0078644

# SAF-RC-104
# 600 Area Component of the RCBRA – Multi-Incremental Soil - Resampling
# FINAL DATA PACKAGE

**COMPLETE COPY OF DATA PACKAGE TO:**

Duane Jacques H4-22 KW 7/28/08
NITIAL/DATE

**COMMENTS:**

**SDG K1233** **SAF-RC-104**

Rad only X Chem only Rad & Chem

X Complete Partial

**WET CHEMISTRY DATA FROM CORVALLIS ATTACHED**

**Waste Site:** **RCBRA 600-208**
**RCBRA 116-F-1**
**RCBRA 600-171**
**RCBRA 600-139**
**RCBRA 600-131**
**RCBRA 600-132**
**RCBRA McGee Ranch**
**RCBRA Vernita Upriver SS**
**RCBRA Saddle Mountain**

RECEIVED
AUG 25 2008
EDMC

CH2M HILL
Applied Sciences Laboratory
2300 NW Walnut Blvd
Corvallis, OR
97330-3538
P.O. Box 428
Corvallis, OR
97339-0428
Tel 541.752.4271
Fax 541.752.0276

CH2MHILL
Applied Sciences Laboratory

RECEIVED
JUL 2008

July 8, 2008

ELR Consulting
418 W. 26th Place
Kennewick, WA 99337-4940

RE: Laboratory Report for ELR Consulting
Applied Sciences Laboratory Reference No. H1920

Dear Joan Kessner/WCH:

On May 20, 2008, CH2M HILL Applied Sciences Laboratory received nine samples with a request for analysis of selected parameters. All analyses were performed by CH2M HILL unless otherwise indicated below.

The analytical results and associated quality control data are enclosed. Any unusual difficulties encountered during the analysis of your samples are discussed in the case narrative. This data package meets standards requested by client and is not intended or implied to meet any other standard. The results included in this report only relate to the samples listed on the following Sample Cross-Reference page. This report shall not be reproduced except in full, without the written approval of the laboratory.

CH2M HILL Applied Sciences Laboratory appreciates your business and looks forward to serving your analytical needs again. If you should have any questions concerning the data, or if you need additional information, please call Mark Bos at (541) 758-0235, extension 3135.

