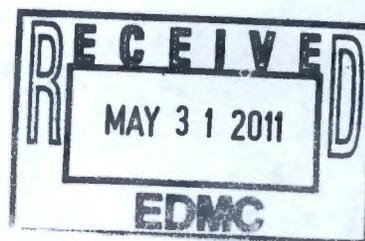


SDM Disclaimer

0096732

The data herein cannot be reconciled by Sample Data Management (SDM) against the analytical requests on the submitted Chains of Custody, due to the nature of Environmental Sciences Laboratory (ESL) special studies. ESL scientists choose and analyze samples at their own discretion which may or may not reflect the planned analysis generated by SDM.



ESL 080017

2009

ESL080017

RECEIVED AUGUST 14, 2009



U.S. DEPARTMENT OF  
**ENERGY**

PNNL-18660

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

# Analytical Data Report for Water Samples Collected From BP-5 Operable Unit D & E Wells (C5856 & C5857)

Michael J. Lindberg  
Christopher F. Brown

August 2009

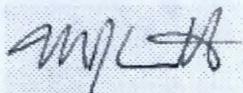


**Pacific Northwest**  
NATIONAL LABORATORY

08/11/09 13:06

To: Dale Dyekman

From: Michael J. Lindberg



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

Subject: Analytical Data Report For Ground Water Samples Collected From BP 5 D (C5856) and E Well (C5857),  
Sample Delivery Group ESL080017, SAF Number F08-076

This letter contains the following information for sample delivery group ESL080017

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

## **Introduction**

Between April 22, 2008 and June 3, 2008 ground water samples were received from BP 5 D and E wells for chemical analysis.

## **Analytical Results/Methodology**

The analyses for this project were performed at the 325 building located in the 300 Area of the Hanford Site. The analyses were performed according to Pacific Northwest National Laboratory (PNNL) approved procedures and/or nationally recognized test procedures. The data sets include the sample identification numbers, analytical results, estimated quantification limits (EQL), and quality control data.

## **Quality Control**

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

## **Definitions**

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

## **Sample Receipt**

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

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

## **Holding Times**

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

## **Analytical Results**

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

## Case Narrative Report

### Hold Time:

Due to the requirements of the statement of work and sampling events in the field, the 28 day and the 48 hr requirements could not be met. The statement of work requires samples to be selected at the completion of the borehole. All applicable hold times were started from the time of preparation and not the time of sampling.

### Preparation Blank (PB):

There were no preparations performed on these samples prior to analysis. No blanks were analyzed.

### Duplicate (DUP):

There were no preparations performed on these samples prior to analysis. No duplicates were analyzed.

### Laboratory Control Samples (LCS):

There were no preparations performed on these samples prior to analysis. No LCS were analyzed.

### Post Spike (PS):

There were no preparations performed on these samples prior to analysis. No post spikes were analyzed.

### Matrix Spike (MS):

Not applicable.

### Other QC Criteria:

No discrepancies noted.

## DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor Battelle Memorial Institute, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or Battelle Memorial Institute. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

## SAMPLES INCLUDED IN THIS REPORT

### 200 BP 5 OU, C5857 E-Well VZ

HEIS No.	Laboratory ID	Matrix	Date Collected	Date Received
B1TNV4	0804013-01	WATER	4/10/08 09:55	4/22/08 14:00
B1TT54	0804013-02	WATER	5/28/08 13:10	6/3/08 13:15
B1TT55	0804013-03	WATER	5/28/08 13:10	6/3/08 13:15

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

---

Anions By Ion Chromatography  
Alkalinity, Titrimetic (pH 4.5)  
Cyanide by Mircodistillation/Colorimetric  
Iodine 129 Water by ICPMS  
Metals Water by ICPMS  
Metals Water by ICPOES  
pH of Waters By Electrode  
Specific Conductance  
Tc\_U Water by ICPMS

**SAMPLES ANALYZED IN THIS REPORT**

<b>HEIS No.</b>	<b>Laboratory ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
B1TNV4	0804013-01	WATER	4/10/08 09:55	4/22/08 14:00
B1TT54	0804013-02	WATER	5/28/08 13:10	6/3/08 13:15
B1TT55	0804013-03	WATER	5/28/08 13:10	6/3/08 13:15

**Wet Chemistry**

**Alkalinity as CaCO<sub>3</sub> (ug/mL) by Standard Methods 2320B**

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804013-01	B1TNV4	8.89E1	N/A	5/30/08	8F02001
0804013-02	B1TT54	8.66E1	N/A	7/01/08	8F24005
0804013-03	B1TT55	8.36E1	N/A	7/01/08	8F24005

