Fluor Hanford, Inc.
Post Office Box 1000
Richland, Washington 99352

0062018

**FLUOR**

# Memorandum

W1141-03-SLF-061

| | | | |
|---|---|---|---|
| To: | S. J. Trent | Date: | November 6, 2003 |
| From: | S. L. Fitzgerald, Manager<br>WSCF Analytical Services | Telephone: | 373-7495 |

| | W/Attachments | | W/O Attachments | |
|---|---|---|---|---|
| cc: | T. F. Dale | S3-28 | D. Hart | S3-30 |
| | S. L. Fitzgerald | S3-30 | L. C. Swanson | E6-35 |
| | H. K. Meznarich | S3-30 | File/LB | |
| | J. E. Trechter | S3-30 | | |
| | M. Neely | S3-30 | | |

Subject: FINAL RESULTS FOR 200-PW-2/~~200-PW-4~~ OU- BOREHOLE SOIL SAMPLING-SAMPLE DELIVERY GROUP WSCF20031352- SAF NUMBER F03-006

References: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEN-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 5, Waste Sampling and Characterization Facility Quality Assurance Plan

This letter contains a narrative (Attachment 1) for the sample delivery group (WSCF20031352), the analytical results (Attachment 2) and the sample receipt information (Attachment 3).

slf/ddw

Attachments 3

RECEIVED
JUL 07 2004
EDMC

NOV 2003
RECEIVED

W1141-03-SLF-061

ATTACHMENT 1

**NARRATIVE**

Consisting of 5 pages
Cover page not included

| | |
|---|---|
| **Sample Delivery Group** | **WSCF20031352** |
| **Sample Matrix** | **Soil** |
| **Sample Visual** | **Brown** |
| **SAF Number** | **F03-006** |
| **Data Deliverable** | **Summary Report** |

## Introduction

Two (2) soil samples (B17121 and B172M8) from GPP were received at the WSCF Laboratory on October 06, 2003. These samples were analyzed for those analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Protection Program-Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and Request for Sample Analysis forms are included as Attachment 3.

## Analytical Methodology for Requested Analyses

- PCB's by EPA SW-846 Method 8082. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8 and ICP-AES Metals by EPA SW-846 Method 6010A. Analytical work was performed with no deviations to the approved method.
- Semi-VOA's by EPA SW-846 Method 8270B. Analytical work was performed with no deviations to the approved method.
- Alcohols and Glycols by EPA SW-846 Method 8015. Analytical work was performed with no deviations to the approved method.
- WTPH-D by WDOE Method NWTPH-Dx. Analytical work was performed with no deviations to the approved method.
- WTPH-G by WDOE Method NWTPH-Gx. Analytical work was performed with no deviations to the approved method.
- IC Anions and Ammonium by EPA SW-846 Method 300.0 and 300.7. Analytical work was performed with no deviations to the approved method for Ammonium, but a deviation was required for the Anions (see comments below).

- The pH by EPA Method 150.1. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- Cyanide by EPA SW-846 Method 9010. Analytical work was performed with no deviations to the approved method.
- All RadChem analyses (AEA's, GEA) were run by internal WDOE accredited WSCF procedures. Analytical work was performed with no deviations to the approved method.

**Comments**

PCB's – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-29 and 2-30 for QC details.

ICP-MS and ICP-AES Metals – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-38, 2-39, 2-40, and 2-46 for QC details.

VOA's – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-48, 2-48 and 2-50 for QC details.

Semi-VOA's – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-32, 2-33, 2-34, 2-35, 2-36 and 2-37 for QC details. Compounds listed on the tentatively identified peak report with an "N" qualifier have been identified with the program used to interpret the raw data.

Alcohols and Glycols – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-51 for QC details.

WTPH-D – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-31 for details.

WTPH-G – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-47 for details.

IC Anions – The client requested hold time(s) for this analysis was not met. The client was notified and requested WSCF to continue with this analysis. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-26 and 2-27 for QC details.

NH4 – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-25 for QC details.

Percent Solids – PCB's, VOA's, Semi-VOA's, Alcohols and Glycols, WTPH-G and WTPH-D analytical results were corrected for percent solids. All other analytical results were reported for the sample as received.

CN – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-28 for QC details.

RadChem – There are no hold times associated with these WDOE accredited methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-41, 2-42, 2-43, 2-44, and 2-45 for QC details.

Tracer Recovery

| Isotope | | B17121 | B172M8 |
|---|---|---|---|
| PU | Blank | 55.20% | 55.20% |
| | LCS | 41.48% | 41.48% |
| | Sample | 86.08% | 79.48% |
| | Duplicate | 73.92% | N/A |
| AM | Blank | 65.95% | 65.95% |
| | LCS | 78.26% | 78.26% |
| | Sample | 78.43% | 69.03% |
| | Duplicate | 90.80% | N/A |
| U | Blank | 84.35% | 84.35% |
| | LCS | 76.57% | 76.57% |
| | Sample | 77.40% | 78.70% |
| | Duplicate | 94.21% | N/A |

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.

Troy Dale
WSCF Production Control

Abbreviations

Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

W1141-03-SLF-061

ATTACHMENT 2

**ANALYTICAL RESULTS**

Consisting of 51 pages
Cover page not included

# WSCF
# ANALYTICAL RESULTS REPORT

**for**

**Ground Water Protection Program**

**Richland, WA 99352**

**Attention: Steve Trent**

Analytical: _____

Client Services: John Boechler

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

Confidentiality Notice: The information contained in this report is privileged and confidential information intended only for the use of the addressee. If the reader of this report is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone at (509) 373-7020.

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20031352
Report Date: 5-nov-2003
*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 TRENT | 57-12-5 | Cyanide | SOIL | LA-695-402 | U | < 0.200 | mg/kg | 1.00 | 0.20 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | NH4-N | Nitrogen in ammonium | SOIL | LA-503-401 | U | < 0.200 | mg/kg | 50.00 | 0.20 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | TS | Total solids | SOIL | LA-519-412 | | 96.7 | % | 1.00 | 0.0 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | PH | pH Measurement | SOIL | LA-212-411 | | 8.71 | pH | 1.00 | 0.010 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 60-29-7 | Diethyl ether | SOIL | Organics | U | < 5.00e+03 | ug/kg | 1.00 | 5.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 67-56-1 | Methanol | SOIL | Organics | U | < 1.00e+03 | ug/kg | 1.00 | 1.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 107-21-1 | Ethylene glycol | SOIL | Organics | U | < 5.00e+03 | ug/kg | 1.00 | 5.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14596-10-2 | Americium-241 | SOIL | LA-508-471 | U | 2.10e-03 | pCi/g | 1.00 | 0.053 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Am-241 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- 2.10e-03 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 16984-48-8 | Fluoride | SOIL | LA-533-410 | U | < 1.15 | mg/kg | 50.00 | 1.2 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 16887-00-6 | Chloride | SOIL | LA-533-410 | B | 6.43 | mg/kg | 50.00 | 2.6 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | NO2-N | Nitrogen in Nitrite | SOIL | LA-533-410 | U | < 0.950 | mg/kg | 50.00 | 0.95 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | NO3-N | Nitrogen in Nitrate | SOIL | LA-533-410 | | 17.9 | mg/kg | 50.00 | 0.65 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14265-44-2 | Phosphate | SOIL | LA-533-410 | U | < 2.70 | mg/kg | 50.00 | 2.7 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14808-79-8 | Sulfate | SOIL | LA-533-410 | U | < 5.00 | mg/kg | 50.00 | 5.0 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14596-10-2 | Americium-241 | SOIL | LA-508-462 | U | -0.0710 | pCi/g | 1.00 | 0.094 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Am-241 Rel Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0710 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14234-35-6 | Antimony-125 | SOIL | LA-508-462 | U | -9.61e-03 | pCi/g | 1.00 | 0.031 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Sb-125 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0188 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 14762-78-8 | Cerium-144 | SOIL | LA-508-462 | U | -0.0168 | pCi/g | 1.00 | 0.10 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Ce-144 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0669 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 10198-40-0 | Cobalt-60 | SOIL | LA-508-462 | U | 3.44e-04 | pCi/g | 1.00 | 0.013 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Co-60 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 3.44e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 13967-70-9 | Cesium-134 | SOIL | LA-508-462 | U | 0.0413 | pCi/g | 1.00 | 0.050 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Cs-134 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0139 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 10045-97-3 | Cesium-137 | SOIL | LA-508-462 | U | -8.81e-03 | pCi/g | 1.00 | 0.012 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | E,T,C | Cs-137 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 9.07e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

2-3

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | 14683-23-9 | Europium-152 | SOIL | LA-508-462 | U | 0.0192 | pCi/g | 1.00 | 0.036 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Eu-152 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0342 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15585-10-1 | Europium-154 | SOIL | LA-508-462 | U | 0.0322 | pCi/g | 1.00 | 0.039 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Eu-154 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0309 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14391-16-3 | Europium-155 | SOIL | LA-508-462 | | 0.0538 | pCi/g | 1.00 | 0.053 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Eu-155 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0408 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14681-63-1 | Niobium-94 | SOIL | LA-508-462 | U | 1.22e-03 | pCi/g | 1.00 | 0.012 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Nb-94 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 8.04e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13982-63-3 | Radium-226 | SOIL | LA-508-462 | | 0.472 | pCi/g | 1.00 | 0.023 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Ra-226 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0859 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15262-20-1 | Radium-228 | SOIL | LA-508-462 | | 0.680 | pCi/g | 1.00 | 0.040 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Ra-228 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.121 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13967-48-1 | Ruthenium-106 | SOIL | LA-508-462 | U | -0.0212 | pCi/g | 1.00 | 0.10 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Ru-106 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0623 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15832-50-5 | Tin-126 | SOIL | LA-508-462 | U | 0.177 | pCi/g | 1.00 | 0.20 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Sn-126 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0352 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15065-10-8 | Thorium-234 | SOIL | LA-508-462 | | 0.829 | pCi/g | 1.00 | 0.78 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Th-234 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.271 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15117-96-1 | Uranium-235 | SOIL | LA-508-462 | U | 0.0771 | pCi/g | 1.00 | 0.10 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | U-235 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0241 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13982-39-3 | Zinc-65 | SOIL | LA-508-462 | U | -8.55e-03 | pCi/g | 1.00 | 0.029 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Zn-65 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0204 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14331-83-0 | Actinium-228 | SOIL | LA-508-462 | | 0.680 | pCi/g | 1.00 | 0.040 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Ac-228 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.121 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14913-49-6 | Bismuth-212 | SOIL | LA-508-462 | | 0.450 | pCi/g | 1.00 | 0.094 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Bi-212 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.125 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14733-03-0 | Bismuth-214 | SOIL | LA-508-462 | | 0.472 | pCi/g | 1.00 | 0.023 | 10/20/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | E.T.C | Bi-214 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0859 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15092-94-1 | Lead-212 | SOIL | LA-508-462 | | 0.702 | pCi/g | 1.00 | 0.025 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E.T.C | Pb-212 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0962 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15067-28-4 | Lead-214 | SOIL | LA-508-462 | | 0.550 | pCi/g | 1.00 | 0.025 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E.T.C | Pb-214 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0809 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13968-53-1 | Ruthenium-103 | SOIL | LA-508-462 | U | -1.59e-03 | pCi/g | 1.00 | 0.012 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E.T.C | Ru-103 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 7.11e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13966-06-8 | Tin-113 | SOIL | LA-508-462 | U | -8.42e-03 | pCi/g | 1.00 | 0.015 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E.T.C | Sn-113 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 9.26e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 14913-50-9 | Thallium-208 | SOIL | LA-508-462 | | 0.213 | pCi/g | 1.00 | 0.012 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E.T.C | Tl-208 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0386 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-42-8 | Boron | SOIL | LA-505-411 | U | < 5.20 | mg/kg | 1.00 | 5.2 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-69-9 | Bismuth | SOIL | LA-505-411 | U | < 5.00 | mg/kg | 1.00 | 5.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-36-0 | Antimony | SOIL | LA-505-412 | U | < 4.72 | mg/kg | 9.43 | 4.7 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-38-2 | Arsenic | SOIL | LA-505-412 | | 4.42 | mg/kg | 9.43 | 2.8 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-39-3 | Barium | SOIL | LA-505-412 | | 57.0 | mg/kg | 9.43 | 1.9 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-41-7 | Beryllium | SOIL | LA-505-412 | U | < 2.83 | mg/kg | 9.43 | 2.8 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-43-9 | Cadmium | SOIL | LA-505-412 | U | < 0.943 | mg/kg | 9.43 | 0.94 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-47-3 | Chromium | SOIL | LA-505-412 | | 13.0 | mg/kg | 9.43 | 2.8 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-50-8 | Copper | SOIL | LA-505-412 | U | < 4.72 | mg/kg | 9.43 | 4.7 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7439-92-1 | Lead | SOIL | LA-505-412 | U | < 11.3 | mg/kg | 9.43 | 11 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-02-0 | Nickel | SOIL | LA-505-412 | | 13.5 | mg/kg | 9.43 | 4.7 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7782-49-2 | Selenium | SOIL | LA-505-412 | | 2.98 | mg/kg | 9.43 | 2.8 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-22-4 | Silver | SOIL | LA-505-412 | U | < 1.89 | mg/kg | 9.43 | 1.9 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7440-61-1 | Uranium | SOIL | LA-505-412 | U | < 0.943 | mg/kg | 9.43 | 0.94 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7439-97-6 | Mercury | SOIL | LA-505-412 | U | < 0.943 | mg/kg | 9.43 | 0.94 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | TPHGASOLINE | Total Pet. Hydrocarbons Gas | SOIL | NWTPH | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/08/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | 12674-11-2 | Aroclor-1016 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 11104-28-2 | Aroclor-1221 | SOIL | LA-523-427 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 11141-16-5 | Aroclor-1232 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 53469-21-9 | Aroclor-1242 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 12672-29-6 | Aroclor-1248 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 11097-69-1 | Aroclor-1254 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 11096-82-5 | Aroclor-1260 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 37324-23-5 | Aroclor-1262 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 11100-14-4 | Aroclor-1268 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 13981-16-3 | Plutonium-238 | SOIL | LA-508-471 | U | -5.90e-03 | pCi/g | 1.00 | 0.054 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Pu-238 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- 0.0295 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | PU-239/240 | Pu-239/240 by AEA | SOIL | LA-508-471 | U | 1.90e-03 | pCi/g | 1.00 | 0.014 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | Pu-239/240 AEA Total Cntg Err | SOIL | LA-508-471 | | +- 0.0190 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 100-02-7 | 4-Nitrophenol | SOIL | LA-523-456 | U | < 660 | ug/kg | 1.00 | 6.6e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 106-46-7 | 1,4-Dichlorobenzene | SOIL | LA-523-456 | U | < 320 | ug/kg | 1.00 | 3.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 108-95-2 | Phenol | SOIL | LA-523-456 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 120-82-1 | 1,2,4-Trichlorobenzene | SOIL | LA-523-456 | U | < 300 | ug/kg | 1.00 | 3.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 121-14-2 | 2,4-Dinitrotoluene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 129-00-0 | Pyrene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 59-50-7 | 4-Chloro-3-methylphenol | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 621-64-7 | N-Nitrosodi-n-dipropylamine | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 83-32-9 | Acenaphthene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 87-86-5 | Pentachlorophenol | SOIL | LA-523-456 | U | < 310 | ug/kg | 1.00 | 3.1e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 95-57-8 | 2-Chlorophenol | SOIL | LA-523-456 | U | < 150 | ug/kg | 1.00 | 1.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 100-01-6 | 4-Nitroaniline | SOIL | LA-523-456 | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 101-55-3 | 4-Bromophenylphenyl ether | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 105-67-9 | 2,4-Dimethylphenol | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | 106-47-8 | 4-Chloroaniline | SOIL | LA-523-456 | U | < 96.0 | ug/kg | 1.00 | 96 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 108-60-1 | Bis(2-chloro-1-methylethyl)eth | SOIL | LA-523-456 | U | < 260 | ug/kg | 1.00 | 2.6e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 111-44-4 | Bis(2-chloroethyl) ether | SOIL | LA-523-456 | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 111-91-1 | Bis(2-Chloroethoxy)methane | SOIL | LA-523-456 | U | < 120 | ug/kg | 1.00 | 1.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 117-81-7 | Bis(2-ethylhexyl) phthalate | SOIL | LA-523-456 | U | < 570 | ug/kg | 1.00 | 5.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 117-84-0 | Di-n-octylphthalate | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 118-74-1 | Hexachlorobenzene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 120-12-7 | Anthracene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 120-83-2 | 2,4-Dichlorophenol | SOIL | LA-523-456 | U | < 82.0 | ug/kg | 1.00 | 82 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 131-11-3 | Dimethyl phthalate | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 132-64-9 | Dibenzofuran | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 191-24-2 | Benzo(ghi)perylene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 193-39-5 | Indeno(1,2,3-cd)pyrene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 205-99-2 | Benzo(b)fluoranthene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 206-44-0 | Fluoranthene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 207-08-9 | Benzo(k)fluoranthene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 208-96-8 | Acenaphthylene | SOIL | LA-523-456 | U | < 82.0 | ug/kg | 1.00 | 82 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 218-01-9 | Chrysene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 50-32-8 | Benzo(a)pyrene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 51-28-5 | 2,4-Dinitrophenol | SOIL | LA-523-456 | U | < 680 | ug/kg | 1.00 | 6.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 53-70-3 | Dibenz[a,h]anthracene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 534-52-1 | 4,6-Dinitro-2-methylphenol | SOIL | LA-523-456 | U | < 680 | ug/kg | 1.00 | 6.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 541-73-1 | 1,3-Dichlorobenzene | SOIL | LA-523-456 | U | < 330 | ug/kg | 1.00 | 3.3e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 56-55-3 | Benzo(a)anthracene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 606-20-2 | 2,6-Dinitrotoluene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 7005-72-3 | 4-Chlorophenylphenyl ether | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 77-47-4 | Hexachlorocyclopentadiene | SOIL | LA-523-456 | U | < 320 | ug/kg | 1.00 | 3.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

