

RECEIVED JANUARY 14, 2008

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**FLUOR****Memorandum**

M4W41-SLF-08-018

To: H. Hampt E6-35 Date: January 8, 2008

From: S. L. Fitzgerald, Manager WSCF Analytical Lab 

cc: w/Attachments  
 T. F. Dale S3-30 J. E. Trechter S3-30  
 H. K. Meznarich S3-30 S. J. Trent E6-35  
 P. D. Mix S3-30 File/LB

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20072130 -- SAF NUMBER F08-032

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002  
 (2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF20072130:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)

SLF/grf

Attachments 4

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M4W41-SLF-08-018

ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

## WSCF SAF NUMBER CROSS REFERENCE

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Group#: WSCF20072130  
Data Deliverable Date: 10-jan-2008  
Data Deliverable: Cover Sheet

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| SAF#    | Sample ID | WSCF#      | Matrix |
|---------|-----------|------------|--------|
| F08-032 | B1RF95    | W07GR03160 | WATER  |
|         | B1RF96    | W07GR03161 | WATER  |
|         | B1RF97    | W07GR03162 | WATER  |
|         | B1RF98    | W07GR03163 | WATER  |
|         | B1RF99    | W07GR03164 | WATER  |
|         | B1RFB0    | W07GR03165 | WATER  |
|         | B1RFB1    | W07GR03166 | WATER  |
|         | B1RFD5    | W07GR03167 | WATER  |

M4W41-SLF-08-018

ATTACHMENT 2

**NARRATIVE**

Consisting of 3 pages  
Including cover page

### **Introduction**

Eight groundwater samples were received at the WSCF Laboratory on November 29, 2007. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was stamped “iced” by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

### **Analytical Methodology for Requested Analyses**

Refer to *WSCF Method References Report*, pages 11 through 12, for a complete listing of approved analytical methods.

### **Inorganic Comments**

**Hexavalent Chromium** – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 21 for QC details.

- Matrix Spike, Matrix Spike Duplicate and Sample Duplicate analyzed on sample # B1P0M7 (SDG 20072125, SAF F07-052)

All QC controls are within the established limits.

### **Radiochemistry Comments**

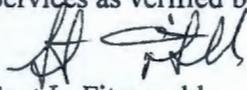
There are no hold times associated with WSCF’s radiochemical methods.

A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group including a Matrix Spike for Tritium. See pages 30 through 32 for QC details.

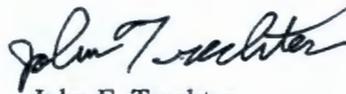
- Matrix Spike and Sample Duplicate analyzed on sample # B1RF77 (SDG 20072108, SAF F08-014)

All QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, 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 and Client Services as verified by the following signatures.



Scot L. Fitzgerald  
WSCF Analytical Laboratory Manager



John E. Trechter  
WSCF Client Services

M4W41-SLF-08-018

ATTACHMENT 3

**ANALYTICAL RESULTS**

Consisting of 26 pages  
Including cover page

**WSCF**  
**ANALYTICAL RESULTS REPORT**

for

**Groundwater Remediation Program**

**Richland, WA 99354**

**Attention: Steve Trent**

Analytical:

*[Signature]* S. Fitzgerald

Client Services:

*[Signature]* John Trechter 1/8/08

*All results are reported on an "as received" basis unless otherwise noted in the comment section.*