**Wet Chemistry**

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

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804013-01	B1TNV4	2.98E0	1.00E-2	5/28/08	8F02003
0804013-02	B1TT54	2.61E0	1.00E-2	7/01/08	8F24006
0804013-03	B1TT55	2.81E0	1.00E-2	7/01/08	8F24006

**Wet Chemistry**

**pH (pH Units) by AGG-pH-001**

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804013-01	B1TNV4	7.45E0	N/A	5/29/08	8F02002
0804013-02	B1TT54	7.13E0	N/A	7/01/08	8F24007
0804013-03	B1TT55	7.24E0	N/A	7/01/08	8F24007

### Anions by Ion Chromatography

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>BITNV4</b>	<b>Lab ID: 0804013-01</b>					
16984-48-8	Fluoride	<2.00E0	ug/mL	2.00E0	11/12/08	8F04002	AGG-IC-001
16887-00-6	Chloride	4.59E1	ug/mL	5.00E0	11/12/08	8F04002	AGG-IC-001
14797-65-0	Nitrite	<1.00E3	ug/mL	1.00E3	6/04/08	8F04002	AGG-IC-001
14797-55-8	Nitrate	1.45E3	ug/mL	1.00E3	6/04/08	8F04002	AGG-IC-001
14808-79-8	Sulfate	2.44E2	ug/mL	1.50E1	11/12/08	8F04002	AGG-IC-001
14265-44-2	Phosphate	<1.50E1	ug/mL	1.50E1	11/12/08	8F04002	AGG-IC-001
<b>HEIS No.</b>	<b>BITT54</b>	<b>Lab ID: 0804013-02</b>					
16984-48-8	Fluoride	<2.00E0	ug/mL	2.00E0	6/24/08	8F24003	AGG-IC-001
16887-00-6	Chloride	4.85E1	ug/mL	5.00E0	6/24/08	8F24003	AGG-IC-001
14797-65-0	Nitrite	<1.00E1	ug/mL	1.00E1	6/24/08	8F24003	AGG-IC-001
14797-55-8	Nitrate	1.41E3	ug/mL	1.00E2	6/30/08	8F24003	AGG-IC-001
14808-79-8	Sulfate	2.23E2	ug/mL	1.50E1	6/24/08	8F24003	AGG-IC-001
14265-44-2	Phosphate	<1.50E1	ug/mL	1.50E1	6/24/08	8F24003	AGG-IC-001
<b>HEIS No.</b>	<b>BITT55</b>	<b>Lab ID: 0804013-03</b>					
16984-48-8	Fluoride	<2.00E0	ug/mL	2.00E0	6/24/08	8F24003	AGG-IC-001
16887-00-6	Chloride	4.84E1	ug/mL	5.00E0	6/24/08	8F24003	AGG-IC-001
14797-65-0	Nitrite	<1.00E1	ug/mL	1.00E1	6/24/08	8F24003	AGG-IC-001
14797-55-8	Nitrate	1.38E3	ug/mL	1.00E2	6/30/08	8F24003	AGG-IC-001
14808-79-8	Sulfate	2.21E2	ug/mL	1.50E1	6/24/08	8F24003	AGG-IC-001
14265-44-2	Phosphate	<1.50E1	ug/mL	1.50E1	6/24/08	8F24003	AGG-IC-001

**Cyanide by Mircodistillation/Colorimetric**

**Cyanide (ug/mL) by MICRODIST Cyanide Method**

Lab ID	HEIS No.	Results	EQL	Analyzed	Batch
0804013-01	B1TNV4	4.77E-1	3.33E-1	12/10/08	9H06006
0804013-02	B1TT54	6.10E-1	3.33E-1	12/10/08	9H06006
0804013-03	B1TT55	4.79E-1	3.33E-1	12/10/08	9H06006