2 - 7

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 TRENT | 78-59-1 | Isophorone | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 84-66-2 | Diethylphthalate | SOIL | LA-523-456 | | 340 | ug/kg | 1.00 | 1.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 84-74-2 | Di-n-butylphthalate | SOIL | LA-523-456 | U | < 89.0 | ug/kg | 1.00 | 89 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 85-01-8 | Phenanthrene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 85-68-7 | Butylbenzylphthalate | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 86-30-6 | N-Nitrosodiphenylamine | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 86-73-7 | Fluorene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 86-74-8 | Carbazole | SOIL | LA-523-456 | U | < 82.0 | ug/kg | 1.00 | 82 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 87-68-3 | Hexachlorobutadiene | SOIL | LA-523-456 | U | < 380 | ug/kg | 1.00 | 3.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 88-74-4 | 2-Nitroaniline | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 88-75-5 | 2-Nitrophenol | SOIL | LA-523-456 | U | < 180 | ug/kg | 1.00 | 1.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 91-20-3 | Naphthalene | SOIL | LA-523-456 | U | < 290 | ug/kg | 1.00 | 2.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 91-57-6 | 2-Methylnaphthalene | SOIL | LA-523-456 | U | < 180 | ug/kg | 1.00 | 1.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 91-58-7 | 2-Chloronaphthalene | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 91-94-1 | 3,3'-Dichlorobenzidine | SOIL | LA-523-456 | U | < 82.0 | ug/kg | 1.00 | 82 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 95-48-7 | 2-Methylphenol (cresol, o-) | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 95-50-1 | 1,2-Dichlorobenzene | SOIL | LA-523-456 | U | < 370 | ug/kg | 1.00 | 3.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 95-95-4 | 2,4,5-Trichlorophenol | SOIL | LA-523-456 | U | < 75.0 | ug/kg | 1.00 | 75 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 98-95-3 | Nitrobenzene | SOIL | LA-523-456 | U | < 270 | ug/kg | 1.00 | 2.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 99-09-2 | 3-Nitroaniline | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 65794-96-9 | 3 & 4 Methylphenol Total | SOIL | LA-523-456 | U | < 120 | ug/kg | 1.00 | 1.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 67-72-1 | Hexachloroethane | SOIL | LA-523-456 | U | < 480 | ug/kg | 1.00 | 4.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 88-06-2 | 2,4,6-Trichlorophenol | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 100-51-6 | Benzyl alcohol | SOIL | LA-523-456 | U | < 75.0 | ug/kg | 1.00 | 75 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 111-76-2 | 2-Butoxyethanol | SOIL | LA-523-456 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | 126-73-8 | Tributyl phosphate | SOIL | LA-523-456 | U | < 68.0 | ug/kg | 1.00 | 68 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 TRENT | U-233/234 | Uranium-233/234 | SOIL | LA-508-471 | | 0.150 | pCi/g | 1.00 | 0.020 | 10/16/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | E,T,C | U-233/234 AEA Total Cntg Error | SOIL | LA-508-471 | | +- | 0.0510 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 15117-96-1 | Uranium-235 | SOIL | LA-508-471 | | | 0.0240 | pCi/g | 1.00 | 5.4e-03 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | U-235 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- | 0.0151 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | U-238 | Uranium-238 | SOIL | LA-508-471 | | | 0.110 | pCi/g | 1.00 | 0.014 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | E,T,C | U-238 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- | 0.0396 | pCi/g | 1.00 | 0.10 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-35-4 | 1,1-Dichloroethene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 79-01-6 | Trichloroethene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 71-43-2 | Benzene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 108-88-3 | Toluene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 108-90-7 | Chlorobenzene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-34-3 | 1,1-Dichloroethane | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 100-41-4 | Ethylbenzene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 100-42-5 | Styrene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 10061-01-5 | cis-1,3-Dichloropropene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 10061-02-6 | trans-1,3-Dichloropropene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 107-06-2 | 1,2-Dichloroethane | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 108-10-1 | 4-Methyl-2-Pentanone | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 124-48-1 | Dibromochloromethane | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 127-18-4 | Tetrachloroethene | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 1330-20-7 | Xylenes (total) | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 540-59-0 | 1,2-Dichloroethene(Total) | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 56-23-5 | Carbon tetrachloride | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 591-78-6 | 2-Hexanone | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 67-64-1 | Acetone | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 67-66-3 | Chloroform | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 71-55-6 | 1,1,1-Trichloroethane | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 74-83-9 | Bromomethane | SOIL | LA-523-455 | U | < | 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | 74-87-3 | Chloromethane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-00-3 | Chloroethane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-01-4 | Vinyl chloride | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-09-2 | Methylenechloride | SOIL | LA-523-455 | BJ | 6.00 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-15-0 | Carbon disulfide | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-25-2 | Bromoform | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 75-27-4 | Bromodichloromethane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 78-87-5 | 1,2-Dichloropropane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 78-93-3 | 2-Butanone | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 79-00-5 | 1,1,2-Trichloroethane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 79-34-5 | 1,1,2,2-Tetrachloroethane | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 71-36-3 | 1-Butanol | SOIL | LA-523-455 | U | < 41.0 | ug/kg | 1.00 | 41 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 107-87-9 | 2-Pentanone | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | 104-51-8 | n-Butylbenzene | SOIL | LA-523-455 | U | < 2.10 | ug/kg | 1.00 | 2.1 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | TPHDIESEL | Total Pet. Hydrocarbons Diesel | SOIL | NWTPH | U | < 3.70e+03 | ug/kg | 1.00 | 3.7e+03 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000880 | B17121 | TRENT | TPHKEROSENE | Kerosene | SOIL | NWTPH | U | < 3.70e+03 | ug/kg | 1.00 | 3.7e+03 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 57-12-5 | Cyanide | SOIL | LA-695-402 | U | < 0.200 | mg/kg | 1.00 | 0.20 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | NH4-N | Nitrogen in ammonium | SOIL | LA-503-401 | U | < 0.200 | mg/kg | 50.00 | 0.20 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | TS | Total solids | SOIL | LA-519-412 | | 96.4 | % | 1.00 | 0.0 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | PH | pH Measurement | SOIL | LA-212-411 | | 8.50 | pH | 1.00 | 0.010 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 60-29-7 | Diethyl ether | SOIL | Organics | U | < 5.00e+03 | ug/kg | 1.00 | 5.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 67-56-1 | Methanol | SOIL | Organics | U | < 1.00e+03 | ug/kg | 1.00 | 1.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 107-21-1 | Ethylene glycol | SOIL | Organics | U | < 5.00e+03 | ug/kg | 1.00 | 5.0e+03 | 10/14/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14596-10-2 | Americium-241 | SOIL | LA-508-471 | U | -0.0170 | pCi/g | 1.00 | 0.063 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E.T.C | Am-241 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- 0.0323 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 16984-48-8 | Fluoride | SOIL | LA-533-410 | U | < 1.15 | mg/kg | 50.00 | 1.2 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 16887-00-6 | Chloride | SOIL | LA-533-410 | | 3.78 | mg/kg | 50.00 | 2.6 | 10/07/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | NO2-N | Nitrogen in Nitrite | SOIL | LA-533-410 | U | < 0.950 | mg/kg | 50.00 | 0.95 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | NO3-N | Nitrogen in Nitrate | SOIL | LA-533-410 | | 10.7 | mg/kg | 50.00 | 0.65 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14265-44-2 | Phosphate | SOIL | LA-533-410 | U | < 2.70 | mg/kg | 50.00 | 2.7 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14808-79-8 | Sulfate | SOIL | LA-533-410 | U | < 5.00 | mg/kg | 50.00 | 5.0 | 10/07/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14596-10-2 | Americium-241 | SOIL | LA-508-462 | U | 0.0409 | pCi/g | 1.00 | 0.10 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Am-241 Rel Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0671 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14234-35-6 | Antimony-125 | SOIL | LA-508-462 | U | 0.0159 | pCi/g | 1.00 | 0.036 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Sb-125 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0213 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14762-78-8 | Cerium-144 | SOIL | LA-508-462 | U | -0.0468 | pCi/g | 1.00 | 0.099 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Ce-144 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0641 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 10198-40-0 | Cobalt-60 | SOIL | LA-508-462 | U | -4.94e-03 | pCi/g | 1.00 | 0.014 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Co-60 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 8.50e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13967-70-9 | Cesium-134 | SOIL | LA-508-462 | U | 0.0408 | pCi/g | 1.00 | 0.050 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Cs-134 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0131 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 10045-97-3 | Cesium-137 | SOIL | LA-508-462 | U | 2.31e-03 | pCi/g | 1.00 | 0.014 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Cs-137 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 9.82e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14683-23-9 | Europium-152 | SOIL | LA-508-462 | U | 0.0173 | pCi/g | 1.00 | 0.038 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Eu-152 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0363 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15585-10-1 | Europium-154 | SOIL | LA-508-462 | U | -0.0170 | pCi/g | 1.00 | 0.046 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Eu-154 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0279 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14391-16-3 | Europium-155 | SOIL | LA-508-462 | U | 0.0455 | pCi/g | 1.00 | 0.055 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Eu-155 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0326 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14681-63-1 | Niobium-94 | SOIL | LA-508-462 | U | 8.65e-03 | pCi/g | 1.00 | 0.013 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Nb-94 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 7.86e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13982-63-3 | Radium-226 | SOIL | LA-508-462 | | 0.609 | pCi/g | 1.00 | 0.026 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Ra-226 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.102 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15262-20-1 | Radium-228 | SOIL | LA-508-462 | | 0.963 | pCi/g | 1.00 | 0.047 | 10/20/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | E,T,C | Ra-228 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.156 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13967-48-1 | Ruthenium-106 | SOIL | LA-508-462 | U | -0.0433 | pCi/g | 1.00 | 0.12 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Ru-106 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0706 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15832-50-5 | Tin-126 | SOIL | LA-508-462 | U | 0.187 | pCi/g | 1.00 | 0.20 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Sn-126 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0430 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15065-10-8 | Thorium-234 | SOIL | LA-508-462 | U | 0.703 | pCi/g | 1.00 | 0.77 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Th-234 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.691 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15117-96-1 | Uranium-235 | SOIL | LA-508-462 | U | 0.0578 | pCi/g | 1.00 | 0.10 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | U-235 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0221 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13982-39-3 | Zinc-65 | SOIL | LA-508-462 | U | 0.0462 | pCi/g | 1.00 | 0.036 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Zn-65 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0243 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14331-83-0 | Actinium-228 | SOIL | LA-508-462 | | 0.963 | pCi/g | 1.00 | 0.047 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Ac-228 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.156 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14913-49-6 | Bismuth-212 | SOIL | LA-508-462 | | 0.605 | pCi/g | 1.00 | 0.11 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Bi-212 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.151 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14733-03-0 | Bismuth-214 | SOIL | LA-508-462 | | 0.609 | pCi/g | 1.00 | 0.026 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Bi-214 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.102 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15092-94-1 | Lead-212 | SOIL | LA-508-462 | | 0.970 | pCi/g | 1.00 | 0.025 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Pb-212 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.130 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15067-28-4 | Lead-214 | SOIL | LA-508-462 | | 0.628 | pCi/g | 1.00 | 0.028 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Pb-214 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0898 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13968-53-1 | Ruthenium-103 | SOIL | LA-508-462 | U | -4.13e-03 | pCi/g | 1.00 | 0.012 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Ru-103 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 7.60e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 13966-06-8 | Tin-113 | SOIL | LA-508-462 | U | 1.88e-03 | pCi/g | 1.00 | 0.017 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Sn-113 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 9.76e-03 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 14913-50-9 | Thallium-208 | SOIL | LA-508-462 | | 0.288 | pCi/g | 1.00 | 0.013 | 10/20/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Tl-208 Rel. Count Error (GEA) | SOIL | LA-508-462 | | +- 0.0472 | pCi/g | 1.00 | 0.0 | 10/20/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 TRENT | 7440-42-8 | Boron | SOIL | LA-505-411 | U | < 5.10 | mg/kg | 1.00 | 5.1 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-69-9 | Bismuth | SOIL | LA-505-411 | U | < 5.00 | mg/kg | 1.00 | 5.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-36-0 | Antimony | SOIL | LA-505-412 | U | < 5.08 | mg/kg | 10.17 | 5.1 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-38-2 | Arsenic | SOIL | LA-505-412 | | 3.74 | mg/kg | 10.17 | 3.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-39-3 | Barium | SOIL | LA-505-412 | | 56.3 | mg/kg | 10.17 | 2.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-41-7 | Beryllium | SOIL | LA-505-412 | U | < 3.05 | mg/kg | 10.17 | 3.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-43-9 | Cadmium | SOIL | LA-505-412 | U | < 1.02 | mg/kg | 10.17 | 1.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-47-3 | Chromium | SOIL | LA-505-412 | | 10.2 | mg/kg | 10.17 | 3.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-50-8 | Copper | SOIL | LA-505-412 | U | < 5.08 | mg/kg | 10.17 | 5.1 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7439-92-1 | Lead | SOIL | LA-505-412 | U | < 12.2 | mg/kg | 10.17 | 12 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-02-0 | Nickel | SOIL | LA-505-412 | | 9.40 | mg/kg | 10.17 | 5.1 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7782-49-2 | Selenium | SOIL | LA-505-412 | U | < 3.05 | mg/kg | 10.17 | 3.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-22-4 | Silver | SOIL | LA-505-412 | U | < 2.03 | mg/kg | 10.17 | 2.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7440-61-1 | Uranium | SOIL | LA-505-412 | U | < 1.02 | mg/kg | 10.17 | 1.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 7439-97-6 | Mercury | SOIL | LA-505-412 | U | < 1.02 | mg/kg | 10.17 | 1.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | TPHGASOLINE | Total Pet. Hydrocarbons Gas | SOIL | NWTPH | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 12674-11-2 | Aroclor-1016 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 11104-28-2 | Aroclor-1221 | SOIL | LA-523-427 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 11141-16-5 | Aroclor-1232 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 53469-21-9 | Aroclor-1242 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 12672-29-6 | Aroclor-1248 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 11097-69-1 | Aroclor-1254 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 11096-82-5 | Aroclor-1260 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 37324-23-5 | Aroclor-1262 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 11100-14-4 | Aroclor-1268 | SOIL | LA-523-427 | U | < 50.0 | ug/kg | 1.00 | 50 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | 13981-16-3 | Plutonium-238 | SOIL | LA-508-471 | U | -0.0200 | pCi/g | 1.00 | 0.064 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 TRENT | E.T.C | Pu-238 by AEA Total Cntg Error | SOIL | LA-508-471 | | + 0.0320 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | PU-239/240 | Pu-239/240 by AEA | SOIL | LA-508-471 | | 8.10e-03 | pCi/g | 1.00 | 5.5e-03 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | Pu-239/240 AEA Total Cntg Err | SOIL | LA-508-471 | | +- 8.10e-03 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 100-02-7 | 4-Nitrophenol | SOIL | LA-523-456 | U | < 670 | ug/kg | 1.00 | 6.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 106-46-7 | 1,4-Dichlorobenzene | SOIL | LA-523-456 | U | < 320 | ug/kg | 1.00 | 3.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 108-95-2 | Phenol | SOIL | LA-523-456 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 120-82-1 | 1,2,4-Trichlorobenzene | SOIL | LA-523-456 | U | < 300 | ug/kg | 1.00 | 3.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 121-14-2 | 2,4-Dinitrotoluene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 129-00-0 | Pyrene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 59-50-7 | 4-Chloro-3-methylphenol | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 621-64-7 | N-Nitrosodi-n-dipropylamine | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 83-32-9 | Acenaphthene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 87-86-5 | Pentachlorophenol | SOIL | LA-523-456 | U | < 310 | ug/kg | 1.00 | 3.1e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 95-57-8 | 2-Chlorophenol | SOIL | LA-523-456 | U | < 150 | ug/kg | 1.00 | 1.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 100-01-6 | 4-Nitroaniline | SOIL | LA-523-456 | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 101-55-3 | 4-Bromophenylphenyl ether | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 105-67-9 | 2,4-Dimethylphenol | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 106-47-8 | 4-Chloroaniline | SOIL | LA-523-456 | U | < 96.0 | ug/kg | 1.00 | 96 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 108-60-1 | Bis(2-chloro-1-methylethyl)eth | SOIL | LA-523-456 | U | < 260 | ug/kg | 1.00 | 2.6e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 111-44-4 | Bis(2-chloroethyl) ether | SOIL | LA-523-456 | U | < 250 | ug/kg | 1.00 | 2.5e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 111-91-1 | Bis(2-Chloroethoxy)methane | SOIL | LA-523-456 | U | < 120 | ug/kg | 1.00 | 1.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 117-81-7 | Bis(2-ethylhexyl) phthalate | SOIL | LA-523-456 | U | < 580 | ug/kg | 1.00 | 5.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 117-84-0 | Di-n-octylphthalate | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 118-74-1 | Hexachlorobenzene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 120-12-7 | Anthracene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 120-83-2 | 2,4-Dichlorophenol | SOIL | LA-523-456 | U | < 83.0 | ug/kg | 1.00 | 83 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 131-11-3 | Dimethyl phthalate | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 132-64-9 | Dibenzofuran | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but >= the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | 191-24-2 | Benzo(ghi)perylene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 193-39-5 | Indeno(1,2,3-cd)pyrene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 205-99-2 | Benzo(b)fluoranthene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 206-44-0 | Fluoranthene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 207-08-9 | Benzo(k)fluoranthene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 208-96-8 | Acenaphthylene | SOIL | LA-523-456 | U | < 83.0 | ug/kg | 1.00 | 83 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 218-01-9 | Chrysene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 50-32-8 | Benzo(a)pyrene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 51-28-5 | 2,4-Dinitrophenol | SOIL | LA-523-456 | U | < 690 | ug/kg | 1.00 | 6.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 53-70-3 | Dibenz(a,h)anthracene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 534-52-1 | 4,6-Dinitro-2-methylphenol | SOIL | LA-523-456 | U | < 690 | ug/kg | 1.00 | 6.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 541-73-1 | 1,3-Dichlorobenzene | SOIL | LA-523-456 | U | < 330 | ug/kg | 1.00 | 3.3e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 56-55-3 | Benzo(a)anthracene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 606-20-2 | 2,6-Dinitrotoluene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 7005-72-3 | 4-Chlorophenylphenyl ether | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 77-47-4 | Hexachlorocyclopentadiene | SOIL | LA-523-456 | U | < 320 | ug/kg | 1.00 | 3.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 78-59-1 | Isophorone | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 84-66-2 | Diethylphthalate | SOIL | LA-523-456 | U | < 190 | ug/kg | 1.00 | 1.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 84-74-2 | Di-n-butylphthalate | SOIL | LA-523-456 | U | < 90.0 | ug/kg | 1.00 | 90 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 85-01-8 | Phenanthrene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 85-68-7 | Butylbenzylphthalate | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 86-30-6 | N-Nitrosodiphenylamine | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 86-73-7 | Fluorene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 86-74-8 | Carbazole | SOIL | LA-523-456 | U | < 83.0 | ug/kg | 1.00 | 83 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 87-68-3 | Hexachlorobutadiene | SOIL | LA-523-456 | U | < 380 | ug/kg | 1.00 | 3.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 88-74-4 | 2-Nitroaniline | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 88-75-5 | 2-Nitrophenol | SOIL | LA-523-456 | U | < 180 | ug/kg | 1.00 | 1.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | 91-20-3 | Naphthalene | SOIL | LA-523-456 | U | < 300 | ug/kg | 1.00 | 3.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 91-57-6 | 2-Methylnaphthalene | SOIL | LA-523-456 | U | < 190 | ug/kg | 1.00 | 1.9e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 91-58-7 | 2-Chloronaphthalene | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 91-94-1 | 3,3'-Dichlorobenzidine | SOIL | LA-523-456 | U | < 83.0 | ug/kg | 1.00 | 83 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 95-48-7 | 2-Methylphenol (cresol, o-) | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 95-50-1 | 1,2-Dichlorobenzene | SOIL | LA-523-456 | U | < 370 | ug/kg | 1.00 | 3.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 95-95-4 | 2,4,5-Trichlorophenol | SOIL | LA-523-456 | U | < 76.0 | ug/kg | 1.00 | 76 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 98-95-3 | Nitrobenzene | SOIL | LA-523-456 | U | < 270 | ug/kg | 1.00 | 2.7e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 99-09-2 | 3-Nitroaniline | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 65794-96-9 | 3 & 4 Methylphenol Total | SOIL | LA-523-456 | U | < 120 | ug/kg | 1.00 | 1.2e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 67-72-1 | Hexachloroethane | SOIL | LA-523-456 | U | < 480 | ug/kg | 1.00 | 4.8e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 88-06-2 | 2,4,6-Trichlorophenol | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 100-51-6 | Benzyl alcohol | SOIL | LA-523-456 | U | < 76.0 | ug/kg | 1.00 | 76 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 111-76-2 | 2-Butoxyethanol | SOIL | LA-523-456 | U | < 100 | ug/kg | 1.00 | 1.0e+02 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 126-73-8 | Tributyl phosphate | SOIL | LA-523-456 | U | < 69.0 | ug/kg | 1.00 | 69 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | U-233/234 | Uranium-233/234 | SOIL | LA-508-471 | | 0.160 | pCi/g | 1.00 | 5.0e-03 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | U-233/234 AEA Total Cntg Error | SOIL | LA-508-471 | | +- 0.0528 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 15117-96-1 | Uranium-235 | SOIL | LA-508-471 | U | 0.0120 | pCi/g | 1.00 | 0.015 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | U-235 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- 0.0118 | pCi/g | 1.00 | 0.0 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | U-238 | Uranium-238 | SOIL | LA-508-471 | | 0.170 | pCi/g | 1.00 | 0.014 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | E,T,C | U-238 by AEA Total Cntg Error | SOIL | LA-508-471 | | +- 0.0561 | pCi/g | 1.00 | 0.10 | 10/16/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-35-4 | 1,1-Dichloroethene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 79-01-6 | Trichloroethene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 71-43-2 | Benzene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 108-88-3 | Toluene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 108-90-7 | Chlorobenzene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-34-3 | 1,1-Dichloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but >= the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | 100-41-4 | Ethylbenzene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 100-42-5 | Styrene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 10061-01-5 | cis-1,3-Dichloropropene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 10061-02-6 | trans-1,3-Dichloropropene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 107-06-2 | 1,2-Dichloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 108-10-1 | 4-Methyl-2-Pentanone | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 124-48-1 | Dibromochloromethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 127-18-4 | Tetrachloroethene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 1330-20-7 | Xylenes (total) | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 540-59-0 | 1,2-Dichloroethene(Total) | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 56-23-5 | Carbon tetrachloride | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 591-78-6 | 2-Hexanone | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 67-64-1 | Acetone | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 67-66-3 | Chloroform | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 71-55-6 | 1,1,1-Trichloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 74-83-9 | Bromomethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 74-87-3 | Chloromethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-00-3 | Chloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-01-4 | Vinyl chloride | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-09-2 | Methylenechloride | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-15-0 | Carbon disulfide | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-25-2 | Bromoform | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 75-27-4 | Bromodichloromethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 78-87-5 | 1,2-Dichloropropane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 78-93-3 | 2-Butanone | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 79-00-5 | 1,1,2-Trichloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 79-34-5 | 1,1,2,2-Tetrachloroethane | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but >= the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent
**Project:** F03-006: 200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W030000881 | B172M8 | TRENT | 71-36-3 | 1-Butanol | SOIL | LA-523-455 | U | < 40.0 | ug/kg | 1.00 | 40 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 107-87-9 | 2-Pentanone | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | 104-51-8 | n-Butylbenzene | SOIL | LA-523-455 | U | < 2.00 | ug/kg | 1.00 | 2.0 | 10/08/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | TPHDIESEL | Total Pet. Hydrocarbons Diesel | SOIL | NWTPH | U | < 3.70e+03 | ug/kg | 1.00 | 3.7e+03 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | TPHKEROSENE | Kerosene | SOIL | NWTPH | U | < 5.00e+03 | ug/kg | 1.00 | 5.0e+03 | 10/13/03 | 10/01/03 | 10/06/03 |
| W030000881 | B172M8 | TRENT | TPHDIESEL | Total petroleum hydrocarbons - | SOIL | NWTPH | | 3.40e+04 | ug/kg | 1.00 | 6.2e+03 | 10/13/03 | 10/01/03 | 10/06/03 |

