1226136

**Department of Energy**
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

RECEIVED
JUN 18 2014
EDMC

JUN 10 2014

14-ESQ-0084

Mr. J. L. Boller
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, AWT-122
Seattle, Washington 98101

Dear Mr. Boller:

INFORMATION REQUESTED IN SUPPORT OF THE MAY 19 AND 20, 2014, U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) TREATMENT, STORAGE, AND DISPOSAL (TSD) UNITS AND WASTE GENERATOR ACTIVITIES INSPECTIONS OF THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT ACTIVITIES

On May 19 and 20, 2014, EPA along with the State of Washington, Department of Ecology conducted TSD and waste generator activity inspections at the 400 Area Waste Management Unit, Centralized Consolidation/Recycle Center, 242-A Evaporator, and Waste Sampling and Characterization Facility West Central Waste Complex (CWC). During the May 21, 2014, inspection post-briefing EPA requested the following:

- Copies of documents that were identified during the inspections as enumerated in the list provided by EPA.
- Response to information requests from EPA during the TSD and Waste Generator Activity inspections.

The documents requested by EPA have been placed into an electronic format on three compact discs, one for each contractor responsible for the units that were inspected. Each disc contains an index or table of files that are contained on the disc.

JUN 10 2014



If you have any questions, please contact me, or your staff may contact Ed MacAlister, Director, Environmental, Safety, and Quality, on (509) 373-0462.

Sincerely,

Jeffrey A. Frey, Acting Assistant Manager
for Safety and Environmental

ESQ:ACM

Enclosures

cc w/encls:
K. A. Conaway, Ecology
M. K. Prescott, EC
K. Schanilec, EPA Region 10
Administrative Record, TSD: S-4-2, T-2-6
Ecology NWP Library (CD)
Environmental Portal, LMSI, A3-01
HF Operating Record (J. K. Perry, MSA, H7-28)

cc w/o encls:
G. Bohnee, NPT
R. Buck, Wanapum
S. L. Dahl-Crumpler, Ecology
R. H. Engelmann, CHPRC
D. A. Faulk, EPA
L. E. Gadbois, EPA
S. Harris, CTUIR
J. A. Hedges, Ecology
S. Hudson, HAB
R. Jim, YN
K. McNeill, EPA Region 10
K. Niles, ODOE
D. Rowland, YN
J. R. Seaver, CHPRC
E. R. Skinnarland, Ecology

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14-ESQ-0084

# SECTION 1 OF 4

**INFORMATION REQUESTED IN SUPPORT OF THE MAY 19 AND 20 2014 US ENVIRONMENTAL PROTECTION AGENCY (EPA) TREATMENT STORAGE AND DISPOSAL (TSD) UNITS AND WASTE GENERATOR ACTIVITIES INSPECTIONS OF THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT ACTIVITIES**

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# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

# DOCUMENTS AND INFORMTION REQUEST TABLE

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**
**INSPECTION OF THE 400 AREA AT THE HANFORD SITE**
**400 AREA WMU, 440-PAD, AND MASF**
**DOCUMENTS AND INFORMATION REQUEST TABLE**
**MAY 21, 2014**

| Inspection Request Number | Date of Inspection Request | EPA Document/Information Request | DOE/CHPRC Response to Document/Information Request | Number of Pages |
|---|---|---|---|---|
| **400 Area Waste Management Unit - Interim Storage Area (ISA)** | | | | |
| 1 | 05/21/2014 | Waste Inventory (SWITS Data) for all containers within the connex box | Copies of the following "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the ISA: | |
| | | | • 0016549 | 4 |
| | | | • 0043409 | 4 |
| | | | • 0044912 | 4 |
| | | | • 0044929 | 4 |
| | | | • 0044930 | 4 |
| | | | • 0046664 | 4 |
| | | | • 0046665 | 4 |
| | | | • 0049499 | 4 |
| | | | • 0055593 | 4 |
| | | | • 0063472 | 4 |
| | | | • CP-12-11-F | 4 |
| | | | • CP-12-12-F | 4 |
| | | | • CP-12-13-F | 4 |
| | | | • CP-12-14-F | 4 |
| | | | • CP-12-15-F | 4 |
| | | | • CP-12-16-F | 4 |
| | | | • CP-12-17-F | 4 |
| | | | • CP-12-18-F | 4 |
| | | | • CP-12-19-F | 4 |
| 2 | 05/21/2014 | Waste Profiles (SWITS Data) | Copy of "400 Area WMU Waste Profile Sheet, "dated April 12, 2012. | 4 |

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**
**INSPECTION OF THE 400 AREA AT THE HANFORD SITE**
**400 AREA WMU, 440-PAD, AND MASF**
**DOCUMENTS AND INFORMATION REQUEST TABLE**
**MAY 21, 2014**

| Inspection Request Number | Date of Inspection Request | EPA Document/Information Request | DOE/CHPRC Response to Document/Information Request | Number of Pages |
|---|---|---|---|---|
| 3 | 05/21/2014 | Training Records (Individuals who perform the inspections) | The following are the Training Plans and Completion Dates for individuals that perform the inspections (Nuclear Chemical Operators):<br>• Tim R. Malley<br>• Deborah S. Older<br>• Jose L. Ramos<br>• Michael R. Reid<br>• William M. Wise. | <br><br><br>4<br>3<br>4<br>4<br>4 |
| 4 | 05/21/2014 | Inspections Log (Weekly inspection sheets going back 1 year – May 2013 to May 19, 2014) | Copies of 2CP-SUR-F-05024 "Hanford Facility RCRA Permit 400 Area Waste Management Unit – Weekly Inspection Log for 400 Area Waste Management Units," dated from May 7, 2013 through May 19, 2014. | 56 |
| 5 | 05/21/2014 | Building Emergency Plan | Copy of HNF-IP-0263-FFTF "Building Emergency Plan for Fast Flux Test Facility Property Protection Area," Revision 23, dated October 20, 2013. | 32 |
| 6 | 05/21/2014 | Shipping Records for last two years | ***There have been no shipments of waste too or from the ISA in the last two years.*** | N/A |
| 7 | 05/21/2014 | Container PIN # 0016549 NaK drum – Inside container photographs and description of the how much NaK liquid is present in the container | Container PIN # 0016549 NaK Container location, open container, and NaK liquid quantity within container. | 1 |
| **400 Area Waste Management Unit - Fuel Storage Facility – Building 403 (FSF)** | | | | |
| 8 | 05/21/2014 | Waste Inventory (SWITS Data) for both large boxes stored within the FSF. | Copies of the following "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the FSF:<br>• 23432-1<br>• 23432-2. | <br><br><br>4<br>4 |

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**
**INSPECTION OF THE 400 AREA AT THE HANFORD SITE**
**400 AREA WMU, 440-PAD, AND MASF**
**DOCUMENTS AND INFORMATION REQUEST TABLE**
**MAY 21, 2014**

| Inspection Request Number | Date of Inspection Request | EPA Document/Information Request | DOE/CHPRC Response to Document/Information Request | Number of Pages |
|---|---|---|---|---|
| 9 | 05/21/2014 | Waste Profiles (SWITS Data) | Refer to response to Inspection Request Number 2. | N/A |
| 10 | 05/21/2014 | Training Records (Individuals who perform the inspections) | Refer to response to Inspection Request Number 3. | N/A |
| 11 | 05/21/2014 | Inspections Log (Weekly inspection sheets going back 1 year – May 2013 to May 19, 2014) | Refer to response to Inspection Request Number 4.<br>***Note: the FSF weekly inspection is on the same page as the ISA weekly inspection provided in Inspection Request Number 4.*** | N/A |
| 12 | 05/21/2014 | Building Emergency Plan | Refer to response to Inspection Request Number 5. | N/A |
| 13 | 05/21/2014 | Shipping Records for last two years | ***There have been no shipments of waste too or from the FSF in the last two years.*** | N/A |
| **440- Pad Satellite Accumulation Area (SAA)** | | | | |
| 14 | 05/21/2014 | Waste Inventory Sheets for the two containers (PINs 0026112 and 0027876) | The following are the Waste Inventory Sheets for the containers located at the 440-Pad:<br>• Waste Inventory Sheet, Container PIN 0026112, 55-Gallon Drum – Tritium Signs<br>• Waste Inventory Sheet, Container PIN 0027876, 61 liter Container – Aerosol Cans. | <br><br>2<br>2 |
| **Maintenance and Storage Facility (MASF) – Building 437 SAA and Universal Waste Storage Area** | | | | |
| 15 | 05/21/2014 | Training Records of the MASF Operations Manager | Training Plan for Michael A (Aaron) Young – MASF Operations Manager, as of May 28, 2014 | 5 |

**U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**
**INSPECTION OF THE 400 AREA AT THE HANFORD SITE**
**400 AREA WMU, 440-PAD, AND MASF**
**DOCUMENTS AND INFORMATION REQUEST TABLE**
**MAY 21, 2014**

| Inspection Request Number | Date of Inspection Request | EPA Document/Information Request | DOE/CHPRC Response to Document/Information Request | Number of Pages |
|---|---|---|---|---|
| **Other Documents Requested During the Inspection** | | | | |
| 16 | 05/21/2014 | Requested copy of letter from U.S. Department of Energy (DOE) to the Washington State Department of Ecology (Ecology), Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," dated January 10, 2014. | Copy of letter from U.S. Department of Energy (DOE) to the Washington State Department of Ecology (Ecology), Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," dated January 10, 2014.<br><br>***Note: The first section of this submitted HF RCRA Permit Class 1 Modification Package is the 400 Area WMU.*** | 43 |
| 17 | 05/21/2014 | Requested copy of letter from DOE to Ecology, Subject: "Response to Washington State Department of Ecology (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resources Conservation and Recovery Act (RCRA) Identification Number WA 7890008967 on September 19 and 20, 2011," dated August 5, 2013. | Copy of letter from DOE to Ecology, Subject: "Response to Washington State Department of Ecology (Ecology) Dangerous Waste Compliance Inspection at the Hanford 400 Area Dangerous Waste Management Unit Resources Conservation and Recovery Act (RCRA) Identification Number WA 7890008967 on September 19 and 20, 2011," dated August 5, 2013. | 32 |

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 1

**Copies of the "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the ISA.**

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0016549
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0016549 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 55 GALLON | Container Empty Tare Wt. (kg): | 24.0000 |
| Container Volume (cu. meters): | 0.2080 | Waste Weight (kg): | 123.0000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 147.0000 |

Container Contents: 13 NAK PRESSURE TRANSDUCERS IN 55 GALLON STEEL DRUM

SWO Comments:

Generator Information

Generating Company: CHPRC CH2M HILL PLATEAU REMEDIATION CO. Generator ID: 0092501 Generator Group: FFTF
Source Facility: 4718 Generator: RJ SWAN
Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/27/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0016549**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0016549
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC1
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 2.60247E-05
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 7.21000E-05
ICRP 71 DE-Ci: 7.21604E-05

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 1.29000E-07 |
| 8 | Cs-137 | 6.55000E-04 |
| 13 | Co-60 | 6.82000E-07 |
| 56 | Na-22 | 6.42000E-08 |
| 97 | Pu-240 | 7.21000E-05 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0016549**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 7.3800 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 115.6200 | 94 |
| | | | 123.0000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0043409
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0043409 | Secondary Pkg ID: | | Accumulation Date: | 03/14/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 06/11/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 55 GALLON | Container Empty Tare Wt. (kg): | 24.0000 |
| Container Volume (cu. meters): | 0.2080 | Waste Weight (kg): | 123.0000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 147.0000 |

Container Contents: 3 BLTC DRIP CUPS (~1.8 GALLONS TOTAL SODIUM) IN ARGON INERTED DRIP CUP TRANSFER STEEL CONTAINER, INSIDE ARGON INERTED 30 GALLON STEEL DRUM, INSIDE ARGON INERTED 55 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS & WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW & CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/19/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0043409**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0043409
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 2.34121E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.50000E+01
Tot Pe-Ci: 6.49000E-04
ICRP 71 DE-Ci: 6.49543E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 1.16000E-06 |
| 8 | Cs-137 | 5.89000E-03 |
| 13 | Co-60 | 6.14000E-06 |
| 56 | Na-22 | 5.77000E-07 |
| 97 | Pu-240 | 6.49000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0043409**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 7.3800 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 115.6200 | 94 |
| | | | 123.0000 | |

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 0044912
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0044912 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 35.4000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: 3 CLEM DRIP CUPS (~<0.1 GALLONS TOTAL SODIUM) WITH STEEL SPACERS IN AN ARGON INERTED 55 GALLON STEEL DRUM IN A 85 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mqmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 0044912
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC1
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 8.40285E-06
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 5.00000E-01
Tot Pe-Ci: 3.61000E-05
ICRP 71 DE-Ci: 3.61302E-05

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-08 |
| 8 | Cs-137 | 3.27000E-04 |
| 13 | Co-60 | 3.41000E-07 |
| 56 | Na-22 | 3.21000E-08 |
| 97 | Pu-240 | 3.61000E-05 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0044912**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0044929
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0044929 | Secondary Pkg ID: | | Accumulation Date: | 03/14/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 06/11/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 38.1000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: 3 CLEM DRIP CUPS (~5.4 GALLONS TOTAL SODIUM) WITH STEEL SPACERS IN AN ARGON INERTED 55 GALLON STEEL DRUM INSIDE OF A 85 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0044929**
Source Facility:
Location Facility:
Shipment #:

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Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0044929**
Source Facility:
Location Facility:
Shipment #:

## Radioactive Package Detail

Waste Category: **WC3**
Combustible Flag:
Exceeds ISB Limit: **N**
NRC Class: **C**

snm Waste?:
Shielding:
Handling: **C**
RSWIMS Container Cnt: **1**
Excluded from DE-Ci:

Thermal Power (w/cu.m.): **4.54440E-04**
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): **2.00000E+01**
Tot Pe-Ci: **1.95000E-03**
ICRP 71 DE-Ci: **1.95163E-03**

## VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

## Current Location Information

Facility ID: **4718**
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

## Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 3.49000E-06 |
| 8 | Cs-137 | 1.77000E-02 |
| 13 | Co-60 | 1.84000E-05 |
| 56 | Na-22 | 1.73000E-06 |
| 97 | Pu-240 | 1.95000E-03 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0044929**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 0044930
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0044930 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 35.4000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: IDENT 15/17 SODIUM OVERFLOW POT AND SMALL STAINLESS STEEL CAN WITH TRACE AMOUNT (~1.25 GALLONS TOTAL SODIUM) IN ARGON INERTED 55 GALLON STEEL DRUM WITH SPACER, IN 85 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

## Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

## RCRA Reporting

ADWR Stream Description: **Sodium Metal -**

Designation Code: **DW**

Source Code: **G19 Other one-time or intermittent process**

Comment: **Decommissioning and Deactivation**

Form Code: **W319 Other inorganic solids, specify in comments**

Comment: **Sodium Wetted Piping**

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

## Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

## PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0044930
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

| | | | | | |
|---|---|---|---|---|---|
| Waste Category: | WC3 | snm Waste?: | | Thermal Power (w/cu.m.): | 1.05049E-04 |
| Combustible Flag: | | Shielding: | | Neutron Dose Rate (mrem/hr): | |
| Exceeds ISB Limit: | N | Handling: | C | Contact Dose Rate (mrem/hr): | 6.00000E+00 |
| NRC Class: | A | RSWIMS Container Cnt: | 1 | Tot Pe-Ci: | 4.51000E-04 |
| | | Excluded from DE-Ci: | | ICRP 71 DE-Ci: | 4.51377E-04 |

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

| | | | | | |
|---|---|---|---|---|---|
| Facility ID: | 4718 | Tier Level: | | Loc Beg Coordinates - N: | |
| Trench / Unit: | | Tier Position: | | W: | |
| Module: | | GPS Data Flag: | | Loc End Coordinates - N: | |
| | | | | W: | |

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 8.08000E-07 |
| 8 | Cs-137 | 4.09000E-03 |
| 13 | Co-60 | 4.26000E-06 |
| 56 | Na-22 | 4.01000E-07 |
| 97 | Pu-240 | 4.51000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0044930**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 0046664
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0046664 | Secondary Pkg ID: | | Accumulation Date: | 08/11/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 11/08/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 35.4000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: FSF SODIUM FILL STATION PIPING, 4 VALVES, AND 1 FILTER (~1.5 GALLONS TOTAL SODIUM) IN ARGON INERTED 85 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0046664
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 1.26069E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E-01
Tot Pe-Ci: 5.41000E-04
ICRP 71 DE-Ci: 5.41453E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 9.70000E-07 |
| 8 | Cs-137 | 4.91000E-03 |
| 13 | Co-60 | 5.11000E-06 |
| 56 | Na-22 | 4.81000E-07 |
| 97 | Pu-240 | 5.41000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0046664**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0046665
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0046665 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 35.4000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: IDENT 17-2 DRIP CUP (~0.4 GALLONS TOTAL SODIUM) WITH STEEL SPACER IN ARGON INERTED 55 GALLON STEEL DRUM IN A 85 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0046665
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

| | | | | | |
|---|---|---|---|---|---|
| Waste Category: | WC1 | snm Waste?: | | Thermal Power (w/cu.m.): | 3.36024E-05 |
| Combustible Flag: | | Shielding: | | Neutron Dose Rate (mrem/hr): | |
| Exceeds ISB Limit: | N | Handling: | C | Contact Dose Rate (mrem/hr): | 2.00000E-01 |
| NRC Class: | A | RSWIMS Container Cnt: | 1 | Tot Pe-Ci: | 1.44000E-04 |
| | | Excluded from DE-Ci: | | ICRP 71 DE-Ci: | 1.44121E-04 |

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

| | | | | | |
|---|---|---|---|---|---|
| Facility ID: | 4718 | Tier Level: | | Loc Beg Coordinates - N: | |
| Trench / Unit: | | Tier Position: | | W: | |
| Module: | | GPS Data Flag: | | Loc End Coordinates - N: | |
| | | | | W: | |

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 2.59000E-07 |
| 8 | Cs-137 | 1.31000E-03 |
| 13 | Co-60 | 1.36000E-06 |
| 56 | Na-22 | 1.28000E-07 |
| 97 | Pu-240 | 1.44000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0046665**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0049499
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0049499 | Secondary Pkg ID: | | Accumulation Date: | 08/04/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 11/01/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 208 LITER | Container Empty Tare Wt. (kg): | 21.3000 |
| Container Volume (cu. meters): | 0.2080 | Waste Weight (kg): | 123.0000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 147.0000 |

Container Contents: ONE NAK PRESSURE TRANSDUCER ,OXYGEN MONITOR ENCASED IN SODIUM IN STAINLESS STEEL PIPE (ESTIMATE <0.1 GALLONS SODIUM), FSF SODIUM FILL STATION ITEMS (ESTIMATE 1.5 GALLONS SODIUM) DRUM BLACK WITH WHITE LID STEEL

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/29/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mqmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0049499
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: C
NRC Class: A

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 3.66905E-02
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 5.41000E-04
ICRP 71 DE-Ci: 1.49021E-01

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 9.70000E-07 |
| 8 | Cs-137 | 4.91000E-03 |
| 13 | Co-60 | 5.11000E-06 |
| 56 | Na-22 | 4.81000E-07 |
| 97 | Pu-240 | 5.41000E-04 |
| 130 | Th-228 | 2.32000E-01 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0049499**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 7.3800 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 115.6200 | 94 |
| | | | 123.0000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0055593
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0055593 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 208 LITER | Container Empty Tare Wt. (kg): | 24.0000 |
| Container Volume (cu. meters): | 0.2080 | Waste Weight (kg): | 123.0000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 147.0000 |

Container Contents: SMALL CANS <GALLON SIZE WITH SODIUM CHUNKS; CONTAMINATED HOLE SAWS ; BLTC DRIP CUPS IN 55 GALLON STEEL DRUM (MAY BE INERTED WITH ARGON)

SWO Comments:

Generator Information

Generating Company: CHPRC CH2M HILL PLATEAU REMEDIATION CO. Generator ID: 0092501 Generator Group: FFTF

Source Facility: 4718 Generator: RJ SWAN

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**

Designation Code: **DW**

Source Code: **G19 Other one-time or intermittent process**

Comment: **Decommissioning and Deactivation**

Form Code: **W319 Other inorganic solids, specify in comments**

Comment: **Sodium Wetted Piping**

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):

PCB Subtype: PCB Waste Weight (kg):

PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0055593
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 3.09591E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 5.00000E-01
Tot Pe-Ci: 8.58000E-04
ICRP 71 DE-Ci: 8.58719E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 1.54000E-06 |
| 8 | Cs-137 | 7.79000E-03 |
| 13 | Co-60 | 8.11000E-06 |
| 56 | Na-22 | 7.63000E-07 |
| 97 | Pu-240 | 8.58000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0055593**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 7.3800 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 115.6200 | 94 |
| | | | 123.0000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0063472
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 0063472 | Secondary Pkg ID: | | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 10 GALLON | Container Empty Tare Wt. (kg): | 4.5000 |
| Container Volume (cu. meters): | 0.0379 | Waste Weight (kg): | 22.2000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 26.8000 |

Container Contents: HALF GALLON METAL CAN INERTED WITH ARGON (~0.5 GALLON SODIUM)[MAY BE IN A 5 GALLON CAN), IN A 10 GALLON STEEL CAN, FROM CLEM GRAPPLE CHANGE PIT

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 0063472
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 3.57177E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 8.00000E+00
Tot Pe-Ci: 1.80000E-04
ICRP 71 DE-Ci: 1.80151E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 3.23000E-07 |
| 8 | Cs-137 | 1.64000E-03 |
| 13 | Co-60 | 1.70000E-06 |
| 56 | Na-22 | 1.60000E-07 |
| 97 | Pu-240 | 1.80000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **0063472**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 1.3320 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 20.8680 | 94 |
| | | | 22.2000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-11-F
Source Facility:
Location Facility:
Shipment #:

---

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-11-F | Secondary Pkg ID: | 95-21 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 5 GALLON | Container Empty Tare Wt. (kg): | 2.3000 |
| Container Volume (cu. meters): | 0.0189 | Waste Weight (kg): | 10.9000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 13.2000 |

Container Contents: BLTC DRIP CUP (ESTIMATE < 1 GALLON SODIUM) IN 5 GALLON STEEL CAN

SWO Comments:

Generator Information

Generating Company: CHPRC CH2M HILL PLATEAU REMEDIATION CO.
Generator ID: 0092501 Generator Group: FFTF
Source Facility: 4718
Generator: RJ SWAN
Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 7/9/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-11-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: C

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 1.43160E-03
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 8.00000E+00
Tot Pe-Ci: 3.61000E-04
ICRP 71 DE-Ci: 3.61302E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-07 |
| 8 | Cs-137 | 3.27000E-03 |
| 13 | Co-60 | 3.41000E-06 |
| 56 | Na-22 | 3.21000E-07 |
| 97 | Pu-240 | 3.61000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-11-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 0.6540 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 10.2460 | 94 |
| | | | 10.9000 | |

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: CP-12-12-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-12-F | Secondary Pkg ID: | 95-19 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 5 GALLON | Container Empty Tare Wt. (kg): | 2.3000 |
| Container Volume (cu. meters): | 0.0189 | Waste Weight (kg): | 10.9000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 13.2000 |

Container Contents: BLTC DRIP CUP (ESTIMATE < 1 GALLON SODIUM) IN 5 GALLON STEEL CAN

SWO Comments:

Generator Information

Generating Company: CHPRC CH2M HILL PLATEAU REMEDIATION CO. Generator ID: 0092501 Generator Group: FFTF

Source Facility: 4718 Generator: RJ SWAN

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 7/9/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-12-F**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-12-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: C

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 1.43160E-03
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 3.61000E-04
ICRP 71 DE-Ci: 3.61302E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-07 |
| 8 | Cs-137 | 3.27000E-03 |
| 13 | Co-60 | 3.41000E-06 |
| 56 | Na-22 | 3.21000E-07 |
| 97 | Pu-240 | 3.61000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-12-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 0.6540 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 10.2460 | 94 |
| | | | 10.9000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-13-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-13-F | Secondary Pkg ID: | 95-18 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 5 GALLON | Container Empty Tare Wt. (kg): | 2.3000 |
| Container Volume (cu. meters): | 0.0189 | Waste Weight (kg): | 10.9000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 13.2000 |
| Container Contents: | BLTC DRIP CUP (ESTIMATE < 1 GALLON SODIUM) IN 5 GALLON STEEL CAN | | |

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 7/9/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**

Designation Code: **DW**

Source Code: **G19 Other one-time or intermittent process**

Comment: **Decommissioning and Deactivation**

Form Code: **W319 Other inorganic solids, specify in comments**

Comment: **Sodium Wetted Piping**

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):

PCB Subtype: PCB Waste Weight (kg):

PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: **CP-12-13-F**
Source Facility:
Location Facility:
Shipment #:

---

### Radioactive Package Detail

Waste Category: **WC3**
Combustible Flag:
Exceeds ISB Limit: **N**
NRC Class: **C**

snm Waste?:
Shielding:
Handling: **C**
RSWIMS Container Cnt: **1**
Excluded from DE-Ci:

Thermal Power (w/cu.m.): **1.43160E-03**
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): **2.00000E+01**
Tot Pe-Ci: **3.61000E-04**
ICRP 71 DE-Ci: **3.61302E-04**

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: **4718**
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-07 |
| 8 | Cs-137 | 3.27000E-03 |
| 13 | Co-60 | 3.41000E-06 |
| 56 | Na-22 | 3.21000E-07 |
| 97 | Pu-240 | 3.61000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-13-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 0.6540 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 10.2460 | 94 |
| | | | 10.9000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-14-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-14-F | Secondary Pkg ID: | 96-1 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 30 GALLON | Container Empty Tare Wt. (kg): | 16.0000 |
| Container Volume (cu. meters): | 0.1136 | Waste Weight (kg): | 63.3000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 79.3000 |

Container Contents: BLTC ARGON SYSTEM PLEATED FIBERGLASS AEROSOLE FILTER (ESTIMATE < 1.3 GALLON SODIUM) IN 30 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/28/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-14-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 3.09508E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 4.69000E-04
ICRP 71 DE-Ci: 4.69392E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 8.40000E-07 |
| 8 | Cs-137 | 4.25000E-03 |
| 13 | Co-60 | 4.43000E-06 |
| 56 | Na-22 | 4.17000E-07 |
| 97 | Pu-240 | 4.69000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-14-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 3.7980 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 59.5020 | 94 |
| | | | 63.3000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-15-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-15-F | Secondary Pkg ID: | 0034085 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 8 GALLON | Container Empty Tare Wt. (kg): | 3.6000 |
| Container Volume (cu. meters): | 0.0303 | Waste Weight (kg): | 17.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 21.3000 |

Container Contents: NOTE: 08-03; 2 SODIUM SAMPLE PIPES WRAPPED IN PLASTIC (~<0.1 GALLONS TOTAL SODIUM) IN 8 GALLON STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/25/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: n/a  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-15-F**
Source Facility:
Location Facility:
Shipment #:

## Radioactive Package Detail

Waste Category: **WC3**
Combustible Flag:
Exceeds ISB Limit: **N**
NRC Class: **A**

snm Waste?:
Shielding:
Handling: **C**
RSWIMS Container Cnt: **1**
Excluded from DE-Ci:

Thermal Power (w/cu.m.): **8.92976E-05**
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): **8.00000E-01**
Tot Pe-Ci: **3.61000E-05**
ICRP 71 DE-Ci: **3.61302E-05**

## VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

## Current Location Information

Facility ID: **4718**
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

## Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-08 |
| 8 | Cs-137 | 3.27000E-04 |
| 13 | Co-60 | 3.41000E-07 |
| 56 | Na-22 | 3.21000E-08 |
| 97 | Pu-240 | 3.61000E-05 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-15-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 1.0620 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 16.6380 | 94 |
| | | | 17.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-16-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-16-F | Secondary Pkg ID: | 96 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 5 GALLON | Container Empty Tare Wt. (kg): | 2.3000 |
| Container Volume (cu. meters): | 0.0189 | Waste Weight (kg): | 10.9000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 13.2000 |

Container Contents: BLTC DRIP CUP (ESTIMATE < 1 GALLON SODIUM) IN 5 GALLON STEEL CAN

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/27/12, 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-16-F**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: CP-12-16-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 1.43160E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 3.61000E-05
ICRP 71 DE-Ci: 3.61302E-05

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-08 |
| 8 | Cs-137 | 3.27000E-04 |
| 13 | Co-60 | 3.41000E-07 |
| 56 | Na-22 | 3.21000E-08 |
| 97 | Pu-240 | 3.61000E-05 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-16-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 0.6540 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 10.2460 | 94 |
| | | | 10.9000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-17-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-17-F | Secondary Pkg ID: | 159 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 208 LITER | Container Empty Tare Wt. (kg): | 24.0000 |
| Container Volume (cu. meters): | 0.2080 | Waste Weight (kg): | 123.0000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 147.0000 |

Container Contents: BLTC ARGON SYSTEM PLEATED FIBERGLASS AEROSOL FILTER AND FILTER CORE (ESTIMATE < 1.3 GALLON SODIUM) IN 55 GALLON PAINTED YELLOW STEEL DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/29/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-17-F**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-17-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: C
NRC Class: C

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 3.69660E-02
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 5.00000E-01
Tot Pe-Ci: 2.38000E-03
ICRP 71 DE-Ci: 1.50860E-01

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 9.70000E-07 |
| 8 | Cs-137 | 4.91000E-03 |
| 13 | Co-60 | 5.11000E-06 |
| 56 | Na-22 | 4.81000E-07 |
| 97 | Pu-240 | 2.38000E-03 |
| 130 | Th-228 | 2.32000E-01 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-17-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 7.3800 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 115.6200 | 94 |
| | | | 123.0000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-18-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-18-F | Secondary Pkg ID: | 57749 | Accumulation Date: | 08/11/2008 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 11/08/2008 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 85 GALLON | Container Empty Tare Wt. (kg): | 35.4000 |
| Container Volume (cu. meters): | 0.3220 | Waste Weight (kg): | 188.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 226.8000 |

Container Contents: FSF SODIUM FILL STATION 7 PIECES OF PIPING AND 1 FILTER (~1.5 GALLONS TOTAL SODIUM) IN ARGON INERTED 85 GALLON DRUM

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 6/29/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

Hazardous Package Detail

Container Status: Full  Flashpoint: N/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-18-F
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling: C
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 1.26069E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr): 2.00000E+01
Tot Pe-Ci: 5.41000E-04
ICRP 71 DE-Ci: 5.41453E-04

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 4718
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 9.70000E-07 |
| 8 | Cs-137 | 4.91000E-03 |
| 13 | Co-60 | 5.11000E-06 |
| 56 | Na-22 | 4.81000E-07 |
| 97 | Pu-240 | 5.41000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-18-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 11.3220 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 177.3780 | 94 |
| | | | 188.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: CP-12-19-F
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | CP-12-19-F | Secondary Pkg ID: | 11-24-92 | Accumulation Date: | 06/24/2009 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 09/21/2009 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | DM / 12 GALLON | Container Empty Tare Wt. (kg): | 2.3000 |
| Container Volume (cu. meters): | 0.0454 | Waste Weight (kg): | 29.9000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 32.2000 |

Container Contents: 3 SECONDARY SODIUM SAMPLE TRAINS (DE MINIMIS SODIUM) IN A METAL CAN STAMPED "MODIFIED MIRAX 88 MS24327-28 ST. LOUIS" THIS CAN IS APPROXIMATELY 36" TALL AND SIMILAR IN STYLE TO A 10" DIAMETER PAINT CAN.

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 4718 | Generator: | RJ SWAN | | |

Generator Comments: ISOTOPICS AND WEIGHTS ARE ESTIMATES. ADDITIONAL REVIEW AND CHARACTERIZATION WILL BE DONE PRIOR TO TRANSPORT. RJS 7/2/12. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA INTERIM STORAGE.AREA (ISA).

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-19-F**
Source Facility:
Location Facility:
Shipment #:

---

Hazardous Package Detail

Container Status: **Full** Flashpoint: **N/A** pH Value: **>12.5** Subpart CC Flag: **NA**

DW Numbers: **D001 D003**

RCRA Reporting

ADWR Stream Description: **Sodium Metal -**
Designation Code: **DW**
Source Code: **G19 Other one-time or intermittent process**
Comment: **Decommissioning and Deactivation**
Form Code: **W319 Other inorganic solids, specify in comments**
Comment: **Sodium Wetted Piping**
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream: Offsite TSD Waste Stream: RCRA Designated Date:

PCB Package Detail:

PCB Type: PCB Source Concentration (PPM):
PCB Subtype: PCB Waste Weight (kg):
PCB Contents: Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: **CP-12-19-F**
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

| | | | | | |
|---|---|---|---|---|---|
| Waste Category: | WC3 | snm Waste?: | | Thermal Power (w/cu.m.): | 5.95973E-05 |
| Combustible Flag: | | Shielding: | | Neutron Dose Rate (mrem/hr): | |
| Exceeds ISB Limit: | N | Handling: | C | Contact Dose Rate (mrem/hr): | 2.00000E+01 |
| NRC Class: | A | RSWIMS Container Cnt: | 1 | Tot Pe-Ci: | 3.61000E-05 |
| | | Excluded from DE-Ci: | | ICRP 71 DE-Ci: | 3.61302E-05 |

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

| | | | | | |
|---|---|---|---|---|---|
| Facility ID: | 4718 | Tier Level: | | Loc Beg Coordinates - N: | |
| Trench / Unit: | | Tier Position: | | W: | |
| Module: | | GPS Data Flag: | | Loc End Coordinates - N: | |
| | | | | W: | |

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 6.46000E-08 |
| 8 | Cs-137 | 3.27000E-04 |
| 13 | Co-60 | 3.41000E-07 |
| 56 | Na-22 | 3.21000E-08 |
| 97 | Pu-240 | 3.61000E-05 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **CP-12-19-F**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 1.7940 | 6 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 28.1060 | 94 |
| | | | 29.9000 | |

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 2

**Copy of "400 Area WMU Waste Profile Sheet, "dated April 12, 2012.**

# 400 Area WMU Waste Profile Sheet



## A. Generator Information

1. Company name: **CH2M Hill Plateau Remediation Company**
2. Address: **US Department of Energy - Hanford Site, Richland, Washington**
3. Generator facility: **Fast Flux Test Facility, Hanford Site 400 Area**

4. Primary Technical Contact: **Dave L. Romine** email: **David_L_Romine@rl.gov** Phone: **(509) 376-1880**

5. DOE Contact: **Mike S. Collins** email: **Michael.collins@rl.doe.gov** Phone: **(509) 376-6536**

6. Generator's EPA Identification Number (If profile involves hazardous waste): **WA7890008967**

## B. General Waste Stream Information

1. Waste stream name: **400 Area Waste Management Unit - Sodium and Potassium Wastes**

2. Waste generating process description: **Waste stored in the Treatment, Storage, and/or Disposal (TSD) unit consists of Fast Flux Test Facility (FFTF) waste, matrices in existence within the 400 Area prior to the effective date of the 400 Area Waste Management Unit (WMU) RCRA Permit, and wastes generated in association with former FFTF operations currently in storage at other Hanford Facility locations. Contaminated debris includes specialized sodium filled monitoring equipment such as a thorium-yttrium oxygen monitor. The Permit limits the waste stored as being mixed waste.**

   **The 400 Area WMU consists of two storage areas, the Fuel Storage Facility (FSF-Building 403) and the Interim Storage Area (ISA). The FFTF (a liquid-sodium metal cooled research reactor) developed and tested mixed oxide (Pu and U) fuels for the US Department of Energy (DOE) Liquid Metal Fast Breeder Reactor Program. Hallam Reactor Sodium was used for the initial fill of FFTF Fuel Storage Facility.**

   **The waste generating process can include using materials during packaging that will prevent or deter the reaction of the sodium (Na) and the sodium-potassium (NaK) while in storage. These materials can include, but are not limited to fire extinguishing media such as NaX (MSDS# 10884) and inert gases such as argon.**

3. Waste Category:

   ☒ Mixed Low-Level ☐ Hazardous

   **Mixed low-level waste (MLLW) consists of elemental Na and NaK (D001, D003, WSC2) and contaminated equipment and debris (for example piping, equipment, and components) from FFTF deactivation/decommissioning, surveillance, and maintenance. Based on known chemical properties of Na and NaK, small amounts of concentrated sodium hydroxide (NaOH) or potassium hydroxide (KOH) (D002) and trace amounts of hydrogen may be generated if the Na and NaK contacts water vapor in the air during storage. Packaging of the waste can introduce other chemicals or materials as long as the waste designation is not affected.**

   **Sodium contaminated waste from former FFTF activities stored at other Hanford Site locations could be transferred to the 400 Area WMU for consolidation with the 400 Area generated wastes. Mixed waste transfers to the 400 Area WMU will be conducted under WA7890008967, *Hanford Facility RCRA Permit, Part III Operating Unit 16* (Attachment 1).**

## C. Physical/Chemical Characterization

1. Physical/Chemical process knowledge. Describe the process knowledge information used for physical/chemical characterization of this waste stream:

   ☒ Material Safety Data Sheets: **As described in Addendum B, Waste Analysis Plan (Reference), Material Safety Data Sheets (MSDS) will be used to characterize waste materials, if available. MSDS are a primary knowledge tool and will be referenced using Hanford Site MSDS number(s).**

   ☒ Mass balance from process inputs: **Mass balance from process input information will be used to the extent such data provides a sufficient understanding of waste stream characteristics and constituents. Mass balance or material balance information is based on conservation of mass (i.e., the mass of inputs to a process balance the mass of outputs as products, emissions, and wastes).**

# 400 Area WMU Waste Profile Sheet

☒ Historical process and analytical data: **Historical FFTF process and analytical data for the waste are the primary methods used for waste characterization. The information will generally be developed from background documents (e.g., interview information, logbooks, procurement records, radiation work packages, procedures, process flow charts, and vendor information); engineering documents and calculations; analytical laboratory analyses; waste designations; container inventory records; and other paperwork.**

☒ Physical/chemical characterization varies. Check this box when the characterization strategy varies from container to container: **Any combination of the above, MSDS, mass balance, historical process, and analytical data will be used for waste characterization.**

2. Physical/chemical analysis. Describe the sampling and analysis performed to characterize this waste stream: **No further chemical testing of the 400 Area WMU Na and NaK wastes is planned because of knowledge developed from former FFTF operations. Additional analytical laboratory analyses are also not required to safely store the Na and NaK wastes at the 400 Area WMU.**

3. Regulatory status. Check all boxes below that describe the regulatory status of the waste stream:

☒ Federally regulated (RCRA) hazardous waste (40 CFR 261). List all RCRA U, P, F, K or D waste codes that apply to the waste stream; place waste codes that do not apply to all containers in parentheses: **(D001-ignitable solid, D002-caustic, and D003-water reactive).**

☒ Washington State dangerous waste (WAC 173-303). List all Washington waste codes that apply; place waste codes that do not apply to all containers in parentheses: **(WSC2-caustic).**

4. Federal land disposal restrictions. Check all boxes that apply:

☒ Waste stream requires treatment to meet land disposal restrictions of 40 CFR Part 268.
If checked, provide the following information:
☒ Non-wastewater ☒ Hazardous debris

5. Waste characteristics. Check any of the boxes for regulated characteristics that apply to the waste stream:

☐ Flash point < 38°C ☐ Flash point 38°C – < 60°C ☐ Flash point 60°C – 93.3°C
☒ Ignitable solid ☐ Oxidizer
☐ pH 2 or less ☒ pH 12.5 or greater
☐ Liquid that corrodes steel at a rate greater than or equal to 0.25 inches/year
☐ Reactive cyanide ☐ Reactive sulfide ☒ Water Reactive
☒ Explosive, unstable or pyrophoric ☐ Generates toxic gases, vapors or fumes

6. Physical state:
☒ Liquid ☐ Sludge ☒ Debris ☒ Solid
☒ Powder/Dust ☐ Sealed Source ☐ Encapsulated ☐ Solidified
☐ Other; describe:

7. Liquid form. If the waste stream contains liquid, check all that apply:
☒ Containerized liquid ☐ Absorbed Liquid ☐ Stabilized liquid

8. Other contents: Check any of the following that are components of the waste stream, and provide a description of how the waste acceptance criteria for each are met:

☐ Animal carcasses ☐ Infectious waste ☐ Vegetation ☐ Free liquids
☐ Chelating agents ☐ Organic liquids ☐ Asbestiform (Friable) ☒ Particulates
☒ Gases ☐ PCBs ☐ Explosives ☒ Pyrophorics
☐ Beryllium Dust ☐ Gloveboxes ☐ HEPA or Pre-Filters ☐ Other

9. Waste composition. Describe the gross composition/component of the waste stream and all hazardous constituents that contribute to any waste codes or LDR treatment standards.
☒ Check this box if the chemical composition varies greatly from container to container, and provide bounding values or ranges here. Further evaluation will occur on the specific package paperwork as it is provided for highly variable streams.

| CAS Number | Chemical constituent | Waste Component | Estimated weight percent ☒<br>Estimated volume percent ☐ |
|---|---|---|---|
| **11135-81-2** | **Sodium/Potassium** | **Sodium-potassium alloy (NaK)** | **22% Na/78% K** |
| **7440-23-5** | **Sodium** | **Sodium (elemental)** | **0.0 - 100.0** |
| **7440-09-7** | **Sodium-Potassium** | **Debris contamination** | **0.0 - 50.0** |
| **7440-23-5** | **Sodium** | **Debris contamination** | **0.0 - 50.0** |
| **1310-58-3** | **Potassium hydroxide** | **Debris contamination** | **0.0 - 50.0** |
| **1310-73-2** | **Sodium hydroxide** | **Debris contamination** | **0.0 - 50.0** |
| **497-19-8** | **Sodium Carbonate** | **Constituent in NaX** | **0.0 - 50.0** |
| **8031-18-3** | **Magnesium Aluminum Silicate** | **Constituent in NaX** | **0.0 - 50.0** |
| **7440-37-1** | **Argon gas** | **Gas environment** | **0.0 – 50.0** |
| | **Metal (nonhazardous)** | **Debris** | **0.0 - 100.0** |
| | **Paper** | **Debris** | **0.0 - 50.0** |
| | **Plastic** | **Debris** | **0.0 - 50.0** |
| | **Rubber** | **Debris** | **0.0 - 50.0** |
| | **Glass** | **Debris** | **0.0 - 50.0** |
| | **Cloth/Rags** | **Debris** | **0.0 - 50.0** |
| | **Wood** | **Debris** | **0.0 - 50.0** |
| | **Tape** | **Debris** | **0.0 - 50.0** |
| | **Fiberglass** | **Debris** | **0.0 - 50.0** |
| | **RTV** | **Debris** | **0.0 - 50.0** |

## D. Radiological Characterization

1. Radiological process knowledge. Describe the source(s) of the radioactive material in this waste stream (i.e., the radiological processes that introduced the radioactive material into the waste stream).