Sincerely,

Mark Bos
Analytical Manager

Enclosures

| VersionCo | LabName | SDG | FieldID | NativeID | QAQCType | LRType | Matrix | LabSample | AnalysisM | Extraction | SampleDate | SampleTin | ReceiveDate | ExtractDate | ExtractTim | AnalysisDate | AnalysisTi | PercentSo | LabLotCtl | CAS | ParamID | Analyte | Result | ExpectedV | Units | Dilution | MDL | RL | LabQualifi | Surrogate | Comments | ParValUnc | Recovery | LowerCon | UpperCon | Basis | ConcQual | MDLAdjus | RLAdjuste | SampleDe | LeachMet | LeachDate | LeachTime | LeachLot | AnalysisLo | CalRefID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | ASTM E77 | NONE | 5/19/2008 | 13:45 | 5/20/2008 | | | 6/2/2008 | 14:20 | 98.71 | | TOC | TOC | Total Orga | 7750 | | MG/KG | 1 | 175 | 366 | | N | | | | | | D | = | 175 | 366 | J16V82 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E351.2 | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 6/5/2008 | 17:02 | 6/5/2008 | 17:02 | 98.71 | SB1-0604 | TKN | KN | Total Kjeld | 489 | | MG/KG | 20 | 3.61 | 32.3 | | N | | | | | | D | = | 3.65 | 32.7 | J16V82 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E350.1 | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 6/3/2008 | 10:14 | 6/3/2008 | 10:14 | 98.71 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.878 | | MG/KG | 1 | 0.173 | 2.01 | B | N | | | | | | D | J | 0.174 | 2.03 | J16V82 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E300.0A | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/22/2008 | 21:08 | 5/22/2008 | 21:08 | 98.71 | SB1-0522 | 16887-00- | CL | Chloride | 0.658 | | MG/KG | 1 | 0.104 | 0.994 | B | N | | | | | | D | J | 0.105 | 1 | J16V82 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E300.0A | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/22/2008 | 21:08 | 5/22/2008 | 21:08 | 98.71 | SB1-0522 | 16984-48- | F | Fluoride | 0.584 | | MG/KG | 1 | 0.0879 | 0.994 | B | N | | | | | | D | J | 0.0888 | 1 | J16V82 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E300.0A | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/22/2008 | 21:08 | 5/22/2008 | 21:08 | 98.71 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.451 | | MG/KG | 1 | 0.0504 | 0.994 | B | N | | | | | | D | J | 0.0509 | 1 | J16V82 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E300.0A | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/22/2008 | 21:08 | 5/22/2008 | 21:08 | 98.71 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.607 | | MG/KG | 1 | 0.0595 | 0.994 | B | N | | | | | | D | J | 0.0601 | 1 | J16V82 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | E300.0A | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/22/2008 | 21:08 | 5/22/2008 | 21:08 | 98.71 | SB1-0522 | 14808-79- | SO4 | Sulfate | 11.8 | | MG/KG | 1 | 0.15 | 0.994 | | N | | | | | | D | = | 0.152 | 1 | J16V82 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | ASTM D22 | NONE | 5/19/2008 | 13:45 | 5/20/2008 | | | 5/21/2008 | 11:18 | 98.71 | | MOISTURE | MOIST | Moisture | 1.29 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V82 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V82 | J16V82 | N | | SOIL | H192001 | SW9045 | METHOD | 5/19/2008 | 13:45 | 5/20/2008 | 5/23/2008 | 11:55 | 5/23/2008 | 11:55 | 98.71 | SB1-0523 | PH | PH | pH | 7.75 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V82 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | ASTM E77 | NONE | 5/19/2008 | 11:45 | 5/20/2008 | | | 6/2/2008 | 14:32 | 99.13 | | TOC | TOC | Total Orga | 5380 | | MG/KG | 1 | 185 | 387 | | N | | | | | | D | = | 185 | 387 | J16V76 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E351.2 | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 6/5/2008 | 17:03 | 6/5/2008 | 17:03 | 99.13 | SB1-0604 | TKN | KN | Total Kjeld | 539 | | MG/KG | 20 | 3.59 | 32.2 | | N | | | | | | D | = | 3.62 | 32.5 | J16V76 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E350.1 | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 6/3/2008 | 10:18 | 6/3/2008 | 10:18 | 99.13 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 1.41 | | MG/KG | 1 | 0.174 | 2.03 | B | N | | | | | | D | J | 0.176 | 2.05 | J16V76 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E300.0A | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/22/2008 | 21:31 | 5/22/2008 | 21:31 | 99.13 | SB1-0522 | 16887-00- | CL | Chloride | 2.04 | | MG/KG | 1 | 0.104 | 0.993 | | N | | | | | | D | = | 0.105 | 1 | J16V76 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E300.0A | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/22/2008 | 21:31 | 5/22/2008 | 21:31 | 99.13 | SB1-0522 | 16984-48- | F | Fluoride | 0.471 | | MG/KG | 1 | 0.0878 | 0.993 | B | N | | | | | | D | J | 0.0887 | 1 | J16V76 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E300.0A | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/22/2008 | 21:31 | 5/22/2008 | 21:31 | 99.13 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 1.54 | | MG/KG | 1 | 0.0504 | 0.993 | | N | | | | | | D | = | 0.0509 | 1 | J16V76 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E300.0A | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/22/2008 | 21:31 | 5/22/2008 | 21:31 | 99.13 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.284 | | MG/KG | 1 | 0.0594 | 0.993 | B | N | | | | | | D | J | 0.06 | 1 | J16V76 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | E300.0A | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/22/2008 | 21:31 | 5/22/2008 | 21:31 | 99.13 | SB1-0522 | 14808-79- | SO4 | Sulfate | 8.79 | | MG/KG | 1 | 0.15 | 0.993 | | N | | | | | | D | = | 0.152 | 1 | J16V76 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | ASTM D22 | NONE | 5/19/2008 | 11:45 | 5/20/2008 | | | 5/21/2008 | 11:18 | 99.13 | | MOISTURE | MOIST | Moisture | 0.87 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V76 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V76 | J16V76 | N | | SOIL | H192002 | SW9045 | METHOD | 5/19/2008 | 11:45 | 5/20/2008 | 5/23/2008 | 11:56 | 5/23/2008 | 11:56 | 99.13 | SB1-0523 | PH | PH | pH | 7.97 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V76 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E350.1 | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 6/3/2008 | 10:12 | 6/3/2008 | 10:12 | 99.24 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.821 | | MG/KG | 1 | 0.165 | 1.93 | B | N | | | | | | D | J | 0.167 | 1.95 | J16V81 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | ASTM E77 | NONE | 5/19/2008 | 16:59 | 5/20/2008 | | | 6/2/2008 | 14:42 | 99.24 | | TOC | TOC | Total Orga | 6660 | | MG/KG | 1 | 216 | 450 | | N | | | | | | D | = | 216 | 450 | J16V81 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E351.2 | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 6/5/2008 | 17:04 | 6/5/2008 | 17:04 | 99.24 | SB1-0604 | TKN | KN | Total Kjeld | 283 | | MG/KG | 20 | 3.42 | 30.7 | | N | | | | | | D | = | 3.46 | 31 | J16V81 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E300.0A | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/22/2008 | 21:55 | 5/22/2008 | 21:55 | 99.24 | SB1-0522 | 16887-00- | CL | Chloride | 0.586 | | MG/KG | 1 | 0.102 | 0.979 | B | N | | | | | | D | J | 0.103 | 0.989 | J16V81 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E300.0A | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/22/2008 | 21:55 | 5/22/2008 | 21:55 | 99.24 | SB1-0522 | 16984-48- | F | Fluoride | 0.36 | | MG/KG | 1 | 0.0866 | 0.979 | B | N | | | | | | D | J | 0.0875 | 0.989 | J16V81 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E300.0A | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/22/2008 | 21:55 | 5/22/2008 | 21:55 | 99.24 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.34 | | MG/KG | 1 | 0.0497 | 0.979 | B | N | | | | | | D | J | 0.0502 | 0.989 | J16V81 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E300.0A | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/22/2008 | 21:55 | 5/22/2008 | 21:55 | 99.24 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.0829 | | MG/KG | 1 | 0.0586 | 0.979 | B | N | | | | | | D | J | 0.0592 | 0.989 | J16V81 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | E300.0A | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/22/2008 | 21:55 | 5/22/2008 | 21:55 | 99.24 | SB1-0522 | 14808-79- | SO4 | Sulfate | 7.44 | | MG/KG | 1 | 0.148 | 0.979 | | N | | | | | | D | = | 0.15 | 0.989 | J16V81 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | ASTM D22 | NONE | 5/19/2008 | 16:59 | 5/20/2008 | | | 5/21/2008 | 11:18 | 99.24 | | MOISTURE | MOIST | Moisture | 0.763 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V81 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V81 | J16V81 | N | | SOIL | H192003 | SW9045 | METHOD | 5/19/2008 | 16:59 | 5/20/2008 | 5/23/2008 | 11:57 | 5/23/2008 | 11:57 | 99.24 | SB1-0523 | PH | PH | pH | 8.09 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V81 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E350.1 | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 6/3/2008 | 10:13 | 6/3/2008 | 10:13 | 99.01 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.888 | | MG/KG | 1 | 0.167 | 1.95 | B | N | | | | | | D | J | 0.169 | 1.97 | J16V80 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | ASTM E77 | NONE | 5/19/2008 | 18:27 | 5/20/2008 | | | 6/2/2008 | 14:52 | 99.01 | | TOC | TOC | Total Orga | 11000 | | MG/KG | 1 | 151 | 316 | | N | | | | | | D | = | 151 | 316 | J16V80 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E351.2 | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 6/5/2008 | 17:05 | 6/5/2008 | 17:05 | 99.01 | SB1-0604 | TKN | KN | Total Kjeld | 444 | | MG/KG | 20 | 3.57 | 31.9 | | N | | | | | | D | = | 3.6 | 32.3 | J16V80 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E300.0A | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 5/22/2008 | 22:18 | 5/22/2008 | 22:18 | 99.01 | SB1-0522 | 16887-00- | CL | Chloride | 0.85 | | MG/KG | 1 | 0.104 | 0.998 | B | N | | | | | | D | J | 0.105 | 1.01 | J16V80 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E300.0A | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 5/22/2008 | 22:18 | 5/22/2008 | 22:18 | 99.01 | SB1-0522 | 16984-48- | F | Fluoride | 0.618 | | MG/KG | 1 | 0.0883 | 0.998 | B | N | | | | | | D | J | 0.0892 | 1.01 | J16V80 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E300.0A | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 5/22/2008 | 22:18 | 5/22/2008 | 22:18 | 99.01 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.863 | | MG/KG | 1 | 0.0506 | 0.998 | B | N | | | | | | D | J | 0.0512 | 1.01 | J16V80 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E300.0A | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 5/22/2008 | 22:18 | 5/22/2008 | 22:18 | 99.01 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.132 | | MG/KG | 1 | 0.0597 | 0.998 | B | N | | | | | | D | J | 0.0603 | 1.01 | J16V80 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | E300.0A | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 6/12/2008 | 14:01 | 6/12/2008 | 14:01 | 99.01 | SB1-0611 | 14808-79- | SO4 | Sulfate | 137 | | MG/KG | 1 | 0.151 | 0.998 | | N | | | | | | D | = | 0.152 | 1.01 | J16V80 | NONE | | | | 061208Q1 | 300A-060408 |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | ASTM D22 | NONE | 5/19/2008 | 18:27 | 5/20/2008 | | | 5/21/2008 | 11:18 | 99.01 | | MOISTURE | MOIST | Moisture | 0.986 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V80 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V80 | J16V80 | N | | SOIL | H192004 | SW9045 | METHOD | 5/19/2008 | 18:27 | 5/20/2008 | 5/23/2008 | 11:59 | 5/23/2008 | 11:59 | 99.01 | SB1-0523 | PH | PH | pH | 7.8 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V80 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E350.1 | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 6/3/2008 | 10:15 | 6/3/2008 | 10:15 | 99.25 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.599 | | MG/KG | 1 | 0.168 | 1.96 | B | N | | | | | | D | J | 0.17 | 1.98 | J16V78 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | ASTM E77 | NONE | 5/19/2008 | 18:30 | 5/20/2008 | | | 6/2/2008 | 15:02 | 99.25 | | TOC | TOC | Total Orga | 1940 | | MG/KG | 1 | 132 | 275 | | N | | | | | | D | = | 132 | 275 | J16V78 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E351.2 | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 6/5/2008 | 17:06 | 6/5/2008 | 17:06 | 99.25 | SB1-0604 | TKN | KN | Total Kjeld | 181 | | MG/KG | 10 | 1.75 | 15.7 | | N | | | | | | D | = | 1.77 | 15.9 | J16V78 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E300.0A | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/22/2008 | 22:42 | 5/22/2008 | 22:42 | 99.25 | SB1-0522 | 16887-00- | CL | Chloride | 0.462 | | MG/KG | 1 | 0.101 | 0.965 | B | N | | | | | | D | J | 0.102 | 0.975 | J16V78 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E300.0A | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/22/2008 | 22:42 | 5/22/2008 | 22:42 | 99.25 | SB1-0522 | 16984-48- | F | Fluoride | 0.687 | | MG/KG | 1 | 0.0854 | 0.965 | B | N | | | | | | D | J | 0.0862 | 0.975 | J16V78 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E300.0A | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/22/2008 | 22:42 | 5/22/2008 | 22:42 | 99.25 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.599 | | MG/KG | 1 | 0.049 | 0.965 | B | N | | | | | | D | J | 0.0495 | 0.975 | J16V78 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E300.0A | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/22/2008 | 22:42 | 5/22/2008 | 22:42 | 99.25 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.975 | | MG/KG | 1 | 0.0577 | 0.965 | U | N | | | | | | D | U | 0.0583 | 0.975 | J16V78 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | E300.0A | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/22/2008 | 22:42 | 5/22/2008 | 22:42 | 99.25 | SB1-0522 | 14808-79- | SO4 | Sulfate | 4.81 | | MG/KG | 1 | 0.146 | 0.965 | | N | | | | | | D | = | 0.147 | 0.975 | J16V78 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | ASTM D22 | NONE | 5/19/2008 | 18:30 | 5/20/2008 | | | 5/21/2008 | 11:18 | 99.25 | | MOISTURE | MOIST | Moisture | 0.75 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V78 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V78 | J16V78 | N | | SOIL | H192005 | SW9045 | METHOD | 5/19/2008 | 18:30 | 5/20/2008 | 5/23/2008 | 12:01 | 5/23/2008 | 12:01 | 99.25 | SB1-0523 | PH | PH | pH | 8.39 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V78 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E350.1 | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 6/3/2008 | 10:16 | 6/3/2008 | 10:16 | 99.3 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.212 | | MG/KG | 1 | 0.157 | 1.83 | B | N | | | | | | D | J | 0.159 | 1.85 | J16V79 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | ASTM E77 | NONE | 5/19/2008 | 15:56 | 5/20/2008 | | | 6/2/2008 | 15:19 | 99.3 | | TOC | TOC | Total Orga | 2000 | | MG/KG | 1 | 140 | 291 | | N | | | | | | D | = | 140 | 291 | J16V79 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E351.2 | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 6/5/2008 | 17:07 | 6/5/2008 | 17:07 | 99.3 | SB1-0604 | TKN | KN | Total Kjeld | 207 | | MG/KG | 10 | 1.62 | 14.5 | | N | | | | | | D | = | 1.63 | 14.6 | J16V79 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E300.0A | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/22/2008 | 23:05 | 5/22/2008 | 23:05 | 99.3 | SB1-0522 | 16887-00- | CL | Chloride | 0.391 | | MG/KG | 1 | 0.103 | 0.987 | B | N | | | | | | D | J | 0.104 | 0.997 | J16V79 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E300.0A | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/22/2008 | 23:05 | 5/22/2008 | 23:05 | 99.3 | SB1-0522 | 16984-48- | F | Fluoride | 0.401 | | MG/KG | 1 | 0.0873 | 0.987 | B | N | | | | | | D | J | 0.0881 | 0.997 | J16V79 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E300.0A | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/22/2008 | 23:05 | 5/22/2008 | 23:05 | 99.3 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.499 | | MG/KG | 1 | 0.05 | 0.987 | B | N | | | | | | D | J | 0.0505 | 0.997 | J16V79 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E300.0A | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/22/2008 | 23:05 | 5/22/2008 | 23:05 | 99.3 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.997 | | MG/KG | 1 | 0.059 | 0.987 | U | N | | | | | | D | U | 0.0596 | 0.997 | J16V79 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | E300.0A | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/22/2008 | 23:05 | 5/22/2008 | 23:05 | 99.3 | SB1-0522 | 14808-79- | SO4 | Sulfate | 4.1 | | MG/KG | 1 | 0.149 | 0.987 | | N | | | | | | D | = | 0.151 | 0.997 | J16V79 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | ASTM D22 | NONE | 5/19/2008 | 15:56 | 5/20/2008 | | | 5/21/2008 | 11:18 | 99.3 | | MOISTURE | MOIST | Moisture | 0.704 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V79 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V79 | J16V79 | N | | SOIL | H192006 | SW9045 | METHOD | 5/19/2008 | 15:56 | 5/20/2008 | 5/23/2008 | 12:04 | 5/23/2008 | 12:04 | 99.3 | SB1-0523 | PH | PH | pH | 8.19 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V79 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E350.1 | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 6/3/2008 | 10:19 | 6/3/2008 | 10:19 | 98.06 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.689 | | MG/KG | 1 | 0.174 | 2.03 | B | N | | | | | | D | J | 0.177 | 2.07 | J16V83 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | ASTM E77 | NONE | 5/19/2008 | 17:20 | 5/20/2008 | | | 6/2/2008 | 15:29 | 98.06 | | TOC | TOC | Total Orga | 3720 | | MG/KG | 1 | 138 | 288 | | N | | | | | | D | = | 138 | 288 | J16V83 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E351.2 | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 6/5/2008 | 17:08 | 6/5/2008 | 17:08 | 98.06 | SB1-0604 | TKN | KN | Total Kjeld | 456 | | MG/KG | 20 | 3.4 | 30.5 | | N | | | | | | D | = | 3.47 | 31.1 | J16V83 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E300.0A | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/22/2008 | 23:29 | 5/22/2008 | 23:29 | 98.06 | SB1-0522 | 16887-00- | CL | Chloride | 0.272 | | MG/KG | 1 | 0.105 | 1 | B | N | | | | | | D | J | 0.107 | 1.02 | J16V83 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E300.0A | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/22/2008 | 23:29 | 5/22/2008 | 23:29 | 98.06 | SB1-0522 | 16984-48- | F | Fluoride | 0.745 | | MG/KG | 1 | 0.0887 | 1 | B | N | | | | | | D | J | 0.0905 | 1.02 | J16V83 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E300.0A | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/22/2008 | 23:29 | 5/22/2008 | 23:29 | 98.06 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.542 | | MG/KG | 1 | 0.0508 | 1 | B | N | | | | | | D | J | 0.0519 | 1.02 | J16V83 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E300.0A | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/22/2008 | 23:29 | 5/22/2008 | 23:29 | 98.06 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 1.02 | | MG/KG | 1 | 0.06 | 1 | U | N | | | | | | D | U | 0.0612 | 1.02 | J16V83 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | E300.0A | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/22/2008 | 23:29 | 5/22/2008 | 23:29 | 98.06 | SB1-0522 | 14808-79- | SO4 | Sulfate | 7.75 | | MG/KG | 1 | 0.152 | 1 | | N | | | | | | D | = | 0.155 | 1.02 | J16V83 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | ASTM D22 | NONE | 5/19/2008 | 17:20 | 5/20/2008 | | | 5/21/2008 | 11:18 | 98.06 | | MOISTURE | MOIST | Moisture | 1.94 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V83 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V83 | J16V83 | N | | SOIL | H192007 | SW9045 | METHOD | 5/19/2008 | 17:20 | 5/20/2008 | 5/23/2008 | 12:05 | 5/23/2008 | 12:05 | 98.06 | SB1-0523 | PH | PH | pH | 8.3 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V83 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E350.1 | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 6/3/2008 | 10:20 | 6/3/2008 | 10:20 | 98.9 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.663 | | MG/KG | 1 | 0.162 | 1.89 | B | N | | | | | | D | J | 0.164 | 1.91 | J16V85 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | ASTM E77 | NONE | 5/19/2008 | 16:20 | 5/20/2008 | | | 6/2/2008 | 15:39 | 98.9 | | TOC | TOC | Total Orga | 3190 | | MG/KG | 1 | 136 | 283 | | N | | | | | | D | = | 136 | 283 | J16V85 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E351.2 | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 6/5/2008 | 17:09 | 6/5/2008 | 17:09 | 98.9 | SB1-0604 | TKN | KN | Total Kjeld | 406 | | MG/KG | 20 | 3.51 | 31.4 | | N | | | | | | D | = | 3.54 | 31.7 | J16V85 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E300.0A | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/22/2008 | 23:52 | 5/22/2008 | 23:52 | 98.9 | SB1-0522 | 16887-00- | CL | Chloride | 0.552 | | MG/KG | 1 | 0.102 | 0.972 | B | N | | | | | | D | J | 0.103 | 0.982 | J16V85 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E300.0A | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/22/2008 | 23:52 | 5/22/2008 | 23:52 | 98.9 | SB1-0522 | 16984-48- | F | Fluoride | 1.06 | | MG/KG | 1 | 0.086 | 0.972 | | N | | | | | | D | = | 0.0868 | 0.982 | J16V85 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E300.0A | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/22/2008 | 23:52 | 5/22/2008 | 23:52 | 98.9 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.281 | | MG/KG | 1 | 0.0493 | 0.972 | B | N | | | | | | D | J | 0.0498 | 0.982 | J16V85 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E300.0A | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/22/2008 | 23:52 | 5/22/2008 | 23:52 | 98.9 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.918 | | MG/KG | 1 | 0.0543 | 0.908 | U | N | | | | | | D | U | 0.0549 | 0.918 | J16V85 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | E300.0A | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/22/2008 | 23:52 | 5/22/2008 | 23:52 | 98.9 | SB1-0522 | 14808-79- | SO4 | Sulfate | 3.58 | | MG/KG | 1 | 0.137 | 0.908 | | N | | | | | | D | = | 0.139 | 0.918 | J16V85 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | ASTM D22 | NONE | 5/19/2008 | 16:20 | 5/20/2008 | | | 5/21/2008 | 11:18 | 98.9 | | MOISTURE | MOIST | Moisture | 1.1 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V85 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V85 | J16V85 | N | | SOIL | H192008 | SW9045 | METHOD | 5/19/2008 | 16:20 | 5/20/2008 | 5/23/2008 | 12:06 | 5/23/2008 | 12:06 | 98.9 | SB1-0523 | PH | PH | pH | 7.31 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V85 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E350.1 | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 6/3/2008 | 10:21 | 6/3/2008 | 10:21 | 98.46 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 0.499 | | MG/KG | 1 | 0.167 | 1.95 | B | N | | | | | | D | J | 0.171 | 1.99 | J16V84 | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | ASTM E77 | NONE | 5/19/2008 | 14:49 | 5/20/2008 | | | 6/2/2008 | 15:50 | 98.46 | | TOC | TOC | Total Orga | 6840 | | MG/KG | 1 | 158 | 329 | | N | | | | | | D | = | 158 | 329 | J16V84 | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E351.2 | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 6/5/2008 | 17:09 | 6/5/2008 | 17:09 | 98.46 | SB1-0604 | TKN | KN | Total Kjeld | 429 | | MG/KG | 20 | 3.48 | 31.2 | | N | | | | | | D | = | 3.55 | 31.8 | J16V84 | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E300.0A | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 0:16 | 5/23/2008 | 0:16 | 98.46 | SB1-0522 | 16887-00- | CL | Chloride | 0.347 | | MG/KG | 1 | 0.105 | 1.01 | B | N | | | | | | D | J | 0.107 | 1.03 | J16V84 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E300.0A | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 0:16 | 5/23/2008 | 0:16 | 98.46 | SB1-0522 | 16984-48- | F | Fluoride | 0.824 | | MG/KG | 1 | 0.089 | 1.01 | B | N | | | | | | D | J | 0.0908 | 1.03 | J16V84 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E300.0A | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 0:16 | 5/23/2008 | 0:16 | 98.46 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 0.193 | | MG/KG | 1 | 0.051 | 1.01 | B | N | | | | | | D | J | 0.0521 | 1.03 | J16V84 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E300.0A | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 0:16 | 5/23/2008 | 0:16 | 98.46 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 0.163 | | MG/KG | 1 | 0.0602 | 1.01 | B | N | | | | | | D | J | 0.0614 | 1.03 | J16V84 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | E300.0A | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 0:16 | 5/23/2008 | 0:16 | 98.46 | SB1-0522 | 14808-79- | SO4 | Sulfate | 4.32 | | MG/KG | 1 | 0.152 | 1.01 | | N | | | | | | D | = | 0.155 | 1.03 | J16V84 | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | ASTM D22 | NONE | 5/19/2008 | 14:49 | 5/20/2008 | | | 5/21/2008 | 11:18 | 98.46 | | MOISTURE | MOIST | Moisture | 1.54 | | PERCENT | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V84 | NONE | | | | 052108MC | NONE |
| 4.30EPACL | CHMC | H1920 | J16V84 | J16V84 | N | | SOIL | H192009 | SW9045 | METHOD | 5/19/2008 | 14:49 | 5/20/2008 | 5/23/2008 | 12:08 | 5/23/2008 | 12:08 | 98.46 | SB1-0523 | PH | PH | pH | 7.97 | | PH UNITS | 1 | 0 | 0 | | N | | | | | | D | = | 0 | 0 | J16V84 | NONE | | | | 052308PH | NONE |
| 4.30EPACL | CHMC | H1920 | BS1S0522 | BS1S0522 | BS | | SOIL | BS1S0522 | E300.0A | METHOD | | | | 5/22/2008 | 18:23 | 5/22/2008 | 18:23 | 100 | SB1-0522 | 16887-00- | CL | Chloride | 51 | 50 | MG/KG | 1 | 0.105 | 1 | | N | | | 102 | 90 | 110 | D | = | 0.105 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | BS1S0522 | BS1S0522 | BS | | SOIL | BS1S0522 | E300.0A | METHOD | | | | 5/22/2008 | 18:23 | 5/22/2008 | 18:23 | 100 | SB1-0522 | 16984-48- | F | Fluoride | 42.9 | 50 | MG/KG | 1 | 0.0884 | 1 | | N | | | 85.7 | 90 | 110 | D | = | 0.0884 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | BS1S0522 | BS1S0522 | BS | | SOIL | BS1S0522 | E300.0A | METHOD | | | | 5/22/2008 | 18:23 | 5/22/2008 | 18:23 | 100 | SB1-0522 | 14808-79- | SO4 | Sulfate | 164 | 150 | MG/KG | 1 | 0.151 | 1 | | N | | | 109 | 90 | 110 | D | = | 0.151 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | BS1S0602 | BS1S0602 | BS | | SOIL | BS1S0602 | ASTM E77 | NONE | | | | | | 6/2/2008 | 13:33 | 100 | | TOC | TOC | Total Orga | 2800 | 2660 | MG/KG | 1 | 61.8 | 129 | | N | | | 105 | 80 | 120 | D | = | 61.8 | 129 | | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | BS1S0603 | BS1S0603 | BS | | SOIL | BS1S0603 | E350.1 | METHOD | | | | 6/3/2008 | 10:04 | 6/3/2008 | 10:04 | 100 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 17.5 | 17.1 | MG/KG | 1 | 0.172 | 2 | | N | | | 102 | 80 | 120 | D | = | 0.172 | 2 | | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | BS1S0604 | BS1S0604 | BS | | SOIL | BS1S0604 | E351.2 | METHOD | | | | 6/5/2008 | 16:13 | 6/5/2008 | 16:13 | 100 | SB1-0604 | TKN | KN | Total Kjeld | 30.7 | 29.3 | MG/KG | 1 | 0.223 | 2 | | N | | | 105 | 75 | 125 | D | = | 0.223 | 2 | | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | BS1S0611 | BS1S0611 | BS | | SOIL | BS1S0611 | E300.0A | METHOD | | | | 6/12/2008 | 11:23 | 6/12/2008 | 11:23 | 100 | SB1-0611 | 14808-79- | SO4 | Sulfate | 47.5 | 50 | MG/KG | 1 | 0.151 | 1 | | N | | | 95.1 | 90 | 110 | D | = | 0.151 | 1 | | NONE | | | | 061208Q1 | 300A-060408 |
| 4.30EPACL | CHMC | H1920 | BS2S0522 | BS2S0522 | BS | | SOIL | BS2S0522 | E300.0A | METHOD | | | | 5/22/2008 | 18:47 | 5/22/2008 | 18:47 | 100 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 12.7 | 12.8 | MG/KG | 1 | 0.0598 | 1 | | N | | | 99.6 | 90 | 110 | D | = | 0.0598 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | BS3S0522 | BS3S0522 | BS | | SOIL | BS3S0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:10 | 5/22/2008 | 19:10 | 100 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 88.2 | 87 | MG/KG | 1 | 0.0507 | 1 | | N | | | 101 | 90 | 110 | D | = | 0.0507 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0522 | SB1-0522 | LB | | SOIL | SB1-0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:57 | 5/22/2008 | 19:57 | 100 | SB1-0522 | 16887-00- | CL | Chloride | 0.391 | 0 | MG/KG | 1 | 0.105 | 1 | B | N | | | | | | D | J | 0.105 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0522 | SB1-0522 | LB | | SOIL | SB1-0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:57 | 5/22/2008 | 19:57 | 100 | SB1-0522 | 16984-48- | F | Fluoride | 1 | 0 | MG/KG | 1 | 0.0884 | 1 | U | N | | | | | | D | U | 0.0884 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0522 | SB1-0522 | LB | | SOIL | SB1-0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:57 | 5/22/2008 | 19:57 | 100 | SB1-0522 | 14797-55- | NO3N | Nitrate-N | 1 | 0 | MG/KG | 1 | 0.0507 | 1 | U | N | | | | | | D | U | 0.0507 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0522 | SB1-0522 | LB | | SOIL | SB1-0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:57 | 5/22/2008 | 19:57 | 100 | SB1-0522 | 14797-65- | NO2N | Nitrite-N | 1 | 0 | MG/KG | 1 | 0.0598 | 1 | U | N | | | | | | D | U | 0.0598 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0522 | SB1-0522 | LB | | SOIL | SB1-0522 | E300.0A | METHOD | | | | 5/22/2008 | 19:57 | 5/22/2008 | 19:57 | 100 | SB1-0522 | 14808-79- | SO4 | Sulfate | 1.65 | 0 | MG/KG | 1 | 0.151 | 1 | | N | | | | | | D | = | 0.151 | 1 | | NONE | | | | 052208Q1 | EPA300A-0522 |
| 4.30EPACL | CHMC | H1920 | SB1-0602 | SB1-0602 | LB | | SOIL | SB1-0602 | ASTM E77 | NONE | | | | | | 6/2/2008 | 13:42 | 100 | | TOC | TOC | Total Orga | 100 | 0 | MG/KG | 1 | 47.9 | 100 | U | N | | | | | | D | U | 47.9 | 100 | | NONE | | | | 060108TO | 020708S1 |
| 4.30EPACL | CHMC | H1920 | SB1-0603 | SB1-0603 | LB | | SOIL | SB1-0603 | E350.1 | METHOD | | | | 6/3/2008 | 10:05 | 6/3/2008 | 10:05 | 100 | SB1-0603 | 7664-41-7 | NH3N | Ammonia- | 1.79 | 0 | MG/KG | 1 | 0.153 | 1.79 | U | N | | | | | | D | U | 0.153 | 1.79 | | NONE | | | | 060308LNI | 051908LNH3ca |
| 4.30EPACL | CHMC | H1920 | SB1-0604 | SB1-0604 | LB | | SOIL | SB1-0604 | E351.2 | METHOD | | | | 6/5/2008 | 16:14 | 6/5/2008 | 16:14 | 100 | SB1-0604 | TKN | KN | Total Kjeld | 0.712 | 0 | MG/KG | 1 | 0.223 | 2 | B | N | | | | | | D | J | 0.223 | 2 | | NONE | | | | 060508LT | 052908LTKNca |
| 4.30EPACL | CHMC | H1920 | SB1-0611 | SB1-0611 | LB | | SOIL | SB1-0611 | E300.0A | METHOD | | | | 6/12/2008 | 10:52 | 6/12/2008 | 10:52 | 100 | SB1-0611 | 14808-79- | SO4 | Sulfate | 1 | 0 | MG/KG | 1 | 0.151 | 1 | U | N | | | | | | D | U | 0.151 | 1 | | NONE | | | | 061208Q1 | 300A-060408 |