**MDL=Minimum Detection Limit**
**RQ=Result Qualifier**

B - The Analyte detected in both the BLANK and the SAMPLE (org.)
J - Estimated Value
B - The analyte < the RDL but > = the IDL/MDL (inorganic)
U - Analyzed for but not detected above limiting criteria.

**DF=Dilution Factor**

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

*Report WGPP/ver. 1*
*Ground Water Protection Program*

# WSCF
# ANALYTICAL COMMENT REPORT

2 - 18

**Attention:** Steve Trent
**Project Number** F03-006

**Group #:** WSCF20031352

| Sample # | Client ID | Lab Area | Test | Comment |
|---|---|---|---|---|
| | | VALGROUP | | TPHD/PCB/SVOC: All results are moisture corrected and reported on a dry weight basis. cgc<br>Sample B172M8 contained extended motor oil. The analysis was added to the requested target compounds and the oil results reported with the diesel and kerosene results. cgc<br>PCB: MS/MSD spike level inadvertantly lower than specified. Hence MS/MSD % rec low and variable at (75/60)% Rec, respectively. But LCS and surrogates recoveries good. gar<br>SVOA: Pentachlorophenol is out low in both the MS and MSD. All the other QC is good. den<br>VOA: J-flag indicates target compound found below the conc of the lowest calib. standard but above the mdl.gar<br>IC:Chloride detected concentration less than the lowest value on the calibration curve.RPD does not apply. jmv<br>ICP-MS: All LCS results are within manufacturers specifications so no flags issued.<br>Eu-155 for GEA Test had poor RPD but the criterion does not apply to low level samples.<br>W030000881 for the U ISO and the Am-241 tests had duplicates flagged for poor RPD. RPD is not applicable to low level samples high in counting error.<br>ICP-AES: The LCS for Bi (Bismuth) was low 60%, however the MS/MSD were within limits. No Qualfoers assigned. ldl |

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

# WSCF
# TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:** Steve Trent
**Project Number** F03-006 :200-PW-2/PW-4

**Group #:** WSCF20031352

| Sample # | Client ID | | Test Name | Peak Name | CAS# | RT | RQ | Result | Units |
|---|---|---|---|---|---|---|---|---|---|
| W030000880 | B17121 | TRENT | Gamma Energy Analysis-grd H2O | K-40 Count Error | | | | 13 | % |
| W030000880 | B17121 | TRENT | Gamma Energy Analysis-grd H2O | K-40 | | | | 17 | pCi/g |
| W030000880 | B17121 | TRENT | SW-846 8270B Semi-Vols | SMP 26.125 Unknown | Unknown | 26.12593 | | 5.6e+02 | ug/kg |
| W030000880 | B17121 | TRENT | SW-846 8270B Semi-Vols | SMP 24.573 Eicosane | 112-95-8 | 24.57301 | | 5.9e+02 | ug/kg |
| W030000881 | B172M8 | TRENT | Gamma Energy Analysis-grd H2O | K-40 Count Error | | | | 13 | % |
| W030000881 | B172M8 | TRENT | Gamma Energy Analysis-grd H2O | K-40 | | | | 18 | pCi/g |
| W030000881 | B172M8 | TRENT | SW-846 8270B Semi-Vols | SMP 25.293 Unknown | Unknown | 25.29325 | | 1.0e+03 | ug/kg |
| W030000881 | B172M8 | TRENT | SW-846 8270B Semi-Vols | SMP 26.120 Unknown Hydrocarbon | Unknown | 26.12078 | | 1.4e+03 | ug/kg |
| W030000881 | B172M8 | TRENT | SW-846 8270B Semi-Vols | SMP 24.567 Eicosane | 112-95-8 | 24.56786 | | 5.7e+02 | ug/kg |
| W030000881 | B172M8 | TRENT | SW-846 8270B Semi-Vols | SMP 28.153 Unknown Hydrocarbon | Unknown | 28.1539 | | 6.7e+02 | ug/kg |

