0058737

FIELD SCREENING
FINAL DATA DELIVERABLE COVER SHEET

Date: Tuesday, December 03, 2002

Sample Authorization Form (SAF) Number: I03-005

SDG Number (assigned by Sample Management): FP0044 Dayus 12/4/02

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

X	Test Results
N/A	Narrative Summary
X	Chain of Custody(s)
X	Logbook Pages
N/A	Anomaly Report

Total number of pages (including cover sheet): 14

Comments:
ISRM - Hexavalent Chromium – Sulfate - Water

THESE TESTS WERE CONDUCTED USING QC-1

RECEIVED
FEB 07 2003
EDMC

DEC 2002
RECEIVED

Analyst Signature — Date 12/03/02

Reviewer's Signature — Date 12/13/02

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

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

0000001

On-Site Measurement of Cr +6

ISRM Groundwater

SAF:I03-005

Procedure: BHI-EE-05, FSP 1.17

Logbook: HNF-N-296 1 Page 48

11/19/2002

Location	Heis Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	Cr +6 (mg/L
199-D5-38	B15XD9	I03-005	11/18/2002	11:01	FMH	Water	11/19/2002	8:05	TMJ	1.36
199-D5-39	B15XF1	I03-005	11/18/2002	8:12	FMH	Water	11/19/2002	8:05	TMJ	4.65
199-D5-43	B15XF3	I03-005	11/18/2002	11:51	FMH	Water	11/19/2002	8:05	TMJ	0.736

Logbook: HNF-N-296 1 Page 51

11/21/2002

Location	Heis Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	Cr +6 (mg/L
199-D4-15	B15XD7	I03-005	11/20/2002	9:22	KJY	Water	11/21/2002	9:00	TMJ	1.50

Logbook: HNF-N-296 1 Page 56

11/26/2002

Location	Heis Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	Cr +6 (mg/L
MS	B15XF5	I03-005	11/25/2002	13:05	RAF	Water	11/26/2002	8:20	TMJ	0.026
MSD	B15XF6	I03-005	11/25/2002	13:05	RAF	Water	11/26/2002	8:20	TMJ	0.027

Analyst: T. M. Johansen Date: 11/26/2002

C:\MAB\CR6DATA\ISRM Data\cr6_ioct.xls

On-Site Measurement of SO_4

ISRM, Groundwater

SAF: I03-005

Logbook: HNF-N-296 1 Page 49

Date: 11/19/02

Location	Heis Number	SAF	Date Collected	Time Collected	Sampler (Initials)	Sample Media	Date Analyzed	Time Analyzed	Analyst (Initials)	SO_4 (mg/L
199-D5-38	*B15XF0	I03-005	11/18/2002	11:01	FMH	Water	11/19/2002	9:25	GST	132
199-D5-39	**B15XF2	I03-005	11/18/2002	8:12	FMH	Water	11/19/2002	9:25	GST	120
199-D5-43	*B15XF4	I03-005	11/18/2002	11:51	FMH	Water	11/19/2002	9:25	GST	94

** 2X Dilution*
*** 4X Dilution*

Logbook: HNF-N-296 1 Page 50

Date: 11/21/02

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	B15XD8	I03-005	11/20/2002	9:22	KJY	Water	11/21/2002	8:15	TMJ	115

** 5X Dilution*

Analyst: G. S. Thomas/ T. M. Johansen Date: 11/21/2002

G:\CR6DATA\HR3 Data\iso4_nov.xls

0000003

100 ISRM Cr+6 T.M. JOHANSEN 11/25/02

Hexavalent Chromium Daily Activity Log
Project: ISRM Groundwater Monitoring / SAF I03-005
Logbook HNF-N-296 1
Date: 11/19/02

0737	G. Thomas arrived on-site at 200W, HO 68N-1985 mobile laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 950, low range hexavalent chromium.
0750	Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A0234, no expiration, to 29.76 mL of deionized water.
0755	B15XD9 and B15XF1 diluted 10X by adding ~~10~~ 18 mL of deionized water to ~~10~~ 2 mL sample. B15XF3 diluted 4X by adding 15 mL deionized water to 5 mL sample.
0805	Analyzed samples.

Sample #	Well #	Concentration (mg/L)	Date Sampled	Time Sampled	Sampler
Blank	-	<0.005	-	-	-
0.10 mg/L std.	-	0.101	-	-	-
B15XD9	199-D5-38	1.36	11/18/01	11:01	FMH
B15XF1	199-D5-39	4.65	11/18/01	08:12	FMH
B15XF3	199-D5-3943	0.736	11/18/01	11:51	FMH
0.10 mg/L std.	- MAB 12/2/02	0.101	-	-	-

Data recorded real time using a laptop computer.