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: FH-EIS-2003-MEM-001

Report#: WSCF20072130

Report Date: 4-jan-2008

Report WGPP/ver. 5.2

Groundwater Remediation Program

## W13q Worklist/Batch/QC Report for Group# WSCF20072130

| WL#   | S# | Batch | QC#   | Tray Type | Sample#    | Test                |
|-------|----|-------|-------|-----------|------------|---------------------|
| 34328 | 2  | 34728 | 38952 | BLANK     |            | Hexavalent chromium |
| 34328 | 3  | 34728 | 38952 | LCS       |            | Hexavalent chromium |
| 34328 | 5  | 34728 | 38952 | DUP       | W07GR03133 | Hexavalent chromium |
| 34328 | 6  | 34728 | 38952 | MS        | W07GR03133 | Hexavalent chromium |
| 34328 | 7  | 34728 | 38952 | MSD       | W07GR03133 | Hexavalent chromium |
| 34328 | 7  | 34728 | 38952 | SPK-RPD   | W07GR03133 | Hexavalent chromium |
| 34328 | 13 | 34728 | 38952 | SAMPLE    | W07GR03160 | Hexavalent chromium |
| 34328 | 14 | 34728 | 38952 | SAMPLE    | W07GR03161 | Hexavalent chromium |
| 34328 | 15 | 34728 | 38952 | SAMPLE    | W07GR03162 | Hexavalent chromium |
| 34327 | 2  | 34729 | 38953 | BLANK     |            | Hexavalent chromium |
| 34327 | 3  | 34729 | 38953 | LCS       |            | Hexavalent chromium |
| 34327 | 5  | 34729 | 38953 | DUP       | W07GR03163 | Hexavalent chromium |
| 34327 | 6  | 34729 | 38953 | MS        | W07GR03163 | Hexavalent chromium |
| 34327 | 7  | 34729 | 38953 | MSD       | W07GR03163 | Hexavalent chromium |
| 34327 | 4  | 34729 | 38953 | SAMPLE    | W07GR03163 | Hexavalent chromium |
| 34327 | 7  | 34729 | 38953 | SPK-RPD   | W07GR03163 | Hexavalent chromium |
| 34327 | 8  | 34729 | 38953 | SAMPLE    | W07GR03164 | Hexavalent chromium |
| 34327 | 9  | 34729 | 38953 | SAMPLE    | W07GR03165 | Hexavalent chromium |
| 34327 | 10 | 34729 | 38953 | SAMPLE    | W07GR03166 | Hexavalent chromium |
| 34327 | 11 | 34729 | 38953 | SAMPLE    | W07GR03167 | Hexavalent chromium |

## W13q Worklist/Batch/QC Report for Group# WSCF20072130

| WL#   | S# | Batch | QC#   | Tray Type | Sample#    | Test                           |
|-------|----|-------|-------|-----------|------------|--------------------------------|
| 34386 | 1  | 34786 | 39074 | BLANK     |            | Strontium 89/90                |
| 34386 | 2  | 34786 | 39074 | LCS       |            | Strontium 89/90                |
| 34386 | 3  | 34786 | 39074 | DUP       | W07GR03160 | Strontium 89/90                |
| 34386 | 4  | 34786 | 39074 | SAMPLE    | W07GR03160 | Strontium 89/90                |
| 34386 | 5  | 34786 | 39074 | SURR      | W07GR03160 | Strontium 89/90                |
| 34386 | 6  | 34786 | 39074 | SAMPLE    | W07GR03161 | Strontium 89/90                |
| 34386 | 7  | 34786 | 39074 | SURR      | W07GR03161 | Strontium 89/90                |
| 34386 | 8  | 34786 | 39074 | SAMPLE    | W07GR03162 | Strontium 89/90                |
| 34386 | 9  | 34786 | 39074 | SURR      | W07GR03162 | Strontium 89/90                |
| 34386 | 10 | 34786 | 39074 | SAMPLE    | W07GR03163 | Strontium 89/90                |
| 34386 | 11 | 34786 | 39074 | SURR      | W07GR03163 | Strontium 89/90                |
| 34386 | 12 | 34786 | 39074 | SAMPLE    | W07GR03164 | Strontium 89/90                |
| 34386 | 13 | 34786 | 39074 | SURR      | W07GR03164 | Strontium 89/90                |
| 34386 | 14 | 34786 | 39074 | SAMPLE    | W07GR03165 | Strontium 89/90                |
| 34386 | 15 | 34786 | 39074 | SURR      | W07GR03165 | Strontium 89/90                |
| 34386 | 16 | 34786 | 39074 | SAMPLE    | W07GR03166 | Strontium 89/90                |
| 34386 | 17 | 34786 | 39074 | SURR      | W07GR03166 | Strontium 89/90                |
| 34386 | 18 | 34786 | 39074 | SAMPLE    | W07GR03167 | Strontium 89/90                |
| 34386 | 19 | 34786 | 39074 | SURR      | W07GR03167 | Strontium 89/90                |
| 34607 | 1  | 35006 | 39340 | BLANK     |            | Tritium by Liq Sct column prep |
| 34607 | 2  | 35006 | 39340 | LCS       |            | Tritium by Liq Sct column prep |
| 34607 | 4  | 35006 | 39340 | DUP       | W07GR03130 | Tritium by Liq Sct column prep |
| 34607 | 3  | 35006 | 39340 | MS        | W07GR03130 | Tritium by Liq Sct column prep |
| 34607 | 8  | 35006 | 39340 | SAMPLE    | W07GR03160 | Tritium by Liq Sct column prep |
| 34607 | 9  | 35006 | 39340 | SAMPLE    | W07GR03161 | Tritium by Liq Sct column prep |
| 34607 | 10 | 35006 | 39340 | SAMPLE    | W07GR03162 | Tritium by Liq Sct column prep |
| 34607 | 11 | 35006 | 39340 | SAMPLE    | W07GR03163 | Tritium by Liq Sct column prep |
| 34607 | 12 | 35006 | 39340 | SAMPLE    | W07GR03164 | Tritium by Liq Sct column prep |
| 34607 | 13 | 35006 | 39340 | SAMPLE    | W07GR03165 | Tritium by Liq Sct column prep |
| 34607 | 14 | 35006 | 39340 | SAMPLE    | W07GR03166 | Tritium by Liq Sct column prep |
| 34607 | 15 | 35006 | 39340 | SAMPLE    | W07GR03167 | Tritium by Liq Sct column prep |