**The source of the radioactive material present in the 400 Area WMU MLLW stream is the mixed-oxide (MOX) fuel used in the reactor and associated daughter products and activities in support of the FFTF operations and deactivation. Under normal FFTF operating conditions, the MOX mixture consisted of plutonium oxide ($PuO_2$) and uranium oxide ($UO_2$), the Pu being mostly the fissile isotope Pu-239. The U was depleted (i.e., almost entirely U-238 [ $\leq$ 0.2% U-235]). The maximum Pu fraction in the fuel was 25-30%.**

**In addition, Cs-137 is expected as a contaminant in the FSF core components pots. Cesium is a fission product that is released from the fuel to the sodium and cover gas systems when fuel pin cladding failure occurs.**

**Radiological characterization methods could include those items that are checked:**

☒ Radionuclide material accountability: **The content of a given radionuclide could be determined by documented logs detailing the mass or activity of the radionuclide added to and leaving the waste in a controlled process.**

☒ Radiochemical analysis: **Historical knowledge as well as additional isotopic analysis may be used to characterize the waste. If additional analysis is performed, the analytical laboratory test results will be provided with waste container paperwork.**

☒ Field measurement instruments: **Isotopic surveys with field instruments may be used to characterize the waste. The instrumentation selected must be appropriately sensitive and accurate for waste classification. Analysis methods that measure gross activity (i.e., not radionuclide specific) must be used in conjunction with other methods to determine the relative concentration of each suspected radionuclide.**

☒ Scaling factors: **Scaling factors may be used to relate the concentration of a readily measured radionuclide to more difficult-to-measure radionuclides. When used, scaling factor development information will be supplied with the waste container paperwork.**

☒ Computer models: **Computer modeling could be used in conjunction with other methods for radiological characterization. Computer modeling information and similar analysis, if performed, will be supplied with the waste container paperwork.**

☒ Other: **Any combination of the radiological characterization methods described above.**

3. Estimated Radiation Dose of package(s) (mSv/hr):

Surface: **≤ 2.0 (200.0 mR/hr)** 30 cm: **≤ 1.0 (100.0 mR/hr)**

## E. Packaging

1. Packaging used. Check the applicable boxes.

☒ Drum; describe size(s): **Any size containers, for example 19.0 L (5.0 gal) to 416.0 L (110.0 gal) metal drums.**

☒ Metal box; describe size(s): **As described in the 400 Area WMU Permit, Addendum C.**

☒ Unique Components: **As described in the 400 Area WMU Permit, Addendum C.**

☒ Packaging Materials: **Materials such as sorbents used to absorb free liquids and moisture, and materials to aid in the prevention of reaction, such as NaX fire extinguisher media or argon are used.**

2. Maximum container size: **The maximum container size is limited by the quantity in the Part A, such that 1,000 gallons is not exceeded in the FSF and 19,000 gallons is not exceeded in the ISA.**

3. Describe any liners/protective coatings used to ensure that the container is compatible with the waste: **Liners/protective coatings will be used, if needed. The standard liner used at the Hanford Site is the 10-mil nylon-reinforced polyethylene liner. Any combination of container liner/protective coatings that is compatible with the waste can be used.**

## F. Reference

**WA7890008967, *Hanford Facility RCRA Permit, Part III Operating Unit 16, 400 Area WMU***
***http://msc.rl.gov/rapidweb/ENVPRO-RCRA/Index.cfm?PageNum=129***

## G. Generator Signatures

To the best of my knowledge, the information provided on this form and the attached documentation is a full, true and accurate description of the waste stream. Willful and deliberate omissions have not been made. All known and suspected hazardous materials have been disclosed.

400 Area WMU Authorized Representative: **D.L. Romine** Date: 4/12/12

Signature: David L Romine

400 Area WMU Environmental Compliance Officer: **L.C. Tuott** Date: 4-12-12

Signature: L C Tuott

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 3

**Copy of the Training Plans and Completion Dates for Individuals that Perform the Inspections (Nuclear Chemical Operators) at the 400 ISA and FSF.**

# Training Plan by HID

Data as of: 05/28/2014



**Name:** Malley, Tim R **Hanford ID:** 0061634 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **--- ALL CHPRC Employee Training (1363) ---** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 01/20/2014 | 01/20/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 01/20/2014 | 01/20/2015 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 10/06/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/19/2010 | | 600045 | | | |
| **--- Class 1 Aerial Lift (5519) ---** | | | | | | | | | |
| 043832 | AERIAL LIFT SAFETY | 60 | Y | 10/15/2012 | 10/15/2017 | 044681 | 0427AL | | |
| 044681 | CLASS 1 SELF PROPELLED BOOM SUPPORTED | 60 | Y | 10/15/2012 | 10/15/2017 | 044681 | 044681 | | |
| **--- CP S&M - Nuclear Chemical Operator (NCO) (1736) ---** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 02/11/1994 | | 000390 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 03/31/1997 | | 000397 | | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL | 12 | Y | 05/20/2014 | 05/20/2015 | 310R56 | 003056 | | |
| 003057 | LOTO-CO-HANGER/VERIFIER/REMOVER PRACTICAL | 12 | Y | 05/20/2014 | 05/20/2015 | 310R57 | 003057 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 05/20/2014 | 05/20/2015 | 00310R | 00310R | | |
| 004140 | BERYLLIUM WORKER TRAINING | 24 | Y | 03/05/2013 | 03/05/2015 | 004150 | 004150 | | |
| 020010 | CRITICALITY SAFETY TRAINING - FISSIONABLE | 24 | Y | 09/18/2012 | 09/18/2014 | 020110 | 020110 | 09/08/2014 | 020110 |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 04/24/2003 | | 035100 | | | |
| 02006L | ASBESTOS AWARENESS | 12 | Y | 05/01/2014 | 05/23/2015 | 170057 | 170063 | | |
| 020075 | HAZARDOUS MATERIALS GENERAL AWARENESS | 36 | Y | 01/04/2012 | 01/04/2015 | 020075 | 020075 | | |
| 020077 | HAZARDOUS MATERIALS DRIVERS TRAINING | 36 | Y | 01/24/2012 | 01/24/2015 | 020077 | 020077 | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 08/17/2011 | | 020134 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 08/24/2009 | | 020147 | | | |
| 020150 | LEAD (Pb) WORKER TRAINING (LWT) | 12 | Y | 04/01/2014 | 04/01/2015 | 020152 | 020152 | | |
| 020193 | HEAT STRESS PREVENTION AND FIRST AID - CBT | 24 | Y | 01/11/2013 | 01/11/2015 | 020193 | 020193 | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 01/20/2014 | 01/20/2015 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 03/26/2014 | 03/26/2016 | 020441 | 020441 | | |
| 031220 | 40-HOUR HAZARDOUS WASTE SITE WORKER | 12 | Y | 06/11/2013 | 06/11/2014 | 032020 | 032020 | 06/10/2014 | 032020 |
| 031420 | 3-DAY SUPERVISED FIELD EXPERIENCE | 0 | Y | 04/08/1998 | | 031420 | | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 01/20/2014 | 01/20/2015 | 035110 | 035110 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 11/13/2003 | | 044370 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 06/30/2005 | | 044391 | | | |
| 044400 | FIRE WATCH TRAINING | 36 | Y | 03/27/2013 | 03/27/2016 | 044400 | 044400 | | |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL | 36 | Y | 12/06/2011 | 12/06/2014 | 044481 | 044480 | | |
| 044605 | EQUIPMENT OPERATION NEAR POWER LINES | 0 | Y | 08/23/2005 | | 044605 | | | |
| 170055 | CERTIFIED ASBESTOS WORKER | 12 | Y | 05/01/2014 | 05/23/2015 | 170057 | 170057 | | |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 07/15/2013 | 07/15/2015 | 170501 | 170501 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 10/03/2012 | 10/03/2014 | 290002 | 290002 | | |

# Training Plan by HID



**Name:** Malley, Tim R **Hanford ID:** 0061634 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/08/2012 | 08/08/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 08/06/2012 | 08/06/2014 | 290004 | 290004 | | |
| 290130 | TSD FACILITIES & WASTE SITE OVERVIEW -CBT | 12 | Y | 04/01/2014 | 04/01/2015 | 290130 | 290130 | | |
| 290147 | CRITICALITY SAFETY JSO FMH - S&M/2E/W D-4 | 24 | Y | 01/09/2013 | 01/09/2015 | 290147 | 290147 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 12/23/2013 | 12/23/2014 | 290200 | 290200 | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 01/20/2014 | 01/20/2015 | 324033 | 324033 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (5274) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 01/20/2014 | 01/20/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 01/20/2014 | 01/20/2015 | 000006 | 000006 | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 01/20/2014 | 01/20/2015 | 035110 | 035110 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 10/03/2012 | 10/03/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/08/2012 | 08/08/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 08/06/2012 | 08/06/2014 | 290004 | 290004 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 12/23/2013 | 12/23/2014 | 290200 | 290200 | | |
| **— CP S&M Nuclear Chemical Operator (NCO) - Core (1735) —** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 05/14/2013 | 05/14/2015 | 020003 | 020003 | | |
| 065911 | CORE FUNDAMENTALS - MATHEMATICS | 0 | Y | 04/22/1994 | | 065911 | | | |
| 065912 | CORE FUNDAMENTALS - CHEMISTRY | 0 | Y | 04/29/1994 | | 065912 | | | |
| 065914 | CORE FUNDAMENTALS - ELECTRICAL | 0 | Y | 04/22/1994 | | 065914 | | | |
| 065915 | CORE FUNDAMENTALS - INSTRUMENTATION | 0 | Y | 05/12/1994 | | 065915 | | | |
| 065917 | CORE FUNDAMENTALS - MECHANICAL | 0 | Y | 05/19/1994 | | 065917 | | | |
| 080403 | WORKPLACE SUBSTANCE ABUSE PROGRAM POLICY | 24 | Y | 12/03/2012 | 12/03/2014 | 080403 | 080403 | | |
| 600078 | CHPRC VEHICLE SPOTTER AWARENESS TRAINING | 0 | Y | 03/30/2011 | | 600078 | | | |
| **— DSA Annual Briefings (1710) —** | | | | | | | | | |
| 290615 | 224-B 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290615 | | | |
| 290616 | 224-T 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290616 | | | |
| 290617 | FFTF 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290617 | | | |
| 290618 | REDOX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/18/2013 | | 290618 | | | |
| 290619 | U-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/18/2013 | | 290619 | | | |
| 290620 | B-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/18/2013 | | 290620 | | | |
| 290621 | PUREX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/18/2013 | | 290621 | | | |
| **— Electrical Hazards Breakers (5597) —** | | | | | | | | | |
| 043820 | BREAKER OPERATION ELECTRICAL SAFETY | 36 | Y | 07/16/2013 | 07/16/2016 | 043820 | 043820 | | |
| **— Global Harmonization Systems Trng - CBT (GHS-1) —** | | | | | | | | | |
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 01/11/2013 | | 600400 | 600400 | | |

# Training Plan by HID



**Name:** Malley, Tim R **Hanford ID:** 0061634 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **---- Gov't Vehicle Drivers Awareness & Practical (1507) ----** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 11/19/2010 | | 301846 | | | |
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 08/02/2010 | | 301845 | | | |
| **---- OUO Information Requirements - CBT (1364) ----** | | | | | | | | | |
| 000030 | OFFICIAL USE ONLY INFORMATION REQUIREMENTS - | 12 | Y | 01/20/2014 | 01/20/2015 | 000030 | 000030 | | |
| **---- RESP - Bottle Cart Operator (5705) ----** | | | | | | | | | |
| 020047 | BOTTLE CART SUPPLIED AIR SYSTEM OPERATOR | 12 | Y | 05/14/2014 | 05/14/2015 | 02R047 | 02R047 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| **---- RESP - Issuer (5707) ----** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 09/17/2013 | 09/17/2014 | 020104 | 020104 | 08/11/2014 | 020104 |
| **---- RESP - MSA Adv 200 (5690) ----** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 05/14/2014 | 05/14/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| 020542 | MSA ADVANTAGE 200 1/2 FACE AIR PURIFYING | 12 | Y | 05/14/2014 | 05/14/2015 | 02R542 | 02R542 | | |
| **---- RESP - MSA MMIIK (5702) ----** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 05/14/2014 | 05/14/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 05/14/2014 | 05/14/2015 | 02R527 | 02R527 | | |
| 020532 | MSA MMK PAPR FACEPIECE | 12 | Y | 05/14/2014 | 05/14/2015 | 02R532 | 02R532 | | |
| **---- RESP - MSA TL (5694) ----** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 05/14/2014 | 05/14/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| 020525 | MSA TL PAPR FACEPIECE / HOOD | 12 | Y | 05/14/2014 | 05/14/2015 | 02R525 | 02R525 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 05/14/2014 | 05/14/2015 | 02R527 | 02R527 | | |
| **---- Respiratory Issuer QC - CPS&M (1174-5) ----** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 05/14/2014 | 05/14/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 09/17/2013 | 09/17/2014 | 020104 | 020104 | 08/11/2014 | 020104 |
| 290210 | CP S&M RESPIRATORY PROTECTION ISSUER | 0 | Y | 01/02/2013 | | 290210 | | | |
| **---- S&M FACILITY EMERGENCY RESPONSE ORGANIZATION (FERO (4670) ----** | | | | | | | | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 01/20/2014 | 01/20/2015 | 324033 | 324033 | | |
| **---- Temp Radiological Containments (5676) ----** | | | | | | | | | |
| 020729 | INSTALLATION, INSPECTION AND REMOVAL OF | 0 | Y | 05/13/2003 | | 020729 | | | |

# Training Plan by HID



**Name:** Malley, Tim R **Hanford ID:** 0061634 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|

**Medical Schedule Dates**

| Last Exam Date | Next Exam Date | Program | Status | Clearance Date | Expiration Date |
|---|---|---|---|---|---|
| 04/10/2014 | 04/10/2014 | RESP | CLEARED | 04/10/2014 | 04/10/2015 |

**Dosimetry Schedule Dates**

| Exam Type and Description | Exam Date | Exam Time | Last Exam Date |
|---|---|---|---|

# Training Plan by HID

Data as of: 05/28/2014


**Name:** Older, Deborah S **Hanford ID:** 0067354 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **--- ALL CHPRC Employee Training (1363) ---** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 08/07/2013 | 08/07/2014 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 08/07/2013 | 08/07/2014 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 10/12/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/13/2010 | | 600045 | | | |
| **--- CP S&M - Nuclear Chemical Operator (NCO) (1736) ---** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 11/18/1993 | | 000390 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 10/09/2012 | | 000397 | | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL | 12 | Y | 06/18/2013 | 06/18/2014 | 310R56 | 003056 | | |
| 003057 | LOTO-CO-HANGER/VERIFIER/REMOVER PRACTICAL | 12 | Y | 06/18/2013 | 06/18/2014 | 310R57 | 003057 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 06/18/2013 | 06/18/2014 | 00310R | 00310R | 06/17/2014 | 00310R |
| 004140 | BERYLLIUM WORKER TRAINING | 24 | Y | 02/13/2013 | 02/13/2015 | 004150 | 004150 | | |
| 020010 | CRITICALITY SAFETY TRAINING - FISSIONABLE | 24 | Y | 08/13/2012 | 08/13/2014 | 020110 | 020110 | 08/04/2014 | 020110 |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 02/13/2002 | | 035100 | | | |
| 02006L | ASBESTOS AWARENESS | 12 | Y | 03/18/2014 | 03/19/2015 | 170057 | 170063 | | |
| 020075 | HAZARDOUS MATERIALS GENERAL AWARENESS | 36 | Y | 04/17/2013 | 04/17/2016 | 020075 | 020075 | | |
| 020077 | HAZARDOUS MATERIALS DRIVERS TRAINING | 36 | Y | 06/13/2013 | 06/13/2016 | 020077 | 020077 | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 08/26/2011 | | 020134 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 02/10/1999 | | 020140 | | | |
| 020150 | LEAD (Pb) WORKER TRAINING (LWT) | 12 | Y | 08/07/2013 | 08/07/2014 | 020152 | 020152 | | |
| 020193 | HEAT STRESS PREVENTION AND FIRST AID - CBT | 24 | Y | 08/07/2013 | 08/07/2015 | 020193 | 020193 | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 08/07/2013 | 08/07/2014 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 12/05/2013 | 12/05/2015 | 020441 | 020441 | | |
| 031220 | 40-HOUR HAZARDOUS WASTE SITE WORKER | 12 | Y | 03/11/2014 | 03/11/2015 | 032020 | 032020 | | |
| 031420 | 3-DAY SUPERVISED FIELD EXPERIENCE | 0 | Y | 05/22/2003 | | 031420 | | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 08/07/2013 | 08/07/2014 | 035110 | 035110 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 10/01/2003 | | 044371 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 06/30/2005 | | 044391 | | | |
| 044400 | FIRE WATCH TRAINING | 36 | Y | 12/05/2013 | 12/05/2016 | 044400 | 044400 | | |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL | 36 | Y | 04/29/2013 | 04/29/2016 | 044480 | 044480 | | |
| 044605 | EQUIPMENT OPERATION NEAR POWER LINES | 0 | Y | 08/23/2005 | | 044605 | | | |
| 170055 | CERTIFIED ASBESTOS WORKER | 12 | Y | 03/18/2014 | 03/19/2015 | 170057 | 170057 | | |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 02/04/2013 | 02/04/2015 | 170501 | 170501 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 08/10/2012 | 08/10/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/10/2012 | 08/10/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 10/03/2012 | 10/03/2014 | 290004 | 290004 | | |
| 290130 | TSD FACILITIES & WASTE SITE OVERVIEW -CBT | 12 | Y | 12/03/2013 | 12/03/2014 | 290130 | 290130 | | |

# Training Plan by HID



**Name:** Older, Deborah S **Hanford ID:** 0067354 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 290147 | CRITICALITY SAFETY JSO FMH - S&M/2E/W D-4 | 24 | Y | 09/24/2012 | 09/24/2014 | 290147 | 290147 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 08/07/2013 | 08/07/2014 | 290200 | 290200 | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 08/07/2013 | 08/07/2014 | 324033 | 324033 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (5274) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 08/07/2013 | 08/07/2014 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 08/07/2013 | 08/07/2014 | 000006 | 000006 | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 08/07/2013 | 08/07/2014 | 035110 | 035110 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 08/10/2012 | 08/10/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/10/2012 | 08/10/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 10/03/2012 | 10/03/2014 | 290004 | 290004 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 08/07/2013 | 08/07/2014 | 290200 | 290200 | | |
| **— CP S&M Nuclear Chemical Operator (NCO) - Core (1735) —** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 01/31/2013 | 01/31/2015 | 020003 | 020003 | | |
| 065911 | CORE FUNDAMENTALS - MATHEMATICS | 0 | Y | 08/05/1994 | | 065911 | | | |
| 065912 | CORE FUNDAMENTALS - CHEMISTRY | 0 | Y | 08/12/1994 | | 065912 | | | |
| 065914 | CORE FUNDAMENTALS - ELECTRICAL | 0 | Y | 08/19/1994 | | 065914 | | | |
| 065915 | CORE FUNDAMENTALS - INSTRUMENTATION | 0 | Y | 08/25/1994 | | 065915 | | | |
| 065917 | CORE FUNDAMENTALS - MECHANICAL | 0 | Y | 09/02/1994 | | 065917 | | | |
| 080403 | WORKPLACE SUBSTANCE ABUSE PROGRAM POLICY | 24 | Y | 12/03/2013 | 12/03/2015 | 080403 | 080403 | | |
| 600078 | CHPRC VEHICLE SPOTTER AWARENESS TRAINING | 0 | Y | 01/11/2011 | | 600078 | | | |
| **— DSA Annual Briefings (1710) —** | | | | | | | | | |
| 290615 | 224-B 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290615 | | | |
| 290616 | 224-T 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290616 | | | |
| 290617 | FFTF 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290617 | | | |
| 290618 | REDOX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290618 | | | |
| 290619 | U-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290619 | | | |
| 290620 | B-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290620 | | | |
| 290621 | PUREX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290621 | | | |
| **— Global Harmonization Systems Trng - CBT (GHS-1) —** | | | | | | | | | |
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 01/21/2013 | | 600400 | 600400 | | |
| **— Gov't Vehicle Drivers Awareness & Practical (1507) —** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 07/23/2010 | | 301846 | | | |
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 06/28/2010 | | 301845 | | | |
| **— OUO Information Requirements - CBT (1364) —** | | | | | | | | | |
| 000030 | OFFICIAL USE ONLY INFORMATION REQUIREMENTS - | 12 | Y | 08/07/2013 | 08/07/2014 | 000030 | 000030 | | |

# Training Plan by HID



**Name:** Older, Deborah S **Hanford ID:** 0067354 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **— RESP - Issuer (5707) —** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 02/06/2014 | 02/06/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 11/19/2013 | 11/19/2014 | 020104 | 020104 | 10/20/2014 | 020104 |
| **— RESP - MSA Adv 200 (5690) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 02/06/2014 | 02/06/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 02/06/2014 | 02/06/2015 | 02R066 | 02R066 | | |
| 020542 | MSA ADVANTAGE 200 1/2 FACE AIR PURIFYING | 12 | Y | 02/06/2014 | 02/06/2015 | 02R542 | 02R542 | | |
| **— RESP - MSA TL (5694) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 02/06/2014 | 02/06/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 02/06/2014 | 02/06/2015 | 02R066 | 02R066 | | |
| 020525 | MSA TL PAPR FACEPIECE / HOOD | 12 | Y | 02/06/2014 | 02/06/2015 | 02R525 | 02R525 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 02/06/2014 | 02/06/2015 | 02R527 | 02R527 | | |
| **— Respiratory Issuer QC - CPS&M (1174-5) —** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 02/06/2014 | 02/06/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 11/19/2013 | 11/19/2014 | 020104 | 020104 | 10/20/2014 | 020104 |
| 290210 | CP S&M RESPIRATORY PROTECTION ISSUER | 0 | Y | 03/25/2013 | | 290210 | | | |
| **— S&M FACILITY EMERGENCY RESPONSE ORGANIZATION (FERO (4670) —** | | | | | | | | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 08/07/2013 | 08/07/2014 | 324033 | 324033 | | |
| **— Temp Radiological Containments (5676) —** | | | | | | | | | |
| 020729 | INSTALLATION, INSPECTION AND REMOVAL OF | 0 | Y | 05/15/2000 | | 020729 | | | |

## Medical Schedule Dates

| Last Exam Date | Next Exam Date | Program | Status | Clearance Date | Expiration Date |
|---|---|---|---|---|---|
| 12/03/2013 | 07/17/2014 | RESP | CLEARED | 12/03/2013 | 12/03/2014 |

## Dosimetry Schedule Dates

| Exam Type and Description | | Exam Date | Exam Time | Last Exam Date |
|---|---|---|---|---|
| C | CHEST COUNT | 04/09/2014 | 0800 | 04/09/2014 |
| WC | COAXIAL WHOLE BODY | 04/09/2014 | 0800 | 04/09/2014 |

# Training Plan by HID



**Name:** Ramos, Jose L **Hanford ID:** 0061769 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **--- ALL CHPRC Employee Training (1363) ---** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 01/09/2014 | 01/09/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 01/20/2014 | 01/20/2015 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 10/08/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/13/2010 | | 600045 | | | |
| **--- Class 1 Aerial Lift (5519) ---** | | | | | | | | | |
| 043832 | AERIAL LIFT SAFETY | 60 | Y | 03/16/2011 | 03/16/2016 | 042720 | 0427AL | | |
| 044681 | CLASS 1 SELF PROPELLED BOOM SUPPORTED | 60 | Y | | | | 044681 | | |
| **--- Class 3 Aerial Lift (5521) ---** | | | | | | | | | |
| 043832 | AERIAL LIFT SAFETY | 60 | Y | 03/16/2011 | 03/16/2016 | 042720 | 0427AL | | |
| 04468B | CLASS 3 SELF-PROPELLED PLATFORM AERIAL LIFT | 60 | Y | | | | 04468B | | |
| **--- CP S&M - Nuclear Chemical Operator (NCO) (1736) ---** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 09/14/1989 | | 000385 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 05/20/1997 | | 000397 | | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL | 12 | Y | 05/21/2014 | 05/21/2015 | 310R56 | 003056 | | |
| 003057 | LOTO-CO-HANGER/VERIFIER/REMOVER PRACTICAL | 12 | Y | 05/21/2014 | 05/21/2015 | 310R57 | 003057 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 05/21/2014 | 05/21/2015 | 00310R | 00310R | | |
| 004140 | BERYLLIUM WORKER TRAINING | 24 | Y | 04/23/2013 | 04/23/2015 | 004150 | 004150 | | |
| 020010 | CRITICALITY SAFETY TRAINING - FISSIONABLE | 24 | Y | 02/04/2013 | 02/04/2015 | 020110 | 020110 | | |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 04/17/2002 | | 035100 | | | |
| 02006L | ASBESTOS AWARENESS | 12 | Y | 03/03/2014 | 03/19/2015 | 170057 | 170063 | | |
| 020075 | HAZARDOUS MATERIALS GENERAL AWARENESS | 36 | Y | 11/05/2013 | 11/05/2016 | 020075 | 020075 | | |
| 020077 | HAZARDOUS MATERIALS DRIVERS TRAINING | 36 | Y | 06/04/2013 | 06/04/2016 | 020077 | 020077 | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 11/09/2011 | | 020134 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 11/07/1994 | | 020140 | | | |
| 020150 | LEAD (Pb) WORKER TRAINING (LWT) | 12 | Y | 08/23/2013 | 08/23/2014 | 020152 | 020152 | | |
| 020193 | HEAT STRESS PREVENTION AND FIRST AID - CBT | 24 | Y | 07/11/2013 | 07/11/2015 | 020193 | 020193 | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 07/11/2013 | 07/11/2014 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 04/30/2014 | 04/30/2016 | 020441 | 020441 | | |
| 031220 | 40-HOUR HAZARDOUS WASTE SITE WORKER | 12 | Y | 01/22/2014 | 01/22/2015 | 032020 | 032020 | | |
| 031420 | 3-DAY SUPERVISED FIELD EXPERIENCE | 0 | Y | 05/22/2003 | | 031420 | | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 01/24/2014 | 01/24/2015 | 035110 | 035110 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 10/01/2003 | | 044370 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 06/20/2005 | | 044391 | | | |
| 044400 | FIRE WATCH TRAINING | 36 | Y | 02/13/2014 | 02/13/2017 | 044400 | 044400 | | |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL | 36 | Y | 04/22/2013 | 04/22/2016 | 044480 | 044480 | | |

# Training Plan by HID



**Name:** Ramos, Jose L **Hanford ID:** 0061769 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 044605 | EQUIPMENT OPERATION NEAR POWER LINES | 0 | Y | 07/11/2005 | | 044605 | | | |
| 170055 | CERTIFIED ASBESTOS WORKER | 12 | Y | 03/03/2014 | 03/19/2015 | 170057 | 170057 | | |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 04/25/2013 | 04/25/2015 | 170501 | 170501 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 09/17/2012 | 09/17/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 09/17/2012 | 09/17/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 09/17/2012 | 09/17/2014 | 290004 | 290004 | | |
| 290130 | TSD FACILITIES & WASTE SITE OVERVIEW -CBT | 12 | Y | 04/08/2014 | 04/08/2015 | 290130 | 290130 | | |
| 290147 | CRITICALITY SAFETY JSO FMH - S&M/2E/W D-4 | 24 | Y | 03/04/2014 | 03/04/2016 | 290147 | 290147 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 04/08/2014 | 04/08/2015 | 290200 | 290200 | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 04/08/2014 | 04/08/2015 | 324033 | 324033 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (5274) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 01/09/2014 | 01/09/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 01/20/2014 | 01/20/2015 | 000006 | 000006 | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 01/24/2014 | 01/24/2015 | 035110 | 035110 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 09/17/2012 | 09/17/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 09/17/2012 | 09/17/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 09/17/2012 | 09/17/2014 | 290004 | 290004 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 04/08/2014 | 04/08/2015 | 290200 | 290200 | | |
| **— CP S&M Nuclear Chemical Operator (NCO) - Core (1735) —** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 11/28/2012 | 11/28/2014 | 020003 | 020003 | | |
| 065911 | CORE FUNDAMENTALS - MATHEMATICS | 0 | Y | 07/01/1994 | | 065911 | | | |
| 065912 | CORE FUNDAMENTALS - CHEMISTRY | 0 | Y | 08/04/1994 | | 065912 | | | |
| 065914 | CORE FUNDAMENTALS - ELECTRICAL | 0 | Y | 07/22/1994 | | 065914 | | | |
| 065915 | CORE FUNDAMENTALS - INSTRUMENTATION | 0 | Y | 09/30/1994 | | 065915 | | | |
| 065917 | CORE FUNDAMENTALS - MECHANICAL | 0 | Y | 08/12/1994 | | 065917 | | | |
| 080403 | WORKPLACE SUBSTANCE ABUSE PROGRAM POLICY | 24 | Y | 01/13/2014 | 01/13/2016 | 080403 | 080403 | | |
| 600078 | CHPRC VEHICLE SPOTTER AWARENESS TRAINING | 0 | Y | 02/08/2011 | | 600078 | | | |
| **— DSA Annual Briefings (1710) —** | | | | | | | | | |
| 290615 | 224-B 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290615 | | | |
| 290616 | 224-T 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290616 | | | |
| 290617 | FFTF 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290617 | | | |
| 290618 | REDOX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290618 | | | |
| 290619 | U-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290619 | | | |
| 290620 | B-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290620 | | | |
| 290621 | PUREX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290621 | | | |
| **— Global Harmonization Systems Trng - CBT (GHS-1) —** | | | | | | | | | |

# Training Plan by HID



**Name:** Ramos, Jose L **Hanford ID:** 0061769 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 02/12/2013 | | 600400 | 600400 | | |
| **--- Gov't Vehicle Drivers Awareness & Practical (1507) ---** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 11/01/2010 | | 301846 | | | |
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 06/28/2010 | | 301845 | | | |
| **--- OUO Information Requirements - CBT (1364) ---** | | | | | | | | | |
| 000030 | OFFICIAL USE ONLY INFORMATION REQUIREMENTS - | 12 | Y | 11/13/2013 | 11/13/2014 | 000030 | 000030 | | |
| **--- RESP - Issuer (5707) ---** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 12/10/2013 | 12/10/2014 | 020104 | 020104 | 11/10/2014 | 020104 |
| **--- RESP - MSA Adv 200 (5690) ---** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 12/03/2013 | 12/03/2014 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020542 | MSA ADVANTAGE 200 1/2 FACE AIR PURIFYING | 12 | Y | 12/03/2013 | 12/03/2014 | 02R542 | 02R542 | | |
| **--- RESP - MSA MMIIK (5702) ---** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 12/03/2013 | 12/03/2014 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 12/03/2013 | 12/03/2014 | 02R527 | 02R527 | | |
| 020532 | MSA MMK PAPR FACEPIECE | 12 | Y | 12/03/2013 | 12/03/2014 | 02I532 | 02R532 | | |
| **--- RESP - MSA TL (5694) ---** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 12/03/2013 | 12/03/2014 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020525 | MSA TL PAPR FACEPIECE / HOOD | 12 | Y | 12/03/2013 | 12/03/2014 | 02R525 | 02R525 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 12/03/2013 | 12/03/2014 | 02R527 | 02R527 | | |
| **--- RESP - SCBA with Scott O-Vista (5710) ---** | | | | | | | | | |
| 020030 | SCOTT SCBA | 12 | Y | 12/03/2013 | 12/03/2014 | 02R030 | 02R030 | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 12/03/2013 | 12/03/2014 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020536 | SCOTT O-VISTA / AV2000 AIR PURIFYING RESPIRATOR | 12 | Y | 12/03/2013 | 12/03/2014 | 02R536 | 02R536 | | |
| **--- Respiratory Issuer QC - CPS&M (1174-5) ---** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 12/03/2013 | 12/03/2014 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 12/10/2013 | 12/10/2014 | 020104 | 020104 | 11/10/2014 | 020104 |
| 290210 | CP S&M RESPIRATORY PROTECTION ISSUER | 0 | Y | 03/10/2014 | | 290210 | | | |
| **--- S&M FACILITY EMERGENCY RESPONSE ORGANIZATION (FERO (4670) ---** | | | | | | | | | |

# Training Plan by HID



**Name:** Ramos, Jose L **Hanford ID:** 0061769 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 04/08/2014 | 04/08/2015 | 324033 | 324033 | | |
| --- Temp Radiological Containments (5676) --- | | | | | | | | | |
| 020729 | INSTALLATION, INSPECTION AND REMOVAL OF | 0 | Y | 03/15/2000 | | 020729 | | | |

## Medical Schedule Dates

| Last Exam Date | Next Exam Date | Program | Status | Clearance Date | Expiration Date |
|---|---|---|---|---|---|
| 11/11/2013 | 11/11/2013 | RESP | CLEARED | 11/11/2013 | 11/11/2014 |

## Dosimetry Schedule Dates

| Exam Type and Description | | Exam Date | Exam Time | Last Exam Date |
|---|---|---|---|---|
| C | CHEST COUNT | 04/08/2014 | 1300 | 04/08/2014 |
| WC | COAXIAL WHOLE BODY | 04/08/2014 | 1300 | 04/08/2014 |

# Training Plan by HID



**Name:** Reid, Michael R **Hanford ID:** 0107791 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **--- ALL CHPRC Employee Training (1363) ---** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 10/16/2013 | 10/16/2014 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 10/16/2013 | 10/16/2014 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 09/22/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/08/2010 | | 600045 | | | |
| **--- CP S&M - Nuclear Chemical Operator (NCO) (1736) ---** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 10/09/2012 | | 000396 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 10/09/2012 | | 000397 | | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL | 12 | Y | 09/18/2013 | 09/18/2014 | 310R56 | 003056 | | |
| 003057 | LOTO-CO-HANGER/VERIFIER/REMOVER PRACTICAL | 12 | Y | 09/18/2013 | 09/18/2014 | 310R57 | 003057 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 09/18/2013 | 09/18/2014 | 00310R | 00310R | 08/19/2014 | 00310R |
| 004140 | BERYLLIUM WORKER TRAINING | 24 | Y | 09/16/2013 | 09/16/2015 | 004150 | 004150 | | |
| 020010 | CRITICALITY SAFETY TRAINING - FISSIONABLE | 24 | Y | 10/15/2012 | 10/15/2014 | 020110 | 020110 | | |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 08/13/1998 | | 035100 | | | |
| 02006L | ASBESTOS AWARENESS | 12 | Y | 06/06/2013 | 06/25/2014 | 170057 | 170063 | | |
| 020075 | HAZARDOUS MATERIALS GENERAL AWARENESS | 36 | Y | 07/31/2012 | 07/31/2015 | 020075 | 020075 | | |
| 020077 | HAZARDOUS MATERIALS DRIVERS TRAINING | 36 | Y | 06/04/2013 | 06/04/2016 | 020077 | 020077 | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 09/09/2011 | | 020134 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 07/29/1997 | | 020140 | | | |
| 020150 | LEAD (Pb) WORKER TRAINING (LWT) | 12 | Y | 01/24/2014 | 01/24/2015 | 020152 | 020152 | | |
| 020193 | HEAT STRESS PREVENTION AND FIRST AID - CBT | 24 | Y | 11/26/2013 | 11/26/2015 | 020193 | 020193 | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 11/26/2013 | 11/26/2014 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 02/13/2013 | 02/13/2015 | 020441 | 020441 | | |
| 031220 | 40-HOUR HAZARDOUS WASTE SITE WORKER | 12 | Y | 11/20/2013 | 11/20/2014 | 032020 | 032020 | | |
| 031420 | 3-DAY SUPERVISED FIELD EXPERIENCE | 0 | Y | 06/24/2004 | | 031420 | | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 10/07/2013 | 10/07/2014 | 035110 | 035110 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 10/01/2003 | | 044371 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 06/30/2005 | | 044391 | | | |
| 044400 | FIRE WATCH TRAINING | 36 | Y | 12/19/2013 | 12/19/2016 | 044400 | 044400 | | |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL | 36 | Y | 10/15/2012 | 10/15/2015 | 044481 | 044480 | | |
| 044605 | EQUIPMENT OPERATION NEAR POWER LINES | 0 | Y | 08/09/2005 | | 044605 | | | |
| 170055 | CERTIFIED ASBESTOS WORKER | 12 | Y | 06/06/2013 | 06/25/2014 | 170057 | 170057 | 06/02/2014 | 170057 |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 12/13/2012 | 12/13/2014 | 170501 | 170501 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 09/16/2012 | 09/16/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/28/2012 | 08/28/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 08/06/2012 | 08/06/2014 | 290004 | 290004 | | |
| 290130 | TSD FACILITIES & WASTE SITE OVERVIEW -CBT | 12 | Y | 05/28/2013 | 05/28/2014 | 290130 | 290130 | | |

# Training Plan by HID



**Name:** Reid, Michael R **Hanford ID:** 0107791 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 290147 | CRITICALITY SAFETY JSO FMH - S&M/2E/W D-4 | 24 | Y | 01/09/2013 | 01/09/2015 | 290147 | 290147 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 01/24/2014 | 01/24/2015 | 290200 | 290200 | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 10/08/2013 | 10/08/2014 | 324033 | 324033 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (5274) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 10/16/2013 | 10/16/2014 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 10/16/2013 | 10/16/2014 | 000006 | 000006 | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 10/07/2013 | 10/07/2014 | 035110 | 035110 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 09/16/2012 | 09/16/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 08/28/2012 | 08/28/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 08/06/2012 | 08/06/2014 | 290004 | 290004 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 01/24/2014 | 01/24/2015 | 290200 | 290200 | | |
| **— CP S&M Nuclear Chemical Operator (NCO) - Core (1735) —** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 09/25/2012 | 09/25/2014 | 020003 | 020003 | 08/27/2014 | 020003 |
| 065911 | CORE FUNDAMENTALS - MATHEMATICS | 0 | Y | 11/12/2004 | | 065911 | | | |
| 065912 | CORE FUNDAMENTALS - CHEMISTRY | 0 | Y | 12/04/2004 | | 065912 | | | |
| 065914 | CORE FUNDAMENTALS - ELECTRICAL | 0 | Y | 11/18/2004 | | 065914 | | | |
| 065915 | CORE FUNDAMENTALS - INSTRUMENTATION | 0 | Y | 11/24/2004 | | 065915 | | | |
| 065917 | CORE FUNDAMENTALS - MECHANICAL | 0 | Y | 12/12/2004 | | 065917 | | | |
| 080403 | WORKPLACE SUBSTANCE ABUSE PROGRAM POLICY | 24 | Y | 11/25/2013 | 11/25/2015 | 080403 | 080403 | | |
| 600078 | CHPRC VEHICLE SPOTTER AWARENESS TRAINING | 0 | Y | 12/09/2010 | | 600078 | | | |
| **— DSA Annual Briefings (1710) —** | | | | | | | | | |
| 290615 | 224-B 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290615 | | | |
| 290616 | 224-T 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290616 | | | |
| 290617 | FFTF 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290617 | | | |
| 290618 | REDOX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290618 | | | |
| 290619 | U-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290619 | | | |
| 290620 | B-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290620 | | | |
| 290621 | PUREX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/11/2013 | | 290621 | | | |
| **— Electrical Hazards Breakers (5597) —** | | | | | | | | | |
| 043820 | BREAKER OPERATION ELECTRICAL SAFETY | 36 | Y | 05/08/2013 | 05/08/2016 | 043820 | 043820 | | |
| **— Global Harmonization Systems Trng - CBT (GHS-1) —** | | | | | | | | | |
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 12/14/2012 | | 600400 | 600400 | | |
| **— Gov't Vehicle Drivers Awareness & Practical (1507) —** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 11/05/2010 | | 301846 | | | |
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 06/28/2010 | | 301845 | | | |

# Training Plan by HID



**Name:** Reid, Michael R **Hanford ID:** 0107791 **Contractor:** CHPRC

**Job Title:** NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **— OUO Information Requirements - CBT (1364) —** | | | | | | | | | |
| 000030 | OFFICIAL USE ONLY INFORMATION REQUIREMENTS - | 12 | Y | 01/21/2014 | 01/21/2015 | 000030 | 000030 | | |
| **— RESP - Issuer (5707) —** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 03/18/2014 | 03/18/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 07/23/2013 | 07/23/2014 | 020104 | 020104 | 07/17/2014 | 020104 |
| **— RESP - MSA Adv 200 (5690) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 03/18/2014 | 03/18/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 03/18/2014 | 03/18/2015 | 02R066 | 02R066 | | |
| 020542 | MSA ADVANTAGE 200 1/2 FACE AIR PURIFYING | 12 | Y | 03/18/2014 | 03/18/2015 | 02R542 | 02R542 | | |
| **— RESP - MSA TL (5694) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 03/18/2014 | 03/18/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 03/18/2014 | 03/18/2015 | 02R066 | 02R066 | | |
| 020525 | MSA TL PAPR FACEPIECE / HOOD | 12 | Y | 03/18/2014 | 03/18/2015 | 02R525 | 02R525 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 03/18/2014 | 03/18/2015 | 02R527 | 02R527 | | |
| **— RESP - SCBA (5703) —** | | | | | | | | | |
| 020030 | SCOTT SCBA | 12 | Y | 03/18/2014 | 03/18/2015 | 02R030 | 02R030 | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 03/18/2014 | 03/18/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 03/18/2014 | 03/18/2015 | 02R066 | 02R066 | | |
| 020538 | SCOTT AV 3000 AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 03/18/2014 | 03/18/2015 | 02R538 | 02R538 | | |
| **— Respiratory Issuer QC - CPS&M (1174-5) —** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 03/18/2014 | 03/18/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 07/23/2013 | 07/23/2014 | 020104 | 020104 | 07/17/2014 | 020104 |
| 290210 | CP S&M RESPIRATORY PROTECTION ISSUER | 0 | Y | 02/19/2013 | | 290210 | | | |
| **— S&M FACILITY EMERGENCY RESPONSE ORGANIZATION (FERO (4670) —** | | | | | | | | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 10/08/2013 | 10/08/2014 | 324033 | 324033 | | |

**Medical Schedule Dates**

| Last Exam Date | Next Exam Date | Program | Status | Clearance Date | Expiration Date |
|---|---|---|---|---|---|
| 02/24/2014 | 02/24/2014 | RESP | CLEARED | 02/24/2014 | 02/24/2015 |

**Dosimetry Schedule Dates**

| Exam Type and Description | Exam Date | Exam Time | Last Exam Date |
|---|---|---|---|