T.M. Johansen 11/25/02

TMJ 11/25/02

T.M. JOHANSEN T.M. Johansen 11/25/02

Reviewed By M.A. Baechler M.A. Baechler 12/2/02

100 ISRM Sulfate

T.M. JOHANSEN TMJohansen 11/25/02

Sulfate Daily Activity Log
Project: ISRM GW Monitoring/SAF I03-005
Date: 11/19/02

0737	G. Thomas arrived on-site at 200W, HO 68N-1985 mobile laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 952, sulfate. Removed samples from refrigerator and allowed to warm to room temperature.
0846	Prepared 50 mg/L standard by adding 1.5 mL of 1000 mg/L HACH sulfate standard, lot # N7108, no expiration, to 28.50 mL of deionized water.
0900	Analyzed samples. All samples are over range and require dilution.
0910	Diluted sample B15XF0, B15XF4 (2X) by adding 10 mL sample to 10 mL deionized water. Diluted samples B15XF2 (4X) by adding 5 mL sample to 15 mL deonized water.
0925	Analyzed samples.

Sample #	Well #	Concentration (mg/L)	Date Sampled	Time Sampled	Sampler
Blank	-	0	-	-	-
50 mg/L std.	-	52	-	-	-
*B15XF0	199-D5-38	132	11:01	11/18/02	FMH
**B15XF2	199-D5-39	120	08:12	11/18/02	FMH
*B15XF4	199-D5-43	94	11:51	11/18/02	FMH
50 mg/L std.	-	52	-	-	-

* Sample diluted 2X
** Sample diluted 4X

0945 Packed up equipment and left site to return waste to operable unit.

Data were recorded real-time using a laptop computer.

11-25-02 TMJohansen

TMJ 11/25/02

0000005

T.M. JOHANSEN TMJohansen 11/25/02

Reviewed By M.A. Boechler M.A. Boechler 12/2/02

100 ISRM Sulfate

T.M. JOHANSEN / TS Johansen 11/26/02

Sulfate Daily Activity Log
Project: ISRM GW Monitoring/SAF I03-005
Date: 11/21/02

0730	T. M. Johansen arrived on-site at 200W, HO 68N-1985 mobile laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 952, sulfate. Removed samples from refrigerator and allowed to warm to room temperature.
0735	Prepared 50 mg/L standard by adding 1.5 mL of 1000 mg/L HACH sulfate standard, lot # N7108, no expiration, to 28.50 mL of deionized water.
0750	Analyzed sample. Samples is over range and requires dilution.
0800	Diluted sample B15XD8 (5X) by adding 4 mL sample to 16 mL deonized water.
0815	Analyzed sample.

Sample #	Well #	Concentration (mg/L)	Date Sampled	Time Sampled	Sampler
Blank	-	0	-	-	-
50 mg/L std.	-	52	-	-	-
B15XD8	199-D4-15	115	09:22	11/20/02	KJY
50 mg/L std.	-	52	-	-	-

0845 Packed up equipment.

Data were recorded real-time using a laptop computer.

Teresa Johansen 11/26/02

TMJ 11/26/02

T.M. JOHANSEN TS Johansen

Reviewed By M. A. Baechler
M. A. Baechler 12/2/02

100 ISRM Cr+6 / 100 KR4 Cr+6

T.M. JOHANSEN / T.M. Johansen 11/26/02

Hexavalent Chromium Daily Activity Log
Project: ISRM GW / SAF I03-005
100-KR4 GW / SAF I03-006
Logbook: HNF-N-296 1
Date: 11/21/02

0820	T. M. Johansen arrives on-site at 200W, HO 68N-1985 mobile laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 950, low range hexavalent chromium.
0825	Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A0234, no expiration, to 29.76 mL of deionized water.
0833	Analyzed sample.
0845	B15XD7 over range. Diluted sample 5X by adding 4 mL of sample to 16 mL deionized water.
0900	Analyzed sample.
1320	Return to 200W mobile laboratory. Set up to analyze additional samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 950, low range hexavalent chromium.
1330	Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A0234, no expiration, to 29.76 mL of deionized water.
1345	Analyzed sample.

Sample #	Well #	Concentration (mg/L)	Date/ Sampled	Time Sampled	Sampler
Blank	-	<0.005	-	-	-
0.10 mg/L std.	-	0.102	-	-	-
B15XD7	199-D4-15	1.50	11/20/02	09:22	KJY
B15WV1	199-K-126	0.115	11/21/02	08:30	FMH
B15WV2	199-K-126	0.114	11/21/02	08:30	FMH
0.10 mg/L std.	-	0.102	-	-	-

1430 Packed up equipment and left site.

Data recorded real time using a laptop computer.

Tamara Johansen 11/26/02

TMJ 11/26/02

Reviewed By M.H. Boechler M.H. Boechler 12/2/02

0000007

T.M. JOHANSEN / T.M. Johansen

100 Cr+6 ISRM

T.M. JOHANSEN /TS/ 11/26

Hexavalent Chromium Daily Activity Log
Project: ISRM GW / SAF I03-005
Logbook: HNF-N-296 1
Date: 11/26/02

0800	T. M. Johansen arrives on-site at 200W, HO 68N-1985 mobile laboratory. Set up to analyze samples for hexavalent chromium using a HACH DR 2010 spectrophotometer, S/N 980600009425, Method 950, low range hexavalent chromium.
0810	Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A0234, no expiration, to 29.76 mL of deionized water.
0820	Analyzed sample.