# WSCF METHOD REFERENCES REPORT

Department: Inorganic

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The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

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|                         |  |
|-------------------------|--|
| <b>LA-265-403</b>       | <b>LA-265-403: Hexavalent Chromium analysis by Spectrophotometer</b> |
| <b>EPA SW-846 7196A</b> | <b>HEXAVALENT CHROMIUM</b>   |
| <b>HEIS 7196_CR6</b>    | <b>Hexavalent Chromium</b>   |

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Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 4-jan-2008  
Report#: WSCF20072130  
Report WGPPM/5.2

Page 2

# WSCF METHOD REFERENCES REPORT

Department: Radiochemistry

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

|                                  |   |
|----------------------------------|---|
| <b>LA-508-415</b>                | <b>LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS</b> |
| <b>HEIS ALPHA_GPC</b>            | GROSS ALPHA GPC   |
| <b>HEIS BETA_GPC</b>             | GROSS BETA GPC  |
| <b>HEIS SRTOT_SEP_PRECIP_GPC</b> | Plutonium 89/90   |
| <b>LA-508-421</b>                | <b>LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER</b> |
| <b>HEIS ALPHA_LSC</b>            | A/B Liquid Scintillation  |
| <b>HEIS BETA_LSC</b>             | A/B Liquid Scintillation  |
| <b>HEIS TC99_3MDSK_LSC</b>       | TC99 by Liquid Scintillation  |
| <b>HEIS TRITIUM_EIE_LSC</b>      | Tritium Liquid Scintillation  |

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 4-jan-2008  
Report#: WSCF20072130  
Report WGPPM/5.2

Page 1

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03160  
**Client ID:** B1RF95

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 |    | 0.0870 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report WGPP/ver. 5.2*  
*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03161  
**Client ID:** B1RF96

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result   | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|----------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |          |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 | B  | 4.00e-03 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03162  
**Client ID:** B1RF97

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 |    | 0.0760 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03163  
**Client ID:** B1RF98

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-285-403 |    | 0.0750 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03164  
**Client ID:** B1RF99

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 |    | 0.0500 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**  
**RQ=Result Qualifier**  
**TP Err=Total Propagated Error**  
**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03165  
**Client ID:** B1RFB0

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 |    | 0.174  | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03166  
**Client ID:** B1RFB1

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF   | MDL     | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|------|---------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |      |         |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-285-403 |    | 0.0190 | mg/L |        |      | 1.00 | 2.0e-03 |     | 11/30/07      |

**MDL=Minimum Detection Limit**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03167  
**Client ID:** B1RFD5

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Inorganic  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed             | CAS #      | Method     | RQ | Result | Unit | TP Err | Unit | DF    | MDL   | PQL | Analysis Date |
|----------------------------|------------|------------|----|--------|------|--------|------|-------|-------|-----|---------------|
| <b>Hexavalent Chromium</b> |            |            |    |        |      |        |      |       |       |     |               |
| Hexavalent Chromium        | 18540-29-9 | LA-265-403 |    | 3.54   | mg/L |        |      | 37.20 | 0.074 |     | 11/30/07      |