## CLIENT SAMPLE CROSS-REFERENCE

## CH2M HILL Applied Sciences Laboratory Reference No. H1920

| Sample ID | Client Sample ID | Date Collected | Time Collected |
|---|---|---|---|
| H192001 | J16V82 | 05/19/2008 | 13:45 |
| H192002 | J16V76 | 05/19/2008 | 11:45 |
| H192003 | J16V81 | 05/19/2008 | 16:59 |
| H192004 | J16V80 | 05/19/2008 | 18:27 |
| H192005 | J16V78 | 05/19/2008 | 18:30 |
| H192006 | J16V79 | 05/19/2008 | 15:56 |
| H192007 | J16V83 | 05/19/2008 | 17:20 |
| H192008 | J16V85 | 05/19/2008 | 16:20 |
| H192009 | J16V84 | 05/19/2008 | 14:49 |

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# Applied Sciences Laboratory

## Organic CLP and CLP Like Data Qualifiers

U — The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J — The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ — The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N — The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ — The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

P — The primary and confirmation analyte result recoveries do not match.

E — The analyte was positively identified; the associated numerical value exceeded the instrument calibration range.

R — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## Inorganic CLP and CLP Like Data Qualifiers

U — The analyte was analyzed for, but not detected above the reported sample quantitation limit.

B — The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ — The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

E — The analyte was positively identified; the associated numerical value exceeded the instrument calibration range.

N — The matrix spike/matrix spike duplicate recovery for the analyte is outside of acceptance criteria—qualifier is applied to the native sample only.

R — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# AMMONIA-N BY METHOD EPA350.1

**CASE NARRATIVE**
**AMMONIA**

Analytical Method: EPA 350.1 Batch No.: H1920

Lab Name: CH2M HILL Applied Sciences Lab Contract #.: 920842.OTC

Base/Command: ELR Consulting Prime Contractor.:

---

I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
All samples were analyzed in accordance with standard operating procedure.

D. Laboratory Control Spike(LCS)
All acceptance criteria were met.

E. Analytical Exception:
None.

F. Other:
None.

III. Sampling Equipment:
None.

IV. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: Date: 6/27/08

Reviewed by: Date: 30 Jun 2008

SAMPLE DATA
SUMMARY

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192001

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.174 | 2.03 | 0.878 | B | mg/Kg | 1 | 2.484 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192002

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.176 | 2.05 | 1.41 | B | mg/Kg | 1 | 2.463 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-N

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

**J16V81**

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.167 | 1.95 | 0.821 | B | mg/Kg | 1 | 2.593 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192004

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.169 | 1.97 | 0.888 | B | mg/Kg | 1 | 2.57 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192005

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.170 | 1.98 | 0.599 | B | mg/Kg | 1 | 2.55 G | E350.1 | 06/03/08 |

DB080627-14:51-N1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.159 | 1.85 | 0.212 | B | mg/Kg | 1 | 2.731 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192007

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.177 | 2.07 | 0.689 | B | mg/Kg | 1 | 2.467 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192008

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.164 | 1.91 | 0.663 | B | mg/Kg | 1 | 2.646 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

**J16V84**

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.171 | 1.99 | 0.499 | B | mg/Kg | 1 | 2.564 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

SB1-0603

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0603

Date Received: / /

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 7664-41-7 | Ammonia-N | 0.153 | 1.79 | 1.79 | U | mg/Kg | 1 | 2.8 G | E350.1 | 06/03/08 |

DB080627-14:51-H1920-W

FORM I GEN CHEM

# QC DATA SUMMARY

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Initial Calibration Date: 05/19/08 14:28

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 051908LNH3cal

| Analyte | Std 1 | Resp 1 | Std 2 | Resp 2 | Std 3 | Resp 3 | Std 4 | Resp 4 | Std 5 | Resp 5 | Std 6 | Resp 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia-N | 2.5 | 2.7 | 2.0 | 2.2 | 1.0 | 1.1 | 0.50 | 0.56 | 0.10 | 0.12 | 0.050 | 0.048 |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Initial Calibration Date: 05/19/08 14:28

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 051908LNH3cal

| Analyte | Std 7 | Resp 7 | Std 8 | Resp 8 | Std 9 | Resp 9 | Std 10 | Resp 10 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia-N | 0.010 | 0.015 | 0.0 | 0.0070 | | | | | | | | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Initial Calibration Date: 05/19/08 14:28

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 051908LNH3cal

| Analyte | Curve Type | r | Q |
|---|---|---|---|
| Ammonia-N | LNR | 0.9999 | |

Comments:

2B-WC

GENERAL CHEMISTRY SECOND SOURCE CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Second Source ID: ICV-0519

Instrument Name: LACH8500

Concentration Units: mg/L

Initial Calibration ID: 051908LNH3cal

| Analyte | Expected | Found | %D | Q |
|---|---|---|---|---|
| Ammonia-N | 1.71 | 1.86 | 8.8 | |
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Comments:

2A-WC

GENERAL CHEMISTRY CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Analytical Lot ID: 060308LNH3sA

Instrument Name: LACH8500

Concentration Units: mg/L

Initial Calibration ID: 051908LNH3cal

CCV #1 ID: CV1-0603 CCV #2 ID: CV2-0603 CCV #3 ID: CV3-0603

| Analyte | Expected | Found | %D | Q | Expected | Found | %D | Q | Expected | Found | %D | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia-N | 1.00 | 1.03 | 2.7 | | 1.00 | 1.05 | 5.2 | | 1.00 | 1.03 | 3.1 | |

Comments:

3-WC

SOIL GENERAL CHEMISTRY METHOD BLANK SUMMARY

Field Sample ID:

SB1-0603

SDG No.: H1920

Analysis Method: E350.1

Initial Calibration ID: 051908LNH3cal

Matrix: (Soil/Water) SOIL

Instrument: LACH8500

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0603

Date Analyzed: 06/03/08

Time Analyzed: 1005

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | BS1S0603 | BS1S0603 | 06/03/08 | 1004 |
| 2 | J16V81 | H192003 | 06/03/08 | 1012 |
| 3 | J16V80 | H192004 | 06/03/08 | 1013 |
| 4 | J16V82 | H192001 | 06/03/08 | 1014 |
| 5 | J16V78 | H192005 | 06/03/08 | 1015 |
| 6 | J16V79 | H192006 | 06/03/08 | 1016 |
| 7 | J16V76 | H192002 | 06/03/08 | 1018 |
| 8 | J16V83 | H192007 | 06/03/08 | 1019 |
| 9 | J16V85 | H192008 | 06/03/08 | 1020 |
| 10 | J16V84 | H192009 | 06/03/08 | 1021 |

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

LCS ID: BS1S0603

Initial Calibration ID: 051908LNH3cal

Date Analyzed: 06/03/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1004

Instrument: LACH8500

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Ammonia-N | 17.1 | 17.5 | 102 | 80-120 | |

* Values outside of QC limits

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Lab Code: CVO

Instrument: LACH8500

Analytical Lot ID: 051908LNH3Acal

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | LEVEL 1 | LEVEL 1 | 05/19/08 | 1428 |
| 2 | LEVEL 2 | LEVEL 2 | 05/19/08 | 1430 |
| 3 | LEVEL 3 | LEVEL 3 | 05/19/08 | 1432 |
| 4 | LEVEL 4 | LEVEL 4 | 05/19/08 | 1433 |
| 5 | LEVEL 5 | LEVEL 5 | 05/19/08 | 1435 |
| 6 | LEVEL 6 | LEVEL 6 | 05/19/08 | 1437 |
| 7 | LEVEL 7 | LEVEL 7 | 05/19/08 | 1439 |
| 8 | LEVEL 8 | LEVEL 8 | 05/19/08 | 1441 |
| 9 | ICV-0519 | ICV-0519 | 05/19/08 | 1447 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E350.1

Lab Code: CVO

Instrument: LACH8500

Analytical Lot ID: 060308LNH3sA

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | CV1-0603 | CV1-0603 | 06/03/08 | 1003 |
| 2 | BS1S0603 | BS1S0603 | 06/03/08 | 1004 |
| 3 | SB1-0603 | SB1-0603 | 06/03/08 | 1005 |
| 4 | J16V81 | H192003 | 06/03/08 | 1012 |
| 5 | J16V80 | H192004 | 06/03/08 | 1013 |
| 6 | J16V82 | H192001 | 06/03/08 | 1014 |
| 7 | J16V78 | H192005 | 06/03/08 | 1015 |
| 8 | J16V79 | H192006 | 06/03/08 | 1016 |
| 9 | CV2-0603 | CV2-0603 | 06/03/08 | 1017 |
| 10 | J16V76 | H192002 | 06/03/08 | 1018 |
| 11 | J16V83 | H192007 | 06/03/08 | 1019 |
| 12 | J16V85 | H192008 | 06/03/08 | 1020 |
| 13 | J16V84 | H192009 | 06/03/08 | 1021 |
| 14 | CV3-0603 | CV3-0603 | 06/03/08 | 1031 |

Comments:

CH2MHILL
Applied Sciences Laboratory (ASL)

CH2M HILL
Applied Sciences Labortory (ASL)
2300 NW Walnut Blvd.
P.O. Box 428
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Telephone: 541-752-4271
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06/27/08

# MDL Study Report

Analytical Method: E350.1

Instrument ID: LACH8500

Matrix: Soil

Concentration Units: mg/Kg

| Analyte | Analysis Date | Amt. Spiked | Replicates 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Std. Dev. | MDL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | 11/12/07 | 0.500 | 0.477 | 0.448 | 0.497 | 0.392 | 0.360 | 0.374 | 0.384 | | 0.0545 | 0.172 |

# ANIONS BY METHOD EPA300.0A

**CASE NARRATIVE**
**ANIONS**

Analytical Method: EPA 300.0 | Batch No.: H1920

Lab Name: CH2M HILL Applied Sciences Lab | Contract #.: 920842.OTC

Base/Command: ELR Consulting | Prime Contractor.:

---

I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
Sulfate was detected above the reporting limit in method blank SB1-0522. Per the PM Richard Weiss, results are to be reported with no reanalysis.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
All samples were analyzed in accordance with standard operating procedure.

D. Laboratory Control Spike(LCS)
Fluoride recovery (85.7%) was outside of acceptance criteria (90-110%) in BS1S0522. Per the PM Richard Weiss, results are to be reported with no reanalysis.

E. Analytical Exception:
None.

F. Other:
None.

III. Sampling Equipment:
None.

IV. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: [signature] Date: 7/9/08

Reviewed by: [signature] Date: 7/9/08

SAMPLE DATA
SUMMARY

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192001

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.105 | 1.00 | 0.658 | B | mg/Kg | 1 | 2.515 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0888 | 1.00 | 0.584 | B | mg/Kg | 1 | 2.515 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0509 | 1.00 | 0.451 | B | mg/Kg | 1 | 2.515 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0601 | 1.00 | 0.607 | B | mg/Kg | 1 | 2.515 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.152 | 1.00 | 11.8 | | mg/Kg | 1 | 2.515 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192002

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.105 | 1.00 | 2.04 | | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0887 | 1.00 | 0.471 | B | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0509 | 1.00 | 1.54 | | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0600 | 1.00 | 0.284 | B | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.152 | 1.00 | 8.79 | | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192002

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.105 | 1.00 | 2.04 | | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0887 | 1.00 | 0.471 | B | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0509 | 1.00 | 1.00 | U | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0600 | 1.00 | 0.284 | B | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.152 | 1.00 | 8.79 | | mg/Kg | 1 | 2.518 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V81

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.103 | 0.989 | 0.586 | B | mg/Kg | 1 | 2.553 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0875 | 0.989 | 0.360 | B | mg/Kg | 1 | 2.553 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0502 | 0.989 | 0.340 | B | mg/Kg | 1 | 2.553 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0592 | 0.989 | 0.0829 | B | mg/Kg | 1 | 2.553 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.150 | 0.989 | 7.44 | | mg/Kg | 1 | 2.553 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192004