RQ=Result Qualifier

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

# WSCF
# METHOD REFERENCES REPORT

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.

| | | |
|---|---|---|
| **LA-212-411** | Determination of Soil pH Measurement | |
| | **EPA SW-846 9045C** | SOIL AND WASTE pH |
| **LA-503-401** | LA-503-401: ANALYSIS OF CATIONS BY ION CHROMATOGRAPHY | |
| | **EPA-600/4-86-024 300.7** | Dissolved Sodium, Ammonium, Potassium, and Calcium in Wet Deposition by Chemical |
| **LA-505-411** | LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE | |
| | **EPA SW-846 6010B** | INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY |
| **LA-505-412** | LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY | |
| | **EPA-600/R-94-111 200.8** | DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS |
| **LA-508-462** | Gamma Energy Analysis -- the Genie System -- WSCF | |
| | **None** | No reference to any industry method. |
| **LA-508-471** | LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP | |
| | **None** | No reference to any industry method. |
| **LA-519-412** | LA-519-412: TOTAL RESIDUE/% SOLIDS DRIED AT 103 - 105 C | |
| | **EPA-600/4-79-020 160.3** | RESIDUE, TOTAL |
| | **Standard Methods 2540B** | Total Solids Dried at 103-105 C |
| **LA-523-427** | LA-523-427: POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY | |
| | **EPA SW-846 3510C** | SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION |
| | **EPA SW-846 3545** | PRESSURIZED FLUID EXTRACTION (PFE) |

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

# WSCF
# METHOD REFERENCES REPORT

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.

| | | |
|---|---|---|
| | **EPA SW-846 3665A** | SULFURIC ACID/PERMANGANATE CLEANUP |
| | **EPA SW-846 8000B** | DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS |
| | **EPA SW-846 8082** | POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY |
| **LA-523-455** | LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846 | |
| | **EPA SW-846 8000B** | DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS |
| | **EPA SW-846 8260B** | VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) |
| **LA-523-456** | LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C | |
| | **EPA SW-846 8000B** | DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS |
| | **EPA SW-846 8270C** | SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS) |
| **LA-533-410** | LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY | |
| | **EPA-600/R-94-111 300** | DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY |
| **LA-695-402** | LA-695-402: DETERMINATION OF CYANIDE BY MIDIDISTILLATION AND SPECTROPHOTOMETRIC | |
| | **EPA-600/4-79-020 335.2** | Cyanide, Total |
| **NWTPH** | NWTPH-Diesel and/or Gasoline | |
| | **WDOE NWTPH-Dx/Gx** | Total Petroleum Hydrocarbons - Diesel/Gasoline |
| **Organics** | Organics - Alcohols, Glycols | |
| | **EPA SW-846 8015B** | Nonhalogenated Organics Using GC/FID |

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

wl3qlog v1 05-nov-2003 15:05:01

Wl3q Worklist/Batch/QC Report for Group# WSCF20031352

| WL# | S# | Batch | QC# | Tray Type | Sample# | Test |
|---|---|---|---|---|---|---|
| | | | | SAMPLE | W030000880 | Percent Solids |
| | | | | SAMPLE | W030000881 | Percent Solids |
| | | | | SAMPLE | W030000880 | pH Soil and Waste Measurement |
| | | | | SAMPLE | W030000881 | pH Soil and Waste Measurement |
| 20599 | 3 | 20983 | 23871 | BLNK-PREP | | Ammonia (N) by IC |
| 20599 | 9 | 20983 | 23871 | BLNK-PREP | | Ammonia (N) by IC |
| 20599 | 1 | 20983 | 23871 | LCS | | Ammonia (N) by IC |
| 20599 | 5 | 20983 | 23871 | DUP | W030000880 | Ammonia (N) by IC |
| 20599 | 6 | 20983 | 23871 | MS | W030000880 | Ammonia (N) by IC |
| 20599 | 7 | 20983 | 23871 | MSD | W030000880 | Ammonia (N) by IC |
| 20599 | 4 | 20983 | 23871 | SAMPLE | W030000880 | Ammonia (N) by IC |
| 20599 | 8 | 20983 | 23871 | SAMPLE | W030000881 | Ammonia (N) by IC |
| 20598 | 2 | 20984 | 23872 | BLANK | | Anions by Ion Chromatography |
| 20598 | 9 | 20984 | 23872 | BLANK | | Anions by Ion Chromatography |
| 20598 | 3 | 20984 | 23872 | LCS | | Anions by Ion Chromatography |
| 20598 | 5 | 20984 | 23872 | DUP | W030000880 | Anions by Ion Chromatography |
| 20598 | 6 | 20984 | 23872 | MS | W030000880 | Anions by Ion Chromatography |
| 20598 | 7 | 20984 | 23872 | MSD | W030000880 | Anions by Ion Chromatography |
| 20598 | 4 | 20984 | 23872 | SAMPLE | W030000880 | Anions by Ion Chromatography |
| 20598 | 8 | 20984 | 23872 | SAMPLE | W030000881 | Anions by Ion Chromatography |
| | | | 23894 | BLANK | | Cyanide by Midi/Spectrophotom |
| | | | 23894 | BLNK-PREP | | Cyanide by Midi/Spectrophotom |
| | | | 23894 | DUP | | Cyanide by Midi/Spectrophotom |
| | | | 23894 | LCS | | Cyanide by Midi/Spectrophotom |
| | | | 23894 | LCS-2 | | Cyanide by Midi/Spectrophotom |
| | | | 23894 | MS | W030000879 | Cyanide by Midi/Spectrophotom |
| | | | 23894 | MSD | W030000879 | Cyanide by Midi/Spectrophotom |
| | | | 23894 | SPK-RPD | W030000879 | Cyanide by Midi/Spectrophotom |
| | | | 23894 | SAMPLE | W030000880 | Cyanide by Midi/Spectrophotom |
| | | | 23894 | SAMPLE | W030000881 | Cyanide by Midi/Spectrophotom |
| | | | 23905 | BLANK | | PCBs complete list |
| | | | 23905 | LCS | | PCBs complete list |
| | | | 23905 | SAMPLE | W030000880 | PCBs complete list |
| | | | 23905 | SURR | W030000880 | PCBs complete list |
| | | | 23905 | MS | W030000881 | PCBs complete list |
| | | | 23905 | MSD | W030000881 | PCBs complete list |
| | | | 23905 | SAMPLE | W030000881 | PCBs complete list |
| | | | 23905 | SPK-RPD | W030000881 | PCBs complete list |
| | | | 23905 | SURR | W030000881 | PCBs complete list |
| | | | 23907 | BLANK | | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | LCS | | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | SAMPLE | W030000880 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | SURR | W030000880 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | MS | W030000881 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | MSD | W030000881 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | SAMPLE | W030000881 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | SPK-RPD | W030000881 | WTPH-D TPH Diesel Range (Wa) |
| | | | 23907 | SURR | W030000881 | WTPH-D TPH Diesel Range (Wa) |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 23926 | BLANK | | SW-846 8270B Semi-Vols |
| | | | 23926 | LCS | | SW-846 8270B Semi-Vols |
| | | | 23926 | SAMPLE | W030000880 | SW-846 8270B Semi-Vols |
| | | | 23926 | SURR | W030000880 | SW-846 8270B Semi-Vols |
| | | | 23926 | MS | W030000881 | SW-846 8270B Semi-Vols |
| | | | 23926 | MSD | W030000881 | SW-846 8270B Semi-Vols |
| | | | 23926 | SAMPLE | W030000881 | SW-846 8270B Semi-Vols |
| | | | 23926 | SPK-RPD | W030000881 | SW-846 8270B Semi-Vols |
| | | | 23926 | SURR | W030000881 | SW-846 8270B Semi-Vols |
| 20657 | 1 | 21040 | 23931 | BLANK | | ICP-2008 MS All possible metal |
| 20657 | 2 | 21040 | 23931 | LCS | | ICP-2008 MS All possible metal |
| 20657 | 4 | 21040 | 23931 | MS | W030000879 | ICP-2008 MS All possible metal |
| 20657 | 5 | 21040 | 23931 | MSD | W030000879 | ICP-2008 MS All possible metal |
| 20657 | 18 | 21040 | 23931 | SAMPLE | W030000880 | ICP-2008 MS All possible metal |
| 20657 | 19 | 21040 | 23931 | SAMPLE | W030000881 | ICP-2008 MS All possible metal |
| 20657 | 7 | 21040 | 23931 | MS | W030000887 | ICP-2008 MS All possible metal |
| 20657 | 8 | 21040 | 23931 | MSD | W030000887 | ICP-2008 MS All possible metal |
| 20640 | 1 | 21026 | 23938 | BLANK | | Americium by AEA |
| 20640 | 2 | 21026 | 23938 | LCS | | Americium by AEA |
| 20640 | 3 | 21026 | 23938 | DUP | W030000880 | Americium by AEA |
| 20640 | 4 | 21026 | 23938 | SAMPLE | W030000880 | Americium by AEA |
| 20640 | 5 | 21026 | 23938 | SAMPLE | W030000881 | Americium by AEA |
| 20641 | 1 | 21025 | 23939 | BLANK | | Plutonium Isotopics by AEA |
| 20641 | 2 | 21025 | 23939 | LCS | | Plutonium Isotopics by AEA |
| 20641 | 3 | 21025 | 23939 | DUP | W030000880 | Plutonium Isotopics by AEA |
| 20641 | 4 | 21025 | 23939 | SAMPLE | W030000880 | Plutonium Isotopics by AEA |
| 20641 | 5 | 21025 | 23939 | SAMPLE | W030000881 | Plutonium Isotopics by AEA |
| 20642 | 1 | 21024 | 23940 | BLANK | | Uranium Isotopics by AEA |
| 20642 | 2 | 21024 | 23940 | LCS | | Uranium Isotopics by AEA |
| 20642 | 3 | 21024 | 23940 | DUP | W030000880 | Uranium Isotopics by AEA |
| 20642 | 4 | 21024 | 23940 | SAMPLE | W030000880 | Uranium Isotopics by AEA |
| 20642 | 5 | 21024 | 23940 | SAMPLE | W030000881 | Uranium Isotopics by AEA |
| 20560 | 1 | 20944 | 23950 | BLANK | | Gamma Energy Analysis-grd H2O |
| 20560 | 2 | 20944 | 23950 | LCS | | Gamma Energy Analysis-grd H2O |
| 20560 | 3 | 20944 | 23950 | DUP | W030000880 | Gamma Energy Analysis-grd H2O |
| 20560 | 4 | 20944 | 23950 | SAMPLE | W030000880 | Gamma Energy Analysis-grd H2O |
| 20560 | 5 | 20944 | 23950 | SAMPLE | W030000881 | Gamma Energy Analysis-grd H2O |
| 20634 | 1 | 21018 | 24003 | BLANK | | ICP Metals Analysis, Grd H2O P |
| 20634 | 2 | 21018 | 24003 | LCS | | ICP Metals Analysis, Grd H2O P |
| 20634 | 4 | 21018 | 24003 | MS | W030000879 | ICP Metals Analysis, Grd H2O P |
| 20634 | 5 | 21018 | 24003 | MSD | W030000879 | ICP Metals Analysis, Grd H2O P |
| 20634 | 0 | 21018 | 24003 | SPK-RPD | W030000879 | ICP Metals Analysis, Grd H2O P |
| 20634 | 6 | 21018 | 24003 | SAMPLE | W030000880 | ICP Metals Analysis, Grd H2O P |
| 20634 | 7 | 21018 | 24003 | SAMPLE | W030000881 | ICP Metals Analysis, Grd H2O P |
| 20764 | 1 | 21146 | 24068 | BLANK | | NWTPH-GX TPH Gasoline Range |
| 20764 | 2 | 21146 | 24068 | LCS | | NWTPH-GX TPH Gasoline Range |
| 20764 | 4 | 21146 | 24068 | MS | W030000880 | NWTPH-GX TPH Gasoline Range |
| 20764 | 5 | 21146 | 24068 | MSD | W030000880 | NWTPH-GX TPH Gasoline Range |
| 20764 | 3 | 21146 | 24068 | SAMPLE | W030000880 | NWTPH-GX TPH Gasoline Range |
| 20764 | 5 | 21146 | 24068 | SPK-RPD | W030000880 | NWTPH-GX TPH Gasoline Range |
| 20764 | 6 | 21146 | 24068 | SAMPLE | W030000881 | NWTPH-GX TPH Gasoline Range |
| | | | 24069 | BLANK | | VOA Ground Water Protection |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 24069 | LCS | | VOA Ground Water Protection |
| | | | 24069 | MS | W030000880 | VOA Ground Water Protection |
| | | | 24069 | MSD | W030000880 | VOA Ground Water Protection |
| | | | 24069 | SAMPLE | W030000880 | VOA Ground Water Protection |
| | | | 24069 | SPK-RPD | W030000880 | VOA Ground Water Protection |
| | | | 24069 | SURR | W030000880 | VOA Ground Water Protection |
| | | | 24069 | SAMPLE | W030000881 | VOA Ground Water Protection |
| | | | 24069 | SURR | W030000881 | VOA Ground Water Protection |
| 20766 | 1 | 21148 | 24072 | BLANK | | Alcohols, Glycols - 8015 |
| 20766 | 2 | 21148 | 24072 | LCS | | Alcohols, Glycols - 8015 |
| 20766 | 4 | 21148 | 24072 | MS | W030000880 | Alcohols, Glycols - 8015 |
| 20766 | 5 | 21148 | 24072 | MSD | W030000880 | Alcohols, Glycols - 8015 |
| 20766 | 3 | 21148 | 24072 | SAMPLE | W030000880 | Alcohols, Glycols - 8015 |
| 20766 | 5 | 21148 | 24072 | SPK-RPD | W030000880 | Alcohols, Glycols - 8015 |
| 20766 | 6 | 21148 | 24072 | SAMPLE | W030000881 | Alcohols, Glycols - 8015 |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Ammonia (N) by IC