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20072130  
 Matrix: WATER  
 Test: Hexavalent chromium

Sample Date: 11/29/07  
 Receive Date: 11/29/07

| QC Type                                | Analyte             | CAS #      | QC Found | QC Yield | Units   | Lower Limit | Upper Limit | RPD(%) | RPD Limit | RQ | Analysis Date |
|--|---------------------|------------|----------|----------|---------|-------------|-------------|--------|-----------|----|---------------|
| <b>Lab ID: W07GR03133</b>              |                     |            |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                     |            |          |          |         |             |             |        |           |    |               |
| DUP                                    | Hexavalent chromium | 18540-29-9 | 0.003    |          | RPD     |             |             | 0.000  | 15.000    |    | 11/30/07      |
| MS                                     | Hexavalent chromium | 18540-29-9 | 0.0527   | 100.000  | % Recov | 85.000      | 115.000     |        |           |    | 11/30/07      |
| MSD                                    | Hexavalent chromium | 18540-29-9 | 0.0527   | 100.000  | % Recov | 85.000      | 115.000     |        |           |    | 11/30/07      |
| SPK-RPD                                | Hexavalent chromium | 18540-29-9 | 100.000  |          | RPD     |             |             | 0.000  | 20.000    |    | 11/30/07      |
| <b>BATCH QC</b>                        |                     |            |          |          |         |             |             |        |           |    |               |
| BLANK                                  | Hexavalent chromium | 18540-29-9 | < 0.002  | n/a      | mg/L    | 0.000       | 2.000       |        |           | U  | 11/30/07      |
| LCS                                    | Hexavalent chromium | 18540-29-9 | 0.0514   | 103.838  | % Recov | 80.000      | 120.000     |        |           |    | 11/30/07      |
| <b>Lab ID: W07GR03163</b>              |                     |            |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                     |            |          |          |         |             |             |        |           |    |               |
| DUP                                    | Hexavalent chromium | 18540-29-9 | 0.075    |          | RPD     |             |             | 0.000  | 15.000    |    | 11/30/07      |
| MS                                     | Hexavalent chromium | 18540-29-9 | 0.0553   | 104.934  | % Recov | 85.000      | 115.000     |        |           |    | 11/30/07      |
| MSD                                    | Hexavalent chromium | 18540-29-9 | 0.0540   | 102.467  | % Recov | 85.000      | 115.000     |        |           |    | 11/30/07      |
| SPK-RPD                                | Hexavalent chromium | 18540-29-9 | 102.467  |          | RPD     |             |             | 2.379  | 20.000    |    | 11/30/07      |
| <b>BATCH QC</b>                        |                     |            |          |          |         |             |             |        |           |    |               |
| BLANK                                  | Hexavalent chromium | 18540-29-9 | < 0.002  | n/a      | mg/L    | 0.000       | 2.000       |        |           | U  | 11/30/07      |
| LCS                                    | Hexavalent chromium | 18540-29-9 | 0.0514   | 103.838  | % Recov | 80.000      | 120.000     |        |           |    | 11/30/07      |

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03160  
**Client ID:** B1RF95

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result    | Unit    | TP Err  | Unit  | DF   | MDL      | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|-----------|---------|---------|-------|------|----------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |           |         |         |       |      |          |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 |    | 2.10      | pCi/L   | + -2.35 | pCi/L | 1.00 | 1.2      |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 71.8      | Percent |         |       | 1.00 | 0.0      |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |           |         |         |       |      |          |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 1.80e +03 | pCi/L   | + -396  | pCi/L | 1.00 | 2.0e +02 |     | 12/31/07      |

**MDL=Minimum Detection Limit**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03161  
**Client ID:** B1RF96

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result   | Unit    | TP Err  | Unit  | DF   | MDL     | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|----------|---------|---------|-------|------|---------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |          |         |         |       |      |         |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 |    | 1.80     | pCi/L   | + -1.94 | pCi/L | 1.00 | 1.1     |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 78.3     | Percent |         |       | 1.00 | 0.0     |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |          |         |         |       |      |         |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 1.80e+03 | pCi/L   | + -396  | pCi/L | 1.00 | 2.0e+02 |     | 12/31/07      |