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.105 | 1.01 | 0.850 | B | mg/Kg | 1 | 2.504 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0892 | 1.01 | 0.618 | B | mg/Kg | 1 | 2.504 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0512 | 1.01 | 0.863 | B | mg/Kg | 1 | 2.504 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0603 | 1.01 | 0.132 | B | mg/Kg | 1 | 2.504 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.152 | 1.01 | 137 | | mg/Kg | 1 | 2.504 G | E300.0A | 06/12/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192005

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.102 | 0.975 | 0.462 | B | mg/Kg | 1 | 2.59 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0862 | 0.975 | 0.687 | B | mg/Kg | 1 | 2.59 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0495 | 0.975 | 0.599 | B | mg/Kg | 1 | 2.59 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0583 | 0.975 | 0.975 | U | mg/Kg | 1 | 2.59 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.147 | 0.975 | 4.81 | | mg/Kg | 1 | 2.59 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.104 | 0.997 | 0.391 | B | mg/Kg | 1 | 2.534 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0881 | 0.997 | 0.401 | B | mg/Kg | 1 | 2.534 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0505 | 0.997 | 0.499 | B | mg/Kg | 1 | 2.534 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0596 | 0.997 | 0.997 | U | mg/Kg | 1 | 2.534 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.151 | 0.997 | 4.10 | | mg/Kg | 1 | 2.534 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192007

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.107 | 1.02 | 0.272 | B | mg/Kg | 1 | 2.494 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0905 | 1.02 | 0.745 | B | mg/Kg | 1 | 2.494 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0519 | 1.02 | 0.542 | B | mg/Kg | 1 | 2.494 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0612 | 1.02 | 1.02 | U | mg/Kg | 1 | 2.494 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.155 | 1.02 | 7.75 | | mg/Kg | 1 | 2.494 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192008

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.103 | 0.982 | 0.552 | B | mg/Kg | 1 | 2.572 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0868 | 0.982 | 1.06 | | mg/Kg | 1 | 2.572 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0498 | 0.982 | 0.281 | B | mg/Kg | 1 | 2.572 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0549 | 0.918 | 0.918 | U | mg/Kg | 1 | 2.752 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.139 | 0.918 | 3.58 | | mg/Kg | 1 | 2.752 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V84

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.107 | 1.03 | 0.347 | B | mg/Kg | 1 | 2.485 G | E300.0A | 05/23/08 |
| 16984-48-8 | Fluoride | 0.0908 | 1.03 | 0.824 | B | mg/Kg | 1 | 2.485 G | E300.0A | 05/23/08 |
| 14797-55-8 | Nitrate-N | 0.0521 | 1.03 | 0.193 | B | mg/Kg | 1 | 2.485 G | E300.0A | 05/23/08 |
| 14797-65-0 | Nitrite-N | 0.0614 | 1.03 | 0.163 | B | mg/Kg | 1 | 2.485 G | E300.0A | 05/23/08 |
| 14808-79-8 | Sulfate | 0.155 | 1.03 | 4.32 | | mg/Kg | 1 | 2.485 G | E300.0A | 05/23/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

SB1-0522

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0522

Date Received: / /

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 16887-00-6 | Chloride | 0.105 | 1.00 | 0.391 | B | mg/Kg | 1 | 2.5 G | E300.0A | 05/22/08 |
| 16984-48-8 | Fluoride | 0.0884 | 1.00 | 1.00 | U | mg/Kg | 1 | 2.5 G | E300.0A | 05/22/08 |
| 14797-55-8 | Nitrate-N | 0.0507 | 1.00 | 1.00 | U | mg/Kg | 1 | 2.5 G | E300.0A | 05/22/08 |
| 14797-65-0 | Nitrite-N | 0.0598 | 1.00 | 1.00 | U | mg/Kg | 1 | 2.5 G | E300.0A | 05/22/08 |
| 14808-79-8 | Sulfate | 0.151 | 1.00 | 1.65 | | mg/Kg | 1 | 2.5 G | E300.0A | 05/22/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

**SB1-0611**

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0611

Date Received: / /

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| 14808-79-8 | Sulfate | 0.151 | 1.00 | 1.00 | U | mg/Kg | 1 | 2.5 G | E300.0A | 06/12/08 |

# QC DATA SUMMARY

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 05/22/08 16:03

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: EPA300A-052208

| Analyte | Std 1 | Resp 1 | Std 2 | Resp 2 | Std 3 | Resp 3 | Std 4 | Resp 4 | Std 5 | Resp 5 | Std 6 | Resp 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | | | 0.10 | 0.036 | 0.50 | 0.10 | 1.0 | 0.17 | 5.0 | 1.1 |
| Fluoride | | | | | 0.10 | 0.013 | 0.50 | 0.059 | 1.0 | 0.14 | 5.0 | 1.1 |
| Nitrate-N | 0.010 | 0.0059 | 0.050 | 0.021 | 0.10 | 0.049 | 0.50 | 0.20 | 1.0 | 0.39 | 5.0 | 2.7 |
| Nitrite-N | | | 0.050 | 0.019 | 0.10 | 0.042 | 0.50 | 0.20 | 1.0 | 0.33 | 5.0 | 2.1 |
| Sulfate | | | | | 0.10 | 0.053 | 0.50 | 0.088 | 1.0 | 0.14 | 5.0 | 0.78 |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 05/22/08 16:03

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: EPA300A-052208

| Analyte | Std 7 | Resp 7 | Std 8 | Resp 8 | Std 9 | Resp 9 | Std 10 | Resp 10 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.0 | 2.2 | | | | | | | | | | |
| Fluoride | 10.0 | 2.4 | | | | | | | | | | |
| Nitrate-N | 10.0 | 5.4 | | | | | | | | | | |
| Nitrite-N | 10.0 | 4.2 | | | | | | | | | | |
| Sulfate | 10.0 | 1.5 | | | | | | | | | | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 05/22/08 16:03

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: EPA300A-052208

| Analyte | Curve Type | r | Q |
|---|---|---|---|
| Chloride | LNR | 0.9997 | |
| Fluoride | LNR | 0.9990 | |
| Nitrate-N | LNR | 0.9997 | |
| Nitrite-N | LNR | 0.9997 | |
| Sulfate | LNR | 0.9994 | |

Comments:

# GENERAL CHEMISTRY SECOND SOURCE CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Second Source ID: ICV-0522

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: EPA300A-052208

| Analyte | Expected | Found | %D | Q |
|---|---|---|---|---|
| Chloride | 5.00 | 5.00 | 0.0 | |
| Fluoride | 5.00 | 4.91 | -1.9 | |
| Nitrate-N | 8.70 | 8.77 | 0.8 | |
| Nitrite-N | 1.32 | 1.23 | -6.7 | |
| Sulfate | 5.00 | 5.32 | 6.4 | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 06/04/08 11:08

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: 300A-060408

| Analyte | Std 1 | Resp 1 | Std 2 | Resp 2 | Std 3 | Resp 3 | Std 4 | Resp 4 | Std 5 | Resp 5 | Std 6 | Resp 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | | | 0.10 | 0.0041 | 0.50 | 0.021 | 1.0 | 0.034 | 5.0 | 0.19 |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 06/04/08 11:08

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: 300A-060408

| Analyte | Std 7 | Resp 7 | Std 8 | Resp 8 | Std 9 | Resp 9 | Std 10 | Resp 10 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 10.0 | 0.42 | 25.0 | 1.1 | | | | | | | | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Initial Calibration Date: 06/04/08 11:08

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: 300A-060408

| Analyte | Curve Type | r | Q |
|---|---|---|---|
| Sulfate | LNR | 0.9994 | |

Comments:

2B-WC

GENERAL CHEMISTRY SECOND SOURCE CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Second Source ID: ICV-0604

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: 300A-060408

| Analyte | Expected | Found | %D | Q |
|---|---|---|---|---|
| Sulfate | 5.00 | 4.67 | -6.6 | |

Comments:

2A-WC

GENERAL CHEMISTRY CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Analytical Lot ID: 052208Q1

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: EPA300A-052208

CCV #1 ID: CV1-0522 CCV #2 ID: CV2-0522 CCV #3 ID:

| Analyte | Expected | Found | %D | Q | Expected | Found | %D | Q | Expected | Found | %D | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.00 | 4.95 | -1.1 | | 5.00 | 4.94 | -1.1 | | | | | |
| Fluoride | 5.00 | 4.52 | -9.6 | | 5.00 | 5.06 | 1.1 | | | | | |
| Nitrate-N | 5.00 | 4.89 | -2.1 | | 5.00 | 4.97 | -0.7 | | | | | |
| Nitrite-N | 5.00 | 5.05 | 1.0 | | 5.00 | 5.05 | 1.1 | | | | | |
| Sulfate | 5.00 | 5.13 | 2.5 | | 5.00 | 5.33 | 6.7 | | | | | |

Comments:

2A-WC

GENERAL CHEMISTRY CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Analytical Lot ID: 061208Q1

Instrument Name: ICQ

Concentration Units: mg/L

Initial Calibration ID: 300A-060408

CCV #1 ID: CV1-0612 CCV #2 ID: CV2-0612 CCV #3 ID:

| Analyte | Expected | Found | %D | Q | Expected | Found | %D | Q | Expected | Found | %D | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 4.54 | -9.2 | | 5.00 | 5.22 | 4.4 | | | | | |

Comments:

# SOIL GENERAL CHEMISTRY METHOD BLANK SUMMARY

Field Sample ID:

SB1-0522

SDG No.: H1920

Analysis Method: E300.0A

Initial Calibration ID: EPA300A-052208

Matrix: (Soil/Water) SOIL

Instrument: ICQ

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0522

Date Analyzed: 05/22/08

Time Analyzed: 1957

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | BS1S0522 | BS1S0522 | 05/22/08 | 1823 |
| 2 | BS2S0522 | BS2S0522 | 05/22/08 | 1847 |
| 3 | BS3S0522 | BS3S0522 | 05/22/08 | 1910 |
| 4 | J16V82 | H192001 | 05/22/08 | 2108 |
| 5 | J16V76 | H192002 | 05/22/08 | 2131 |
| 6 | J16V81 | H192003 | 05/22/08 | 2155 |
| 7 | J16V80 | H192004 | 05/22/08 | 2218 |
| 8 | J16V78 | H192005 | 05/22/08 | 2242 |
| 9 | J16V79 | H192006 | 05/22/08 | 2305 |
| 10 | J16V83 | H192007 | 05/22/08 | 2329 |
| 11 | J16V85 | H192008 | 05/22/08 | 2352 |
| 12 | J16V84 | H192009 | 05/23/08 | 0016 |

Comments:

3-WC

SOIL GENERAL CHEMISTRY METHOD BLANK SUMMARY

Field Sample ID:

SB1-0611

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Lab Sample ID: SB1-0611

Initial Calibration ID: 300A-060408

Date Analyzed: 06/12/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1052

Instrument: ICQ

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | BS1S0611 | BS1S0611 | 06/12/08 | 1123 |
| 2 | J16V80 | H192004 | 06/12/08 | 1401 |

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

LCS ID: BS1S0522

Initial Calibration ID: EPA300A-052208

Date Analyzed: 05/22/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1823

Instrument: ICQ

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Chloride | 50.0 | 51.0 | 102 | 90-110 | |
| Fluoride | 50.0 | 42.9 | 85.7 | 90-110 | * |
| Sulfate | 150 | 164 | 109 | 90-110 | |

* Values outside of QC limits

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

LCS ID: BS2S0522

Initial Calibration ID: EPA300A-052208

Date Analyzed: 05/22/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1847

Instrument: ICQ

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Nitrite-N | 12.8 | 12.7 | 99.6 | 90-110 | |

* Values outside of QC limits

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

LCS ID: BS3S0522

Initial Calibration ID: EPA300A-052208

Date Analyzed: 05/22/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1910

Instrument: ICQ

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Nitrate-N | 87.0 | 88.2 | 101 | 90-110 | |

* Values outside of QC limits

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

LCS ID: BS1S0611

Initial Calibration ID: 300A-060408

Date Analyzed: 06/12/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1123

Instrument: ICQ

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Sulfate | 50.0 | 47.5 | 95.1 | 90-110 | |

