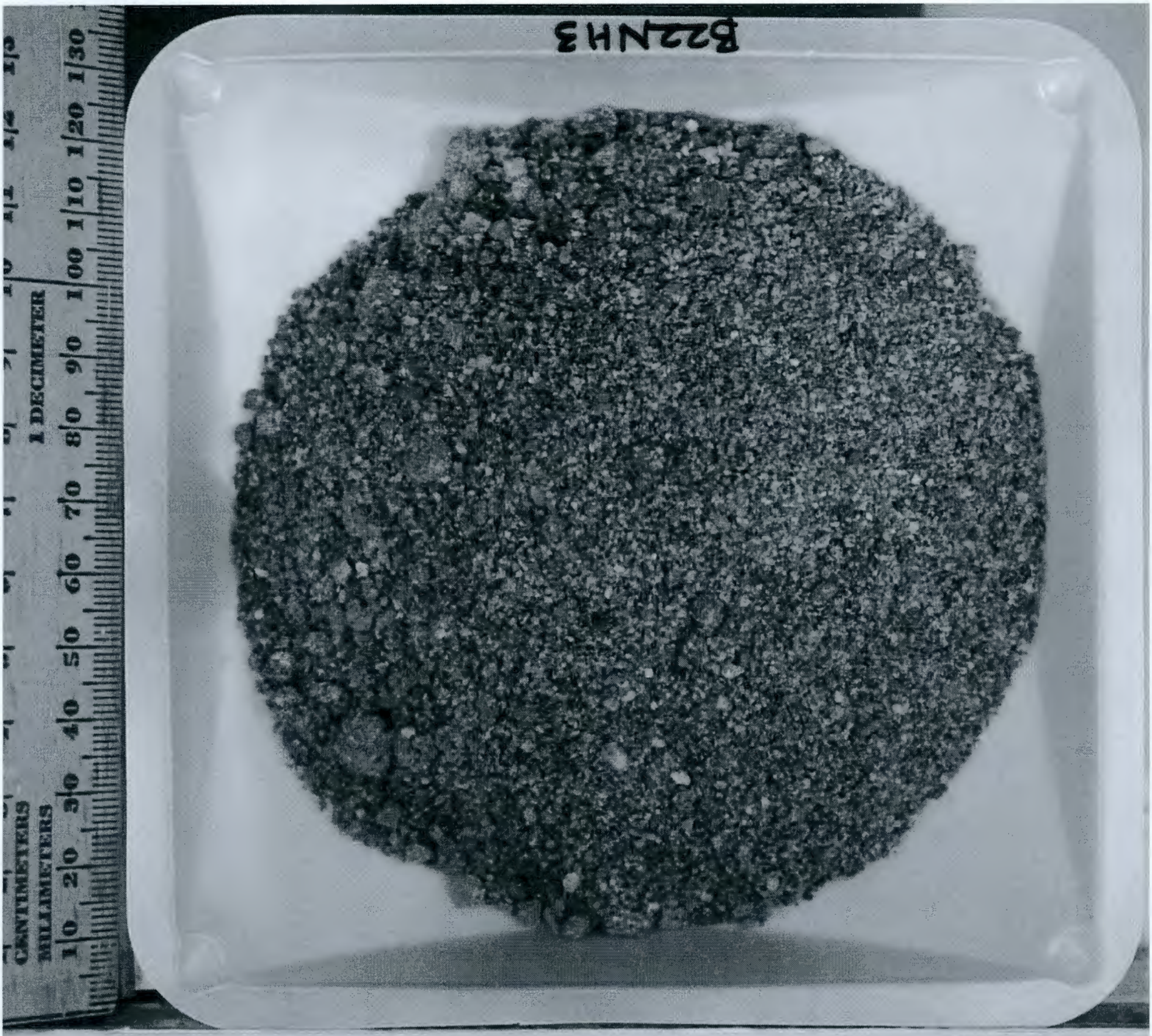
Borehole ID Sample ID Depth from Chain-of-Custody



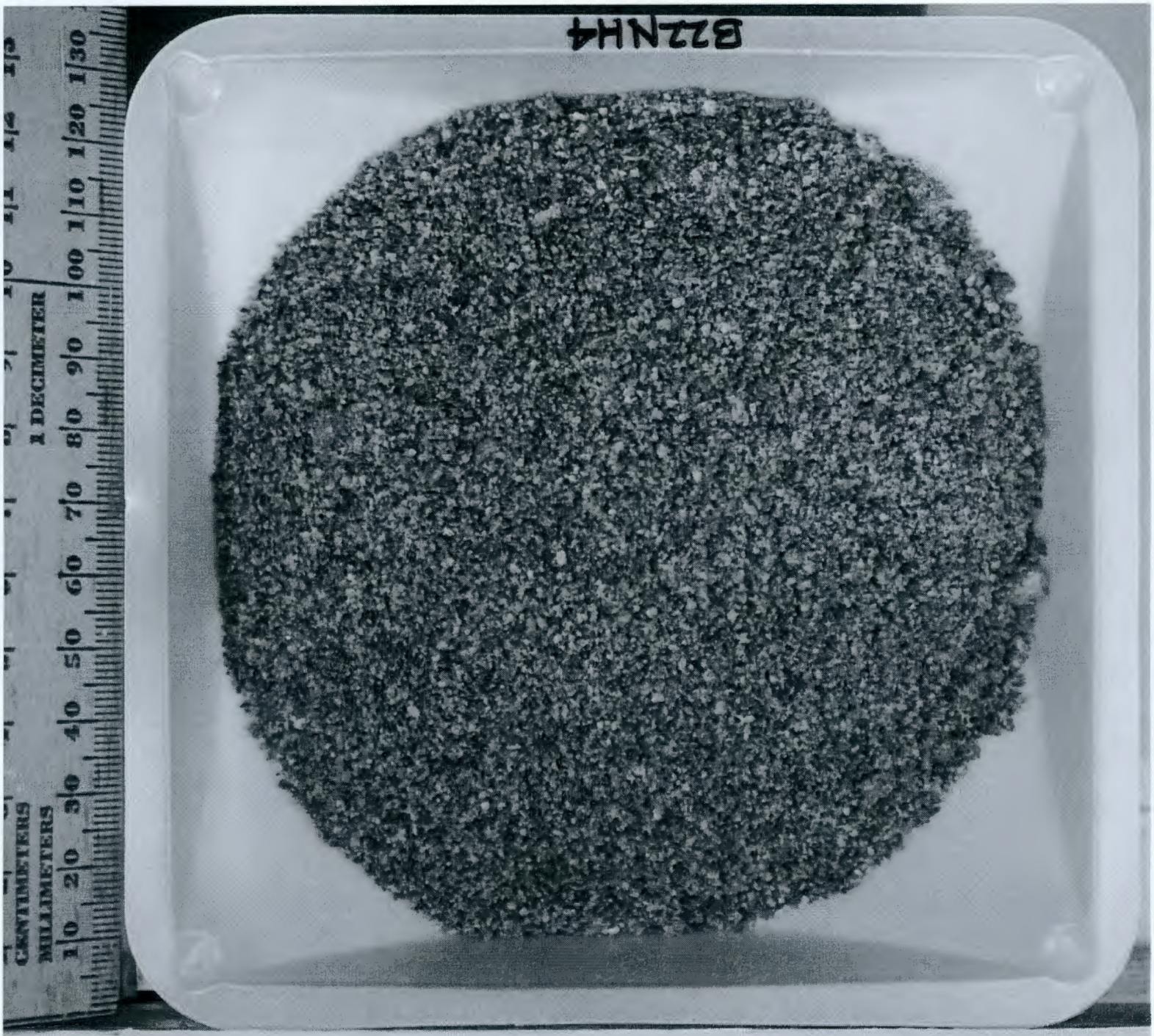
C5860	B22NH1	223.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



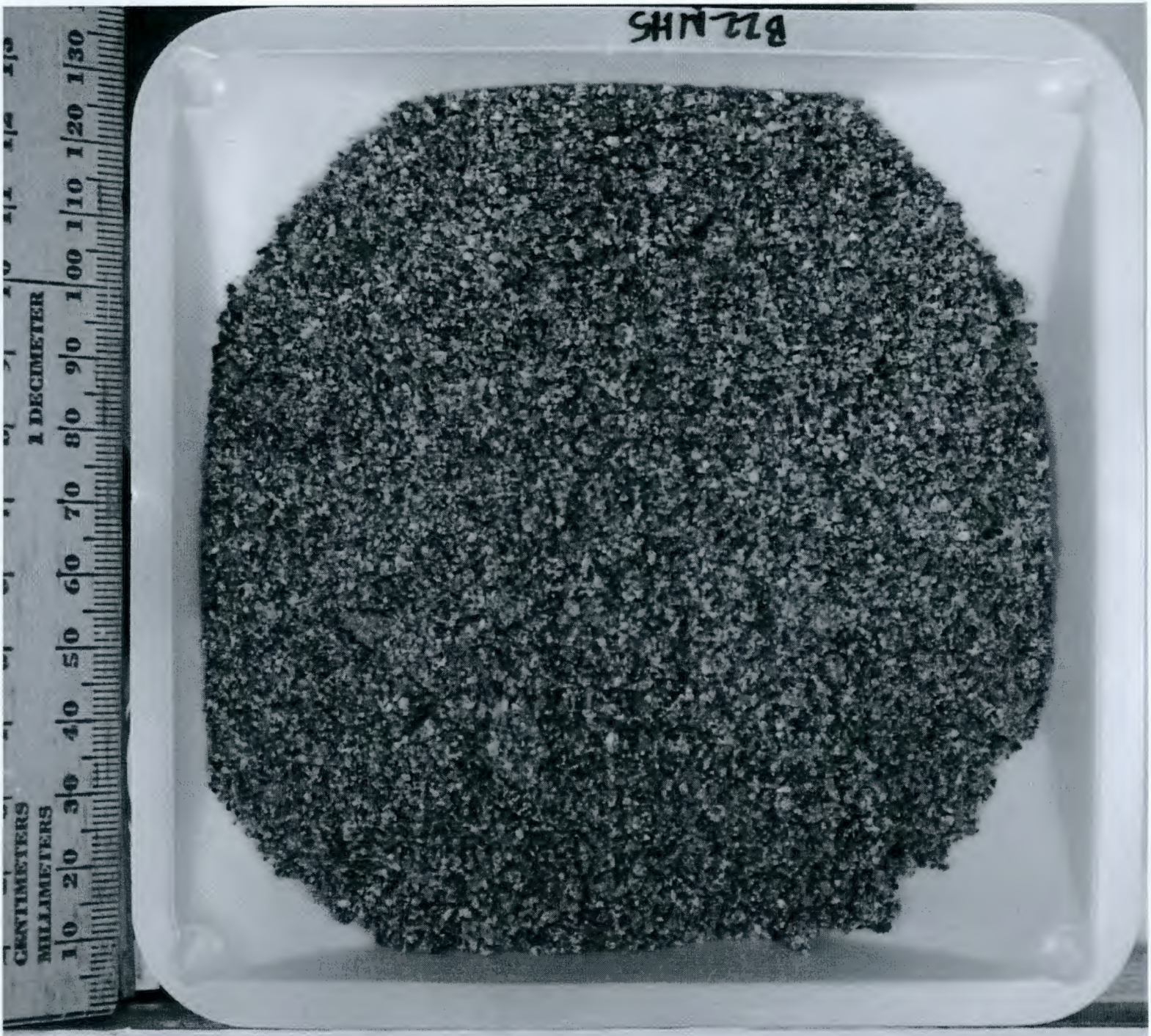
C5860	B22NH2	225.7 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



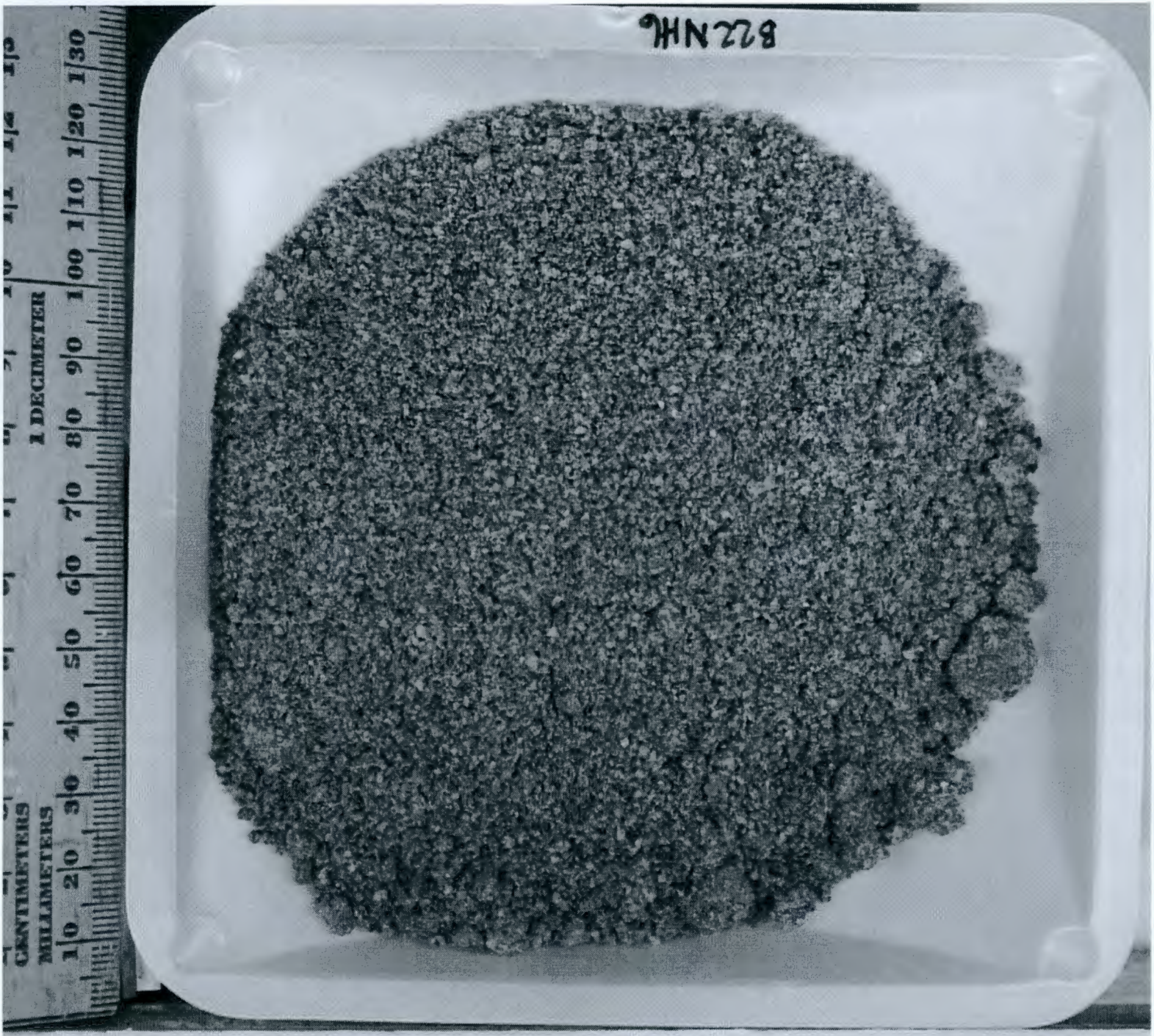
C5860	B22NH3	229.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



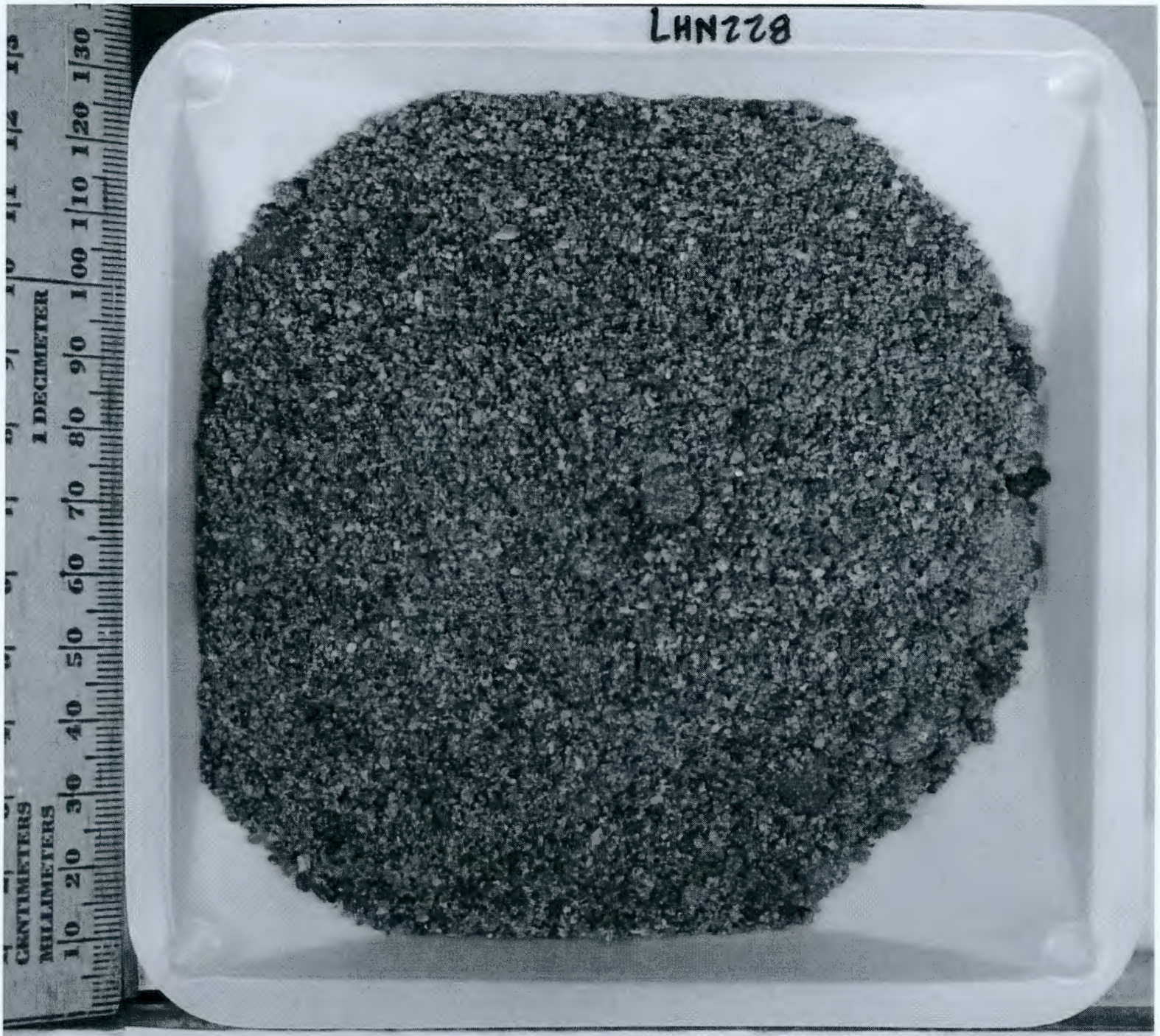
C5860	B22NH4	232.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