**Total Metals by PNNL-AGG-ICP-AES**

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>BITNV4</b>	<b>Lab ID:</b>		<b>0804013-01</b>			
7429-90-5	Aluminum	<5.22E1	ug/L	5.22E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-39-3	Barium	1.56E2	ug/L	1.95E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	2.02E5	ug/L	8.66E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-89-6	Iron	3.97E1	ug/L	2.96E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.79E4	ug/L	1.52E3	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	6.49E4	ug/L	1.50E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	7.77E2	ug/L	7.62E0	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<2.84E1	ug/L	2.84E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.56E2	ug/L	1.56E2	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.37E5	ug/L	6.48E2	7/30/08	8G22001	PNNL-AGG-ICP-AES
<b>HEIS No.</b>	<b>BITT54</b>	<b>Lab ID:</b>		<b>0804013-02</b>			
7429-90-5	Aluminum	<5.22E1	ug/L	5.22E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-39-3	Barium	2.07E2	ug/L	1.95E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	2.36E5	ug/L	8.66E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-89-6	Iron	4.01E2	ug/L	2.96E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.82E4	ug/L	1.52E3	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	6.28E4	ug/L	1.50E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.02E3	ug/L	7.62E0	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<2.84E1	ug/L	2.84E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.56E2	ug/L	1.56E2	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.69E5	ug/L	6.48E2	7/30/08	8G22001	PNNL-AGG-ICP-AES
<b>HEIS No.</b>	<b>BITT55</b>	<b>Lab ID:</b>		<b>0804013-03</b>			
7429-90-5	Aluminum	<5.22E1	ug/L	5.22E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-39-3	Barium	2.04E2	ug/L	1.95E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-70-2	Calcium	2.38E5	ug/L	8.66E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-89-6	Iron	3.04E2	ug/L	2.96E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-09-7	Potassium	1.81E4	ug/L	1.52E3	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-95-4	Magnesium	6.32E4	ug/L	1.50E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7439-96-5	Manganese	1.00E3	ug/L	7.62E0	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-02-0	Nickel	<2.84E1	ug/L	2.84E1	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-28-0	Thallium	<1.56E2	ug/L	1.56E2	7/30/08	8G22001	PNNL-AGG-ICP-AES
7440-23-5	Sodium	2.71E5	ug/L	6.48E2	7/30/08	8G22001	PNNL-AGG-ICP-AES

### Radionuclides By ICP-MS

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>B1TNV4</b>	<b>Lab ID: 0804013-01</b>					
15046-84-1	Iodine-129	<5.00E-2	ug/L	5.00E-2	11/10/08	8K07001	PNNL-AGG-415
<b>HEIS No.</b>	<b>B1TT54</b>	<b>Lab ID: 0804013-02</b>					
15046-84-1	Iodine-129	<5.00E-2	ug/L	5.00E-2	11/10/08	8K07001	PNNL-AGG-415
<b>HEIS No.</b>	<b>B1TT55</b>	<b>Lab ID: 0804013-03</b>					
15046-84-1	Iodine-129	<5.00E-2	ug/L	5.00E-2	11/10/08	8K07001	PNNL-AGG-415

### Radionuclides By ICP-MS

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>BITNV4</b>	<b>Lab ID: 0804013-01</b>					
14133-76-7	Technetium-99	8.16E-1	ug/L	4.75E-3	7/08/08	8G07016	PNNL-AGG-415
	Uranium 238	1.09E2	ug/L	2.65E-2	7/08/08	8G07016	PNNL-AGG-415
<b>HEIS No.</b>	<b>BITT54</b>	<b>Lab ID: 0804013-02</b>					
14133-76-7	Technetium-99	1.38E0	ug/L	4.75E-3	7/08/08	8G07016	PNNL-AGG-415
	Uranium 238	4.70E1	ug/L	2.65E-2	7/08/08	8G07016	PNNL-AGG-415
<b>HEIS No.</b>	<b>BITT55</b>	<b>Lab ID: 0804013-03</b>					
14133-76-7	Technetium-99	1.31E0	ug/L	4.75E-3	7/08/08	8G07016	PNNL-AGG-415
	Uranium 238	4.59E1	ug/L	2.65E-2	7/08/08	8G07016	PNNL-AGG-415