# Training Plan by HID



**Name:** Wise, William M **Hanford ID:** 0020433 **Contractor:** CHPRC

**Job Title:** STD 4/28 - NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **— ALL CHPRC Employee Training (1363) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 02/19/2014 | 02/19/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 02/19/2014 | 02/19/2015 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 10/13/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/13/2010 | | 600045 | | | |
| **— Class 1 Aerial Lift (5519) —** | | | | | | | | | |
| 043832 | AERIAL LIFT SAFETY | 60 | Y | 10/05/2012 | 10/05/2017 | 044681 | 0427AL | | |
| 044681 | CLASS 1 SELF PROPELLED BOOM SUPPORTED | 60 | Y | 10/05/2012 | 10/05/2017 | 044681 | 044681 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (1736) —** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 09/27/1994 | | 000390 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 06/22/1999 | | 000397 | | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL | 12 | Y | 07/10/2013 | 07/10/2014 | 310R56 | 003056 | | |
| 003057 | LOTO-CO-HANGER/VERIFIER/REMOVER PRACTICAL | 12 | Y | 07/10/2013 | 07/10/2014 | 310R57 | 003057 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 07/10/2013 | 07/10/2014 | 00310R | 00310R | 09/23/2014 | 00310R |
| 004140 | BERYLLIUM WORKER TRAINING | 24 | Y | 08/06/2013 | 08/06/2015 | 004150 | 004150 | | |
| 020010 | CRITICALITY SAFETY TRAINING - FISSIONABLE | 24 | Y | 04/11/2013 | 04/11/2015 | 020110 | 020110 | | |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 03/08/1994 | | 02006G | | | |
| 02006L | ASBESTOS AWARENESS | 12 | Y | 02/19/2014 | 02/19/2015 | 170063 | 170063 | | |
| 020075 | HAZARDOUS MATERIALS GENERAL AWARENESS | 36 | Y | 06/21/2012 | 06/21/2015 | 020075 | 020075 | | |
| 020077 | HAZARDOUS MATERIALS DRIVERS TRAINING | 36 | Y | 06/13/2013 | 06/13/2016 | 020077 | 020077 | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 11/21/2011 | | 020134 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 02/20/1996 | | 020140 | | | |
| 020150 | LEAD (Pb) WORKER TRAINING (LWT) | 12 | Y | 02/20/2014 | 02/20/2015 | 020152 | 020152 | | |
| 020193 | HEAT STRESS PREVENTION AND FIRST AID - CBT | 24 | Y | 02/26/2013 | 02/26/2015 | 020193 | 020193 | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 02/19/2014 | 02/19/2015 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 05/30/2012 | 05/30/2014 | 020441 | 020441 | 10/01/2014 | 020441 |
| 031220 | 40-HOUR HAZARDOUS WASTE SITE WORKER | 12 | Y | 03/12/2014 | 03/12/2015 | 032020 | 032020 | | |
| 031420 | 3-DAY SUPERVISED FIELD EXPERIENCE | 0 | Y | 01/17/1990 | | 020202 | | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 02/19/2014 | 02/19/2015 | 035110 | 035110 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 10/01/2003 | | 044370 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 07/05/2005 | | 044391 | | | |
| 044400 | FIRE WATCH TRAINING | 36 | Y | 05/26/2011 | 05/26/2014 | 044400 | 044400 | 09/18/2014 | 044400 |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL | 36 | Y | 04/02/2014 | 04/02/2017 | 044480 | 044480 | | |
| 044605 | EQUIPMENT OPERATION NEAR POWER LINES | 0 | Y | 06/25/2007 | | 044605 | | | |
| 170055 | CERTIFIED ASBESTOS WORKER | 12 | Y | 05/06/2013 | 06/25/2014 | 170057 | 170057 | 10/09/2014 | 170057 |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 03/26/2014 | 03/26/2016 | 170501 | 170501 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 06/26/2012 | 06/26/2014 | 290002 | 290002 | | |

# Training Plan by HID



**Name:** Wise, William M **Hanford ID:** 0020433 **Contractor:** CHPRC

**Job Title:** STD 4/28 - NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 06/26/2012 | 06/26/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 03/13/2014 | 03/13/2016 | 290004 | 290004 | | |
| 290130 | TSD FACILITIES & WASTE SITE OVERVIEW -CBT | 12 | Y | 02/20/2014 | 02/20/2015 | 290130 | 290130 | | |
| 290147 | CRITICALITY SAFETY JSO FMH - S&M/2E/W D-4 | 24 | Y | 09/24/2012 | 09/24/2014 | 290147 | 290147 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 02/19/2014 | 02/19/2015 | 290200 | 290200 | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 02/19/2014 | 02/19/2015 | 324033 | 324033 | | |
| **— CP S&M - Nuclear Chemical Operator (NCO) (5274) —** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 02/19/2014 | 02/19/2015 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 02/19/2014 | 02/19/2015 | 000006 | 000006 | | |
| 035100 | CONTAINER WASTE MANAGEMENT INITIAL | 12 | Y | 02/19/2014 | 02/19/2015 | 035110 | 035110 | | |
| 290002 | S&M NCO SURVEILLANCE QUALIFICATION - CANYON | 24 | Y | 06/26/2012 | 06/26/2014 | 290002 | 290002 | | |
| 290003 | S&M NCO SURVEILLANCE | 24 | Y | 06/26/2012 | 06/26/2014 | 290003 | 290003 | | |
| 290004 | S&M NCO WASTE QUAL (HANDLING, PACKAGING, AND | 24 | Y | 03/13/2014 | 03/13/2016 | 290004 | 290004 | | |
| 290200 | CPS&M ORIENTATION / FEHIC - CBT | 12 | Y | 02/19/2014 | 02/19/2015 | 290200 | 290200 | | |
| **— CP S&M Nuclear Chemical Operator (NCO) - Core (1735) —** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 12/05/2012 | 12/05/2014 | 020003 | 020003 | | |
| 065911 | CORE FUNDAMENTALS - MATHEMATICS | 0 | Y | 01/18/1993 | | 065911 | | | |
| 065912 | CORE FUNDAMENTALS - CHEMISTRY | 0 | Y | 01/25/1993 | | 065912 | | | |
| 065914 | CORE FUNDAMENTALS - ELECTRICAL | 0 | Y | 01/29/1993 | | 065914 | | | |
| 065915 | CORE FUNDAMENTALS - INSTRUMENTATION | 0 | Y | 02/11/1993 | | 065915 | | | |
| 065917 | CORE FUNDAMENTALS - MECHANICAL | 0 | Y | 02/05/1993 | | 065917 | | | |
| 080403 | WORKPLACE SUBSTANCE ABUSE PROGRAM POLICY | 24 | Y | 02/27/2013 | 02/27/2015 | 080403 | 080403 | | |
| 600078 | CHPRC VEHICLE SPOTTER AWARENESS TRAINING | 0 | Y | 02/15/2011 | | 600078 | | | |
| **— DSA Annual Briefings (1710) —** | | | | | | | | | |
| 290615 | 224-B 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290615 | | | |
| 290616 | 224-T 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290616 | | | |
| 290617 | FFTF 2012 DSA ANNUAL BRIEFING | 0 | Y | 08/29/2012 | | 290617 | | | |
| 290618 | REDOX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/30/2013 | | 290618 | | | |
| 290619 | U-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/30/2013 | | 290619 | | | |
| 290620 | B-PLANT 2012 DSA ANNUAL TRAINING | 0 | Y | 04/30/2013 | | 290620 | | | |
| 290621 | PUREX 2012 DSA ANNUAL TRAINING | 0 | Y | 04/30/2013 | | 290621 | | | |
| **— Global Harmonization Systems Trng - CBT (GHS-1) —** | | | | | | | | | |
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 02/26/2013 | | 600400 | 600400 | | |
| **— Gov't Vehicle Drivers Awareness & Practical (1507) —** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 07/23/2010 | | 301846 | | | |

# Training Plan by HID



**Name:** Wise, William M **Hanford ID:** 0020433 **Contractor:** CHPRC

**Job Title:** STD 4/28 - NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 06/28/2010 | | 301845 | | | |
| **— OJE to operate aerial lifts. (5655) —** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 09/27/1994 | | 000390 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 06/22/1999 | | 000397 | | | |
| 003909 | H&R ON-THE-JOB EVALUATOR INSTRUCTION | 60 | Y | 10/05/2012 | 10/05/2017 | 003909 | 003909 | | |
| 043832 | AERIAL LIFT SAFETY | 60 | Y | 10/05/2012 | 10/05/2017 | 044681 | 0427AL | | |
| 044674 | PROPANE BOTTLE CHANGE-OUT | 0 | Y | 11/02/2012 | | 044674 | | | |
| **— OUO Information Requirements - CBT (1364) —** | | | | | | | | | |
| 000030 | OFFICIAL USE ONLY INFORMATION REQUIREMENTS - | 12 | Y | 02/20/2014 | 02/20/2015 | 000030 | 000030 | | |
| **— RESP - Bottle Cart Operator (5705) —** | | | | | | | | | |
| 020047 | BOTTLE CART SUPPLIED AIR SYSTEM OPERATOR | 12 | Y | 04/24/2014 | 04/24/2015 | 02R047 | 02R047 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| **— RESP - Issuer (5707) —** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 12/03/2013 | 12/03/2014 | 020104 | 020104 | 11/06/2014 | 020104 |
| **— RESP - MSA Adv 200 (5690) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020542 | MSA ADVANTAGE 200 1/2 FACE AIR PURIFYING | 12 | Y | 04/24/2014 | 04/24/2015 | 02R542 | 02R542 | | |
| **— RESP - MSA MMIIK (5702) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R527 | 02R527 | | |
| 020532 | MSA MMK PAPR FACEPIECE | 12 | Y | 04/24/2014 | 04/24/2015 | 02R532 | 02R532 | | |
| **— RESP - MSA TL (5694) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020525 | MSA TL PAPR FACEPIECE / HOOD | 12 | Y | 04/24/2014 | 04/24/2015 | 02R525 | 02R525 | | |
| 020527 | MSA ULTRA ELITE AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R527 | 02R527 | | |
| **— RESP - MSA Ultra Twin/Vue (5691) —** | | | | | | | | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020533 | MSA ULTRA TWIN AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R533 | 02R533 | | |

# Training Plan by HID



**Name:** Wise, William M **Hanford ID:** 0020433 **Contractor:** CHPRC

**Job Title:** STD 4/28 - NCO - CP S&M

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **--- RESP - SCBA (5703) ---** | | | | | | | | | |
| 020030 | SCOTT SCBA | 12 | Y | 04/24/2014 | 04/24/2015 | 02R030 | 02R030 | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020538 | SCOTT AV 3000 AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R538 | 02R538 | | |
| **--- RESP - Scott Carri-Air (5706) ---** | | | | | | | | | |
| 020032 | SCOTT SKA-PAK | 12 | Y | 04/24/2014 | 04/24/2015 | 02R032 | 02R032 | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020538 | SCOTT AV 3000 AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R538 | 02R538 | | |
| 020601 | SUPPLIED (CARRI-AIR) AIR ENTRY-EXIT SYSTEM | 12 | Y | 04/24/2014 | 04/24/2015 | 02R601 | 02R601 | | |
| **--- RESP - Scott SKA-PAK Plus (5704) ---** | | | | | | | | | |
| 020032 | SCOTT SKA-PAK | 12 | Y | 04/24/2014 | 04/24/2015 | 02R032 | 02R032 | | |
| 020044 | QUANTITATIVE MASK FIT | 12 | Y | 04/24/2014 | 04/24/2015 | 020044 | 020044 | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020538 | SCOTT AV 3000 AIR PURIFYING RESPIRATOR (APR) | 12 | Y | 04/24/2014 | 04/24/2015 | 02R538 | 02R538 | | |
| **--- Respiratory Issuer QC - CPS&M (1174-5) ---** | | | | | | | | | |
| 020066 | RESPIRATORY KNOWLEDGE-BASED INITIAL | 12 | Y | 04/24/2014 | 04/24/2015 | 02R066 | 02R066 | | |
| 020104 | RESPIRATORY PROTECTION ISSUER TRAINING | 12 | Y | 12/03/2013 | 12/03/2014 | 020104 | 020104 | 11/06/2014 | 020104 |
| 290210 | CP S&M RESPIRATORY PROTECTION ISSUER | 0 | Y | 03/26/2013 | | 290210 | | | |
| **--- S&M FACILITY EMERGENCY RESPONSE ORGANIZATION (FERO (4670) ---** | | | | | | | | | |
| 324033 | S&M FACILITY EMERGENCY RESPONSE | 12 | Y | 02/19/2014 | 02/19/2015 | 324033 | 324033 | | |

## Medical Schedule Dates

| Last Exam Date | Next Exam Date | Program | Status | Clearance Date | Expiration Date |
|---|---|---|---|---|---|
| 08/27/2013 | 06/24/2014 | RESP | CLEARED | 08/27/2013 | 08/27/2014 |

## Dosimetry Schedule Dates

| Exam Type and Description | Exam Date | Exam Time | Last Exam Date |
|---|---|---|---|

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 4

**Copies of 2CP-SUR-F-05024 "Hanford Facility RCRA Permit 400 Area Waste Management Unit – Weekly Inspection Log for 400 Area Waste Management Units," dated from May 7, 2013 through May 19, 2014.**

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 9-9-13 | 1340 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Olds — Inspector / Print Name

DS Olds — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 9-9-13 | 1330 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Olds — Inspector / Print Name

DS Olds — Inspector / Signature

9/9/13

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 9-16-13 | 0907 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Olc — Inspector / Print Name

DSM — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 9-16-13 | 0923 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Olc — Inspector / Print Name

DSM — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 9/~~24~~ 23/13 9/27/13 | 0955 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 9/~~24~~ 23/13 9/23/13 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 9-30-13 | 1332 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

JOSÉ L RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 9-30-13 | 1314 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

JOSÉ L RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 10-7/2013 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 10-7/2013 | 0930 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 10-14-13 | 0923 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | ↓ |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DS Older — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 10-14-13 | 0909 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | ↓ |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DS Older — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 10-22-13 | 1330 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | (Yes) | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | (Yes) | No | |
| Is container structural integrity satisfactory? | (Yes) | No | |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |

Additional Comments

N/A

D S Olde — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 10-22-13 | 1311 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | (Yes) | No | N/A |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |
| Are modules free of moisture, including condensation? | (Yes) | No | |

Additional Comments

N/A

D S Olde — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 10/28/13 | 10:10 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

Jose L. Ramos — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 10/28/13 | 10:25 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

Jose L. Ramos — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 11-7-13 | 1001 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DSOlde — Inspector / Print Name

DSOlde — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 11-7-13 | 0949 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DSOlde — Inspector / Print Name

DSOlde — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 11/12/13 | 0940 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | (Yes) | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | (Yes) | No | |
| Is container structural integrity satisfactory? | (Yes) | No | |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 11/12/13 | 0913 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | (Yes) | No | N/A |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |
| Are modules free of moisture, including condensation? | (Yes) | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 11/18/13 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

Jack Ham — Inspector / Print Name

Jack Ham — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 11/18/13 | 0935 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | NA |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

NA

Jack Ham — Inspector / Print Name

Jack Ham — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 11-25-13 | 0929 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 11-25-13 | 0918 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 12/2/13 | 0948 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 12/2/13 | 0920 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 12-9-13 | 1330 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

TIM MAILEY — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 12-9-13 | 1350 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

TIM MAILEY — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 12-18-13 | 0935 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Olds — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 12-18-13 | 0921 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Olds — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 12-23-13 | 0937 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

Wm Wise — Inspector / Print Name

[signature] — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 12-23-13 | 0910 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

Wm Wise — Inspector / Print Name

[signature] — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 12/30/13 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 12-30-13 | 0930 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 1-6-14 | 0922 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Oldham — Inspector / Print Name

DS Oldham — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 1-6-14 | 0926 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Oldham — Inspector / Print Name

DS Oldham — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 1-13-14 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DS — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 1-13-14 | 0917 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Older — Inspector / Print Name

DS — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 1-20-14 | 0949 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments N/A

DS Old — Inspector / Print Name

DS Old — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 1-20-14 | 0934 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments N/A

DS Old — Inspector / Print Name

DS Old — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 1/27/14 | 10:08 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | N/A |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 1/27/14 | 0945 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | N/A |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

we put ice melt down on the pads very ice

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 2-13/2014 | 0315 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

Battery's down on lights
Need lights for WK 2°

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 2-3/2014 | 0845 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 2-10-14 | 0901 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

DS. Olds — Inspector / Print Name

DS — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 2-10-14 | 0550 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

DS Olds — Inspector / Print Name

DS — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 2/18/14 | 0929 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 $inH_2O$ <27 $inH_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

N/A

JOSE L RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 2/18/14 | 0855 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

N/A

JOSE L. RAMOS — Inspector / Print Name

Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 2-24 /2014 | 0924 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 2-24 /2014 | 0855 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 3-3-14 | 0846 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DS Olden — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 3-3-14 | 0850 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DS Olden — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 3-10-14 | 1113 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DSOlder — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 3-10-14 | 1131 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DSO — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 3-17-14 | 0857 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DSOlds — Inspector / Print Name

DS — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 3-17-14 | 0833 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DSOlds — Inspector / Print Name

DS — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 3/24/14 | 0924 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

JOSE L RAMOS — Inspector / Print Name

Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 3/24/14 | 0900 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

JOSE L RAMOS — Inspector / Print Name

Inspector / Signature

**Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units**

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 3-31-14 | 0855 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DS Old — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 3-31-14 | 0840 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DS Old — Inspector / Print Name

DSO — Inspector / Signature

**Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units**

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 4-7-2014 | 0918 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DS Old — Inspector / Print Name

DSOl — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 4-7-2014 | 0900 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DS Old — Inspector / Print Name

DSOl — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 4/14/14 | 1042 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | (Yes) | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | (Yes) | No | |
| Is container structural integrity satisfactory? | (Yes) | No | |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |

Additional Comments

JOSE L. RAMOS — Inspector / Print Name

[signature] — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 4/14/14 | 0942 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | (Yes) | No | |
| Are containers closed? | (Yes) | No | |
| Are containers free of significant corrosion? | (Yes) | No | |
| No evidence of spills or leaks from containers? | (Yes) | No | |
| No accumulated liquids present? | (Yes) | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | (Yes) | No | |
| Are modules free of moisture, including condensation? | (Yes) | No | |

Additional Comments

JOSE L. RAMOS — Inspector / Print Name

[signature] — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 4/21/2014 | 0845 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

Relicon lights need replaced with changed ones (red light on both)

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 4/21/2014 | 0815 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

Mike Reid — Inspector / Print Name

Mike Reid — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 4-28-14 | 0920 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

Changed out Pelican Lights with charged ones

DS Older — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 4-28-14 | 0905 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DS Older — Inspector / Print Name

DSO — Inspector / Signature

**Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units**

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 5-5-14 | 0917 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

DS Older — Inspector / Print Name

DSO — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 5-5-14 | 0859 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

DS Older — Inspector / Print Name

DSO — Inspector / Signature

Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 5-12-14 | 1025 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

Deborah S. Olds — Inspector / Print Name

[signature] — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 5-12-14 | 0904 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

[signature] — Inspector / Print Name

Deborah S Olds — Inspector / Signature

**Data Sheet 1 – Weekly Inspection Log for 400 Area Waste Management Units**

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.2) Active Storage Areas: FSF (Building 403) | 5-19-14 | 0905 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is inert gas pressure in feed line to CCP boxes (>2 in$H_2O$ <27 in$H_2O$) at the Dewar Pad? | Yes | No | |
| Is concrete floor, curbing, and walls in satisfactory condition? | Yes | No | |
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |

Additional Comments

D S Older — Inspector / Print Name

DS O — Inspector / Signature

| Locations Inspected | Date of Inspection | Time of Inspection |
|---|---|---|
| (Sub-section 4.3) Active Storage Area: ISA | 5-19-14 | 0851 |

| Compliance and Status | | | Problems Noted |
|---|---|---|---|
| Is container structural integrity satisfactory? | Yes | No | |
| Are containers closed? | Yes | No | |
| Are containers free of significant corrosion? | Yes | No | |
| No evidence of spills or leaks from containers? | Yes | No | |
| No accumulated liquids present? | Yes | No | |
| Is the major risk mark "Dangerous When Wet," in place on each container, legible, and unobscured? | Yes | No | |
| Are modules free of moisture, including condensation? | Yes | No | |

Additional Comments

D S Older — Inspector / Print Name

DS O — Inspector / Signature

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 5

**Copy of HNF-IP-0263-FFTF "Building Emergency Plan for Fast Flux Test Facility Property Protection Area," Revision 23, dated October 20, 2013.**

HNF-IP-0263-FFTF
Revision 23

# Building Emergency Plan for Fast Flux Test Facility Property Protection Area

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

CH2MHILL
Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352

Approved for Public Release;
Further Dissemination Unlimited

HNF-IP-0263-FFTF
Revision 23

# Building Emergency Plan for Fast Flux Test Facility Property Protection Area

A. J. Olsen
CH2M HILL Plateau Remediation Company

Date Published
October 2013

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

CH2MHILL
Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352

APPROVED
By Janis D. Aardal at 7:25 am, Oct 17, 2013

Release Approval | Date

Approved for Public Release;
Further Dissemination Unlimited

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**This plan covers the following buildings and structures: All buildings and storage areas within the Fast Flux Test Facility Property Protection Area, with the following exceptions: Building 437 (MASF), 481, and 4713C.**

**Approved:**

| | |
|---|---|
| Facility Management | 10/10/2013<br>Date |
| Brett M Barnes / Brett M Barnes<br>Environmental Compliance Officer | 10/9/13<br>Date |
| Sheila Godfrey / Sheila Godfrey<br>CH2M HILL Plateau Remediation Company<br>Emergency Preparedness | 10/9/13<br>Date |

**This document will be reviewed at least annually and updated if necessary by Facility Management unless Hanford Facility RCRA Permit coordination requirements provide otherwise. The Building Emergency Director has the authority to carry out the provisions of this plan.**

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## 1.0 GENERAL INFORMATION

The Fast Flux Test Facility (FFTF) is located on the Hanford Site, a 560-square-mile (1,450-square kilometer) U.S. Department of Energy (DOE/RL) site in southeastern Washington State. The FFTF is located in the center portion of the 400 Area near the South end of the Hanford Site. The Hanford Site Emergency Preparedness Program is based on the incident command system that allows a graded approach for response to emergency events. This plan contains a description of facility specific emergency planning and response and is used in conjunction with Hanford Facility RCRA Permit (Permit) Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02). Response to events is performed using facility specific and/or Hanford Site level emergency procedures.

### 1.1 FACILITY NAME:

U.S. Department of Energy
Hanford Site
Fast Flux Test Facility

### 1.2 FACILITY LOCATION:

Benton County, Washington within the 400 Area.

Buildings/facilities covered by this plan are: All buildings, structures, and storage locations within the FFTF Property Protection Area (PPA), with the following exceptions: Building 437 (MASF), 481, and 4713C.

### 1.3 OWNER:

U.S. Department of Energy
Richland Operations Office
825 Jadwin Avenue
Richland, Washington 99352

**FACILITY MANAGER:**

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352-1600

## 1.4 DESCRIPTION OF THE FACILITY AND OPERATIONS

Unless otherwise implied, the term "FFTF", as used in this document, is generally intended to signify all areas covered by the Building Emergency Plan as delineated in Section 1.2.

**FFTF Plant**

The FFTF Plant was a sodium-cooled reactor complex with three primary and secondary loops utilizing 12 sodium-to-air Dump Heat Exchangers (DHX) that transferred heat from the secondary loops to the ambient air.

Originally constructed to support the U.S. Liquid Metal Fast Breeder Reactor Program, the FFTF has performed nuclear fuel and materials tests in support of both national and international fast breeder reactor programs, produced medical and industrial isotopes, performed materials tests for fusion and space programs, conducted passive safety tests, and provided customized neutron environments to meet varying needs. Due to lack of a long-term mission the reactor was shut down in March 1992. All fuel has been removed from the facility. The bulk liquid metal inventory has been drained to the Sodium Storage Facility (Building 402).

**Building 403 - Fuel Storage Facility (FSF)**

The Fuel Storage Facility (FSF) was designed to provide long term storage for irradiated fueled assemblies and core components that were not intended to be returned to the core. The FSF is located adjacent to the Reactor Service Building and the FSF vessel is located below grade in a cell. All fuel assemblies have been removed from the FSF vessel and, except for a small amount of residuals, the liquid metal inventory has been transferred to the Sodium Storage Facility (Building 402).

**Interim Decay Storage Vessel (IDS)**

The Interim Decay Storage vessel was designed to provide a controlled environment for temporary storage of core fuel assemblies and reactor components (control rods, reflectors etc.). The IDS is located inside Containment below floor level. All fuel assemblies have been removed from the IDS vessel and, except for a small amount of residuals, the liquid metal inventory has been transferred to the Sodium Storage Facility.

**RCRA Waste Management Units**

The FFTF has two areas subject to RCRA contingency planning requirements as described below.

**Building 403 Fuel Storage Facility (FSF) Treatment, Storage, and/or Disposal (TSD) unit**

Building 403 has received authorization to serve as a TSD unit as part of the 400 Area Waste Management Unit (WMU). The TSD unit is permitted to store approximately 350 gallons of frozen sodium contained in components removed from the Interim Decay Storage Vessel.

**Interim Storage Area (ISA)**

This area is a fenced gravel area with a concrete pad located east of the Maintenance and Storage Facility (MASF) in the northeast corner of the FFTF PPA. The ISA has received authorization to serve as a TSD unit as part of the 400 Area Waste Management Unit (WMU).

**Building 402 - Sodium Storage Facility (SSF)**

The Sodium Storage Facility was constructed in 1996 for storage of the metallic sodium from the FFTF plant systems. It serves as an interim storage facility for the frozen sodium when removed from the FFTF until final disposition. The facility is located between the South and West Dump Heat Exchangers. The 28 by 27meter (91 by 90 foot) concrete facility houses three 303,000-liter (80,000 gallon) sodium storage tanks and one 199,000-liter (52,500 gallon) sodium storage tank. The total frozen sodium inventory contained in the four tanks is approximately 247,300 gallons.

## 1.5 BUILDING EVACUATION ROUTING (BUILDING LAYOUT)

Figures 1 and 2 provide identification of the primary and secondary staging areas and a general layout of the 400 Area WMU. Alternate evacuation routes will be used on a case-by-case basis based on meteorological conditions at the time of the event.

## 2.0 PURPOSE

This plan describes both the facility hazards and the basic responses to upset and/or emergency conditions within the FFTF. These events may include spills or releases caused by processing, fires and explosions, transportation activities, movement of materials, packaging, storage of hazardous materials, and natural and security contingencies. When used in conjunction with Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), this plan meets the requirements for contingency planning as required by WAC 173-303. Sections 1.5, 3.1, 4.0, 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3, 8.2, 8.3, 8.4, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, 13.0 of the Building Emergency Plan (BEP) are enforceable sections meeting RCRA contingency planning requirements. Enforceable sections cannot be changed without coordinating the change with the Permit modification process.

## 3.0 FACILITY/BUILDING EMERGENCY RESPONSE ORGANIZATION

The FFTF and all associated facilities covered under this plan are unoccupied. The Building Emergency Director (BED) is an on-call position during normal working hours, back-shifts, weekends, and holidays.

## 3.1 BUILDING EMERGENCY DIRECTOR (BED)

Emergency response will be directed by the BED until the Incident Commander (IC) arrives. The incident command system (ICS) and staff, with supporting on-call personnel, fulfill the responsibilities of the Emergency Coordinator as discussed in WAC 173-303-360. During events, WMU personnel perform response duties under the direction of the BED. The Incident Command Post (ICP) is managed by either the senior Hanford Fire Department member present or senior Hanford Patrol member present on the scene (security events only). These individuals are designated as the IC and as such, have the authority to request and obtain any resources necessary for protecting people and the environment.

The BED becomes a member of the ICP and functions under the direction of the IC. In this role, the BED continues to manage and direct 400 Area WMU operations.

A listing of the BEDs by title, work location, and work telephone number is contained in Section 13.0 of this plan. The BED is on the premises or is available through an "on-call" list 24-hours-a-day. Names and home telephone numbers of the BEDs are available from the Patrol Operations Center (POC) in accordance with Permit Condition II.A.4.

## 3.2 OTHER MEMBERS

As a minimum, Facility Management appoints and ensures training is provided to individuals to perform as Personnel Accountability Aides and Staging Area Managers. The Personnel Accountability Aides are responsible for facilitating the implementation of protective actions (evacuation or take cover) and for facilitating the accountability of personnel after the protective actions have been implemented. Staging Area Managers are responsible for coordinating and conducting activities at the staging area. In addition, the BED can identify additional support personnel (radiological control, maintenance, engineering, hazardous material coordinators, etc.) to be part of the Facility/Building Emergency Response Organization.

The complete Facility/Building Emergency Response Organization listing of positions, names, work locations and telephone numbers for the FFTF is maintained in a separate location in a format determined appropriate by S&M management. Copies are distributed to appropriate FFTF locations and to Emergency Preparedness.

## 4.0 IMPLEMENTATION OF THE PLAN

In accordance with WAC 173-303-360(2)(b), the BED ensures that trained personnel identify the character, source, amount, and areal extent of the release, fire, or explosion to the extent possible. Identification of waste can be made by activities that can include, but are not limited to, visual inspection of involved containers, sampling activities in the field, reference to inventory records, or by consulting with facility personnel. Samples of materials involved in an emergency might be taken by qualified personnel and analyzed as appropriate. These activities must be performed with a sense of immediacy and shall include available information.

The BED shall use the following guidelines to determine if an event has met the requirements of WAC 173-303-360(2)(d):

1. The event involved an unplanned spill, release, fire, or explosion,

AND

2.a The unplanned spill or release involved a dangerous waste, or the material involved became a dangerous waste as a result of the event (e.g., product that is not recoverable.),

OR

2.b The unplanned fire or explosion occurred at the 400 Area WMU or transportation activity subject to RCRA contingency planning requirements,

AND

3. Time-urgent response from an emergency services organization was required to mitigate the event, or a threat to human health or the environment exists.

As soon as possible after stabilizing event conditions, the BED shall determine, in consultation with the site contractor environmental single-point-of-contact, if notification to the Washington State Department of Ecology (Ecology) is needed to meet WAC 173-303-360 (2)(d) reporting requirements. If all of the conditions under 1, 2, and 3 are met, notifications are to be made to Ecology. Additional information is found in Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 4.2.

If review of all available information does not yield a definitive assessment of the danger posed by the incident, a worst-case condition will be presumed and appropriate protective actions and notifications will be initiated. The BED is responsible for initiating any protective actions based on their best judgment of the incident.

The BED must assess each incident to determine the response necessary to protect the personnel, facility, and the environment. If assistance from Hanford Patrol, Hanford Fire Department, or ambulance units is required, the Hanford Emergency Response Number (911 from site office phones/373-0911 from cellular phones) must be used to contact the POC and request the desired assistance. To request other resources or assistance from outside the 400 Area WMU, the POC business number is used (373-3800).

## 5.0 FACILITY HAZARDS

### 5.1 HAZARDOUS MATERIALS

The only significant bulk hazardous material at FFTF is solid sodium. The material usage, location, and estimated quantities are summarized below.

| MATERIAL | USAGE/LOCATION | APPROXIMATE QUANTITY | PRIMARY HAZARD |
|---|---|---|---|
| Sodium (solid) | SSF and residual frozen sodium remaining in piping and cold traps | 936,100 liters (247,300 gallons) | Reactivity |

Other hazardous materials at the facility include ethylene glycol and petroleum products. Specific locations of chemical products may be obtained from the facility chemical coordinator. MSDS data sheets are maintained electronically using current Hanford Site data bases.

## 5.2 INDUSTRIAL HAZARDS

Industrial hazards that may be encountered at FFTF include confined spaces, rotating equipment, and asbestos in some building materials.

Because the ventilation system is not normally operated and the possibility of a cover gas leak, there is the potential for an oxygen deficiency to be encountered in below grade spaces. Oxygen monitors are required for building entries.

## 5.3 DANGEROUS/MIXED WASTE

S&M Regulatory Compliance maintains a specific list of dangerous waste, mixed waste, and radioactive waste accumulated/stored at FFTF. As identified in the Surveillance and Maintenance Plan for the Fast Flux Test Facility (FFTF) (DOE/RL-2009-26, Rev. 0 April 2009), dangerous waste generation and disposal are not expected during S&M. If waste is generated, it will be handled in compliance with the applicable Federal, State, and local environmental laws and regulations, and DOE orders. A brief description of wastes commonly stored is as follows (this list is not intended to be all-inclusive and may vary to support the needs or operations of the facility):

| WASTE TYPE | LOCATION |
|---|---|
| Radioactive sodium waste and sodium hydroxide in Building 403 (FSF) and the ISA<br>A mixed-waste drum containing small amounts of NaK is located on the ISA pad. | Building 403 (FSF) and ISA Treatment, Storage, and Disposal Units |

## 5.4 RADIOACTIVE MATERIALS

Radioactive materials are stored in Buildings 402, 403, 405, and in the ISA.

## 5.5 CRITICALITY

Criticality is not a credible event at the FFTF.

## 6.0 POTENTIAL EMERGENCY CONDITIONS

Potential emergency conditions, under both WAC 173-303 and DOE, may include one of three basic categories: (1) operations (process upsets, fires, explosions, loss of utilities, spills, and releases), (2) natural phenomena (e.g., earthquakes), and 3) security contingencies (bomb threat, hostage situation, etc.). The following are conditions that may lead to an emergency at the FFTF.

## 6.1 FACILITY OPERATIONS EMERGENCIES

### 6.1.1 Loss of Utilities

A loss of utilities is not expected to lead to an emergency condition or require implementation of protective actions. During Surveillance and Maintenance (S&M) mode the fire detection system is the only continuously powered system. Lighting and Heating and Ventilation (H&V) are only energized during plant entries for surveillance and/or maintenance.

### 6.1.2 Major Process Disruption/Loss of Plant Control

There are no plant process failures or malfunctions that are expected to lead to an emergency condition or require implementation of protective actions.

### 6.1.3 Pressure Release

There are no pressure containing systems at FFTF that would result in a potential emergency condition.

### 6.1.4 Fire and/or Explosion

A fire or explosion would require the affected building to be evacuated. A fire or explosion in an area containing hazardous material or dangerous waste could generate environmental release concerns.

The sodium systems containing bulk quantities of frozen sodium are maintained with an inert gas blanket. A breach of these systems is considered to be unlikely and if any breach did occur, it would be very small and the leakage of cover gas would be made up by the cover gas supply system. A larger breach that may introduce air into the sodium systems would result in only a minor reaction between the sodium and oxygen or water vapor in the air and would not present a significant hazard. A large rapid sodium-water reaction event is not considered credible considering the low probability of a large system breach combined with the low probability of significant water accumulation (considering the draining of all water systems in the plant, the arid Hanford climate, and the periodic inspection of vulnerable locations.

### 6.1.5 Hazardous Material Spill

The most significant hazardous material release would come from a sodium leak. Since all of the remaining sodium at FFTF is frozen, a sodium leak has been determined to be an unlikely event. Other hazardous material spills would be limited to local areas and mitigated by plant design but may require time urgent response to minimize environmental impact.

#### 6.1.6 Dangerous/Mixed Waste Spill

Due to the limited quantity of wastes maintained at the facility, there are no dangerous waste or mixed waste spills identified that could generate a DOE declared emergency or are likely to create a RCRA emergency at FFTF. However, in the event of a waste spill the consequences would be very localized and necessary mitigating measures minimal.

#### 6.1.7 Transportation and/or Packaging Incidents

Due to the receipt of some hazardous materials and the shipment of wastes, a transportation incident is possible. The effects of a shipment event would be the same as those for hazardous material or dangerous/mixed waste events except no shipments are made which could generate a DOE declared emergency.

#### 6.1.8 Radioactive Material Release

##### 6.1.8.1 Radioactive Liquid Waste Spill

Due to the location of system piping and components, a radioactive liquid waste spill outside of facility structures to the environment is unlikely. There are no identified scenarios involving radioactive liquid waste that would generate an emergency condition.

#### 6.1.9 Criticality

Criticality is not a credible event at the FFTF.

### 6.2 NATURAL PHENOMENA

Natural phenomena are discussed in the following sections.

#### 6.2.1 Seismic Event

Depending on the magnitude of the event, severe structural damage can occur resulting in serious injuries or fatalities and the release of hazardous materials to the environment. Damaged electrical circuits and wiring could result in the initiation of fires.

#### 6.2.2 Volcanic Eruption/Ash fall

Though not expected to cause structural damage, the ash resulting from a volcanic eruption could cause shorts in electrical equipment and plug ventilation system filters.

#### 6.2.3 High Winds/Tornados

High winds or tornados may cause structural damage to systems containing hazardous materials resulting in a release of the materials to the environment.

#### 6.2.4 Flood

Flooding can cause the release of hazardous materials depending on the type of storage containers. Floods can also cause short circuits in electrical wiring located at or below ground level. This may then result in an increased likelihood of fires. However, the 400 Area is well above projected flood elevations for the Columbia and Yakima Rivers, therefore, a flood is not considered a credible natural event for the FFTF.

#### 6.2.5 Range Fire

The hazards associated with a range fire are the same as those associated with a building fire plus potential site access restrictions and travel hazards such as poor visibility.

#### 6.2.6 Aircraft Crash

In addition to the potential for serious injuries or fatalities, an aircraft crash could result in the direct release of hazardous materials to the environment or cause a fire that could lead to the release.

### 6.3 SECURITY CONTINGENCIES

Security contingencies are discussed in the following sections.

#### 6.3.1 Bomb Threat/Explosive Devices

A bomb threat may be received by anyone who answers the telephone or receives mail. The major effect on the FFTF is that systems may need to be placed in a safe configuration prior to an evacuation. If an explosive device detonates, the effects are the same as those discussed under fire and explosion.

#### 6.3.2 Hostage Situation/Armed Intruder

A hostage situation or the entry of an armed hostile intruder(s) into the building or facility can pose an emergency if either of these conditions has the potential to adversely affect facility operations.

#### 6.3.3 Suspicious Object

If a suspicious object is discovered, the major effect on the FFTF is that personnel may need to perform an emergency shutdown of the facility before evacuation.

### 6.4 UNEXPECTED/UNIDENTIFIED ODORS

Unexpected or unidentified odors have the potential to cause health effects and could be indicative of other events.

## 7.0 INCIDENT RESPONSE

The initial response to any emergency is to immediately protect the health and safety of persons in the affected area. Identification of released material is essential to determine appropriate protective actions. Containment, treatment, and disposal assessment are secondary responses.

The following sections describe the process for implementing basic protective actions as well as descriptions of response actions for the events listed in Section 6.0 of this plan. Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 1.3, provides concept of operations for emergency response on the Hanford Site.

This section provides a discussion of protective action responses, response to facility operations emergencies, response to natural phenomena, and response to security contingencies. In addition, a section addressing prevention of secondary release, fires or explosions is provided.

## 7.1 PROTECTIVE ACTION RESPONSES

Protective action responses are discussed in the following sections. The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events.

### 7.1.1 Evacuation

When a Fast Flux Facility (FFTF) evacuation is ordered or the evacuation siren sounds, non-essential employees will turn off office equipment, obtain car keys and proceed to the staging area. Essential personal are those who have been previously designated as having an emergency response rôle, are assigned to the on-shift Operations crew, or are utilized by the Emergency Response Organization during the event (e.g., RCTs, Stationary Operating Engineers). Once at the staging area, personnel will report to their prescribed location to allow for accountability. Personnel with physical handicaps should have monitors assigned as necessary to assist them during an evacuation.

Personnel in protective clothing when an evacuation alarm sounds should make an effort to undress at the normal undress area if safe to do so. These personnel must remain separated from others, and report to the Contaminated Personnel staging sign located outside the north end of 4713-B, next to the Tool Crib door. An RCT will be dispatched to that location to survey personnel. If directed to the alternate staging area, it is recommended that personnel remove and leave protective clothing in the parking lot prior to entering their vehicle and upon arrival at the alternate staging area remain segregating from others and notify staging area personnel of the situation.

Personnel performing significant plant operations when an evacuation is initiated shall place the equipment in a stable configuration if safe to do so and then respond as appropriate to the evacuation.

The locations of the staging areas are shown on the illustrations in Figures 1 and 2. Within each occupied building the exits are clearly marked and evacuation routes to the staging area are maintained clear of obstacles. The supervisor (or delegate) is responsible for ensuring accountability of personnel at the ISA or FSF.

The BED will normally contact the POC to inform them of the event and ensure that necessary onsite and offsite protective actions are initiated. If additional transportation is needed for personnel, the BED may coordinate for additional transportation through RL-EOC.

### 7.1.2 Take Cover

The site area siren will sound to notify personnel of the need to take cover. Personnel shall respond to the first take cover signal sounded. The BED will normally contact the POC to inform them of the event and ensure that necessary onsite and offsite protective actions are initiated.

When the "Take Cover" Alarm is activated, personnel shall take cover in the nearest suitable (consider water supply, bathroom facilities, size, etc.) building or trailer, halt work, and if able place equipment in a safe condition. Close windows, exterior doors, interior doors, and/or window blinds for offices with windows, and secure heating, ventilation, and air conditioning (HVAC). If possible, personnel should move to interior hallways, and follow normal exit procedures from radiologically controlled areas in preparation for evacuation.

## 7.2 RESPONSE TO FACILITY OPERATIONS EMERGENCIES

Depending on the severity of the event, the BED reviews the site-wide and FFTF emergency response procedure(s) and, as required, categorizes and/or classifies the event. If necessary, the BED initiates area protective actions and Hanford Site Emergency Response Organization activation. The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events.

### 7.2.1 Loss of Utilities

A loss of utilities is not expected to lead to an emergency condition or require implementation of protective actions.

A case-by-case evaluation is required for each event to determine loss of utility impacts. When a BED determines a loss of utility impact, actions are taken to ensure dangerous and/or mixed waste is being properly managed, to the extent possible given event circumstances. As necessary, the BED will stop operations and take appropriate actions until the utility is restored.

### 7.2.2 Major Process Disruption/Loss of Plant Control

There are no process upsets or losses of plant control that can have any effect at FFTF (including the 400 Area WMU). The FFTF facility has been deactivated and is currently being operated in accordance with the approved Surveillance & Maintenance Plan.

### 7.2.3 Pressure Release

There are no pressure containing systems at FFTF that would result in a potential emergency condition.

### 7.2.4 Fire and/or Explosion

In the event of a fire, the discoverer activates a fire alarm (pull box); calls 911 from site office phones/373-0911 from cellular phones or verifies that the Hanford Emergency Response Number (911 or 373-0911) has been called. Automatic initiation of a fire alarm (through the smoke detectors ) is also possible.

- Unless otherwise instructed, personnel shall evacuate the area/building by the nearest safe exit and proceed to the designated staging area for accountability.
- On actuation of the fire alarm, ONLY if time permits, personnel should shut down equipment, and secure waste. The alarm automatically signals the Hanford Fire Department.
- The BED proceeds directly to the ICP, obtains all necessary information pertaining to the incident, and sends a representative to meet Hanford Fire Department.
- The BED provides a formal turnover to the IC when the IC arrives at the ICP.
- The BED informs the Hanford Site Emergency Response Organization as to the extent of the emergency (including estimates of dangerous waste, mixed waste or radioactive material quantities released to the environment).
- If operations are stopped in response to the fire, the BED ensures that systems are monitored for leaks, pressure buildup, gas generation, and ruptures.
- Hanford Fire Department firefighters extinguish the fire as necessary.

### 7.2.5 Hazardous Material, Dangerous and/or Mixed Waste Spill

Spills can result from many sources including process leaks, container spills or leaks, damaged packages or shipments, or personnel error. Spills of mixed waste are complicated by the need to deal with the extra hazards posed by the presence of radioactive materials.

- The discoverer notifies the BED and initiates SWIMS response:
  - Stops work,
  - Warns others in the vicinity,
  - Isolates the area
  - Minimizes exposures to the hazards
  - Requests the BED Secure ventilation.
- The BED determines if emergency conditions exist requiring response from the Hanford Fire Department based on classification of the spill and injured personnel, and evaluates the need to perform additional protective actions.
- If the Hanford Fire Department resources are not needed, the spill is mitigated with resources identified in Section 9.0 of this plan and proper notifications are made.

- If the Hanford Fire Department resources are needed, the BED calls 911 from site office phones /373-0911 from cellular phones.
- The BED sends a representative to meet the Hanford Fire Department.
- The BED provides a formal turnover to the IC when the IC arrives at the ICP.
- The BED informs the Hanford Site Emergency Response Organization as to the extent of the emergency (including estimates of dangerous waste, mixed waste, or radioactive material quantities released to the environment).
- If operations are stopped in response to the spill, the BED ensures that systems are monitored for leaks, pressure buildup, gas generation, and ruptures.
- Hanford Fire Department stabilizes the spill.