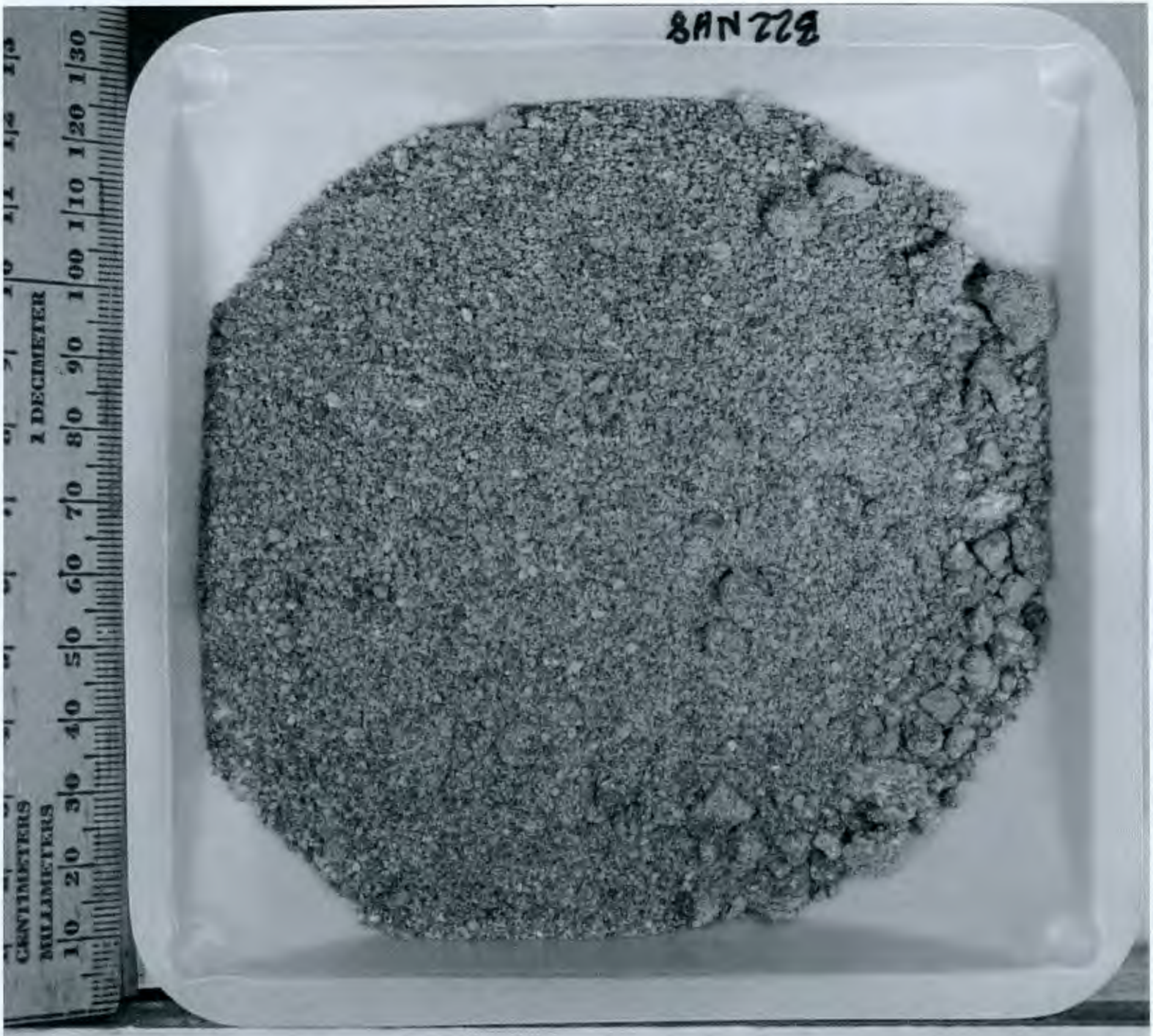
C5860	B22NH5	235.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



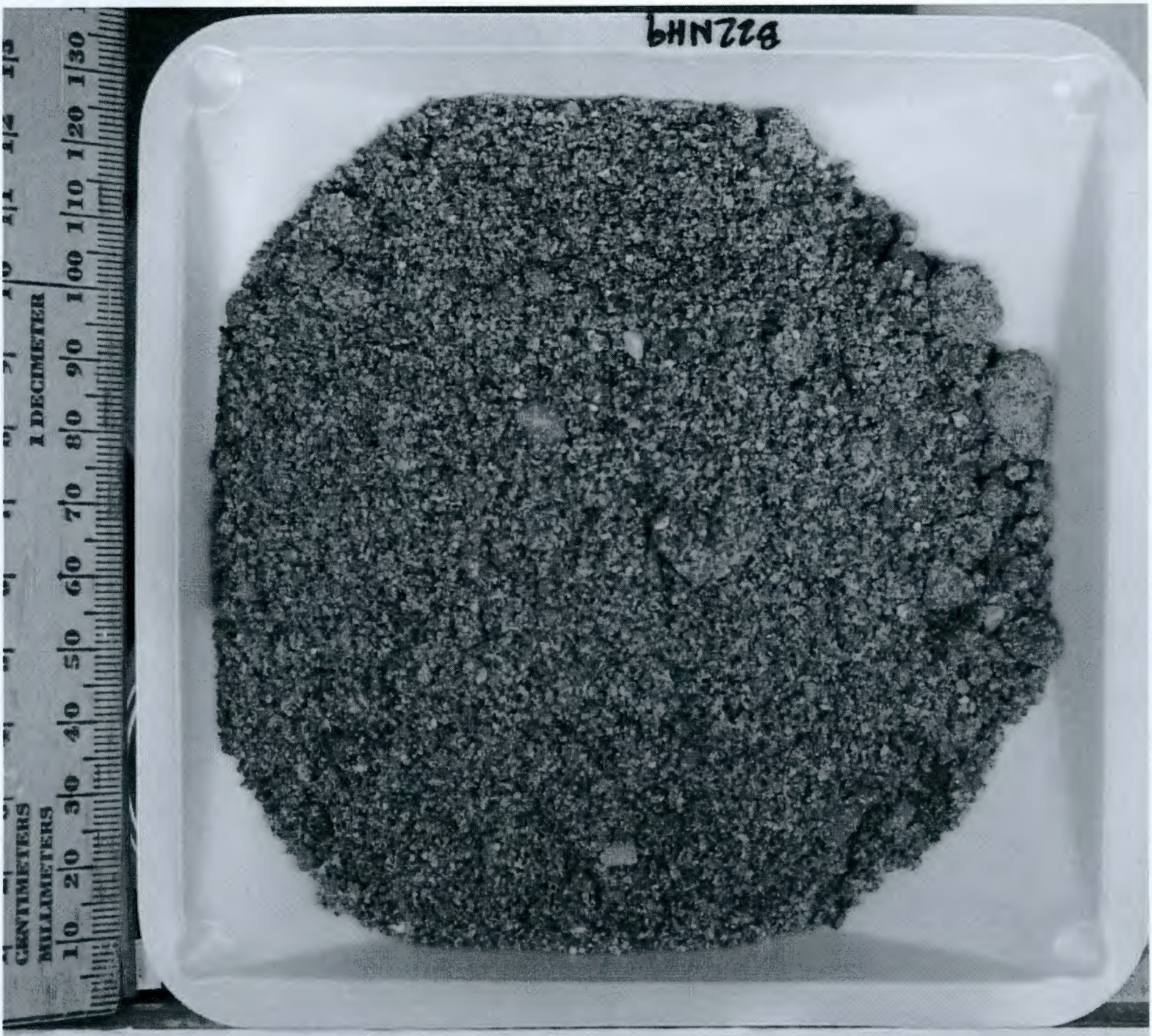
C5860	B22NH6	237.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



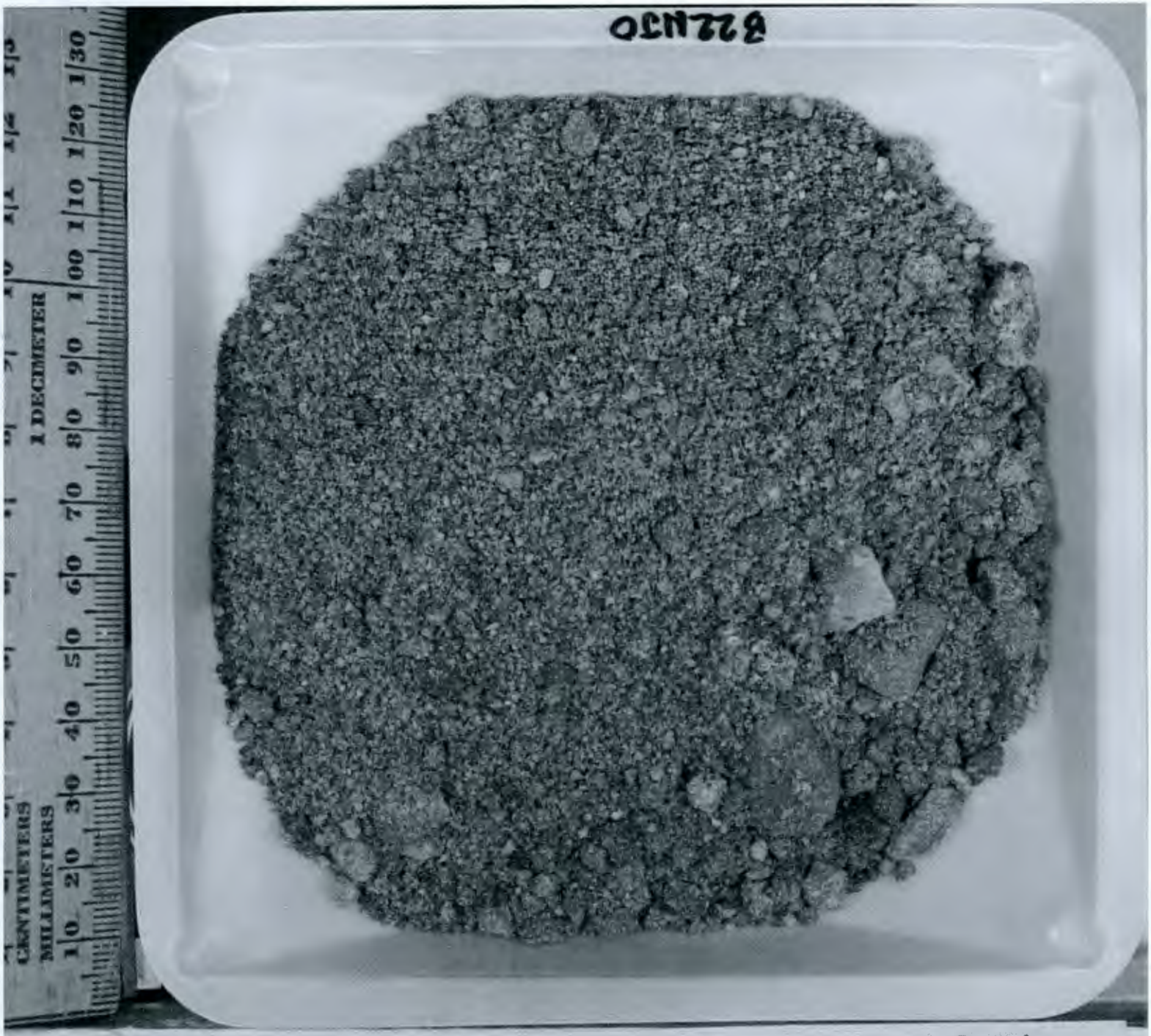
C5860	B22NH7	240.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



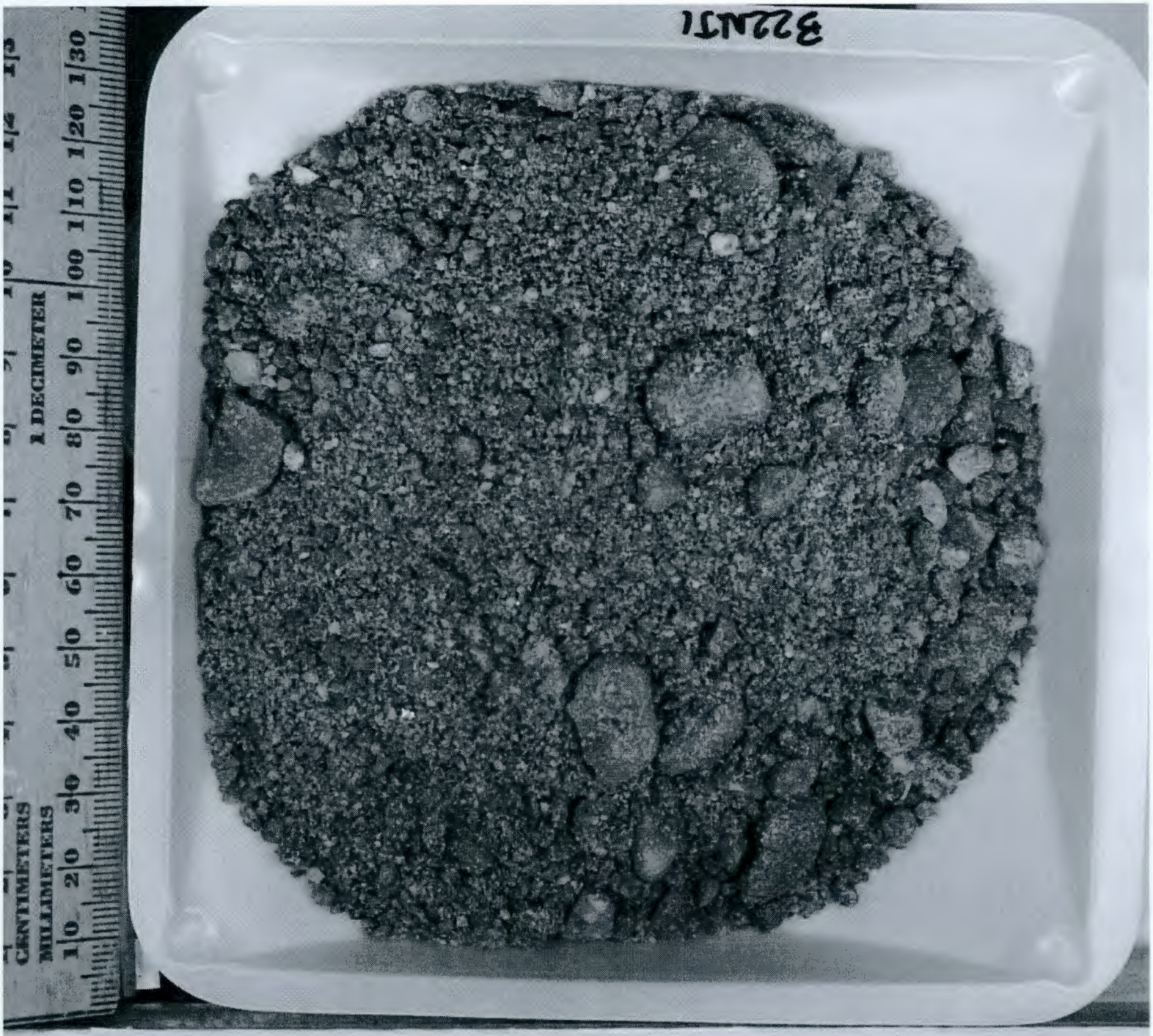
C5860	B22NH8	242.8 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



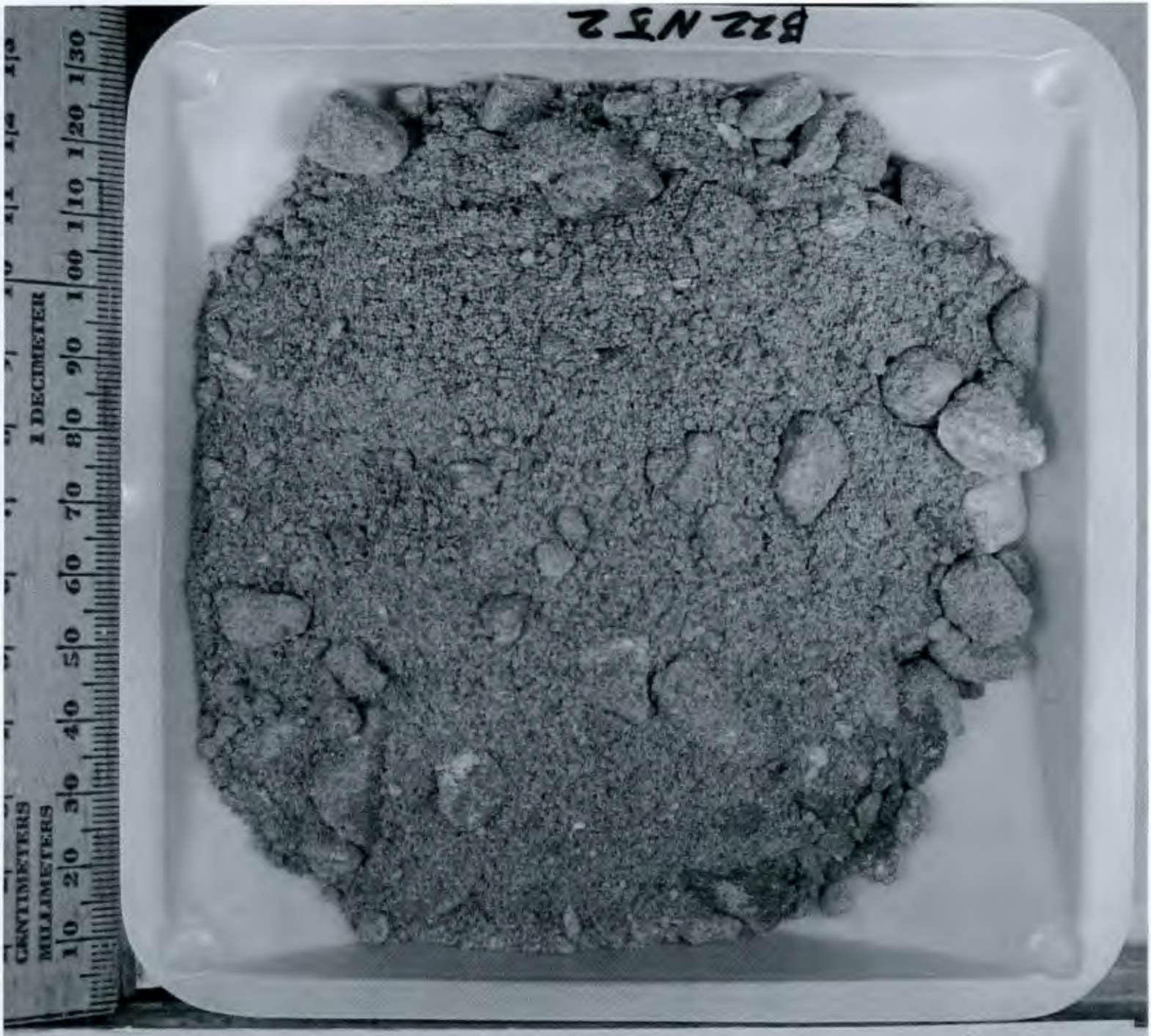
C5860	B22NH9	245.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22NJ0	247.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

