

FIELD SCREENING FINAL DATA DELIVERABLE COVER SHEET

Date: Monday, February 5, 2007

Sample Authorization Form (SAF) Number: I07-022

SDG Number (assigned by Sample Management): FP0417 *Daynes*
2/7/07

Attachments (check all that apply or N/A):

- Test Results
- Narrative Summary
- Chain of Custody(s)
- Logbook Pages
- Anomaly Report

Total number of pages (including cover sheet): 10

Comments:

ISRM - Hexavalent Chromium - Sulfate - Water

THESE TESTS WERE CONDUCTED USING QC-1



[Signature]

 Analyst Signature

[Signature]

 Reviewer's Signature

2-5-2007

 Date

2/5/07

 Date

Distribution: **CPP Sample Management A0-21**
Project (Specify)

Requires distribution to listed project personnel by Sample Management (check if applicable)

RECEIVED
AUG 20 2007

EDMC

On-Site Measurement of Cr +6

ISRM Groundwater

SAF:107-022

Procedure: GRP-EE-05-1.17

Logbook: HNF-N-296 7 Page 139

1/8/2007

Location	HEIS Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	Cr +6 (mg/L)	Conductivity (µS/cm)	Water Level (m TOC)
199-D4-15	B1LNH1*	107-022	1/8/2007	1336	DRB	Water	1/8/2007	15:45	LCP	1.494	694	26.598
199-D5-38	B1LNH5	107-022	1/8/2007	1150	DRB	Water	1/8/2007	15:45	LCP	0.381	464	26.732
199-D5-38	B1LNH7	107-022	1/8/2007	1150	DRB	Water	1/8/2007	15:45	LCP	0.382	464	26.732
199-D5-39	B1LNJ0*	107-022	1/8/2007	1219	DRB	Water	1/8/2007	15:45	LCP	1.442	488	NA
199-D5-43	B1LNJ3	107-022	1/8/2007	1303	DRB	Water	1/8/2007	15:45	LCP	0.735	569	26.396

* 2X dilution

Analyst(s): J.D. Mehrer/ L.C. Petersen

Date: 1/12/2007

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On-Site Measurement of SO₄

ISRM Groundwater

SAF:107-022

Procedure: GRP-EE-05-1.18

Logbook: HNF-N-296 7 Page 141

1/8/2007

Location	HEIS Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	SO ₄ (mg/L)
199-D4-15	B1LNH2*	107-022	1/8/2007	1336	DRB	Water	1/8/2007	16:40	LCP	80
199-D5-38	B1LNH6	107-022	1/8/2007	1150	DRB	Water	1/8/2007	16:40	LCP	36
199-D5-38	B1LNH8	107-022	1/8/2007	1150	DRB	Water	1/8/2007	16:40	LCP	38
199-D5-39	B1LNJ1	107-022	1/8/2007	1219	DRB	Water	1/8/2007	16:40	LCP	46
199-D5-43	B1LNJ4	107-022	1/8/2007	1303	DRB	Water	1/8/2007	16:40	LCP	59

** 4X dilution

Analyst(s): J.D. Mehrer/ L.C. Petersen

Date: 1/12/2007

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ISRM GW - C+6
January 2007

L.C. PETERSEN 139
Petersen GRAM, Inc

Hexavalent Chromium Daily Activity Log

Project: 100-ISRM GW Monitoring

SAF I07-022

Logbook HNF-N-296 7

Date: 1/8/07

JAN 11 2007
Petersen

1400	L.C. Petersen arrived on-site at 200W, MO-612 field laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 951, low range hexavalent chromium.
1415	Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A5354, exp. December 2010, to 29.76 mL of deionized water.
1545	Diluted samples B1LNH1 & B1LNJ0 2X by adding 10-mL sample to 10-mL deionized water. Other samples were not diluted. After pulling standard, blank, and sample fluids into hexavalent chromium ampules (lot # A6215, exp. May 2009), analyzed samples.

Sample #	Well #	SAF #	Concentration (mg/L)	Date Sampled	Time Sampled	Sampler	Conductivity (µs/cm)	Water Depth-m(TOC)
Blank	----	----	0.002	----	----	----	----	----
0.10 mg/L std.	----	----	0.104	----	----	----	----	----
B1LNH1*	199-D4-15	I07-022	1.494	1/8/07	1336	DRB	694	26.598
B1LNH5	199-D5-38	I07-022	0.381	1/8/07	1150	DRB	464	26.732
B1LNH7	199-D5-38	I07-022	0.382	1/8/07	1150	DRB	464	26.732
B1LNJ0*	199-D5-39	I07-022	1.442	1/8/07	1219	DRB	488	NA
B1LNJ3	199-D5-43	I07-022	0.735	1/8/07	1303	DRB	569	26.396
0.10 mg/L std.	----	----	0.103	----	----	----	----	----
Blank	----	----	0.002	----	----	----	----	----

* 2X dilution

JAN 11 2007

JAN 31 2007

Reviewed

By: M.A. Baechler

L.C. PETERSEN

Petersen

M.A. Baechler

JAN 11 2007

00000003

ISRM GW Monitoring - 204
January 2007

Petersen, GWM, etc
L.C. PETERSEN 141
201

Sulfate Daily Activity Log
Project: ISRM GW Monitoring
SAF I07-022
Logbook HNF-N-296 7
Date: 1/8/07