#### 7.2.5.1 Damaged or Unacceptable Shipments

During the course of receiving an onsite transfer of mixed waste at the 400 Area WMU, an unanticipated event could be discovered resulting in a conformance issue concerning the waste. Damaged or unacceptable shipments resulting from onsite transfers are not subject to WAC 173-303-370; however, conformance issues must be resolved in order to maintain proper records.

The following actions are taken to resolve the conformance issue:

- Operations management is notified of the damaged or unacceptable waste to be received.
- If the conformance issue results in a spill or release, actions described in Section 7.2.5 are taken.
- The generating organization is notified of the conformance issue.
- An operations representative, in conjunction with the generating organization, determines the course of action to resolve the conformance issue.

### 7.2.6 Radioactive Material Release

Significant Contamination Spread. Stop work activities and immediately exit the area. Contact RC and stand by for survey and contamination status. Notify immediate manager and the BED.

#### 7.2.7 Criticality

Criticality is not a credible event at the FFTF; therefore, no response planning is necessary in this area.

## 7.3 PREVENTION OF RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR RELEASES

The BED, as part of the ICP, takes the steps necessary to ensure that a secondary release, fire, or explosion does not occur. The BED will take measures, where applicable, to stop processes and operations; collect and contain released wastes and remove or isolate containers. The BED shall also monitor for leaks, pressure buildups, gas generation, or ruptures in valves, pipes or other equipment, whenever this is appropriate.

## 7.4 RESPONSE TO NATURAL PHENOMENA

Depending on the severity of the event, the BED reviews Sitewide and FFTF emergency response procedure(s) and, as required, categorizes and/or classifies the event. If necessary, the BED initiates area protective actions and Hanford Site Emergency Response Organization activation. The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events. Attachment A provides a list of procedures.

#### 7.4.1 Seismic Event

The Hanford Site Emergency Response Organization's primary role in a seismic event is coordinating the initial response to injuries, fires, fire hazards and acting to contain or control radioactive and/or hazardous material releases.

Individuals should remain calm and stay away from windows, steam lines, and hazardous material storage locations. Once the shaking has subsided, individuals should evacuate carefully and asst personnel needing help. The location of any trapped individuals should be reported to the BED or is reported to 911 from site office phones/373-0911 from cellular phones.

The BED takes whatever actions are necessary to minimize damage and personnel injuries. Responsibilities include the following:

- Coordinating searches for personnel and potential hazardous conditions (fires, spills, etc.).
- Conducting accountability.
- Securing utilities and facility operations.
- Arranging rescue efforts, and notifying 911 for assistance.
- Determining if hazardous materials were released.
- Determining current local meteorological conditions.
- Warning other facilities and implementing protective actions if release of hazardous materials poses an immediate danger.

- Providing personnel and resource assistance to other facilities, if required and possible.

### 7.4.2 Volcanic Eruption/Ash fall

When notified of an impending ash fall, the BED will implement measures to minimize the impact of the ash fall. BED actions include the following:

- Installing filter media over building ventilation intakes.
- Installing filter media or protective coverings on outdoors equipment that may be adversely affected by the ash (diesel generators, equipment rooms, etc.).
- Shutting down some or all operations and processes.
- Sealing secondary use exterior doors.

If other emergency conditions arise as a result of the ash fall (e.g., fires due to electrical shorts or lightning), response is as described in other sections of this plan.

### 7.4.3 High Winds/Tornadoes

Upon notification of impending high winds, the BED takes steps necessary to secure all outdoor waste and hazardous material containers and storage locations. All doors and windows are shut, and personnel are warned to use extreme caution when entering or exiting the building. Ventilation, utilities, and operations will be shut down as appropriate to lessen the severity of the impact.

### 7.4.4 Flood

Not applicable.

### 7.4.5 Range Fire

Responses to range fires are handled by preventive measures (i.e., keeping hazardous material and waste accumulation areas free of combustible materials such as weeds and brush). If a range fire breaches the FFTF boundary, the response is as described in Section 7.2.4.

### 7.4.6 Aircraft Crash

The response to an aircraft crash is the same as for a fire and/or explosion (Section 7.2.4).

## 7.5 SECURITY CONTINGENCIES

Depending on the severity of the event, the BED reviews Sitewide and FFTF emergency response procedure(s) and, as required, categorizes and/or classifies the event. If necessary, the BED initiates area protective actions and Hanford Site Emergency Response Organization activation. The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events. Attachment A provides a list of procedures.

### 7.5.1 Bomb Threat/Explosive Device

Response to a bomb threat/explosive device is discussed in the following sections.

#### 7.5.1.1 Telephone Threat

Individuals receiving telephoned threats attempt to get as much information as possible from the caller (using the bomb threat checklist if available). Upon conclusion of the call, or during the call if possible, notify the BED and Hanford Patrol by calling 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 300 feet from the suspected object).

When notified, the BED ensures the FFTF is evacuated and questions personnel at the staging area regarding any suspicious objects. When Hanford Patrol personnel arrive, follow their instructions.

#### 7.5.1.2 Written Threat

Receivers of written threats handle the letter as little as possible. Notify the BED and Hanford Patrol by calling 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 300 feet from the suspected object). Depending on the content of the letter, the BED might evacuate the affected locations. The letter is turned over to Hanford Patrol and their instructions are followed.

### 7.5.2 Hostage Situation/Armed Intruder

The discoverer of a hostage situation or armed intruder reports the incident to 911 from site office phones/373-0911 from cellular phones and to the BED if possible. Hanford Patrol will determine the remaining response actions.

### 7.5.3 Suspicious Object

The discoverer of a suspicious object reports this object to the BED and to 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 300 feet from the suspected object), if possible, and ensures that the object is not disturbed.

## 7.6 RESPONSE TO UNEXPECTED/UNIDENTIFIED ODORS

Unexpected and unidentified odors should be investigated by the facility or project safety and health personnel. If the odor can be traced to an identifiable source and controlled safely with local resources, it can be resolved at the facility level. Air monitoring may aid in identification of a source and help determine if the odor is indicative of a health threat or is merely a nuisance. If facility or project safety and health personnel concur that the odor may be indicative of a health threat and cannot be safely controlled with local resources or an odor is found to be the result of an action or condition that requires emergency response, the Hanford Fire Department would be notified and respond accordingly.

## 8.0 TERMINATION OF EVENT, INCIDENT RECOVERY, AND RESTART OF OPERATIONS

Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 9.0, describes actions for event termination, incident recovery, and restart of operations. The extent by which these actions are employed is based on the incident classification of each event. In addition, Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02) also contains actions for the management of incompatible wastes that might apply.

## 8.1 TERMINATION OF EVENT

For events where the Hanford Emergency Operations Center (Hanford-EOC) is activated, the DOE RL or DOE Office of River Protection Emergency Manager has the authority to declare event termination. This decision is based on input from the BED, IC, and other emergency response organization members. For events where the Hanford-EOC is not activated, the ICS and staff will declare event termination.

## 8.2 INCIDENT RECOVERY AND RESTART OF OPERATIONS

A recovery plan is developed when necessary in accordance with Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 9.2. A recovery plan is needed following an event where further risk could be introduced to personnel, the FFTF (including the 400 Area WMU), or the environment through recovery action and/or to maximize the preservation of evidence.

If this plan was implemented according to Section 4.0, Ecology must be notified before operations can resume. Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 5.1 discusses different reports to outside agencies. This notification is in addition to those required reports and must include the following statements.

- There are no incompatibility issues with the waste and released materials from the incident.
- All the equipment has been cleaned, fit for its intended use, and placed back into service.

The notification required by WAC 173-303-360(2)(j) may be made via telephone conference. Additional information that Ecology requests regarding these restart conditions will be included in the required 15-day report identified in Section 11.0 of this plan.

For emergencies not involving activation of the Hanford-EOC, the BED ensures that conditions are restored to normal before operations are resumed. If the Hanford Site Emergency Response Organization was activated and the emergency phase is complete, a special recovery organization could

be appointed at the discretion of DOE to restore conditions to normal. This process is detailed in DOE and contractor emergency procedures. The makeup of this organization depends on the extent of the damage and its effects. The onsite recovery organization will be appointed by the appropriate contractor's management.

## 8.3 INCOMPATIBLE WASTE

After an event, the BED or the onsite recovery organization ensures that no waste that might be incompatible with the released material is treated, stored, and/or disposed of until cleanup is completed. Clean up actions are taken by 400 WMU personnel or other assigned personnel. Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 9.2.3 describes actions to be taken.

Waste from cleanup activities is designated and managed as newly generated waste. A field check for compatibility before storage is performed, as necessary. Incompatible wastes are not placed in the same container. Containers of waste are placed in approved storage areas appropriate for their compatibility class.

If incompatibility of waste was a factor in the incident, the BED or the onsite recovery organization ensures that the cause is corrected.

## 8.4 POST EMERGENCY EQUIPMENT MAINTENANCE AND DECONTAMINATION

All equipment used during an incident is decontaminated, if practicable, or disposed of as spill debris. Decontaminated equipment is checked for proper operation before storage for subsequent use. Consumable and disposed materials are restocked. Fire extinguishers are replaced.

The BED ensures that all equipment is cleaned and fit for its intended use before operations are resumed. Depleted stocks of neutralizing and absorbing materials are replenished, protective clothing is cleaned or disposed of and restocked, etc.

# 9.0 EMERGENCY EQUIPMENT

Emergency resources and equipment for the FFTF (including the 400 Area WMU) are presented in this section.

## 9.1 FIXED EMERGENCY EQUIPMENT

None refer to Section 9.2.

## 9.2 PORTABLE EMERGENCY EQUIPMENT

| PORTABLE EMERGENCY EQUIPMENT | | |
|---|---|---|
| **TYPE** | **LOCATION** | **CAPABILITY** |
| Fire Extinguisher | A fire extinguisher is available at the ISA pad (inside the locked fenced area on the fence near the gate) and at the FSF building (adjacent to the entrance). | Portable Class D fire extinguishers are available for use to respond to fires at the FSF and the ISA |
| Emergency Response Kit | An emergency response kit is maintained at the facility.<br><br>All personnel entering the noted areas, regardless of the type of work being performed, must be made aware of the emergency kit location prior to entering the areas. | Boundary control, PPE for response, first aid kit, and emergency lights. |

## 9.3 COMMUNICATIONS EQUIPMENT/WARNING SYSTEMS

| COMMUNICATIONS EQUIPMENT | | |
|---|---|---|
| **TYPE** | **LOCATION** | **CAPABILITY** |
| Fire Alarm<br>Continuous Ringing Bell Or Electronic Gong And Strobe<br>or Area siren | Fire alarm – at or near building exits in buildings 405; 491E, S, & W; 4621E & W; and 4703.<br><br>Siren alert – The siren can be clearly heard by personnel at the ISA and by support personnel at the FSF when staff are in the building.<br><br>When appropriate, personnel at the FSF and ISA will be notified of fire alarms at the 400 Area. | Alerts personnel of a potential fire or other emergency notifications in their area. |

| COMMUNICATIONS EQUIPMENT | | |
|---|---|---|
| **TYPE** | **LOCATION** | **CAPABILITY** |
| 2-Way radio/cell phone | At least one with personnel while in the TSD unit location. | Notify personnel to summon emergency assistance. |
| Argon pressure monitoring system | FFTF argon dewar pad located on a pad west of the main FFTF Plant. | Notify personnel of over or under pressure in the inert cover gas for piping and components containing sodium residuals. |

Note: Sitewide communications and warning systems are identified in Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Table 5.1.

## 9.4 PERSONAL PROTECTIVE EQUIPMENT

| PERSONAL PROTECTIVE EQUIPMENT | | |
|---|---|---|
| **TYPE** | **LOCATION** | **CAPABILITY** |
| Personnel Protective Equipment | Personal Protective Equipment is available and will be staged when work is performed at the 400 Area WMU location. | Protection from various hazards (e.g. smoke, fumes, oxygen deficient atmosphere, chemicals, high airborne radioactivity, radiological contamination, insufficient lighting). PPE clothing can be based specific job requirements. |

## 9.5 SPILL CONTROL AND CONTAINMENT SUPPLIES

| SPILL KITS AND SPILL CONTROL EQUIPMENT | | |
|---|---|---|
| **TYPE** | **LOCATION** | **CAPABILITY** |
| • Spill Control Materials<br>• Absorbent materials<br>• Bags<br>• Step-off pads<br>• Barrier tape<br>• Rags<br>• Scissors | One spill kit will be located at the 400 Area WMU and will be clearly identified.<br><br>All personnel entering either the ISA or FSF will be made aware of the location of the spill kit. | Control and mitigation of radioactive and chemical spills. |

## 9.6 INCIDENT COMMAND POST

The ICPs can be identified in a fixed location or the IC can determine a location appropriate for the event. Emergency resource materials are stored at each location. The IC could activate the Hanford Fire Department Mobile Command Unit if necessary.

## 10.0 COORDINATION AGREEMENTS

RL has established a number of coordination agreements or memoranda of understanding (MOU) with various agencies to ensure proper response resource availability for incidents involving the Hanford Site. A description of the agreements is contained in Permit Attachment 4, *Hanford Emergency Management Plan* (DOE/RL-94-02), Section 3.0, Table 3-1.

## 11.0 REQUIRED REPORTS

Post incident written reports are required for certain incidents on the Hanford Site. The reports are described in Permit Attachment 4, *Hanford Emergency Management Plan (*DOE/RL-94-02), Section 5.1.

Facility management must note in the TSD-unit operating record, the time, date, and details of any incident which requires implementation of the contingency plan. Within 15 days after the incident, a written report must be submitted to Ecology. The report must, at a minimum, include the elements specified in WAC 173-303-360(2)(k).

## 12.0 PLAN LOCATION AND AMENDMENTS

Copies of this plan are maintained in following locations

- MO-294.

This plan will be reviewed and immediately amended as necessary, in accordance with Permit Attachment 4, *Hanford Emergency Management Plan (*DOE/RL-94-02), Section 14.3.1.1.

## 13.0 BUILDING EMERGENCY ORGANIZATION

**BUILDING EMERGENCY DIRECTOR**

| FFTF BEDs | | |
|---|---|---|
| TITLE | WORK LOCATION | WORK PHONE |
| Facility Operations | MO-294 | 373-1355 |

Names and home telephone numbers of the BEDs are available from the POC (373-3800) in accordance with Permit Condition II.A.4.

## 14.0 REFERENCES

DOE/RL-94-02, *Hanford Emergency Management Plan*

DOE O 231.1A, "*Environment, Safety, and Health Reporting*", U.S. Department of Energy, Washington D.C.

DOE M 231.1-2, "*Occurrence Reporting and Processing of Operations Information*", U.S. Department of Energy, Washington D.C.

WAC 173-303, "*Washington State Dangerous Waste Regulations," Washington Administrative Code*, Washington State Department of Ecology, Olympia, Washington

Ecology, *Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Permit Number* WA7890008967, Washington State Department of Ecology, Olympia, Washington, as amended.

## ATTACHMENT A

### Listing of Procedures

DOE-0223, Emergency Plan Implementing Procedures, RLEP 1.1, "Hanford Incident Command System and Event Recognition and Classification"

DOE-0223, Emergency Plan Implementing Procedures, RLEP 3.4, "Emergency Termination, Reentry, and Recovery"

PRC-PRO-EM-40325, "Radiological/Chemical Hazard Event Response"

**FIGURE 1**

**FFTF Primary Staging Area**

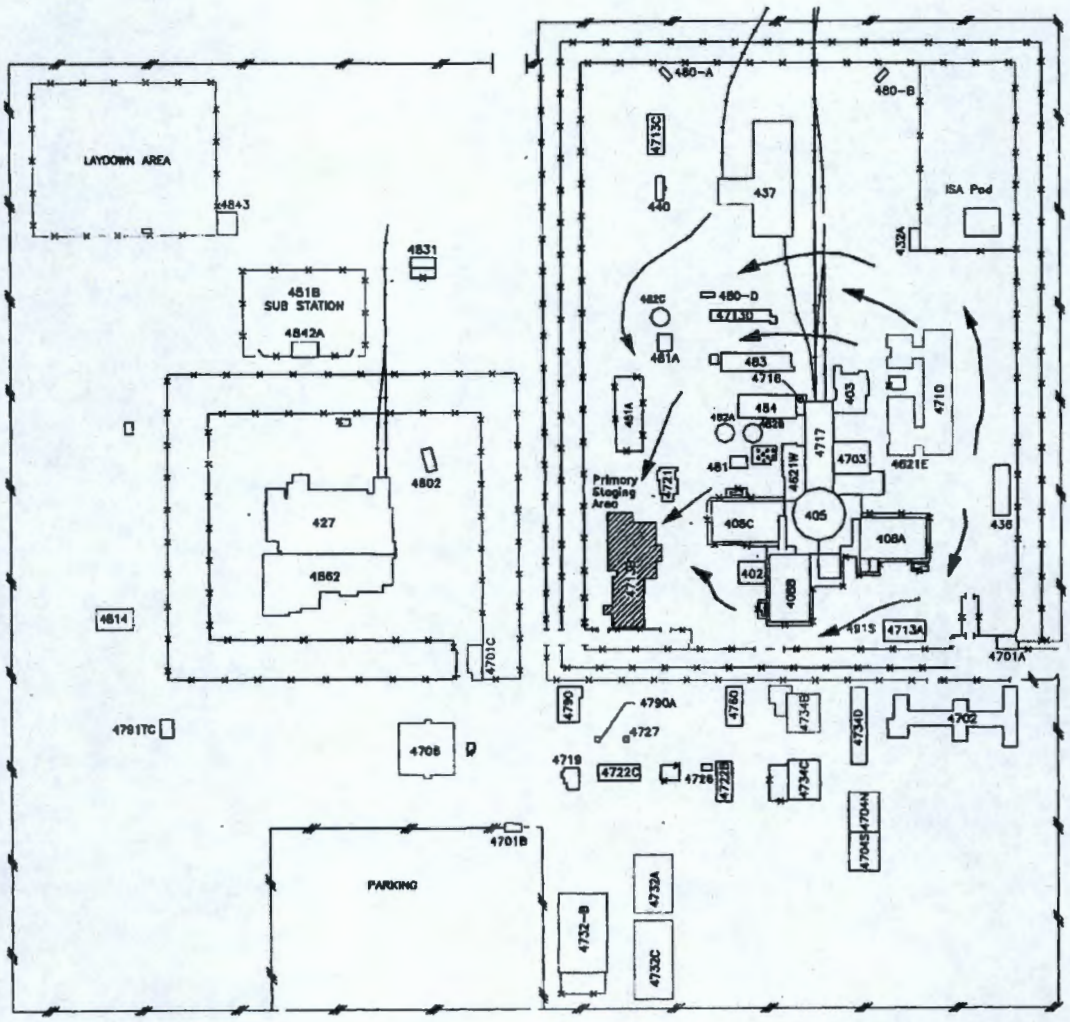
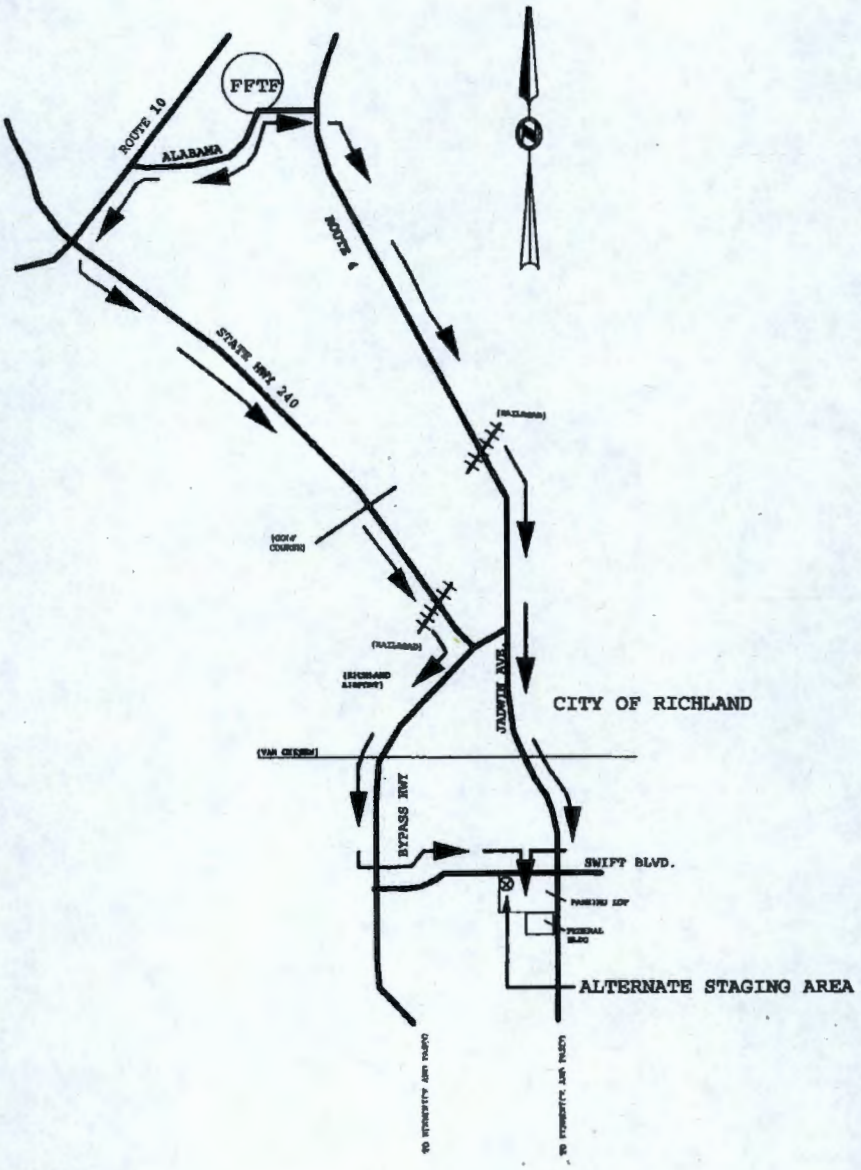


**Figure 2**
**FFTF Alternate Staging Area**



# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 7

**Container PIN # 0016549 NaK Container location, open container, and NaK liquid quantity within container.**

**U.S. ENVIRONMENTAL PROTECTION AGENCY INSPECTION OF THE 400 AREA WASTE MANAGEMENT AREA TREATMENT, STORAGE AND DISPOSAL UNIT**

**INSPECTION REQUEST NUMBER 7**

**MAY 21, 2014**

**PHOTOGRAPHS OF CONTAINER PIN NUMBER 0016549 - NaK PRESSURE TRANDUCERS CONTAINER CONTENTS**

**NaK LIQUID QUANTITY WITHIN THE CONTAINER**

Container PIN 0016549 inside ISA Connex Box

Container Contents - NaK pressure transducers

The NaK liquid quantity sealed within the transducers in this container is approximately = **0.2 Gallons**

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 8

**Copies of the "Solid Waste Information and Tracking System Container Listing Report" PINs for containers that are currently stored in the FSF.**

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 23432-1
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 23432-1 | Secondary Pkg ID: | | Accumulation Date: | 07/19/2006 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 10/16/2006 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | CM / 14.3*7.33*8 | Container Empty Tare Wt. (kg): | 3628.8000 |
| Container Volume (cu. meters): | 23.7500 | Waste Weight (kg): | 4626.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 8255.5000 |

Container Contents: CORE COMPONENT POTS (CCP) WITH <200 GALS RAD-CONTAMINATED SODIUM (MAX OF 3.7 GALS PER CCP). BOX IS PRIMARY CONTAINER FOR THE SODIUM INSIDE THE CCP.

SWO Comments:

Generator Information

| | | | | | |
|---|---|---|---|---|---|
| Generating Company: | CHPRC CH2M HILL PLATEAU REMEDIATION CO. | Generator ID: | 0092501 | Generator Group: | FFTF |
| Source Facility: | 403 | Generator: | RJ SWAN | | |

Generator Comments: CONTAINER SIZE BASED ON CONTAINER (E525-05-152-01). THE CPP IS A CYLINDRICAL CONTAINER PREVIOUSLY USED TO HOLD ASSEMBLIES & OTHER COMPONENTS. EACH CCP HAS BEEN EMPTIED OF SODIUM TO THE EXTEND PRACTICABLE. EACH BOX IS CLOSED WITH ELASTOMER GASKET AND BOLTED FLANGE CLOSURES. AN INERT GAS COVER IS MAINTAINED ON STORAGE OF EACH BOX TO PREVENT CONTACT OF THE METALLIC SODIUM WITH THE WATER VAPOR IN THE AIR. SHIELDING IS PROVIDED FOR WORKER PROTECTION AND TO MEET ALARA REQUIREMENTS. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA FUEL STORAGE FACILITY (FSF)..

Hazardous Package Detail

Container Status: Full  Flashpoint: n/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D002 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -

Designation Code: DW

Source Code: G19 Other one-time or intermittent process

Comment: Decommissioning and Deactivation

Form Code: W319 Other inorganic solids, specify in comments

Comment: Sodium Wetted Piping

Origin Code:

Residual Mgmt Method:

Comment:

Management Method:

Comment:

Certification Group:

Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:

PCB Subtype:

PCB Contents:

PCB Source Concentration (PPM):

PCB Waste Weight (kg):

Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report

for Package ID: 23432-1
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 8.92789E-05
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr):
Tot Pe-Ci: .00000E+00
ICRP 71 DE-Ci: 4.02134E-05

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 403
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 5.27000E-04 |
| 8 | Cs-137 | 4.32000E-01 |
| 13 | Co-60 | 1.96000E-03 |
| 56 | Na-22 | 3.01000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **23432-1**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 1193.6886 | 25.8 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 3433.0114 | 74.2 |
| | | | 4626.7000 | |

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 23432-2
Source Facility:
Location Facility:
Shipment #:

| | | | | | |
|---|---|---|---|---|---|
| Package ID: | 23432-2 | Secondary Pkg ID: | | Accumulation Date: | 07/19/2006 |
| Waste Type: | D LLW | Phys State Cd: | S | Deadline Date: | 10/16/2006 |
| Sec Waste Type: | LLW | UHC Determination: | | Ship Date: | |
| Encasement/HIC#: | | UHC's Applicable: | | TSD Receive Date: | |
| Profile / Rev#: | TBD - 00 | NFPA < 93.3C: | | TSD Accept Date: | |
| WSRd / Rev #: | - | Storage Category: | | Disposal Date: | |
| CCP Control?: | | | | | |

Routine Status: 100 Non-Routine / Other

| | | | |
|---|---|---|---|
| Container Type / Descr: | CM / 14.3*7.33*8 | Container Empty Tare Wt. (kg): | 3628.8000 |
| Container Volume (cu. meters): | 23.7500 | Waste Weight (kg): | 4626.7000 |
| Labpack Flag: | N | Container Gross Wt. (kg): | 8255.5000 |

Container Contents: CORE COMPONENT POTS (CCP) WITH <200 GALS OF RAD-CONTAMINATED SODIUM (MAX OF 3.7 GALS PER CCP). BOX IS PRIMARY CONTAINER FOR THE SODIUM INSIDE THE CCP.

SWO Comments:

Generator Information

Generating Company: CHPRC CH2M HILL PLATEAU REMEDIATION CO. Generator ID: 0092501 Generator Group: FFTF

Source Facility: 403 Generator: RJ SWAN

Generator Comments: CONTAINER SIZE BASED ON CONTAINER (E525-05-152-01). THE CPP IS A CYLINDRICAL CONTAINER PREVIOUSLY USED TO HOLD ASSEMBLIES & OTHER COMPONENTS. EACH CCP HAS BEEN EMPTIED OF SODIUM TO THE EXTEND PRACTICABLE. EACH BOX IS CLOSED WITH ELASTOMER GASKET AND BOLTED FLANGE CLOSURES. AN INERT GAS COVER IS MAINTAINED ON STORAGE OF EACH BOX TO PREVENT CONTACT OF THE METALLIC SODIUM WITH THE WATER VAPOR IN THE AIR. SHIELDING IS PROVIDED FOR WORKER PROTECTION AND TO MEET ALARA REQUIREMENTS. 400 AREA TSD PROFILE DEVOLPED FOR TSD ACCEPTANCE AT THE 400 AREA FUEL STORAGE FACILITY (FSF).

Hazardous Package Detail

Container Status: Full  Flashpoint: n/A  pH Value: >12.5  Subpart CC Flag: NA

DW Numbers: D001 D002 D003

RCRA Reporting

ADWR Stream Description: Sodium Metal -
Designation Code: DW
Source Code: G19 Other one-time or intermittent process
Comment: Decommissioning and Deactivation
Form Code: W319 Other inorganic solids, specify in comments
Comment: Sodium Wetted Piping
Origin Code:
Residual Mgmt Method:
Comment:
Management Method:
Comment:
Certification Group:
Reportable CERCLA?:

Pre-2007 Reporting

Waste Stream:  Offsite TSD Waste Stream:  RCRA Designated Date:

PCB Package Detail:

PCB Type:
PCB Subtype:
PCB Contents:
PCB Source Concentration (PPM):
PCB Waste Weight (kg):
Removed from Service:

# Solid Waste Information and Tracking System
## Container Listing Report
for Package ID: 23432-2
Source Facility:
Location Facility:
Shipment #:

### Radioactive Package Detail

Waste Category: WC3
Combustible Flag:
Exceeds ISB Limit: N
NRC Class: A

snm Waste?:
Shielding:
Handling:
RSWIMS Container Cnt: 1
Excluded from DE-Ci:

Thermal Power (w/cu.m.): 2.16228E-04
Neutron Dose Rate (mrem/hr):
Contact Dose Rate (mrem/hr):
Tot Pe-Ci: .00000E+00
ICRP 71 DE-Ci: 9.78718E-05

### VOC/Hydrogen Gas Diffusion Detail

H2 Diffusion Release Date:
VOC Hold?:
VOC Resample Date:

### Current Location Information

Facility ID: 403
Trench / Unit:
Module:

Tier Level:
Tier Position:
GPS Data Flag:

Loc Beg Coordinates - N:
W:
Loc End Coordinates - N:
W:

### Isotope Information

| Isotope Number | Isotope Name | Isotope Activity (Ci) |
|---|---|---|
| 7 | Cs-134 | 1.23000E-03 |
| 8 | Cs-137 | 1.06000E+00 |
| 13 | Co-60 | 9.12000E-04 |
| 56 | Na-22 | 2.72000E-04 |

**Solid Waste Information and Tracking System**
**Container Listing Report**
for Package ID: **23432-2**
Source Facility:
Location Facility:
Shipment #:

Waste Component Records

| Component ID | Component Text | PPM | Weight (kg) | Weight % |
|---|---|---|---|---|
| 7440-23-5 | SODIUM | | 1193.6886 | 25.8 |
| GCNMETAL | METAL (NONHAZARDOUS) | | 3433.0114 | 74.2 |
| | | | 4626.7000 | |

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 14

**Copies of the Waste Inventory Sheets for the Containers Located at the 440-Pad SAA.**

# WASTE INVENTORY SHEET



**1(a) WASTE TYPE**
- [ ] Suspect
- [x] Hazardous
- [ ] LLW
- [ ] Mixed
- [ ] Transuranic
- [ ] Non-Reg.
- [ ] ECM
- [ ] 
- [ ] 
- [ ] 
- [ ] 

**1(b) PHYSICAL STATE**
- [ ] Free liquid
- [ ] Solid
- [ ] Absorbed liquid
- [ ] Liquid / Solid
- [ ] Gas
- [ ] Sludge
- [ ] Used
- [ ] Old / Expired
- [ ] Spill Cleanup
- [x] aerosol cans
- [ ] 

**2) LINER**
- [ ] 90 mil
- [ ] 10 mil, nylon reinforced
- [ ] 10 mil, plastic
- [x] n/a
- [ ] 
- [ ] 

**3) CONTAINER CONDITION**
- [ ] NEW
- [ ] USED
- [ ] 

**4) CONTAINER DESCRIPTION(s)**

| | |
|---|---|
| [ ] 5 Gallon | [ ] UN1A1 (bung) |
| [ ] 8 Gallon | [x] UN1A2 (open top) |
| [ ] 15 Gallon | [ ] Galvanized |
| [ ] 30 Gallon | [ ] Painted |
| [ ] 55 Gallon | [ ] Wood |
| [ ] 85 Gallon | [ ] Plastic |
| [ ] 5*4*3 | [ ] Metal |
| [ ] 8*4*4 | [ ] Fiberboard |
| [ ] 6*3 Resin Tote | [ ] Resin Coated |
| [ ] 4*8 GAC Canister | [ ] |
| [x] 61 Liter | [ ] |

**CONTAINER IDENTIFICATION**

**5) PIN**

**6) CIN / Barcode** 0027876

**7) Storage Location** 440 pad / FFTF

**8) CACN**

**9)**
- Dose Rate at Contact (mRem/hr): 
- Dose Rate at (@ 30 cm) (mRem/hr): 
- Dose Rate at 1 Meter (mRem/hr): 

---

Item No. 1

Packager's Name: Malley

Date: 5-29-14

MSDS(s): 

**10) GENERAL WASTE DESCRIPTION**

13-Aerosol cans/CRC zinc-it Instant cold galv. 13 oz.
3-Aerosol cans/CRC Instant cold galv.zinc rich. 13 oz.
1-Aerosol cans/sprayon zinc rich cold galv. 14 oz.
1-Aerosol cans/ZRC galvilite galv. comp. 12 oz.

**TOTE/CANISTER NO.**

**VESSEL NO.**

Package Weight: 6.4 (check one) ○ KG ◉ LB

| | | | | |
|---|---|---|---|---|
| a. **Paper** % | e. **Metal** 90 % | i. **Soil** % | j. liquid 5 % | n. **Generating Facility** |
| b. **Plastic** 5 % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

---

Item No.

Packager's Name

Date

MSDS(s): 

**10) GENERAL WASTE DESCRIPTION**

Package Weight: (check one) ○ KG ○ LB

| | | | | |
|---|---|---|---|---|
| a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** |
| b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

---

**11) COMMENTS**

**12) Container Status**
- ○ **FULL**
- ○ **PARTIALLY FULL**
- ○ **EMPTY**
- ○ 

**13) Packaging** Weight
- **Wood Blocking** 
- **Void Filler** (type in comments)
- **Absorbent** (identify in comments)
- **Other:** (identify in comments)

**14) Final Net Weight** ○ KG ○ LB

**15) TARE** ○ KG ○ LB

**16) Packaging** (including liner) ○ KG ○ LB

**17) Gross Weight** ○ KG ○ LB

**18) Waste Water** ○ **Non-Waste Water** ○

**19) Debris** ○ **Non-Debris** ○

# WASTE INVENTORY SHEET - Continuation Sheet



**5) PIN** **6) CIN / Barcode** 0027876

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | |
|---|---|---|---|---|---|
| Packager's Name | | | | | Package Weight _____ (check one) ○ KG ○ LB |
| Date | | | | | |
| MSDS(s) | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | |
|---|---|---|---|---|---|
| Packager's Name | | | | | Package Weight _____ (check one) ○ KG ○ LB |
| Date | | | | | |
| MSDS(s) | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | |
|---|---|---|---|---|---|
| Packager's Name | | | | | Package Weight _____ (check one) ○ KG ○ LB |
| Date | | | | | |
| MSDS(s) | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | |
|---|---|---|---|---|---|
| Packager's Name | | | | | Package Weight _____ (check one) ○ KG ○ LB |
| Date | | | | | |
| MSDS(s) | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | |

# WASTE INVENTORY SHEET



| 1(a) WASTE TYPE | 1(b) PHYSICAL STATE | 2) LINER | 4) CONTAINER DESCRIPTION(s) | | CONTAINER IDENTIFICATION |
|---|---|---|---|---|---|
| ☐ Suspect | ☐ Free liquid | ☐ 90 mil | ☐ 5 Gallon | ☐ UN1A1 (bung) | 5) PIN CP-13-02-F |
| ☐ Hazardous | ☒ Solid | ☐ 10 mil, nylon reinforced | ☐ 8 Gallon | ☒ UN1A2 (open top) | 6) CIN / Barcode 0026112 |
| ☐ LLW | ☐ Absorbed liquid | ☐ 10 mil, plastic | ☐ 15 Gallon | ☐ Galvanized | 7) Storage Location 440 pad / FFTF |
| ☒ Mixed | ☐ Liquid / Solid | ☐ n/a | ☐ 30 Gallon | ☐ Painted | 8) CACN |
| ☐ Transuranic | ☐ Gas | ☐ | ☒ 55 Gallon | ☐ Wood | 9) |
| ☐ Non-Reg. | ☐ Sludge | ☐ | ☐ 85 Gallon | ☐ Plastic | Dose Rate at Contact (mRem/hr) |
| ☐ ECM | ☐ Used | **3) CONTAINER CONDITION** | ☐ 5*4*3 | ☐ Metal | Dose Rate at (@ 30 cm) (mRem/hr) |
| ☐ | ☐ Old / Expired | ☒ NEW | ☐ 8*4*4 | ☐ Fiberboard | Dose Rate at 1 Meter (mRem/hr) |
| ☐ | ☐ Spill Cleanup | ☐ USED | ☐ 6*3 Resin Tote | ☐ Resin Coated | |
| ☐ | ☐ | ☐ | ☐ 4*8 GAC Canister | ☐ | |
| ☐ | ☐ | | ☐ | ☐ | |

| Item No. 1 | 10) GENERAL WASTE DESCRIPTION | TOTE/CANISTER NO. | VESSEL NO. |
|---|---|---|---|
| Packager's Name REID / RAMOS | 1-Tritium sign (BROKEN) Forever-lite inc./serial#286,268/model#SLXTU1/Tritium curies 11.21 in plastic bags (2) absorbent pads tyveks, rubber gloves,tape. | | Package Weight 6.8 (check one) ○ KG ◉ LB |
| Date 2-6-13 | | | |
| MSDS(s) | | | |

| | | | | | |
|---|---|---|---|---|---|
| a. Paper % | e. Metal 1 % | i. Soil % | j. % | n. Generating Facility | 4713 |
| b. Plastic 80 % | f. Wood % | | k. % | o. Dose Rate at Contact | <.5 mr |
| c. Rubber 9 % | g. Glass 10 % | | l. % | p. Absorbent (explain in comments) | % |
| d. Cloth % | h. Leather % | | m. Container Current Net Weight 6.8 lbs | | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | |
|---|---|---|
| Packager's Name | | Package Weight (check one) ○ KG ○ LB |
| Date | | |
| MSDS(s) | | |

| | | | | | |
|---|---|---|---|---|---|
| a. Paper % | e. Metal % | i. Soil % | j. % | n. Generating Facility | |
| b. Plastic % | f. Wood % | | k. % | o. Dose Rate at Contact | |
| c. Rubber % | g. Glass % | | l. % | p. Absorbent (explain in comments) | % |
| d. Cloth % | h. Leather % | | m. Container Current Net Weight lbs | | |

| 11) COMMENTS | 12) Container Status | 13) Packaging Weight | 14) Final Net Weight ○ KG ○ LB |
|---|---|---|---|
| | ○ FULL | Wood Blocking | 15) TARE ○ KG ○ LB |
| | ○ PARTIALLY FULL | Void Filler (type in comments) | 16) Packaging (including liner) ○ KG ○ LB |
| | ○ EMPTY | Absorbent (identify in comments) | 17) Gross Weight ○ KG ○ LB |
| | ○ | Other: (identify in comments) | 18) Waste Water ○ Non-Waste Water ○ |
| | | | 19) Debris ○ Non-Debris ○ |

# WASTE INVENTORY SHEET - Continuation Sheet



**5) PIN** CP-13-02-F **6) CIN / Barcode** 0026112

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | | |
|---|---|---|---|---|---|---|
| Packager's Name | | | | | | Package Weight _____ (check one) ◯ KG ◯ LB |
| Date | | | | | | |
| MSDS(s) | | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** | |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** | |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % | |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | | |
|---|---|---|---|---|---|---|
| Packager's Name | | | | | | Package Weight _____ (check one) ◯ KG ◯ LB |
| Date | | | | | | |
| MSDS(s) | | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** | |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** | |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % | |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | | |
|---|---|---|---|---|---|---|
| Packager's Name | | | | | | Package Weight _____ (check one) ◯ KG ◯ LB |
| Date | | | | | | |
| MSDS(s) | | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** | |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** | |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % | |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | | |

| Item No. | 10) GENERAL WASTE DESCRIPTION | | | | | |
|---|---|---|---|---|---|---|
| Packager's Name | | | | | | Package Weight _____ (check one) ◯ KG ◯ LB |
| Date | | | | | | |
| MSDS(s) | | | | | | |
| _____ | a. **Paper** % | e. **Metal** % | i. **Soil** % | j. % | n. **Generating Facility** | |
| _____ | b. **Plastic** % | f. **Wood** % | | k. % | o. **Dose Rate at Contact** | |
| _____ | c. **Rubber** % | g. **Glass** % | | l. % | p. **Absorbent** (explain in comments) % | |
| _____ | d. **Cloth** % | h. **Leather** % | | m. **Container Current Net Weight** lbs | | |

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 15

**Copy of the Training Plan and Completion Dates for the MASF Operations Manager.**

# Training Plan by HID



**Name:** Young, Michael A **Hanford ID:** 0015565 **Contractor:** CHPRC **Job Title:** 3-ENG/FWS/PLNR - MASF

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **---- AJHA Facility Support Admin Trng (1421) ----** | | | | | | | | | |
| 172709 | AUTOMATED JOB HAZARD ANALYSIS FACILITY SUPPORT | 0 | Y | 06/12/2013 | | 172709 | | | |
| **---- ALL CHPRC Employee Training (1363) ----** | | | | | | | | | |
| 000001 | HANFORD GENERAL EMPLOYEE TRAINING - CBT | 12 | Y | 09/23/2013 | 09/23/2014 | 000001 | 000001 | | |
| 000006 | CHPRC - GENERAL EMPLOYEE TRAINING (CGET) | 12 | Y | 09/23/2013 | 09/23/2014 | 000006 | 000006 | | |
| 600008 | ISMS/EMS/VPP OVERVIEW - CBT | 0 | Y | 10/14/2009 | | 600008 | | | |
| 600045 | UNIVERSAL WASTE MANAGEMENT | 0 | Y | 07/12/2010 | | 600045 | | | |
| **---- All Engineering Disciplines (1377) ----** | | | | | | | | | |
| 022400 | SITE ENGINEERING QUALIFICATION TRAINING | 0 | Y | 01/12/2010 | | 022400 | | | |
| **---- Basic Crane & Rigging (3814) ----** | | | | | | | | | |
| 040784 | BASIC CRANE & RIGGING SAFETY | 60 | Y | 12/21/2009 | 12/21/2014 | 044691 | 040786 | | |
| 044691 | CLASS 1 OVERHEAD CRANES, FLOOR OPERATED | 60 | Y | 12/21/2009 | 12/21/2014 | 044691 | 044691 | | |
| **---- cab operated E will not operate (5570) ----** | | | | | | | | | |
| 040784 | BASIC CRANE & RIGGING SAFETY | 60 | Y | 12/21/2009 | 12/21/2014 | 044691 | 040786 | | |
| 043010 | OVERHEAD CRANE INSPECTION (ELECTRICAL) | 60 | Y | 04/14/2009 | 04/14/2014 | 043010 | 043010 | 06/11/2014 | 043010 |
| **---- cab operated M will not operate (5569) ----** | | | | | | | | | |
| 040784 | BASIC CRANE & RIGGING SAFETY | 60 | Y | 12/21/2009 | 12/21/2014 | 044691 | 040786 | | |
| 042830 | OVERHEAD CRANE INSPECTION MECHANICAL | 60 | Y | 03/24/2009 | 03/24/2014 | 042830 | 042830 | | |
| **---- CHPRC Management Assessments (1339) ----** | | | | | | | | | |
| 600007 | CHPRC MANAGEMENT ASSESSMENT TUTORIAL | 24 | Y | 01/16/2013 | 01/16/2015 | 600007 | 600007 | | |
| **---- CHPRC Occurrence Report Writers (ORPS) (1318) ----** | | | | | | | | | |
| 170640 | INTRODUCTION TO OCCURRENCE REPORTING | 0 | Y | 06/02/2009 | | 170640 | | | |
| 170642 | OCCURRENCE REPORT WRITING | 0 | Y | 11/10/2009 | | 170642 | | | |
| 600081 | CHPRC CAUSE EVALUATOR TRAINING | 0 | Y | 03/23/2012 | | 600081 | | | |
| **---- CHPRC Technical Authorities (1401) ----** | | | | | | | | | |
| 600614 | CHPRC PPS & TA TRAINING - CBT | 0 | Y | 01/09/2013 | | 600614 | | | |
| **---- CHPRC Utility Vehicle Checklist (1509) ----** | | | | | | | | | |
| 290527 | CHPRC UTILITY VEHICLE TRAINING | 0 | Y | 10/19/2012 | | 290527 | | | |
| **---- CHPRC Work Planner Qualification (1417) ----** | | | | | | | | | |
| 00312I | HANFORD SITE LOCKOUT/TAGOUT TRAINING OVERVIEW - | 0 | Y | 08/23/2007 | | 00310I | | | |