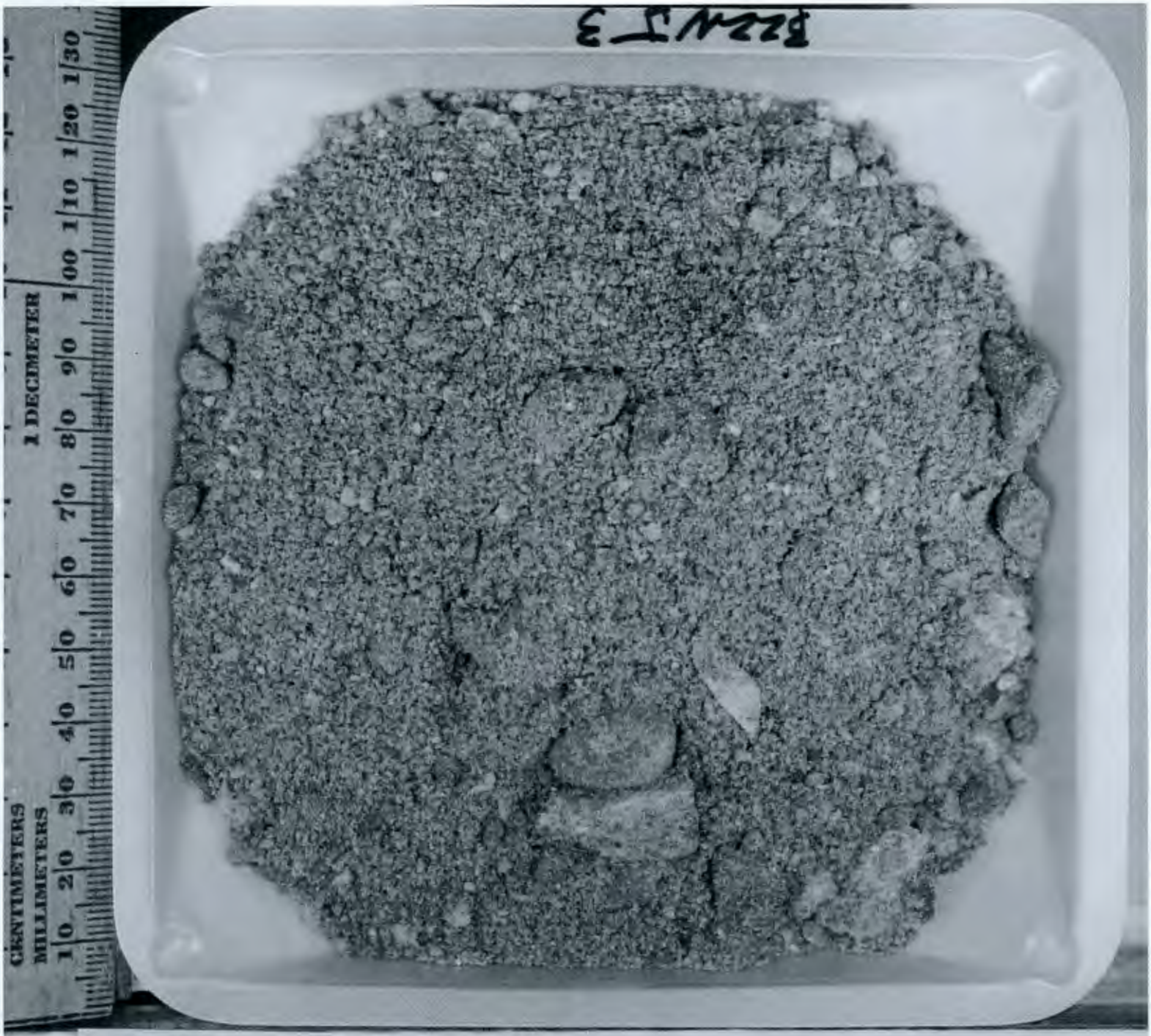


C5860	B22NJ1	249.9 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860 B22NJ2 252.4 ft Grab Sample

Borehole ID Sample ID Depth from Chain-of-Custody



C5860	B22NJ3	255.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860 B22NJ4 258.0 ft Grab Sample

Borehole ID Sample ID Depth from Chain-of-Custody

C5860	B22NJ5	259.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

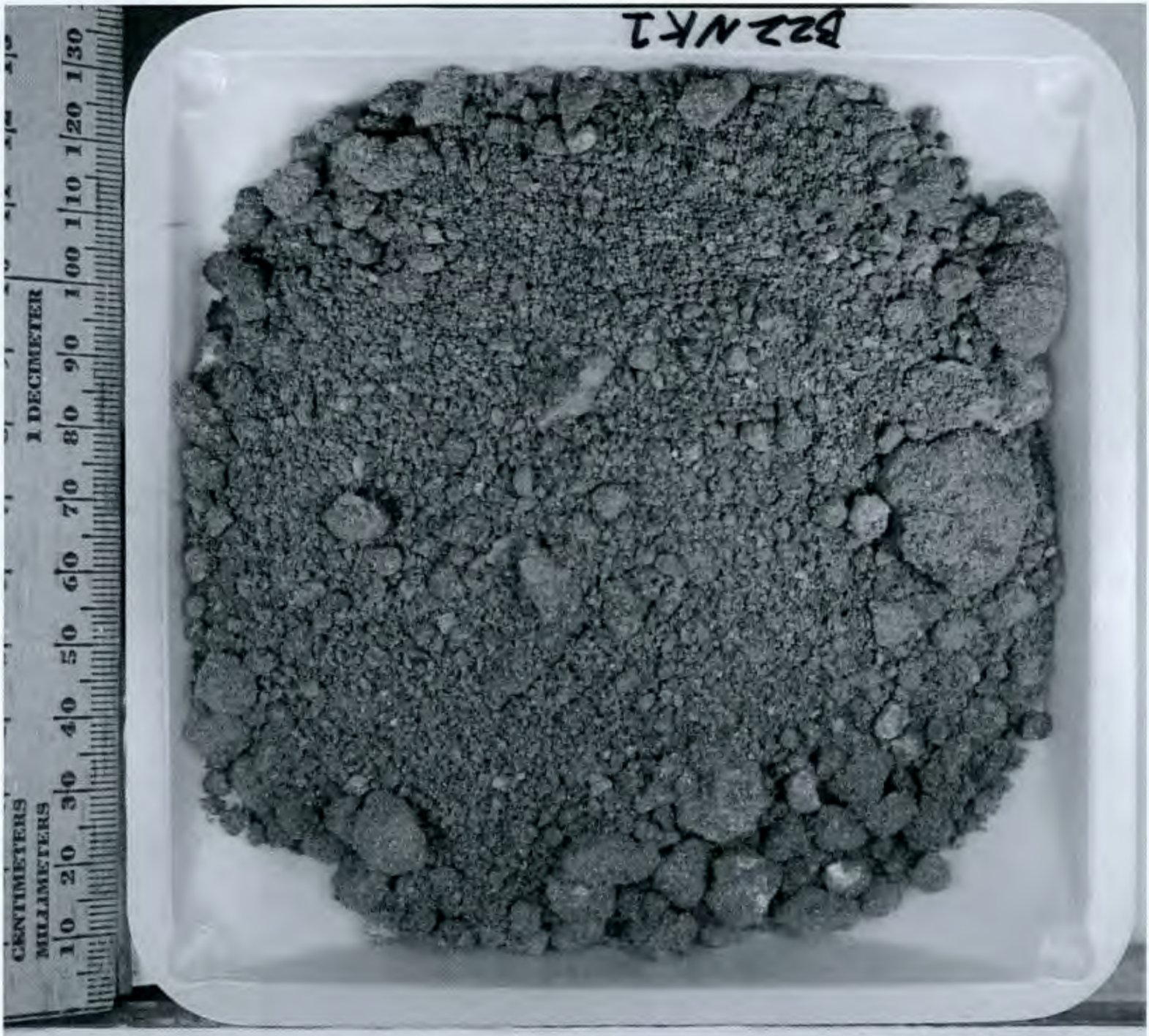
C5860	B22NJ6	262.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NJ7	265.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NJ8	267.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NJ9	270.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

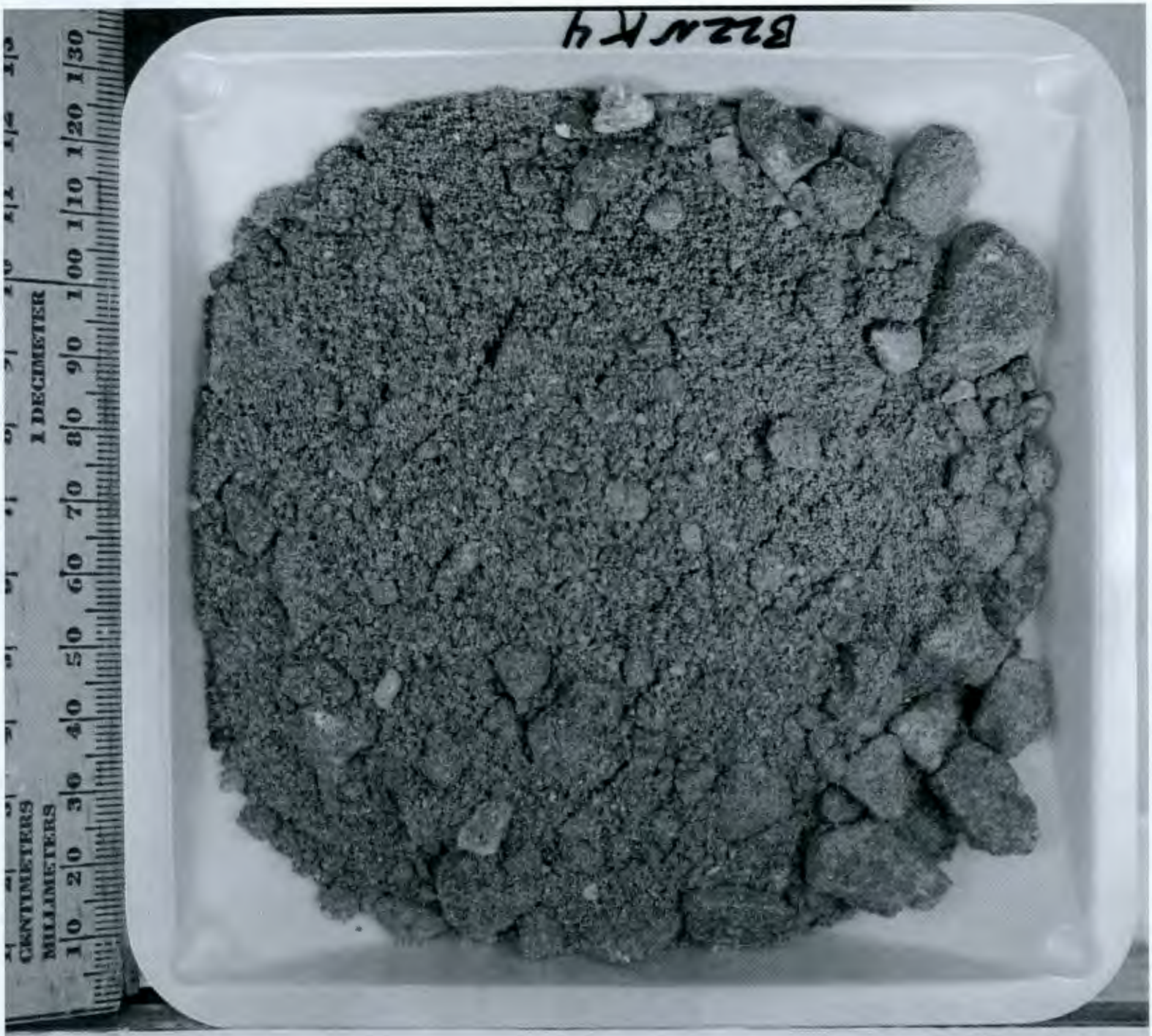
C5860	B22NK0	272.3 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22NK1	275.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NK2	278.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

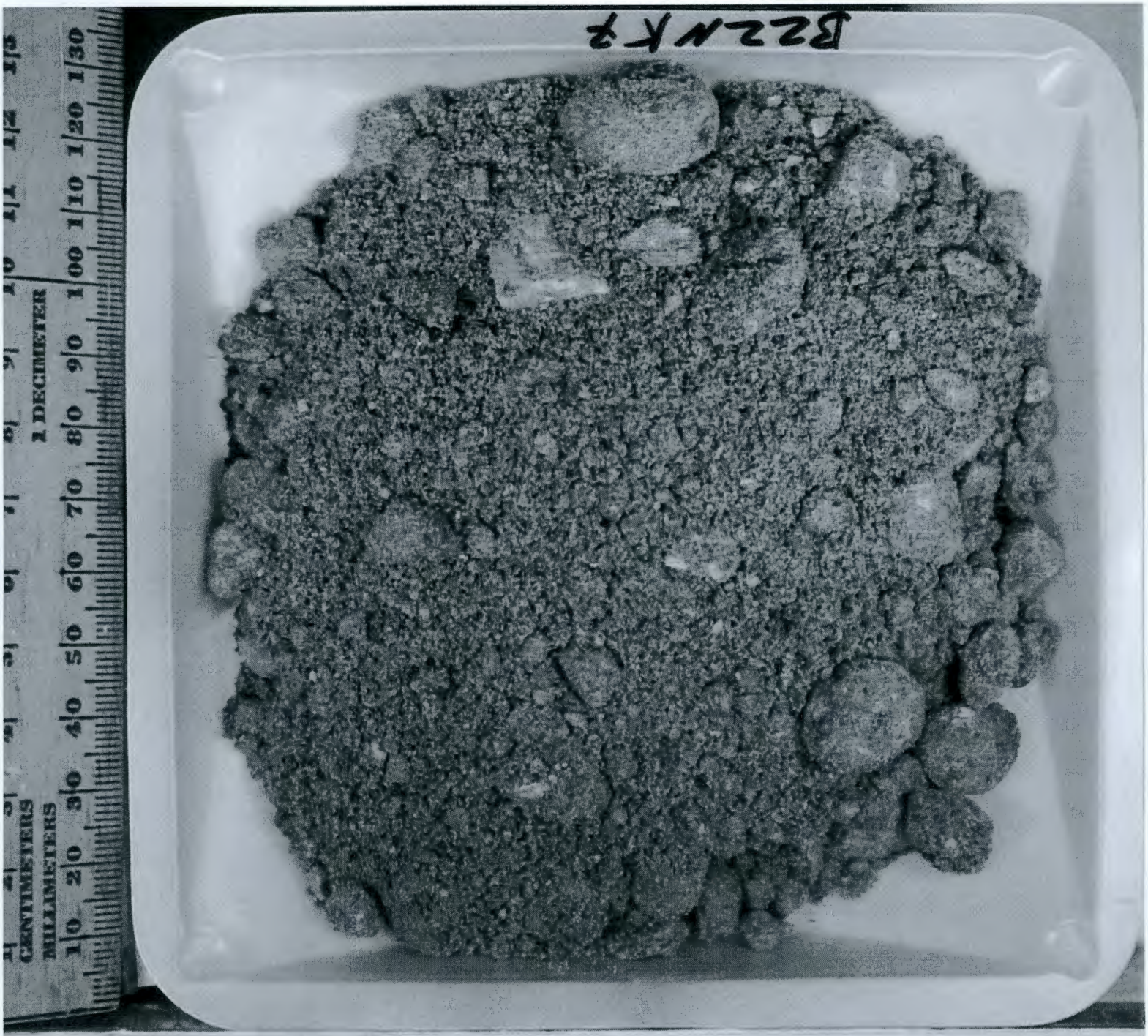
C5860	B22NK3	280.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22NK4	282.7 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NK5	285.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NK6	287.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	



C5860	B22NK7	290.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NK8	292.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NK9	295.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NL0	297.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NL1	301.0 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

C5860	B22NL2	305.5 ft	Grab Sample
Borehole ID	Sample ID	Depth from Chain-of-Custody	

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F10-010-001	PAGE 1 OF 1
ECTOR Rosanne Rost	COMPANY CONTACT DYEKMAN, DL	TELEPHONE NO. 373-2530	PROJECT COORDINATOR DYEKMAN, DL	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C5860 (299-E29-54); I-001	PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		SAF NO. F10-010	AIR QUALITY ☐	45 Days / 45 Days
ICE CHEST NO. GWS-115	FIELD LOGBOOK NO. HNF-N-576-3 pg 84	ACTUAL SAMPLE DEPTH 30.0-31.5'	COA 302143ES10	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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC0

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	
B22PW3	SOIL	11-19-09	1350	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	11-19-09 / 1500	MO-413 SSU-R2	11-19-09 / 1500
SSU-R2	NOV 23 2009	DW Brotherton	NOV 23 2009
DW Brotherton	NOV 23 2009	Igor Kutyakov	11:40 NOV 23 2009

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

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

ESL 09 0009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-002

COLLECTOR
SM Rust Makkan, Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-002

