0088457

# FIELD SCREENING
# FINAL DATA DELIVERABLE COVER SHEET

Date: Tuesday, October 10, 2006

Sample Authorization Form (SAF) Number: I06-057

SDG Number (assigned by Sample Management): FP0344 Daynes

Attachments (check all that apply or N/A): 10/14/06

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

RECEIVED
JUN 03 2010
EDMC

Total number of pages (including cover sheet): 20

Comments:
**100-HR-3 IAM - Hexavalent Chromium - Water**

**THESE TESTS WERE CONDUCTED USING QC-1**

OCT 2006
RECEIVED

Analyst Signature — Date: 10/19/06

Reviewer's Signature — Date: 10/19/06

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

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

# On-Site Measurement of Cr +6

## 100-HR-3 Groundwater

SAF: I06-057

Procedure: GRP-EE-05-1.17

Logbook: HNF-N-296 7 Page 16

**9/7/2006**

| 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FTB/ 199-D5-38 | B1KBY0 | I06-057 | 9/7/2006 | 7:30 | RTS | Water | 9/7/2006 | 13:50 | LCP | <0.005 | N/A | N/A |
| 199-D5-38/ FTB | B1KBY2 | I06-057 | 9/7/2006 | 8:49 | RTS | Water | 9/7/2006 | 13:50 | LCP | 0.080 | 428 | 26.298 |
| 199-D8-88 | B1KBX4 | I06-057 | 9/7/2006 | 11:26 | DRB/LW | Water | 9/7/2006 | 13:50 | LCP | 0.047 | 233 | 24.116 |
| 199-D8-73 | B1KBX2 | I06-057 | 9/7/2006 | 12:01 | DRB/LW | Water | 9/7/2006 | 13:50 | LCP | 0.153 | 340 | 24.826 |
| 199-D8-73 | B1KBX1 | I06-057 | 9/7/2006 | 12:01 | DRB/LW | Water | 9/7/2006 | 13:50 | LCP | 0.152 | 340 | 24.826 |

Logbook: HNF-N-296 7 Page 17

**9/11/2006**

| 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-H4-11 | B1KBX6 | I06-057 | 9/11/2006 | 12:15 | LDW | Water | 9/11/2006 | 14:10 | LCP | 0.012 | 384 | 13.523 |
| 199-H4-5 | B1KBX8 | I06-057 | 9/11/2006 | 12:29 | FMH | Water | 9/11/2006 | 14:10 | LCP | 0.007 | 367 | 12.972 |

Logbook: HNF-N-296 7 Page 21

**9/21/2006**

| 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-D5-43 | B1KBY5 | I06-057 | 9/21/2006 | 10:32 | RTS | Water | 9/21/2006 | 14:00 | LCP | 0.479 | 557 | 26.032 |
| 199-D8-69 | B1KBW5 | I06-057 | 9/21/2006 | 11:03 | RTS | Water | 9/21/2006 | 14:00 | LCP | 0.037 | 291 | 14.628 |
| 199-D8-70 | B1KBW7 | I06-057 | 9/21/2006 | 12:19 | RTS | Water | 9/21/2006 | 14:00 | LCP | 0.071 | 433 | 16.047 |

Note: Samples were analyzed with the blank of reagent-treated deionized water as the "zero vial".

Analyst(s): LC Petersen Date: 9/26/2006

\\esp014\afsfieldsc\cr6data\HR3 Data\cr6_hsept.xls



00000002

# On-Site Measurement of $SO_4$

## 100-HR-3 Groundwater

SAF: I06-057
Procedure: GRP-EE-05-1.18
Logbook: HNF-N-296 7 Page 15

**9/7/2006**

| Location | Heis Number | SAF | Date Collected | Time Collected | Sampler (Initials) | Sample Media | Date Analyzed | Time Analyzed | Analyst (Initials) | $SO_4$ (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| FTB/ 199-D5-38 | B1KBY1 | I06-057 | 9/7/2006 | 7:30 | RTS | Water | 9/7/2006 | 14:50 | LCP | 0 |
| 199-D5-38/ FTB | B1KBY3* | I06-057 | 9/7/2006 | 8:49 | RTS | Water | 9/7/2006 | 15:05 | LCP | 72 |