# Training Plan by HID



**Name:** Young, Michael A **Hanford ID:** 0015565 **Contractor:** CHPRC **Job Title:** 3-ENG/FWS/PLNR - MASF

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **---- CHPRC Work Planner Qualification (1417) ----** | | | | | | | | | |
| 010108 | WORK MANAGEMENT/JOB CONTROL SYSTEM OVERVIEW | 0 | Y | 12/31/2004 | | 010108 | | | |
| 02006G | WASTE MANAGEMENT AWARENESS | 0 | Y | 10/21/1993 | | 02006G | | | |
| 170720 | SUSPECT/COUNTERFEIT ITEMS | 12 | Y | 09/10/2013 | 09/10/2014 | 170724 | 170724 | | |
| 170723 | CHPRC WORK PLANNING INITIAL QUALIFICATION CARD | 0 | Y | 04/04/2007 | | 170723 | | | |
| 172703 | THE WEB-BASED AJHA TOOL | 0 | Y | 02/13/2007 | | 172703 | | | |
| 172705 | EFFECTIVE WORK PLANNING | 0 | Y | 08/16/2007 | | 172705 | | | |
| 172706 | USING THE FEEDBACK, POST-JOB/ALARA REVIEW DATABASE | 0 | Y | 11/14/2012 | | 172706 | | | |
| 180400 | CHPRC WORK MANAGEMENT OVERVIEW | 0 | Y | 05/04/2011 | | 604240 | | | |
| **---- CHPRC Work Planning Manager (1418) ----** | | | | | | | | | |
| 100723 | CHPRC WORK PLANNING MANAGER QUALIFICATION CARD | 0 | Y | 06/08/2011 | | 100723 | | | |
| 172706 | USING THE FEEDBACK, POST-JOB/ALARA REVIEW DATABASE | 0 | Y | 11/14/2012 | | 172706 | | | |
| 180400 | CHPRC WORK MANAGEMENT OVERVIEW | 0 | Y | 05/04/2011 | | 604240 | | | |
| **---- CHPRC Work Release Authority Qualification (1419) ----** | | | | | | | | | |
| 003055 | LOCKOUT/TAGOUT CONTROLLING ORG ADMINISTRATOR | 12 | Y | 05/29/2013 | 05/29/2014 | 310R55 | 003055 | | |
| 003056 | LOCKOUT/TAGOUT AUTHORIZED WORKER PRACTICAL EVAL | 12 | Y | 05/29/2013 | 05/29/2014 | 310R56 | 003056 | | |
| 00310I | HANFORD SITE LOCKOUT/TAGOUT FOR CONTROLLING | 12 | Y | 05/29/2013 | 05/29/2014 | 00310R | 00310R | 05/27/2014 | 00310R |
| 170727 | CHPRC RELEASE AUTHORITY DESIGNATION CARD | 0 | Y | 01/14/2010 | | 170727 | | | |
| **---- Confined Space (3812) ----** | | | | | | | | | |
| 020134 | HANFORD SITE CONFINED SPACE ENTRY | 0 | Y | 08/29/2011 | | 020134 | | | |
| **---- D and D Plant Specifics JSO (3864) ----** | | | | | | | | | |
| 076626 | D&D PROJECT JOB SPECIFIC ORIENTATION | 0 | Y | 06/25/2012 | | 076626 | | | |
| **---- Design Authority (1379) ----** | | | | | | | | | |
| 005102 | DESIGN AUTHORITY QUALIFICATION - CHPRC | 0 | Y | 01/12/2010 | | 005102 | | | |
| **---- Designated as equip. custodian (5637) ----** | | | | | | | | | |
| 042870 | EQUIPMENT CUSTODIAN TRAINING | 60 | Y | 05/01/2014 | 05/01/2019 | 042870 | 042870 | | |
| **---- Emergency Preparedness/BW-General Purpose (5725) ----** | | | | | | | | | |
| 037505 | BUILDING WARDEN INITIAL TRAINING FOR GENERAL | 12 | Y | 02/10/2014 | 02/10/2015 | 037526 | 037526 | | |
| **---- Emergency Preparedness/PAA (5723) ----** | | | | | | | | | |
| 038200 | STAGING AREA MANAGER (SAM) PERSONNEL | 12 | Y | 02/10/2014 | 02/10/2015 | 037526 | 038200 | | |
| **---- Field Work Supervisor - MASF (3809) ----** | | | | | | | | | |

# Training Plan by HID



**Name:** Young, Michael A **Hanford ID:** 0015565 **Contractor:** CHPRC **Job Title:** 3-ENG/FWS/PLNR - MASF

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **---- Field Work Supervisor - MASF (3809) ----** | | | | | | | | | |
| 010108 | WORK MANAGEMENT/JOB CONTROL SYSTEM OVERVIEW | 0 | Y | 12/31/2004 | | 010108 | | | |
| 020147 | FALL HAZARD RECOGNITION AND PREVENTION | 0 | Y | 05/22/1996 | | 020140 | | | |
| 020194 | HEARING CONSERVATION - CBT | 12 | Y | 05/20/2014 | 05/20/2015 | 020194 | 020194 | | |
| 020440 | FALL PROTECTION PFAS USERS | 24 | Y | 02/19/2014 | 02/19/2016 | 020441 | 020441 | | |
| 043820 | BREAKER OPERATION ELECTRICAL SAFETY | 36 | Y | 03/25/2013 | 03/25/2016 | 043820 | 043820 | | |
| 044371 | USERS SCAFFOLD SAFETY - CBT | 0 | Y | 10/01/2003 | | 044371 | | | |
| 044391 | PORTABLE LADDER SAFETY - CBT | 0 | Y | 07/02/2005 | | 044391 | | | |
| 044480 | ELECTRICAL SAFETY FOR NON-ELECTRICAL WORKERS | 36 | Y | 05/21/2013 | 05/21/2016 | 043875 | 044480 | | |
| 170173 | CONDITION REPORTING AND RESOLUTION SYSTEM (CRRS) - | 0 | Y | 11/09/2009 | | 170173 | | | |
| 172703 | THE WEB-BASED AJHA TOOL | 0 | Y | 02/13/2007 | | 172703 | | | |
| 180400 | CHPRC WORK MANAGEMENT OVERVIEW | 0 | Y | 05/04/2011 | | 604240 | | | |
| 211186 | MASF FWS INITIAL QUALIFICATION CHECKLIST | 24 | Y | 04/04/2013 | 04/04/2015 | 211187 | 211187 | | |
| 213007 | MASF FEHIC / ORIENTATION | 12 | Y | 04/28/2014 | 04/28/2015 | 213007 | 213007 | | |
| 604240 | CHPRC FIELD WORK SUPERVISOR | 0 | Y | 05/04/2011 | | 604240 | | | |
| **---- Global Harmonization Systems Trng - CBT (GHS-1) ----** | | | | | | | | | |
| 600400 | CHPRC GHS HAZARD COMMUNICATION | 0 | Y | 01/16/2013 | | 600400 | 600400 | | |
| **---- Gov't Vehicle Drivers Awareness & Practical (1507) ----** | | | | | | | | | |
| 145000 | DRIVER AWARENESS - PRACTICAL | 0 | Y | 08/26/2011 | | 301846 | | | |
| 301845 | DRIVER AWARENESS - CBT | 0 | Y | 06/29/2010 | | 301845 | | | |
| **---- Haz Review for Subject Matter Experts & Tech Auth (1423) ----** | | | | | | | | | |
| 172703 | THE WEB-BASED AJHA TOOL | 0 | Y | 02/13/2007 | | 172703 | | | |
| 172707 | HAZARD REVIEW FOR SUBJECT MATTER EXPERTS AND | 0 | Y | | | | | 06/16/2014 | 172707 |
| **---- LOTO CO Designating MGR - QC ----** | | | | | | | | | |
| 600606 | CHPRC CONTROLLING ORGANIZATION LOCKOUT/TAGOUT | 0 | Y | 01/24/2014 | | 600606 | | | |
| **---- MASF - Qualified Electrical Worker (3815) ----** | | | | | | | | | |
| 043870 | NFPA-70E STANDARDS FOR ELECTRICAL SAFETY | 36 | Y | 05/21/2013 | 05/21/2016 | 043875 | 043875 | | |
| 170500 | BASIC MEDIC FIRST AID/CPR/AED TRAINING | 24 | Y | 03/27/2013 | 03/27/2015 | 170501 | 170501 | | |
| 801497 | NEC CODE UPDATE 2014 | 0 | Y | 03/12/2014 | | 801497 | | | |
| **---- MASF Personnel (5487) ----** | | | | | | | | | |
| 213007 | MASF FEHIC / ORIENTATION | 12 | Y | 04/28/2014 | 04/28/2015 | 213007 | 213007 | | |
| **---- MGR TRNG - Safe & Drug Free Workplace (1334) ----** | | | | | | | | | |
| 080820 | SAFE AND DRUG-FREE WORKPLACE INITIAL - CBT | 24 | Y | 04/02/2013 | 04/02/2015 | 080830 | 080830 | | |

# Training Plan by HID



**Name:** Young, Michael A **Hanford ID:** 0015565 **Contractor:** CHPRC **Job Title:** 3-ENG/FWS/PLNR - MASF

| Course | Course Title | Recert Freq | Req? | Date Taken | Date Needed | Crs Taken | Retrain Crs | Date Sched | Crs# Sched |
|---|---|---|---|---|---|---|---|---|---|
| **---- OJT / OJE Instructor -Evaluator (1395) ----** | | | | | | | | | |
| 000396 | ON-THE-JOB TRAINER FUNDAMENTALS | 0 | Y | 09/04/1996 | | 071957 | | | |
| 000397 | ON-THE-JOB EVALUATOR FUNDAMENTALS | 0 | Y | 09/04/1996 | | 071957 | | | |
| **---- OPTIONAL - CHPRC Building Administator Trng (1366) ----** | | | | | | | | | |
| 038300 | BUILDING ADMINISTRATOR | 12 | Y | 07/23/2013 | 07/23/2014 | 038301 | 038301 | | |
| **---- Optional training - 802114 NFPA 101 Life Safety Code ----** | | | | | | | | | |
| 802114 | NFPA 101 - LIFE SAFETY CODE | 0 | Y | 10/12/2011 | | 802114 | | | |
| **---- Principals for Conduct of Operations (1345) ----** | | | | | | | | | |
| 001011 | VALUE OF OPERATIONAL EXCELLENCE | 0 | Y | 08/19/1993 | | 001000 | | | |
| **---- Rad Worker II (3822) ----** | | | | | | | | | |
| 020001 | RADIOLOGICAL WORKER II INITIAL TRAINING | 24 | Y | 03/21/2013 | 03/21/2015 | 020003 | 020003 | | |
| **---- Responsible Manager - Issues Management (1305) ----** | | | | | | | | | |
| 600082 | CHPRC RESPONSIBLE MANAGER TRAINING - ISSUES | 0 | Y | 05/18/2011 | | 600082 | | | |
| **---- Responsible Manager #600029 (1349) ----** | | | | | | | | | |
| 600029 | CHPRC RESPONSIBLE MANAGER OVERVIEW TRAINING | 0 | Y | 05/04/2011 | | 600029 | | | |
| **---- Scaffold Safety Inspection (5685) ----** | | | | | | | | | |
| 044372 | SCAFFOLD SAFETY FOR INSPECTORS | 0 | Y | 09/27/2003 | | 044370 | | | |
| **---- Work Management - D&D Project Specific RM Qual Card (1429) ----** | | | | | | | | | |
| 600090 | RESPONSIBLE MANAGER QUALIFICATION D&D/100K | 0 | Y | 06/14/2011 | | 600090 | | | |
| **---- Work Management - Responsible Manager Qual (1428) ----** | | | | | | | | | |
| 172703 | THE WEB-BASED AJHA TOOL | 0 | Y | 02/13/2007 | | 172703 | | | |
| 180400 | CHPRC WORK MANAGEMENT OVERVIEW | 0 | Y | 05/04/2011 | | 604240 | | | |
| 600024 | CHPRC RESPONSIBLE MANAGER - WORK PLANNING | 0 | Y | 06/08/2011 | | 600024 | | | |
| 600029 | CHPRC RESPONSIBLE MANAGER OVERVIEW TRAINING | 0 | Y | 05/04/2011 | | 600029 | | | |
| 604240 | CHPRC FIELD WORK SUPERVISOR | 0 | Y | 05/04/2011 | | 604240 | | | |

## Respiratory Medical Schedule Dates

| Last Exam Date | Date Scheduled | Time | Location | Type | Status | Inactive Date |
|---|---|---|---|---|---|---|
| 10/27/2009 | | | | RESP | EXPIRED | 10/31/2010 |

## Dosimetry Schedule Dates

| Exam Type and Description | Exam Date | Exam Time | Last Exam |
|---|---|---|---|

# U.S. ENVIRONMENTAL PROTECTION AGENCY

# INSPECTION OF 400 AREA WMU, 440-PAD, AND MASF

# DOCUMENTS AND INFORMATION REQUEST

# MAY 21, 2014

## INSPECTION REQUEST NUMBER 16

**Copy of letter from U.S. Department of Energy (DOE) to the Washington State Department of Ecology (Ecology), Subject: "Class 1 Modifications to the Hanford Facility Resources Conservation and Recovery Act Permit (Permit), Quarter Ending December 31, 2013," dated January 10, 2014.**

***Note: The first section of this submitted HF RCRA Permit Class 1 Modification Package is the 400 Area WMU.***

# DOCUMENT RELEASE FORM

S

| | | | |
|---|---|---|---|
| (1) Document Number: RPP-RPT-40709 | | (2) Revision Number: 1 | (3) Effective Date: 8/30/11 |
| (4) Document Type: ☐ Digital Image ☐ Hard copy ☒ PDF ☐ Video | | (a) Number of pages (including the DRF) or number of digital images 1188 | |
| (5) Release Type ☐ New ☐ Cancel | | ☐ Page Change | ☒ Complete Revision |
| (6) Document Title: FINAL REPORT FOR TANK 241-AW-106 GRAB SAMPLES COLLECTED IN SUPPORT OF EVAPORATOR CAMPAIGNS FOR FISCAL YEAR 2009 | | | |
| (7) Change/Release Description: Replace pages 6-16, 79-88, 520-522, 699-701 and cover page. | | | |
| (8) Change Justification: Added missing qualifier flags to results (gross alpha and Np237) in data summary report and raw data in accordance with a Characterization Data Deficiency Form (DDF) from Customer | | | |

| (9) Associated Structure, System, and Component (SSC) and Building Number: | (a) Structure Location: | (c) Building Number: | (e) Project Number: |
|---|---|---|---|
| | N/A | AW-106 | N/A |
| | (b) System Designator: | (d) Equipment ID Number (EIN): | |
| | N/A | N/A | |

| (10) Impacted Documents: | (a) Document Type | (b) Document Number | (c) Document Revision |
|---|---|---|---|
| | DATA PACKAGE | RPP-RPT-40709 | 0 |
| | DATA PACKAGE | RPP-RPT-40709 | 1 |
| | | | |

**(11) Approvals:**

| | |
|---|---|
| (a) Author (Print/Sign): C. S. Menjivar | Date: 8/30/11 |
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# FINAL REPORT FOR TANK 241-AW-106 LIQUID GRAB SAMPLES IN SUPPORT OF EVAPORATOR CAMPAIGNS FOR FISCAL YEAR 2009

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# 222-S LABORATORY

## REISSUED FINAL REPORT FOR TANK 241-AW-106 LIQUID GRAB SAMPLES IN SUPPORT OF EVAPORATOR CAMPAIGNS FOR FISCAL YEAR 2009

## 1. INTRODUCTION

**This report has been reissued in order to add missing qualifier flags to the radchem results ( gross alpha and $^{237}$Np) included in the data the summary report (see Attachment 1). In addition, the raw data included in Attachment 9 has been updated. These changes are in accordance with a Characterization Data Deficiency Form (DDF) received from the customer (see Attachment 6).**

This data package presents the results for liquid grab samples taken from tank 241-AW-106 (AW-106) on March 4 and 9, 2009. The samples were analyzed in accordance with RPP-PLAN-39120, *Tank 241-AW-106 Grab Sampling and Analysis Plan in Support of Evaporator Campaigns for Fiscal Year 2009* (TSAP); ATL-MP-1011, *ATL Quality Assurance Project Plan for 222-S Laboratory;* and SW-846, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.*

All known deviations from the requirements in the TSAP are documented in this narrative. The Data Summary Report is presented in Attachment 1. The Sample Breakdown Diagrams are presented in Attachment 2. These diagrams show the relationships between the parent field samples and the laboratory sample identification numbers. Opportunistic Analyte Results are included in Attachment 3. Attachment 4 contains the surrogate recoveries for the volatile organic compound (VOC), semivolatile organic compound (SVOC), and polychlorinated biphenyls (PCB) analyses. Tentatively identified compounds from the VOC and SVOC analyses are included in Attachment 5. Attachment 6 contains correspondence received during the project. The photographs of the samples taken immediately after receipt are included in Attachment 7. Copies of the Chain of Custody (COC) and Generator Knowledge Information forms are included as Attachment 8. Copies of the raw data for each analysis are included in Attachment 9.

Details for sample analysis times and dates relative to holding times are given in Sections 4.1 through 4.3. All analyses were completed within 30 days.

As noted in Table 1, sample 6AW-08-04A was broken while loading it into the hot-cells. The tank coordinator was notified and on discussion, it was decided that a portion sample 6AW-08-04B would be used for the volatile organic analysis (VOA) test, and a characterization change notice was issued (09-CCN-04) to this effect. It is estimated that sample 6AW-08-04B was open for less than 5 minutes prior to subsampling for VOA. A second characterization change notice was issued (09-CCN-07) to add 2-butoxyethanol to the SVOA required analyte list and $^{237}$Np to the ICP-MS analysis.

## 2. SAMPLE RECEIPT AND BREAKDOWN

Five grab samples and two field blanks were taken from AW-106 Riser 14 on March 4, 2009. Two grab samples (6AW-08-04A and -04B) were taken from AW-106 Riser 19 on

March 9, 2009. A trip blank was also created and delivered to the laboratory. The samples were received at the 222-S Laboratory on March 4, 5 and 9, 2009.

The data on the COCs were verified at sample receipt, and all samples except 6AW-08-01TB and 6AW-08-01FB1 were loaded into the 11A hot cell. These two samples were removed from the shipping containers outside of the hot cell and transferred into slip-lid cans for transporting to the lab. Samples were observed for appearance and determination of volume percent settled solids, and then photographs were taken of the samples that were handled in the hot cell.

## 3. SAMPLE APPEARANCE INFORMATION

The sample receipt and appearance information is included in Table 1. Sample descriptions from the COC forms may differ slightly. Since all samples except 6AW-08-01 were received in amber bottles, the color observation was made on subsampling. The samples were generally described as clear yellow liquids. Sample 6AW-08-04A was broken when it was being removed from the sample carrier; therefore the weight and volume could not be measured; the color observation was made on the material contained in the plastic bag.

**Table 1. Sample Receipt.**

| Sample Identification | Date Sampled | Date Received | Volume Percent Settled Solids (%) | Liquid Weight (g) | Sample Description |
|---|---|---|---|---|---|
| 6AW-08-01TB | 3/4/09 | 3/5/09 | None | N/A | 250 mL clear colorless liquid; no solids; no organic layer. |
| 6AW-08-01FB1 | 3/4/09 | 3/5/09 | None | N/A | 250 mL clear colorless liquid; no solids; no organic layer. |
| 6AW-08-01FB2 | 3/4/09 | 3/5/09 | None | 242 | 250 mL clear colorless liquid; no solids; no organic layer. |
| 6AW-08-01 | 3/4/09 | 3/4/09 | None | 306 | 250 mL clear yellow liquid; no solids; no organic layer. |
| 6AW-08-02A | 3/4/09 | 3/5/09 | None | 302 | 250 mL clear yellow liquid; no solids; no organic layer. |
| 6AW-08-02B | 3/4/09 | 3/5/09 | None | 302 | 250 mL clear yellow liquid; no solids; no organic layer. |
| 6AW-08-03A | 3/4/09 | 3/5/09 | None | 301 | 250 mL clear yellow liquid; no solids; no organic layer. |
| 6AW-08-03B | 3/4/09 | 3/4/09 | None | 302 | 250 mL clear yellow liquid; no solids; no organic layer. |
| 6AW-08-04A | 3/9/09 | 3/9/09 | None | N/A | Clear yellow liquid; no solids; no organic layer. Sample jar broken in hot-cell; tests transferred to 6AW-08-04B. |
| 6AW-08-04B | 3/9/09 | 3/9/09 | None | 304 | 250 mL clear yellow liquid; no solids; no organic layer. |

N/A – Measurement not obtained because sample was handled outside the hot cell.

## 4. ANALYTICAL RESULTS SUMMARY

The Data Summary Report (Attachment 1) presents the final analytical results for those analytes requested in the TSAP. Measured analytes that were not specifically requested in Table 4-1 in the TSAP are reported in Attachment 3. There were no customer-defined quality control (QC) parameters for these analytes; the results were not verified and are not discussed in this narrative. These nonrequested results are considered "opportunistic" according to ATL-MP-1011. For VOC and SVOC, compounds that were detected but were not in the calibration, are considered tentatively identified compounds and are reported in Attachment 5.

Field blank 6AW-08-01FB1 was removed from the shipping container outside of the hot cell and all subsample aliquots were removed in a fume hood. Field blank 6AW-08-01FB2 was loaded into the 11A hot cell and subsampled in the same manner as the tank samples. Chloride, silicon, sodium, total organic carbon (TOC), gross beta activity, $^{79}$Se, $^{90}$Sr, $^{235}$U, and $^{237}$Np were detected in both field blanks at trace levels. Additionally, calcium and strontium were detected in 6AW-08-01FB1, and lead, nitrate, $^{236}$U and $^{238}$U were detected in 6AW-08-01FB2 at trace levels. With the exception of TOC, samples were analyzed at dilution factors 1000 times greater than the blanks. All detected analytes were less than 20% of the lowest sample result.

The TSAP requested that the laboratory use the least dilution to obtain the lowest practical detection limit. Minimum detection limits were also requested. However, the TSAP indicated that these required minimum detection limits (RDL) were not expected to be met if the sample results were greater than the estimated quantitation limit (EQL). All analytes either met the RDL or were reported above the EQL except for two of the seven Aroclors. For the PCB analysis, the sample size was chosen based on the specific gravity (SpG). The detection limit for all Aroclors, except Aroclor-1016 and Aroclor-1260 met the RDL.

The "Det Limit" column in Attachments 1 and 3 contains the method detection limit (MDL) for nonradionuclide analyses or the minimum detectable activity (MDA) for radionuclides.

In Attachments 1 and 3, the column labeled "A#" indicates the aliquot class or the method used for sample preparation before analysis. The "O" indicates that samples were extracted for organic analysis. The "S" indicates that samples were distilled prior to analysis for ammonium ion. Samples without a letter identifier were analyzed directly with no separate preparation analysis or with sample preparation performed as a part of the procedure steps.

The flags used to qualify the data are defined as the following. These are used in the "Qual Flags" column in Attachments 1 and 3 but can also be found in Attachment 5 and the raw data.

a. "B" is used to indicate that the analyte was detected in the method blank and in the sample, and the result for the blank was greater than 5% of the reported sample result.

b. "J" indicates that the reported result should be considered an estimate because of increased uncertainty near the detection limit. The "J" flag is applied to sample concentrations that are greater than the MDL but less than the EQL. For radionuclides, the "J" flag is applied to detected isotopes that have a counting uncertainty (Count Err %) greater than 30%. It is also applied to samples with pH reported >13.5.

c. "Q" indicates that the result is qualitative only.

d. "U" indicates that the reported result is less than the calculated MDL or MDA.

e. "b" indicates that the associated matrix spike/matrix spike duplicate (MS/MSD) were outside the range specified in the TSAP

f. "e" indicates that the serial dilution for that sample was outside the range specified in the method.

Manual calculations using rounded results from the Data Summary Report or result calculation forms may differ slightly from the actual results derived from the raw data.

## 4.1 INORGANIC ANALYSES

### 4.1.1 Specific Gravity

The SpG analysis was performed on a direct subsample of the surface sample and each "B" sample. The analysis was performed using a 5-mL sample size to improve the precision of the measurements. The LCS recovery and the relative percent difference (RPD) between sample and duplicate results met the criterion in the TSAP.

### 4.1.2 pH

The pH analysis was performed on a direct subsample of the surface sample, each "B" sample, and both field blanks. The LCS and duplicate pH measurements met the criteria listed in the TSAP.

The stated SW-846 holding time for pH analysis is "immediately." The time duration between sampling and measurement of the pH for each sample is shown in Table 2.

**Table 2. Holding Times for pH.**

| Customer ID | Sample Number | Sampling Date | Receipt Date | Analysis Date | Elapsed Time (hours) |
|---|---|---|---|---|---|
| 6AW-08-01FB1 | S09T001751 | 3/4/09 10:22 | 3/5/09 | 3/5/2009 17:30 | 31 |
| 6AW-08-01FB2 | S09T001762 | 3/4/09 10:27 | 3/5/09 | 3/5/2009 17:30 | 31 |
| 6AW-08-01 | S09T001772 | 3/4/09 10:36 | 3/4/09 | 3/4/2009 20:30 | 10 |
| 6AW-08-02B | S09T001783 | 3/4/09 10:50 | 3/5/09 | 3/5/2009 17:30 | 31 |
| 6AW-08-03B | S09T001795 | 3/4/09 11:00 | 3/4/09 | 3/4/2009 20:30 | 9.5 |
| 6AW-08-04B | S09T001807 | 3/9/09 10:41 | 3/9/09 | 3/9/2009 18:00 | 7.3 |

### 4.1.3 Hydroxide

The $OH^-$ analysis was performed on a direct subsample of the surface sample and each "B" sample. The LCS recovery, spike recovery, and RPD met the criteria in the TSAP. No free $OH^-$ was detected in the method blank. The RDL was not met, but the reported results for the tank samples were above the EQL.

### 4.1.4 Differential Scanning Calorimetry

The differential scanning calorimetry (DSC) analysis was performed on a direct subsample of each "B" sample. The LCS met the recovery criteria specified in the TSAP. No exotherms were exhibited in the samples, so calculation of an RPD was not applicable. The results were also reported on a dry weight basis, using the thermogravimetric analysis (TGA) results, as required in the TSAP.

### 4.1.5 Percent Water

The percent water was determined on a direct subsample of the surface sample and each "B" sample using TGA. The LCS recoveries and RPD met the criteria listed in the TSAP.

### 4.1.6 Mercury

Analysis for Hg was performed on a direct subsample of the surface sample, each "B" sample and each field blank. The LCS recovery and RPD met the criteria listed in the TSAP, as did the post-digestion spike. However, the pre-digestion spike had a recovery of only 33.8%. A reanalysis of the samples produced similar results (56.4% pre-digestion spike recovery), suggesting a matrix effect. Trace amounts of mercury were detected in all the tank samples in the reanalysis. The original analysis was performed within the 28-day holding time, the reanalysis was not.

### 4.1.7 Ammonium

Analysis for $NH_4^+$ was performed on a distilled subsample of each field blank and each "B" sample. The LCS and MS recoveries and RPD met the criteria listed in the TSAP. A low level of $NH_4^+$ was detected in the method blank.

### 4.1.8 Ion Chromatography

Ion chromatography (IC) analysis was performed on a direct subsample of the surface sample, each "B" sample, and both field blanks. Table 4-1 in the TSAP listed required analytes. Results from all other anions and organic acids are presented in Attachment 3.

The samples were analyzed using the IC method that separates the low molecular weight organic acids from the fluoride. The holding time for nitrate, nitrite and phosphate is 48 hours. The holding time for chloride is 28 days. Due to delays between sampling and delivery, the only sample that met all of the holding times was 6AW-08-04B. The actual durations from sampling to analysis are indicated in Table 3.

**Table 3. Nitrate and Nitrite Holding Times.**

| Customer ID | Sample Number | Sampling Date | Receipt Date | Analysis Date | Elapsed Time (hours) |
|---|---|---|---|---|---|
| 6AW-08-01FB1 | S09T001751 | 3/4/09 10:22 | 3/5/09 | 3/6/2009 19:12 | 57 |
| 6AW-08-01FB2 | S09T001762 | 3/4/09 10:27 | 3/5/09 | 3/6/2009 19:44 | 57 |
| 6AW-08-01 | S09T001772 | 3/4/09 10:36 | 3/4/09 | 3/6/2009 21:52 | 59 |
| 6AW-08-02B | S09T001783 | 3/4/09 10:50 | 3/5/09 | 3/6/2009 20:16 | 57 |
| 6AW-08-03B | S09T001795 | 3/4/09 11:00 | 3/4/09 | 3/9/2009 17:23 | 126 |
| 6AW-08-04B | S09T001807 | 3/9/09 10:41 | 3/9/09 | 3/10/2009 00:54 | 14.2 |

The LCS recoveries, spike recoveries, and RPDs met the criteria listed in the TSAP.

### 4.1.9 Inductively Coupled Plasma-Atomic Emission Spectroscopy

The inductively coupled plasma-atomic emission spectroscopy analysis was performed on a direct subsample of the surface sample, each "B" sample, and both field blanks. Table 4-1 in the TSAP listed required analytes. All other analyte results obtained from this method are presented in Attachment 3.

A duplicate and spike were analyzed on the surface sample. The LCS and MS recoveries and RPDs all met the requirements in the TSAP. Iron and nickel were detected in the method blank, except for sample S09T001782 (6AW-08-02B), which had no reportable nickel above the detection limit (<8.0 µg/mL). The percent difference for sodium serial dilution (10.8%) slightly exceeded the control limit of 10%; no reanalysis was performed.

All sample analyses were completed within the required 180-day hold time.

### 4.1.10 Inductively Coupled Plasma-Mass Spectrometry

The inductively coupled plasma-mass spectrometry (ICP-MS) analysis for $^{99}$Tc and isotopic uranium was performed on a direct subsample of each "B" sample and both field blanks. Table 4-1 in the TSAP listed required analytes. All other analyte results obtained from this method are presented in Attachment 3. A duplicate and MS were required for the isotopic uranium analysis; an MS and MSD were required for the $^{99}$Tc analysis. Table 4 summarizes the MS/MSD recoveries and the spike RPDs.

**Table 4. Matrix Spike/ Duplicate Summary for $^{99}$Tc.**

| Laboratory Identification | Analyte | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|---|
| S09T001784 | $^{99}$Tc | 104 | 101 | 3.16 |

The presence of $^{99}$Ru and/or natural $^{64}$Zn$^{35}$Cl in these samples would cause a high bias in the $^{99}$Tc results measured by ICP-MS. Interference from zinc chloride is estimated to be negligible based on Zn results. Since $^{99}$Ru is a fission product and is known to be present in some tank waste, these results may be biased high. The dilutions required for the samples were large enough such that any chloride in the samples would not interfere with the $^{99}$Tc results.

With the exception of $^{238}$U, the results for the field blank samples, which were run at a tenfold dilution, were less than the detection limit.

Direct calibration, where a standard containing the isotope and element of interest is used to calibrate the response of the isotope, is the most accurate type of calibration. Standard material is not available for all the isotopes of interest. Those isotopes without available standards are calibrated using the instrument's mass-response curve and the intensity/concentration relationship for the available isotope standards. While the isotope results calibrated in this manner are designated "semi-quantitative" in the procedure, the differences in instrument response along the curve are generally small enough across the actinide mass range such that the results generated might be expected to be within similar uncertainties associated with quantitative results (i.e., those obtained directly against an isotope-specific standard).

A similar approach is used to evaluate the recoveries of calibration checks, standards, and spikes. Just as all of the elemental isotopes of interest are not available for calibration, they are also not available for the various QC samples. Because the chemical properties of an element are the same for all of its isotopes, one elemental isotope can be used as a measure for other isotopes of interest. For example, by measuring the recovery of $^{238}$U in the various QC samples, the accuracy of the other uranium isotopes also can be evaluated. Table 5 lists the isotopes used for standards and spike samples for ICP-MS analyses.

**Table 5. Inductively Coupled Plasma-Mass Spectroscopy Standards and Spikes.**

| Standard Type | Analytes Analyzed |
|---|---|
| Initial calibration verification (equivalent to an LCS) | $^{99}$Tc, $^{235}$U, $^{237}$Np, $^{238}$U |
| Matrix spike | $^{99}$Tc, $^{237}$Np, $^{235}$U, $^{238}$U |
| No standard or spike of either type | $^{233}$U, $^{234}$U, $^{236}$U |

The LCS recoveries, MS recoveries, and RPDs generally met the criteria listed in the TSAP. In the case of $^{233}$U, the serial dilution percent difference and %RPD were greater than 10% and 20%, respectively; however, the sample results were less than the EQL and the requirements are not applicable. A low level of $^{99}$Tc, $^{233}$U, and $^{235}$U were detected in the method blanks. In the case of $^{99}$Tc, the results were not flagged because the method blank concentration was less than

5% of the sample concentrations. A "B" flag was applied to the $^{233}U$ and $^{235}U$ results. The detection limits for the required analytes met the RDL in the TSAP. No MDL was listed in the TSAP for $^{237}Np$ or $^{238}U$.

#### 4.1.11 Carbon Analysis

Total organic carbon was measured by both the furnace and persulfate oxidation methods. In addition, total carbon (TC) was determined by the furnace oxidation method, and total inorganic carbon (TIC) was determined by the persulfate oxidation method. These methods were performed on a direct subsample of each field blank, the surface sample, and each "B" sample.

The units for the results for the method blank are µg, as indicated in the raw data, not µg/mL as indicated in Attachment 1.

No minimum detection limits were specified in the TSAP. The reported results for all tank samples were above the EQL. The LCS recoveries, MS recoveries, and duplicate RPDs met the criteria listed in the TSAP for both methods. Low levels of TOC were detected in the method blank for the furnace method. The level was greater than 5% of the field blank results, which were flagged with a "B", but was less than 5% of the tank sample results.

### 4.2 RADIOCHEMICAL ANALYSIS

#### 4.2.1 Total Alpha/Total Beta Analysis

The total alpha/total beta analysis was performed on a direct subsample of each "B" sample and both field blanks. An MS and MSD were required for the total alpha analysis, while a duplicate and MS were required for the total beta analysis. Since these two measurements are performed in a single analysis, a duplicate, MS, and MSD were analyzed for both analytes.

The LCS recoveries, MS and MSD recoveries, and duplicate and spike RPDs met the criteria listed in the TSAP. Duplicate RPDs and recoveries for the MS are presented in Attachment 1, but MSD recoveries and spike RPDs are not included in that attachment. Table 6 summarizes the MS and MSD recoveries and the RPDs for the MS/MSD.

**Table 6. Matrix Spike/Matrix Spike Duplicate Summary for Total Alpha and Total Beta Analysis.**

| Laboratory Identification | Analyte | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|---|
| S09T001796 | Total alpha | 101 | 100 | 1.39 |
| | Total beta | 113 | 101 | 11.1 |

No alpha or beta activity was detected in the method blank or the field blank. No minimum detection limits were specified in the TSAP.

### 4.2.2 Gamma Energy Analysis

Gamma energy analysis was performed on a direct subsample of the surface sample, each "B" sample and both field blanks. No MS was required. The LCS consists of a standard of $^{60}Co$ and $^{137}Cs$. Table 4-1 of the TSAP listed the required analytes. In addition, the laboratory was asked to provide results for other analytes from the "typical tank farms list" and any positively identified gamma emitters that were not included in the list. Nonrequired gamma emitters from the "typical tank farms list" are included in Attachment 3; no additional gamma emitters were detected.

The LCS recoveries and RPDs met the criteria listed in the TSAP. No primary analytes were detected in the method blank or the field blanks. The TSAP specified a minimum detection limit for only $^{137}Cs$; this detection limit was met.

### 4.2.3 Strontium-90

The $^{90}Sr$ analysis was performed on a direct subsample of the surface sample, each "B" sample and both field blanks. No MS was required.

The LCS recovery and RPD met the criteria listed in the TSAP. Strontium-90 activity was detected in the method blank and the field blanks; the levels found in the field blanks were approximately twice the method blank and had relatively large counting uncertainties and were flagged with a "B". However, the blank activity was insignificant when compared to the tank samples, and no reanalysis was requested.

### 4.2.4 Carbon-14

The $^{14}C$ analysis was performed on a direct subsample of each "B" sample and both field blanks. The spike recovery, duplicate precision and LCS recovery met the requirements specified in the TSAP. No $^{14}C$ activity was detected in the method blank or the field blanks. No minimum detection limit was specified in the TSAP for $^{14}C$ activity.

### 4.2.5 Iodine-129

The $^{129}I$ analysis was performed on a direct subsample of each "B" sample and both field blanks. No duplicate analysis was required. The LCS recovery, MS and MSD recoveries, and the spike RPD met the criteria listed in the TSAP. Table 7 summarizes the MS and MSD recoveries and the RPD for the MS/MSD.

**Table 7. Matrix Spike/Matrix Spike Duplicate Summary for Iodine-129 Analysis.**

| Laboratory Identification | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|
| S09T001796 | 109 | 107 | 2.40 |

No $^{129}I$ activity was detected in the method blank or either of the field blanks. No minimum detection limit was specified in the TSAP for $^{129}I$ activity.

### 4.2.6 Selenium-79

The $^{79}Se$ analysis was performed on a direct subsample of each "B" sample and both field blanks. No standard is available for this isotope, so no LCS or MS analysis was required. The RPD met the criteria listed in the TSAP. A low level of $^{79}Se$ activity was detected in the method blank and field blanks. The activity levels in the blanks had relatively high counting uncertainties. However, the blank activity was insignificant when compared to the tank samples, and no reanalysis was requested. No minimum detection limit was specified in the TSAP for $^{79}Se$ activity.

### 4.2.7 Tritium

The $^{3}H$ analysis was performed on a direct subsample of each "B" sample and both field blanks. An MS and MSD were analyzed on sample 6AW-08-02B; no duplicate analysis was required.

The LCS recovery, MS and MSD recoveries, and the spike RPD met the criteria listed in the TSAP. Table 8 summarizes the MS and MSD recoveries and the RPD for the MS/MSD.

**Table 8. Matrix Spike/Matrix Spike Duplicate Summary for Tritium Analysis.**

| Laboratory Identification | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|
| S09T001782 | 95.3 | 92.5 | 3.06 |

A very low level of $^{3}H$ activity was detected in the method blank. It was considered insignificant and no reanalysis was requested. No minimum detection limit was specified in the TSAP for $^{3}H$ activity. The reported results for all tank samples were well above the EQL.

### 4.2.8 Neptunium-237

The $^{237}Np$ analysis was performed on a direct subsample of each "B" sample and both field blanks. No duplicate analysis was required.

The LCS recovery, MS and MSD recoveries, and the spike RPD met the criteria listed in the TSAP. Table 9 summarizes the MS and MSD recoveries and the RPD for the MS/MSD.

**Table 9. Matrix Spike/Matrix Spike Duplicate Summary for Neptunium-237 Analysis.**

| Laboratory Identification | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|
| S09T001784 | 83.2 | 100.8 | 19.1 |

A very low level of $^{237}Np$ activity was detected in the method blank. The activity was greater than 5% of the field blanks and they were flagged with a "B". However, the blank activity was

insignificant when compared to the tank samples, and no reanalysis was requested. No minimum detection limit was specified in the TSAP for $^{237}$Np activity.

### 4.2.9 Americium-241 and Curium-243/244

The analysis for $^{241}$Am and $^{243/244}$Cm was performed on a direct subsample of the surface sample, each "B" sample and both field blanks. An MS and MSD were required for the $^{241}$Am; only a duplicate was required for $^{234/244}$Cm. Since all analytes are measured in a single analysis, a duplicate was run for both required analytes. In addition to $^{241}$Am and $^{243/244}$Cm, $^{242}$Cm is also measured in this analysis, and results are reported in Attachment 3.

The LCS recovery, MS and MSD recoveries, and the duplicate and spike RPDs met the criteria listed in the TSAP. Table 10 summarizes the MS and MSD recoveries and the RPD for the $^{241}$Am MS/MSD.

**Table 10. Matrix Spike/Matrix Spike Duplicate Summary for Americium-241 Analysis.**

| Laboratory Identification | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|
| S09T001784 | 105 | 105 | 0.411 |

No required analytes were detected in the method blank. The MDAs met the RDLs specified in the TSAP.

### 4.2.10 Plutonium-238 and Plutonium-239/240

The analysis for $^{238}$Pu and $^{239/240}$Pu was performed on a direct subsample of the surface sample, each "B" sample and both field blanks. An MS and MSD were required for the $^{239/240}$Pu; only a duplicate was required for $^{238}$Pu. Since all analytes are measured in a single analysis, a duplicate was run for both required analytes.

The LCS recovery, MS and MSD recoveries, and the duplicate and spike RPDs met the criteria listed in the TSAP. Table 11 summarizes the MS and MSD recoveries and the RPD for the MS/MSD.

**Table 11. Matrix Spike/Matrix Spike Duplicate Summary for Plutonium-239/240 Analysis.**

| Laboratory Identification | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|
| S09T001784 | 107 | 111 | 4.14 |

No $^{239/240}$Pu or $^{238}$Pu activity was detected in the method blank. The MDAs met the RDLs specified in the TSAP.

## 4.3 ORGANIC ANALYSES

### 4.3.1 Volatile Organic Analysis

Volatile organic compound analysis was performed on a direct subsample from the trip blank, both field blanks, and each "A" sample, except for sample 6AW-08-04B, which was analyzed due to the breakage of 6AW-08-04A. Table 4-1 of the TSAP listed three required compounds. Tentatively identified compounds are reported in Attachment 5.