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-125

FIELD LOGBOOK NO.
HNF-N-576-3 p 86

ACTUAL SAMPLE DEPTH
~~59.5~~ 62.4 feet
59.9

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC1

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
B22PW4	SOIL	11-24-09	10:30 ✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SM Rust Sam Rust SR cooler 11-24-09	1105	MO413 SSU R-2	11/24/9-1105
MO-413-R2	NOV 30 2009	DE Parchen CHPRC	NOV 30 2009
DE Parchen CHPRC	NOV 30 2009		NOV 30 2009

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

COC # ESL 00000

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F10-010-004	PAGE 1 OF 2
COLLECTOR Emmerson Moklen Rust Turner	COMPANY CONTACT DYEKMAN, DL	TELEPHONE NO. 373-2530	PROJECT COORDINATOR DYEKMAN, DL	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-003	PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		SAF NO. F10-010		
ICE CHEST NO. GWS-115	FIELD LOGBOOK NO. HNF-N-576-3 p86	ACTUAL SAMPLE DEPTH 64.5 foot	COA 302143ES10	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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22RY5

PRESERVATION	Cool~4C	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		
B22N77	SOIL	NOV 24 2009	13:20	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SM Rust SE Carlson	NOV 24 2009 1425	MO413 SSGR-2	11/24/09 1425
MO-413-R2	NOV 30 2009	CHPRC	NOV 30 2009
CHPRC 11:15	NOV 30 2009	11:15	NOV 30 2009

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F10-010-004	PAGE 2 OF 2
COLLECTOR Emmerson Moxlen Rust Turner	COMPANY CONTACT DYEKMAN, DL	TELEPHONE NO. 373-2530	PROJECT COORDINATOR DYEKMAN, DL	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C5860 (299-E29-54); I-003	PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		SAF NO. F10-010	AIR QUALITY ☐	45 Days / 45 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-576-3p 86	ACTUAL SAMPLE DEPTH 64.5 feet	COA 302143ES10	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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-005

COLLECTOR
Rust, Mohler, Turner Bumgarner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-004

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS 125

FIELD LOGBOOK NO.
HNF-N-576-3p86

ACTUAL SAMPLE DEPTH
67.5 ft

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T85

PRESERVATION	Cool~4C	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										
B22N78	SOIL	NOV 24 2009	13:37	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Bill Rust	NOV 24 2009 1400	MO-413 354R-2	11/24/9-1445
MO-413-R2	NOV 30 2009	CHPRC	NOV 30 2009
DE Parchen	NOV 30 2009		NOV 30 2009
CHPRC			

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-005** |

COLLECTOR	**COMPANY CONTACT**	**TELEPHONE NO.**	**PROJECT COORDINATOR**	**PRICE CODE** 8N	**DATA TURNAROUND**
Rusyl, Mott Lon Turner Environmental	DYEKMAN, DL	373-2530	DYEKMAN, DL		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
C5860 (299-E29-54); I-004	ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		F10-010		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-576-3 p86	67.5 feet	302143E510	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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-007

COLLECTOR
[illegible]

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-005

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS 125

FIELD LOGBOOK NO.
HNF-N-576-329

ACTUAL SAMPLE DEPTH
70 feet

COA
302143E510

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22RY6

PRESERVATION	Cool—4C	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		
B22N79	SOIL	NOV 24 2009	14:14	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Sam Hunt [illegible]	NOV 24 2009 1445	MO413 SS4R-2	11/24/9- 1445
MO-413-R2	NOV 30 2009	DE Parchen CHPRC	NOV 30 2009
DE Parchen CHPRC	NOV 30 2009 11:15	[illegible]	NOV 30 2009 11:45

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-007** | **PAGE 2 OF 2**

COLLECTOR Mohler, Turner, Rust, Dameron	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-005	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-526-3386	**ACTUAL SAMPLE DEPTH** 70 feet	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE BN

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-008

COLLECTOR
Mixler, Rust, Jones, Emmerson

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-006

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS 125

FIELD LOGBOOK NO.
HNF-N-5763-p86

ACTUAL SAMPLE DEPTH
72 foot

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T86

PRESERVATION	Cool~4C	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										
B22N80	SOIL	NOV 24 2009	1430	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Bill Rust / Code	NOV 24 2009 1445	MO-413-54 R2	11/24/9 1445
MO-413-R2	NOV 30 2009 0900	CHPRC	NOV 30 2009 0900
CHPRC	NOV 30 2009 1445		NOV 30 2009 1445

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-008** |

COLLECTOR	**COMPANY CONTACT**	**TELEPHONE NO.**	**PROJECT COORDINATOR**	**PRICE CODE** 8N	**DATA TURNAROUND**
Mixler, Rust, Turner, Blumenson	DYEKMAN, DL	373-2530	DYEKMAN, DL		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
C5860 (299-E29-54); I-006	ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		F10-010		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-576-3, p 86	72 foot	302143ES10	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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-010

COLLECTOR
Rosane-Turner-Rust

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-007

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GW9-021

FIELD LOGBOOK NO.
HNF-N-576-3, p87

ACTUAL SAMPLE DEPTH
74.7 feet

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22RY7

PRESERVATION	Cool~4C	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		
B22N81	SOIL	11-30-09	0833	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	11-30-09 / 1530	MO-413 SSU-R1	11-30-09 / 1530
MO-413 SSU-R1	DEC 02 2009 1000	DE Parchen CHPRC	DEC 02 2009 1000
DE Parchen CHPRC	DEC 02 2009 1270	[signature]	DEC 02 2009 12:30
		F. Kutnyakov	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY

DATE/TIME

CDC #FSI 090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-010

COLLECTOR

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-007

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-5763 p 87

ACTUAL SAMPLE DEPTH
74.7 feet

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-011

COLLECTOR
Rosane, Rust Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-008

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 pg 87

ACTUAL SAMPLE DEPTH
78 feet

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T87

PRESERVATION	Cool-4C	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		
B22N82	SOIL	NOV 30 2009	12:41	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Rust	NOV 30 2009 / 1530	MO-413 SSU-R1	11-30-09 / 1530
MO-413 SSU-F1	DEC 02 2009 1000	DE Parcher CHPRC	DEC 02 2009 1000
DE Parcher CHPRC	DEC 02 2009 1330	Igor Kutnyakov	DEC 02 2009 1330
		I. Kutnyakov	

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-011** |

COLLECTOR Roxane Rust Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-008	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-p87	**ACTUAL SAMPLE DEPTH** 78 feet	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

DATA TURNAROUND 45 Days / 45 Days

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-013

COLLECTOR
Rosane Rust Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-009

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N 576-3 Pg 87

ACTUAL SAMPLE DEPTH
80 feet

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22RY8

PRESERVATION	Cool-4C	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									
B22N83	SOIL	NOV 30 2009	1410	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	NOV 30 2009 1415	MO-413 SSU-R1	11-30-09 / 1530
MO-413 SSU-R1	DEC 02 2009 1000	DE Pantlen	DEC 02 2009 1000
DE Pantlen	DEC 02 2009 1230	CHPRC	DEC 02 2009
CHPRC		T. Kudryakov	12:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-013

COLLECTOR
Roxanne Turner Rost

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-009

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 A37

ACTUAL SAMPLE DEPTH
80 feet

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

NOV 30 2009

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-014

COLLECTOR
Rust Rosane Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-010

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 PG 87

ACTUAL SAMPLE DEPTH
82 Feet

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T88

PRESERVATION	Cool~4C	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
B22N84	SOIL	NOV 30 2009	1453

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Rust Rosane Turner	NOV 30 2009 / 1530	MO-413 SSU-R1	11-30-09 / 1530
MO-413 SSU-F1	DEC 02 2009 1000	DE Parchen CHPRC	DEC 02 2009 1000
DE Parchen CHPRC	DEC 02 2009 1230	I. Kutnyakov	DEC 02 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-014** |

COLLECTOR Rosine Rost Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-010	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N- 576-3 p87	**ACTUAL SAMPLE DEPTH** 82 feet	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-016

COLLECTOR
Rosane

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-011

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 PG 89

ACTUAL SAMPLE DEPTH
85'

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22RY9

PRESERVATION	Cool~4C	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		
B22N85	SOIL	12-1-09	0810	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-1-09 1500	MO-413 SSU-R1	12-1-09 1500
MO-413 SSU-F1	DEC 0 2 2009 1000	DE Parcher CHPRC	DEC 0 2 2009 1000
DE Parcher CHPRC	DEC 0 2 2009 1230	I. Kuthyar	DEC 02 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-016** |

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-011	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GW5-021	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 86	**ACTUAL SAMPLE DEPTH** 85'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-017

COLLECTOR
Rosante

SAMPLING LOCATION
C5860 (299-E29-54); I-012

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 PG 53

ACTUAL SAMPLE DEPTH
57'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T89

PRESERVATION	Cool~4C	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										
B22N86	SOIL	12-1-09	0816	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Kraane Larry Kraane 12-1-09	1500	MO-413 SSU-R1	12-1-09 1500
MO-413 SSU-F1	DEC 02 2009 1000	DE Parker CHPRC	DEC 02 2009 1000
DE Parker CHPRC	DEC 02 2009 1230	T. Kuhnyakov	DEC 02 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-017** |

COLLECTOR	**COMPANY CONTACT**	**TELEPHONE NO.**	**PROJECT COORDINATOR**	**PRICE CODE** 8N	**DATA TURNAROUND**
[illegible]	DYEKMAN, DL	373-2530	DYEKMAN, DL		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	45 Days / 45 Days
C5860 (299-E29-54); I-012	ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		F10-010		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
GWS-021	HNF-N-576-3 Pg. 88	87'	302143ES10	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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Antimony, Aluminum, Iron, Potassium, Calcium, Nickel, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE (Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-019

COLLECTOR
Rosie Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-013

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 p 88

ACTUAL SAMPLE DEPTH
90'

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T00

PRESERVATION	Cool-4C	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SFE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B22N87	SOIL	DEC 0 1 2009	0930	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rowe	12-1-09 / 1500	MO-413 SSU-R1	12-1-09 / 1500
MO-413 SSU-R1	DEC 0 2 2009 1000	DE Parsons CHPRC	DEC 0 2 2009 1000
DE Parsons CHPRC	DEC 0 2 2009 1230	T. Kuriyakai	DEC 0 2 2009 1230

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-019** |

COLLECTOR Rosane Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-013	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 88	**ACTUAL SAMPLE DEPTH** 90'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

DEC 0 1 2009

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-021

COLLECTOR Rosanne

SAMPLING LOCATION C5860 (299-E29-54); I-015

ICE CHEST NO. GWS-021

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 16 88

ACTUAL SAMPLE DEPTH 89-92'

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143E510

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T01

PRESERVATION	Cool~4C	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 - 02216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B22N88	SOIL	12-1-09	1027	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	12-1-09 / 1500	MO-413 SSU-R1	12-1-09 / 1500
MO-413 SSU-R1	DEC 0 2 2009 1000	BE Parchen CHPRC	DEC 0 2 2009 1000
BE Parchen CHPRC	DEC 0 2 2009 1230	T Kufyaka	DEC 0 2 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-021** |

COLLECTOR	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-015	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. CYWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 88	**ACTUAL SAMPLE DEPTH** 89-92'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-022

COLLECTOR
Fulton

SAMPLING LOCATION
C5860 (299-E29-54); I-016

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N- 576-3 pg 58

ACTUAL SAMPLE DEPTH
95 ft

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T01

PRESERVATION	Cool~4C	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
B22N89	SOIL	12/1/09	1316

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosene Larry Rosene	12-1-09 / 1500	MO-413 SSU-R1	12-1-09 / 1500
MO-413 SSU-R1	DEC 0 2 2009 1000	DE Parchen CHPRC	DEC 0 2 2009 1000
DE Parchen CHPRC	DEC 0 2 2009 1230	T. Chernyakov	DEC 0 2 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-022** |

COLLECTOR Fulton	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-016	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 PG	**ACTUAL SAMPLE DEPTH** 95 ft	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-024

COLLECTOR
Rosine

SAMPLING LOCATION
C5860 (299-E29-54); I-017

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 PG 58

ACTUAL SAMPLE DEPTH
97'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T02

PRESERVATION	Cool-4C	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										
B22N90	SOIL	12-1-09	1331	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosine Larry Rosine	12-1-09/ 1500	MO-413 SSU-R1	12-1-09/1500
MO-413 SSU-F1	DEC 0 2 2009 1000	DE Parchen CHPRC	DEC 0 2 2009 1000
DE Parchen CHPRC	DEC 0 2 2009 1230	F. Kuznyakov	DEC 0 2 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-024** |

COLLECTOR Leave	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-017	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GW5-021	**FIELD LOGBOOK NO.** HNF-N-576-3 p6 EB	**ACTUAL SAMPLE DEPTH** 97'	**COA** 302143ES10	**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 GK1 applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-025

COLLECTOR
KESANE

SAMPLING LOCATION
C5860 (299-E29-54); I-018

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 88

ACTUAL SAMPLE DEPTH
98.8-100

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T02

PRESERVATION	Cool~4C	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		
B22N91	SOIL	12-1-09	1423	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Reams Larry Reams	12-1-09/ 1500	MO-413 SSU-R1	12-1-09/ 1500
DE Parchen	DEC 0 2 2009 1000	DE Parchen CHPRC	DEC 0 2 2009 1000
MO-413 SSU-F1 DE Parchen CHPRC	DEC 0 2 2009 1230	I Kufnacka	DEC 0 2 2009 12:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-025

COLLECTOR
ROSANE

SAMPLING LOCATION
C5860 (299-E29-54); I-018

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 88

ACTUAL SAMPLE DEPTH
98.8-100'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-027

COLLECTOR Rowe

SAMPLING LOCATION C5860 (299-E29-54); I-019

ICE CHEST NO. GWS-021

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 PG 58

ACTUAL SAMPLE DEPTH 48.8 - 102.5

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143ES10

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T03

PRESERVATION	Cool~4C	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		
B22N92	SOIL	12-1-09	1433	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rowe Larry Rowe	12-1-09 1500	MO-413 SSU-R1 [illegible]	1500
MO-413 SSU-F1 DE Parchen	DEC 0 2 2009 1000	DE Parchen	DEC 0 2 2009 1000
DE Parchen CHPRC Dely	DEC 0 2 2009 1230	CHPRC Dely	DEC 0 2 2009 12:30
		Igor Kuznyakov	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-027

COLLECTOR

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-019

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 PG

ACTUAL SAMPLE DEPTH
98.8 - 102.5'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-028

COLLECTOR Rosaue

SAMPLING LOCATION C5860 (299-E29-54); I-020

ICE CHEST NO. GWS-154

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO. HNF-N-576-3 pg 89

ACTUAL SAMPLE DEPTH 105.7'

COA 302143ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T03

PRESERVATION	Cool-4C	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**									
B22N93	SOIL	12-4-09	1400	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosaue Larry Rosaue	12-4-09 1505	MO 413 SSU-R1	12-4-09 1505
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009 11:15	[illegible]	DEC 08 2009 11:15

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

[illegible]

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-028

COLLECTOR
ROJANE

SAMPLING LOCATION
C5860 (299-E29-54); I-020

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 PG 89

ACTUAL SAMPLE DEPTH
105.7'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
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ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-030

COLLECTOR
Rosanne

SAMPLING LOCATION
C5860 (299-E29-54); I-021

ICE CHEST NO.
GW3-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 PG 89

ACTUAL SAMPLE DEPTH
101.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2ZT04

PRESERVATION	Cool~4C	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									
B22N94	SOIL	12-4-09	1423	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-4-09/ 1505	MO-413 SSU-R1	12-4-09/ 1505
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009	I. Kutnyakov	DEC 08 2009
	11:15		11:15
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

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-030

COLLECTOR Rosanne	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-021	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 PG 89	**ACTUAL SAMPLE DEPTH** 107.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
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ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-031

COLLECTOR Rosane

SAMPLING LOCATION C5860 (299-E29-54); I-022

ICE CHEST NO. GWS-154

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 pg 89

ACTUAL SAMPLE DEPTH 110.0

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143ES10

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T04

PRESERVATION	Cool-4C	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									
B22N95	SOIL	12-4-07	1440	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosne Larry Rosne	12-4-07 1505	MO-413 SSU-R1	12-4-07/ 1505
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009	T. Kutyakov	DEC 08 2009
	11:15	Lyn Kutyakov	11:15
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-031

COLLECTOR
Rosnic

SAMPLING LOCATION
C5860 (299-E29-54); I-022

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 89

ACTUAL SAMPLE DEPTH
110.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-033

COLLECTOR
[illegible]

SAMPLING LOCATION
C5860 (299-E29-54); I-023

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 10

ACTUAL SAMPLE DEPTH
12.5

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
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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: B22T05

PRESERVATION	Cool-4C	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									
B22N96	SOIL	12-7-09	1153									

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-7-09 1510	MO-413 SSU-R1 12-7-09	1510
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009 11:15	Igor Kutyakov	DEC 08 2009 11:15
Igor Kutyakov			

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-033

COLLECTOR Rosante	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-023	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N- 576-3 Pg. 40	**ACTUAL SAMPLE DEPTH** 112.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-034

COLLECTOR
Rosanne

SAMPLING LOCATION
C5860 (299-E29-54); I-024

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 PG 40

ACTUAL SAMPLE DEPTH
115.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T05

PRESERVATION	Cool-4C	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									
B22N97	SOIL	12-7-09	0841	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne 12-7-09	1510	MO-413 SSU-R1 12-7-09	1510
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009 11:15	T. Kudryakov	DEC 08 2009 11:15

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-034** |

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-024	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 90	**ACTUAL SAMPLE DEPTH** 115.5	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-036

COLLECTOR
Rosanne

SAMPLING LOCATION
C5860 (299-E29-54); I-025

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-516-3 Pg. 90

ACTUAL SAMPLE DEPTH
117.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T06

PRESERVATION	Cool--4C	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									
B22N98	SOIL	12-7-09	0852	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	12-7-09 / 1510	MO-413 SSU-R1	12-7-09 / 1510
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009	CHPRC	DEC 08 2009
	11:15	T. Kudryabov	11:15

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-036** |

COLLECTOR Rosanne	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-025	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 90	**ACTUAL SAMPLE DEPTH** 117.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-037

COLLECTOR
Rosane

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); 1-026

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-154

FIELD LOGBOOK NO.
HNF-N-576-3 pg 90

ACTUAL SAMPLE DEPTH
114.1-114.5

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T06

PRESERVATION	Cool-4C	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									
B22N99	SOIL	12-7-09	1523	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-7-09/1610	MO-413 SSU-R1 - 12-7-09/1610	
MO-413 SSU-R1	DEC 0 8 2009 0815	DE Parchen CHPRC	DEC 0 8 2009 0815
DE Parchen CHPRC	DEC 0 8 2009 11:15	Egor Kudryavtsev	DEC 0 8 2009 11:15
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-037** |