**MDL=Minimum Detection Limit**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03162  
**Client ID:** B1RF97

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result   | Unit    | TP Err  | Unit  | DF   | MDL     | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|----------|---------|---------|-------|------|---------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |          |         |         |       |      |         |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 | U  | -2.10    | pCi/L   | + -2.10 | pCi/L | 1.00 | 1.0     |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 82.1     | Percent |         |       | 1.00 | 0.0     |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |          |         |         |       |      |         |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 4.00e+03 | pCi/L   | + -840  | pCi/L | 1.00 | 2.0e+02 |     | 12/31/07      |

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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+ - Indicates more than six qualifier symbols

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U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03163  
**Client ID:** B1RF98

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result    | Unit    | TP Err  | Unit  | DF   | MDL      | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|-----------|---------|---------|-------|------|----------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |           |         |         |       |      |          |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 | U  | -0.480    | pCi/L   | + -2.05 | pCi/L | 1.00 | 1.1      |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 77.2      | Percent |         |       | 1.00 | 0.0      |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |           |         |         |       |      |          |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 4.00e +03 | pCi/L   | + -840  | pCi/L | 1.00 | 2.0e +02 |     | 12/31/07      |

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03164  
**Client ID:** B1RF99

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result     | Unit    | TP Err        | Unit  | DF   | MDL       | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|------------|---------|---------------|-------|------|-----------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |            |         |               |       |      |           |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 |    | 1.80       | pCi/L   | + -2.18       | pCi/L | 1.00 | 1.3       |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 64.1       | Percent |               |       | 1.00 | 0.0       |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |            |         |               |       |      |           |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 7.40e + 03 | pCi/L   | + -1.48e + 03 | pCi/L | 1.00 | 2.0e + 02 |     | 12/31/07      |

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**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03165  
**Client ID:** B1RFB0

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result   | Unit    | TP Err  | Unit  | DF   | MDL     | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|----------|---------|---------|-------|------|---------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |          |         |         |       |      |         |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 |    | 2.60     | pCi/L   | + -2.03 | pCi/L | 1.00 | 1.2     |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 70.8     | Percent |         |       | 1.00 | 0.0     |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |          |         |         |       |      |         |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 1.00e+03 | pCi/L   | + -250  | pCi/L | 1.00 | 2.0e+02 |     | 12/31/07      |

**MDL=Minimum Detection Limit**

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U - Analyzed for but not detected above limiting criteria(inorg)

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03166  
**Client ID:** B1RFB1

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result     | Unit    | TP Err  | Unit  | DF   | MDL       | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|------------|---------|---------|-------|------|-----------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |            |         |         |       |      |           |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 | U  | 0.170      | pCi/L   | + -1.70 | pCi/L | 1.00 | 1.2       |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 72.5       | Percent |         |       | 1.00 | 0.0       |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |            |         |         |       |      |           |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 2.00e + 03 | pCi/L   | + -440  | pCi/L | 1.00 | 2.0e + 02 |     | 12/31/07      |

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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+ - Indicates more than six qualifier symbols

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-032  
**Sample #** W07GR03167  
**Client ID:** B1RFD5

**GRP** TRENT  
**WSCF**

**Matrix:** WATER

**Group #:** WSCF20072130  
**Department:** Radiochemistry  
**Sampled:** 11/29/07  
**Received:** 11/29/07

| Test Performed                        | CAS #      | Method     | RQ | Result | Unit    | TP Err  | Unit  | DF   | MDL      | PQL | Analysis Date |
|---------------------------------------|------------|------------|----|--------|---------|---------|-------|------|----------|-----|---------------|
| <b>Strontium 89/90</b>                |            |            |    |        |         |         |       |      |          |     |               |
| Strontium-89/90                       | SR-RAD     | LA-508-415 | U  | -1.60  | pCi/L   | + -1.98 | pCi/L | 1.00 | 1.2      |     | 12/05/07      |
| Sr-85 Tracer by Beta Counting         | SR85       | LA-508-415 |    | 71.6   | Percent |         |       | 1.00 | 0.0      |     | 12/05/07      |
| <b>Tritium by Liq Sct column prep</b> |            |            |    |        |         |         |       |      |          |     |               |
| Tritium                               | 10028-17-8 | LA-508-421 |    | 890    | pCi/L   | + -231  | pCi/L | 1.00 | 2.0e +02 |     | 12/31/07      |

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

U - Analyzed for but not detected above limiting criteria(inorg)