Logbook: HNF-N-296 7 Page 22

**9/21/2006**

| Location | Heis Number | SAF | Date Collected | Time Collected | Sampler (Initials) | Sample Media | Date Analyzed | Time Analyzed | Analyst (Initials) | $SO_4$ (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| 199-D5-43 | B1KBY6* | I06-057 | 9/21/2006 | 10:32 | RTS | Water | 9/21/2006 | 14:35 | LCP | 106 |

Analyst(s): LC Petersen Date: 9/26/2006

\\ap014\afsfieldsc\cr6data\HR3 Data\hso4_sept.xls



00000003

ISRM Cr+6
HR3 Cr+6

TMJohansen/TMJohansen

# Hexavalent Chromium Daily Activity Log
## Project: 100-ISRM / SAF No. I06-056
## 100-ISRM / SAF No. I06-062
## 100-HR3 / SAF No. I06-057
## Logbook HNF-N-296 7
## Date: 9/07/06

TMJohansen 10/6/06

| | |
|---|---|
| 1230 | 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. |
| 1325 | Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A5354, Exp. 12-2010, to 29.76 mL of deionized water. |
| 1350 | Analyzed samples. |
| 1355 | Diluted samples B1KCR7, B1KCR9, B1KCR4 2X by adding 10 mL deionized water to 10 mL sample. |
| 1450 | Analyzed samples. |

| Sample # | Well # | SAF # | Concentration (mg/L) | Date Sampled | Time Sampled | Sampler | Conductivity (µs/cm) | Water Depth-m(TOC) |
|---|---|---|---|---|---|---|---|---|
| Blank | ----- | ----- | 0.006 | ----- | ----- | ----- | ----- | ----- |
| 0.10 mg/L std. | ----- | ----- | 0.102 [1] | ----- | ----- | ----- | ----- | ----- |
| B1K6N3 | 199-D4-86 | I06-056 | 0.013 | 9/7/06 | 10:47 | RTS | 383 | 25.291 |
| B1KCR7* | 199-D5-39 | I06-062 | 1.506 | 9/7/06 | 09:06 | RTS | 475 | N/A |
| B1KCR9* | 199-D5-39 | I06-062 | 1.514 | 9/7/06 | 09:06 | RTS | 475 | N/A |
| B1KCR4* | 199-D4-15 | I06-062 | 1.438 | 9/7/06 | 09:34 | RTS | 692 | 26.111 |
| B1KBY0 | FTB/ 199-D5-38 | I06-057 | 0.002 | 9/7/06 | 07:30 | RTS | N/A | N/A |
| B1KBY2 | 199-D5-38/ FTB | I06-057 | 0.080 | 9/7/06 | 08:49 | RTS | 428 | 26.298 |
| B1KBX4 | 199-D8-88 | I06-057 | 0.047 | 9/7/06 | 11:26 | DRB/ LW | 233 | 24.116 |
| B1KBX2 | 199-D8-73 | I06-057 | 0.153 | 9/7/06 | 12:01 | DRB/ LW | 340 | 24.826 |
| B1KBX1 | 199-D8-73 | I06-057 | 0.152 | 9/7/06 | 12:01 | DRB/ LW | 340 | 24.826 |
| 0.10 mg/L std. | ----- | ----- | 0.100 [1] | ----- | ----- | ----- | ----- | ----- |
| Blank | ----- | ----- | 0.005 | ----- | ----- | ----- | ----- | ----- |

[1] New lot of HACH ChromaVer® 3 Reagent, which is reading known concentrations of hexavalent chromium in deionized water higher than we normally see in this analysis. To subtract out this affect, we used the blank of reagent-treated deionized water as the "zero vial" for the analyses of the standard and all samples.