COLLECTOR
Rosanne

SAMPLING LOCATION
C5860 (299-E29-54); I-026

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
F-N-576-3 pg 90

ACTUAL SAMPLE DEPTH
119.1' - 119.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

DATA TURNAROUND
45 Days / 45 Days

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-038

COLLECTOR
Rosane

SAMPLING LOCATION
C5860 (299-E29-54); I-027

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 PG 90

ACTUAL SAMPLE DEPTH
119.5-122.6

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC2

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									
B22PW5	SOIL	12-7-09	1523	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lizzy Rosane Lizzy Rosane 12-7-09	1610	MO-413 SSU-R1 12-7-09	1610
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009 11:15	F. Kudnyakov	DEC 08 2009 11:15

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-039

COLLECTOR
Rosane

SAMPLING LOCATION
C5860 (299-E29-54); I-028

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 90

ACTUAL SAMPLE DEPTH
122.0'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC2

PRESERVATION	Cool~4C	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		
B22NB0	SOIL	12-7-09	1523	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-7-09/ 1610	MO-413 SSU-R1	12-7-09/ 1610
MO-413 SSU-R1	DEC 08 2009 0815	DE Parchen CHPRC	DEC 08 2009 0815
DE Parchen CHPRC	DEC 08 2009	F. Kudnyaki	DEC 08 2009
	11:15		11:15
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-039** |

COLLECTOR Rosave	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5860 (299-E29-54); I-028	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 90	**ACTUAL SAMPLE DEPTH** 122.0'	**COA** 302143ES10	**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

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-041

COLLECTOR: Rosane

SAMPLING LOCATION: C5860 (299-E29-54); 1-029

ICE CHEST NO.: GRP-03-027

SHIPPED TO: Environmental Sciences Laboratory

COMPANY CONTACT: DYEKMAN, DL

TELEPHONE NO.: 373-2530

PROJECT COORDINATOR: DYEKMAN, DL

PRICE CODE: 8N

DATA TURNAROUND: 45 Days / 45 Days

PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.: F10-010

AIR QUALITY: ☐

FIELD LOGBOOK NO.: HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH: 125.3'

COA: 302143ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE: RADIOACTIVE TIE TO: B22T07

PRESERVATION	Cool~4C	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		
B22NB1	SOIL	12-8-09	0844	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosado Larry Rosado 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 09 2009	DE Patchell CHPRC	DEC 09 2009
DE Patchell CHPRC	11:30 DEC 09 2009	I. Kudryavtsev	DEC 09 2009
		Igor Kudryavtsev	11:30

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

C.C.P # FSI 090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-041

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-029	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N 576-3 pg 91	**ACTUAL SAMPLE DEPTH** 125.3'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-042

COLLECTOR Rosanne

SAMPLING LOCATION C5860 (299-E29-54); I-030

ICE CHEST NO. GRP-03-027

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO. HNF-N-576-3 Pg 91

ACTUAL SAMPLE DEPTH 127.8'

COA 302143ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T07

PRESERVATION	Cool~4C	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										
B22NB2	SOIL	12-8-09	0853	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	12-8-09 / 1510	MO-413 SSU-R1	12-8-09 / 1510
MO-413 SSU-R1	DEC 09 2009	DE Parcher CHPRC	DEC 09 2009
DE Parcher CHPRC	11:30 DEC 09 2009	J. Kutnyakov	DEC 09 2009
		Igor Kutnyakov	11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-042

COLLECTOR
Rosanne

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-030

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH
127.8'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-044

COLLECTOR
Rosawe

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-031

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GRP 03-027

FIELD LOGBOOK NO.
HNF-N-576-3 16 91

ACTUAL SAMPLE DEPTH
130.2'

COA
302143E510

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T08

PRESERVATION	Cool~4C	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									
B22NB3	SOIL	12-8-09	0924	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosawe Larry Rosawe	12-8-09/ 1510	MO-413 SSU-RI	12-8-09/ 1510
MO-413 SSU-RI	DEC 09 2009 0900	DE Parchen CHPRC	DEC 09 2009 0900
DE Parchen CHPRC	DEC 09 2009 11:30	T. Kudryakov	DEC 09 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-044

COLLECTOR Rosnue	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-031	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 130.2	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide {Total} - 335.2 {Cyanide} pH {Water} - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ Original

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-045

COLLECTOR Rosane

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

SAMPLING LOCATION C5860 (299-E29-54); 1-032

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

ICE CHEST NO. GRP-03-027

FIELD LOGBOOK NO. HNF-N-576-3 Pg 91

ACTUAL SAMPLE DEPTH 133.0'

COA 302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T08

PRESERVATION	Cool-4C	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										
B22NB4	SOIL	12-8-09	0935	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-8-09/ 1510	MO-413 SSURI	12-8-09/ 1510
MO-413 SSU-R1	DEC 0 9 2009	DE Parchen	DEC 0 9 2009
DE Parchen CHPRC	11:30 DEC 0 9 2009	CHPRC J. Kuznyakov	DEC 0 9 2009
		11:30	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-045

COLLECTOR
ROSANE

SAMPLING LOCATION
C5860 (299-E29-54); I-032

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-5763 pg 91

ACTUAL SAMPLE DEPTH
133.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-047

COLLECTOR Rosane

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

SAMPLING LOCATION C5860 (299-E29-54); I-033

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

ICE CHEST NO. GRP-03 027

FIELD LOGBOOK NO. HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH 135.7'

COA 302143ES10

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=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B22T09

PRESERVATION	Cool~4C	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										
B22NB5	SOIL	12-8-09	0945	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 0 9 2009 0900	DE Patchen CHPRC	DEC 0 9 2009 0900
DE Patchen CHPRC 11:30	DEC 0 9 2009	T. Kudryashov	DEC 0 9 2009
		11:30	

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION **RECEIVED BY** **TITLE** **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-047 **PAGE 2 OF 2**

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-033	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 135.7'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-048

COLLECTOR: Roxane

SAMPLING LOCATION: C5860 (299-E29-54); I-034

ICE CHEST NO.: GRP-03-027

SHIPPED TO: Environmental Sciences Laboratory

COMPANY CONTACT: DYEKMAN, DL

TELEPHONE NO.: 373-2530

PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.: HNF-576-3 pg 91

ACTUAL SAMPLE DEPTH: 135.7'

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: DYEKMAN, DL

SAF NO.: F10-010

COA: 302143ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8N

AIR QUALITY: ☐

DATA TURNAROUND: 45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T09

PRESERVATION	Cool-4C	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		
B22NB6	SOIL	12-8-09	1013	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Roxane Larry Roxane 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 09 2009	DE Parchen CHPRC	DEC 09 2009
DE Parchen CHPRC	11:30 DEC 09 2009	T. Kudnyakov	DEC 09 2009
		T. Kudnyakov	11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-048

COLLECTOR
Rosane

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-034

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 91

ACTUAL SAMPLE DEPTH
135.7'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME191SA {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-050

COLLECTOR Rosanne

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

SAMPLING LOCATION C5860 (299-E29-54); I-035

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

ICE CHEST NO. GRP-03-027

FIELD LOGBOOK NO. HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH 141.0'

COA 302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T10

PRESERVATION			Cool-4C	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**										
B22NB7	SOIL	12-8-09	1027	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO-413 SSU-R1	DEC 0 9 2009	DE Parchen CHPRC	DEC 0 9 2009
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DE Parchen CHPRC	11:30 DEC 0 9 2009	T. Kusnyaker	DEC 0 9 2009
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		11:30	
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

ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-050

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION CS860 (299-E29-54); I-035	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 141.0	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole CS860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-051

COLLECTOR
Rosane

SAMPLING LOCATION
C5860 (299-E29-54); I-036

ICE CHEST NO.
GRP-03-007

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH
142.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T10

PRESERVATION			Cool-4C	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**									
B22NB8	SOIL	12-8-09	1056	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-8-09	1510	MO 413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 0 9 2009 0700	DE Parcher	0700
DE Parcher CHPRC	DEC 0 9 2009 11:30	CHPRC	DEC 0 9 2009
		T. Kuzmyakov	DEC 0 9 2009
		T. Kuzmyakov	11:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-051

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-036	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 91	**ACTUAL SAMPLE DEPTH** 142.5	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

DATA TURNAROUND 45 Days / 45 Days

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-053

COLLECTOR: Rosnere

SAMPLING LOCATION: C5860 (299-E29-54); I-037

ICE CHEST NO.:

SHIPPED TO: Environmental Sciences Laboratory

COMPANY CONTACT: DYEKMAN, DL

TELEPHONE NO.: 373-2530

PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.: HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH: 145.0'

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: DYEKMAN, DL

SAF NO.: F10-010

COA: 302143ES10

BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8N

AIR QUALITY: ☐

DATA TURNAROUND: 45 Days / 45 Days

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=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE: RADIOACTIVE TIE TO: B22T11

PRESERVATION	Cool-4C	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		
B22NB9	SOIL	12-8-09	1238	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosnere Larry Rosnere 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 0 9 2009	DE Parchen CHPRC	DEC 0 9 2009
DE Parchen CHPRC 11:30	DEC 0 9 2009	I Kutnyakov	DEC 0 9 2009
		Ign Kutnyakov 11130	

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-053

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-037	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 145.0	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-054

COLLECTOR Rosane

SAMPLING LOCATION C5860 (299-E29-54); I-038

ICE CHEST NO. GRP-03-027

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY [ ]

FIELD LOGBOOK NO. HNF-N 576-3 pg 91

ACTUAL SAMPLE DEPTH 147.5'

COA 302143ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T11

PRESERVATION	Cool-4C	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										
B22NC0	SOIL	12-8-09	~~1420~~ 1320	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 09 2009 0720	DE Parchen CHPRC	DEC 09 2009 0720
DE Parchen CHPRC	11:30 DEC 09 2009	T. Kuthyakov	DEC 09 2009
		11:30	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

SDG # ESL 09000a

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-054

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-038	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 147.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-056

COLLECTOR: Rosane

SAMPLING LOCATION: C5860 (299-E29-54); I-039

ICE CHEST NO.: GRP-03-027

SHIPPED TO: Environmental Sciences Laboratory

COMPANY CONTACT: DYEKMAN, DL

TELEPHONE NO.: 373-2530

PROJECT COORDINATOR: DYEKMAN, DL

PRICE CODE: 8N

DATA TURNAROUND: 45 Days / 45 Days

AIR QUALITY: ☐

PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.: F10-010

FIELD LOGBOOK NO.: HNF-N-576-3 PG 91

ACTUAL SAMPLE DEPTH: 149.4'

COA: 302143ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T12

PRESERVATION	Cool-4C	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										
B22NC1	SOIL	12-8-09	1348	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-8-09	1510	MO-413 SSU-R1 12-8-09	1510
MO-413 SSU-R1	DEC 09 2009	DE Fletcher CHPRC	DEC 09 2009
DE Fletcher CHPRC	11:30 DEC 09 2009	T. Kutyakov	DEC 09 2009
		T. Kutyakov 11:30	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-056** |

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** BN	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-039	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 149.4'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-057

COLLECTOR
Rosanne

SAMPLING LOCATION
C5860 (299-E29-54); I-040

ICE CHEST NO.
GRP-03-027

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 91

ACTUAL SAMPLE DEPTH
149.4' - 151.9'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T12

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									
B22PW6	SOIL	12-8-09	1348	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Rosanne Rosanne	12-8-09/ 1510	MO-413 SSU-R1	12-8-09/ 1510
MO-413 SSU-R1	DEC 09 2009	CE Parchen	DEC 09 2009
JE Parchen	11:30	CHPRC	DEC 09 2009
CHPRC		T Kuthyakov	
		11:30	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-059

COLLECTOR Rosane

SAMPLING LOCATION C5860 (299-E29-54); I-041

ICE CHEST NO. GRP-03-027

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO. HNF-N-576-5 pg 91

ACTUAL SAMPLE DEPTH 151.9'

COA 302143ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T13

PRESERVATION	Cool--4C	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**									
B22NC2	SOIL	12-8-09	1348	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-8-09	1510	MO-413 SSV-R1 12-8-09	1510
MO-413 SSV-R1	DEC 09 2009	DE Parcher CHPRC	DEC 09 2009
DE Parcher CHPRC	DEC 09 2009		

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-059** |

COLLECTOR Rosane	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-041	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 151.9'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-060

COLLECTOR Rosfave

SAMPLING LOCATION C5860 (299-E29-54); I-042

ICE CHEST NO. GRP-03-027

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 Pg 91

ACTUAL SAMPLE DEPTH 154.8

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143ES10

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T13

PRESERVATION	Cool--4C	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**										
B22NC3	SOIL	12-8-09	1438	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosfave Larry Rosfave	12-8-09 1510	MO-413 SSU-R1	12-8-09 1510
MO-413 SSU-R1	DEC 09 2009 0900	DE Fletcher	DEC 09 2009 0900
DE Fletcher CHPRC	11:30 DEC 09 2009	CHPRC I. Kuznyakov	DEC 09 2009
		I. Kuznyakov	11:30
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

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-060 **PAGE 2 OF 2**

COLLECTOR Rosanne	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-042	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 91	**ACTUAL SAMPLE DEPTH** 154.8	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ Original

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-062

COLLECTOR
Turner

SAMPLING LOCATION
C5860 (299-E29-54); I-043

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 92

ACTUAL SAMPLE DEPTH
157.1

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T14

PRESERVATION	Cool-4C	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**											
B22NC4 / SOIL / 12/9/04 / 0827	✓	✓									

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A. Turner	11:30 12/9/04	I. Kudryavtsev	12.09.09 11:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-062** |

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-043	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 92	**ACTUAL SAMPLE DEPTH** 157.1	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Potassium, Antimony, Aluminum, Iron, Calcium, Nickel, Silver, Magnesium} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-063

COLLECTOR
Turner

SAMPLING LOCATION
C5860 (299-E29-54); I-044

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 92

ACTUAL SAMPLE DEPTH
159.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T14

PRESERVATION	Cool~4C	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										
B22NC5	SOIL	12-9-09	0902	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A. Turner AT	12-9-09 11:30	I. Kutnyakov	12.09.09
		[illegible]	11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-063** |

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-044	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 92	**ACTUAL SAMPLE DEPTH** 154.5	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS (Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-064

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-046	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 92	**ACTUAL SAMPLE DEPTH** 162	**COA** 302143ES10
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=Vegetation, W=Water, WT=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: B22T41

PRESERVATION	Cool--4C	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		
B22NC6	SOIL	12-9-04	0902	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AL Turner	12-9-04 11:30	I. Kudnyakov	12.09.09
		Jon Ketzenko	11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-064 **PAGE 2 OF 2**

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-046	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 As 92	**ACTUAL SAMPLE DEPTH** 162	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME191SA {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-066

COLLECTOR
Turner

SAMPLING LOCATION
C5860 (299-E29-54); I-047

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 93

ACTUAL SAMPLE DEPTH
164.8

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T15

PRESERVATION	Cool--4C	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									
B22NC7	SOIL	12-9-09	0954	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AL Turner AL	12-9-09 11:30	I. Kuthyakov	12.09.09
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		Igor Kuthyakov	11:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-066** |

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-047	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N- 576-3 Pg 92	**ACTUAL SAMPLE DEPTH** 164.8	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-067

COLLECTOR
Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-048

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-576-3 pg 92

ACTUAL SAMPLE DEPTH
167.5

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T15

PRESERVATION	Cool-4C	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										
B22NC8	SOIL	12-9-04	1006	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AL Turner	12-9-04 11:30	I. Kuthyakov	12.09.09
		[illegible]	11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-067** |

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-048	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 92	**ACTUAL SAMPLE DEPTH** 167.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-069

COLLECTOR
Turner

SAMPLING LOCATION
C5860 (299-E29-54); I-049

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 92

ACTUAL SAMPLE DEPTH
169.5

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T16

PRESERVATION	Cool--4C	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										
B22NC9	SOIL	12-9-09	1233	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Al Turner	12-9-09 1330	MO-413-R2 12-9-09	1330
MO-413-R2	DEC 14 2009 0730	DE Parchen CHPRC	DEC 14 2009 0730
DE Parchen CHPRC	DEC 14 2009 11:50	I. Kutyarov	DEC 14 2009 11:50

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

SOP # FSI 090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-069** |

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-049	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 A 92	**ACTUAL SAMPLE DEPTH** 169.5	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-070

COLLECTOR
Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-050

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 92

ACTUAL SAMPLE DEPTH
169.5-172

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T16

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									
B22PW7	SOIL	12-9-09	1233	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AL Turner	12-9-09 1330	MO-413-R2	12-9-09 1330
DE Parchen	0730	DE Parchen MO-413-R2	DEC 14 2009 0730
DE Parchen CHPRC	DEC 14 2009	I Kutnyakov	DEC 14 2009 11:50
	11:50		

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-072

COLLECTOR
Turner

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-051

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GW5021

FIELD LOGBOOK NO.
HNF-N-576-3 pg 92

ACTUAL SAMPLE DEPTH
~~16~~ 172
A4

COA
302143ES10

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T17

PRESERVATION	Cool-4C	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										
B22ND0	SOIL	12-9-09	1233	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AL Turner	12-9-09 1330	MO-413-R2	12-9-09 1330
MO-413-R2	DEC 14 2009 0730	DE Parchen	DEC 14 2009 0730
DE Parchen	DEC 14 2009 11:50	T Kudnyak	DEC 14 2009 11:50
CHPRC		CHPRC	

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-072

COLLECTOR Turner	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-051	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 92	**ACTUAL SAMPLE DEPTH** 17ft	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Potassium, Antimony, Aluminum, Iron, Calcium, Nickel, Silver, Magnesium} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A (Total organic carbon, Total Inorganic Carbon, Total carbon) 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-073

COLLECTOR
Ronnie Rust Young

SAMPLING LOCATION
C5860 (299-E29-54); I-052

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 pg. 43

ACTUAL SAMPLE DEPTH
175

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T17

PRESERVATION	Cool--4C	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										
B22ND1	SOIL	12-11-09	0810	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rennie Larry Rennie 12-11-09	1505	MO-413 SSU-R1 12-11-09	1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parcho CHPRC	DEC 14 2009 0730
DE Parcho CHPRC	DEC 14 2009 11:50	I. Kulyakov	DEC 14 2009 11:50

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-073** |

COLLECTOR Rosanne Rust Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-052	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 93	**ACTUAL SAMPLE DEPTH** 175'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-075