**RCRA Metals By PNNL-AGG-415**

CAS #	Analyte	Results	Units	EQL	Analyzed	Batch	Method
<b>HEIS No.</b>	<b>BITNV4</b>	<b>Lab ID:</b>		<b>0804013-01</b>			
14092-98-9	Chromium	<1.21E0	ug/L	1.21E0	7/22/08	8G08002	PNNL-AGG-415
14119-06-3	Copper	3.17E1	ug/L	1.61E0	7/22/08	8G08002	PNNL-AGG-415
7440-38-2	Arsenic	<3.26E0	ug/L	3.26E0	7/22/08	8G08002	PNNL-AGG-415
14687-58-2	Selenium	1.13E1	ug/L	7.27E0	7/22/08	8G08002	PNNL-AGG-415
14378-37-1	Silver	<3.30E-1	ug/L	3.30E-1	7/22/08	8G08002	PNNL-AGG-415
14336-64-2	Cadmium	<7.24E-1	ug/L	7.24E-1	7/22/08	8G08002	PNNL-AGG-415
14265-72-6	Antimony	<6.52E-1	ug/L	6.52E-1	7/22/08	8G08002	PNNL-AGG-415
13966-28-4	Lead	<4.51E-1	ug/L	4.51E-1	7/22/08	8G08002	PNNL-AGG-415
<b>HEIS No.</b>	<b>BITT54</b>	<b>Lab ID:</b>		<b>0804013-02</b>			
14092-98-9	Chromium	<1.21E0	ug/L	1.21E0	7/22/08	8G08002	PNNL-AGG-415
14119-06-3	Copper	3.71E1	ug/L	1.61E0	7/22/08	8G08002	PNNL-AGG-415
7440-38-2	Arsenic	<3.26E0	ug/L	3.26E0	7/22/08	8G08002	PNNL-AGG-415
14687-58-2	Selenium	1.25E1	ug/L	7.27E0	7/22/08	8G08002	PNNL-AGG-415
14378-37-1	Silver	<3.30E-1	ug/L	3.30E-1	7/22/08	8G08002	PNNL-AGG-415
14336-64-2	Cadmium	<7.24E-1	ug/L	7.24E-1	7/22/08	8G08002	PNNL-AGG-415
14265-72-6	Antimony	<6.52E-1	ug/L	6.52E-1	7/22/08	8G08002	PNNL-AGG-415
13966-28-4	Lead	<4.51E-1	ug/L	4.51E-1	7/22/08	8G08002	PNNL-AGG-415
<b>HEIS No.</b>	<b>BITT55</b>	<b>Lab ID:</b>		<b>0804013-03</b>			
14092-98-9	Chromium	<1.21E0	ug/L	1.21E0	7/22/08	8G08002	PNNL-AGG-415
14119-06-3	Copper	3.11E1	ug/L	1.61E0	7/22/08	8G08002	PNNL-AGG-415
7440-38-2	Arsenic	<3.26E0	ug/L	3.26E0	7/22/08	8G08002	PNNL-AGG-415
14687-58-2	Selenium	1.30E1	ug/L	7.27E0	7/22/08	8G08002	PNNL-AGG-415
14378-37-1	Silver	<3.30E-1	ug/L	3.30E-1	7/22/08	8G08002	PNNL-AGG-415
14336-64-2	Cadmium	<7.24E-1	ug/L	7.24E-1	7/22/08	8G08002	PNNL-AGG-415
14265-72-6	Antimony	<6.52E-1	ug/L	6.52E-1	7/22/08	8G08002	PNNL-AGG-415
13966-28-4	Lead	<4.51E-1	ug/L	4.51E-1	7/22/08	8G08002	PNNL-AGG-415

COLLECTOR  
NCO SAMPLER

*BAILEY*

COMPANY CONTACT  
TRENT, SJ

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE 7N

DATA  
TURNAROUND  
45 Days / 45  
Days

SAMPLING LOCATION  
C5856, I-141-D

PROJECT DESIGNATION  
200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342

SAF NO.  
F08-076

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.  
*HNF-N-488-1*

ACTUAL SAMPLE DEPTH  
*232.5'*

COA  
123514E510

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  
Dt =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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE  
Radioactive Tie To B1TT56

PRESERVATION None

TYPE OF CONTAINER P

NO. OF CONTAINER(S) 1

VOLUME 1L

SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TT56	WATER	5-28-08	1310 ✓

*31394*

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>JR BAILEY / JR Bailey</i>	<i>5-28-08 1520</i>	<i>MOTRIB REF # 2</i>	<i>5-28-08 1520</i>
<i>NO 413 Ref #2</i>	<i>6-3-08</i>	<i>D. Parche</i>	<i>6-3-08</i>
<i>D. Parche</i>	<i>6-3-09</i>	<i>C. J. J. J.</i>	<i>6/3/08 1315</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

\*\* ESL will be responsible for shipping the Uranium Isotopic Ratios samples to Lawrence Berkeley National Laboratory. They will include the analytical results in their final data deliverable.

\*\* 1 1000 mL bottle of filtered but unpreserved water from each well once it is "completed" will be provided to ESL for Kd tests.