00000004

Reviewed
By: M.A. Baechler OCT 10 2006

* 2X Dilution

TMJohansen/TMJohansen 10/6/06

M.A. Baechler

ISRM Cr/Te 504
HR-3 Cr/Te 504

# Sulfate Daily Activity Log
## Project: ISRM GW Monitoring / SAF I06-056
## ISRM GW Monitoring / SAF I06-062
## 100 HR3 GW Monitoring / SAF I06-057
## Logbook HNF-N-296 7
## Date: 09/07/06

| | |
|---|---|
| 1230 | 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. |
| 1415 | 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. |
| 1450 | Analyzed samples. |
| 1455 | Diluted samples B1KCR8, B1KCT0 and B1KBY3 2X by adding 10 mL deionized water to 10 mL sample. Diluted sample B1KCR5 4X by adding 15 mL deionized water to 5 mL sample. |
| 1505 | Analyzed samples. |

| Sample # | Well # | SAF # | Concentration (mg/L) | Date Sampled | Time Sampled | Sampler |
|---|---|---|---|---|---|---|
| Blank | --- | --- | 0 | --- | --- | --- |
| 50 mg/L std. | --- | --- | 50 | --- | --- | --- |
| B1K6N4 | 199-D4-86 | I06-056 | 58 | 9/7/06 | 10:47 | RTS |
| B1KCR8* | 199-D5-39 | I06-062 | 86 | 9/7/06 | 09:06 | RTS |
| B1KCT0* | 199-D5-39 | I06-062 | 84 | 9/7/06 | 09:06 | RTS |
| B1KCR5** | 199-D4-15 | I06-062 | 156 | 9/7/06 | 09:34 | RTS |
| B1KBY1 | FTB/ 199-D5-38 | I06-057 | 0 | 9/7/06 | 07:30 | RTS |
| B1KBY3* | 199-D5-38/ FTB | I06-057 | 72 | 9/7/06 | 08:49 | RTS |
| 50 mg/L std. | --- | --- | 49 | --- | --- | --- |
| Blank | --- | --- | 0 | --- | --- | --- |

* 2X Dilution
** 4X Dilution

Reviewed OCT 10 2006
By: M.A. Baechler

HR3 Cr+6 TMJohnsen/DMJohnsen

BEST AVAILABLE COPY

# Hexavalent Chromium Daily Activity Log
# Project: 100-HR3 / SAF No. I06-057
# Logbook HNF-N-296 7
# Date: 9/11/06

TMJohnsen 10/10/06

| | |
|---|---|
| ~~1230~~ 1220 MEB 10/10/06 | 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. |
| 1310 | Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A5354, Exp. 12-2010, to 29.76 mL of deionized water. |
| 1410 | Analyzed samples. |

| Sample # | Well # | SAF # | Concentration (mg/L) | Date Sampled | Time Sampled | Sampler | Conductivity (µs/cm) | Water Depth-m(TOC) |
|---|---|---|---|---|---|---|---|---|
| Blank | ----- | ----- | 0.005 | ----- | ----- | ----- | ----- | ----- |
| 0.10 mg/L std. | ----- | ----- | 0.105 [1] | ----- | ----- | ----- | ----- | ----- |
| B1KBX6 | 199-H4-11 | I06-057 | 0.012 | 9/11/06 | 12:15 | LDW | 384 | 13.523 |
| B1KBX8 | 199-H4-5 | I06-057 | 0.007 | 9/11/06 | 12:29 | FMH | 367 | 12.972 |
| 0.10 mg/L std. | ----- | ----- | 0.106 [1] | ----- | ----- | ----- | ----- | ----- |
| Blank | ----- | ----- | 0.005 | ----- | ----- | ----- | ----- | ----- |

[1] New lot of HACH ChromaVer® 3 Reagent, which is reading known concentrations of hexavalent chromium in deionized water higher than we normally see in this analysis. To subtract out this affect, we used the blank of reagent-treated deionized water as the "zero vial" for the analyses of the standard and all samples.