COLLECTOR
Rosane Rust Young

SAMPLING LOCATION
C5860 (299-E29-54); I-053

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 93

ACTUAL SAMPLE DEPTH
178

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T18

PRESERVATION	Cool~4C	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 - 02216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B22ND2	SOIL	12-11-09	0857	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-11-09	1505	MO-413 SSU-R1 12-11-09	1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen	DEC 14 2009 0730
DE Parchen	DEC 14 2009	CHPRC	DEC 14 2009
CHPRC	11:50	L. Kurtzweil	11:50
		Lyn Kurtzweil	

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

Original

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-075

COLLECTOR Rosanne Rust Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-053	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Charactertzation Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 93	**ACTUAL SAMPLE DEPTH** 178	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-076

COLLECTOR
Rosanne Rust Young

SAMPLING LOCATION
C5860 (299-E29-54); I-054

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 93

ACTUAL SAMPLE DEPTH
179.9'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T18

PRESERVATION	Cool~4C	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		
B22ND3	SOIL	12-11-09	0926	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rowe	12-11-09 1505	MO-413 SSU-21	12-11-09 1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen	DEC 14 2009 0730
DE Parchen	DEC 14 2009 11:50	T. Kudryavtsev	DEC 14 2009 11:50

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-076

COLLECTOR
Roxanne Rust Young

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-054

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
576-3 pg 93

ACTUAL SAMPLE DEPTH
179.9

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A (Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-077

COLLECTOR Rosalie Rust Young

SAMPLING LOCATION C5860 (299-E29-54); I-055

ICE CHEST NO. GWS-021

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT COORDINATOR DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND 45 Days / 45 Days

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO. F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO. HNF-N-576-3 pg 93

ACTUAL SAMPLE DEPTH 179.9 - 182.4

COA 302143ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC3

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
B22PW8	SOIL	12-11-09	0926 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosque Larry Rosque 12-11-09	1505	MO-413 SSU-R1 12-11-09	1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen	DEC 14 2009 0730
DE Parchen	DEC 14 2009 11:50	J. Rutnyakov	DEC 14 2009 11:50
CHPRC			

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-078

COLLECTOR
Rosanne Rust, Young

SAMPLING LOCATION
CS860 (299-E29-54); I-056

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N- 576-3 pg 93

ACTUAL SAMPLE DEPTH
182.4'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC3

PRESERVATION	Cool-4C	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										
B22ND4	SOIL	12-11-09	0926	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-11-09/ 1505	MO-413 SSU-R1	12-11-09/ 1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen	DEC 14 2009 0730
DE Parchen	DEC 14 2009 11:50	I Rutnyakov	DEC 14 2009 11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-078** |

COLLECTOR Rosanne Rust Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5860 (299-E29-54); I-056	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 PG 93	**ACTUAL SAMPLE DEPTH** 182.4'	**COA** 302143ES10	**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

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-080

COLLECTOR
Rosane, Rust, Yosra

SAMPLING LOCATION
C5860 (299-E29-54); I-057

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE BN

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 PG 93

ACTUAL SAMPLE DEPTH
185'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T19

PRESERVATION	Cool-4C	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		
B22ND5	SOIL	12-11-09	1041	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-11-09	1505	MO-413 SSU-R1 - 12-11-09	1505
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen CHPRC	DEC 14 2009 0730
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DE Parchen CHPRC	DEC 14 2009 11:50	I Kulyatin	DEC 14 2009 11:50
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

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-080

COLLECTOR Rosine, Rust, Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-057	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 93	**ACTUAL SAMPLE DEPTH** 185'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Potassium, Antimony, Aluminum, Iron, Calcium, Nickel, Silver, Magnesium} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-081

COLLECTOR
Rachel Rust, Young

SAMPLING LOCATION
C5860 (299-E29-54); I-058

ICE CHEST NO.
GW5-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 PG 43

ACTUAL SAMPLE DEPTH
187.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T19

PRESERVATION			Cool-4C	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**									
B22ND6	SOIL	12-11-09	1226	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane, Young Rosane 12-11-09	1505	MO-413 SSU-R1 12-11-09	1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen CHPRC	DEC 14 2009 0730
DE Parchen CHPRC	DEC 14 2009 11:50	I Kurkyakov	DEC 14 2009 11:50

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-081 **PAGE 2 OF 2**

COLLECTOR
Rosane, Rust Young

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-058

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 43

ACTUAL SAMPLE DEPTH
187.5'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Calcium, Nickel, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-083

COLLECTOR: Rosanne, Rust Young	COMPANY CONTACT: DYEKMAN, DL	TELEPHONE NO.: 373-2530	PROJECT COORDINATOR: DYEKMAN, DL
SAMPLING LOCATION: CS860 (299-E29-54); 1-059	PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		SAF NO.: F10-010
ICE CHEST NO.: GWS-021	FIELD LOGBOOK NO.: HNF-N-576-3p 93	ACTUAL SAMPLE DEPTH: 189.3'	COA: 302143ES10
SHIPPED TO: Environmental Sciences Laboratory	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8N

AIR QUALITY: ☐

DATA TURNAROUND: 45 Days / 45 Days

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=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE: RADIOACTIVE TIE TO: B22T20

PRESERVATION	Cool-4C	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										
B22ND7	SOIL	12-11-09	1333	✓	✓								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne 12-11-09	1505	MO-413 DU-R1 12-11-09	1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen CHPRC	DEC 14 2009 0730
DE Parchen CHPRC	DEC 14 2009 11:50	I. Kutnyakov	DEC 14 2009 11:50

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

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

SDG # FSL090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-083

COLLECTOR Rosane, Rust Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-059	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3p 93	**ACTUAL SAMPLE DEPTH** 189.5	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Antimony, Aluminum, Iron, Potassium, Calcium, Nickel, Silver, Magnesium} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-085

COLLECTOR
Rosanne Rust Young

SAMPLING LOCATION
C5860 (299-E29-54); I-061

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 p 93

ACTUAL SAMPLE DEPTH
191.8'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T21

PRESERVATION	Cool--4C	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										
B22ND8	SOIL	12-11-09	1333	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rowe Larry Rowe	12-11-09 1505	MO-413 SSU-R1	12-11-09 1505
MO-413 SSU-R1	DEC 14 2009 0730	DE Parchen CNPRC	DEC 14 2009 0730
DE Parchen CNPRC	DEC 14 2009 11:50	J. Kellington	DEC 14 2009 11:50

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-085

COLLECTOR Rosane Rost Young	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-061	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-021	**FIELD LOGBOOK NO.** HNF-N-576-3, p 93	**ACTUAL SAMPLE DEPTH** 191.8'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-086

COLLECTOR
Rosnwe, Rost Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-062

ICE CHEST NO.
GW4-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-376-3 p 94

ACTUAL SAMPLE DEPTH
194.3'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T21

PRESERVATION	Cool~4C	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									
B22ND9	SOIL	12-14-09	0758	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosnwe Larry Rosnwe 12-14-09	11:50	~~[illegible]~~ 12-14-09	
		I Kotyarkin	
		Igor Kotyarkin 12.14.09	11:50

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-086

COLLECTOR
Rosano, Rust, Helms, Chamberlin

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-062

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
194.3'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-087

COLLECTOR Rosane, Rust Holmes Charbonneau	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-063	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO. GVS-021	**FIELD LOGBOOK NO.** HNF-N-576-3 p 94	**ACTUAL SAMPLE DEPTH** 194.03-196.18	**COA** 302143ES10
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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC4

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									
B22PW9	SOIL	12-14-09	0758	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-14-09	11:50	~~[illegible]~~	12-14-09
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		L. Kudryavtsev	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		[illegible] 12 14 09	11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-088

COLLECTOR
Rosine Root Helen Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-064

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-570-3P 94

ACTUAL SAMPLE DEPTH
196.3'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC4

PRESERVATION	Cool~4C	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		
B22NF0	SOIL	12-14-04	0824	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Roome Larry Roome 12-14-04	11:50	~~[illegible]~~ 12-14-04	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		I. Kuthyakov	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		Igor Kuthyakov 12.14.04	11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-088 **PAGE 2 OF 2**

COLLECTOR
Rosane Rust Helms Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-064

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
196.3'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-61B(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-089

COLLECTOR
Rozanne, Rust Helms Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-065

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
196.3 - 198.8

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC5

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
B22PX0	SOIL	12-14-09	0824

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-14-09	11:50	~~[illegible]~~ - 12-14-09	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		J. Kuzyakov	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		Igor Kuzyakov 12.14.09	11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-090

COLLECTOR
Rosane, Rust Heims Chandler

SAMPLING LOCATION
C5860 (299-E29-54); I-066

ICE CHEST NO.
GW5-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-572-3, p 94

ACTUAL SAMPLE DEPTH
199.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC5

PRESERVATION	Cool-4C	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										
B22NF1	SOIL	12-14-09	0917	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Kenny Rustad Tony Rosane 12-14-09	11:50	~~[illegible]~~	12-14-09
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		J. Kuljnyakov	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		[illegible] 12.14.09	11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-090

COLLECTOR
Rosine Rust Hewins Chamberlin

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-066

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-39 94

ACTUAL SAMPLE DEPTH
199.0'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-091

COLLECTOR
Rosine Rust Hems Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-067

ICE CHEST NO.
GW5-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3P 94

ACTUAL SAMPLE DEPTH
199.0'-201.5

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC6

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
B22PX1	SOIL	12-14-09	0917 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosine Larry Rosine 12-14-09	11:50	~~[illegible] 550-R7~~	12-14-09
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		S. Kudnyabi	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		[illegible] 12 14 09	11:50
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-092

COLLECTOR
Rosane, Rust Helms Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-068

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
201.1'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC6

PRESERVATION	Cool~4C	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										
B22NF2	SOIL	12-14-09	0940	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Terry Rosane Terry Rosane	12-14-09/11:50	~~TTO 713 550-84~~	12-14-09/
		L. Kutryakov	
		L. Kutryakov	12-14-09. 11:50

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-092

COLLECTOR
Renee Rust Heems Chamberlin

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-068

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-021

FIELD LOGBOOK NO.
HNF-N-576-3 p94

ACTUAL SAMPLE DEPTH
201.1'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-093

COLLECTOR
Rosane, Rust, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-069

ICE CHEST NO.
GWS-021

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
201.1 - 203.6'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC7

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										
B22PX2	SOIL	12-14-09	0840	✓									

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-14-09 1040	MO-413 SSO-R1	12-14-09 1040
MO-413 SSO-R1	12-14-09 11:50	Kudryakov	
		Kudryakov	12.14.09 11:50

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-094

COLLECTOR
Rosanne Rust, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-070

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3, p 94

ACTUAL SAMPLE DEPTH
203.4'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC7

PRESERVATION	Cool-4C	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 - Q2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B22NF3	SOIL	12-14-09	1241	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	12-14-09 / 1530	7110-413 SSU-R1	12-14-09 / 1530
MO4B SSU R1	12-21-09 0920	Calvin Ferris / Calvin Ferris 606-159	12-21-09 0920
Calvin Ferris / Calvin Ferris 606-159	12-21-09 11:40	I. Kutyakov	12-21-09 11:40
		Igor Kutyakov	
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

ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

SDC # F21 nanma

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-094

COLLECTOR
Ronald Rod Helms Chamberlin

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-070

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
203.4'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-095

COLLECTOR
Rosawe, Rust, Heems, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-071

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3P 94

ACTUAL SAMPLE DEPTH
203.4' - 205.9'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC8

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	2
VOLUME	10000
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B22PX3	SOIL	12-14-09	1241	✓									

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosawe Jenny Rosawe	12-14-09 1530	MO-413 SSU-R1	12-14-09 / 1530
MO-413 SSU-R1	12-21-09 0820	D. Bates/OAO GWS-066	12-21-09 0820
D. Bates/OAO GWS-066	12-21-09 11:40	I. Kurtnyakov	
		Ira Kurtnyakov	12/21/09 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-096

COLLECTOR
Rosane, Rust, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-072

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
205.7'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC8

PRESERVATION	Cool-4C	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									
B22NF4	SOIL	12-14-09	1342	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-14-09 1530	7110-413 SSU-21	12-14-09 1530
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
7110-413 SSU21	12-21-09 0820	Calvin Harris / Calvin Harris 6U3-158	12-21-09 0820
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Calvin Harris / Calvin Harris 6U3-158	12-21-09 11:40	J. Kadryabov	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		Igor Kadyabov	12.21.09. 11:40
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

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-096

COLLECTOR
Rodnie Rust Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-072

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3p 94

ACTUAL SAMPLE DEPTH
205.7'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE BN

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-097

COLLECTOR
Rosanne Rust, Helios, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-073

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
205.1 - 208.2'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC9

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									
B22PX4	SOIL	12-14-09	1342	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-14-09	1530	MO-413 SSV-21 12-14-09	1530
MO-413 SSV-21 12-21-09	0830	[illegible] GW3-066 12-21-09	0830
[illegible] GW3-066 12-21-09	11:40	I. Kutnyakov	
		for [illegible] 12.21.09.	11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-098

COLLECTOR
Rosario, Rust, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-074

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 p 94

ACTUAL SAMPLE DEPTH
208.7'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TC9

PRESERVATION	Cool-4C	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									
B22NF5	SOIL	12-14-09	1445	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosario Larry Rosario 12-14-09	1530	MO-413 SSU-R1 12-14-09	1530
MO413 SSUR1	12-21-09 0920	Calvin Farris/Calvin Farris GWS-158	12-21-09 0920
Calvin Farris/Calvin Farris GWS-158	12-21-09 11:40	I. Kurbatova / Igor Kurbatova	12.21.09. 11:40

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-098

COLLECTOR Rosanne Rust, Helms, Chamberlin	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-074	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3p 94	**ACTUAL SAMPLE DEPTH** 208.4'	**COA** 302143ES10
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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-099

COLLECTOR
Rohne Root, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-076

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 p 95

ACTUAL SAMPLE DEPTH
~~0.05~~, 21.2

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE BN

AIR QUALITY ☐

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T49

PRESERVATION	Cool-4C	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										
B22NF6	SOIL	12-15-09	1230	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rohne Root	12-15-09 / 1430	MV 413 SSOR1	12-15-09 / 1430
MV413 SSOR1	12-21-09 0820	Calvin Farris/Calvin Farris Gus-158	12-21-09 0820
Calvin Farris/Calvin Farris Gus-158	12-21-09 11:40	I. Kutnyakov	12.21.09 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-099

COLLECTOR Rosanne Rust, Helen Chamberlin	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-076	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 p 95	**ACTUAL SAMPLE DEPTH** 211.2'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Fluoride, Phosphate, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-100 PAGE 1 OF 1

COLLECTOR
Rasnic, Rust, Helms, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-077

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p 95

ACTUAL SAMPLE DEPTH
211.2' - 213.7'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD0

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
B22PX5	SOIL	12-15-09	1230

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rasnic, Jerry Rasnic	12-15-09 / 1430	MO-413 SSU-21	12-15-09 / 1430
MO-413 SSU-21	12-21-09 0920	[illegible] GWS-066	12-21-09 0920
[illegible] GWS-066	12-21-09 11:40	J. Kutnyakov	
		[illegible]	12.21.09. 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-101

COLLECTOR
Rosanne Rust, HELMS, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-078

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p 95

ACTUAL SAMPLE DEPTH
213.2

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD0

PRESERVATION	Cool-4C	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										
B22NF7	SOIL	12-15-09	1334	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Fowler Larry Fowler	12-15-09 / 1430	MO-413 SSW-R1	12-15-09 / 1430
MO-413 SSW-R1	12-21-09 0820	Calvin Farris / Calvin Farris GWS-158	12-21-09 0820
Calvin Farris / Calvin Farris GWS-158	12-21-09 11:40	I. Kutyakov / Ivan Kutyakov	12-21-09 11:40

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-101** | **PAGE 2 OF 2**

COLLECTOR Rosanne Rust, Helms, Chamberlin	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N
SAMPLING LOCATION C5860 (299-E29-54); 1-078	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 p 95	**ACTUAL SAMPLE DEPTH** 213.2'	**COA** 302143ES10	**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

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-102

COLLECTOR
Rosane, Rust Helms Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-079

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3p 95

ACTUAL SAMPLE DEPTH
213.2 - 215.7'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD1

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
B22PX6	SOIL	12-15-09	1354 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-15-09 / 1430	7110-413 SSC-R1	12-15-09 / 1430
7110-413-SSC-R1	12-21-09 0830	DOBTON/OBOT GLS-066	12-21-09 0830
DOBTON/OBOT GLS-066	12-21-09 11:40	I. Kufyrchov	
		Lyn Krbyshev	12.21.09 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY

FINAL SAMPLE DISPOSITION — DISPOSAL METHOD

TITLE — DATE/TIME

DISPOSED BY — DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-103

COLLECTOR
Rosario, Rost Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-080

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3p 96

ACTUAL SAMPLE DEPTH
215.1

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD1

PRESERVATION	Cool~4C	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									
B22NF8	SOIL	12-17-09	1000	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosario Larry Rosario	12-17-09 1510	7110-413 SSU-R1	12-17-09 1510
7110-413 SSU R1	12-21-09 0805	Calvin Farris / Calvin Farris GWS-046	12-21-09 0805
Calvin Farris / Calvin Farris GWS-046	12/21/09 11:40	I. Kutnyakov	
		Igor Kutnyakov	12.21.09. 11:40

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-103

COLLECTOR
Rosie, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-080

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N- 576-3p 96

ACTUAL SAMPLE DEPTH
215.1'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-104

COLLECTOR
Rosane, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); 1-081

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3p 96

ACTUAL SAMPLE DEPTH
215.1' - 217.6'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD2

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
B22PX7	SOIL	12-17-09	1000 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane, Jim Rosane 12-17-09	1510	7MO-413 SSV-R1 12-17-09	1510
7MO-413 SSV-R1 12-21-09	0905	D. Bates/[illegible] GWS-066 12-21-09	0905
D. Bates/[illegible] GWS-066 12-21-09	11:40	I. Kuthyar	
		Iya Kuthyar 12.21.09	11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-105

COLLECTOR
Roanne, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); 1-082

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3p 96

ACTUAL SAMPLE DEPTH
217.5'

COA
302143E510

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD2

PRESERVATION	Cool-4C	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										
B22NF9	SOIL	12-17-09	1220	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Roanne Larry Roanne 12-17-09	1510	MO-413 SSO-R1 12/17/09	1510
MO-413 SSO R1 12/29/09	0905	Calvin Farris/Calvin Farris GWS-066	12-21-09 0905
Calvin Farris/Calvin Farris GWS-066 12/21/09	11:40	I. Kutnyakov	
		Igor Kutnyakov 12.21.09.	11:40
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-105