* Values outside of QC limits

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Lab Code: CVO

Instrument: ICQ

Analytical Lot ID: 300A-052208

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | ICB-0522 | ICB-0522 | 05/22/08 | 1255 |
| 2 | LEVEL1 | LEVEL1 | 05/22/08 | 1318 |
| 3 | LEVEL2 | LEVEL2 | 05/22/08 | 1342 |
| 4 | LEVEL3 | LEVEL3 | 05/22/08 | 1405 |
| 5 | LEVEL4 | LEVEL4 | 05/22/08 | 1429 |
| 6 | LEVEL5 | LEVEL5 | 05/22/08 | 1452 |
| 7 | LEVEL6 | LEVEL6 | 05/22/08 | 1516 |
| 8 | LEVEL7 | LEVEL7 | 05/22/08 | 1539 |
| 9 | ICV-0522 | ICV-0522 | 05/22/08 | 1626 |
| 10 | ICV-0522 | ICV-0522 | 05/22/08 | 1650 |
| 11 | ICV-0522 | ICV-0522 | 05/22/08 | 1713 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Lab Code: CVO

Instrument: ICQ

Analytical Lot ID: 052208Q1

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | CV1-0522 | CV1-0522 | 05/22/08 | 1737 |
| 2 | BS1S0522 | BS1S0522 | 05/22/08 | 1823 |
| 3 | BS2S0522 | BS2S0522 | 05/22/08 | 1847 |
| 4 | BS3S0522 | BS3S0522 | 05/22/08 | 1910 |
| 5 | SB1-0522 | SB1-0522 | 05/22/08 | 1957 |
| 6 | J16V82 | H192001 | 05/22/08 | 2108 |
| 7 | J16V76 | H192002 | 05/22/08 | 2131 |
| 8 | J16V81 | H192003 | 05/22/08 | 2155 |
| 9 | J16V80 | H192004 | 05/22/08 | 2218 |
| 10 | J16V78 | H192005 | 05/22/08 | 2242 |
| 11 | J16V79 | H192006 | 05/22/08 | 2305 |
| 12 | J16V83 | H192007 | 05/22/08 | 2329 |
| 13 | J16V85 | H192008 | 05/22/08 | 2352 |
| 14 | J16V84 | H192009 | 05/23/08 | 0016 |
| 15 | CV2-0522 | CV2-0522 | 05/23/08 | 0126 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Lab Code: CVO

Instrument: ICQ

Analytical Lot ID: 060408Q1

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | ICB-0604 | ICB-0604 | 06/04/08 | 0940 |
| 2 | LEVEL1 | LEVEL1 | 06/04/08 | 0951 |
| 3 | LEVEL2 | LEVEL2 | 06/04/08 | 1002 |
| 4 | LEVEL3 | LEVEL3 | 06/04/08 | 1013 |
| 5 | LEVEL4 | LEVEL4 | 06/04/08 | 1024 |
| 6 | LEVEL5 | LEVEL5 | 06/04/08 | 1035 |
| 7 | LEVEL6 | LEVEL6 | 06/04/08 | 1046 |
| 8 | LEVEL7 | LEVEL7 | 06/04/08 | 1057 |
| 9 | LEVEL8 | LEVEL8 | 06/04/08 | 1108 |
| 10 | ICV-0604 | ICV-0604 | 06/04/08 | 1119 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E300.0A

Lab Code: CVO

Instrument: ICQ

Analytical Lot ID: 061208Q1

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | SB1-0611 | SB1-0611 | 06/12/08 | 1052 |
| 2 | CV1-0612 | CV1-0612 | 06/12/08 | 1102 |
| 3 | BS1S0611 | BS1S0611 | 06/12/08 | 1123 |
| 4 | J16V80 | H192004 | 06/12/08 | 1401 |
| 5 | CV2-0612 | CV2-0612 | 06/12/08 | 1422 |

Comments:

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07/02/08

# MDL Study Report

Analytical Method: E300.0A

Matrix: Soil

Instrument ID: ICQ

Concentration Units: mg/Kg

| Analyte | Analysis Date | Amt. Spiked | Replicates 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Std. Dev. | MDL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate | 11/15/06 | 0.250 | 0.190 | 0.175 | 0.185 | 0.190 | 0.197 | 0.200 | 0.195 | 0.200 | 0.00846 | 0.0254 |
| Nitrite-N | 11/15/06 | 0.250 | 0.235 | 0.225 | 0.210 | 0.235 | 0.220 | 0.210 | 0.225 | 0.215 | 0.00998 | 0.0299 |
| Sulfate | 11/15/06 | 0.750 | 0.685 | 0.750 | 0.675 | 0.700 | 0.705 | 0.735 | 0.705 | 0.725 | 0.0252 | 0.0756 |
| Chloride | 11/15/06 | 0.250 | 0.370 | 0.355 | 0.346 | 0.320 | 0.334 | 0.365 | 0.359 | 0.365 | 0.0174 | 0.0523 |
| Fluoride | 11/15/06 | 0.250 | 0.185 | 0.174 | 0.184 | 0.190 | 0.170 | 0.190 | 0.215 | 0.170 | 0.0148 | 0.0442 |

**PERCENT MOISTURE**
**ASTM D2216**

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192001

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 1.29 | | % | 1 | 12.69 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192002

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 0.870 | | % | 1 | 13.214 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V81

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 0.763 | | % | 1 | 11.005 G | ASTM D2216 | 05/21/08 |

E7080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192004

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 0.986 | | % | 1 | 13.086 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192005

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 0.750 | | % | 1 | 11.068 G | ASTM D2216 | 05/21/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 0.704 | | % | 1 | 12.783 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192007

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 1.94 | | % | 1 | 12.173 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192008

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 1.10 | | % | 1 | 12.1 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V84

SDG No.: H1920

Matrix: SOIL

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| MOISTURE | Moisture | 0.00 | 0.00 | 1.54 | | % | 1 | 14.004 G | ASTM D2216 | 05/21/08 |

ET080612-15:02-H1920-W

FORM I GEN CHEM

**PARTICLE SIZE**
**METHOD 422**

*HANFORD/ELR*

**Particle Size**

501.1 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192001 | J16V82 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 9.4 | 1.92 | 1.92 | 98.08 |
| | | 30 | 600 | 0.600 | 16.9 | 3.45 | 5.37 | 94.63 |
| | | 50 | 500 | 0.500 | 109.7 | 22.38 | 27.75 | 72.25 |
| | | 100 | 147 | 0.147 | 147.1 | 30.01 | 57.76 | 42.24 |
| | | 200 | 75 | 0.075 | 176.2 | 35.95 | 93.72 | 6.28 |
| | | pan | | | 30.8 | 6.28 | 100.00 | 0.00 |
| | | total | | | 490.1 | | | |



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*HANFORD/ELR*

**Particle Size**

501.3 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192002 | J16V76 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 5.2 | 1.04 | 1.04 | 98.96 |
| | | 30 | 600 | 0.600 | 15.5 | 3.10 | 4.14 | 95.86 |
| | | 50 | 500 | 0.500 | 160.5 | 32.13 | 36.28 | 63.72 |
| | | 100 | 147 | 0.147 | 186.9 | 37.42 | 73.69 | 26.31 |
| | | 200 | 75 | 0.075 | 111.9 | 22.40 | 96.10 | 3.90 |
| | | pan | | | 19.5 | 3.90 | 100.00 | 0.00 |
| | | total | | | 499.5 | | | |



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*HANFORD/ELR*

**Particle Size**

500.4 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET. 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192003 | J16V81 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 7.6 | 1.53 | 1.53 | 98.47 |
| | | 30 | 600 | 0.600 | 24.0 | 4.82 | 6.34 | 93.66 |
| | | 50 | 500 | 0.500 | 169.9 | 34.10 | 40.44 | 59.56 |
| | | 100 | 147 | 0.147 | 161.1 | 32.33 | 72.77 | 27.23 |
| | | 200 | 75 | 0.075 | 117.0 | 23.48 | 96.25 | 3.75 |
| | | pan | | | 18.7 | 3.75 | 100.00 | 0.00 |
| | | total | | | 498.3 | | | |



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*HANFORD/ELR*

**Particle Size**

500.9 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192004 | J16V80 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 18.3 | 3.69 | 3.69 | 96.31 |
| | | 30 | 600 | 0.600 | 53.8 | 10.83 | 14.52 | 85.48 |
| | | 50 | 500 | 0.500 | 213.2 | 42.93 | 57.45 | 42.55 |
| | | 100 | 147 | 0.147 | 135.2 | 27.23 | 84.68 | 15.32 |
| | | 200 | 75 | 0.075 | 66.2 | 13.33 | 98.01 | 1.99 |
| | | pan | | | 9.9 | 1.99 | 100.00 | 0.00 |
| | | total | | | 496.6 | | | |



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*HANFORD/ELR*

**Particle Size**

500.1 **g sample used**

**Weight retained is the weight of material ON each sieve**

**ANALYST:** **ET** **6/11/2008**

| Lab LD. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192005 | J16V78 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 7.7 | 1.55 | 1.55 | 98.45 |
| | | 30 | 600 | 0.600 | 50.1 | 10.06 | 11.61 | 88.39 |
| | | 50 | 500 | 0.500 | 225.4 | 45.28 | 56.89 | 43.11 |
| | | 100 | 147 | 0.147 | 128.7 | 25.85 | 82.74 | 17.26 |
| | | 200 | 75 | 0.075 | 74.9 | 15.05 | 97.79 | 2.21 |
| | | pan | | | 11.0 | 2.21 | 100.00 | 0.00 |
| | | total | | | 497.8 | | | |



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*HANFORD/ELR*

**Particle Size**

502.9 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192006 | J16V79 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 9.3 | 1.86 | 1.86 | 98.14 |
| | | 30 | 600 | 0.600 | 46.5 | 9.30 | 11.16 | 88.84 |
| | | 50 | 500 | 0.500 | 183.1 | 36.62 | 47.78 | 52.22 |
| | | 100 | 147 | 0.147 | 160.5 | 32.10 | 79.88 | 20.12 |
| | | 200 | 75 | 0.075 | 85.3 | 17.06 | 96.94 | 3.06 |
| | | pan | | | 15.3 | 3.06 | 100.00 | 0.00 |
| | | total | | | 500.0 | | | |



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*HANFORD/ELR*

**Particle Size**

500.4 **g sample used**

**Weight retained is the weight of material ON each sieve**

**ANALYST:** **ET** **6/11/2008**

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| **H192007** | J16V83 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 27.2 | 5.44 | 5.44 | 94.56 |
| | | 30 | 600 | 0.600 | 47.3 | 9.47 | 14.91 | 85.09 |
| | | 50 | 500 | 0.500 | 77.6 | 15.53 | 30.44 | 69.56 |
| | | 100 | 147 | 0.147 | 229.8 | 46.00 | 76.44 | 23.56 |
| | | 200 | 75 | 0.075 | 104.7 | 20.96 | 97.40 | 2.60 |
| | | pan | | | 13.0 | 2.60 | 100.00 | 0.00 |
| | | total | | | 499.6 | | | |



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*HANFORD/ELR*

**Particle Size**

501.8 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192008 | J16V85 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 10.4 | 2.08 | 2.08 | 97.92 |
| | | 30 | 600 | 0.600 | 17.7 | 3.53 | 5.61 | 94.39 |
| | | 50 | 500 | 0.500 | 57.8 | 11.54 | 17.15 | 82.85 |
| | | 100 | 147 | 0.147 | 294.6 | 58.83 | 75.98 | 24.02 |
| | | 200 | 75 | 0.075 | 109.3 | 21.83 | 97.80 | 2.20 |
| | | pan | | | 11.0 | 2.20 | 100.00 | 0.00 |
| | | total | | | 500.8 | | | |