TMJ 10/10/06

TMJohnsen/DMJohnsen 10/10/06

Reviewed OCT 10 2006
By: M.A. Baechler
M. A. Baechler

KR-4 $Cr^{+6}$ mpdhansen/lmdhansen

# Hexavalent Chromium Daily Activity Log
# Project: KR-4 GW Monitoring / SAF I06-058
# 100-HR3 GW Monitoring / SAF I06-057
# Logbook HNF-N-296 7
# Date: 9/21/06

lmdhansen 10/6/06

| | |
|---|---|
| 1215 | 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. |
| 1325 | Prepared 0.10 mg/L standard by adding 240 µL of 12.5 mg/L HACH hexavalent chromium standard, lot # A2361, no expiration, to 29.76 mL of deionized water. |
| 1400 | Analyzed samples. |

| Sample # | Well # | SAF # | Concentration (mg/L) | Date Sampled | Time Sampled | Sampler | Conductivity (µs/cm) | Water Depth-m(TOC) |
|---|---|---|---|---|---|---|---|---|
| Blank | ----- | ----- | 0.005 | ----- | ----- | ----- | ----- | ----- |
| 0.10 mg/L std. | ----- | ----- | 0.107 [1] | ----- | ----- | ----- | ----- | ----- |
| B1KC33 | 199-K-130 | I06-058 | 0.089 | 9/21/06 | 09:18 | RTS | 399 | 15.407 |
| B1KBY5 | 199-D5-43 | I06-057 | 0.479 | 9/21/06 | 10:32 | RTS | 557 | 26.032 |
| B1KBW5 | 199-D8-69 | I06-057 | 0.037 | 9/21/06 | 11:03 | RTS | 291 | 14.628 |
| B1KBW7 | 199-D8-70 | I06-057 | 0.071 | 9/21/06 | 12:19 | RTS | 433 | 16.047 |
| 0.10 mg/L std. | ----- | ----- | 0.108 [1] | ----- | ----- | ----- | ----- | ----- |
| Blank | ----- | ----- | 0.005 | ----- | ----- | ----- | ----- | ----- |

[1] New lot of HACH ChromaVer® 3 Reagent, which is reading known concentrations of hexavalent chromium in deionized water higher than we normally see in this analysis. To subtract out this affect, we used the blank of reagent-treated deionized water as the "zero vial" for the analyses of the standard and all samples.

TMT 10/6/06

Reviewed OCT 10 2006
By: M.A. Baechler
M.A. Baechler

mpdhansen/lmdhansen 10/6/06

HR3 SO4 Mathansen/Mathansen

# Sulfate Daily Activity Log
# Project: 100 HR3 / SAF No. I06-057
# Logbook HNF-N-296 7
# Date: 9/21/06

Tamara Johansen 10/6/06

| | |
|---|---|
| 1215 | 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. |
| 1400 | 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. |
| 1425 | Analyzed samples. |
| 1430 | Diluted sample 2X by adding 10-mL sample to 10-mL deionized water. |
| 1435 | Analyzed sample. |

| Sample # | Well # | SAF # | $SO_4$ (mg/L) | Date Sampled | Time Sampled | Sampler |
|---|---|---|---|---|---|---|
| Blank | --- | --- | 0 | --- | --- | --- |
| 50 mg/L std. | --- | --- | 49 | --- | --- | --- |
| B1KBY6* | 199-D5-43 | I06-057 | 106 | 9/21/06 | 10:32 | RTS |
| 50 mg/L std. | --- | --- | 49 | --- | --- | --- |
| Blank | --- | --- | 0 | --- | --- | --- |

* 2X Dilution

TMJ 10/6/06

00000008

Reviewed
By: M.A. Baechler OCT 10 2006

Mathansen/Mathansen 10/6/06

M.A. Baechler

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I06-057-2

Page 1 of 1

| | | |
|---|---|---|
| **Collector** R.T. SICKLE | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTS-SAWS-11105 | **Ice Chest No.** SAWS-119 **Temp.** |
| **Shipped To (Lab)** Mobile Field Laboratory | **Method of Shipment** Govt. Vehicle | **Bill of Lading/Air Bill No.** |
| **Protocol** CERCLA | **riority:** 45 Days | **Offsite Property No.** |