COLLECTOR
Rosse, Rost, Turner, Chamberlain

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-082

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-5763p 96

ACTUAL SAMPLE DEPTH
217.5'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-106

COLLECTOR
Rosine, Rust, Trevor, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-084

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 96

ACTUAL SAMPLE DEPTH
219.8'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T53

PRESERVATION	Cool-4C	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										
B22NH0	SOIL	12-17-09	1305	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosine Larry Rosine	12-17-09 / 1510	MO-413 SSOR1	12-17-09 / 1510
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO-413 SSOR1	12/21/09 0805	Calvin Harris / Calvin Harris CW3-066	12-21-09 0805
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Calvin Harris / Calvin Harris CW3-066	12-21-09 11:40	I. Kuznyatov	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		Igor Kuznyatov	12.21.09 11:40
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-106

COLLECTOR
Rosanne Rust Turner, Chamberlain

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-084

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-N-576-3 pg 96

ACTUAL SAMPLE DEPTH
219.8'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-107

COLLECTOR
Rosanne Rust Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-085

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 96

ACTUAL SAMPLE DEPTH
219.8'-222.3'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD3

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
B22PX8	SOIL	12-17-09	1305 ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-17-09	1510	7110-413 350-R1- 12-17-09	1510
7110-413 350-R1- 12-21-09	0905	D. Bates/ORD OWS-066 12-21-09	0905
D. Bates/ORD OWS-066 12-21-09	11:40	I. Kutuzatov	
		I. Kutuzatov 12.21.09	11:40
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
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

CDC # FS1.090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-108

COLLECTOR
Rosane, Rust, Turner Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-086

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 96

ACTUAL SAMPLE DEPTH
~~224.4~~ 223.3

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD3

PRESERVATION	Cool~4C	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		
B22NH1	SOIL	12-17-09	1305	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-17-09 / 1510	MO-413 SSU R1	12-17-09 / 1510
MO413 SSUR1	12-21-09 0905	Calvin Farris / Calvin Farris 6W5-066	12-21-09 0905
Calvin Farris / Calvin Farris 6W5-066	12-21-09 11:40	I. Kushnyakov	
		I. Kushnyakov	12-21-09 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-108

COLLECTOR
Rosane Rust, Turner, Chamberlian

SAMPLING LOCATION
C5860 (299-E29-54); I-086

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 96

ACTUAL SAMPLE DEPTH
SL-1014 ~~22.1~~ 223.3'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-110

COLLECTOR
Rashne Rust, Terence Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-087

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 pg 96

ACTUAL SAMPLE DEPTH
225.7'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T22

PRESERVATION	Cool~4C	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									
B22NH2	SOIL	12-17-09	1410	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rowe, Larry Rowe 12-17-09	1510	MO-413 SSLR1 12-17-09	1510
MO-413 SSLR1 12-21-09	0905	D. Bates/ GW-066 12-21-09	0905
D. Bates/ GW-066 12-21-09	11:40	I. Kurbyatko 12.21.09	11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-110

COLLECTOR Rosane, Rust, Turner, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-087	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 46	**ACTUAL SAMPLE DEPTH** 225.7'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-111

COLLECTOR
Rosanne Rust, ~~Forrest Chamberlain~~ Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-088

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N- 576-3 pg 96

ACTUAL SAMPLE DEPTH
229.5

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T22

PRESERVATION	Cool-4C	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										
B22NH3	SOIL	12-18-09	0802	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-18-09 / 1030	MO-113 SSURI	12-18-09 / 1030
~~Calvin Farris SSURI~~	~~12-21-09 / 0710~~	~~GWS-154~~	~~12-21-09 / 0710~~
MO-113 SSURI	12-21-09 0710	Calvin Farris GWS-154	12-21-09 0710
Calvin Farris GWS-154	12-21-09 11:40	I. Kertyaka	12.21.09. 11:40
		Lyn Kertyaka	

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

* May have more moisture than normal Due to Borehole was open all night which lift more moisture content when taking sample, No clean out was done.
JK 12-18-09

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-111** |

COLLECTOR Rosane, Rust Turner Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-088	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 97	**ACTUAL SAMPLE DEPTH** 229.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-112

COLLECTOR
Rosanne Rust, Rono

SAMPLING LOCATION
C5860 (299-E29-54); I-089

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 PG 97

ACTUAL SAMPLE DEPTH
229.5 - 232.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD4

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										
B22PX9	SOIL	12-18-09	0802	✓									

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rust Larry Rust	12-18-09 / 1030	MO-413 - SSURI	12-18-09 / 1030
~~Calvin Farris - SSURI~~	~~12-21-09 / 0710~~	~~GWS-154~~	~~12-21-09 0710~~
MO-413 SSURI	12-21-09 0710	Calvin Farris GWS-158	12-21-09 0710
Calvin Farris GWS-158	12-21-09 11:40	I. Kutsyakov	12.21.09 11:40

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-113

COLLECTOR
Rosano, Rust, Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-090

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N- 576-3 Pg 97

ACTUAL SAMPLE DEPTH
232.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE BN

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD4

PRESERVATION			Cool-4C	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**									
B22NH4	SOIL	12-18-09	0802	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Romo / Larry Rosano	12-18-09/1030	MO-413 SSU-R1	12-18-09/1030
~~Calvin Farris SSURI~~	~~12-21-09/0710~~	~~GWS-154~~	~~12-21-09 /0710~~
~~MO-413 SSURI Calvin Farris / Calvin Farris~~	~~12-21-09 0710~~	~~Calvin Farris / Calvin Farris GWS-154~~	~~12-21-09 0710~~
Calvin Farris / Calvin Farris GWS-154	12-21-09 11:40	I. Kutnyakov	12.21.09. 11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-113** |

COLLECTOR Rosmie Rost, Romo	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-090	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 97	**ACTUAL SAMPLE DEPTH** 232.0	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT GOVERNMENT VEHICLE

DATA TURNAROUND 45 Days / 45 Days

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-115

COLLECTOR Rosnue Rust Romo

SAMPLING LOCATION C5860 (299-E29-54); I-091

ICE CHEST NO.

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 ka 97

ACTUAL SAMPLE DEPTH 235.0'

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143ES10

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B22T23

PRESERVATION	Cool-4C	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		
B22NH5	SOIL	12-18-09	0824	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Romo Larry Romo	12-18-09 / 1030	MO-413 SSU-R1	12-18-09 / 1030
~~Calvin Harris SSU-R1~~	~~12-21-09 0710~~	~~GWS-154~~	~~12-21-09 0710~~
MO-413 SSU-R1	12-21-09 0710	GWS-154	
Calvin Harris / Calvin Harris	12-21-09	GWS-154	12-21-09 0710
Calvin Harris / Calvin Harris	12-21-09	I. Kustyakov	12-21-09
	11:40		11:40

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-115

COLLECTOR Rasmussen, Rust, Romo	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-091	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 97	**ACTUAL SAMPLE DEPTH** 235.0'	**COA** 302143ES10
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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-116

COLLECTOR
Rosane, Rust, Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-092

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 97

ACTUAL SAMPLE DEPTH
237.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T23

PRESERVATION	Cool-4C	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										
B22NH6	SOIL	12-18-09	0850	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-18-09 1030	MO-413 SSU-R1	12-18-09 1030
~~Calvin Farris SSU-R1~~	~~12-21-09 0710~~	~~GWS-151~~	~~12-21-09 0710~~
MO-413 SSU-R1	12-21-09 0710	Calvin Farris / Calvin Farris GWS-151	12/21/09 0710
Calvin Farris / Calvin Farris GWS-151	12-21-09 11:40	I. Kuzmyakov	12.21.09.
		Igor Kuzmyakov	11:40

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-116

COLLECTOR Rosine Rust, Rano	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-092	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 & 97	**ACTUAL SAMPLE DEPTH** 237.5'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-118

COLLECTOR Rosane Rust, Romo

SAMPLING LOCATION CS860 (299-E29-54); 1-093

ICE CHEST NO.

SHIPPED TO Environmental Sciences Laboratory

COMPANY CONTACT DYEKMAN, DL

TELEPHONE NO. 373-2530

PROJECT DESIGNATION ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO. HNF-N-576-3 Pg 97

ACTUAL SAMPLE DEPTH 240.3'

OFFSITE PROPERTY NO. N/A

PROJECT COORDINATOR DYEKMAN, DL

SAF NO. F10-010

COA 302143ES10

BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

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=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B22T24

PRESERVATION	Cool-4C	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										
B22NH7	SOIL	12-18-09	0930	✓	✓								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-18-09 1030	MO-413 SS-UR-	12-18-09 1030
~~Glenn Yook SSUR1~~	~~12-21-09 0710~~	~~GW3-145 CZ 1541~~	~~12-21-09 0710~~
M6413 SSU-R2	12-21-09 0710	D.Bates/OBB GW3-158	12-21-09 0710
D.Bates/OBB GW3-158	12-21-09 11:40	T. Kurbyakov	12.21.09.
		Igor Kurbyakov	11:40

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-118

COLLECTOR Rosanne Rust, Romo	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-093	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N- 5763 Pg 97	**ACTUAL SAMPLE DEPTH** 240.3'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver) 6010M_ICP_ASTM_AE (Add-On) (Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) (Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-119

COLLECTOR
Rosnke, Rust, Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-094

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 97

ACTUAL SAMPLE DEPTH
240.3 - 242.8'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T24

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
B22PY0	SOIL	12-18-09	0930 ✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosnke Larry Romo	12-18-09 / 1030	710-413 SSU-R1	12-18-09 / 1036
~~RELINQUISHED BY/REMOVED FROM~~	~~DATE/TIME~~	~~RECEIVED BY/STORED IN~~	~~DATE/TIME~~
~~SSU-R1~~	~~12-21-09 0710~~	~~B22-T24 Cooler 154~~	~~12-21-09 0710~~
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
710-413 SSU-R2	12-21-09 0710	O.Batori/DAS 645-158	12-21-09 0710
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
O.Batori/DAS 645-158	12-21-09 11:40	T. Karayakov	12.21.09.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
		T. Karayakov	11:40
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

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-121

COLLECTOR
Rosane, Rust, Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-095

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 97

ACTUAL SAMPLE DEPTH
242.8'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T25

PRESERVATION	Cool--4C	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									
B22NH8	SOIL	12-18-09	0930	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Romo Larry Romo 12-18-09	1030	MO-413 350-R1 12-18-09	1030
~~[illegible] 350R1 12-21-09~~	~~0710~~	~~[illegible] GCS-154 12-21-09~~	~~0710~~
MO-413 350-R2 12-21-09	0710	[illegible] GCS-150 12-21-09	0710
[illegible] GCS-150 12-21-09	11:40	T. Kuzmyakov 12.21.09.	11:40

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-121 **PAGE 2 OF 2**

COLLECTOR Rosane, Rust, Romo	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-095	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N- 576-3 PG 97	**ACTUAL SAMPLE DEPTH** 242.8'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-122

COLLECTOR
Rosine, Rust, Romo

SAMPLING LOCATION
C5860 (299-E29-54); I-096

ICE CHEST NO.

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 97

ACTUAL SAMPLE DEPTH
245.0

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T25

PRESERVATION	Cool-4C	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										
B22NH9	SOIL	12-18-09	0948	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Romo Larry Romo 12-18-09	1030	7110-413 SSU-21 12-18-09	1030
~~Calvin Farris SSU21~~	~~12-21-09 0710~~	~~GWS-154~~	~~12-21-09 0710~~
7110-413 SSU21	12-21-09 0710	Calvin Farris / Calvin Farris GWS-158	12-21-09 0710
Calvin Farris / Calvin Farris GWS-158	12-21-09 11:40	T. Kuftyakov	12.21.09.
		T. Kuftyakov	11:40

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-122** |

COLLECTOR Rosane, Rust, Romo	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-096	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 97	**ACTUAL SAMPLE DEPTH** 245.0'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

AK

21

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-124

CTOR
Kasey Rost Terrence Chamberlain

SAMPLING LOCATION
C3860 (299-E29-54); I-097

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N- 576-3 pg 98

ACTUAL SAMPLE DEPTH
247.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T26

PRESERVATION	Cool--4C	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									
B22NJ0	SOIL	12-28-09	0821	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosson Larry Rosson 12-28-09	1515	MO-413 SSU-R1 12-28-09	1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner CHPRC	DEC 30 2009 0820
A.D. Turner CHPRC	DEC 30 2009 11:30	C. Irvin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-124

COLLECTOR
Rosnoe, Rost, Turner Chandwhan

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
C5860 (299-E29-54); I-097

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

ICE CHEST NO.
GWS-164

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 98

ACTUAL SAMPLE DEPTH
247.5'

COA
302143ES10

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-125

COLLECTOR
Rosine Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-098

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 98

ACTUAL SAMPLE DEPTH
249.9'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T26

PRESERVATION	Cool-4C	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										
B22NJ1	SOIL	12-28-09	0935	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosine Tony Rust	12-28-09/ 1515	MO-413 SSU-R1	12-28-09/ 1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner	DEC 30 2009 0820
A.D. Turner	DEC 30 2009 11:30	CHPRC C. Tom	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-125** |

COLLECTOR Rosnue Rust, Turner, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-098	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 98	**ACTUAL SAMPLE DEPTH** 249.9'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-126

COLLECTOR
Rosanne, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-100

ICE CHEST NO.
GW5-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 98

ACTUAL SAMPLE DEPTH
252.4'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T56

PRESERVATION	Cool-4C	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		
B22NJ2	SOIL	12-28-09	1005 ~~0955~~	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne	12-28-09 1515	MO-413 SSU-R1 -	12-28-09 1515
MO-413 SSU-R1	DEC 30 2009 0800	A.D. Turner CHPRC	DEC 30 2009 0800
A.D. Turner CHPRC	DEC 30 2009 11:30	E. Iovin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-126

COLLECTOR
Rosing, Rust, Turner Chambulion

SAMPLING LOCATION
C5860 (299-E29-54); I-100

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N- 576-3 pg 98

ACTUAL SAMPLE DEPTH
252.4'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE (Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-128

COLLECTOR
Rosanne, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-101

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 Pg. 98

ACTUAL SAMPLE DEPTH
255'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T27

PRESERVATION	Cool-4C	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		
B22NJ3	SOIL	12-28-09	1221	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Larry Rosanne 12-28-09	1515	MO-413 - SSU-R1 - 12-28-09	1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner CHPRC	DEC 30 2009 0820
A.D. Turner CHPRC	DEC 30 2009 11:30	C Jorin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-128

COLLECTOR
Reeme, Rust, Turner Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-101

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 98

ACTUAL SAMPLE DEPTH
255'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS (Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 (Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-129

COLLECTOR
Roarke, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-102

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 98

ACTUAL SAMPLE DEPTH
258.0'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T27

PRESERVATION			Cool-4C	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**								
B22NJ4	SOIL	12-28-09	1256	✓	✓						

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosales, Jimmy Rosales, 12-28-09	1515	MO-413 SSU-R1 - 12-28-09,	1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner CHPRC	DEC 30 2009 0820
A.D. Turner CHPRC	DEC 30 2009 11:30	@ Iovin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-129

COLLECTOR Rosine, Rust Turner, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-102	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 98	**ACTUAL SAMPLE DEPTH** 258.0'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-131

COLLECTOR
Reaume, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-103

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 98

ACTUAL SAMPLE DEPTH
254.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T28

PRESERVATION	Cool-4C	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		
B22NJ5	SOIL	12-28-09	1344	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Reaume Larry Reaume 12-28-09	1515	MO-413, SSU-21 - 12-28-09	1515
MO-413 SSU-R1 A.D. Turner CHPRC	DEC 30 2009	A.D. Turner	DEC 30 2009
	DEC 30 2009 11:30	C. Joiner	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

* Due to lack of soil and alot of Rocks (Big) only able to fill 200g Moisture tin and very little in the 1 Liter

ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-131

COLLECTOR Roxanne, Rust Turner, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-103	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 M 98	**ACTUAL SAMPLE DEPTH** 259.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver) 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium) 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver) 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium) 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium) 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic) 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium) 6020M_METALS_ICPMS_WE (Add-On) {Arsenic) 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Fluoride, Phosphate, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-132

COLLECTOR
Roxane, Rust, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-104

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 pg 98

ACTUAL SAMPLE DEPTH
254.5'-262.0'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T28

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
B22PY1	SOIL	12-28-09	1344

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rouse Larry Rouse 12-28-09	1515	MO-413 SSU-R1 12-28-09	1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner	DEC 30 2009 0820
A.D. Turner GUBRC	DEC 30 2009 11:30	GUBRC G. Jovin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

☐ ORIGINAL

LABORATORY SECTION | **RECEIVED BY**

FINAL SAMPLE DISPOSITION | **DISPOSAL METHOD**

TITLE | **DATE/TIME**

DISPOSED BY | **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-134

COLLECTOR
Lossane, Rust Turner Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-105

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N- 576-3 A 98

ACTUAL SAMPLE DEPTH
262.5

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T29

PRESERVATION			Cool-4C	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**										
B22NJ6	SOIL	12-28-09	1403	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Lossane Larry Lossane	12-28-09 1515	MO-413 SSU-R1	12-28-09 1515
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner CHPRC	DEC 30 2009 0820
A.D. Turner CHPRC	DEC 30 2009 11:30	C. Iovin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-134** |

COLLECTOR Rosane, Rust, Turner, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-105	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg	**ACTUAL SAMPLE DEPTH** 262.5'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-135

COLLECTOR
Rasmussen, Rost, Turner, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-106

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg. 98

ACTUAL SAMPLE DEPTH
265.0

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T29

PRESERVATION	Cool~4C	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										
B22NJ7	SOIL	12-28-09	1456	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rasmussen Larry Rasmussen 12-28-09		MO-413 SSU-R1 - 12-28-09	
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Taylor CHPRC	DEC 30 2009 0820
A.D. Taylor CHPRC	DEC 30 2009 11:30	CJ Olin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-135

COLLECTOR Roanne, Rost Turner Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-106	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 98	**ACTUAL SAMPLE DEPTH** 265.0'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-137

COLLECTOR
Rosane, Rust, Chamberlain

SAMPLING LOCATION
CS860 (299-E29-54); I-107

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 99

ACTUAL SAMPLE DEPTH
267.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T30

PRESERVATION	Cool~4C	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									
B22NJ8	SOIL	12-29-09	0822	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-29-09/ 1530	MO-413 SSU-R1	12-29-09/ 1530
MO-413 SSU-R1	DEC 30 2009 0830	A.D. Turner CHPRC	DEC 30 2009 0830
A.D. Turner CHPRC	DEC 30 2009 11:30	C. Sowa	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-137