Hold times for the analysis are shown in Table 12. The 14-day holding time was met for all samples.

**Table 12. Volatile Organic Analysis Hold Times.**

| Customer ID | Sample Number | Sampling Date | Analysis Date | Elapsed Time (days) |
|---|---|---|---|---|
| 6AW-08-01TB | S09T001768 | 3/4/09 | 3/10/09 | 6 |
| 6AW-08-01FB1 | S09T001752 | 3/4/09 | 3/10/09 | 6 |
| 6AW-08-01FB2 | S09T001757 | 3/4/09 | 3/10/09 | 6 |
| 6AW-08-02A | S09T001777 | 3/4/09 | 3/10/09 | 6 |
| 6AW-08-03A | S09T001789 | 3/4/09 | 3/10/09 | 6 |
| 6AW-08-04A | S09T001801 | 3/9/09 | 3/13/09 | 4 |

The LCS compounds all met the criteria specified in the TSAP. A summary of the surrogate recoveries is included in Attachment 4. All recoveries were within the laboratory acceptance limits except dibromofluoromethane; the failure was attributed to a matrix effect.

Methylene chloride was detected in the method blank. While they are calibrated compounds, both methylene chloride and tetrahydrofuran were reported as TICs in Attachment 5 due to a current limitation of this report.

The results for the MS and MSDs met the criteria specified in the TSAP and are summarized in Table 13.

**Table 13. Volatile Organic Analysis Matrix Spike/Matrix Spike Duplicate Summary.**

| Laboratory Identification | Analyte | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|---|
| S09T001777 | 1,1-Dichloroethene | 114 | 113 | 0.547 |
| | Acetone | 103 | 108 | 5.33 |
| | 2-Butanone | 110 | 117 | 6.42 |
| | 1-Butanol | 114 | 126 | 10.2 |
| | Benzene | 104 | 107 | 2.91 |
| | Trichloroethene | 103 | 106 | 2.67 |
| | Toluene | 101 | 106 | 5.27 |
| | Chlorobenzene | 102 | 106 | 3.47 |

No minimum detection limit was specified in the TSAP for VOAs.

### 4.3.2 Semivolatile Organic Analysis

Semivolatile organic analysis was performed on a methylene chloride extraction of a subsample of the trip blank, both field blanks, and each "B" sample. Table 4-1 of the TSAP listed two required compounds.

The tentatively identified compounds are reported in Attachment 5. It is the laboratory's opinion that dichloronitromethane and phosgene oxime are likely reaction products of methylene chloride and nitrous acid; 2-nitrophenol-D4 is a nitration product of a spiked surrogate compound; the other nitrated phenols were most likely nitrated during the acid extraction step.

Hold times for the analysis are shown in Table 14. The extraction and analysis holding time was met for all samples.

**Table 14. Semivolatile Organic Analysis Extraction and Analysis Hold Times.**

| Customer ID | Sample Number | Sampling Date | Extraction Date | Elapsed Time (Days) | Analysis Date | Elapsed Time (Days) |
|---|---|---|---|---|---|---|
| 6AW-08-01TB | S09T001769 | 3/4/09 | 3/11/09 | 7 | 3/13/09 | 4 |
| 6AW-08-01FB1 | S09T001753 | 3/4/09 | 3/11/09 | 7 | 3/13/09 | 4 |
| 6AW-08-01FB2 | S09T001764 | 3/4/09 | 3/11/09 | 7 | 3/13/09 | 4 |
| 6AW-08-02B | S09T001785 | 3/4/09 | 3/11/09 | 7 | 3/13/09 | 4 |
| 6AW-08-03B | S09T001797 | 3/4/09 | 3/11/09 | 7 | 3/13/09 | 4 |
| 6AW-08-04B | S09T001809 | 3/9/09 | 3/11/09 | 2 | 3/13/09 | 4 |

Only the two required compounds, 2-butoxyethanol and tri-n-butylphosphate, were included in the LCS, MS, and MSD standards. The LCS recoveries for tri-n-butylphosphate (79.8%) and 2-butoxyethanol (74.2%) met the requirements in the TSAP. No required compounds were detected in the preparation blanks.

The MS and MSD recoveries and the spike RPDs met the criteria specified in the TSAP. They are summarized in Table 15.

**Table 15. Semivolatile Organic Analysis Matrix Spike/Matrix Spike Duplicate Summary.**

| Laboratory Identification | Analyte | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|---|
| S09T001797 | 2-Butoxyethanol | 81.1 | 76.8 | 5.46 |
| | Tri-n-butylphosphate | 74.0 | 77.6 | 4.76 |

Surrogate recoveries are summarized in Attachment 4. Three of the six surrogates failed to meet the administrative control limits of 50%-150% for the tank samples (see Attachment 4): 2-fluorophenol, 2,4,6-tribromophenol, and phenol-d5. The phenol compounds are affected by the high concentration of nitrate and nitrite in the matrix. The presence of 2-nitrophenol-d4 in the samples indicates that the phenol surrogates were likely nitrated during the extraction. A reextraction and reanalysis was not expected to significantly improve the results.

### 4.3.3 Polychlorinated Biphenyls Analysis

The PCB analysis was performed on a methylene chloride extraction of a subsample of both field blanks, the surface sample, and each "B" sample. There are no SW-846 specified holding times for PCBs.

No Aroclors were detected in any of the samples above the MDL. The LCS, MS, and MSD consisted of only Aroclor-1254 because it is the most common Aroclor detected in Hanford Site samples. The LCS, MS, and MSD recoveries met the requirements in the TSAP. The RPD for the MS and MSD met the requirement in the TSAP. The MS and MSD and spike RPD results are summarized in Table 16.

**Table 16. Polychlorinated Biphenyls Matrix Spike/Matrix Spike Duplicate Summary.**

| Laboratory Identification | Analyte | MS Recovery (%) | MSD Recovery (%) | RPD (%) |
|---|---|---|---|---|
| S09T001775 | Aroclor 1254 | 61.6 | 77.0 | 22.3 |

Surrogate recoveries are presented in Attachment 4. All of the surrogate recoveries were within the laboratory statistical control limits.

When comparing the results and MDLs reported in Attachment 1 to the RDL, note that the laboratory results and MDLs are reported in µg/L units whereas the RDL is listed in µg/mL units.

## 5. PROCEDURES

Table 17 lists the analytical procedures used for analysis of the AW-106 liquid grab samples.

**Table 17. Analytical Procedures.**

| Analysis | Preparation Method | Analysis Procedure |
|---|---|---|
| **Inorganic Analyses** | | |
| Appearance | Direct | LA-519-151, Rev. J-0 |
| SpG | Direct | LA-510-112, Rev. I-0 |
| pH | Direct | LA-212-106, Rev. G-0 |
| Hydroxide | Direct | LA-211-102, Rev. I-0 |
| DSC | Direct | LA-514-115, Rev. E-0 |
| TGA – gravimetric | Direct | LA-514-115, Rev. E-0 |
| Mercury | Direct | LA-325-106, Rev. G-0 |
| Ammonia – IC | Distillation LA-544-112, Rev. D-0 | LA-533-101, Rev. O-0 |
| IC | Direct | LA-533-115, Rev. J-0 |
| ICP | Direct | LA-505-161, Rev. I-0 |
| ICP-MS: actinides | Direct | LA-506-102, Rev. E-0 |
| ICP-MS: $^{99}$Tc | Direct | LA-506-102, Rev. E-0 |
| TC/TOC – furnace oxidation | Direct | LA-344-105, Rev. I-0 |
| TIC/TOC – persulfate oxidation | Direct | LA-342-100, Rev. J-0 |
| **Radiochemical Analyses** | | |
| Total alpha/total beta | Direct | LA-508-101, Rev. L-2 |
| GEA | Direct | LA-548-121, Rev. I-0 |
| $^{90}$Sr – separation/beta counting | Direct | LA-220-101, Rev. I-0 |
| $^{14}$C – liquid scintillation | Direct | LA-348-104, Rev. H-0 |
| $^{129}$I – separation/GEA | Direct | LA-378-103, Rev. K-0 |
| $^{79}$Se – liquid scintillation | Direct | LA-365-132, Rev. I-0 |
| $^{3}$H – liquid scintillation | Direct | LA-218-114, Rev. F-0 |
| $^{237}$Np – extraction/alpha count | Direct | LA-933-141, Rev. K-1 |
| $^{241}$Am – separation/alpha energy analysis(AEA) | Direct | LA-953-104, Rev. H-1 |
| $^{239/240}$Pu, $^{238}$Pu – separation/AEA | Direct | LA-953-104, Rev. H-1 |
| **Organic Analyses** | | |
| VOC – gas chromatography (GC)/MS | Direct | LA-523-118, Rev. G-0 |
| SVOC – GC/MS | Extraction LA-523-115, Rev. G-0 | LA-523-135, Rev. C-0 |
| PCB – GC/electron capture detector | Extraction LA-523-115, Rev. G-0 | LA-523-140, Rev. F-0 |

## 6. REFERENCES

ATL-MP-1011, 2008, *ATL Quality Assurance Project Plan for 222-S Laboratory*, Rev. 8, Advanced Technologies and Laboratories International, Inc., Richland, Washington.

RPP-PLAN-39120, 2008, *Tank 241-AW-106 Grab Sampling and Analysis Plan in Support of Evaporator Campaign for Fiscal Year* 2009, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

SW-846, 1986, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods,* Third Edition, as amended, U.S. Environmental Protection Agency, Washington, D.C.

Attachment 1

DATA SUMMARY REPORT

23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001770 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001770 | | | MASS | Mass | g | n/a | n/a | 306 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001770 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001770 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001770 | | | SPECGRAVI | Specific gravity | unitless | 99.17 | n/a | 1.208 | 1.204 | 1.206 | 0.3317 | n/a | 1.000E-03 | n/a | |
| S09T001771 | | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <7.14E-06 | n/a | n/a | n/a | n/a | 7.14E-06 | n/a | U |
| S09T001771 | | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | 1.46E-04 | n/a | n/a | n/a | n/a | 1.78E-05 | 2.81 | |
| S09T001771 | | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <0.0103 | n/a | n/a | n/a | n/a | 0.0103 | n/a | U |
| S09T001771 | | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <0.0111 | n/a | n/a | n/a | n/a | 0.0111 | n/a | U |
| S09T001771 | | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <1.40 | n/a | n/a | n/a | n/a | 1.40 | n/a | U |
| S09T001771 | | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <0.0706 | n/a | n/a | n/a | n/a | 0.0706 | n/a | U |
| S09T001771 | | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | 208 | n/a | n/a | n/a | n/a | 0.113 | 4.23 | |
| S09T001771 | | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <0.413 | n/a | n/a | n/a | n/a | 0.413 | n/a | U |
| S09T001771 | | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <0.0322 | n/a | n/a | n/a | n/a | 0.0322 | n/a | U |
| S09T001771 | | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <0.180 | n/a | n/a | n/a | n/a | 0.180 | n/a | U |
| S09T001771 | | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <2.05 | n/a | n/a | n/a | n/a | 2.05 | n/a | U |
| S09T001771 | | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | 1.13E-03 | n/a | n/a | n/a | n/a | 6.06E-05 | 2.08 | |
| S09T001771 | | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | 1.38E-04 | n/a | n/a | n/a | n/a | 6.06E-05 | 3.78 | |
| S09T001771 | | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 1.15 | n/a | n/a | n/a | n/a | 1.06E-04 | 0.53 | |
| S09T001772 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | 6.84E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | J |
| S09T001772 | | | 16984-48-8 | Fluoride | ug/mL | 96.7 | <1.61E-03 | 330 | 331 | 330 | 0.433 | 97.3 | 1.79 | n/a | |
| S09T001772 | | | 16887-00-6 | Chloride | ug/mL | 99.0 | <9.98E-03 | 1.57E+03 | 1.57E+03 | 1.57E+03 | 0.0 | 84.1 | 11.1 | n/a | |
| S09T001772 | | | 14797-65-0 | Nitrite | ug/mL | 101 | <0.0192 | 3.21E+04 | 3.27E+04 | 3.24E+04 | 1.80 | 98.5 | 196 | n/a | |
| S09T001772 | | | 14808-79-8 | Sulfate | ug/mL | 99.7 | <0.0187 | 6.64E+03 | 6.67E+03 | 6.65E+03 | 0.394 | 93.0 | 20.8 | n/a | |
| S09T001772 | | | 14797-55-8 | Nitrate | ug/mL | 99.5 | <0.0208 | 1.10E+05 | 1.12E+05 | 1.11E+05 | 2.26 | 97.7 | 212 | n/a | |
| S09T001772 | | | 14265-44-2 | Phosphate | ug/mL | 98.0 | <0.0167 | 2.63E+03 | 2.61E+03 | 2.62E+03 | 0.569 | 98.0 | 18.6 | n/a | |
| S09T001772 | | | PH | pH | unitless | n/a | n/a | >13.500 | >13.500 | n/a | n/a | n/a | 0.0100 | n/a | J |
| S09T001772 | | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | 1.46E+03 | 1.43E+03 | 1.44E+03 | 2.08 | 102 | 100 | n/a | |

NA = Not Analyzed, ND = Not Detected

U - Less Than Detection Limit
Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001772 | | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | 4.79E+03 | 4.87E+03 | 4.83E+03 | 1.66 | 112 | 35.0 | n/a | |
| S09T001773 | | | DSC-02 | Exotherms - calculated dry weight | J/g DW | n/a | n/a | 0.0 | 0.0 | 0.0 | 0.0 | n/a | n/a | n/a | |
| S09T001773 | | | DSC-01 | DSC Exotherm | J/g | 98.9 | n/a | 0.0 | 0.0 | 0.0 | 0.0 | n/a | n/a | n/a | |
| S09T001773 | | | 7440-22-4 | Silver | ug/mL | 97.3 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 92.6 | 2.00 | n/a | U |
| S09T001773 | | | 7429-90-5 | Aluminum | ug/mL | 99.0 | <0.0300 | 6.25E+03 | 6.28E+03 | 6.26E+03 | 0.472 | 97.7 | 12.0 | n/a | |
| S09T001773 | | | 7440-38-2 | Arsenic | ug/mL | 103 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 103 | 20.0 | n/a | U |
| S09T001773 | | | 7440-41-7 | Beryllium | ug/mL | 100 | <1.00E-03 | <0.400 | <0.400 | n/a | n/a | 95.5 | 0.400 | n/a | U |
| S09T001773 | | | 7440-69-9 | Bismuth | ug/mL | 98.6 | <0.100 | <40.0 | <40.0 | n/a | n/a | 99.6 | 40.0 | n/a | U |
| S09T001773 | | | 7440-70-2 | Calcium | ug/mL | 109 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 92.1 | 20.0 | n/a | U |
| S09T001773 | | | 7440-43-9 | Cadmium | ug/mL | 99.2 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 97.1 | 2.00 | n/a | U |
| S09T001773 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <4.00 | <4.00 | n/a | n/a | 97.4 | 4.00 | n/a | U |
| S09T001773 | | | 7440-47-3 | Chromium | ug/mL | 99.9 | <5.00E-03 | 591 | 592 | 592 | 0.105 | 97.8 | 2.00 | n/a | |
| S09T001773 | | | 7439-89-6 | Iron | ug/mL | 101 | <5.00E-03 | 2.01 | 2.43 | 2.22 | 18.8 | 96.6 | 2.00 | n/a | J |
| S09T001773 | | | 7440-09-7 | Potassium | ug/mL | 102 | <0.500 | 1.49E+03 | 1.57E+03 | 1.53E+03 | 4.80 | 91.8 | 200 | n/a | J |
| S09T001773 | | | 7439-91-0 | Lanthanum | ug/mL | 99.1 | <3.00E-03 | <1.20 | <1.20 | n/a | n/a | 97.3 | 1.20 | n/a | U |
| S09T001773 | | | 7439-96-5 | Manganese | ug/mL | 98.2 | <3.00E-03 | <1.20 | <1.20 | n/a | n/a | 97.7 | 1.20 | n/a | U |
| S09T001773 | | | 7440-23-5 | Sodium | ug/mL | 102 | <0.100 | 8.59E+04 | 8.82E+04 | 8.70E+04 | 2.66 | 99.0 | 40.0 | n/a | e |
| S09T001773 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | <0.0200 | 10.9 | 8.33 | 9.61 | 26.8 | 96.0 | 8.00 | n/a | J |
| S09T001773 | | | 7439-92-1 | Lead | ug/mL | 103 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 100 | 20.0 | n/a | U |
| S09T001773 | | | 7440-16-6 | Rhodium | ug/mL | 102 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 100 | 20.0 | n/a | U |
| S09T001773 | | | 7782-49-2 | Selenium | ug/mL | 101 | <0.100 | <40.0 | <40.0 | n/a | n/a | 108 | 40.0 | n/a | U |
| S09T001773 | | | 7440-21-3 | Silicon | ug/mL | 95.5 | <0.0300 | <12.0 | 12.0 | n/a | n/a | 94.6 | 12.0 | n/a | U |
| S09T001773 | | | 7440-24-6 | Strontium | ug/mL | 100 | <3.00E-03 | <1.20 | <1.20 | n/a | n/a | 97.5 | 1.20 | n/a | U |
| S09T001773 | | | 7440-61-1 | Uranium | ug/mL | 103 | <0.100 | <40.0 | <40.0 | n/a | n/a | 97.2 | 40.0 | n/a | U |
| S09T001773 | | | 7440-33-7 | Tungsten | ug/mL | 101 | <0.200 | <80.0 | <80.0 | n/a | n/a | 99.8 | 80.0 | n/a | U |
| S09T001773 | | | 7440-66-6 | Zinc | ug/mL | 97.6 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 97.8 | 2.00 | n/a | U |
| S09T001773 | | | 7440-67-7 | Zirconium | ug/mL | 97.5 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 89.9 | 2.00 | n/a | U |
| S09T001773 | | | HYDROXID | Hydroxide | ug/mL | 95 | <42 | 7.6E+03 | n/a | n/a | n/a | n/a | 2.5E+03 | n/a | |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001773 | | | %WATER | Percent water | % | 98.7 | n/a | 70.1 | 69.3 | 69.7 | 1.16 | n/a | 0.0100 | n/a | |
| S09T001773 | | | TC | Total carbon | ug/mL | 92.1 | <1.00 | 6.39E+03 | 6.56E+03 | 6.48E+03 | 2.63 | 86.4 | 105 | n/a | |
| S09T001773 | | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 1.83E+03 | 1.87E+03 | 1.85E+03 | 2.08 | 92.5 | 55.0 | n/a | |
| S09T001775 | | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001775 | | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001775 | | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001775 | | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001775 | | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001775 | | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | 61.6 | 2.60 | n/a | Ub |
| S09T001775 | | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001751 | | | 12587-46-1 | Gross alpha | uCi/mL | 96.7 | <4.77E-07 | <4.77E-07 | n/a | n/a | n/a | n/a | 4.77E-07 | n/a | U |
| S09T001751 | | | 12587-47-2 | Gross beta | uCi/mL | 107 | <7.87E-07 | 2.96E-05 | n/a | n/a | n/a | n/a | 7.87E-07 | 7.0 | |
| S09T001751 | | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <1.14E-06 | n/a | n/a | n/a | n/a | 1.14E-06 | n/a | U |
| S09T001751 | | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | <2.85E-06 | n/a | n/a | n/a | n/a | 2.85E-06 | n/a | U |
| S09T001751 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001751 | | | 14762-75-5 | Carbon-14 | uCi/mL | 94.6 | <9.85E-07 | <1.51E-06 | n/a | n/a | n/a | n/a | 1.51E-06 | n/a | U |
| S09T001751 | | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <2.43E-05 | n/a | n/a | n/a | n/a | 2.43E-05 | n/a | U |
| S09T001751 | | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <2.30E-05 | n/a | n/a | n/a | n/a | 2.30E-05 | n/a | U |
| S09T001751 | | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <4.07E-04 | n/a | n/a | n/a | n/a | 4.07E-04 | n/a | U |
| S09T001751 | | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <2.54E-05 | n/a | n/a | n/a | n/a | 2.54E-05 | n/a | U |
| S09T001751 | | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | <2.96E-05 | n/a | n/a | n/a | n/a | 2.96E-05 | n/a | U |
| S09T001751 | | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <8.50E-05 | n/a | n/a | n/a | n/a | 8.50E-05 | n/a | U |
| S09T001751 | | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <6.98E-05 | n/a | n/a | n/a | n/a | 6.98E-05 | n/a | U |
| S09T001751 | | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <3.92E-05 | n/a | n/a | n/a | n/a | 3.92E-05 | n/a | U |
| S09T001751 | | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <4.11E-04 | n/a | n/a | n/a | n/a | 4.11E-04 | n/a | U |
| S09T001751 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | <1.00E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | U |
| S09T001751 | | | 16984-48-8 | Fluoride | ug/mL | 100 | <1.61E-03 | <1.61E-03 | n/a | n/a | n/a | n/a | 1.61E-03 | n/a | U |
| S09T001751 | | | 16887-00-6 | Chloride | ug/mL | 105 | <9.98E-03 | 0.0325 | n/a | n/a | n/a | n/a | 9.98E-03 | n/a | J |
| S09T001751 | | | 14797-65-0 | Nitrite | ug/mL | 101 | <0.0192 | <0.0192 | n/a | n/a | n/a | n/a | 0.0192 | n/a | U |
| S09T001751 | | | 14808-79-8 | Sulfate | ug/mL | 103 | <0.0187 | <0.0187 | n/a | n/a | n/a | n/a | 0.0187 | n/a | U |
| S09T001751 | | | 14797-55-8 | Nitrate | ug/mL | 99.5 | <0.0208 | <0.0208 | n/a | n/a | n/a | n/a | 0.0208 | n/a | U |
| S09T001751 | | | 14265-44-2 | Phosphate | ug/mL | 102 | <0.0167 | <0.0167 | n/a | n/a | n/a | n/a | 0.0167 | n/a | U |
| S09T001751 | | | 7440-22-4 | Silver | ug/mL | 97.8 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7429-90-5 | Aluminum | ug/mL | 99.6 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001751 | | | 7440-38-2 | Arsenic | ug/mL | 104 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-41-7 | Beryllium | ug/mL | 101 | <1.00E-03 | <1.00E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | U |
| S09T001751 | | | 7440-69-9 | Bismuth | ug/mL | 99.4 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-70-2 | Calcium | ug/mL | 108 | <0.0500 | 0.321 | n/a | n/a | n/a | n/a | 0.0500 | n/a | J |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001751 | | | 7440-43-9 | Cadmium | ug/mL | 99.7 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001751 | | | 7440-47-3 | Chromium | ug/mL | 99.4 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7439-89-6 | Iron | ug/mL | 101 | 0.0120 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-09-7 | Potassium | ug/mL | 103 | <0.500 | <0.500 | n/a | n/a | n/a | n/a | 0.500 | n/a | U |
| S09T001751 | | | 7439-91-0 | Lanthanum | ug/mL | 100 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001751 | | | 7439-96-5 | Manganese | ug/mL | 97.9 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001751 | | | 7440-23-5 | Sodium | ug/mL | 100 | <0.100 | 0.528 | n/a | n/a | n/a | n/a | 0.100 | n/a | J |
| S09T001751 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | 0.0236 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001751 | | | 7439-92-1 | Lead | ug/mL | 104 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-16-6 | Rhodium | ug/mL | 100 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7782-49-2 | Selenium | ug/mL | 103 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-21-3 | Silicon | ug/mL | 96.1 | <0.0300 | 1.20 | n/a | n/a | n/a | n/a | 0.0300 | n/a | |
| S09T001751 | | | 7440-24-6 | Strontium | ug/mL | 101 | <3.00E-03 | 0.0451 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | |
| S09T001751 | | | 7440-61-1 | Uranium | ug/mL | 106 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-33-7 | Tungsten | ug/mL | 105 | <0.200 | <0.200 | n/a | n/a | n/a | n/a | 0.200 | n/a | U |
| S09T001751 | | | 7440-66-6 | Zinc | ug/mL | 97.2 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-67-7 | Zirconium | ug/mL | 97.8 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 15046-84-1 | Iodine-129 | uCi/mL | 110 | <2.16E-06 | <4.43E-05 | n/a | n/a | n/a | n/a | 4.43E-05 | n/a | U |
| S09T001751 | | | 13968-55-3 | Uranium-233 | ug/mL | n/a | 1.50E-08 | <1.00E-07 | n/a | n/a | n/a | n/a | 1.00E-07 | n/a | U |
| S09T001751 | | | 15117-96-1 | Uranium-235 | ug/mL | 96.8 | 1.10E-08 | 1.53E-07 | n/a | n/a | n/a | n/a | 1.10E-07 | n/a | BJ |
| S09T001751 | | | 13994-20-2 | Neptunium-237 | ug/mL | 105 | <5.30E-08 | <5.30E-07 | n/a | n/a | n/a | n/a | 5.30E-07 | n/a | U |
| S09T001751 | | | U-238 | Uranium-238 | ug/mL | 99.7 | <5.50E-07 | <5.50E-06 | n/a | n/a | n/a | n/a | 5.50E-06 | n/a | U |
| S09T001751 | | | 14133-76-7 | Technetium-99 | ug/mL | 101 | <3.00E-07 | <3.00E-06 | n/a | n/a | n/a | n/a | 3.00E-06 | n/a | U |
| S09T001751 | | | 13994-20-2 | Neptunium-237 | uCi/mL | 101 | 1.47E-05 | 1.90E-05 | n/a | n/a | n/a | n/a | 1.43E-05 | 97.3 | BJ |
| S09T001751 | | | PH | pH | unitless | n/a | n/a | 10.2 | 10.2 | 10.2 | 0.197 | n/a | 0.0100 | n/a | |
| S09T001751 | | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | <2.06E-06 | n/a | n/a | n/a | n/a | 2.06E-06 | n/a | U |
| S09T001751 | | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | <2.06E-06 | n/a | n/a | n/a | n/a | 2.06E-06 | n/a | U |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001751 | | | 15758-45-9 | Selenium-79 | uCi/mL | n/a | 8.04E-06 | 6.10E-06 | n/a | n/a | n/a | n/a | 2.22E-06 | 111.17 | BJ |
| S09T001751 | | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 2.85E-06 | n/a | n/a | n/a | n/a | 1.06E-06 | 63.67 | BJ |
| S09T001751 | | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001751 | | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | <7.00 | n/a | n/a | n/a | n/a | 7.00 | n/a | U |
| S09T001751 | | | TC | Total carbon | ug/mL | 92.1 | <1.00 | <5.00 | n/a | n/a | n/a | n/a | 5.00 | n/a | U |
| S09T001751 | | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 10.4 | n/a | n/a | n/a | n/a | 5.50 | n/a | BJ |
| S09T001751 | | | 10028-17-8 | Tritium | uCi/mL | 92.0 | 3.13E-06 | <6.92E-07 | n/a | n/a | n/a | n/a | 6.92E-07 | n/a | U |
| S09T001752 | | | 71-36-3 | 1-Butanol | ug/L | 87.4 | <7.77 | <8.63 | n/a | n/a | n/a | n/a | 8.63 | n/a | U |
| S09T001752 | | | 67-64-1 | Acetone | ug/L | 90.0 | <2.19 | <2.43 | n/a | n/a | n/a | n/a | 2.43 | n/a | U |
| S09T001752 | | | 78-93-3 | 2-Butanone | ug/L | 95.7 | <1.33 | <1.48 | n/a | n/a | n/a | n/a | 1.48 | n/a | U |
| S09T001753 | | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | n/a | 212 | n/a | U |
| S09T001753 | | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | <44.6 | n/a | n/a | n/a | n/a | 44.6 | n/a | U |
| S09T001754 | | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001754 | | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001754 | | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001754 | | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001754 | | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001754 | | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | n/a | 2.60 | n/a | U |
| S09T001754 | | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |
| S09T001755 | | S | 14798-03-9 | Ammonium | ug/mL | 96.8 | 1.75 | <0.120 | n/a | n/a | n/a | n/a | 0.120 | n/a | U |

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001756 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001756 | | | MASS | Mass | g | n/a | n/a | 242 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001756 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001756 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001757 | | | 71-36-3 | 1-Butanol | ug/L | 87.4 | <7.77 | <311 | n/a | n/a | n/a | n/a | 311 | n/a | U |
| S09T001757 | | | 67-64-1 | Acetone | ug/L | 90.0 | <2.19 | <87.6 | n/a | n/a | n/a | n/a | 87.6 | n/a | U |
| S09T001757 | | | 78-93-3 | 2-Butanone | ug/L | 95.7 | <1.33 | <53.2 | n/a | n/a | n/a | n/a | 53.2 | n/a | U |
| S09T001761 | | | 14762-75-5 | Carbon-14 | uCi/mL | 94.6 | <9.85E-07 | <8.89E-07 | n/a | n/a | n/a | n/a | 8.89E-07 | n/a | U |
| S09T001761 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | <2.00E-03 | n/a | n/a | n/a | n/a | 2.00E-03 | n/a | U |
| S09T001761 | | | 7440-22-4 | Silver | ug/mL | 97.8 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7429-90-5 | Aluminum | ug/mL | 99.6 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001761 | | | 7440-38-2 | Arsenic | ug/mL | 104 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | | 7440-41-7 | Beryllium | ug/mL | 101 | <1.00E-03 | <1.00E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | U |
| S09T001761 | | | 7440-69-9 | Bismuth | ug/mL | 99.4 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001761 | | | 7440-70-2 | Calcium | ug/mL | 108 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | | 7440-43-9 | Cadmium | ug/mL | 99.7 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001761 | | | 7440-47-3 | Chromium | ug/mL | 99.4 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7439-89-6 | Iron | ug/mL | 101 | 0.0120 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7440-09-7 | Potassium | ug/mL | 103 | <0.500 | <0.500 | n/a | n/a | n/a | n/a | 0.500 | n/a | U |
| S09T001761 | | | 7439-91-0 | Lanthanum | ug/mL | 100 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001761 | | | 7439-96-5 | Manganese | ug/mL | 97.9 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001761 | | | 7440-23-5 | Sodium | ug/mL | 100 | <0.100 | 3.00 | n/a | n/a | n/a | n/a | 0.100 | n/a | |
| S09T001761 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | 0.0236 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001761 | | | 7439-92-1 | Lead | ug/mL | 104 | <0.0500 | 0.0514 | n/a | n/a | n/a | n/a | 0.0500 | n/a | J |
| S09T001761 | | | 7440-16-6 | Rhodium | ug/mL | 100 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | | 7782-49-2 | Selenium | ug/mL | 103 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001761 | | | 7440-21-3 | Silicon | ug/mL | 96.1 | <0.0300 | 4.10 | n/a | n/a | n/a | n/a | 0.0300 | n/a | |

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Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001761 | | | 7440-24-6 | Strontium | ug/mL | 101 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001761 | | | 7440-61-1 | Uranium | ug/mL | 106 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001761 | | | 7440-33-7 | Tungsten | ug/mL | 105 | <0.200 | <0.200 | n/a | n/a | n/a | n/a | 0.200 | n/a | U |
| S09T001761 | | | 7440-66-6 | Zinc | ug/mL | 97.2 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7440-67-7 | Zirconium | ug/mL | 97.8 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 15758-45-9 | Selenium-79 | uCi/mL | n/a | 8.04E-06 | 4.68E-06 | n/a | n/a | n/a | n/a | 1.72E-06 | 139.45 | BJ |
| S09T001761 | | | 10028-17-8 | Tritium | uCi/mL | 92.0 | 3.13E-06 | <6.93E-07 | n/a | n/a | n/a | n/a | 6.93E-07 | n/a | U |
| S09T001762 | | | 16984-48-8 | Fluoride | ug/mL | 100 | <1.61E-03 | <1.61E-03 | n/a | n/a | n/a | n/a | 1.61E-03 | n/a | U |
| S09T001762 | | | 16887-00-6 | Chloride | ug/mL | 105 | <9.98E-03 | 0.0808 | n/a | n/a | n/a | n/a | 9.98E-03 | n/a | J |
| S09T001762 | | | 14797-65-0 | Nitrite | ug/mL | 101 | <0.0192 | <0.0192 | n/a | n/a | n/a | n/a | 0.0192 | n/a | U |
| S09T001762 | | | 14808-79-8 | Sulfate | ug/mL | 103 | <0.0187 | <0.0187 | n/a | n/a | n/a | n/a | 0.0187 | n/a | U |
| S09T001762 | | | 14797-55-8 | Nitrate | ug/mL | 99.5 | <0.0208 | 0.0951 | n/a | n/a | n/a | n/a | 0.0208 | n/a | J |
| S09T001762 | | | 14265-44-2 | Phosphate | ug/mL | 102 | <0.0167 | <0.0167 | n/a | n/a | n/a | n/a | 0.0167 | n/a | U |
| S09T001762 | | | PH | pH | unitless | n/a | n/a | 6.75 | n/a | n/a | n/a | n/a | 0.0100 | n/a | |
| S09T001762 | | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001762 | | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | <7.00 | n/a | n/a | n/a | n/a | 7.00 | n/a | U |
| S09T001762 | | | TC | Total carbon | ug/mL | 92.1 | <1.00 | <5.00 | n/a | n/a | n/a | n/a | 5.00 | n/a | U |
| S09T001762 | | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 6.60 | n/a | n/a | n/a | n/a | 5.50 | n/a | BJ |
| S09T001763 | | | 12587-46-1 | Gross alpha | uCi/mL | 96.7 | <4.77E-07 | <5.97E-07 | n/a | n/a | n/a | n/a | 5.97E-07 | n/a | U |
| S09T001763 | | | 12587-47-2 | Gross beta | uCi/mL | 107 | <7.87E-07 | 3.13E-05 | n/a | n/a | n/a | n/a | 7.87E-07 | 6.7 | |
| S09T001763 | | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <1.04E-06 | n/a | n/a | n/a | n/a | 1.04E-06 | n/a | U |
| S09T001763 | | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | <2.60E-06 | n/a | n/a | n/a | n/a | 2.60E-06 | n/a | U |
| S09T001763 | | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <2.42E-05 | n/a | n/a | n/a | n/a | 2.42E-05 | n/a | U |
| S09T001763 | | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <2.37E-05 | n/a | n/a | n/a | n/a | 2.37E-05 | n/a | U |
| S09T001763 | | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <4.19E-04 | n/a | n/a | n/a | n/a | 4.19E-04 | n/a | U |
| S09T001763 | | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <2.41E-05 | n/a | n/a | n/a | n/a | 2.41E-05 | n/a | U |
| S09T001763 | | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | <2.73E-05 | n/a | n/a | n/a | n/a | 2.73E-05 | n/a | U |
| S09T001763 | | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <8.81E-05 | n/a | n/a | n/a | n/a | 8.81E-05 | n/a | U |

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U - Less Than Detection Limit
Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001763 | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <7.37E-05 | n/a | n/a | n/a | n/a | 7.37E-05 | n/a | U |
| S09T001763 | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <3.82E-05 | n/a | n/a | n/a | n/a | 3.82E-05 | n/a | U |
| S09T001763 | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <3.72E-04 | n/a | n/a | n/a | n/a | 3.72E-04 | n/a | U |
| S09T001763 | | 15046-84-1 | Iodine-129 | uCi/mL | 110 | <2.16E-06 | <1.25E-05 | n/a | n/a | n/a | n/a | 1.25E-05 | n/a | U |
| S09T001763 | | 13968-55-3 | Uranium-233 | ug/mL | n/a | 1.50E-08 | <1.00E-07 | n/a | n/a | n/a | n/a | 1.00E-07 | n/a | U |
| S09T001763 | | 15117-96-1 | Uranium-235 | ug/mL | 96.8 | 1.10E-08 | 9.32E-07 | n/a | n/a | n/a | n/a | 1.10E-07 | n/a | BJ |
| S09T001763 | | 13994-20-2 | Neptunium-237 | ug/mL | 105 | <5.30E-08 | <5.30E-07 | n/a | n/a | n/a | n/a | 5.30E-07 | n/a | U |
| S09T001763 | | U-238 | Uranium-238 | ug/mL | 99.7 | <5.50E-07 | 1.32E-04 | n/a | n/a | n/a | n/a | 5.50E-06 | n/a | |
| S09T001763 | | 14133-76-7 | Technetium-99 | ug/mL | 101 | <3.00E-07 | <3.00E-06 | n/a | n/a | n/a | n/a | 3.00E-06 | n/a | U |
| S09T001763 | | 13994-20-2 | Neptunium-237 | uCi/mL | 101 | 1.47E-05 | 2.26E-05 | n/a | n/a | n/a | n/a | 1.43E-05 | 83 | BJ |
| S09T001763 | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | <1.80E-06 | n/a | n/a | n/a | n/a | 1.80E-06 | n/a | U |
| S09T001763 | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | <1.80E-06 | n/a | n/a | n/a | n/a | 1.80E-06 | n/a | U |
| S09T001763 | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 2.75E-06 | n/a | n/a | n/a | n/a | 1.05E-06 | 65.33 | BJ |
| S09T001764 | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | n/a | 212 | n/a | U |
| S09T001764 | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | <44.6 | n/a | n/a | n/a | n/a | 44.6 | n/a | U |
| S09T001765 | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001765 | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001765 | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001765 | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001765 | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001765 | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | n/a | 2.60 | n/a | U |
| S09T001765 | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |
| S09T001766 | S | 14798-03-9 | Ammonium | ug/mL | 96.8 | 1.75 | <0.120 | n/a | n/a | n/a | n/a | 0.120 | n/a | U |

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23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01TB**
**Segment Portion: Trip Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001767 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001768 | | | 71-36-3 | 1-Butanol | ug/L | 87.4 | <7.77 | <8.63 | n/a | n/a | n/a | n/a | 8.63 | n/a | U |
| S09T001768 | | | 67-64-1 | Acetone | ug/L | 90.0 | <2.19 | <2.43 | n/a | n/a | n/a | n/a | 2.43 | n/a | U |
| S09T001768 | | | 78-93-3 | 2-Butanone | ug/L | 95.7 | <1.33 | <1.48 | n/a | n/a | n/a | n/a | 1.48 | n/a | U |
| S09T001769 | | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | n/a | 212 | n/a | U |
| S09T001769 | | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | <44.6 | n/a | n/a | n/a | n/a | 44.6 | n/a | U |

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23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02A**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001776 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001776 | | | MASS | Mass | g | n/a | n/a | 302 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001776 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001776 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001777 | | | 71-36-3 | 1-Butanol | ug/L | 87.4 | <7.77 | 7.56E+03 | n/a | n/a | n/a | 114 | 311 | n/a | |
| S09T001777 | | | 67-64-1 | Acetone | ug/L | 90.0 | <2.19 | 698 | n/a | n/a | n/a | 103 | 87.6 | n/a | J |
| S09T001777 | | | 78-93-3 | 2-Butanone | ug/L | 95.7 | <1.33 | <53.2 | n/a | n/a | n/a | 110 | 53.2 | n/a | U |

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e - SERDIL Outside Range

23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001778 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001778 | | | MASS | Mass | g | n/a | n/a | 302 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001778 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001778 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001778 | | | SPECGRAVI | Specific gravity | unitless | 99.17 | n/a | 1.210 | n/a | n/a | n/a | n/a | 1.000E-03 | n/a | |
| S09T001782 | | | 14762-75-5 | Carbon-14 | uCi/mL | 94.6 | <9.85E-07 | 1.06E-03 | 1.33E-03 | 1.20E-03 | 23.3 | 88.1 | 1.02E-06 | 0.7 | |
| S09T001782 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | 5.51E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | J |
| S09T001782 | | | 7440-22-4 | Silver | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7429-90-5 | Aluminum | ug/mL | 99.6 | <0.0300 | 6.47E+03 | n/a | n/a | n/a | n/a | 12.0 | n/a | |
| S09T001782 | | | 7440-38-2 | Arsenic | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-41-7 | Beryllium | ug/mL | 101 | <1.00E-03 | <0.400 | n/a | n/a | n/a | n/a | 0.400 | n/a | U |
| S09T001782 | | | 7440-69-9 | Bismuth | ug/mL | 99.4 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001782 | | | 7440-70-2 | Calcium | ug/mL | 108 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-43-9 | Cadmium | ug/mL | 99.7 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001782 | | | 7440-47-3 | Chromium | ug/mL | 99.4 | <5.00E-03 | 603 | n/a | n/a | n/a | n/a | 2.00 | n/a | |
| S09T001782 | | | 7439-89-6 | Iron | ug/mL | 101 | 0.0120 | 2.73 | n/a | n/a | n/a | n/a | 2.00 | n/a | J |
| S09T001782 | | | 7440-09-7 | Potassium | ug/mL | 103 | <0.500 | 1.50E+03 | n/a | n/a | n/a | n/a | 200 | n/a | J |
| S09T001782 | | | 7439-91-0 | Lanthanum | ug/mL | 100 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001782 | | | 7439-96-5 | Manganese | ug/mL | 97.9 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001782 | | | 7440-23-5 | Sodium | ug/mL | 100 | <0.100 | 9.10E+04 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001782 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | 0.0236 | <8.00 | n/a | n/a | n/a | n/a | 8.00 | n/a | U |
| S09T001782 | | | 7439-92-1 | Lead | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-16-6 | Rhodium | ug/mL | 100 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7782-49-2 | Selenium | ug/mL | 103 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001782 | | | 7440-21-3 | Silicon | ug/mL | 96.1 | <0.0300 | 12.6 | n/a | n/a | n/a | n/a | 12.0 | n/a | J |
| S09T001782 | | | 7440-24-6 | Strontium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001782 | | | 7440-61-1 | Uranium | ug/mL | 106 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |

NA = Not Analyzed, ND = Not Detected

U - Less Than Detection Limit
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B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001782 | | 7440-33-7 | Tungsten | ug/mL | 105 | <0.200 | <80.0 | n/a | n/a | n/a | n/a | 80.0 | n/a | U |
| S09T001782 | | 7440-66-6 | Zinc | ug/mL | 97.2 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | 7440-67-7 | Zirconium | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | 15758-45-9 | Selenium-79 | uCi/mL | n/a | 8.04E-06 | 1.81E-04 | 1.91E-04 | 1.86E-04 | 5.08 | n/a | 1.58E-06 | 2.14 | |
| S09T001782 | | 10028-17-8 | Tritium | uCi/mL | 92.0 | 3.13E-06 | 3.16E-04 | n/a | n/a | n/a | 95.3 | 7.36E-07 | 1.9 | |
| S09T001783 | | DSC-02 | Exotherms - calculated dry weight | J/g DW | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | |
| S09T001783 | | DSC-01 | DSC Exotherm | J/g | 99.3 | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | |
| S09T001783 | | 16984-48-8 | Fluoride | ug/mL | 96.7 | <1.61E-03 | 315 | n/a | n/a | n/a | n/a | 1.79 | n/a | |
| S09T001783 | | 16887-00-6 | Chloride | ug/mL | 99.0 | <9.98E-03 | 1.51E+03 | n/a | n/a | n/a | n/a | 11.1 | n/a | |
| S09T001783 | | 14797-65-0 | Nitrite | ug/mL | 101 | <0.0192 | 3.36E+04 | n/a | n/a | n/a | n/a | 196 | n/a | |
| S09T001783 | | 14808-79-8 | Sulfate | ug/mL | 99.7 | <0.0187 | 6.41E+03 | n/a | n/a | n/a | n/a | 20.8 | n/a | |
| S09T001783 | | 14797-55-8 | Nitrate | ug/mL | 99.5 | <0.0208 | 1.15E+05 | n/a | n/a | n/a | n/a | 212 | n/a | |
| S09T001783 | | 14265-44-2 | Phosphate | ug/mL | 98.0 | <0.0167 | 2.51E+03 | n/a | n/a | n/a | n/a | 18.6 | n/a | |
| S09T001783 | | PH | pH | unitless | n/a | n/a | 13.4 | n/a | n/a | n/a | n/a | 0.0100 | n/a | |
| S09T001783 | | %WATER | Percent water | % | 98.0 | n/a | 71.3 | n/a | n/a | n/a | n/a | 0.0100 | n/a | |
| S09T001783 | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | 1.50E+03 | n/a | n/a | n/a | n/a | 100 | n/a | |
| S09T001783 | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | 5.14E+03 | n/a | n/a | n/a | n/a | 35.0 | n/a | |
| S09T001783 | | TC | Total carbon | ug/mL | 92.1 | <1.00 | 7.80E+03 | n/a | n/a | n/a | n/a | 105 | n/a | |
| S09T001783 | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 1.96E+03 | n/a | n/a | n/a | n/a | 55.0 | n/a | |
| S09T001784 | | 12587-46-1 | Gross alpha | uCi/mL | 96.7 | <4.77E-07 | 5.12E-03 | n/a | n/a | n/a | n/a | 3.07E-03 | 130.9 | J |
| S09T001784 | | 12587-47-2 | Gross beta | uCi/mL | 107 | <7.87E-07 | 224 | n/a | n/a | n/a | n/a | 0.0124 | .4 | |
| S09T001784 | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <7.22E-06 | <6.60E-06 | n/a | n/a | n/a | 7.22E-06 | n/a | U |
| S09T001784 | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | 1.53E-04 | 1.51E-04 | 1.52E-04 | 1.07 | 105 | 1.80E-05 | 2.54 | |
| S09T001784 | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <0.0105 | n/a | n/a | n/a | n/a | 0.0105 | n/a | U |
| S09T001784 | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <0.0110 | n/a | n/a | n/a | n/a | 0.0110 | n/a | U |
| S09T001784 | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <1.44 | n/a | n/a | n/a | n/a | 1.44 | n/a | U |
| S09T001784 | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <0.0733 | n/a | n/a | n/a | n/a | 0.0733 | n/a | U |
| S09T001784 | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | 221 | n/a | n/a | n/a | n/a | 0.118 | 4.23 | |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001784 | | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <0.426 | n/a | n/a | n/a | n/a | 0.426 | n/a | U |
| S09T001784 | | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <0.0325 | n/a | n/a | n/a | n/a | 0.0325 | n/a | U |
| S09T001784 | | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <0.185 | n/a | n/a | n/a | n/a | 0.185 | n/a | U |
| S09T001784 | | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <2.11 | n/a | n/a | n/a | n/a | 2.11 | n/a | U |
| S09T001784 | | | 15046-84-1 | Iodine-129 | uCi/mL | 110 | <2.16E-06 | 8.32E-05 | n/a | n/a | n/a | n/a | 2.42E-06 | 4.4 | |
| S09T001784 | | | 13968-55-3 | Uranium-233 | ug/mL | n/a | 1.50E-08 | 1.12E-03 | n/a | n/a | n/a | n/a | 5.00E-04 | n/a | BJ |
| S09T001784 | | | 15117-96-1 | Uranium-235 | ug/mL | 96.8 | 1.10E-08 | 0.129 | n/a | n/a | n/a | n/a | 5.50E-04 | n/a | B |
| S09T001784 | | | 13994-20-2 | Neptunium-237 | ug/mL | 105 | <5.30E-08 | 0.117 | n/a | n/a | n/a | n/a | 2.65E-03 | n/a | |
| S09T001784 | | | U-238 | Uranium-238 | ug/mL | 99.7 | <5.50E-07 | 18.2 | n/a | n/a | n/a | n/a | 0.0275 | n/a | |
| S09T001784 | | | 14133-76-7 | Technetium-99 | ug/mL | 102 | 5.46E-07 | 5.22 | 5.08 | 5.15 | 2.64 | 104 | 3.00E-03 | n/a | |
| S09T001784 | | | 13994-20-2 | Neptunium-237 | uCi/mL | 101 | 1.47E-05 | 9.18E-05 | n/a | n/a | n/a | 83.2 | 1.43E-05 | 25.4 | B |
| S09T001784 | | | HYDROXID | Hydroxide | ug/mL | 97 | <42 | 8.4E+03 | 8.0E+03 | 8.2E+03 | 4.96 | 95 | 2.5E+03 | n/a | |
| S09T001784 | | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | 1.16E-03 | 1.18E-03 | 1.17E-03 | 1.54 | 107 | 6.20E-05 | 2.09 | |
| S09T001784 | | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | 1.44E-04 | 1.46E-04 | 1.45E-04 | 1.05 | n/a | 6.20E-05 | 3.77 | |
| S09T001784 | | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 1.20 | n/a | n/a | n/a | n/a | 1.04E-04 | 0.51 | |
| S09T001785 | | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | n/a | 212 | n/a | U |
| S09T001785 | | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | 182 | n/a | n/a | n/a | n/a | 44.6 | n/a | J |
| S09T001786 | | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001786 | | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001786 | | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001786 | | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001786 | | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001786 | | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | n/a | 2.60 | n/a | U |
| S09T001786 | | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |
| S09T001787 | | S | 14798-03-9 | Ammonium | ug/mL | 96.8 | 1.75 | 83.4 | n/a | n/a | n/a | n/a | 0.120 | n/a | |

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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03A**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001788 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001788 | | | MASS | Mass | g | n/a | n/a | 301 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001788 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001788 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001789 | | | 71-36-3 | 1-Butanol | ug/L | 87.4 | <7.77 | 6.78E+03 | n/a | n/a | n/a | n/a | 311 | n/a | |
| S09T001789 | | | 67-64-1 | Acetone | ug/L | 90.0 | <2.19 | 668 | n/a | n/a | n/a | n/a | 87.6 | n/a | J |
| S09T001789 | | | 78-93-3 | 2-Butanone | ug/L | 95.7 | <1.33 | <53.2 | n/a | n/a | n/a | n/a | 53.2 | n/a | U |

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23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001790 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001790 | | | MASS | Mass | g | n/a | n/a | 302 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001790 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001790 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001790 | | | SPECGRAVI | Specific gravity | unitless | 99.17 | n/a | 1.218 | n/a | n/a | n/a | n/a | 1.000E-03 | n/a | |
| S09T001794 | | | 14762-75-5 | Carbon-14 | uCi/mL | 94.6 | <9.85E-07 | 1.26E-03 | n/a | n/a | n/a | n/a | 1.01E-06 | 0.6 | |
| S09T001794 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | 4.76E-03 | 4.58E-03 | 4.67E-03 | 3.85 | 56.4 | 1.00E-03 | n/a | Jb |
| S09T001794 | | | 7440-22-4 | Silver | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7429-90-5 | Aluminum | ug/mL | 99.6 | <0.0300 | 6.51E+03 | n/a | n/a | n/a | n/a | 12.0 | n/a | |
| S09T001794 | | | 7440-38-2 | Arsenic | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-41-7 | Beryllium | ug/mL | 101 | <1.00E-03 | <0.400 | n/a | n/a | n/a | n/a | 0.400 | n/a | U |
| S09T001794 | | | 7440-69-9 | Bismuth | ug/mL | 99.4 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001794 | | | 7440-70-2 | Calcium | ug/mL | 108 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-43-9 | Cadmium | ug/mL | 99.7 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001794 | | | 7440-47-3 | Chromium | ug/mL | 99.4 | <5.00E-03 | 611 | n/a | n/a | n/a | n/a | 2.00 | n/a | |
| S09T001794 | | | 7439-89-6 | Iron | ug/mL | 101 | 0.0120 | 2.22 | n/a | n/a | n/a | n/a | 2.00 | n/a | J |
| S09T001794 | | | 7440-09-7 | Potassium | ug/mL | 103 | <0.500 | 1.59E+03 | n/a | n/a | n/a | n/a | 200 | n/a | J |
| S09T001794 | | | 7439-91-0 | Lanthanum | ug/mL | 100 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001794 | | | 7439-96-5 | Manganese | ug/mL | 97.9 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001794 | | | 7440-23-5 | Sodium | ug/mL | 100 | <0.100 | 9.09E+04 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001794 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | 0.0236 | 8.99 | n/a | n/a | n/a | n/a | 8.00 | n/a | J |
| S09T001794 | | | 7439-92-1 | Lead | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-16-6 | Rhodium | ug/mL | 100 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7782-49-2 | Selenium | ug/mL | 103 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001794 | | | 7440-21-3 | Silicon | ug/mL | 96.1 | <0.0300 | 12.8 | n/a | n/a | n/a | n/a | 12.0 | n/a | J |
| S09T001794 | | | 7440-24-6 | Strontium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001794 | | | 7440-61-1 | Uranium | ug/mL | 106 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |

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23 - Aug - 2011 8:09:04
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.27



**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001794 | | | 7440-33-7 | Tungsten | ug/mL | 105 | <0.200 | <80.0 | n/a | n/a | n/a | n/a | 80.0 | n/a | U |
| S09T001794 | | | 7440-66-6 | Zinc | ug/mL | 97.2 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7440-67-7 | Zirconium | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 15758-45-9 | Selenium-79 | uCi/mL | n/a | 8.04E-06 | 1.77E-04 | n/a | n/a | n/a | n/a | 1.69E-06 | 2.27 | |
| S09T001794 | | | 10028-17-8 | Tritium | uCi/mL | 92.0 | 3.13E-06 | 3.19E-04 | n/a | n/a | n/a | n/a | 7.31E-07 | 1.8 | |
| S09T001795 | | | DSC-02 | Exotherms - calculated dry weight | J/g DW | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | |
| S09T001795 | | | DSC-01 | DSC Exotherm | J/g | 96.4 | n/a | 0.0 | 0.0 | 0.0 | 0.0 | n/a | n/a | n/a | |
| S09T001795 | | | 16984-48-8 | Fluoride | ug/mL | 96.7 | <1.61E-03 | 364 | n/a | n/a | n/a | n/a | 1.79 | n/a | |
| S09T001795 | | | 16887-00-6 | Chloride | ug/mL | 99.0 | <9.98E-03 | 1.72E+03 | n/a | n/a | n/a | n/a | 11.1 | n/a | |
| S09T001795 | | | 14797-65-0 | Nitrite | ug/mL | 97.2 | <0.0192 | 3.15E+04 | n/a | n/a | n/a | n/a | 196 | n/a | |
| S09T001795 | | | 14808-79-8 | Sulfate | ug/mL | 99.7 | <0.0187 | 7.31E+03 | n/a | n/a | n/a | n/a | 20.8 | n/a | |
| S09T001795 | | | 14797-55-8 | Nitrate | ug/mL | 96.1 | <0.0208 | 1.08E+05 | n/a | n/a | n/a | n/a | 212 | n/a | |
| S09T001795 | | | 14265-44-2 | Phosphate | ug/mL | 98.0 | <0.0167 | 2.87E+03 | n/a | n/a | n/a | n/a | 18.6 | n/a | |
| S09T001795 | | | PH | pH | unitless | n/a | n/a | >13.500 | n/a | n/a | n/a | n/a | 0.0100 | n/a | J |
| S09T001795 | | | %WATER | Percent water | % | 98.0 | n/a | 71.5 | 71.6 | 71.6 | 0.112 | n/a | 0.0100 | n/a | |
| S09T001795 | | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | 1.51E+03 | n/a | n/a | n/a | n/a | 100 | n/a | |
| S09T001795 | | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | 5.16E+03 | n/a | n/a | n/a | n/a | 35.0 | n/a | |
| S09T001795 | | | TC | Total carbon | ug/mL | 92.1 | <1.00 | 7.23E+03 | n/a | n/a | n/a | n/a | 105 | n/a | |
| S09T001795 | | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 2.06E+03 | n/a | n/a | n/a | n/a | 55.0 | n/a | |
| S09T001796 | | | 12587-46-1 | Gross alpha | uCi/mL | 96.7 | <4.77E-07 | 6.22E-03 | <6.63E-03 | n/a | n/a | 101 | 3.07E-03 | 104.8 | J |
| S09T001796 | | | 12587-47-2 | Gross beta | uCi/mL | 107 | <7.87E-07 | 219 | 220 | 220 | 0.456 | 113 | 0.0124 | .4 | |
| S09T001796 | | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <6.82E-06 | n/a | n/a | n/a | n/a | 6.82E-06 | n/a | U |
| S09T001796 | | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | 1.52E-04 | n/a | n/a | n/a | n/a | 1.70E-05 | 2.74 | |
| S09T001796 | | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <0.0109 | n/a | n/a | n/a | n/a | 0.0109 | n/a | U |
| S09T001796 | | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <0.0114 | n/a | n/a | n/a | n/a | 0.0114 | n/a | U |
| S09T001796 | | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <1.42 | n/a | n/a | n/a | n/a | 1.42 | n/a | U |
| S09T001796 | | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <0.0721 | n/a | n/a | n/a | n/a | 0.0721 | n/a | U |
| S09T001796 | | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | 216 | n/a | n/a | n/a | n/a | 0.116 | 4.23 | |

NA = Not Analyzed, ND = Not Detected

U - Less Than Detection Limit
Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001796 | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <0.421 | n/a | n/a | n/a | n/a | 0.421 | n/a | U |
| S09T001796 | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <0.0296 | n/a | n/a | n/a | n/a | 0.0296 | n/a | U |
| S09T001796 | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <0.183 | n/a | n/a | n/a | n/a | 0.183 | n/a | U |
| S09T001796 | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <2.09 | n/a | n/a | n/a | n/a | 2.09 | n/a | U |
| S09T001796 | | 15046-84-1 | Iodine-129 | uCi/mL | 110 | <2.16E-06 | 9.23E-05 | n/a | n/a | n/a | 109 | 2.96E-06 | 4.5 | |
| S09T001796 | | 13968-55-3 | Uranium-233 | ug/mL | n/a | 1.50E-08 | 9.68E-04 | 1.22E-03 | 1.09E-03 | 22.8 | n/a | 5.00E-04 | n/a | BJ |
| S09T001796 | | 15117-96-1 | Uranium-235 | ug/mL | 96.8 | 1.10E-08 | 0.122 | 0.126 | 0.124 | 3.06 | 104 | 5.50E-04 | n/a | B |
| S09T001796 | | 13994-20-2 | Neptunium-237 | ug/mL | 105 | <5.30E-08 | 0.130 | 0.118 | 0.124 | 10.1 | 104 | 2.65E-03 | n/a | |
| S09T001796 | | U-238 | Uranium-238 | ug/mL | 99.7 | <5.50E-07 | 18.3 | 18.3 | 18.3 | 0.109 | 99.4 | 0.0275 | n/a | |
| S09T001796 | | 14133-76-7 | Technetium-99 | ug/mL | 102 | 5.46E-07 | 5.26 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | |
| S09T001796 | | 13994-20-2 | Neptunium-237 | uCi/mL | 101 | 1.47E-05 | 9.83E-05 | n/a | n/a | n/a | n/a | 1.43E-05 | 24.1 | B |
| S09T001796 | | HYDROXID | Hydroxide | ug/mL | 95 | <42 | 8.0E+03 | 8.0E+03 | 8.0E+03 | 0.752 | 96 | 2.5E+03 | n/a | |
| S09T001796 | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | 1.15E-03 | n/a | n/a | n/a | n/a | 7.35E-05 | 2.16 | |
| S09T001796 | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | 1.42E-04 | n/a | n/a | n/a | n/a | 7.35E-05 | 3.88 | |
| S09T001796 | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 1.19 | n/a | n/a | n/a | n/a | 1.06E-04 | 0.52 | |
| S09T001797 | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | 81.1 | 212 | n/a | U |
| S09T001797 | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | 201 | n/a | n/a | n/a | 74.0 | 44.6 | n/a | J |
| S09T001798 | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001798 | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001798 | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001798 | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001798 | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001798 | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | n/a | 2.60 | n/a | U |
| S09T001798 | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |
| S09T001799 | S | 14798-03-9 | Ammonium | ug/mL | 96.8 | 1.75 | 84.6 | 83.3 | 84.0 | 1.62 | 82.9 | 0.120 | n/a | |

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B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001801 | | | 71-36-3 | 1-Butanol | ug/L | 100 | <7.77 | 6.37E+03 | n/a | n/a | n/a | n/a | 311 | n/a | |
| S09T001801 | | | 67-64-1 | Acetone | ug/L | 97.5 | <2.19 | 666 | n/a | n/a | n/a | n/a | 87.6 | n/a | J |
| S09T001801 | | | 78-93-3 | 2-Butanone | ug/L | 103 | <1.33 | <53.2 | n/a | n/a | n/a | n/a | 53.2 | n/a | U |
| S09T001802 | | | ORGVOL | Organic Volume Present | mL | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001802 | | | MASS | Mass | g | n/a | n/a | 304 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001802 | | | VOL%SETS | Volume percent settled solids | % | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001802 | | | | Volume of Sample | mL | n/a | n/a | 250 | n/a | n/a | n/a | n/a | n/a | n/a | Q |
| S09T001802 | | | SPECGRAVI | Specific gravity | unitless | 99.17 | n/a | 1.220 | n/a | n/a | n/a | n/a | 1.000E-03 | n/a | |
| S09T001806 | | | 14762-75-5 | Carbon-14 | uCi/mL | 94.6 | <9.85E-07 | 1.36E-03 | n/a | n/a | n/a | n/a | 1.01E-06 | 0.6 | |
| S09T001806 | | | 7439-97-6 | Mercury | ug/mL | 98.1 | <1.00E-04 | 4.82E-03 | n/a | n/a | n/a | n/a | 1.00E-03 | n/a | J |
| S09T001806 | | | 7440-22-4 | Silver | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7429-90-5 | Aluminum | ug/mL | 99.6 | <0.0300 | 6.53E+03 | n/a | n/a | n/a | n/a | 12.0 | n/a | |
| S09T001806 | | | 7440-38-2 | Arsenic | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-41-7 | Beryllium | ug/mL | 101 | <1.00E-03 | <0.400 | n/a | n/a | n/a | n/a | 0.400 | n/a | U |
| S09T001806 | | | 7440-69-9 | Bismuth | ug/mL | 99.4 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001806 | | | 7440-70-2 | Calcium | ug/mL | 108 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-43-9 | Cadmium | ug/mL | 99.7 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7440-48-4 | Cobalt | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001806 | | | 7440-47-3 | Chromium | ug/mL | 99.4 | <5.00E-03 | 614 | n/a | n/a | n/a | n/a | 2.00 | n/a | |
| S09T001806 | | | 7439-89-6 | Iron | ug/mL | 101 | 0.0120 | 2.42 | n/a | n/a | n/a | n/a | 2.00 | n/a | J |
| S09T001806 | | | 7440-09-7 | Potassium | ug/mL | 103 | <0.500 | 1.53E+03 | n/a | n/a | n/a | n/a | 200 | n/a | J |
| S09T001806 | | | 7439-91-0 | Lanthanum | ug/mL | 100 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001806 | | | 7439-96-5 | Manganese | ug/mL | 97.9 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001806 | | | 7440-23-5 | Sodium | ug/mL | 100 | <0.100 | 9.09E+04 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001806 | | | 7440-02-0 | Nickel | ug/mL | 98.6 | 0.0236 | 13.1 | n/a | n/a | n/a | n/a | 8.00 | n/a | J |
| S09T001806 | | | 7439-92-1 | Lead | ug/mL | 104 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-16-6 | Rhodium | ug/mL | 100 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7782-49-2 | Selenium | ug/mL | 103 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |

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J - Estimated
b - MS/MSD Outside Range
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**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001806 | | | 7440-21-3 | Silicon | ug/mL | 96.1 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001806 | | | 7440-24-6 | Strontium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001806 | | | 7440-61-1 | Uranium | ug/mL | 106 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001806 | | | 7440-33-7 | Tungsten | ug/mL | 105 | <0.200 | <80.0 | n/a | n/a | n/a | n/a | 80.0 | n/a | U |
| S09T001806 | | | 7440-66-6 | Zinc | ug/mL | 97.2 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7440-67-7 | Zirconium | ug/mL | 97.8 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 15758-45-9 | Selenium-79 | uCi/mL | n/a | 8.04E-06 | 1.65E-04 | n/a | n/a | n/a | n/a | 1.60E-06 | 2.37 | |
| S09T001806 | | | 10028-17-8 | Tritium | uCi/mL | 92.0 | 3.13E-06 | 3.18E-04 | n/a | n/a | n/a | n/a | 7.26E-07 | 1.8 | |
| S09T001807 | | | DSC-02 | Exotherms - calculated dry weight | J/g DW | n/a | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | |
| S09T001807 | | | DSC-01 | DSC Exotherm | J/g | 99.3 | n/a | 0.0 | n/a | n/a | n/a | n/a | n/a | n/a | |
| S09T001807 | | | 16984-48-8 | Fluoride | ug/mL | 99.9 | <1.61E-03 | 387 | 385 | 386 | 0.513 | 103 | 1.79 | n/a | |
| S09T001807 | | | 16887-00-6 | Chloride | ug/mL | 102 | <9.98E-03 | 1.85E+03 | 1.83E+03 | 1.84E+03 | 0.990 | 101 | 11.1 | n/a | |
| S09T001807 | | | 14797-65-0 | Nitrite | ug/mL | 101 | <0.0192 | 3.39E+04 | 3.36E+04 | 3.37E+04 | 0.982 | 99.8 | 196 | n/a | |
| S09T001807 | | | 14808-79-8 | Sulfate | ug/mL | 103 | <0.0187 | 7.84E+03 | 7.75E+03 | 7.79E+03 | 1.04 | 101 | 20.8 | n/a | |
| S09T001807 | | | 14797-55-8 | Nitrate | ug/mL | 99.4 | <0.0208 | 1.16E+05 | 1.15E+05 | 1.15E+05 | 1.10 | 96.1 | 212 | n/a | |
| S09T001807 | | | 14265-44-2 | Phosphate | ug/mL | 102 | <0.0167 | 3.09E+03 | 3.06E+03 | 3.08E+03 | 0.767 | 102 | 18.6 | n/a | |
| S09T001807 | | | PH | pH | unitless | n/a | n/a | 13.4 | 13.5 | 13.5 | 0.0743 | n/a | 0.0100 | n/a | |
| S09T001807 | | | %WATER | Percent water | % | 98.7 | n/a | 68.9 | n/a | n/a | n/a | n/a | 0.0100 | n/a | |
| S09T001807 | | | TOC | Total organic carbon | ug/mL | 91.8 | <20.0 | 1.52E+03 | n/a | n/a | n/a | n/a | 100 | n/a | |
| S09T001807 | | | TIC | Total inorganic carbon | ug/mL | 98.3 | <7.00 | 5.20E+03 | n/a | n/a | n/a | n/a | 35.0 | n/a | |
| S09T001807 | | | TC | Total carbon | ug/mL | 92.1 | <1.00 | 6.98E+03 | n/a | n/a | n/a | n/a | 105 | n/a | |
| S09T001807 | | | TOC | Total organic carbon | ug/mL | 105 | 1.00 | 2.00E+03 | n/a | n/a | n/a | n/a | 55.0 | n/a | |
| S09T001808 | | | 12587-46-1 | Gross alpha | uCi/mL | 96.7 | <4.77E-07 | 0.0203 | n/a | n/a | n/a | n/a | 3.07E-03 | 82.6 | J |
| S09T001808 | | | 12587-47-2 | Gross beta | uCi/mL | 107 | <7.87E-07 | 220 | n/a | n/a | n/a | n/a | 0.0124 | .4 | |
| S09T001808 | | | CM-243/244 | Curium-243/244 | uCi/mL | n/a | <1.10E-06 | <7.18E-06 | n/a | n/a | n/a | n/a | 7.18E-06 | n/a | U |
| S09T001808 | | | 14596-10-2 | Americium-241 | uCi/mL | 99.4 | <2.75E-06 | 1.53E-04 | n/a | n/a | n/a | n/a | 1.80E-05 | 2.77 | |
| S09T001808 | | | 10198-40-0 | Cobalt-60 | uCi/mL | 102 | <2.62E-05 | <0.0105 | <0.0112 | n/a | n/a | n/a | 0.0105 | n/a | U |
| S09T001808 | | | 14681-63-1 | Niobium-94 | uCi/mL | n/a | <2.48E-05 | <0.0113 | <0.0107 | n/a | n/a | n/a | 0.0113 | n/a | U |

NA = Not Analyzed, ND = Not Detected

U - Less Than Detection Limit
Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

**AW106 EVAP3**
**Data Summary Report**

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001808 | | | RU/RH-106 | Ruthenium/Rhodium-106 | uCi/mL | n/a | <3.94E-04 | <1.41 | <1.42 | n/a | n/a | n/a | 1.41 | n/a | U |
| S09T001808 | | | 13967-70-9 | Cesium-134 | uCi/mL | n/a | <2.49E-05 | <0.0715 | <0.0729 | n/a | n/a | n/a | 0.0715 | n/a | U |
| S09T001808 | | | 10045-97-3 | Cesium-137 | uCi/mL | 103 | <3.16E-05 | 215 | 219 | 217 | 1.84 | n/a | 0.108 | 4.23 | |
| S09T001808 | | | 14762-78-8 | Cerium-144 | uCi/mL | n/a | <8.67E-05 | <0.419 | <0.423 | n/a | n/a | n/a | 0.419 | n/a | U |
| S09T001808 | | | 15585-10-1 | Europium-154 | uCi/mL | n/a | <7.62E-05 | <0.0300 | <0.0327 | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001808 | | | 14391-16-3 | Europium-155 | uCi/mL | n/a | <3.67E-05 | <0.183 | <0.184 | n/a | n/a | n/a | 0.183 | n/a | U |
| S09T001808 | | | 13982-63-3 | Radium-226 | uCi/mL | n/a | <3.81E-04 | <2.09 | <2.11 | n/a | n/a | n/a | 2.09 | n/a | U |
| S09T001808 | | | 15046-84-1 | Iodine-129 | uCi/mL | 110 | <2.16E-06 | 8.06E-05 | n/a | n/a | n/a | n/a | 2.10E-06 | 4.5 | |
| S09T001808 | | | 13968-55-3 | Uranium-233 | ug/mL | n/a | 1.50E-08 | 5.32E-04 | n/a | n/a | n/a | n/a | 5.00E-04 | n/a | BJ |
| S09T001808 | | | 15117-96-1 | Uranium-235 | ug/mL | 96.8 | 1.10E-08 | 0.132 | n/a | n/a | n/a | n/a | 5.50E-04 | n/a | B |
| S09T001808 | | | 13994-20-2 | Neptunium-237 | ug/mL | 105 | <5.30E-08 | 0.110 | n/a | n/a | n/a | n/a | 2.65E-03 | n/a | |
| S09T001808 | | | U-238 | Uranium-238 | ug/mL | 99.7 | <5.50E-07 | 18.1 | n/a | n/a | n/a | n/a | 0.0275 | n/a | |
| S09T001808 | | | 14133-76-7 | Technetium-99 | ug/mL | 102 | 5.46E-07 | 5.18 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | |
| S09T001808 | | | 13994-20-2 | Neptunium-237 | uCi/mL | 101 | 1.47E-05 | 7.67E-05 | n/a | n/a | n/a | n/a | 1.43E-05 | 29.2 | B |
| S09T001808 | | | HYDROXID | Hydroxide | ug/mL | 93 | <42 | 7.9E+03 | 7.9E+03 | 7.9E+03 | 1.03 | 100 | 2.5E+03 | n/a | |
| S09T001808 | | | PU-239/240 | Plutonium-239/240 | uCi/mL | 100 | <1.98E-06 | 1.14E-03 | n/a | n/a | n/a | n/a | 7.05E-05 | 2.13 | |
| S09T001808 | | | 13981-16-3 | Plutonium-238 | uCi/mL | n/a | <1.98E-06 | 1.47E-04 | n/a | n/a | n/a | n/a | 7.05E-05 | 3.79 | |
| S09T001808 | | | SR-89/90 | Strontium-89/90 | uCi/mL | 96.5 | 1.41E-06 | 1.19 | 1.19 | 1.19 | 0.320 | n/a | 1.04E-04 | 0.52 | |
| S09T001809 | | O | 111-76-2 | 2-Butoxyethanol | ug/L | 74.2 | <30.3 | <212 | n/a | n/a | n/a | n/a | 212 | n/a | U |
| S09T001809 | | O | 126-73-8 | Tributyl phosphate | ug/L | 79.8 | <6.37 | 241 | n/a | n/a | n/a | n/a | 44.6 | n/a | J |
| S09T001810 | | O | 12674-11-2 | Aroclor 1016 | ug/L | n/a | <5.40 | <37.8 | n/a | n/a | n/a | n/a | 37.8 | n/a | U |
| S09T001810 | | O | 11104-28-2 | Aroclor 1221 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001810 | | O | 11141-16-5 | Aroclor 1232 | ug/L | n/a | <1.17 | <8.20 | n/a | n/a | n/a | n/a | 8.20 | n/a | U |
| S09T001810 | | O | 53469-21-9 | Aroclor 1242 | ug/L | n/a | <1.80 | <12.6 | n/a | n/a | n/a | n/a | 12.6 | n/a | U |
| S09T001810 | | O | 12672-29-6 | Aroclor 1248 | ug/L | n/a | <1.01 | <7.10 | n/a | n/a | n/a | n/a | 7.10 | n/a | U |
| S09T001810 | | O | 11097-69-1 | Aroclor 1254 | ug/L | 77.7 | <0.371 | <2.60 | n/a | n/a | n/a | n/a | 2.60 | n/a | U |
| S09T001810 | | O | 11096-82-5 | Aroclor 1260 | ug/L | n/a | <4.09 | <28.6 | n/a | n/a | n/a | n/a | 28.6 | n/a | U |
| S09T001811 | | S | 14798-03-9 | Ammonium | ug/mL | 96.8 | 1.75 | 84.4 | n/a | n/a | n/a | n/a | 0.120 | n/a | |

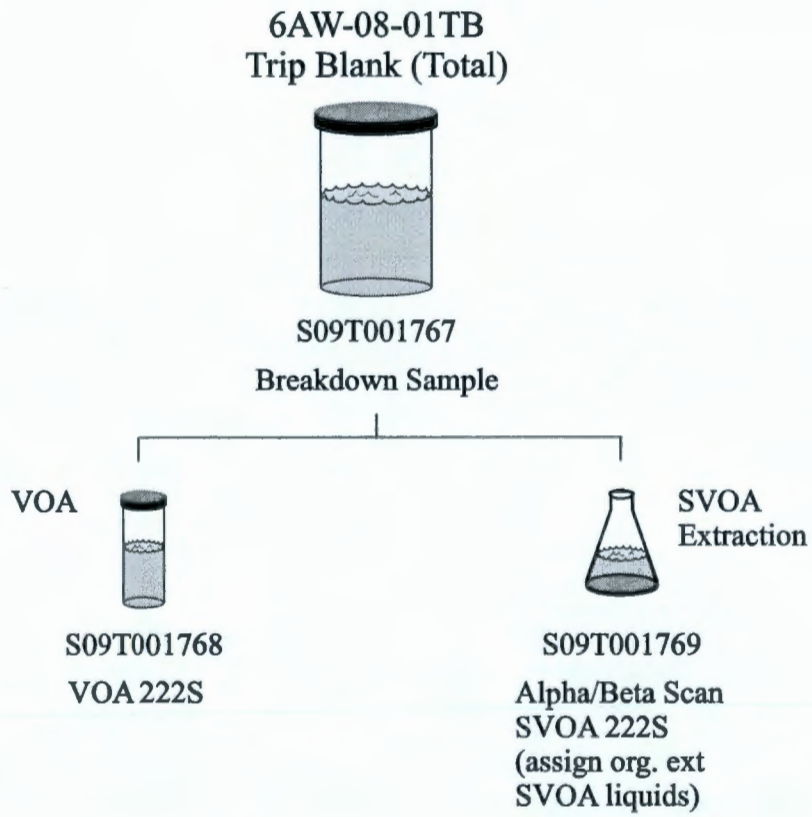
NA = Not Analyzed, ND = Not Detected

U - Less Than Detection Limit
Q - Qualitative
B - Blank Contamination
J - Estimated
b - MS/MSD Outside Range
e - SERDIL Outside Range

Attachment 2

SAMPLE BREAKDOWN DIAGRAMS

# AW106 EVAP3
# Grab Samples
# Riser 014
# Group 200900162



**AW106 EVAP3**
**Grab Samples**
**Riser 014**
**Group 20090162**

6AW-08-01FB1
Field Blank
(Hood subsampling)

S09T001751
Alpha/Beta
Americium
Breakdown Sample (2B)
Carbon-14
GEA
Hg
I-129
IC-an/org
ICP-TOTAL metals
MS Tc-99
MS Actinides
Np-237
pH
Plutonium
Selenium-79
Sr-90
TIC/TOC
Tot. Carb.
Tot. Org Carb
Tritium

VOA

S09T001752
VOA 222S

SVOA Extraction

S09T001753
Alpha/Beta Scan
SVOA 222S
(assign org. ext
SVOA liquids)

PCB Extraction

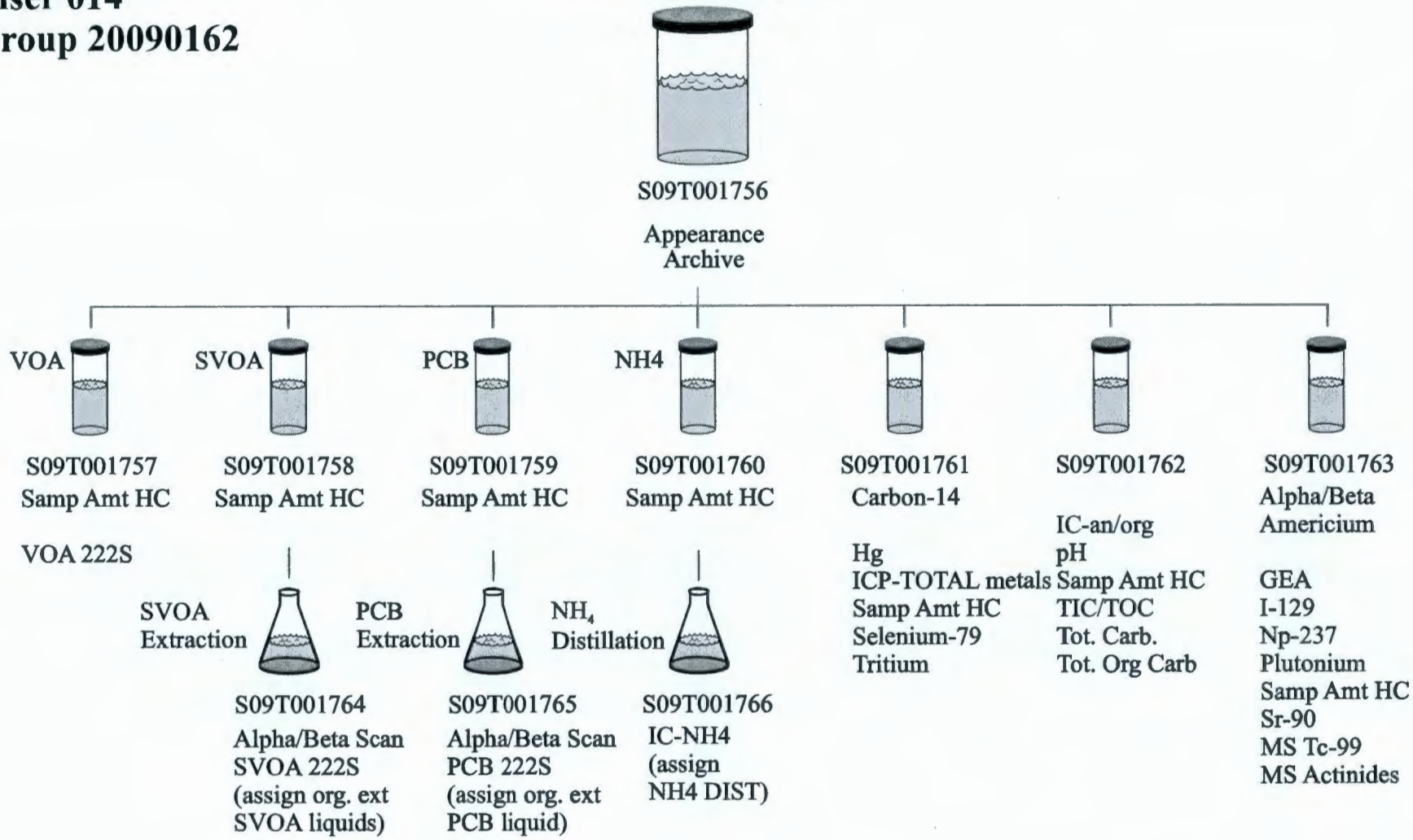
S09T001754
Alpha/Beta Scan
PCB 222S
(assign org. ext
PCB liquids)

$NH_4$ Distillation

S09T001755
IC-NH4
(assign
NH4 DIST)

**AW106 EVAP3**
**Grab Samples**
**Riser 014**
**Group 20090162**

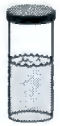
6AW-08-01FB2
Field Blank
(Hot Cell subsampling)



**AW106 EVAP3**
**Grab Samples**
**Riser 014**
**Group 20090162**

6AW-08-01
(Surface Sample)
Grab Sample (Total)

S09T001770
Appearance
Archive
SpG HC(DP)



S09T001771
Americium

GEA
Plutonium
Samp Amt HC
Sr-90

S09T001772

IC-an/org(DUP,MS)
pH(DUP)
Samp Amt HC
TIC/TOC(DUP,MS)
Hg

S09T001773

ICP-TOTAL metals(DP,MS)
OH(DP,SPK)
Samp Amt HC
TGA (DP)
DSC-TA
DSC dry calc
Tot. Carb. (DP, MS)
Tot. Org Carb(DP, MS)

S09T001774
Samp Amt HC

PCB
Extract

S09T001775
Alpha/Beta Scan
PCB 222S (MS,MSD)
(assign org. ext PCB liquid)

# AW106 EVAP3
# Grab Samples
# Groups 20090162 & 20090163

Riser 014
Group 20090162

6AW-08-02A
Grab Sample (Total)

S09T001776

Appearance
Archive

VOA

S09T001777

Samp Amt HC

VOA 222S (MS,MSD)

6AW-08-03A
Grab Sample (Total)

S09T001788

Appearance
Archive

VOA

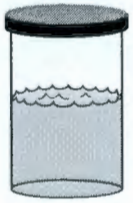
S09T001789

Samp Amt HC

VOA 222S

Riser 019
Group 20090163

6AW-08-04A
Grab Sample (Total)



S09T001800

sample jar was broken during hot-cell load-in

VOA testing was performed on a subsample of 6AW-08-04B

# AW106 EVAP3
# Grab Samples
# Riser 014
# Group 200900162

6AW-08-02B
Grab Sample (Total)

S09T001778

Appearance
SpG - HC
Archive

SVOA

S09T001779
Samp Amt HC

PCB

S09T001780
Samp Amt HC

NH4

S09T001781
Samp Amt HC

S09T001782
Carbon-14(DUP,MS)

Hg
ICP-TOTAL metals
Samp Amt HC
Selenium-79(DUP)
Tritium(MS,MSD)

S09T001783

DSC-Dry Calc
DSC-TA(DP)
IC-an/org
pH
Samp Amt HC
TGA-TA
TIC/TOC
Tot. Carb
Tot. Org Carb

S09T001784

Alpha/Beta
Americium
(DP,MS,MSD)

GEA
I-129
Np-237 (MS,MSD)
OH
Plutonium
(DP,MS,MSD)
Samp Amt HC
Sr-90
MS Tc-99(MS,MSD)
MS Actinides

SVOA
Extraction

S09T001785
Alpha/Beta Scan
SVOA 222S
(assign org. ext
SVOA liquids)

PCB
Extraction

S09T001786
Alpha/Beta Scan
PCB 222S
(assign org. ext
PCB liquid)

$NH_4$
Distillation

S09T001787
IC-NH4
(assign NH4 DIST)

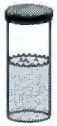
# AW106 EVAP3
# Grab Samples
# Riser 014
# Group 20090162

6AW-08-03B
Grab Sample (Total)

S09T001790

Appearance
SpG - HC
Archive

SVOA



S09T001791

Samp Amt HC

PCB

S09T001792

Samp Amt HC

NH4

S09T001793

Samp Amt HC

S09T001794

Carbon-14

Hg(DUP,MS)
ICP-TOTAL metals
Samp Amt HC
Selenium-79
Tritium

S09T001795

DSC-Dry Calc
DSC-TA
IC-an/org
pH
Samp Amt HC
TGA-TA
TIC/TOC
Tot. Carb
Tot. Org Carb

S09T001796

Alpha/Beta
(DP,MS,MSD)
Americium

GEA
I-129(MS,MSD)
Np-237
OH
Plutonium
Samp Amt HC
Sr-90
MS Tc-99
MS Actinides
(DP, MS)

SVOA
Extraction

S09T001797

Alpha/Beta Scan
SVOA 222S
(MS, MSD)
(assign org. ext
SVOA liquids)

PCB
Extraction

S09T001798

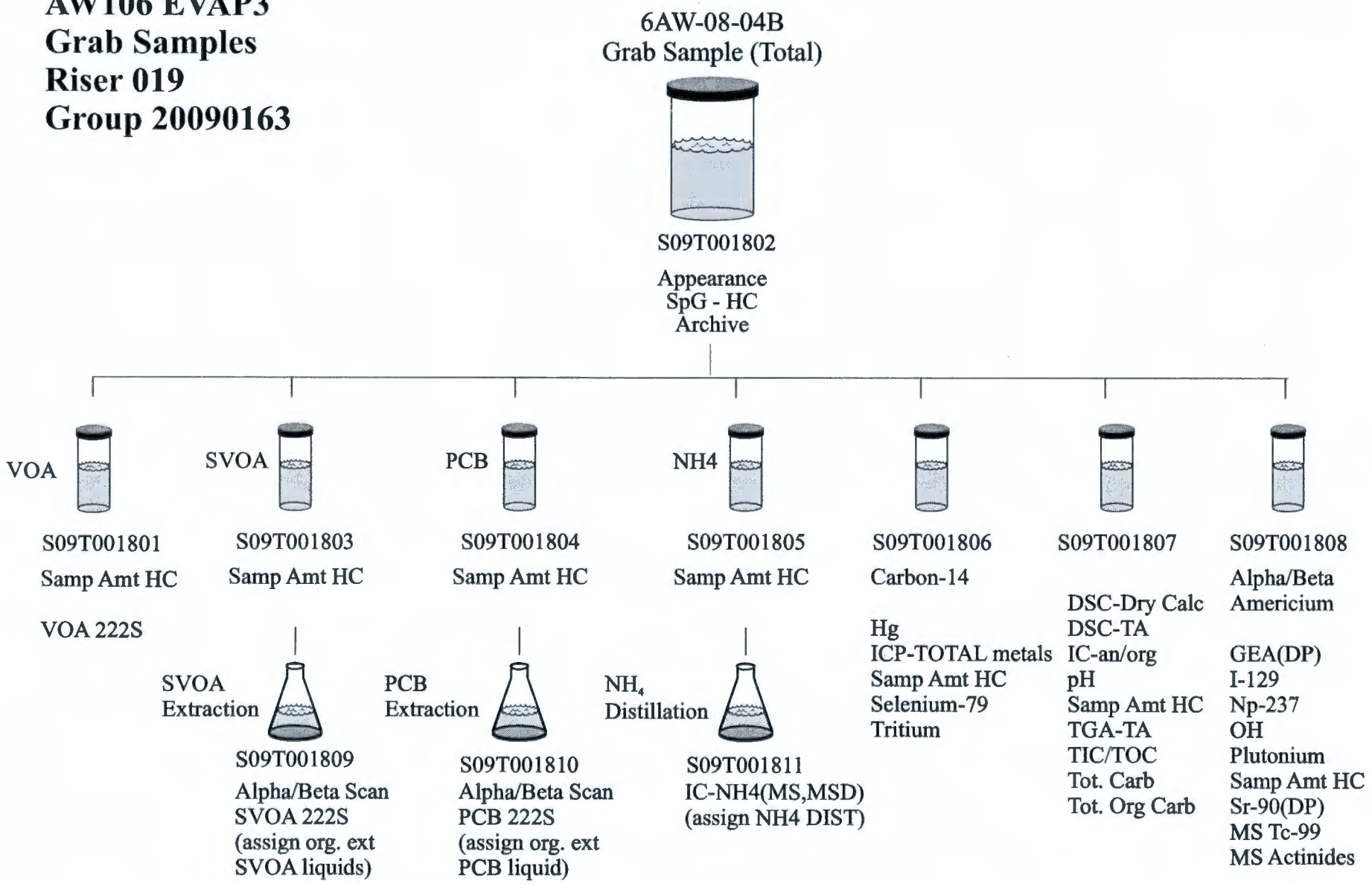
Alpha/Beta Scan
PCB 222S
(assign org. ext
PCB liquid)