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20072130  
 Matrix: WATER  
 Test: Strontium 89/90

Sample Date: 11/29/07  
 Receive Date: 11/29/07

| QC Type                                | Analyte                       | CAS #  | QC Found | QC Yield | Units   | Lower Limit | Upper Limit | RPD(%) | RPD Limit | RQ | Analysis Date |
|--|-------------------------------|--------|----------|----------|---------|-------------|-------------|--------|-----------|----|---------------|
| <b>Lab ID: W07GR03160</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| DUP                                    | Sr-85 Tracer by Beta Counting | SR85   | 73.2     | 73.200   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| DUP                                    | Strontium-89/90               | SR-RAD | 2.0      |          | RPD     |             |             | 4.878  | 20.000    |    | 12/05/07      |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 71.8     | 71.800   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03161</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 78.3     | 78.300   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03162</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 82.1     | 82.100   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03163</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 77.2     | 77.200   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03164</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 64.1     | 64.100   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03165</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |
| SURR                                   | Sr-85 Tracer by Beta Counting | SR85   | 70.8     | 70.800   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| <b>Lab ID: W07GR03166</b>              |                               |        |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |                               |        |          |          |         |             |             |        |           |    |               |

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20072130  
 Matrix: WATER  
 Test: Strontium 89/90

Sample Date: 11/29/07  
 Receive Date: 11/29/07

| QC Type   | Analyte                       | CAS #      | QC Found | QC Yield | Units   | Lower Limit | Upper Limit | RPD(%) | RPD Limit | RQ | Analysis Date |
|---|-------------------------------|------------|----------|----------|---------|-------------|-------------|--------|-----------|----|---------------|
| SURR  | Sr-85 Tracer by Beta Counting | SR85       | 72.5     | 72.500   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| Lab ID: W07GR03167<br>BATCH QC ASSOCIATED WITH SAMPLE |                               |            |          |          |         |             |             |        |           |    |               |
| SURR  | Sr-85 Tracer by Beta Counting | SR85       | 71.6     | 71.600   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| BATCH QC  |                               |            |          |          |         |             |             |        |           |    |               |
| BLANK   | Sr-85 Tracer by Beta Counting | SR85       | 82.1     | 82.100   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| BLANK   | Strontium-89/90               | 10098-97-2 | 1.6      | 1.600    | pCi/L   | -10.000     | 100.000     |        |           |    | 12/05/07      |
| LCS   | Sr-85 Tracer by Beta Counting | SR85       | 80.1     | 80.100   | % Recov | 30.000      | 105.000     |        |           |    | 12/05/07      |
| LCS   | Strontium-89/90               | 10098-97-2 | 175.0    | 104.979  | % Recov | 80.000      | 120.000     |        |           |    | 12/05/07      |

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20072130  
 Matrix: WATER  
 Test: Tritium by Liq Sct column prep

Sample Date: 11/27/07  
 Receive Date: 11/27/07

| QC Type                                | Analyte | CAS #      | QC Found | QC Yield | Units   | Lower Limit | Upper Limit | RPD(%) | RPD Limit | RQ | Analysis Date |
|--|---------|------------|----------|----------|---------|-------------|-------------|--------|-----------|----|---------------|
| <b>Lab ID: W07GR03130</b>              |         |            |          |          |         |             |             |        |           |    |               |
| <b>BATCH QC ASSOCIATED WITH SAMPLE</b> |         |            |          |          |         |             |             |        |           |    |               |
| DUP                                    | Tritium | 10028-17-8 | 3.4E+03  |          | RPD     |             |             | 5.714  | 20.000    |    | 12/31/07      |
| MS                                     | Tritium | 10028-17-8 | 23060.0  | 86.518   | % Recov | 75.000      | 125.000     |        |           |    | 12/31/07      |
| <b>BATCH QC</b>                        |         |            |          |          |         |             |             |        |           |    |               |
| BLANK                                  | Tritium | 10028-17-8 | UB.8E+01 | n/a      | pCi/L   | -10.000     | 1000.000    |        |           |    | 12/31/07      |
| LCS                                    | Tritium | 10028-17-8 | 2520.0   | 99.889   | % Recov | 80.000      | 120.000     |        |           |    | 12/31/07      |