CH2M HILL
Applied Sciences Group

2300 NW Walnut Blvd., Corvallis, OR 97330-3538
P.O. Box 428, Corvallis, OR 97339-0428
Tel 541.752.4271 Fax 541.752.0276

*HANFORD/ELR*

**Particle Size**

500.8 g sample used

**Weight retained is the weight of material ON each sieve**

**ANALYST:** ET 6/11/2008

| Lab I.D. | Client I.D. | Sieve # | Sieve Size (um) | Sieve Size (mm) | Weight Retained (g) | Weight Retained (%) | Cumulative Coarser (%) | Cumulative Finer (%) |
|---|---|---|---|---|---|---|---|---|
| H192009 | J16V84 | 8 | 2362 | 2.362 | 0.0 | 0.00 | 0.00 | 100.00 |
| | | 16 | 1180 | 1.180 | 28.4 | 5.69 | 5.69 | 94.31 |
| | | 30 | 600 | 0.600 | 34.7 | 6.95 | 12.64 | 87.36 |
| | | 50 | 500 | 0.500 | 178.8 | 35.82 | 48.47 | 51.53 |
| | | 100 | 147 | 0.147 | 192.7 | 38.61 | 87.08 | 12.92 |
| | | 200 | 75 | 0.075 | 60.5 | 12.12 | 99.20 | 0.80 |
| | | pan | | | 4.0 | 0.80 | 100.00 | 0.00 |
| | | total | | | 499.1 | | | |



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**pH**
**METHOD SW9045C**

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192001

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 7.75 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

FORM I GEN CHEM

ET080612-15:03-H1920-W

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192002

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 7.97 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

E7080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V81

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 8.09 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192004

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 7.80 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192005

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 8.39 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 8.19 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192007

% Moisture: 2

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 8.30 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192008

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 7.31 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V84

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| PH | pH | 0.00 | 0.00 | 7.97 | | pH | 1 | 20 G | SW9045 | 05/23/08 |

ET080612-15:03-H1920-W

FORM I GEN CHEM

TOTAL KJELDAHL NITROGEN

BY METHOD EPA351.2

**CASE NARRATIVE**
**TOTAL KJELDAHL NITROGEN**

Analytical Method: EPA 351.2 Batch No.: H1920

Lab Name: CH2M HILL Applied Sciences Lab Contract #.: 920842.OTC

Base/Command: ELR Consulting Prime Contractor.:

I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
All samples were analyzed in accordance with standard operating procedure.

D. Laboratory Control Spike(LCS)
All acceptance criteria were met.

E. Analytical Exception:
None.

F. Other:
None.

III. Sampling Equipment:
None.

IV. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: Date: 6/27/08

Reviewed by: Date: 30 June 2008

# SAMPLE DATA SUMMARY

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192001

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.65 | 32.7 | 489 | | mg/Kg | 20 | 2.474 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192002

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.62 | 32.5 | 539 | | mg/Kg | 20 | 2.488 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V81

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.46 | 31.0 | 283 | | mg/Kg | 20 | 2.609 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192004

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.60 | 32.3 | 444 | | mg/Kg | 20 | 2.504 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192005

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 1.77 | 15.9 | 181 | | mg/Kg | 10 | 2.549 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

% Moisture: 1

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 1.63 | 14.6 | 207 | | mg/Kg | 10 | 2.76 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192007

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.47 | 31.1 | 456 | | mg/Kg | 20 | 2.624 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192008

% Moisture: 1

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.54 | 31.7 | 406 | | mg/Kg | 20 | 2.547 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V84

SDG No.: H1920

Matrix: SOIL

% Moisture: 2

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 3.55 | 31.8 | 429 | | mg/Kg | 20 | 2.567 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

**SB1-0604**

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0604

Date Received: / /

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TKN | Total Kjeldahl Nitrogen as N | 0.223 | 2.00 | 0.712 | B | mg/Kg | 1 | 2 G | E351.2 | 06/05/08 |

DB080627-14:54-H1920-W

FORM I GEN CHEM

# QC DATA SUMMARY

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Initial Calibration Date: 05/29/08 16:35

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 052908LTKNcal

| Analyte | Std 1 | Resp 1 | Std 2 | Resp 2 | Std 3 | Resp 3 | Std 4 | Resp 4 | Std 5 | Resp 5 | Std 6 | Resp 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Kjeldahl Nitrogen as N | 5.0 | 10.4 | 2.5 | 5.3 | 1.0 | 2.1 | 0.50 | 0.98 | 0.10 | 0.10 | 0.050 | 0.037 |

Comments:

# GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Initial Calibration Date: 05/29/08 16:35

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 052908LTKNcal

| Analyte | Std 7 | Resp 7 | Std 8 | Resp 8 | Std 9 | Resp 9 | Std 10 | Resp 10 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Kjeldahl Nitrogen as N | 0.0 | -0.017 | | | | | | | | | | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Initial Calibration Date: 05/29/08 16:35

Instrument Name: LACH8500

Concentration Units: MG/L

Initial Calibration ID: 052908LTKNcal

| Analyte | Curve Type | r | Q |
|---|---|---|---|
| Total Kjeldahl Nitrogen as N | LNR | 0.9999 | |

Comments:

2B-WC

GENERAL CHEMISTRY SECOND SOURCE CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Second Source ID: ICV-0529

Instrument Name: LACH8500

Concentration Units: mg/L

Initial Calibration ID: 052908LTKNcal

| Analyte | Expected | Found | %D | Q |
|---|---|---|---|---|
| Total Kjeldahl Nitrogen as N | 2.93 | 3.13 | 6.9 | |

Comments:

2A-WC

GENERAL CHEMISTRY CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Analytical Lot ID: 060508LTKNA

Instrument Name: LACH8500

Concentration Units: mg/L

Initial Calibration ID: 052908LTKNcal

CCV #1 ID: CV1-0605 CCV #2 ID: CV2-0605 CCV #3 ID: CV3-0605

| Analyte | Expected | Found | %D | Q | Expected | Found | %D | Q | Expected | Found | %D | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Kjeldahl Nitrogen as N | 1.00 | 0.973 | -2.7 | | 1.00 | 1.03 | 3.4 | | 1.00 | 1.08 | 7.7 | |

Comments:

3-WC

SOIL GENERAL CHEMISTRY METHOD BLANK SUMMARY

Field Sample ID:

SB1-0604

SDG No.: H1920

Analysis Method: E351.2

Initial Calibration ID: 052908LTKNcal

Matrix: (Soil/Water) SOIL

Instrument: LACH8500

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0604

Date Analyzed: 06/05/08

Time Analyzed: 1614

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | BS1S0604 | BS1S0604 | 06/05/08 | 1613 |
| 2 | J16V82 | H192001 | 06/05/08 | 1702 |
| 3 | J16V76 | H192002 | 06/05/08 | 1703 |
| 4 | J16V81 | H192003 | 06/05/08 | 1704 |
| 5 | J16V80 | H192004 | 06/05/08 | 1705 |
| 6 | J16V78 | H192005 | 06/05/08 | 1706 |
| 7 | J16V79 | H192006 | 06/05/08 | 1707 |
| 8 | J16V83 | H192007 | 06/05/08 | 1708 |
| 9 | J16V84 | H192009 | 06/05/08 | 1709 |
| 10 | J16V85 | H192008 | 06/05/08 | 1709 |

Comments:

7-WC

GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

LCS ID: BS1S0604

Initial Calibration ID: 052908LTKNcal

Date Analyzed: 06/05/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1613

Instrument: LACH8500

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Total Kjeldahl Nitrogen as N | 29.3 | 30.7 | 105 | 75-125 | |

* Values outside of QC limits

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Lab Code: CVO

Instrument: LACH8500

Analytical Lot ID: 052908LTKNcalAB

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | LEVEL 1 | LEVEL 1 | 05/29/08 | 1636 |
| 2 | LEVEL 2 | LEVEL 2 | 05/29/08 | 1638 |
| 3 | LEVEL 3 | LEVEL 3 | 05/29/08 | 1640 |
| 4 | LEVEL 4 | LEVEL 4 | 05/29/08 | 1642 |
| 5 | LEVEL 5 | LEVEL 5 | 05/29/08 | 1644 |
| 6 | LEVEL 6 | LEVEL 6 | 05/29/08 | 1646 |
| 7 | LEVEL 7 | LEVEL 7 | 05/29/08 | 1648 |
| 8 | ICV-0529 | ICV-0529 | 05/29/08 | 1737 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: E351.2

Lab Code: CVO

Instrument: LACH8500

Analytical Lot ID: 060508LTKNA

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | CV1-0605 | CV1-0605 | 06/05/08 | 1610 |
| 2 | BS1S0604 | BS1S0604 | 06/05/08 | 1613 |
| 3 | SB1-0604 | SB1-0604 | 06/05/08 | 1614 |
| 4 | CV2-0605 | CV2-0605 | 06/05/08 | 1626 |
| 5 | J16V82 | H192001 | 06/05/08 | 1702 |
| 6 | J16V76 | H192002 | 06/05/08 | 1703 |
| 7 | J16V81 | H192003 | 06/05/08 | 1704 |
| 8 | J16V80 | H192004 | 06/05/08 | 1705 |
| 9 | J16V78 | H192005 | 06/05/08 | 1706 |
| 10 | J16V79 | H192006 | 06/05/08 | 1707 |
| 11 | J16V83 | H192007 | 06/05/08 | 1708 |
| 12 | J16V84 | H192009 | 06/05/08 | 1709 |
| 13 | J16V85 | H192008 | 06/05/08 | 1709 |
| 14 | CV3-0605 | CV3-0605 | 06/05/08 | 1711 |

Comments:

CH2MHILL
Applied Sciences Laboratory (ASL)

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Corvallis, OR 97330-0428
Telephone: 541-752-4271
Fax: 541-752-0276

06/27/08

# MDL Study Report

Analytical Method: E351.2

Matrix: Soil

Instrument ID: LACH8500

Concentration Units: mg/Kg

| Analyte | Analysis Date | Amt. Spiked | Replicates 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Std. Dev. | MDL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Kjeldahl Nitrogen | 10/26/07 | 0.500 | 0.497 | 0.493 | 0.690 | 0.454 | 0.469 | 0.485 | 0.516 | 0.487 | 0.0744 | 0.223 |

TOTAL ORGANIC CARBON by ASTM E-777

**CASE NARRATIVE**
**TOTAL ORGANIC CARBON**

Analytical Method: ASTM E777 Batch No.: H1920

Lab Name: CH2M HILL Applied Sciences Lab Contract #.: 920842.OTC

Base/Command: ELR Consulting Prime Contractor.:

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I. Holding Times:
All acceptance criteria were met.

II. Analysis:

A. Calibration:
All acceptance criteria were met.

B. Blanks:
All acceptance criteria were met.

C. Matrix Spike/Matrix Spike Duplicate Sample(s):
All samples were analyzed in accordance with standard operating procedure.