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)

**POSSIBLE SAMPLE HAZARDS/REMARKS**
** **

**SPECIAL INSTRUCTIONS** **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBY0 (F) | | W | 9-7-06 | 0730 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |
| B1KBY1 | | W | ↓ | 0730 | 1x40-mL aGs* | COLOR_TK_FLD: Sulfate (1) | None |

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| R.T. SICKLE | | | 9-7-06 1230 SEP 06 2006 | L.C. Petersen | | | 9-7-06 1230 SEP 06 2006 |
| 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 = Wine | |
| 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) RETURNED TO OU Disposed By L.C. Petersen Date/Time 9/7/06 1530

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I06-057-3

Page 1 of 1

| | | |
|---|---|---|
| **Collector** R.T. SICKLE | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTS - SAWS - H/05 | **Ice Chest No.** SAWS-119 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBY2 (F) | | W | 9-7-06 | 0849 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |
| B1KBY3 | | W | ↓ | ↓ | 1x40-mL aGs* | COLOR_TK_FLD: Sulfate (1) | None |

| Relinquished By | Received By |
|---|---|
| Print: R.T. SICKLE Sign: [signature] Date/Time: 1230 SEP 07 2006 | Print: L.C. Petersen Sign: [signature] Date/Time: 1230 SEP 07 2006 |
| 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 | = Wine |
| 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) RETURNED TO OU Disposed By: LCPetersen Date/Time: 9/7/06 1530

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I06-057-28

Page 1 of 1

| | | |
|---|---|---|
| **Collector** DURATEK D. R. BREWINGTON | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | Logbook: DTS-SAWS-1H106 | **Ice Chest No.** SAWS-105 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBX4 (F) | | W | 9/7/06 | 1124 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

L. Wall 9/7/06

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| DURATEK D. R. BREWINGTON | D. R. Brewington | SEP 07 2006 | 1305 | L. C. Peterson | | SEP 07 2006 | 1305 |
| 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 | = Wine |
| 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) RETURNED TO OU Disposed By L C Peterson Date/Time 9/7/06 1530

00000011

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-25**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** DURATEK D. R. BREWINGTON | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | Logbook: DTS-SAWS-H106 | **Ice Chest No.** SAWS-105 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBX2 (F) | | W | 9/7/06 | 1201 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

J. Wall 9/7/06

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| DURATEK D. R. BREWINGTON | DR. Brewington | | SEP 07 2006 1305 | L. C. Petersen | L Petersen | | SEP 07 2006 1305 |
| 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) RETURNED TO OU Disposed By L C Petersen Date/Time 1530

00000012

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-24**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** DURATEK D. R. BREWINGTON | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOL SEPTEMBER 2006 | Logbook: DTS - SAWS-H106 | **Ice Chest No.** SAWS-105 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBX1 (F) | | W | 9/7/06 | 1201 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

R. Wade 9/7/06

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| DURATEK D. R. BREWINGTON | D. R. Brewington | | SEP 07 2006 1305 | L. C. Peterson | | L Peterson | SEP 07 2006 1305 |
| 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 | = Wine |
| 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) **RETURNED TO OU** Disposed By L Peterson Date/Time 9/7/06 1530

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PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-32**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** L WALL | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 MSIN FAX |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI SEPTEMBER 2006 | DTS-SAWS-H106 | **Ice Chest No.** 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 ☐

Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.

Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBX6 (F) | | W | 9-11-06 | 1215 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| L WALL | R. Wall | | 9-11-06 1330 | L.C. Petersen | L Petersen | | 1330 |
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Matrix *

| | | | |
|---|---|---|---|
| S | = Soil | DS | = Drum Solid |
| SE | = Sediment | DL | = Drum Liqui |
| SO | = Solid | T | = Tissue |
| SL | = Sludge | WI | = Wine |
| 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) RETURNED TO OL

Disposed By L C Petersen Date/Time ~~9/11/06~~ 9/11/06 1430

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-36**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** DURATEK F. M. HALL | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTS-SAWS-1/105 | **Ice Chest No.** SAWS-119 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBX8 (F) | | W | 9-11-06 | 1229 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |
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|---|---|---|---|
| Relinquished By DURATEK F. M. HALL Print Sign [signature] Date/Time 1830 SEP 1 1 2006 | Received By L.C. Petersen Print L Petersen Sign Date/Time 1330 SEP 1 1 2006 | Matrix * | |
| Relinquished By Date/Time | Received By Date/Time | S = Soil | DS = Drum Solid |
| Relinquished By Date/Time | Received By Date/Time | SE = Sediment | DL = Drum Liqui |
| Relinquished By Date/Time | Received By Date/Time | SO = Solid | T = Tissue |
| | | SL = Sludge | WI = Wine |
| | | 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) RETURNED TO OU Disposed By LCPetersen Date/Time 9/11/06 1445

0000015

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-6**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** R. T. SICKLE | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTS-SAWS-H113 | **Ice Chest No.** SM1 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBY5 (F) | | W | 9-21-06 | 1032 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |
| B1KBY6 | | W | ↓ | ↓ | 1x40-mL aGs* | COLOR_TK_FLD: Sulfate (1) | None |

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| R. T. SICKLE | | | SEP 21 2006 1338 | L.C. Petersen | L Petersen | | SEP 21 2006 1338 |
| 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 | = Wine |
| 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) RETURNED TO OU Disposed By LC Petersen Date/Time 9/21/06 1515

00000016

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I06-057-14

Page 1 of 1

| | | |
|---|---|---|
| **Collector** R. T. SICKLE | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTS SAWS-H113 | **Ice Chest No.** 5M1 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBW5 (F) | | W | 9-21-06 | 1103 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

| Relinquished By (Print / Sign) | Date/Time | Received By (Print / Sign) | Date/Time |
|---|---|---|---|
| R. T. SICKLE | SEP 21 2006 1328 | L.C. Petersen | SEP 21 2006 1328 |
| | | | |
| | | | |
| | | | |

Matrix *

| | | | |
|---|---|---|---|
| S = Soil | | DS = Drum Solid | |
| SE = Sediment | | DL = Drum Liqui | |
| SO = Solid | | T = Tissue | |
| SL = Sludge | | WI = Wine | |
| 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): RETURNED TO OU Disposed By: L C Petersen Date/Time: 9/21/06 1445

0000017

PNNL

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I06-057-18**

Page 1 of 1

| | | |
|---|---|---|
| **Collector** R. T. SICKLE | **Contact/Requester** Dot Stewart | **Telephone No.** 509-376-5056 **MSIN** **FAX** |
| **SAF No.** I06-057 | **Sampling Origin** Hanford Site | **Purchase Order/Charge Code** |
| **Project Title** 100HR3IAM(1/2)-LOI, SEPTEMBER 2006 | DTG-SAWS-H113 | **Ice Chest No** Sm1 **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 ☐
Batch all PNNL GW samples submitted under "W", "S", "I", "A" or "G" 06 SAFs into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

| Sample No. | Lab ID | * | Date | Time | No/Type Container | Sample Analysis | Preservative |
|---|---|---|---|---|---|---|---|
| B1KBW7 (F) | | W | 9-21-06 | 1324 | 1x40-mL aGs* | COLOR_TK_FLD: Hexavalent Chromium (1) | None |

| Relinquished By | Print | Sign | Date/Time | Received By | Print | Sign | Date/Time |
|---|---|---|---|---|---|---|---|
| R. T. SICKLE | | | SEP 21 2006 1328 | L. C. Petersen | | L. Petersen | SEP 21 2006 1328 |
| 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 | = Wine |
| 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) **RETURNED TO OU** Disposed By L. Petersen Date/Time 9/21/06 1430

00000018