M4W41-SLF-08-018

ATTACHMENT 4

**SAMPLE RECEIPT INFORMATION**

Consisting of 4 pages  
Including cover page

**Waste Sampling and Characterization Facility**  
P.O. BOX 1970 S3-30, Richland, WA 99352  
PHONE: (509) 373-7004/FAX: (509) 373-7134

*File  
VI  
11/10/0*

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354  
Attn: Steve Trent

Customer Code: GPP  
PO#: 122553/ES20  
Group#: 20072130  
Project#: F08-032  
Proj Mgr: Steve Trent E6-35  
Phone: 373-5869

The following samples were received from you on 11/29/07. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

| Sample#    | Sample Id | Tests Scheduled | Matrix                       | Sample Date |
|------------|-----------|-----------------|------------------------------|-------------|
| W07GR03160 | B1RF95    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03161 | B1RF96    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03162 | B1RF97    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03163 | B1RF98    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03164 | B1RF99    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03165 | B1RFB0    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03166 | B1RFB1    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |
| W07GR03167 | B1RFD5    | GRP<br>@H3-33   | TRENT Water<br>@SR89_90 CR+6 | 11/29/0     |

Test Acronym Description

| Test Acronym | Description                    |
|--------------|--------------------------------|
| @H3-33       | Tritium by Liq Sct column prep |
| @SR89_90     | Strontium 89/90                |
| CR+6         | Hexavalent chromium            |

|  |  |                                    |   |   |   |
|--|--|------------------------------------|---|---|---|
| <b>COLLECTOR</b><br>NCO Samplers                               | <b>COMPANY CONTACT</b><br>HEDQUIST, KA                                     | <b>TELEPHONE NO.</b><br>372-1436   | <b>PROJECT COORDINATOR</b><br>TRENT, SJ | <b>PRICE CODE</b><br>7N                         | <b>DATA TURNAROUND</b><br>45 Days / 45 Days |
| <b>SAMPLING LOCATION</b><br>KW Pump & Treat Quarterly Sampling | <b>PROJECT DESIGNATION</b><br>100-KW Treatment System - Quarterly Sampling | <b>SAF NO.</b><br>F08-032          | <b>AIR QUALITY</b>                      |   |   |
| <b>ICE CHEST NO.</b>   | <b>FIELD LOGBOOK NO.</b><br>HNF-N-576-2                                    | <b>ACTUAL SAMPLE DEPTH</b>         | <b>COA</b><br>122553E520                | <b>METHOD OF SHIPMENT</b><br>GOVERNMENT VEHICLE |   |
| <b>SHIPPED TO</b><br>Waste Sampling & Characterization         | <b>OFFSITE PROPERTY NO.</b>  | <b>BILL OF LADING/AIR BILL NO.</b> |   |   |   |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS       | PRESERVATION               | Cool~4C              | HNO3 to pH <2                 | None          |
|---------|--|----------------------------|----------------------|-------------------------------|---------------|
|         |  | <b>TYPE OF CONTAINER</b>   | P                    | P                             | G             |
|         |  | <b>NO. OF CONTAINER(S)</b> | 1                    | 2                             | 1             |
|         |  | <b>VOLUME</b>              | 500mL                | 1000mL                        | 500mL         |
|         | <b>SPECIAL HANDLING AND/OR STORAGE</b> | <b>SAMPLE ANALYSIS</b>     | Chromium Hex - 7196; | Strontium - 89,90 - Total Sr; | Tritium - H3; |

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| SAMPLE NO. | MATRIX*    | SAMPLE DATE | SAMPLE TIME |   |   |   |
|------------|------------|-------------|-------------|---|---|---|
| B1RF95     | 3107 WATER | 11-29-07    | 1028        | X | X | X |
| B1RF96     | 3161 WATER |             | 1030        | X | X | X |
| B1RF97     | 3162 WATER |             | 1045        | X | X | X |
| B1RF98     | 3163 WATER |             | 1045        | X | X | X |
| B1RF99     | 3164 WATER | 11-29-07    | 1130        | X | X | X |

**ICED**

| CHAIN OF POSSESSION          |           | SIGN/ PRINT NAMES     |                | SPECIAL INSTRUCTIONS |  |
|------------------------------|-----------|-----------------------|----------------|----------------------|--|
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME      |                      |  |
| S. Pope / AShe               | 11-29-07  | Victor Sims           | 11/29/07 15:02 |                      |  |
| 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      |                      |  |