\*\* Analytical batch QC must be run on a sample associated with this SAF. (1)URANIUM ISOTOPIC RATIOS (Uranium-234/Uranium-238 ratio, Uranium-236/Uranium-238 Ratio, Uranium-238/Uranium-235 Ratio)

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY DATE/TIME

COLLECTOR  
NCO SAMPLER *BAILEY*  
SAMPLING LOCATION  
CS856, I-141  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342  
FIELD LOGBOOK NO.  
*HNF.N-488-1*  
ACTUAL SAMPLE DEPTH  
*232.5'*  
OFFSITE PROPERTY NO.  
SEE PTR

PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-076  
COA  
123514ES10  
BILL OF LADING/AIR BILL NO.  
SEE PTR

PRICE CODE 7N  
AIR QUALITY   
METHOD OF SHIPMENT  
FEDERAL EXPRESS

DATA  
TURNAROUND  
45 Days / 45  
Days

SHIPPED TO  
Environmental Sciences Laboratory

MATRIX\*  
A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
W1=Wipe  
X=Other  
POSSIBLE SAMPLE HAZARDS/ REMARKS  
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)  
SPECIAL HANDLING AND/OR STORAGE  
Radioactive Tie To B1TT56

PRESERVATION None  
TYPE OF CONTAINER P  
NO. OF CONTAINER(S) 1  
VOLUME 1L  
SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO. B1TT54  
MATRIX\* WATER  
SAMPLE DATE 5-28-08  
SAMPLE TIME 1310

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM  
*J. BAILEY*  
DATE/TIME  
*5-28-08 1520*  
RECEIVED BY/STORED IN  
*M0413 REF #2*  
DATE/TIME  
*5-28-08 1520*  
RELINQUISHED BY/REMOVED FROM  
*MO 413 Ref #2*  
DATE/TIME  
*6-3-08*  
RECEIVED BY/STORED IN  
*D. Parcken*  
DATE/TIME  
*6-3-08*  
RELINQUISHED BY/REMOVED FROM  
*D. Parcken*  
DATE/TIME  
*6-3-08*  
RECEIVED BY/STORED IN  
*E. Fouin*  
DATE/TIME  
*6/3/08*

*029688*

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
\*\* ESL will be responsible for shipping the Uranium Isotopic Ratios samples to Lawrence Berkeley National Laboratory. They will include the analytical results in their final data deliverable.  
\*\* 1 1000 mL bottle of filtered but unpreserved water from each well once it is "completed" will be provided to ESL for Kd tests.  
\*\* Analytical batch QC must be run on a sample associated with this SAF. (1)URANIUM ISOTOPIC RATIOS {Uranium-234/Uranium-238 ratio, Uranium-236/Uranium-238 Ratio, Uranium-238/Uranium-235 Ratio}

LABORATORY SECTION RECEIVED BY  
FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME  
DISPOSED BY DATE/TIME

COLLECTOR  
NCO SAMPLER - *MONTG/CHASCON*

SAMPLING LOCATION  
C5857, I-135

ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL

PROJECT DESIGNATION  
200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342

FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH  
*292.9*

SAF NO.  
F08-076

COA  
123515ES10

PRICE CODE 7N

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA TURNAROUND  
45 Days / 45 Days

SHIPPED TO  
Environmental Sciences Laboratory

OFFSITE PROPERTY NO.  
N/A

BILL OF LADING/AIR BILL NO.  
*MMV 4/30/08 (Have 1L un preserved)*

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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE  
Radioactive Tie to: B1TNV1

PRESERVATION  
*Cool-4C* None Cool

TYPE OF CONTAINER  
*G.P.*

NO. OF CONTAINER(S)  
1

VOLUME  
1000mL

SAMPLE ANALYSIS  
KD - Batch;  
*XX* SEE ITEM 1 IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TNV4	WATER	4/10/8	1755 (F) (F)

Lot\*

25294 29409

~~COPY~~ 4/10/08

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM <i>J. Montg</i>	RECEIVED BY/STORED IN <i>MD345 REF 1</i>
RELINQUISHED BY/REMOVED FROM <i>mojus Ref #1</i>	RECEIVED BY/STORED IN <i>D. Paech</i>
RELINQUISHED BY/REMOVED FROM <i>D. Paech</i>	RECEIVED BY/STORED IN <i>C. Iovin</i>
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

\*\* ESL will be responsible for shipping the Uranium Isotopic Ratios samples to Lawrence Berkeley National Laboratory. They will include the analytical results in their final data deliverable.

\*\* 1 1000 mL bottle of filtered but unpreserved water from each well once it is "completed" will be provided to ESL for Kd tests.

\*\* Analytical batch QC must be run on a sample associated with this SAF. (1)URANIUM ISOTOPIC RATIOS {Uranium-234/Uranium-238 ratio, Uranium-236/Uranium-238 Ratio, Uranium-238/Uranium-235 Ratio}

*\*(F) SAMPLE FILTERED*

*\*\* Sample taken back to sampler*

TITLE DATE/TIME

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY DATE/TIME

Page 17 of 17

Page 17 of 17