Sample #	Well #	Concentration (mg/L)	Date/ Sampled	Time Sampled	Sampler
Blank	-	<0.005	-	-	-
0.10 mg/L std.	-	0.102	-	-	-
B15XF5	MS	0.026	11/25/02	13:05	RAF
B15XF6	MSD	0.027	11/25/02	13:05	RAF
0.10 mg/L std.	-	0.102	-	-	-

0900 Packed up equipment and left site.

Data recorded real time using a laptop computer.

11/26/02

TMJ 11/26/02

T.M. JOHANSEN 11/26/02

Reviewed By M.A. Buchter 12/2

0000008

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I03-005-96

Page 1 of 1

Collector: KJ. YOUNG	Contact/Requester: DL STEWART	Telephone No.: (509) 376-5056 MSIN FAX
SAF No.: I03-005	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: ISRM GW MONITORING, NOVEMBER 2002	Logbook No.: DFSNW-SAWS-H60	Ice Chest No.: CARNEY 1 Temp.
Shipped To (Lab): Mobile Field Laboratory	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XD7 (F)		W	11/20/02	0922	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B15XD8		W	1	1	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None

Dup 11-20-02

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	KJ. YOUNG		11/21/02 0710 NOV 20 2002				11/21/02 0710
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process): Return to Project

Disposed By: T.M. JOHANSEN Date/Time: 11/21/02

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I03-005-97
		Page 1 of 1

Collector F. M. HALL	Contact/Requester DL STEWART	Telephone No. (509) 376-5056 MSIN FAX
SAF No. I03-005	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ISRM GW MONITORING, NOVEMBER 2002	Logbook No. SAWS-1458	Ice Chest No. Temp.
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XD9 (F)		W	11-18-02	1101	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B15XF0		W	↓	↓	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	F. M. HALL	[signature]	11/19/02 0715		Greg Thomas	[signature]	11/19/02 0715
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
	RETURN TO [illegible]	T.M. JOHANSEN	11/19/02 1100

000010

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I03-005-98

Collector: F. M. HALL	Contact/Requester: DL STEWART	Telephone No.: (509) 376-5056 MSIN FAX
SAF No.: I03-005	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: ISRM GW MONITORING, NOVEMBER 2002	Logbook No.: SAWS-H58	Ice Chest No. Temp.
Shipped To (Lab): Mobile Field Laboratory	Method of Shipment: GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol: CERCLA	Data Turnaround: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XF1 (F)		W	11-18-02	0812	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B15XF2		W	↓	↓	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	F. M. HALL	[signature]	11/19/02 0715		Greg Thomas	[signature]	11/19/02 0715
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION — Disposal Method (e.g. Return to customer, per lab procedure, used in process): return to Product

Disposed By: T.M. JOHANSEN Date/Time: 11/19/02 1100

0000011

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I03-005-99

Page 1 of 1

Collector F. M. HALL	Contact/Requester DL STEWART	Telephone No. (509) 376-5056 MSIN FAX
SAF No. I03-005	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ISRM GW MONITORING, NOVEMBER 2002	Logbook No. SAWS-458	Ice Chest No. Temp.
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XF3 (F)		W	11/18/02	1151	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None
B15XF4		W	↓	↓	1x40-mL aGs*	COLOR_TK_FLD: Sulfate (1)	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. HALL			11/19/02 0715	Greg Thomas			11/19/02 0715
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process) Return to Project

Disposed By T.M. JOHANSEN Date/Time 11/19/02 1100

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I03-005-100
		Page 1 of 1

Collector R Fox	Contact/Requester DL STEWART	Telephone No. (509) 376-5056 MSIN FAX
SAF No. I03-005	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ISRM GW MONITORING, NOVEMBER 2002	Logbook No. DFSNW-SAWS-H55	Ice Chest No. SMLS37 Temp.
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment GOVT. VEHICLE	Bill of Lading/Air Bill No.
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all samples submitted under "I" SAF's into one SDG, not to exceed SDG closure of 14 days.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XF5 (F)		W	11-25-02	1305	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R Fox			11-25-02 0745	TM Johnson			11-25-02 0745
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g. Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
	Return to Project	TM Johnson	11-25-02 1000

0010013

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I03-005-101
		Page 1 of 1

Collector R Fox	Contact/Requester	Telephone No. MSIN FAX
SAF No. I03-005	Sampling Origin	Purchase Order/Charge Code
Project Title ISRM GW MONITORING, NOVEMBER 2002	Logbook No. DFSNW-SAWS-HSS	Ice Chest No. SMC 533 Temp.
Shipped To (Lab) Mobile Field Laboratory	Method of Shipment	Bill of Lading/Air Bill No.
Protocol CERCLA	Data Turnaround 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B15XF6 (F)		W	11-25-02	1305	1x40-mL aGs*	COLOR_TK_FLD: Hexavalent Chromium (1)	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R Fox			11-25-02 0745		TM Johnson		11-25-02 0745
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
	Return to Project	TM Johnson	11-25-02 1000

000014