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Ammonia (N) by IC | 7664-41-7 | <2.00e-1 | n/a | RPD | 10/07/03 | 0.000 | 20.000 | U |
| MS | Ammonia (N) by IC | 7664-41-7 | 1.52e-01 | 92.121 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Ammonia (N) by IC | 7664-41-7 | 1.55e-01 | 93.939 | % Recov | 10/07/03 | 75.000 | 125.000 | |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLNK-PREP | Ammonia (N) by IC | 7664-41-7 | <4.00e-3 | n/a | Ratio | 10/07/03 | | | U |
| BLNK-PREP | Ammonia (N) by IC | 7664-41-7 | 3.26e-02 | 0.033 | Ratio | 10/07/03 | | | |
| LCS | Ammonia (N) by IC | 7664-41-7 | 8.58e+01 | 103.498 | % Recov | 10/07/03 | 80.000 | 120.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Chloride | 16887-00-6 | 2.78e+00 | 79.262 | RPD | 10/07/03 | 0.000 | 20.000 | |
| DUP | Fluoride | 16984-48-8 | <1.13e0 | n/a | RPD | 10/07/03 | 0.000 | 20.000 | U |
| DUP | Nitrogen in Nitrite | NO2-N | <9.31e-1 | n/a | RPD | 10/07/03 | 0.000 | 20.000 | U |
| DUP | Nitrogen in Nitrate | NO3-N | 1.55e+01 | 14.371 | RPD | 10/07/03 | 0.000 | 20.000 | |
| DUP | Phosphate | 14265-44-2 | <2.65e0 | n/a | RPD | 10/07/03 | 0.000 | 20.000 | U |
| DUP | Sulfate | 14808-79-8 | <4.90e0 | n/a | RPD | 10/07/03 | 0.000 | 20.000 | U |
| MS | Chloride | 16887-00-6 | 8.59e-01 | 86.768 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MS | Fluoride | 16984-48-8 | 4.19e-01 | 85.685 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MS | Nitrogen in Nitrite | NO2-N | 4.81e-01 | 95.437 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MS | Nitrogen in Nitrate | NO3-N | 3.99e-01 | 89.462 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MS | Phosphate | 14265-44-2 | 8.27e-01 | 86.236 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MS | Sulfate | 14808-79-8 | 1.93e+00 | 97.970 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Chloride | 16887-00-6 | 8.91e-01 | 90.000 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Fluoride | 16984-48-8 | 4.33e-01 | 88.548 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Nitrogen in Nitrite | NO2-N | 4.94e-01 | 98.016 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Nitrogen in Nitrate | NO3-N | 4.17e-01 | 93.498 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Phosphate | 14265-44-2 | 8.56e-01 | 89.260 | % Recov | 10/07/03 | 75.000 | 125.000 | |
| MSD | Sulfate | 14808-79-8 | 1.92e+00 | 97.462 | % Recov | 10/07/03 | 75.000 | 125.000 | |

BATCH QC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Chloride | 16887-00-6 | <5.20e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Chloride | 16887-00-6 | <5.20e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Fluoride | 16984-48-8 | <2.30e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Fluoride | 16984-48-8 | <2.30e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Nitrogen in Nitrite | NO2-N | <1.90e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Nitrogen in Nitrite | NO2-N | <1.90e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 27

SDG Number: WSCF20031352
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Nitrogen in Nitrate | NO3-N | <1.30e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Nitrogen in Nitrate | NO3-N | <1.30e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Phosphate | 14265-44-2 | <5.40e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Phosphate | 14265-44-2 | <5.40e-2 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Sulfate | 14808-79-8 | <1.00e-1 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| BLANK | Sulfate | 14808-79-8 | <1.00e-1 | n/a | mg/L | 10/07/03 | 0.000 | 300.000 | U |
| LCS | Chloride | 16887-00-6 | 1.93e+02 | 96.500 | % Recov | 10/07/03 | 80.000 | 120.000 | |
| LCS | Fluoride | 16984-48-8 | 9.14e+01 | 92.604 | % Recov | 10/07/03 | 80.000 | 120.000 | |
| LCS | Nitrogen in Nitrite | NO2-N | 8.99e+01 | 89.900 | % Recov | 10/07/03 | 80.000 | 120.000 | |
| LCS | Nitrogen in Nitrate | NO3-N | 8.46e+01 | 93.896 | % Recov | 10/07/03 | 80.000 | 120.000 | |
| LCS | Phosphate | 14265-44-2 | 1.85e+02 | 95.459 | % Recov | 10/07/03 | 80.000 | 120.000 | |
| LCS | Sulfate | 14808-79-8 | 3.76e+02 | 94.236 | % Recov | 10/07/03 | 80.000 | 120.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 28

SDG Number: WSCF20031352
Matrix: SOLID
Test: Cyanide by Midi/Spectrophotom

SAF Number: F03-006
Sample Date: 10/03/03
Receive Date:10/03/03

Lab ID: W030000879

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | Cyanide by Midi/Spectrophotom | 57-12-5 | 79.6 | 79.600 | % Recov | 10/14/03 | 75.000 | 125.000 | |
| MSD | Cyanide by Midi/Spectrophotom | 57-12-5 | 93.6 | 93.600 | % Recov | 10/14/03 | 75.000 | 125.000 | |
| SPK-RPD | Cyanide by Midi/Spectrophotom | 57-12-5 | 93.600 | 16.166 | RPD | 10/14/03 | 0.000 | 20.000 | |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Cyanide by Midi/Spectrophotom | 57-12-5 | <1 | n/a | ug/L | 10/14/03 | -4.000 | 4.000 | U |
| BLNK-PREP | Cyanide by Midi/Spectrophotom | 57-12-5 | <1 | n/a | ug/L | 10/14/03 | -4.000 | 4.000 | U |
| DUP | Cyanide by Midi/Spectrophotom | 57-12-5 | n/a | n/a | RPD | 10/14/03 | 0.000 | 20.000 | |
| LCS | Cyanide by Midi/Spectrophotom | 57-12-5 | 95.95 | 95.950 | % Recov | 10/14/03 | 85.000 | 115.000 | |
| LCS-2 | Cyanide by Midi/Spectrophotom | 57-12-5 | n/a | n/a | % Recov | 10/14/03 | 85.000 | 115.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: PCBs complete list

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| **Lab ID: W030000880** | | | | | | | | | |
| **BATCH QC ASSOCIATED WITH SAMPLE** | | | | | | | | | |
| SURR | Decachlorobiphenyl | 2051-24-3 | 805.64 | 80.200 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| SURR | Tetrachloro-m-xylene | 877-09-8 | 728.66 | 72.600 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| **Lab ID: W030000881** | | | | | | | | | |
| **BATCH QC ASSOCIATED WITH SAMPLE** | | | | | | | | | |
| MS | Aroclor-1254 | 11097-69-1 | 151.72 | 75.400 | % Recov | 10/13/03 | 75.000 | 125.000 | |
| MS | Decachlorobiphenyl | 2051-24-3 | 745.52 | 74.100 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| MS | Tetrachloro-m-xylene | 877-09-8 | 679.57 | 67.600 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| MSD | Aroclor-1254 | 11097-69-1 | 124.22 | 59.800 | % Recov | 10/13/03 | 75.000 | 125.000 | |
| MSD | Decachlorobiphenyl | 2051-24-3 | 832.30 | 80.200 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| MSD | Tetrachloro-m-xylene | 877-09-8 | 765.47 | 73.800 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| SPK-RPD | Aroclor-1254 | 11097-69-1 | 59.800 | 23.077 | RPD | 10/13/03 | 0.000 | 25.000 | |
| SPK-RPD | Decachlorobiphenyl | 2051-24-3 | 80.200 | 7.907 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Tetrachloro-m-xylene | 877-09-8 | 73.800 | 8.769 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SURR | Decachlorobiphenyl | 2051-24-3 | 986.38 | 98.500 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| SURR | Tetrachloro-m-xylene | 877-09-8 | 835.89 | 83.500 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| **BATCH QC** | | | | | | | | | |
| BLANK | Aroclor-1016 | 12674-11-2 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1221 | 11104-28-2 | < 100 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1232 | 11141-16-5 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1242 | 53469-21-9 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1248 | 12672-29-6 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1254 | 11097-69-1 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1260 | 11096-82-5 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Aroclor-1262 | 37324-23-5 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 30

SDG Number: WSCF20031352
Matrix: SOLID
Test: PCBs complete list

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Aroclor-1268 | 11100-14-4 | < 50 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Decachlorobiphenyl | 2051-24-3 | 920.46 | 92.000 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| BLANK | Tetrachloro-m-xylene | 877-09-8 | 887.82 | 88.800 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| LCS | Aroclor-1254 | 11097-69-1 | 897.15 | 89.700 | % Recov | 10/13/03 | 70.000 | 130.000 | |
| LCS | Decachlorobiphenyl | 2051-24-3 | 880.44 | 88.000 | % Recov | 10/13/03 | 50.000 | 150.000 | |
| LCS | Tetrachloro-m-xylene | 877-09-8 | 791.70 | 79.200 | % Recov | 10/13/03 | 50.000 | 150.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| **Lab ID: W030000880** | | | | | | | | | |
| **BATCH QC ASSOCIATED WITH SAMPLE** | | | | | | | | | |
| SURR | ortho-Terphenyl Surr | 84-15-1 | 23360 | 94.200 | % Recov | 10/13/03 | 70.000 | 130.000 | |
| **Lab ID: W030000881** | | | | | | | | | |
| **BATCH QC ASSOCIATED WITH SAMPLE** | | | | | | | | | |
| MS | ortho-Terphenyl Surr | 84-15-1 | 24959 | 100.000 | % Recov | 10/13/03 | 70.000 | 130.000 | |
| MS | Total Pet. Hydrocarbons Diesel | TPHDIESEL | 97230 | 78.300 | % Recov | 10/13/03 | 75.000 | 125.000 | |
| MSD | ortho-Terphenyl Surr | 84-15-1 | 26855 | 108.000 | % Recov | 10/13/03 | 70.000 | 130.000 | |
| MSD | Total Pet. Hydrocarbons Diesel | TPHDIESEL | 96825 | 77.800 | % Recov | 10/13/03 | 75.000 | 125.000 | |
| SPK-RPD | ortho-Terphenyl Surr | 84-15-1 | 108.000 | 7.692 | RPD | 10/09/03 | 0.000 | 20.000 | |
| SPK-RPD | Total Pet. Hydrocarbons Diesel | TPHDIESEL | 77.800 | 0.641 | RPD | 10/09/03 | 0.000 | 20.000 | |
| SURR | ortho-Terphenyl Surr | 84-15-1 | 23558 | 94.500 | % Recov | 10/13/03 | 70.000 | 130.000 | |
| **BATCH QC** | | | | | | | | | |
| BLANK | Kerosene | TPHKEROSENE | < 3800 | n/a | ug/Kg | 10/09/03 | 0.000 | 100.000 | U |
| BLANK | ortho-Terphenyl Surr | 84-15-1 | 25694 | 103.000 | % Recov | 10/09/03 | 70.000 | 130.000 | |
| BLANK | Total Pet. Hydrocarbons Diesel | TPHDIESEL | < 3800 | n/a | ug/Kg | 10/09/03 | 0.000 | 300.000 | U |
| LCS | Kerosene | TPHKEROSENE | 93967 | 75.200 | %Recove | 10/13/03 | 70.000 | 130.000 | |
| LCS | ortho-Terphenyl Surr | 84-15-1 | 26590 | 106.000 | % Recov | 10/13/03 | 70.000 | 130.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880
BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| SURR | 2-Fluorophenol | 367-12-4 | 2386.3 | 72.300 | %Recove | 10/13/03 | 42.000 | 105.000 | |
| SURR | 2-Fluorobiphenyl | 321-60-8 | 2738.8 | 82.900 | %Recove | 10/13/03 | 56.000 | 122.000 | |
| SURR | Nitrobenzene-d5 | 4165-60-0 | 2470.6 | 74.800 | %Recove | 10/13/03 | 64.000 | 111.000 | |
| SURR | Phenol-d5 | 4165-62-2 | 2617.0 | 79.200 | %Recove | 10/13/03 | 54.000 | 120.000 | |
| SURR | 2,4,6-Tribromophenol | 118-79-6 | 2419.0 | 73.200 | %Recove | 10/13/03 | 24.000 | 122.000 | |
| SURR | Terphenyl-d14 (7Cl) | 98904-43-9 | 2800.7 | 84.800 | %Recove | 10/13/03 | 35.000 | 150.000 | |

Lab ID: W030000881
BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | 1,2,4-Trichlorobenzene | 120-82-1 | 2658.5 | 80.200 | % Recov | 10/13/03 | 46.000 | 107.000 | |
| MS | 1,4-Dichlorobenzene | 106-46-7 | 2604.5 | 78.600 | % Recov | 10/13/03 | 30.000 | 96.000 | |
| MS | 2,4-Dinitrotoluene | 121-14-2 | 2468.8 | 74.500 | % Recov | 10/13/03 | 59.000 | 106.000 | |
| MS | 2-Fluorophenol | 367-12-4 | 2622.4 | 79.100 | %Recove | 10/13/03 | 42.000 | 105.000 | |
| MS | Acenaphthene | 83-32-9 | 2738.5 | 82.600 | % Recov | 10/13/03 | 61.000 | 116.000 | |
| MS | 4-Chloro-3-methylphenol | 59-50-7 | 3859.8 | 77.600 | % Recov | 10/13/03 | 61.000 | 106.000 | |
| MS | 2-Chlorophenol | 95-57-8 | 3988.5 | 80.200 | % Recov | 10/13/03 | 66.000 | 106.000 | |
| MS | N-Nitrosodi-n-dipropylamine | 621-64-7 | 3050.3 | 92.000 | % Recov | 10/13/03 | 71.000 | 114.000 | |
| MS | 2-Fluorobiphenyl | 321-60-8 | 2439.6 | 73.600 | %Recove | 10/13/03 | 56.000 | 122.000 | |
| MS | Phenol | 108-95-2 | 4325.7 | 87.000 | % Recov | 10/13/03 | 42.000 | 111.000 | |
| MS | Nitrobenzene-d5 | 4165-60-0 | 2409.6 | 72.700 | %Recove | 10/13/03 | 64.000 | 111.000 | |
| MS | 4-Nitrophenol | 100-02-7 | 3046.6 | 61.300 | % Recov | 10/13/03 | 32.000 | 118.000 | |
| MS | Pentachlorophenol | 87-86-5 | 3008.2 | 60.500 | % Recov | 10/13/03 | 62.000 | 114.000 | |
| MS | Phenol-d5 | 4165-62-2 | 2495.6 | 75.300 | %Recove | 10/13/03 | 54.000 | 120.000 | |
| MS | Pyrene | 129-00-0 | 2871.0 | 86.600 | % Recov | 10/13/03 | 66.000 | 118.000 | |
| MS | 2,4,6-Tribromophenol | 118-79-6 | 2624.1 | 79.200 | %Recove | 10/13/03 | 24.000 | 122.000 | |
| MS | Terphenyl-d14 (7Cl) | 98904-43-9 | 2781.2 | 83.900 | %Recove | 10/13/03 | 35.000 | 150.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 33

SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MSD | 1,2,4-Trichlorobenzene | 120-82-1 | 2742.1 | 82.900 | % Recov | 10/13/03 | 46.000 | 107.000 | |
| MSD | 1,4-Dichlorobenzene | 106-46-7 | 2566.7 | 77.600 | % Recov | 10/13/03 | 30.000 | 96.000 | |
| MSD | 2,4-Dinitrotoluene | 121-14-2 | 2540.4 | 76.800 | % Recov | 10/13/03 | 59.000 | 106.000 | |
| MSD | 2-Fluorophenol | 367-12-4 | 2689.9 | 81.300 | %Recove | 10/13/03 | 42.000 | 105.000 | |
| MSD | Acenaphthene | 83-32-9 | 2762.2 | 83.500 | % Recov | 10/13/03 | 61.000 | 116.000 | |
| MSD | 4-Chloro-3-methylphenol | 59-50-7 | 3996.7 | 80.600 | % Recov | 10/13/03 | 61.000 | 106.000 | |
| MSD | 2-Chlorophenol | 95-57-8 | 4128.8 | 83.200 | % Recov | 10/13/03 | 66.000 | 106.000 | |
| MSD | N-Nitrosodi-n-dipropylamine | 621-64-7 | 3098.4 | 93.700 | % Recov | 10/13/03 | 71.000 | 114.000 | |
| MSD | 2-Fluorobiphenyl | 321-60-8 | 2494.8 | 75.400 | %Recove | 10/13/03 | 56.000 | 122.000 | |
| MSD | Phenol | 108-95-2 | 4262.2 | 85.900 | % Recov | 10/13/03 | 42.000 | 111.000 | |
| MSD | Nitrobenzene-d5 | 4165-60-0 | 2400.6 | 72.600 | %Recove | 10/13/03 | 64.000 | 111.000 | |
| MSD | 4-Nitrophenol | 100-02-7 | 3026.1 | 61.000 | % Recov | 10/13/03 | 32.000 | 118.000 | |
| MSD | Pentachlorophenol | 87-86-5 | 2984.2 | 60.100 | % Recov | 10/13/03 | 62.000 | 114.000 | |
| MSD | Phenol-d5 | 4165-62-2 | 2548.3 | 77.000 | %Recove | 10/13/03 | 54.000 | 120.000 | |
| MSD | Pyrene | 129-00-0 | 2914.5 | 88.100 | % Recov | 10/13/03 | 66.000 | 118.000 | |
| MSD | 2,4,6-Tribromophenol | 118-79-6 | 2558.7 | 77.400 | %Recove | 10/13/03 | 24.000 | 122.000 | |
| MSD | Terphenyl-d14 (7Cl) | 98904-43-9 | 2836.2 | 85.700 | %Recove | 10/13/03 | 35.000 | 150.000 | |
| SPK-RPD | 1,2,4-Trichlorobenzene | 120-82-1 | 82.900 | 3.311 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 1,4-Dichlorobenzene | 106-46-7 | 77.600 | 1.280 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 2,4-Dinitrotoluene | 121-14-2 | 76.800 | 3.040 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 2-Fluorophenol | 367-12-4 | 81.300 | 2.743 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Acenaphthene | 83-32-9 | 83.500 | 1.084 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 4-Chloro-3-methylphenol | 59-50-7 | 80.600 | 3.793 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 2-Chlorophenol | 95-57-8 | 83.200 | 3.672 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | N-Nitrosodi-n-dipropylamine | 621-64-7 | 93.700 | 1.831 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 2-Fluorobiphenyl | 321-60-8 | 75.400 | 2.416 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Phenol | 108-95-2 | 85.900 | 1.272 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Nitrobenzene-d5 | 4165-60-0 | 72.600 | 0.138 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 4-Nitrophenol | 100-02-7 | 61.000 | 0.491 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Pentachlorophenol | 87-86-5 | 60.100 | 0.663 | RPD | 10/13/03 | 0.000 | 20.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| SPK-RPD | Phenol-d5 | 4165-62-2 | 77.000 | 2.232 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Pyrene | 129-00-0 | 88.100 | 1.717 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | 2,4,6-Tribromophenol | 118-79-6 | 77.400 | 2.299 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SPK-RPD | Terphenyl-d14 (7Cl) | 98904-43-9 | 85.700 | 2.123 | RPD | 10/13/03 | 0.000 | 20.000 | |
| SURR | 2-Fluorophenol | 367-12-4 | 2479.2 | 74.700 | %Recove | 10/13/03 | 42.000 | 105.000 | |
| SURR | 2-Fluorobiphenyl | 321-60-8 | 2752.9 | 82.900 | %Recove | 10/13/03 | 56.000 | 122.000 | |
| SURR | Nitrobenzene-d5 | 4165-60-0 | 2323.4 | 70.000 | %Recove | 10/13/03 | 64.000 | 111.000 | |
| SURR | Phenol-d5 | 4165-62-2 | 2774.9 | 83.600 | %Recove | 10/13/03 | 54.000 | 120.000 | |
| SURR | 2,4,6-Tribromophenol | 118-79-6 | 2336.8 | 70.400 | %Recove | 10/13/03 | 24.000 | 122.000 | |
| SURR | Terphenyl-d14 (7Cl) | 98904-43-9 | 2932.7 | 88.400 | %Recove | 10/13/03 | 35.000 | 150.000 | |

## BATCH QC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | 1,2-Dichlorobenzene | 95-50-1 | < 360 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 1,2,4-Trichlorobenzene | 120-82-1 | < 290 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 1,3-Dichlorobenzene | 541-73-1 | < 320 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 1,4-Dichlorobenzene | 106-46-7 | < 310 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4-Dichlorophenol | 120-83-2 | < 80 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4-Dinitrotoluene | 121-14-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4,5-Trichlorophenol | 95-95-4 | < 73 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4,6-Trichlorophenol | 88-06-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4-Dimethylphenol | 105-67-9 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,6-Dinitrotoluene | 606-20-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Butoxyethanol | 111-76-2 | < 100 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Chloronaphthalene | 91-58-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Fluorophenol | 367-12-4 | 2422.2 | 72.700 | %Recove | 10/13/03 | 42.000 | 105.000 | |
| BLANK | 2-Methylnaphthalene | 91-57-6 | < 180 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Methylphenol (cresol, o-) | 95-48-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Nitroaniline | 88-74-4 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Nitrophenol | 88-75-5 | < 170 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 3 & 4 Methylphenol Total | 65794-96-9 | < 110 | n/a | ug/Kg | 10/13/03 | 0.000 | 300.000 | U |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | 3-Nitroaniline | 99-09-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4,6-Dinitro-2-methylphenol | 534-52-1 | < 670 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Bromophenylphenyl ether | 101-55-3 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Chlorophenylphenyl ether | 7005-72-3 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Acenaphthene | 83-32-9 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Acenaphthylene | 208-96-8 | < 80 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Anthracene | 120-12-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Bis(2-chloroethyl) ether | 111-44-4 | < 250 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Benzo(a)anthracene | 56-55-3 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Benzo(b)fluoranthene | 205-99-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Benzo(ghi)perylene | 191-24-2 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Benzo(a)pyrene | 50-32-8 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Bis(2-Chloroethoxy)methane | 111-91-1 | < 110 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Bis(2-ethylhexyl) phthalate | 117-81-7 | < 560 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Bis(2-chloro-1-methylethyl)eth | 108-60-1 | < 250 | n/a | ug/Kg | 10/13/03 | 0.000 | 10.000 | U |
| BLANK | Benzyl alcohol | 100-51-6 | < 73 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Benzo(k)fluoranthene | 207-08-9 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Butylbenzylphthalate | 85-68-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Carbazole | 86-74-8 | < 80 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Chloroaniline | 106-47-8 | < 93 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Chloro-3-methylphenol | 59-50-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Chlorophenol | 95-57-8 | < 150 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Chrysene | 218-01-9 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 3,3'-Dichlorobenzidine | 91-94-1 | < 80 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Dibenz[a,h]anthracene | 53-70-3 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Dibenzofuran | 132-64-9 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Di-n-butylphthalate | 84-74-2 | < 87 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Diethylphthalate | 84-66-2 | < 190 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Dimethyl phthalate | 131-11-3 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4-Dinitrophenol | 51-28-5 | < 670 | n/a | ug/Kg | 10/13/03 | | | U |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Di-n-octylphthalate | 117-84-0 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | N-Nitrosodi-n-dipropylamine | 621-64-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2-Fluorobiphenyl | 321-60-8 | 2675.2 | 80.300 | %Recove | 10/13/03 | 56.000 | 122.000 | |
| BLANK | Fluorene | 86-73-7 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Fluoranthene | 206-44-0 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Hexachlorobenzene | 118-74-1 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Hexachlorobutadiene | 87-68-3 | < 370 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Hexachlorocyclopentadiene | 77-47-4 | < 310 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Hexachloroethane | 67-72-1 | < 470 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Indeno(1,2,3-cd)pyrene | 193-39-5 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Isophorone | 78-59-1 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Phenol | 108-95-2 | < 100 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Naphthalene | 91-20-3 | < 290 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Nitrobenzene-d5 | 4165-60-0 | 2407.6 | 72.200 | %Recove | 10/13/03 | 64.000 | 111.000 | |
| BLANK | Nitrobenzene | 98-95-3 | < 260 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Nitrophenol | 100-02-7 | < 650 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 4-Nitroaniline | 100-01-6 | < 250 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | N-Nitrosodiphenylamine | 86-30-6 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Pentachlorophenol | 87-86-5 | < 300 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Phenanthrene | 85-01-8 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Phenol-d5 | 4165-62-2 | 2820.0 | 84.600 | %Recove | 10/13/03 | 54.000 | 120.000 | |
| BLANK | Pyrene | 129-00-0 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | Tributyl phosphate | 126-73-8 | < 67 | n/a | ug/Kg | 10/13/03 | | | U |
| BLANK | 2,4,6-Tribromophenol | 118-79-6 | 2150.0 | 64.500 | %Recove | 10/13/03 | 24.000 | 122.000 | |
| BLANK | Terphenyl-d14 (7Cl) | 98904-43-9 | 2819.5 | 84.600 | %Recove | 10/13/03 | 35.000 | 150.000 | |
| LCS | 1,2,4-Trichlorobenzene | 120-82-1 | 2585.5 | 77.600 | % Recov | 10/13/03 | 46.000 | 107.000 | |
| LCS | 1,4-Dichlorobenzene | 106-46-7 | 2482.5 | 74.500 | % Recov | 10/13/03 | 42.000 | 111.000 | |
| LCS | 2,4-Dinitrotoluene | 121-14-2 | 2639.0 | 79.200 | % Recov | 10/13/03 | 59.000 | 106.000 | |
| LCS | 2-Fluorophenol | 367-12-4 | 2502.9 | 75.100 | % Recov | 10/13/03 | 50.000 | 110.000 | |
| LCS | Acenaphthene | 83-32-9 | 2563.9 | 76.900 | % Recov | 10/13/03 | 61.000 | 116.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 37

SDG Number: WSCF20031352
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| LCS | 4-Chloro-3-methylphenol | 59-50-7 | 3947.8 | 79.000 | % Recov | 10/13/03 | 61.000 | 106.000 | |
| LCS | 2-Chlorophenol | 95-57-8 | 3855.4 | 77.100 | % Recov | 10/13/03 | 66.000 | 106.000 | |
| LCS | N-Nitrosodi-n-dipropylamine | 621-64-7 | 2985.4 | 89.600 | % Recov | 10/13/03 | 71.000 | 114.000 | |
| LCS | 2-Fluorobiphenyl | 321-60-8 | 2507.2 | 75.200 | % Recov | 10/13/03 | 58.000 | 109.000 | |
| LCS | Phenol | 108-95-2 | 4530.7 | 90.600 | % Recov | 10/13/03 | 67.000 | 105.000 | |
| LCS | Nitrobenzene-d5 | 4165-60-0 | 2483.9 | 74.500 | % Recov | 10/13/03 | 60.000 | 118.000 | |
| LCS | 4-Nitrophenol | 100-02-7 | 3027.7 | 60.600 | % Recov | 10/13/03 | 32.000 | 118.000 | |
| LCS | Pentachlorophenol | 87-86-5 | 3220.3 | 64.400 | % Recov | 10/13/03 | 62.000 | 114.000 | |
| LCS | Phenol-d5 | 4165-62-2 | 2396.4 | 71.900 | % Recov | 10/13/03 | 59.000 | 116.000 | |
| LCS | Pyrene | 129-00-0 | 2796.0 | 83.900 | % Recov | 10/13/03 | 66.000 | 118.000 | |
| LCS | 2,4,6-Tribromophenol | 118-79-6 | 2256.2 | 67.700 | % Recov | 10/13/03 | 60.000 | 120.000 | |
| LCS | Terphenyl-d14 (7Cl) | 98904-43-9 | 2697.2 | 80.900 | % Recov | 10/13/03 | 60.000 | 120.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 10/03/03
Receive Date:10/03/03

Lab ID: W030000879
BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | Silver | 7440-22-4 | 335.024 | 83.756 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Arsenic | 7440-38-2 | 354.8 | 88.700 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Barium | 7440-39-3 | 364.12 | 91.030 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Beryllium | 7440-41-7 | 296 | 74.000 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Cadmium | 7440-43-9 | 352.5 | 88.125 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Chromium | 7440-47-3 | 325.802 | 81.451 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Copper | 7440-50-8 | 320.7 | 80.175 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Mercury | 7439-97-6 | 19.7 | 98.500 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Nickel | 7440-02-0 | 312.838 | 78.210 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Lead | 7439-92-1 | 354.4 | 88.600 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Antimony | 7440-36-0 | 365.1 | 91.275 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Selenium | 7782-49-2 | 346.929 | 86.732 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MS | Uranium | 7440-61-1 | 361 | 90.250 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Silver | 7440-22-4 | 363.724 | 90.931 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Arsenic | 7440-38-2 | 372.2 | 93.050 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Barium | 7440-39-3 | 391.12 | 97.780 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Beryllium | 7440-41-7 | 307.7 | 76.925 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Cadmium | 7440-43-9 | 368.7 | 92.175 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Chromium | 7440-47-3 | 341.802 | 85.451 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Copper | 7440-50-8 | 333.7 | 83.425 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Mercury | 7439-97-6 | 21.21 | 106.050 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Nickel | 7440-02-0 | 326.838 | 81.710 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Lead | 7439-92-1 | 372.5 | 93.125 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Antimony | 7440-36-0 | 379.6 | 94.900 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Selenium | 7782-49-2 | 368.229 | 92.057 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Uranium | 7440-61-1 | 383.6 | 95.900 | % Recov | 10/16/03 | 70.000 | 130.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 10/03/03
Receive Date:10/03/03