COLLECTOR Rosane Rust, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-107	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg. 99	**ACTUAL SAMPLE DEPTH** 267.5'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-138

COLLECTOR
Rosane, Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-108

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE BN

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 99

ACTUAL SAMPLE DEPTH
270.0'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T30

PRESERVATION	Cool~4C	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		
B22NJ9	SOIL	12-29-09	0840	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-29-09 / 1530	MO-413 SSU-R1	12-29-09 / 1530
MO-413 SSU-R1	DEC 30 2009 0800	A.D. Turner CHPRC	DEC 30 2009 0800
A.D. Turner CHPRC	DEC 30 2009 11:30	Kelly C. Lowe	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-138

COLLECTOR Rosane, Rust, Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5860 (299-E29-54); I-108	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 99	**ACTUAL SAMPLE DEPTH** 270.0	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-139

COLLECTOR
Rayne, Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-109

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 99

ACTUAL SAMPLE DEPTH
269.7 - 272.2

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD5

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
B22PY2	SOIL	12-29-09	0908

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rayne Larry Rayne	12-29-09	MO-413 SSU-R1 - 12-29-09	
MO-413 SSU-R1	DEC 30 2009 0840	A.D. Turner CHPRC	DEC 30 2009 0840
A.D. Turner CHPRC	DEC 30 2009 11:30	R. Irwin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-140

COLLECTOR
Rosnue, Rust, Chmeselian

SAMPLING LOCATION
C5860 (299-E29-54); I-110

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE BN

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 99

ACTUAL SAMPLE DEPTH
272.3

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD5

PRESERVATION	Cool-4C	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**									
B22NK0	SOIL	12-29-09	0930	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosnue Larry Rosnue	12-29-09 1530	MO-413 SSU-R1	12-29-09 1530
MO-413 SSU-R1	DEC 30 2009 0840	A.D. Turner	DEC 30 2009 0840
A.D. Turner	DEC 30 2009 11:30	CHPRC	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

TITLE **DATE/TIME**

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-140

COLLECTOR
Rosalie Rust. Chmoeccum

SAMPLING LOCATION
C5860 (299-E29-54); I-110

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N- 576-3 Pg 99

ACTUAL SAMPLE DEPTH
272.3'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

DATA TURNAROUND
45 Days / 45 Days

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-142

COLLECTOR: Rosane Rust Chamberlain	COMPANY CONTACT: DYEKMAN, DL	TELEPHONE NO.: 373-2530	PROJECT COORDINATOR: DYEKMAN, DL
PRICE CODE: 8N	DATA TURNAROUND: 45 Days / 45 Days		
SAMPLING LOCATION: C5860 (299-E29-54); I-111	PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	SAF NO.: F10-010	AIR QUALITY: ☐
ICE CHEST NO.: GWS-166	FIELD LOGBOOK NO.: HNF-N-576-3 pg 99	ACTUAL SAMPLE DEPTH: 275.5'	COA: 302143ES10
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=Vegetation, W=Water, WI=Wipe, X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T31

PRESERVATION	Cool-4C	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		
B22NK1	SOIL	12-29-09	1020	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-29-09 1530	MO-413 SSU-R1	12-29-09 1530
MO-413 SSU-R1	DEC 30 2009 0810	A.D. Turner CHPRC	DEC 30 2009 0810
A.D. Turner CHPRC	DEC 30 2009 11:30	C. Iovin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-142

COLLECTOR Rosane Rust Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-111	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 Pg 99	**ACTUAL SAMPLE DEPTH** 275.5	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE (Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-143

COLLECTOR
Rosalie Rust Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-112

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 Pg 99

ACTUAL SAMPLE DEPTH
278.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T31

PRESERVATION	Cool-4C	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**											
B22NK2 / SOIL / 12-29-09 / 1240	✓	✓									

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Lorance Larry Lorance	12-29-09/ 1530	MO-413 SSU-R1	12-29-09/ 1530
MO-413 SSU-R1	DEC 30 2009 0840	A.D. Turner	DEC 30 2009 0840
A.D. Turner CHPRC	DEC 30 2009 11:30	CHPRC	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION — **RECEIVED BY** — **TITLE** — **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-143

COLLECTOR
Rosane Rost. Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-112

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
INF-N-576-3 Pg 99

ACTUAL SAMPLE DEPTH
278.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-145

COLLECTOR
Rosine, Rust, Chamberlin

SAMPLING LOCATION
C5860 (299-E29-54); I-113

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 PG 99

ACTUAL SAMPLE DEPTH
280.0'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T32

PRESERVATION	Cool~4C	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										
B22NK3	SOIL	12-29-09	1256	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosine Larry Rosine 12-29-09	1530	MO-413 SSU-R1 12-29-09	1530
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner CHPRC	DEC 30 2009 0820
A.D. Turner CHPRC	DEC 30 2009 11:30	@ Jovin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-145

COLLECTOR Lanne, Rust, Chunsedin	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-113	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 99	**ACTUAL SAMPLE DEPTH** 280.0	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-147

COLLECTOR
Rosanne Rust Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-115

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 pg 99

ACTUAL SAMPLE DEPTH
282.7'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T33

PRESERVATION	Cool~4C	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									
B22NK4	SOIL	12-29-09	1357	✓	✓							

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosene Larry Rosene	12-29-09 / 1530	MO-413 SSU-R1	12-29-09 / 1530
MO-413 SSU-R1	DEC 30 2009 0820	A.D. Turner	DEC 30 2009 0820
A.D. Turner	DEC 30 2009 11:30	CHPRC	DEC 30 2009 11:30
CHPRC			

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-147

COLLECTOR Rosanne Rust Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-115	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-166	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 99	**ACTUAL SAMPLE DEPTH** 282.7'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
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ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-148

COLLECTOR
Rosane, Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-116

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 99

ACTUAL SAMPLE DEPTH
285.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B2ZT33

PRESERVATION	Cool-4C	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										
B22NK5	SOIL	12-29-09	1430	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-29-09/ 1530	7110-413 SSURI	12-29-09/ 1532
MO-413 SSU-RI	DEC 30 2009 0920	A.D. Turner	DEC 30 2009 0920
A.D. Turner CHPRC	DEC 30 2009 11:30	CHPRC C Jovin	DEC 30 2009 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-148

COLLECTOR
Rosave, Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-116

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 ⊡ 99

ACTUAL SAMPLE DEPTH
285.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A (Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-150

COLLECTOR
Rosanne Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-117

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-pg 99

ACTUAL SAMPLE DEPTH
287.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T34

PRESERVATION			Cool-4C	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**										
B22NK6	SOIL	12-29-09	1504	✓	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Russell Larry Russell	12-29-09/ 1530	MO-413 SSU-R1	12-29-09/ 1530
MO-413 SSU-R1	DEC 30 2009 0810	A.D. Turner CHPRC	DEC 30 2009 0810
A.D. Turner CHPRC	DEC 30 2009 11:30	C. Irvin	DEC 30 2009 11:30

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION **RECEIVED BY** **TITLE** **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-150

COLLECTOR
Rosanne Rust, Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-117

ICE CHEST NO.
GWS-166

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 99

ACTUAL SAMPLE DEPTH
287.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-151

COLLECTOR
Rooney, Rust, Farris

SAMPLING LOCATION
C5860 (299-E29-54); I-118

ICE CHEST NO.
Long - 094

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 p.100

ACTUAL SAMPLE DEPTH
290.0

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T34

PRESERVATION	Cool-4C	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										
B22NK7	SOIL	12-30-09	0944	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rooney Larry Rooney 12-30-09	11:30	C. Lovin	12/30/09 11:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY — TITLE — DATE/TIME

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-151** |

COLLECTOR Rosane, Rust, Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-118	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	**45 Days / 45 Days**
ICE CHEST NO. 9W5-094	**FIELD LOGBOOK NO.** HNF-N-576-3 (pg 100)	**ACTUAL SAMPLE DEPTH** 290.0"	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Antimony, Potassium, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-152

COLLECTOR Rosnie, Rick Jones	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-119	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO. GWS-049	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 100	**ACTUAL SAMPLE DEPTH** 287.5-292.0	**COA** 302143E510
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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD6

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
B22PY3	SOIL	12-30-09	0905

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosnie, Larry Rosnie	12-30-09 11:30	C. Irvin	12/30/09 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-153

COLLECTOR
Rosane, Rust Farris

SAMPLING LOCATION
C5860 (299-E29-54); I-120

ICE CHEST NO.
GWS 094

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 100

ACTUAL SAMPLE DEPTH
292.5'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22TD6

PRESERVATION			Cool-4C	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**									
B22NK8	SOIL	12-30-09	0926	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-30-09/ 11:30	C. Fouler	12/30/09 11:30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION | **RECEIVED BY**

FINAL SAMPLE DISPOSITION | **DISPOSAL METHOD**

TITLE | **DATE/TIME**

DISPOSED BY | **DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-153

COLLECTOR Rosalie Rust Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-120	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GW3-094	**FIELD LOGBOOK NO.** HNF-N-576-3 to 100	**ACTUAL SAMPLE DEPTH** 292.5	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-155

COLLECTOR
Rosane Rust FARRIS

SAMPLING LOCATION
C5860 (299-E29-54); I-121

ICE CHEST NO.
GWS-094

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3 pg 100

ACTUAL SAMPLE DEPTH
295.0'

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T35

PRESERVATION	Cool-4C	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										
B22NK9	SOIL	12-30-09	1033	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	12-30-09 11:30	C.Lovum	12/30/09 11:30

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

LABORATORY SECTION | **RECEIVED BY** | **TITLE** | **DATE/TIME**

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-155

COLLECTOR Rosanne Rust Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL	**PRICE CODE** 8N	**DATA TURNAROUND**
SAMPLING LOCATION C5860 (299-E29-54); I-121	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010	**AIR QUALITY** ☐	45 Days / 45 Days
ICE CHEST NO. GWS-094	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 100	**ACTUAL SAMPLE DEPTH** 295.0'	**COA** 302143ES10	**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.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate Ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-156 PAGE 1 OF 1

COLLECTOR
Rosanne Rust Farris

SAMPLING LOCATION
C5860 (299-E29-54); I-122

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE BN

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

AIR QUALITY ☐

FIELD LOGBOOK NO.
HNF-N-576-3 vs 100

ACTUAL SAMPLE DEPTH
294.7' - 297.2'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T35

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									
B22PY4	SOIL	12-30-09	1225	✓								

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-30-09	1520	MO-413 SSU R1 - 12-30-09 / 1520	
CHPRO MO-413 SSU-R1	JAN 05 2010 0940	J. Garcia CHPRO	JAN 05 2010 0940
J. Garcia CHPRO MO-413 SSU-R1	JAN 05 2010	Ben Williams	11:50 JAN 05 2010
11:50			

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(01/06)

GK N.P. Collier SDG# ESL090000

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-158

COLLECTOR
Rosanne Rust Farris

SAMPLING LOCATION
C5860 (299-E29-54); I-123

ICE CHEST NO.
GWS-154

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

FIELD LOGBOOK NO.
HNF-N-576-3,13 100

ACTUAL SAMPLE DEPTH
297.5

OFFSITE PROPERTY NO.
N/A

PROJECT COORDINATOR
DYEKMAN, DL

SAF NO.
F10-010

COA
302143ES10

BILL OF LADING/AIR BILL NO.
N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T36

PRESERVATION	Cool--4C	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									
B22NL0	SOIL	12-30-09	1235	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane 12-30-09	1520	MO-413 SSU-R1 12-30-09	1520
J. Gross CHPRC MO-413 SSU-R1	JAN 05 2010 0940	J. Gross CHPRC	JAN 05 2010 0940
J. Gross CHPRC	11:50 JAN 05 2010	Ben Williams/	11:50 JAN 05 2010
	~~JAN 05 2010~~		

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-158

COLLECTOR Rosane, Rust Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-123	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-154	**FIELD LOGBOOK NO.** HNF-N-376 Pgs 100	**ACTUAL SAMPLE DEPTH** 297.5'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

☐ Original

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-159 PAGE 1 OF 1

COLLECTOR Roque Rust Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
PRICE CODE 8N	**DATA TURNAROUND** 45 Days / 45 Days		
SAMPLING LOCATION C5860 (299-E29-54); I-124	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	**SAF NO.** F10-010	**AIR QUALITY** ☐
ICE CHEST NO. GWS -154	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 100	**ACTUAL SAMPLE DEPTH** 299.3' - 302.3'	**COA** 302143ES10
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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T36

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
B22PY5	SOIL	12-30-09	1335

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosene Larry Rosene	12-30-09 / 1520	MO-413 SSURI - 12-30-09	/ 1520
J. Garcia CHPRC MO-413 SSURI	JAN 05 2010 0940	J. Garcia CHPRC	JAN 05 2010 0940
J. Garcia CHPRC	11:50 JAN 05 2010	Ben Williams	11:50 JAN 05 2010

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)Density; CATIONEXCH_TR; Particle Size (Dry Sieve) - D422; Particle Size (Hydrometer) - D422; KD - Batch;

ORIGINAL

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-161

COLLECTOR: Rosanne Rust Farris	COMPANY CONTACT: DYEKMAN, DL	TELEPHONE NO.: 373-2530	PROJECT COORDINATOR: DYEKMAN, DL
PRICE CODE: 8N	DATA TURNAROUND: 45 Days / 45 Days		
SAMPLING LOCATION: C5860 (299-E29-54); I-125	PROJECT DESIGNATION: ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling	SAF NO.: F10-010	AIR QUALITY: ☐
ICE CHEST NO.: GWS-154	FIELD LOGBOOK NO.: HNF-N-576-3, pg 100	ACTUAL SAMPLE DEPTH: 301.0'	COA: 302143ES10
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=Vegetation
W=Water
WI=Wipe
X=Other

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T37

PRESERVATION	Cool-4C	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
B22NL1	SOIL	12-30-09	1400

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosanne Samplesane	12-30-09/ 1520	MO-413 SSU-R1	12-30-09/ 1520
J. Garrett CHPRC	JAN 05 2010	CHPRC	JAN 05 2010
CHPRC	11:50 JAN 05 2010	Ben Williams/	11:50 JAN 05 2010

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

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

CH2MHill Plateau Remediation Company | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **F10-010-161** |

COLLECTOR Rosane Rust Farris	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-125	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-154	**FIELD LOGBOOK NO.** HNF-N-576-3 pg 100	**ACTUAL SAMPLE DEPTH** 301.0'	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** ESL shall submit all data deliverables according to SOW "200-LW-2 and 200-BP-5 Operable Units/Contaminant and Transport Property Analysis and Report for Vadose Zone Sediments at Borehole C5860/Well 299-E29-54" and shall adhere to all S&GRP standard protocol.
(1)6010M_ICP_ASTM_AE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_ICP_ASTM_AE (Add-On) {Lead, Thallium, Selenium} 6010M_METALS_ICP_WE (TAL) {Sodium, Aluminum, Iron, Potassium, Antimony, Nickel, Calcium, Magnesium, Silver} 6010M_METALS_ICP_WE (Add-On) {Lead, Thallium, Selenium} 6020M_ICPMS_ASTM_AE (TAL) {Chromium, Cadmium} 6020M_ICPMS_ASTM_AE (Add-On) {Arsenic} 6020M_METALS_ICPMS_WE (TAL) {Chromium, Cadmium} 6020M_METALS_ICPMS_WE (Add-On) {Arsenic} 6020M_HG_ICPMS_AE; 6020M_HG_ICPMS_WE; Chromium Hex - 7196; RADISO_ICPMS_ASTM_AE {Uranium-238, Technetium-99} RADISO_ICPMS_WE {Iodine-129, Uranium-238, Technetium-99} I-129 by ICPMS {Iodine-129} GAMMA_GS; URANIUM ISOTOPIC RATIOS; ALPHA_BETA_AE {Gross beta, Gross alpha} ALPHA_BETA_WE {Gross beta, Gross alpha} IC Anions - 9056_WE {Nitrate, Chloride, Phosphate, Fluoride, Nitrite, Sulfate} Cyanide (Total) - 335.2 {Cyanide} pH (Water) - 9045_WE; Conductivity - 9050_WE; TOC - ASTME1915A {Total organic carbon, Total Inorganic Carbon, Total carbon} 2320_ALKALINITY {Carbonate ion, Bicarbonate, Alkalinity, Calcium Carbonate}

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-163

COLLECTOR
Rosanne Rust Turner Chamberlain

SAMPLING LOCATION
C5860 (299-E29-54); I-127

ICE CHEST NO.
GWS-16

SHIPPED TO
Environmental Sciences Laboratory

COMPANY CONTACT
DYEKMAN, DL

TELEPHONE NO.
373-2530

PROJECT COORDINATOR
DYEKMAN, DL

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / 45 Days

PROJECT DESIGNATION
ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling

SAF NO.
F10-010

FIELD LOGBOOK NO.
HNF-N-576-3 p 102

ACTUAL SAMPLE DEPTH
305.5'

COA
302143ES10

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

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

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B22T38

PRESERVATION	Cool-4C	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		
B22NL2	SOIL	1-5-10	1044	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosane Larry Rosane	1-5-10/ 1520	MO-413 SSU-R1	1-5-10/ 1520
MO-413 SSU-R1	JAN 11 2010 0900	R.C. Robb CHPRC Robb Robb	JAN 11 2010 0900
R.C. Robb CHPRC Robb Robb	JAN 11 2010	J. Kuhnyalw	JAN 11 2010
J. Kuhnyalw	11:40	Jm Kuhnyalw	11:40
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

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

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

SDG# ESL090009

WA 091105

SDG# ESL090009

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-010-163

COLLECTOR Rosemarie Tinsen Chamberlain	**COMPANY CONTACT** DYEKMAN, DL	**TELEPHONE NO.** 373-2530	**PROJECT COORDINATOR** DYEKMAN, DL
SAMPLING LOCATION C5860 (299-E29-54); I-127	**PROJECT DESIGNATION** ARRA 200-LW-2 OU Characterization Vadose Zone - Geochemical Modeling		**SAF NO.** F10-010
ICE CHEST NO. GWS-16	**FIELD LOGBOOK NO.** HNF-N-576-3 p2 102	**ACTUAL SAMPLE DEPTH** 305.5	**COA** 302143ES10
SHIPPED TO Environmental Sciences Laboratory	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

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☐ ORIGINAL