D. Laboratory Control Spike(LCS)
All acceptance criteria were met.

E. Analytical Exception:
None.

F. Other:
None.

III. Sampling Equipment:
None.

IV. Documentation Exceptions:
None

V. I certify that this data package is in compliance with the terms and conditions agreed to by the client and CH2M HILL, both technically and for completeness, except for the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Reported by: Date: 6/27/08

Reviewed by: Date: 30 June 2008

SAMPLE DATA
SUMMARY

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V82

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192001

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 175 | 366 | 7750 | | mg/Kg | 1 | 0.2734 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V76

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192002

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 185 | 387 | 5380 | | mg/Kg | 1 | 0.2585 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V81

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192003

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 216 | 450 | 6660 | | mg/Kg | 1 | 0.2222 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V80

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192004

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 151 | 316 | 11000 | | mg/Kg | 1 | 0.3169 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V78

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192005

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 132 | 275 | 1940 | | mg/Kg | 1 | 0.364 G | ASTM E777 | 06/02/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V79

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192006

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 140 | 291 | 2000 | | mg/Kg | 1 | 0.3431 G | ASTM E777 | 06/02/08 |

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V83

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192007

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 138 | 288 | 3720 | | mg/Kg | 1 | 0.347 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V85

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Matrix: SOIL

Lab Sample ID: H192008

% Moisture: 0

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 136 | 283 | 3190 | | mg/Kg | 1 | 0.3532 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

J16V84

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: H192009

Date Received: 05/20/08

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 158 | 329 | 6840 | | mg/Kg | 1 | 0.3035 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

1A-WC

GENERAL CHEMISTRY ANALYSIS DATA SHEET

Field Sample ID:

SB1-0602

SDG No.: H1920

Matrix: SOIL

% Moisture: 0

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0602

Date Received: / /

| CAS No. | Analyte | MDL | PQL | Result | Q | Units | DF | Sample Amount | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|
| TOC | Total Organic Carbon | 47.9 | 100 | 100 | U | mg/Kg | 1 | 1 G | ASTM E777 | 06/02/08 |

DB080627-14:48-H1920-W

FORM I GEN CHEM

# QC DATA SUMMARY

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Initial Calibration Date: 02/07/08 11:42

Instrument Name: TOC SKALAR

Concentration Units: mg/Kg

Initial Calibration ID: 020708S1

| Analyte | Std 1 | Resp 1 | Std 2 | Resp 2 | Std 3 | Resp 3 | Std 4 | Resp 4 | Std 5 | Resp 5 | Std 6 | Resp 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 100 | 827176 | 200 | 1962770 | 400 | 3695401 | 1000 | 8574803 | 4000 | 3.02E+7 | | |

Comments:

2-WC

GENERAL CHEMISTRY INITIAL CALIBRATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Initial Calibration Date: 02/07/08 11:42

Instrument Name: TOC SKALAR

Concentration Units: mg/Kg

Initial Calibration ID: 020708S1

| Analyte | Curve Type | r | Q |
|---|---|---|---|
| Total Organic Carbon | LNR | 0.9990 | |

Comments:

# GENERAL CHEMISTRY SECOND SOURCE CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Second Source ID: ICV-0207

Instrument Name: TOC SKALAR

Concentration Units: mg/Kg

Initial Calibration ID: 020708S1

| Analyte | Expected | Found | %D | Q |
|---|---|---|---|---|
| Total Organic Carbon | 9070 | 8170 | -10.0 | |
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Comments:

2A-WC

GENERAL CHEMISTRY CALIBRATION VERIFICATION DATA

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Analytical Lot ID: 060108TOCS1

Instrument Name: TOC SKALAR

Concentration Units: mg/Kg

Initial Calibration ID: 020708S1

CCV #1 ID: CV1-0602 CCV #2 ID: CV2-0602 CCV #3 ID:

| Analyte | Expected | Found | %D | Q | Expected | Found | %D | Q | Expected | Found | %D | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 2000 | 1680 | -16.2 | | 2000 | 2130 | 6.4 | | | | | |

Comments:

3-WC

SOIL GENERAL CHEMISTRY METHOD BLANK SUMMARY

Field Sample ID:

SB1-0602

SDG No.: H1920

Analysis Method: ASTM E777

Initial Calibration ID: 020708S1

Matrix: (Soil/Water) SOIL

Instrument: TOC SKALAR

Lab Name: CH2M HILL/LAB/CVO

Lab Sample ID: SB1-0602

Date Analyzed: 06/02/08

Time Analyzed: 1342

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | BS1S0602 | BS1S0602 | 06/02/08 | 1333 |
| 2 | J16V82 | H192001 | 06/02/08 | 1420 |
| 3 | J16V76 | H192002 | 06/02/08 | 1432 |
| 4 | J16V81 | H192003 | 06/02/08 | 1442 |
| 5 | J16V80 | H192004 | 06/02/08 | 1452 |
| 6 | J16V78 | H192005 | 06/02/08 | 1502 |
| 7 | J16V79 | H192006 | 06/02/08 | 1519 |
| 8 | J16V83 | H192007 | 06/02/08 | 1529 |
| 9 | J16V85 | H192008 | 06/02/08 | 1539 |
| 10 | J16V84 | H192009 | 06/02/08 | 1550 |

Comments:

# GENERAL CHEMISTRY LABORATORY CONTROL SAMPLE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

LCS ID: BS1S0602

Initial Calibration ID: 020708S1

Date Analyzed: 06/02/08

Matrix: (Soil/Water) SOIL

Time Analyzed: 1333

Instrument: TOC SKALAR

Concentration Units: mg/Kg

| Analyte | Expected | Found | %R | QC Limits %R | Q |
|---|---|---|---|---|---|
| Total Organic Carbon | 2660 | 2800 | 105 | 80-120 | |

* Values outside of QC limits

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Lab Code: CVO

Instrument: TOC SKALAR

Analytical Lot ID: 020708TOCS1

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | LEVEL 1 | LEVEL 1 | 02/07/08 | 1142 |
| 2 | LEVEL 2 | LEVEL 2 | 02/07/08 | 1152 |
| 3 | LEVEL 3 | LEVEL 3 | 02/07/08 | 1202 |
| 4 | LEVEL 4 | LEVEL 4 | 02/07/08 | 1306 |
| 5 | LEVEL 5 | LEVEL 5 | 02/07/08 | 1316 |
| 6 | ICV-0207 | ICV-0207 | 02/07/08 | 1348 |

Comments:

14-WC

GENERAL CHEMISTRY ANALYTICAL SEQUENCE

SDG No.: H1920

Lab Name: CH2M HILL/LAB/CVO

Analysis Method: ASTM E777

Lab Code: CVO

Instrument: TOC SKALAR

Analytical Lot ID: 060108TOCS1

| | Field Sample ID | Lab Sample ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| 1 | CV1-0602 | CV1-0602 | 06/02/08 | 1317 |
| 2 | BS1S0602 | BS1S0602 | 06/02/08 | 1333 |
| 3 | SB1-0602 | SB1-0602 | 06/02/08 | 1342 |
| 4 | J16V82 | H192001 | 06/02/08 | 1420 |
| 5 | J16V76 | H192002 | 06/02/08 | 1432 |
| 6 | J16V81 | H192003 | 06/02/08 | 1442 |
| 7 | J16V80 | H192004 | 06/02/08 | 1452 |
| 8 | J16V78 | H192005 | 06/02/08 | 1502 |
| 9 | J16V79 | H192006 | 06/02/08 | 1519 |
| 10 | J16V83 | H192007 | 06/02/08 | 1529 |
| 11 | J16V85 | H192008 | 06/02/08 | 1539 |
| 12 | J16V84 | H192009 | 06/02/08 | 1550 |
| 13 | CV2-0602 | CV2-0602 | 06/02/08 | 1600 |

Comments:

CH2MHILL
Applied Sciences Laboratory (ASL)

CH2M HILL
Applied Sciences Labortory (ASL)
2300 NW Walnut Blvd.
P.O. Box 428
Corvallis, OR 97330-0428
Telephone: 541-752-4271
Fax: 541-752-0276

06/27/08

# MDL Study Report

Analytical Method: ASTM E777

Instrument ID: TOC Skalar

Matrix: Soil

Concentration Units: mg/Kg

| Analyte | Analysis Date | Amt. Spiked | Replicates 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Std. Dev. | MDL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | 09/05/07 | 140 | 33.1 | 2.35 | 11.2 | 37.8 | 48.0 | 42.4 | 17.0 | 28.8 | 16.0 | 47.9 |

# CHAIN OF CUSTODY/SHIPPING DOCUMENTS

**CH2M HILL Applied Sciences Laboratory**
**CHAIN OF CUSTODY RECORD**

CVO 2300 NW Walnut Boulevard
Corvallis, OR 97330-3538
(541) 752-4271 FAX (541) 752-0276

| Project/Contact Information | |
|---|---|
| Project # | 600 Area Component RCBRA |
| Project Name | ELR / Washington Hanford Closure |
| Report Copy to | Joan Kessner |
| Field Log Book ID | EL-1611-1 |

THIS AREA FOR LAB USE ONLY
SDG: H1920
ELR Consulting
05/20/2008

Log In | LIMS Verification
pH | Cust Seals Y N | Ice Y N
QC Level 1 2 3
Cooler Temperature

| Sampling Date | Time | Type Comp | Type Grab | Matrix Water | Matrix Soil | Matrix Air | Client Sample ID (9 Characters Max) | LAB QC | Total Number of Containers | Gen Chemistry (1) | Soil Plant ToxASTM E1963 | VOL G/ Preservation NONE 1000 G | 4000 G | Sample Location | Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/19/2008 | 13:45 | X | | | X | | J16V82 | | 2 | 1 | 1 | | | RCBRA 600-208 | 1 |
| 5/19/2008 | 11:45 | X | | | X | | J16V76 | | 2 | 1 | 1 | | | RCBRA 116-F-1 | 2 |
| 5/19/2008 | 16:59 | X | | | X | | J16V81 | | 2 | 1 | 1 | | | RCBRA 600-171 | 3 |
| 5/19/2008 | 18:27 | X | | | X | | J16V80 | | 2 | 1 | 1 | | | RCBRA 600-139 | 4 |
| 5/19/2008 | 18:30 | X | | | X | | J16V78 | | 2 | 1 | 1 | | | RCBRA 600-131 | 5 |
| 5/19/2008 | 15:56 | X | | | X | | J16V79 | | 2 | 1 | 1 | | | RCBRA 600-132 | 6 |
| 5/19/2008 | 17:20 | X | | | X | | J16V83 | | 2 | 1 | 1 | | | RCBRA McGee Ranch | 7 |
| 5/19/2008 | 16:20 | X | | | X | | J16V85 | | 2 | 1 | 1 | | | RCBRA Vernita Upriver SS | 8 |
| 5/19/2008 | 14:49 | X | | | X | | J16V84 | | 2 | 1 | 1 | | | RCBRA Saddle Mountain | 9 |

Sampled By: Elizabeth Tepper

Relinquished By: Elizabeth Tepper Elizabeth M Tepper 5-20-08 8:50

Received By: D. Hubbard 5-20-08 08:50

Relinquished By:

Received By:

Date/Time:

Special Instructions: Gen Chem (1): Part Size ( Dry Sieve)-D422; % moist-D2216; TOC-9060; pH (soil)-9045; TKN-351.2; Ammonia-350.1; IC Anions-300.0

File: 052008ELR COC.xls

**CH2MHILL**
*Applied Sciences Laboratory (ASL)*

# Sample Receipt Record

Batch Number: H1920 Date received: 5-20-08

Client/Project ELR/WCH

**VERIFICATION OF SAMPLE CONDITIONS** (verify all items) * HD = Client Hand delivered Samples

| Observation | YES | NO |
|---|---|---|
| Radiological Screening for AFCEE | | NA |
| Were custody seals intact and on the outside of the cooler? | | HD |
| If yes, Where? Front_____Rear_____Lt Side_____Rt Side_____ | | |
| Type of packing material: Ice Blue Ice Bubble wrap | | – |
| Was the Chain of Custody inside the cooler? | | HD |
| Was the Chain of Custody properly filled out? | ✓ | |
| Were the sample containers in good condition? | ✓ | |
| Containers supplied by ASL? | ✓ | |
| Any sample with < 1/2 holding time remaining? If so contact LPM | | ✓ |
| Was there ice in the cooler? Enter temp. 20.2° C | | ✓ |
| All VOCs free of air bubbles ? | | NA |

**VERIFICATION OF SAMPLE PRESERVATION**

| Sample No | Nutrients pH <2 | Metals pH <2 | Volatiles pH <2 | Cyanides pH >12 | TOC pH <2 | TOX pH <2 | Other (specify) | N/A (soils/unpres) |
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**LOGIN AND pH VERIFICATIONS PERFORMED BY**

D. Hubbard 5-20-08 15:45
Date/Time

Date/Time



CH2M HILL
Applied Sciences Laboratory (ASL)

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