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|                                 |                        |                    |                  |
|---------------------------------|------------------------|--------------------|------------------|
| <b>LABORATORY SECTION</b>       | <b>RECEIVED BY</b>     | <b>TITLE</b>       | <b>DATE/TIME</b> |
| <b>FINAL SAMPLE DISPOSITION</b> | <b>DISPOSAL METHOD</b> | <b>DISPOSED BY</b> | <b>DATE/TIME</b> |

|  |  |                                    |   |   |   |
|--|--|------------------------------------|---|---|---|
| <b>COLLECTOR</b><br>NCO Samplers                               | <b>COMPANY CONTACT</b><br>HEDQUIST, KA                                     | <b>TELEPHONE NO.</b><br>372-1436   | <b>PROJECT COORDINATOR</b><br>TRENT, SJ | <b>PRICE CODE</b><br>7N                         | <b>DATA TURNAROUND</b><br>45 Days / 45 Days |
| <b>SAMPLING LOCATION</b><br>KW Pump & Treat Quarterly Sampling | <b>PROJECT DESIGNATION</b><br>100-KW Treatment System - Quarterly Sampling | <b>SAF NO.</b><br>F08-032          | <b>AIR QUALITY</b>                      |   |   |
| <b>ICE CHEST NO.</b>   | <b>FIELD LOGBOOK NO.</b><br>HNF-N-576-2                                    | <b>ACTUAL SAMPLE DEPTH</b>         | <b>COA</b><br>122553ES20                | <b>METHOD OF SHIPMENT</b><br>GOVERNMENT VEHICLE |   |
| <b>SHIPPED TO</b><br>Waste Sampling & Characterization         | <b>OFFSITE PROPERTY NO.</b>  | <b>BILL OF LADING/AIR BILL NO.</b> |   |   |   |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS       | PRESERVATION               | Cool~4C              | HNO3 to pH <2                 | None          |
|---------|--|----------------------------|----------------------|-------------------------------|---------------|
|         |  | <b>TYPE OF CONTAINER</b>   | P                    | P                             | G             |
|         |  | <b>NO. OF CONTAINER(S)</b> | 1                    | 2                             | 1             |
|         |  | <b>VOLUME</b>              | 500mL                | 1000mL                        | 500mL         |
|         | <b>SPECIAL HANDLING AND/OR STORAGE</b> | <b>SAMPLE ANALYSIS</b>     | Chromium Hex - 7196; | Strontium- 89,90 -- Total Sr; | Tritium - H3; |

**ICED**

| SAMPLE NO.       | MATRIX* | SAMPLE DATE | SAMPLE TIME |   |   |   |
|------------------|---------|-------------|-------------|---|---|---|
| B1RFBO 076203165 | WATER   | 11-29-07    | 1055        | X | X | X |
| B1RFB1 3166      | WATER   | 11-29-07    | 1105        | X | X | X |
| B1RFD5 3167      | WATER   | 11-29-07    | 1240        | X | X | X |

| CHAIN OF POSSESSION                                    | SIGN/ PRINT NAMES                             | SPECIAL INSTRUCTIONS |
|--|---|----------------------|
| RELINQUISHED BY/REMOVED FROM<br>J. PODE/AS/ky 11-29-07 | RECEIVED BY/STORED IN<br>Victor Sims 11/29/07 |                      |
| RELINQUISHED BY/REMOVED FROM                           | RECEIVED BY/STORED IN                         |                      |
| RELINQUISHED BY/REMOVED FROM                           | RECEIVED BY/STORED IN                         |                      |
| RELINQUISHED BY/REMOVED FROM                           | RECEIVED BY/STORED IN                         |                      |
| RELINQUISHED BY/REMOVED FROM                           | RECEIVED BY/STORED IN                         |                      |
| RELINQUISHED BY/REMOVED FROM                           | RECEIVED BY/STORED IN                         |                      |

|                                 |                        |                    |                  |
|---------------------------------|------------------------|--------------------|------------------|
| <b>LABORATORY SECTION</b>       | <b>RECEIVED BY</b>     | <b>TITLE</b>       | <b>DATE/TIME</b> |
| <b>FINAL SAMPLE DISPOSITION</b> | <b>DISPOSAL METHOD</b> | <b>DISPOSED BY</b> | <b>DATE/TIME</b> |

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