JAN 11 2007
L.C. Petersen

1400	L.C. Petersen arrived on-site at 200W, MO-612 field laboratory. Set up to analyze samples for sulfate using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 952, sulfate.
1620	Prepared 50 mg/L standard by adding 1.5 mL of 1000 mg/L HACH sulfate standard, lot #A1214, no expiration, to 28.50 mL of deionized water.
1640	Diluted samples B1LNH2 & B1LNJ1 4X by adding 5-mL sample to 15-mL deionized water. Other samples were not diluted. After pulling standard, blank, and sample fluids into sulfate ampules (#A6249, expiration September 2011), analyzed samples.
1715	Concentration for the standard was low, at 20 mg/L. Also, the results for B1LNH2 & B1LNJ1 were lower than expected, and the results for duplicate samples B1LNH6 & B1LNH8 were dissimilar (51 mg/L and 38 mg/L respectively). Due to these irregularities, reran entire analysis. Diluted samples B1LNH2 & B1LNJ1 4X by adding 5-mL sample to 15-mL deionized water, and by 2X by adding 10-mL sample to 10-mL deionized water. Also ran all five samples without dilution, and filled an additional ampul with standard. After pulling standard, blank, and sample fluids into sulfate ampules (#A6249, expiration September 2011), re-analyzed samples.
1715	Standard concentrations were still low, at 29 mg/L and 16 mg/L. Higher values were obtained for the diluted samples, B1LNH2 & B1LNJ1 (the 4X dilution value is reported for B1LNH2 and undiluted value is reported for B1LNJ1). The results for duplicate samples B1LNH6 & B1LNH8 were again dissimilar (36 mg/L and 50 mg/L respectively). However, when combined with the original results, two pairs of similar data (36 mg/L and 38 mg/L, and 51 mg/L and 50 mg/L) emerge. The 59 mg/L value reported upon re-analysis for sample B1LNJ4 was similar to the 60 mg/L initially reported. Reported low sulfate standard results and other unusual results to Fluor contact, Mike Baechler.

Sample #	Well #	SAF #	Concentration (mg/L)	Date Sampled	Time Sampled	Sampler
Blank	---	---	0	---	---	---
50 mg/L std.	---	---	29	---	---	---
B1LNH2*	199-D4-15	I07-022	80	1/8/07	1336	DRB
B1LNH6	199-D5-38	I07-022	36	1/8/07	1150	DRB
B1LNH8	199-D5-38	I07-022	38	1/8/07	1150	DRB
B1LNJ1	199-D5-39	I07-022	46	1/8/07	1219	DRB
B1LNJ4	199-D5-43	I07-022	59	1/8/07	1303	DRB
50 mg/L std.	---	---	29	---	---	---
Blank	---	---	0	---	---	---

* 4X Dilution

L.C. PETERSEN
L.C. Petersen

Reviewed
By: M.A. Baechler

JAN 31 2007
M.A. Baechler

JAN 11 2007

Collector Fluor Hanford D. R. BREWINGTON	Contact/Requester Dot Stewart	Telephone No. MSIN FAX 509-376-5056
SAF No. 107-022	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title ISRM-LOL JANUARY 2007	Logbook: HNF-N-S06-3	Ice Chest No. 600-06-8 Temp.
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol CERCLA	Priority: 45 Days	Offsite Property No.

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 INSTRUCTIONS **Hold Time** **Total Activity Exemption: Yes No**
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LNH5 (F)		W	1/8/07	1150	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B1LNH6		W	↓	↓	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None
<div style="font-size: 2em; opacity: 0.5; transform: rotate(-45deg); position: absolute; top: 50%; left: 50%;"> R. Wall 1/8/07 </div>							

Relinquished By Fluor Hanford D. R. BREWINGTON	Print <i>D.R. Brewington</i>	Sign <i>D.R. Brewington</i>	Date/Time JAN 08 2007	500	Received By LC Petersen	Print <i>LC Petersen</i>	Sign <i>LC Petersen</i>	Date/Time JAN 08 2007	1500
Relinquished By	Date/Time	Received By	Date/Time		Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time		Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time		Relinquished By	Date/Time	Received By	Date/Time	

FINAL SAMPLE DISPOSITION **RETURNED TO OU** **Disposed By** **LC. PETERSEN** **Date/Time** **1/8 2007 1730**

- Matrix ***
- S = Soil
 - SE = Sediment
 - SO = Solid
 - SI = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solid
 - DL = Drum Liquid
 - T = Tissue
 - WI = Wine
 - L = Liquid
 - V = Vegetation
 - X = Other

00000006

Collector Fluor Hanford D. R. BREWINGTON	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN	FAX
SAF No. 107-022	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title ISRM-LOI JANUARY 2007	Logbook: HNF-N-506-3	Ice Chest No. 600-06-8	Temp.	
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.		
Protocol CERCLA	Priority: 45 Days	Offsite Property No.		

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 INSTRUCTIONS **Hold Time** **Total Activity Exemption: Yes No**
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LNH7 (F)		W	1/8/07	1150	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B1LNH8		W	↓	↓	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None
<i>P. Wall</i> 1/8/07							

Relinquished By Fluor Hanford D. R. BREWINGTON	Print <i>D.R. Brewington</i> Sign	Date/Time JAN 08 2007 1500	Received By <i>L.C. Petersen</i>	Print <i>Petersen</i> Sign	Date/Time JAN 08 2007 1500	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge WL = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	

FINAL SAMPLE DISPOSITION Disposed/Returned (e.g. Return to customer, per lab procedure, used in process) **RETURNED TO OU** Disposed By *L.C. PETERSEN* Date/Time **JAN 8 2007 1730**

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