Lab ID: W030000887

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | Antimony | 7440-36-0 | 367.1 | 91.775 | % Recov | 10/16/03 | 70.000 | 130.000 | |
| MSD | Antimony | 7440-36-0 | 372.7 | 93.175 | % Recov | 10/16/03 | 70.000 | 130.000 | |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Silver | 7440-22-4 | <0.2 | n/a | ug/L | 10/16/03 | -0.440 | 0.440 | U |
| BLANK | Arsenic | 7440-38-2 | <0.3 | n/a | ug/L | 10/16/03 | -0.660 | 0.660 | U |
| BLANK | Barium | 7440-39-3 | 0.374 | 0.374 | ug/L | 10/16/03 | -0.440 | 0.440 | |
| BLANK | Beryllium | 7440-41-7 | <0.3 | n/a | ug/L | 10/16/03 | -0.660 | 0.660 | U |
| BLANK | Cadmium | 7440-43-9 | <0.1 | n/a | ug/L | 10/16/03 | -0.220 | 0.220 | U |
| BLANK | Chromium | 7440-47-3 | <0.3 | n/a | ug/L | 10/16/03 | -0.660 | 0.660 | U |
| BLANK | Copper | 7440-50-8 | <0.5 | n/a | ug/L | 10/16/03 | -1.100 | 1.100 | U |
| BLANK | Mercury | 7439-97-6 | <0.1 | n/a | ug/L | 10/16/03 | -0.220 | 0.220 | U |
| BLANK | Nickel | 7440-02-0 | <0.5 | n/a | ug/L | 10/16/03 | -1.100 | 1.100 | U |
| BLANK | Lead | 7439-92-1 | <1.2 | n/a | ug/L | 10/16/03 | -2.640 | 2.640 | U |
| BLANK | Antimony | 7440-36-0 | <0.5 | n/a | ug/L | 10/16/03 | -1.100 | 1.100 | U |
| BLANK | Selenium | 7782-49-2 | 0.349 | 0.349 | ug/L | 10/16/03 | -0.660 | 0.660 | |
| BLANK | Uranium | 7440-61-1 | <0.1 | n/a | ug/L | 10/16/03 | -0.220 | 0.220 | U |
| LCS | Silver | 7440-22-4 | 147.6 | 124.034 | % Recov | 10/16/03 | 85.000 | 115.000 | * |
| LCS | Arsenic | 7440-38-2 | 201.1 | 103.128 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Barium | 7440-39-3 | 392.6 | 100.153 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Beryllium | 7440-41-7 | 68.49 | 90.956 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Cadmium | 7440-43-9 | 69.84 | 101.808 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Chromium | 7440-47-3 | 74.13 | 85.699 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Copper | 7440-50-8 | 104.6 | 82.362 | % Recov | 10/16/03 | 85.000 | 115.000 | * |
| LCS | Mercury | 7439-97-6 | 9.764 | 103.762 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Nickel | 7440-02-0 | 79.54 | 95.144 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Lead | 7439-92-1 | 97.48 | 103.153 | % Recov | 10/16/03 | 85.000 | 115.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| LCS | Antimony | 7440-36-0 | 146 | 105.797 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Selenium | 7782-49-2 | 124.9 | 109.561 | % Recov | 10/16/03 | 85.000 | 115.000 | |
| LCS | Uranium | 7440-61-1 | 390.6 | 97.650 | % Recov | 10/16/03 | 85.000 | 115.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Americium by AEA

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Americium-241 | 14596-10-2 | 7.6e-03 | 113.402 | RPD | 10/16/03 | 0.000 | 20.000 | * |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Americium-241 | 14596-10-2 | 4.3e-02 | 0.043 | PCG | 10/16/03 | 0.000 | 1000.000 | |
| LCS | Americium-241 | 14596-10-2 | 14.17 | 107.757 | % Recov | 10/16/03 | 75.000 | 125.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date: 10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Pu-239/240 by AEA | PU-239/240 | 1.9e-03 | 0.000 | RPD | 10/16/03 | 0.000 | 20.000 | |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Pu-239/240 by AEA | PU-239/240 | 1.2e-02 | 0.012 | PCG | 10/16/03 | 0.000 | 1000.000 | |
| LCS | Pu-239/240 by AEA | PU-239/240 | 10.62 | 86.341 | % Recov | 10/16/03 | 75.000 | 125.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Uranium-238 | U-238 | 1.8e-01 | 48.276 | RPD | 10/16/03 | 0.000 | 20.000 | * |

BATCH QC

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Uranium-238 | 24678-82-8 | 3.7e-03 | 0.004 | PCG | 10/16/03 | 0.000 | 1000.000 | |
| LCS | Uranium-238 | 24678-82-8 | 4.0e+01 | 105.513 | % Recov | 10/16/03 | 75.000 | 125.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880
BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| DUP | Actinium-228 | 14331-83-0 | 6.60e-01 | 2.985 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Americium-241 | 14596-10-2 | U4.59e-02 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Bismuth-212 | 14913-49-6 | 4.95e-01 | 9.524 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Bismuth-214 | 14733-03-0 | 5.37e-01 | 12.884 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Cerium-144 | 14762-78-8 | U-2.40e-2 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Cobalt-60 | 10198-40-0 | U1.63e-03 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Cesium-134 | 13967-70-9 | U4.42e-02 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Cesium-137 | 10045-97-3 | U-8.97e-3 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Europium-152 | 14683-23-9 | U-3.66e-2 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Europium-154 | 15585-10-1 | U-4.15e-2 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Europium-155 | 14391-16-3 | 7.63e-02 | 34.589 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Niobium-94 | 14681-63-1 | U-3.60e-4 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Lead-212 | 15092-94-1 | 7.03e-01 | 0.142 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Lead-214 | 15067-28-4 | 5.78e-01 | 4.965 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Radium-226 | 13982-63-3 | 5.37e-01 | 12.884 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Radium-228 | 15262-20-1 | 6.60e-01 | 2.985 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Ruthenium-103 | 13968-53-1 | U6.64e-03 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Ruthenium-106 | 13967-48-1 | U-5.74e-2 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Antimony-125 | 14234-35-6 | U2.45e-03 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Tin-113 | 13966-06-8 | U-8.34e-3 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Tin-126 | 15832-50-5 | U1.56e-01 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Thorium-234 | 15065-10-8 | 9.39e-01 | 12.443 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Thallium-208 | 14913-50-9 | 2.24e-01 | 5.034 | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Uranium-235 | 15117-96-1 | U6.76e-02 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |
| DUP | Zinc-65 | 13982-39-3 | U8.15e-05 | n/a | RPD | 10/20/03 | 0.000 | 20.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 45

SDG Number: WSCF20031352
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BATCH QC | | | | | | | | | |
| BLANK | Actinium-228 | 14331-83-0 | 6.88e-02 | 0.069 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Americium-241 | 14596-10-2 | U-5.94e-2 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Bismuth-212 | 14913-49-6 | U3.82e-02 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Bismuth-214 | 14733-03-0 | 9.47e-02 | 0.095 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Cerium-144 | 14762-78-8 | U-3.07e-2 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Cobalt-60 | 10198-40-0 | U-1.76e-3 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Cesium-134 | 13967-70-9 | U1.09e-03 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Cesium-137 | 10045-97-3 | U-1.32e-3 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Europium-152 | 14683-23-9 | U-1.25e0 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Europium-154 | 15585-10-1 | U-3.15e-3 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Europium-155 | 14391-16-3 | U2.03e-03 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Niobium-94 | 14681-63-1 | U7.63e-04 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Lead-212 | 15092-94-1 | 6.91e-02 | 0.069 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Lead-214 | 15067-28-4 | 9.73e-02 | 0.097 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Radium-226 | 13982-63-3 | 9.47e-02 | 0.095 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Radium-228 | 15262-20-1 | 6.88e-02 | 0.069 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Ruthenium-103 | 13968-53-1 | U2.76e-03 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Ruthenium-106 | 13967-48-1 | U-1.58e-2 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Antimony-125 | 14234-35-6 | U-2.96e-3 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Tin-113 | 13966-06-8 | U5.98e-03 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Tin-126 | 15832-50-5 | U-6.61e-2 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Thorium-234 | 15065-10-8 | U-2.61e-1 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Thallium-208 | 14913-50-9 | 1.12e-02 | 0.011 | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Uranium-235 | 15117-96-1 | U1.24e-02 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| BLANK | Zinc-65 | 13982-39-3 | U7.56e-03 | n/a | pCi/g | 10/20/03 | -10000.000 | 1000.000 | |
| LCS | Americium-241 | 14596-10-2 | 3.98e+03 | 101.531 | % Recov | 10/20/03 | 80.000 | 120.000 | |
| LCS | Cobalt-60 | 10198-40-0 | 4.24e+03 | 101.193 | % Recov | 10/20/03 | 80.000 | 120.000 | |
| LCS | Cesium-137 | 10045-97-3 | 3.74e+03 | 104.469 | % Recov | 10/20/03 | 80.000 | 120.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F03-006
Sample Date: 10/03/03
Receive Date:10/03/03

Lab ID: W030000879

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | Boron | 7440-42-8 | 262 | 105.645 | % Recov | 10/16/03 | 75.000 | 125.000 | |
| MS | Bismuth | 7440-69-9 | 258 | 104.032 | % Recov | 10/16/03 | 75.000 | 125.000 | |
| MSD | Boron | 7440-42-8 | 262 | 105.645 | % Recov | 10/16/03 | 75.000 | 125.000 | |
| MSD | Bismuth | 7440-69-9 | 258 | 104.032 | % Recov | 10/16/03 | 75.000 | 125.000 | |
| SPK-RPD | Boron | 7440-42-8 | 105.645 | 0.000 | RPD | 10/16/03 | 0.000 | 20.000 | |
| SPK-RPD | Bismuth | 7440-69-9 | 104.032 | 0.000 | RPD | 10/16/03 | 0.000 | 20.000 | |

BATCH QC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Boron | 7440-42-8 | <10.2 | n/a | ug/L | 10/16/03 | -10.000 | 10.000 | U |
| BLANK | Bismuth | 7440-69-9 | <10 | n/a | ug/L | 10/16/03 | -1.000 | 0.068 | U |
| LCS | Boron | 7440-42-8 | 65.39 | 102.172 | % Recov | 10/16/03 | 80.000 | 120.000 | |
| LCS | Bismuth | 7440-69-9 | 301 | 60.685 | % Recov | 10/16/03 | 80.000 | 120.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

2 - 47

SDG Number: WSCF20031352
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID: W030000880 | | | | | | | | | |
| BATCH QC ASSOCIATED WITH SAMPLE | | | | | | | | | |
| MS | Total Pet. Hydrocarbons Gas | TPHGASOLINE | 3100 | 86.835 | % Recov | 10/08/03 | 50.000 | 150.000 | |
| MSD | Total Pet. Hydrocarbons Gas | TPHGASOLINE | 3390 | 94.958 | % Recov | 10/08/03 | 50.000 | 150.000 | |
| SPK-RPD | Total Pet. Hydrocarbons Gas | TPHGASOLINE | 94.958 | 8.937 | RPD | 10/08/03 | 0.000 | 20.000 | |
| BATCH QC | | | | | | | | | |
| BLANK | Total Pet. Hydrocarbons Gas | TPHGASOLINE | < 250 | n/a | mg/L | 10/08/03 | 0.000 | 300.000 | U |
| LCS | Total Pet. Hydrocarbons Gas | TPHGASOLINE | 3790 | 109.855 | % Recov | 10/08/03 | 85.000 | 115.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880
BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | 1,1-Dichloroethene | 75-35-4 | 48.000 | 92.800 | % Recov | 10/08/03 | 63.000 | 117.000 | |
| MS | Benzene | 71-43-2 | 50.000 | 96.700 | % Recov | 10/08/03 | 75.000 | 129.000 | |
| MS | 4-Bromofluorobenzene | 460-00-4 | 98.000 | 94.800 | % Recov | 10/08/03 | 84.000 | 116.000 | |
| MS | Chlorobenzene | 108-90-7 | 52.000 | 101.000 | % Recov | 10/08/03 | 79.000 | 119.000 | |
| MS | 1,2-Dichloroethane-d4 | 17060-07-0 | 110.00 | 106.000 | % Recov | 10/08/03 | 82.000 | 136.000 | |
| MS | Toluene-d8 | 2037-26-5 | 100.00 | 96.700 | % Recov | 10/08/03 | 89.000 | 119.000 | |
| MS | Toluene | 108-88-3 | 52.000 | 101.000 | % Recov | 10/08/03 | 76.000 | 120.000 | |
| MS | Trichloroethene | 79-01-6 | 49.000 | 94.800 | % Recov | 10/08/03 | 73.000 | 123.000 | |
| MSD | 1,1-Dichloroethene | 75-35-4 | 45.000 | 90.000 | % Recov | 10/08/03 | 63.000 | 117.000 | |
| MSD | Benzene | 71-43-2 | 49.000 | 98.000 | % Recov | 10/08/03 | 75.000 | 129.000 | |
| MSD | 4-Bromofluorobenzene | 460-00-4 | 94.000 | 94.000 | % Recov | 10/08/03 | 84.000 | 116.000 | |
| MSD | Chlorobenzene | 108-90-7 | 51.000 | 102.000 | % Recov | 10/08/03 | 79.000 | 119.000 | |
| MSD | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.00 | 100.000 | % Recov | 10/08/03 | 82.000 | 136.000 | |
| MSD | Toluene-d8 | 2037-26-5 | 100.00 | 100.000 | % Recov | 10/08/03 | 89.000 | 119.000 | |
| MSD | Toluene | 108-88-3 | 50.000 | 100.000 | % Recov | 10/08/03 | 76.000 | 120.000 | |
| MSD | Trichloroethene | 79-01-6 | 48.000 | 96.000 | % Recov | 10/08/03 | 73.000 | 123.000 | |
| SPK-RPD | 1,1-Dichloroethene | 75-35-4 | 90.000 | 3.063 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | Benzene | 71-43-2 | 98.000 | 1.335 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | 4-Bromofluorobenzene | 460-00-4 | 94.000 | 0.847 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | Chlorobenzene | 108-90-7 | 102.000 | 0.985 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.000 | 5.825 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | Toluene-d8 | 2037-26-5 | 100.000 | 3.355 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | Toluene | 108-88-3 | 100.000 | 0.995 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SPK-RPD | Trichloroethene | 79-01-6 | 96.000 | 1.258 | RPD | 10/08/03 | 0.000 | 25.000 | |
| SURR | 4-Bromofluorobenzene | 460-00-4 | 95.000 | 91.900 | % Recov | 10/08/03 | 71.000 | 125.000 | |
| SURR | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.00 | 96.700 | % Recov | 10/08/03 | 80.000 | 134.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT



SDG Number: WSCF20031352
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| SURR | Toluene-d8 | 2037-26-5 | 100.00 | 96.700 | % Recov | 10/08/03 | 80.000 | 126.000 | |

Lab ID: W030000881
BATCH QC ASSOCIATED WITH SAMPLE

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| SURR | 4-Bromofluorobenzene | 460-00-4 | 94.000 | 94.000 | % Recov | 10/08/03 | 71.000 | 125.000 | |
| SURR | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 134.000 | |
| SURR | Toluene-d8 | 2037-26-5 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 126.000 | |

BATCH QC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | 1,1-Dichloroethane | 75-34-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,1,1-Trichloroethane | 71-55-6 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,1,2-Trichloroethane | 79-00-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,1,2,2-Tetrachloroethane | 79-34-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,1-Dichloroethene | 75-35-4 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,2-Dichloroethane | 107-06-2 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,2-Dichloroethene(Total) | 540-59-0 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1-Butanol | 71-36-3 | < 40 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 2-Hexanone | 591-78-6 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 2-Pentanone | 107-87-9 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 4-Methyl-2-Pentanone | 108-10-1 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Acetone | 67-64-1 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Bromodichloromethane | 75-27-4 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Benzene | 71-43-2 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 4-Bromofluorobenzene | 460-00-4 | 95.000 | 95.000 | % Recov | 10/08/03 | 71.000 | 125.000 | |
| BLANK | Bromoform | 75-25-2 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | n-Butylbenzene | 104-51-8 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Carbon disulfide | 75-15-0 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Carbon tetrachloride | 56-23-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Dibromochloromethane | 124-48-1 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Chloroform | 67-66-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |

# WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031352
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date:
Receive Date:

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | Chlorobenzene | 108-90-7 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | cis-1,3-Dichloropropene | 10061-01-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Chloroethane | 75-00-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 134.000 | |
| BLANK | 1,2-Dichloropropane | 78-87-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Ethylbenzene | 100-41-4 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Bromomethane | 74-83-9 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Chloromethane | 74-87-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | 2-Butanone | 78-93-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Methylenechloride | 75-09-2 | 8.0 | 8.000 | ug/Kg | 10/08/03 | | | |
| BLANK | Tetrachloroethene | 127-18-4 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Styrene | 100-42-5 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Xylenes (total) | 1330-20-7 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Toluene-d8 | 2037-26-5 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 126.000 | |
| BLANK | Toluene | 108-88-3 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | trans-1,3-Dichloropropene | 10061-02-6 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Trichloroethene | 79-01-6 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| BLANK | Vinyl chloride | 75-01-4 | < 2.0 | n/a | ug/Kg | 10/08/03 | | | U |
| LCS | 1,1-Dichloroethene | 75-35-4 | 44.000 | 88.000 | % Recov | 10/08/03 | 70.000 | 130.000 | |
| LCS | Benzene | 71-43-2 | 48.000 | 96.000 | % Recov | 10/08/03 | 70.000 | 130.000 | |
| LCS | 4-Bromofluorobenzene | 460-00-4 | 96.000 | 96.000 | % Recov | 10/08/03 | 71.000 | 125.000 | |
| LCS | Chlorobenzene | 108-90-7 | 50.000 | 100.000 | % Recov | 10/08/03 | 70.000 | 130.000 | |
| LCS | 1,2-Dichloroethane-d4 | 17060-07-0 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 134.000 | |
| LCS | Toluene-d8 | 2037-26-5 | 100.00 | 100.000 | % Recov | 10/08/03 | 80.000 | 126.000 | |
| LCS | Toluene | 108-88-3 | 49.000 | 98.000 | % Recov | 10/08/03 | 70.000 | 130.000 | |
| LCS | Trichloroethene | 79-01-6 | 47.000 | 94.000 | % Recov | 10/08/03 | 70.000 | 130.000 | |

# WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031352
Matrix: SOLID
Test: Alcohols, Glycols - 8015

SAF Number: F03-006
Sample Date: 10/01/03
Receive Date:10/06/03

Lab ID: W030000880

BATCH QC ASSOCIATED WITH SAMPLE

| QC Type | Analyte | CAS # | QC Found | QC Yield | Units | Analysis Date | Lower Limit | Upper Limit | RQ |
|---|---|---|---|---|---|---|---|---|---|
| MS | 2-Bromoethanol | 540-51-2 | 8750 | 90.486 | %Recove | 10/14/03 | 70.000 | 125.000 | |
| MS | Diethyl ether | 60-29-7 | 8700 | 89.969 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| MS | Ethylene glycol | 107-21-1 | 7900 | 81.696 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| MS | Methanol | 67-56-1 | 8200 | 84.798 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| MSD | 2-Bromoethanol | 540-51-2 | 7950 | 82.213 | %Recove | 10/14/03 | 70.000 | 125.000 | |
| MSD | Diethyl ether | 60-29-7 | 9710 | 100.414 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| MSD | Ethylene glycol | 107-21-1 | 8290 | 85.729 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| MSD | Methanol | 67-56-1 | 8030 | 83.040 | %Recove | 10/14/03 | 75.000 | 125.000 | |
| SPK-RPD | 2-Bromoethanol | 540-51-2 | 82.213 | 9.581 | RPD | 10/14/03 | 0.000 | 20.000 | |
| SPK-RPD | Diethyl ether | 60-29-7 | 100.414 | 10.973 | RPD | 10/14/03 | 0.000 | 20.000 | |
| SPK-RPD | Ethylene glycol | 107-21-1 | 85.729 | 4.818 | RPD | 10/14/03 | 0.000 | 20.000 | |
| SPK-RPD | Methanol | 67-56-1 | 83.040 | 2.095 | RPD | 10/14/03 | 0.000 | 20.000 | |

BATCH QC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BLANK | 2-Bromoethanol | 540-51-2 | 8080 | 0.808 | ug/Kg | 10/14/03 | 0.000 | 10.000 | |
| BLANK | Diethyl ether | 60-29-7 | <5000 | n/a | ug/Kg | 10/14/03 | 0.000 | 10.000 | U |
| BLANK | Ethylene glycol | 107-21-1 | <5000 | n/a | ug/Kg | 10/14/03 | 0.000 | 5.000 | U |
| BLANK | Methanol | 67-56-1 | <1000 | n/a | ug/Kg | 10/14/03 | 0.000 | 10.000 | U |
| LCS | 2-Bromoethanol | 540-51-2 | 8200 | 82.000 | %Recove | 10/14/03 | 70.000 | 130.000 | |
| LCS | Diethyl ether | 60-29-7 | 7700 | 77.000 | %Recove | 10/14/03 | 70.000 | 130.000 | |
| LCS | Ethylene glycol | 107-21-1 | 10200 | 102.000 | %Recove | 10/14/03 | 70.000 | 130.000 | |
| LCS | Methanol | 67-56-1 | 9400 | 94.000 | %Recove | 10/14/03 | 70.000 | 130.000 | |

W1141-03-SLF-061

ATTACHMENT 3

**SAMPLE RECEIPT INFORMATION**

Consisting of 3 pages
Cover page not included

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

11/5/03
File KB

## ACKNOWLEDGMENT OF SAMPLES RECEIVED

Ground Water Protection Program
Richland, WA 99352
Attn: Steve Trent

Customer Code: GPP
PO#: 117504/ES10
Group#: 20031352
Project#: F03-006
Proj Mgr: STEVE TRENT A0-21
Phone: 373-5869

The following samples were received from you on 10/06/03. 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 | Matrix | Sample Date |
|---|---|---|---|
| W030000880 | B17121 | TRENT Solid, or handle as if solid | 10/01/03 |
| | | @2008 @8015GPP @AEA-30 @AEA-31 @AEA-32 | |
| | | @GEA-GPP @GPP6010 @IC-30 @PCBGPP @SVOCGPP @TPHD-WA | |
| | | @TPHG-WA @VOA-GPP CN-02 NH4-IC PERSOLID PH-30 | |
| W030000881 | B172M8 | TRENT Solid, or handle as if solid | 10/01/03 |
| | | @2008 @8015GPP @AEA-30 @AEA-31 @AEA-32 | |
| | | @GEA-GPP @GPP6010 @IC-30 @PCBGPP @SVOCGPP @TPHD-WA | |
| | | @TPHG-WA @VOA-GPP CN-02 NH4-IC PERSOLID PH-30 | |

Test Acronym Description

| Test Acronym | Description |
|---|---|
| @2008 | ICP-2008 MS All possible metal |
| @8015GPP | Alcohols, Glycols - 8015 |
| @AEA-30 | Plutonium Isotopics by AEA |
| @AEA-31 | Americium by AEA |
| @AEA-32 | Uranium Isotopics by AEA |
| @GEA-GPP | Gamma Energy Analysis-grd H2O |
| @GPP6010 | ICP Metals Analysis, Grd H2O P |
| @IC-30 | Anions by Ion Chromatography |
| @PCBGPP | PCBs complete list |
| @SVOCGPP | SW-846 8270B Semi-Vols |
| @TPHD-WA | WTPH-D TPH Diesel Range (Wa) |
| @TPHG-WA | NWTPH-GX TPH Gasoline Range |
| @VOA-GPP | VOA Ground Water Protection |
| CN-02 | Cyanide by Midi/Spectrophotom |
| NH4-IC | Ammonia (N) by IC |
| PERSOLID | Percent Solids |
| PH-30 | pH Soil and Waste Measurement |



MGN
3-1

11/5

3-2

| FH-Central Plateau Project | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F03-006-253 | Page 1 of 1 |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **Collector** Pope/Pfister/Hughes/Johansen | **Company Contact** LC Hulstrom | **Telephone No.** 373-3928 | **Project Coordinator** TRENT, SJ |
| **Price Code** 8N | **Data Turnaround** 45 Days | **Air Quality** ☐ | |
| **Project Designation** 200-PW-2/200-PW-4 OU - Borehole Soil Sampling | **Sampling Location** 216-A-10 (C3247) 287.5-290 ft | **SAF No.** F03-006 | |
| **Ice Chest No.** SMC-69 | **Field Logbook No.** HNF-N-3361 | **COA** 117504ES10 | **Method of Shipment** Government Vehicle |
| **Shipped To** Waste Sampling & Characterization | **Offsite Property No.** N/A | | **Bill of Lading/Air Bill No.** N/A |

**POSSIBLE SAMPLE HAZARDS/REMARKS**

**Special Handling and/or Storage**
*N/A*

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Preservation** | Cool 4C | Cool 4C | Cool 4C | Cool 4C | | | | | | | |
| **Type of Container** | Gs* | aG | Gs* | P | | | | | | | |
| **No. of Container(s)** | 3 | 1 | 3 | 1 | | | | | | | |
| **Volume** | 40mL | 250mL | 40mL | 500mL | | | | | | | |
| **SAMPLE ANALYSIS** 20031352 | See item (1) in Special Instructions. | See item (2) in Special Instructions. | See item (3) in Special Instructions. | See item (4) in Special Instructions. | | | | | | | |

| Sample No. | Matrix * | Sample Date | Sample Time | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B17121 | SOIL | 10-1-3 | ~~16:50~~ MJ 10-6-03 | X | X | X | X | | | | | | |
| W03000880 | | | 16:30 | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**CHAIN OF POSSESSION** — **Sign/Print Names**

| Relinquished By/Removed From | Date/Time | Received By/Stored In | Date/Time |
|---|---|---|---|
| Kevin D Hughes | 10-1-3 1820 | MO-026 Fridge #1 | 10-1-3 1830 |
| MO-026 Fridge #1 | 10-6-3 0630 | Kevin D Hughes | 10-6-3 0630 |
| Kevin D Hughes | 10-6-3 0900 | [illegible] | 10-6-03 0900 |
| [illegible] | 10-6-03 0915 | Victor Sias | 10-6-03 0915 |
| | | | |
| | | | |

**SPECIAL INSTRUCTIONS** MJ 10-1-03

~~The lab is to achieve a detection limit of 50.0 pCi/g for C-14.~~ Report kerosene and diesel range compounds from WTPH-D analysis. FH acknowledges that holding times (less than 14 days) may not be met by the lab due to the radl characteristics.

(1) VOA - 8260A (TCL); VOA - 8260A (Add-On) {2-Pentanone, Benzyl alcohol, n-Butylbenzene}
(2) Semi-VOA - 8270A (TCL); Semi-VOA -- 8270A (Add-On) {2-Butoxyethanol, Tributyl phosphate}; TPH-Diesel Range - WTPH-D; TPH-Gasoline Range - WTPH-G; PCBs - 8082
(3) Alcohols, Glycols, & Ketones - 8015 {1-Butanol, Diethyl ether, Ethylene glycol, Methanol}
(4) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Antimony-125, Cesium-134, Radium-226, Radium-228, Tin-126}; Isotopic Plutonium; Americium-241; Isotopic Uranium; Trace Elements ICP/MS - 200.8 (Complete) {Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Uranium}; ICP Metals - 6010A (Add-on) {Bismuth, Boron}; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Cyanide (Total) - 335.2; Cations (IC) - 300.7 {Nitrogen in ammonium}; pH (Soil) - 9045

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

| | | | |
|---|---|---|---|
| **LABORATORY SECTION** | Received By | Title | Date/Time |
| **FINAL SAMPLE DISPOSITION** | Disposal Method | Disposed By | Date/Time |

BHI-EE-011 (03/01/2002)

| FH-Central Plateau Project | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F03-006-255 | Page 1 of 1 |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **Collector** Pope/Pfister/Hughes/Johansen | **Company Contact** LC Hulstrom **Telephone No.** 373-3928 | **Project Coordinator** TRENT, SJ | **Price Code** 8N **Data Turnaround** 45 Days |
| **Project Designation** 200-PW-2/200-PW-4 OU - Borehole Soil Sampling | **Sampling Location** 216-A-10 (C3247) 292-294.5 ft | **SAF No.** F03-006 | **Air Quality** ☐ |
| **Ice Chest No.** SMC-69 | **Field Logbook No.** HNF-N-3361 **COA** 117504ES10 | **Method of Shipment** Government Vehicle | |
| **Shipped To** Waste Sampling & Characterization | **Offsite Property No.** N/A | **Bill of Lading/Air Bill No.** N/A | |

**POSSIBLE SAMPLE HAZARDS/REMARKS**

**Special Handling and/or Storage**
*N/A*

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Preservation** | Cool 4C | Cool 4C | Cool 4C | Cool 4C | | | | | | | |
| **Type of Container** | Gs* | aG | Gs* | P | | | | | | | |
| **No. of Container(s)** | 3 | 1 | 3 | 1 | | | | | | | |
| **Volume** | 40mL | 250mL | 40mL | 500mL | | | | | | | |
| **SAMPLE ANALYSIS** | See item (1) in Special Instructions. | See item (2) in Special Instructions. | See item (3) in Special Instructions. | See item (4) in Special Instructions. | | | | | | | |

| Sample No. | Matrix * | Sample Date | Sample Time | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B172M8 | SOIL | 10-1-3 | 17:15 | X | X | X | X | | | | | | |
| W03000881 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

**CHAIN OF POSSESSION** — **Sign/Print Names**

| Relinquished By/Removed From | Date/Time | Received By/Stored In | Date/Time |
|---|---|---|---|
| Kevin Hughes | 10-1-3 1830 | MO-026 Fridge #1 | 10-1-3 1830 |
| MO-026 Fridge #1 | 10-6-3 0630 | Kevin Hughes | 10-6-1 0630 |
| Kevin Hughes | 10-6-3 0900 | [illegible] | 10-6-03 0900 |
| [illegible] | 10-6-03 0915 | [illegible] | 10-6-03 0915 |
| Relinquished By/Removed From | Date/Time | Received By/Stored In | Date/Time |
| Relinquished By/Removed From | Date/Time | Received By/Stored In | Date/Time |

**SPECIAL INSTRUCTIONS** TMJ 10-1-03

~~The lab is to achieve a detection limit of 50.0 pCi/g for C-14.~~ Report kerosene and diesel range compounds from WTPH-D analysis. FH acknowledges that holding times (less than 14 days) may not be met by the lab due to the radl characteristics.

(1) VOA - 8260A (TCL); VOA - 8260A (Add-On) {2-Pentanone, Benzyl alcohol, n-Butylbenzene}
(2) Semi-VOA - 8270A (TCL); Semi-VOA -- 8270A (Add-On) {2-Butoxyethanol, Tributyl phosphate}; TPH-Diesel Range - WTPH-D; TPH-Gasoline Range - WTPH-G; PCBs - 8082
(3) Alcohols, Glycols, & Ketones - 8015 {1-Butanol, Diethyl ether, Ethylene glycol, Methanol}
(4) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Antimony-125, Cesium-134, Radium-226, Radium-228, Tin-126}; Isotopic Plutonium; Americium-241; Isotopic Uranium; Trace Elements ICP/MS - 200.8 (Complete) {Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Uranium}; ICP Metals - 6010A (Add-on) {Bismuth, Boron}; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Cyanide (Total) - 335.2; Cations (IC) - 300.7 {Nitrogen in ammonium}; pH (Soil) - 9045

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

| | | | |
|---|---|---|---|
| **LABORATORY SECTION** | Received By | Title | Date/Time |
| **FINAL SAMPLE DISPOSITION** | Disposal Method | Disposed By | Date/Time |

SHI-EE-011 (03/01/2002)

3-3