$NH_4$
Distillation

S09T001799

IC-NH4
(assign NH4 DIST)

# AW106 EVAP3
# Grab Samples
# Riser 019
# Group 20090163



Attachment 3

OPPORTUNISTIC ANALYTE RESULTS

12 - May - 2009 15:46:03
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001771 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <7.14E-06 | n/a | n/a | n/a | n/a | 7.14E-06 | n/a | U |
| S09T001771 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <0.455 | n/a | n/a | n/a | n/a | 0.455 | n/a | U |
| S09T001771 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <0.0515 | n/a | n/a | n/a | n/a | 0.0515 | n/a | U |
| S09T001771 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <0.0957 | n/a | n/a | n/a | n/a | 0.0957 | n/a | U |
| S09T001772 | | | 666-14-8 | Glycolate | ug/mL | 98.5 | <9.37E-03 | 211 | 211 | 211 | 0.175 | 104 | 10.4 | n/a | |
| S09T001772 | | | 71-50-1 | Acetate | ug/mL | 103 | <6.04E-03 | 364 | 367 | 365 | 0.781 | 109 | 6.71 | n/a | |
| S09T001772 | | | 12311-97-6 | Formate | ug/mL | 99.1 | <4.67E-03 | 687 | 688 | 688 | 0.0800 | 102 | 5.19 | n/a | |
| S09T001772 | | | 338-70-5 | Oxalate | ug/mL | 98.9 | <0.0231 | 1.63E+03 | 1.64E+03 | 1.63E+03 | 0.343 | 97.3 | 25.7 | n/a | |
| S09T001772 | | | 24959-67-9 | Bromide | ug/mL | 91.1 | <0.0580 | <64.4 | <64.4 | n/a | n/a | 94.7 | 64.4 | n/a | U |
| S09T001773 | | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | <12.0 | 12.7 | n/a | n/a | 99.0 | 12.0 | n/a | U |
| S09T001773 | | | 7440-39-3 | Barium | ug/mL | 98.6 | <3.00E-03 | <1.20 | <1.20 | n/a | n/a | 98.4 | 1.20 | n/a | U |
| S09T001773 | | | 7440-45-1 | Cerium | ug/mL | 104 | <0.0300 | <12.0 | <12.0 | n/a | n/a | 97.2 | 12.0 | n/a | U |
| S09T001773 | | | 7440-50-8 | Copper | ug/mL | 99.3 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 99.5 | 2.00 | n/a | U |
| S09T001773 | | | 7440-53-1 | Europium | ug/mL | 96.8 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 98.9 | 2.00 | n/a | U |
| S09T001773 | | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <1.20 | <1.20 | n/a | n/a | 96.0 | 1.20 | n/a | U |
| S09T001773 | | | 7439-95-4 | Magnesium | ug/mL | 98.5 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 94.9 | 20.0 | n/a | U |
| S09T001773 | | | 7439-98-7 | Molybdenum | ug/mL | 98.9 | <0.0200 | 30.9 | 28.3 | 29.6 | 8.81 | 96.0 | 8.00 | n/a | J |
| S09T001773 | | | 7440-00-8 | Neodymium | ug/mL | 98.1 | <0.0100 | <4.00 | <4.00 | n/a | n/a | 97.3 | 4.00 | n/a | U |
| S09T001773 | | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <12.0 | <12.0 | n/a | n/a | 100 | 12.0 | n/a | U |
| S09T001773 | | | 7723-14-0 | Phosphorus | ug/mL | 99.6 | <0.0500 | 1.02E+03 | 1.03E+03 | 1.03E+03 | 0.961 | 99.9 | 20.0 | n/a | |
| S09T001773 | | | 7440-05-3 | Palladium | ug/mL | 99.1 | <0.100 | <40.0 | <40.0 | n/a | n/a | 99.8 | 40.0 | n/a | U |
| S09T001773 | | | 7440-10-0 | Praseodymium | ug/mL | 98.0 | <0.0100 | <4.00 | <4.00 | n/a | n/a | 96.5 | 4.00 | n/a | U |
| S09T001773 | | | 7440-17-7 | Rubidium | ug/mL | 98.5 | <1.00 | <400 | <400 | n/a | n/a | 94.4 | 400 | n/a | U |
| S09T001773 | | | 7440-18-8 | Ruthenium | ug/mL | 97.2 | <0.0300 | <12.0 | <12.0 | n/a | n/a | 93.7 | 12.0 | n/a | U |
| S09T001773 | | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | 2.48E+03 | 2.50E+03 | 2.49E+03 | 0.491 | 98.3 | 40.0 | n/a | |
| S09T001773 | | | 7440-36-0 | Antimony | ug/mL | 98.8 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 96.0 | 20.0 | n/a | U |
| S09T001773 | | | 7440-19-9 | Samarium | ug/mL | 99.7 | <0.0200 | <8.00 | <8.00 | n/a | n/a | 96.9 | 8.00 | n/a | U |
| S09T001773 | | | 7440-31-5 | Tin | ug/mL | 102 | <0.0300 | <12.0 | <12.0 | n/a | n/a | 98.5 | 12.0 | n/a | U |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12 - May - 2009 15:46:03
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001773 | | | 7440-25-7 | Tantalum | ug/mL | 104 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 102 | 20.0 | n/a | U |
| S09T001773 | | | 7440-29-1 | Thorium | ug/mL | 98.8 | <0.0500 | <20.0 | <20.0 | n/a | n/a | 97.2 | 20.0 | n/a | U |
| S09T001773 | | | 7440-32-6 | Titanium | ug/mL | 101 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 96.3 | 2.00 | n/a | U |
| S09T001773 | | | 7440-28-0 | Thallium | ug/mL | 100 | <0.100 | <40.0 | <40.0 | n/a | n/a | 97.5 | 40.0 | n/a | U |
| S09T001773 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <2.00 | <2.00 | n/a | n/a | 98.8 | 2.00 | n/a | U |
| S09T001773 | | | 7440-65-5 | Yttrium | ug/mL | 97.6 | <2.00E-03 | <0.800 | <0.800 | n/a | n/a | 97.2 | 0.800 | n/a | U |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12 - May - 2009 15:46:03
DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001751 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <1.14E-06 | n/a | n/a | n/a | n/a | 1.14E-06 | n/a | U |
| S09T001751 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <5.93E-05 | n/a | n/a | n/a | n/a | 5.93E-05 | n/a | U |
| S09T001751 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <1.22E-04 | n/a | n/a | n/a | n/a | 1.22E-04 | n/a | U |
| S09T001751 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <2.23E-05 | n/a | n/a | n/a | n/a | 2.23E-05 | n/a | U |
| S09T001751 | | | 666-14-8 | Glycolate | ug/mL | 102 | <9.37E-03 | <9.37E-03 | n/a | n/a | n/a | n/a | 9.37E-03 | n/a | U |
| S09T001751 | | | 71-50-1 | Acetate | ug/mL | 107 | <6.04E-03 | <6.04E-03 | n/a | n/a | n/a | n/a | 6.04E-03 | n/a | U |
| S09T001751 | | | 12311-97-6 | Formate | ug/mL | 103 | <4.67E-03 | <4.67E-03 | n/a | n/a | n/a | n/a | 4.67E-03 | n/a | U |
| S09T001751 | | | 338-70-5 | Oxalate | ug/mL | 102 | <0.0231 | <0.0231 | n/a | n/a | n/a | n/a | 0.0231 | n/a | U |
| S09T001751 | | | 24959-67-9 | Bromide | ug/mL | 94.0 | <0.0580 | <0.0580 | n/a | n/a | n/a | n/a | 0.0580 | n/a | U |
| S09T001751 | | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001751 | | | 7440-39-3 | Barium | ug/mL | 101 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001751 | | | 7440-45-1 | Cerium | ug/mL | 105 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001751 | | | 7440-50-8 | Copper | ug/mL | 101 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-53-1 | Europium | ug/mL | 99.4 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001751 | | | 7439-95-4 | Magnesium | ug/mL | 98.4 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7439-98-7 | Molybdenum | ug/mL | 100 | <0.0200 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001751 | | | 7440-00-8 | Neodymium | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001751 | | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001751 | | | 7723-14-0 | Phosphorus | ug/mL | 101 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-05-3 | Palladium | ug/mL | 98.2 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-10-0 | Praseodymium | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001751 | | | 7440-17-7 | Rubidium | ug/mL | 90.0 | <1.00 | <1.00 | n/a | n/a | n/a | n/a | 1.00 | n/a | U |
| S09T001751 | | | 7440-18-8 | Ruthenium | ug/mL | 97.1 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001751 | | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-36-0 | Antimony | ug/mL | 99.8 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-19-9 | Samarium | ug/mL | 101 | <0.0200 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001751 | | | 7440-31-5 | Tin | ug/mL | 101 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001751 | | | 7440-25-7 | Tantalum | ug/mL | 106 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-29-1 | Thorium | ug/mL | 98.6 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001751 | | | 7440-32-6 | Titanium | ug/mL | 102 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-28-0 | Thallium | ug/mL | 99.2 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001751 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001751 | | | 7440-65-5 | Yttrium | ug/mL | 98.3 | <2.00E-03 | <2.00E-03 | n/a | n/a | n/a | n/a | 2.00E-03 | n/a | U |
| S09T001751 | | | 13966-29-5 | Uranium-234 | ug/mL | n/a | <5.00E-09 | <5.00E-08 | n/a | n/a | n/a | n/a | 5.00E-08 | n/a | U |
| S09T001751 | | | 13982-70-2 | Uranium-236 | ug/mL | n/a | <4.00E-09 | <4.00E-08 | n/a | n/a | n/a | n/a | 4.00E-08 | n/a | U |
| S09T001752 | | | 75-35-4 | 1,1-Dichloroethene | ug/L | 96.2 | <0.170 | <0.189 | n/a | n/a | n/a | n/a | 0.189 | n/a | U |
| S09T001752 | | | 71-43-2 | Benzene | ug/L | 96.2 | <0.160 | <0.178 | n/a | n/a | n/a | n/a | 0.178 | n/a | U |
| S09T001752 | | | 108-90-7 | Chlorobenzene | ug/L | 99.9 | <0.110 | <0.122 | n/a | n/a | n/a | n/a | 0.122 | n/a | U |
| S09T001752 | | | 108-88-3 | Toluene | ug/L | 96.7 | <0.120 | <0.133 | n/a | n/a | n/a | n/a | 0.133 | n/a | U |
| S09T001752 | | | 79-01-6 | Trichloroethene | ug/L | 96.2 | <0.150 | <0.167 | n/a | n/a | n/a | n/a | 0.167 | n/a | U |

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U - Less Than Detection Limit

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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001757 | | 75-35-4 | 1,1-Dichloroethene | ug/L | 96.2 | <0.170 | <6.80 | n/a | n/a | n/a | n/a | 6.80 | n/a | U |
| S09T001757 | | 71-43-2 | Benzene | ug/L | 96.2 | <0.160 | <6.40 | n/a | n/a | n/a | n/a | 6.40 | n/a | U |
| S09T001757 | | 108-90-7 | Chlorobenzene | ug/L | 99.9 | <0.110 | <4.40 | n/a | n/a | n/a | n/a | 4.40 | n/a | U |
| S09T001757 | | 108-88-3 | Toluene | ug/L | 96.7 | <0.120 | <4.80 | n/a | n/a | n/a | n/a | 4.80 | n/a | U |
| S09T001757 | | 79-01-6 | Trichloroethene | ug/L | 96.2 | <0.150 | <6.00 | n/a | n/a | n/a | n/a | 6.00 | n/a | U |
| S09T001761 | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | 1.48 | n/a | n/a | n/a | n/a | 0.0300 | n/a | |
| S09T001761 | | 7440-39-3 | Barium | ug/mL | 101 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001761 | | 7440-45-1 | Cerium | ug/mL | 105 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001761 | | 7440-50-8 | Copper | ug/mL | 101 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | 7440-53-1 | Europium | ug/mL | 99.4 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <3.00E-03 | n/a | n/a | n/a | n/a | 3.00E-03 | n/a | U |
| S09T001761 | | 7439-95-4 | Magnesium | ug/mL | 98.4 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | 7439-98-7 | Molybdenum | ug/mL | 100 | <0.0200 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001761 | | 7440-00-8 | Neodymium | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001761 | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001761 | | 7723-14-0 | Phosphorus | ug/mL | 101 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | 7440-05-3 | Palladium | ug/mL | 98.2 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001761 | | 7440-10-0 | Praseodymium | ug/mL | 101 | <0.0100 | <0.0100 | n/a | n/a | n/a | n/a | 0.0100 | n/a | U |
| S09T001761 | | 7440-17-7 | Rubidium | ug/mL | 90.0 | <1.00 | <1.00 | n/a | n/a | n/a | n/a | 1.00 | n/a | U |
| S09T001761 | | 7440-18-8 | Ruthenium | ug/mL | 97.1 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001761 | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |
| S09T001761 | | 7440-36-0 | Antimony | ug/mL | 99.8 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | 7440-19-9 | Samarium | ug/mL | 101 | <0.0200 | <0.0200 | n/a | n/a | n/a | n/a | 0.0200 | n/a | U |
| S09T001761 | | 7440-31-5 | Tin | ug/mL | 101 | <0.0300 | <0.0300 | n/a | n/a | n/a | n/a | 0.0300 | n/a | U |
| S09T001761 | | 7440-25-7 | Tantalum | ug/mL | 106 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | 7440-29-1 | Thorium | ug/mL | 98.6 | <0.0500 | <0.0500 | n/a | n/a | n/a | n/a | 0.0500 | n/a | U |
| S09T001761 | | 7440-32-6 | Titanium | ug/mL | 102 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | 7440-28-0 | Thallium | ug/mL | 99.2 | <0.100 | <0.100 | n/a | n/a | n/a | n/a | 0.100 | n/a | U |

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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001761 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <5.00E-03 | n/a | n/a | n/a | n/a | 5.00E-03 | n/a | U |
| S09T001761 | | | 7440-65-5 | Yttrium | ug/mL | 98.3 | <2.00E-03 | <2.00E-03 | n/a | n/a | n/a | n/a | 2.00E-03 | n/a | U |
| S09T001762 | | | 666-14-8 | Glycolate | ug/mL | 102 | <9.37E-03 | <9.37E-03 | n/a | n/a | n/a | n/a | 9.37E-03 | n/a | U |
| S09T001762 | | | 71-50-1 | Acetate | ug/mL | 107 | <6.04E-03 | <6.04E-03 | n/a | n/a | n/a | n/a | 6.04E-03 | n/a | U |
| S09T001762 | | | 12311-97-6 | Formate | ug/mL | 103 | <4.67E-03 | 5.70E-03 | n/a | n/a | n/a | n/a | 4.67E-03 | n/a | J |
| S09T001762 | | | 338-70-5 | Oxalate | ug/mL | 102 | <0.0231 | <0.0231 | n/a | n/a | n/a | n/a | 0.0231 | n/a | U |
| S09T001762 | | | 24959-67-9 | Bromide | ug/mL | 94.0 | <0.0580 | <0.0580 | n/a | n/a | n/a | n/a | 0.0580 | n/a | U |
| S09T001763 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <1.04E-06 | n/a | n/a | n/a | n/a | 1.04E-06 | n/a | U |
| S09T001763 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <6.16E-05 | n/a | n/a | n/a | n/a | 6.16E-05 | n/a | U |
| S09T001763 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <1.10E-04 | n/a | n/a | n/a | n/a | 1.10E-04 | n/a | U |
| S09T001763 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <2.17E-05 | n/a | n/a | n/a | n/a | 2.17E-05 | n/a | U |
| S09T001763 | | | 13966-29-5 | Uranium-234 | ug/mL | n/a | <5.00E-09 | <5.00E-08 | n/a | n/a | n/a | n/a | 5.00E-08 | n/a | U |
| S09T001763 | | | 13982-70-2 | Uranium-236 | ug/mL | n/a | <4.00E-09 | 1.02E-07 | n/a | n/a | n/a | n/a | 4.00E-08 | n/a | J |

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J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01TB**
**Segment Portion: Trip Blank**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001768 | | | 75-35-4 | 1,1-Dichloroethene | ug/L | 96.2 | <0.170 | <0.189 | n/a | n/a | n/a | n/a | 0.189 | n/a | U |
| S09T001768 | | | 71-43-2 | Benzene | ug/L | 96.2 | <0.160 | <0.178 | n/a | n/a | n/a | n/a | 0.178 | n/a | U |
| S09T001768 | | | 108-90-7 | Chlorobenzene | ug/L | 99.9 | <0.110 | <0.122 | n/a | n/a | n/a | n/a | 0.122 | n/a | U |
| S09T001768 | | | 108-88-3 | Toluene | ug/L | 96.7 | <0.120 | <0.133 | n/a | n/a | n/a | n/a | 0.133 | n/a | U |
| S09T001768 | | | 79-01-6 | Trichloroethene | ug/L | 96.2 | <0.150 | <0.167 | n/a | n/a | n/a | n/a | 0.167 | n/a | U |

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J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02A**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001777 | | | 75-35-4 | 1,1-Dichloroethene | ug/L | 96.2 | <0.170 | <6.80 | n/a | n/a | n/a | 114 | 6.80 | n/a | U |
| S09T001777 | | | 71-43-2 | Benzene | ug/L | 96.2 | <0.160 | <6.40 | n/a | n/a | n/a | 104 | 6.40 | n/a | U |
| S09T001777 | | | 108-90-7 | Chlorobenzene | ug/L | 99.9 | <0.110 | <4.40 | n/a | n/a | n/a | 102 | 4.40 | n/a | U |
| S09T001777 | | | 108-88-3 | Toluene | ug/L | 96.7 | <0.120 | <4.80 | n/a | n/a | n/a | 101 | 4.80 | n/a | U |
| S09T001777 | | | 79-01-6 | Trichloroethene | ug/L | 96.2 | <0.150 | <6.00 | n/a | n/a | n/a | 103 | 6.00 | n/a | U |

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J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001782 | | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | 14.3 | n/a | n/a | n/a | n/a | 12.0 | n/a | J |
| S09T001782 | | | 7440-39-3 | Barium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001782 | | | 7440-45-1 | Cerium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001782 | | | 7440-50-8 | Copper | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7440-53-1 | Europium | ug/mL | 99.4 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001782 | | | 7439-95-4 | Magnesium | ug/mL | 98.4 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7439-98-7 | Molybdenum | ug/mL | 100 | <0.0200 | 28.3 | n/a | n/a | n/a | n/a | 8.00 | n/a | J |
| S09T001782 | | | 7440-00-8 | Neodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001782 | | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001782 | | | 7723-14-0 | Phosphorus | ug/mL | 101 | <0.0500 | 1.06E+03 | n/a | n/a | n/a | n/a | 20.0 | n/a | |
| S09T001782 | | | 7440-05-3 | Palladium | ug/mL | 98.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001782 | | | 7440-10-0 | Praseodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001782 | | | 7440-17-7 | Rubidium | ug/mL | 90.0 | <1.00 | <400 | n/a | n/a | n/a | n/a | 400 | n/a | U |
| S09T001782 | | | 7440-18-8 | Ruthenium | ug/mL | 97.1 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001782 | | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | 2.56E+03 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001782 | | | 7440-36-0 | Antimony | ug/mL | 99.8 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-19-9 | Samarium | ug/mL | 101 | <0.0200 | <8.00 | n/a | n/a | n/a | n/a | 8.00 | n/a | U |
| S09T001782 | | | 7440-31-5 | Tin | ug/mL | 101 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001782 | | | 7440-25-7 | Tantalum | ug/mL | 106 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-29-1 | Thorium | ug/mL | 98.6 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001782 | | | 7440-32-6 | Titanium | ug/mL | 102 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7440-28-0 | Thallium | ug/mL | 99.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001782 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001782 | | | 7440-65-5 | Yttrium | ug/mL | 98.3 | <2.00E-03 | <0.800 | n/a | n/a | n/a | n/a | 0.800 | n/a | U |
| S09T001783 | | | 666-14-8 | Glycolate | ug/mL | 98.5 | <9.37E-03 | 203 | n/a | n/a | n/a | n/a | 10.4 | n/a | |
| S09T001783 | | | 71-50-1 | Acetate | ug/mL | 103 | <6.04E-03 | 347 | n/a | n/a | n/a | n/a | 6.71 | n/a | |
| S09T001783 | | | 12311-97-6 | Formate | ug/mL | 99.1 | <4.67E-03 | 654 | n/a | n/a | n/a | n/a | 5.19 | n/a | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001783 | | | 338-70-5 | Oxalate | ug/mL | 98.9 | <0.0231 | 1.56E+03 | n/a | n/a | n/a | n/a | 25.7 | n/a | |
| S09T001783 | | | 24959-67-9 | Bromide | ug/mL | 91.1 | <0.0580 | <64.4 | n/a | n/a | n/a | n/a | 64.4 | n/a | U |
| S09T001784 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <7.22E-06 | <6.60E-06 | n/a | n/a | n/a | 7.22E-06 | n/a | U |
| S09T001784 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <0.470 | n/a | n/a | n/a | n/a | 0.470 | n/a | U |
| S09T001784 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <0.0527 | n/a | n/a | n/a | n/a | 0.0527 | n/a | U |
| S09T001784 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <0.0987 | n/a | n/a | n/a | n/a | 0.0987 | n/a | U |
| S09T001784 | | | 13966-29-5 | Uranium-234 | ug/mL | n/a | <5.00E-09 | 1.80E-03 | n/a | n/a | n/a | n/a | 2.50E-04 | n/a | J |
| S09T001784 | | | 13982-70-2 | Uranium-236 | ug/mL | n/a | <4.00E-09 | 3.10E-03 | n/a | n/a | n/a | n/a | 2.00E-04 | n/a | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03A**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001789 | | | 75-35-4 | 1,1-Dichloroethene | ug/L | 96.2 | <0.170 | <6.80 | n/a | n/a | n/a | n/a | 6.80 | n/a | U |
| S09T001789 | | | 71-43-2 | Benzene | ug/L | 96.2 | <0.160 | <6.40 | n/a | n/a | n/a | n/a | 6.40 | n/a | U |
| S09T001789 | | | 108-90-7 | Chlorobenzene | ug/L | 99.9 | <0.110 | <4.40 | n/a | n/a | n/a | n/a | 4.40 | n/a | U |
| S09T001789 | | | 108-88-3 | Toluene | ug/L | 96.7 | <0.120 | <4.80 | n/a | n/a | n/a | n/a | 4.80 | n/a | U |
| S09T001789 | | | 79-01-6 | Trichloroethene | ug/L | 96.2 | <0.150 | <6.00 | n/a | n/a | n/a | n/a | 6.00 | n/a | U |

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N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001794 | | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | 13.1 | n/a | n/a | n/a | n/a | 12.0 | n/a | J |
| S09T001794 | | | 7440-39-3 | Barium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001794 | | | 7440-45-1 | Cerium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001794 | | | 7440-50-8 | Copper | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7440-53-1 | Europium | ug/mL | 99.4 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001794 | | | 7439-95-4 | Magnesium | ug/mL | 98.4 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7439-98-7 | Molybdenum | ug/mL | 100 | <0.0200 | 30.0 | n/a | n/a | n/a | n/a | 8.00 | n/a | J |
| S09T001794 | | | 7440-00-8 | Neodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001794 | | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001794 | | | 7723-14-0 | Phosphorus | ug/mL | 101 | <0.0500 | 1.07E+03 | n/a | n/a | n/a | n/a | 20.0 | n/a | |
| S09T001794 | | | 7440-05-3 | Palladium | ug/mL | 98.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001794 | | | 7440-10-0 | Praseodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001794 | | | 7440-17-7 | Rubidium | ug/mL | 90.0 | <1.00 | <400 | n/a | n/a | n/a | n/a | 400 | n/a | U |
| S09T001794 | | | 7440-18-8 | Ruthenium | ug/mL | 97.1 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001794 | | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | 2.59E+03 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001794 | | | 7440-36-0 | Antimony | ug/mL | 99.8 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-19-9 | Samarium | ug/mL | 101 | <0.0200 | <8.00 | n/a | n/a | n/a | n/a | 8.00 | n/a | U |
| S09T001794 | | | 7440-31-5 | Tin | ug/mL | 101 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001794 | | | 7440-25-7 | Tantalum | ug/mL | 106 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-29-1 | Thorium | ug/mL | 98.6 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001794 | | | 7440-32-6 | Titanium | ug/mL | 102 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7440-28-0 | Thallium | ug/mL | 99.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001794 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001794 | | | 7440-65-5 | Yttrium | ug/mL | 98.3 | <2.00E-03 | <0.800 | n/a | n/a | n/a | n/a | 0.800 | n/a | U |
| S09T001795 | | | 666-14-8 | Glycolate | ug/mL | 98.5 | <9.37E-03 | 233 | n/a | n/a | n/a | n/a | 10.4 | n/a | |
| S09T001795 | | | 71-50-1 | Acetate | ug/mL | 103 | <6.04E-03 | 405 | n/a | n/a | n/a | n/a | 6.71 | n/a | |
| S09T001795 | | | 12311-97-6 | Formate | ug/mL | 99.1 | <4.67E-03 | 752 | n/a | n/a | n/a | n/a | 5.19 | n/a | |

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DSRHardcopyWOLimits 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001795 | | | 338-70-5 | Oxalate | ug/mL | 98.9 | <0.0231 | 1.79E+03 | n/a | n/a | n/a | n/a | 25.7 | n/a | |
| S09T001795 | | | 24959-67-9 | Bromide | ug/mL | 91.1 | <0.0580 | <64.4 | n/a | n/a | n/a | n/a | 64.4 | n/a | U |
| S09T001796 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <6.82E-06 | n/a | n/a | n/a | n/a | 6.82E-06 | n/a | U |
| S09T001796 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <0.462 | n/a | n/a | n/a | n/a | 0.462 | n/a | U |
| S09T001796 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <0.0527 | n/a | n/a | n/a | n/a | 0.0527 | n/a | U |
| S09T001796 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <0.0979 | n/a | n/a | n/a | n/a | 0.0979 | n/a | U |
| S09T001796 | | | 13966-29-5 | Uranium-234 | ug/mL | n/a | <5.00E-09 | 1.83E-03 | 1.68E-03 | 1.76E-03 | 8.26 | n/a | 2.50E-04 | n/a | J |
| S09T001796 | | | 13982-70-2 | Uranium-236 | ug/mL | n/a | <4.00E-09 | 4.35E-03 | 4.84E-03 | 4.59E-03 | 10.7 | n/a | 2.00E-04 | n/a | |

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DSRHardcopyWOLimits 2.7.26a
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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001801 | | | 75-35-4 | 1,1-Dichloroethene | ug/L | 114 | <0.170 | <6.80 | n/a | n/a | n/a | n/a | 6.80 | n/a | U |
| S09T001801 | | | 71-43-2 | Benzene | ug/L | 105 | <0.160 | <6.40 | n/a | n/a | n/a | n/a | 6.40 | n/a | U |
| S09T001801 | | | 108-90-7 | Chlorobenzene | ug/L | 106 | <0.110 | <4.40 | n/a | n/a | n/a | n/a | 4.40 | n/a | U |
| S09T001801 | | | 108-88-3 | Toluene | ug/L | 104 | <0.120 | <4.80 | n/a | n/a | n/a | n/a | 4.80 | n/a | U |
| S09T001801 | | | 79-01-6 | Trichloroethene | ug/L | 108 | <0.150 | <6.00 | n/a | n/a | n/a | n/a | 6.00 | n/a | U |
| S09T001806 | | | 7440-42-8 | Boron | ug/mL | 104 | <0.0300 | 14.5 | n/a | n/a | n/a | n/a | 12.0 | n/a | J |
| S09T001806 | | | 7440-39-3 | Barium | ug/mL | 101 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001806 | | | 7440-45-1 | Cerium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001806 | | | 7440-50-8 | Copper | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7440-53-1 | Europium | ug/mL | 99.4 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7439-93-2 | Lithium | ug/mL | 104 | <3.00E-03 | <1.20 | n/a | n/a | n/a | n/a | 1.20 | n/a | U |
| S09T001806 | | | 7439-95-4 | Magnesium | ug/mL | 98.4 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7439-98-7 | Molybdenum | ug/mL | 100 | <0.0200 | 29.5 | n/a | n/a | n/a | n/a | 8.00 | n/a | J |
| S09T001806 | | | 7440-00-8 | Neodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001806 | | | 7440-30-1 | Niobium | ug/mL | 105 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001806 | | | 7723-14-0 | Phosphorus | ug/mL | 101 | <0.0500 | 1.08E+03 | n/a | n/a | n/a | n/a | 20.0 | n/a | |
| S09T001806 | | | 7440-05-3 | Palladium | ug/mL | 98.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |
| S09T001806 | | | 7440-10-0 | Praseodymium | ug/mL | 101 | <0.0100 | <4.00 | n/a | n/a | n/a | n/a | 4.00 | n/a | U |
| S09T001806 | | | 7440-17-7 | Rubidium | ug/mL | 90.0 | <1.00 | <400 | n/a | n/a | n/a | n/a | 400 | n/a | U |
| S09T001806 | | | 7440-18-8 | Ruthenium | ug/mL | 97.1 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001806 | | | 7704-34-9 | Sulfur | ug/mL | 100 | <0.100 | 2.60E+03 | n/a | n/a | n/a | n/a | 40.0 | n/a | |
| S09T001806 | | | 7440-36-0 | Antimony | ug/mL | 99.8 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-19-9 | Samarium | ug/mL | 101 | <0.0200 | <8.00 | n/a | n/a | n/a | n/a | 8.00 | n/a | U |
| S09T001806 | | | 7440-31-5 | Tin | ug/mL | 101 | <0.0300 | <12.0 | n/a | n/a | n/a | n/a | 12.0 | n/a | U |
| S09T001806 | | | 7440-25-7 | Tantalum | ug/mL | 106 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-29-1 | Thorium | ug/mL | 98.6 | <0.0500 | <20.0 | n/a | n/a | n/a | n/a | 20.0 | n/a | U |
| S09T001806 | | | 7440-32-6 | Titanium | ug/mL | 102 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7440-28-0 | Thallium | ug/mL | 99.2 | <0.100 | <40.0 | n/a | n/a | n/a | n/a | 40.0 | n/a | U |

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DSRHardcopyWOLimits 2.7.26a
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## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | CAS # | Analyte | Unit | STD % | Blank | Result | Duplicate | Average | RPD % | Spk Rec % | Det Limit | Cnt Err % | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S09T001806 | | | 7440-62-2 | Vanadium | ug/mL | 101 | <5.00E-03 | <2.00 | n/a | n/a | n/a | n/a | 2.00 | n/a | U |
| S09T001806 | | | 7440-65-5 | Yttrium | ug/mL | 98.3 | <2.00E-03 | <0.800 | n/a | n/a | n/a | n/a | 0.800 | n/a | U |
| S09T001807 | | | 666-14-8 | Glycolate | ug/mL | 102 | <9.37E-03 | 246 | 244 | 245 | 0.783 | 106 | 10.4 | n/a | |
| S09T001807 | | | 71-50-1 | Acetate | ug/mL | 108 | <6.04E-03 | 440 | 430 | 435 | 2.42 | 113 | 6.71 | n/a | |
| S09T001807 | | | 12311-97-6 | Formate | ug/mL | 103 | <4.67E-03 | 816 | 799 | 808 | 2.12 | 105 | 5.19 | n/a | |
| S09T001807 | | | 338-70-5 | Oxalate | ug/mL | 102 | <0.0231 | 1.91E+03 | 1.89E+03 | 1.90E+03 | 1.20 | 98.3 | 25.7 | n/a | |
| S09T001807 | | | 24959-67-9 | Bromide | ug/mL | 93.1 | <0.0580 | <64.4 | <64.4 | n/a | n/a | 92.5 | 64.4 | n/a | U |
| S09T001808 | | | 15510-73-3 | Curium-242 | uCi/mL | n/a | <1.10E-06 | <7.18E-06 | n/a | n/a | n/a | n/a | 7.18E-06 | n/a | U |
| S09T001808 | | | 14234-35-6 | Antimony-125 | uCi/mL | n/a | <6.10E-05 | <0.461 | <0.466 | n/a | n/a | n/a | 0.461 | n/a | U |
| S09T001808 | | | 14683-23-9 | Europium-152 | uCi/mL | n/a | <1.19E-04 | <0.0524 | <0.0511 | n/a | n/a | n/a | 0.0524 | n/a | U |
| S09T001808 | | | 14596-10-2 | Americium-241 | uCi/mL | 58.7 | <2.27E-05 | <0.0971 | <0.0982 | n/a | n/a | n/a | 0.0971 | n/a | U |
| S09T001808 | | | 13966-29-5 | Uranium-234 | ug/mL | n/a | <5.00E-09 | 8.73E-04 | n/a | n/a | n/a | n/a | 2.50E-04 | n/a | J |
| S09T001808 | | | 13982-70-2 | Uranium-236 | ug/mL | n/a | <4.00E-09 | 3.37E-03 | n/a | n/a | n/a | n/a | 2.00E-04 | n/a | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
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T - Tentatively Identified Compound
U - Less Than Detection Limit

Attachment 4

SURROGATE RECOVERIES

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: 20090162A

| | EPA SAMPLE NO. | SMC1 # | SMC2 (DCE) # | SMC3 (TOL) # | OTHER (BFB) # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | CCB | 109 | 103 | 104 | 105 | 0 |
| 02 | LCS | 99 | 99 | 94 | 97 | 0 |
| 03 | S09T001752 | 113 | 117 | 105 | 112 | 0 |
| 04 | S09T001768 | 114 | 115 | 109 | 116 | 0 |
| 05 | S09T001757 | 105 | 102 | 106 | 105 | 0 |
| 06 | S09T001777 | 8* | 104 | 99 | 101 | 1 |
| 07 | S09T001777MS | 5* | 108 | 99 | 105 | 1 |
| 08 | S09T001777MS | 3* | 112 | 104 | 105 | 1 |
| 09 | S09T001789 | 4* | 110 | 106 | 108 | 1 |
| 10 | S09T001801 | 195* | 8262* | 7203* | 5718* | 4 |
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| | | QC LIMITS |
|---|---|---|
| SMC1 | = Dibromofluoromethane | (70-130) |
| SMC2 (DCE) | = 1,2-Dichloroethane-d4 | (70-130) |
| SMC3 (TOL) | = Toluene-d8 | (70-130) |
| OTHER (BFB) | = Bromofluorobenzene | (70-130) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

Sample S09T001801 NOT Reported from this batch due to QC Failure. Rerun performed 03/13/09. MJD 03/19/09

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: 20090162B

| | EPA SAMPLE NO. | SMC1 # | SMC2 (DCE) # | SMC3 (TOL) # | OTHER (BFB) # | TOT OUT |
|---|---|---|---|---|---|---|
| 01 | CCB | 108 | 105 | 104 | 108 | 0 |
| 02 | LCS | 106 | 103 | 101 | 104 | 0 |
| 03 | S09T001801 | 48* | 110 | 109 | 111 | 1 |
| 04 | BLKCHK | 97 | 93 | 90 | 96 | 0 |
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| | | QC LIMITS |
|---|---|---|
| SMC1 | = Dibromofluoromethane | (70-130) |
| SMC2 (DCE) | = 1,2-Dichloroethane-d4 | (70-130) |
| SMC3 (TOL) | = Toluene-d8 | (70-130) |
| OTHER(BFB) | = Bromofluorobenzene | (70-130) |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: AW106EVAP3

| | CHG SAMPLE NO. | S1 (FBP)# | S2 (2FP)# | S3 (NBZ)# | S4 # | S5 (TBP)# | S6 (TPH)# | S7 # | S8 # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | BLANK | 71 | 78 | 88 | 82 | 88 | 89 | | | 0 |
| 02 | LCS | 67 | 82 | 86 | 84 | 88 | 91 | | | 0 |
| 03 | S09T001797MS | 71 | 0* | 86 | 0* | 2* | 79 | | | 3 |
| 04 | S09T001797MS | 68 | 0* | 84 | 0* | 0* | 73 | | | 3 |
| 05 | S09T001797 | 91 | 0* | 87 | 0* | 0* | 93 | | | 3 |
| 06 | S09T001753 | 83 | 82 | 92 | 88 | 88 | 98 | | | 0 |
| 07 | S09T001764 | 88 | 88 | 94 | 92 | 90 | 104 | | | 0 |
| 08 | S09T001769 | 88 | 86 | 90 | 88 | 91 | 104 | | | 0 |
| 09 | S09T001785 | 135 | 0* | 75 | 0* | 2* | 77 | | | 3 |
| 10 | S09T001809 | 119 | 0* | 71 | 0* | 0* | 74 | | | 3 |
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| | | | QC LIMITS |
|---|---|---|---|
| S1 | (FBP) | = 2-Fluorobiphenyl | (50-150) |
| S2 | (2FP) | = 2-Fluorophenol | (50-150) |
| S3 | (NBZ) | = Nitrobenzene-d5 | (50-150) |
| S4 | | = Phenol-d6 | (50-150) |
| S5 | (TBP) | = 2,4,6-Tribromophenol | (50-150) |
| S6 | (TPH) | = Terphenyl-d14 | (50-150) |

# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

page 1 of 1 FORM II SV

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: PCBAW106EVAP3

GC Column(1): RESTEK XTI-5 ID: 0.25 (mm)

| | EPA SAMPLE NO. | S1 %REC # | TCX %REC # | S3 %REC # | S4 %REC # | S5 %REC # | S6 %REC # | TOT OUT |
|---|---|---|---|---|---|---|---|---|
| 01 | BLANK | 87 | 22 | | | | | 0 |
| 02 | LCS | 84 | 24 | | | | | 0 |
| 03 | S09T001775 | 70 | 19* | | | | | 1 |
| 04 | S09T001775MS | 63 | 15* | | | | | 1 |
| 05 | S09T001775MS | 66 | 26 | | | | | 0 |
| 06 | S09T001754 | 91 | 21* | | | | | 1 |
| 07 | S09T001765 | 90 | 33 | | | | | 0 |
| 08 | S09T001786 | 53 | 33 | | | | | 0 |
| 09 | S09T001798 | 67 | 32 | | | | | 0 |
| 10 | S09T001810 | 75 | 21* | | | | | 1 |
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ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (DC (19-145)
S2 (TCX) = Tetrachloro-m-Xylene (21-106)

# Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

Attachment 5

TENTATIVELY IDENTIFIED COMPOUNDS

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB1**
**Segment Portion: Field Blank**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001752 | | | | Methylene Chloride | | | ug/L | 1.59 | BJ |
| S09T001752 | | | BLNK | Methylene Chloride | | | ug/L | 1.83 | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01FB2**
**Segment Portion: Field Blank**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001757 | | | | Methylene Chloride | | | ug/L | 62.6 | BJ |
| S09T001757 | | | BLNK | Methylene Chloride | | | ug/L | 1.83 | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-01TB**
**Segment Portion: Trip Blank**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001768 | | | | Methylene Chloride | | | ug/L | 2.64 | B |
| S09T001768 | | | BLNK | Methylene Chloride | | | ug/L | 1.83 | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02A**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001777 | | | | Tetrahydrofuran | | | ug/L | 90.5 | J |
| S09T001777 | | | | Methylene Chloride | | | ug/L | 61.7 | BJ |
| S09T001777 | | | BLNK | Methylene Chloride | | | ug/L | 1.83 | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

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DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-02B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001785 | | O | | 2,4-Dinitrophenol | | | ug/L | 550 | T |
| S09T001785 | | O | | Methane, dichloronitro | 7119-89-3 | 4.33 | ug/L | 3.04E+03 | JNT |
| S09T001785 | | O | | Butanoic acid | 107-92-6 | 4.85 | ug/L | 1.44E+04 | JNT |
| S09T001785 | | O | | Unknown-1 | | 5.26 | ug/L | 2.65E+03 | JT |
| S09T001785 | | O | | Unknown-2 | | 5.46 | ug/L | 3.02E+03 | JT |
| S09T001785 | | O | | 3-methyl-1-nitrobut-2- | 0-00-0 | 5.65 | ug/L | 2.04E+04 | JNT |
| S09T001785 | | O | | Phosgene oxime | 1794-86-1 | 5.75 | ug/L | 7.51E+03 | JNT |
| S09T001785 | | O | | Butyrolactone | 96-48-0 | 6.23 | ug/L | 1.29E+03 | JNT |
| S09T001785 | | O | | Unknown-3 | | 6.28 | ug/L | 5.49E+03 | JT |
| S09T001785 | | O | | Unknown-4 | | 6.50 | ug/L | 7.76E+03 | JT |
| S09T001785 | | O | | Unknown-5 | | 6.54 | ug/L | 1.73E+04 | JT |
| S09T001785 | | O | | Unknown-6 | | 6.85 | ug/L | 1.37E+03 | JT |
| S09T001785 | | O | | Hexanoic acid | 142-62-1 | 6.88 | ug/L | 1.18E+03 | JNT |
| S09T001785 | | O | | Unknown-7 | | 7.14 | ug/L | 1.55E+03 | JT |
| S09T001785 | | O | | Heptanoic acid | 111-14-8 | 7.96 | ug/L | 1.65E+03 | JNT |
| S09T001785 | | O | | Unknown-8 | | 8.70 | ug/L | 5.20E+03 | JT |
| S09T001785 | | O | | 2-NITROPHENOL-D4 | 0-00-0 | 8.86 | ug/L | 885 | JNT |
| S09T001785 | | O | | Octanoic Acid | 124-07-2 | 9.00 | ug/L | 1.43E+03 | JNT |
| S09T001785 | | O | | Unknown-9 | | 12.05 | ug/L | 3.72E+03 | JT |
| S09T001785 | | O | | Unknown-10 | | 14.24 | ug/L | 1.21E+03 | JT |
| S09T001785 | | O | | Unknown-11 | | 17.24 | ug/L | 1.02E+03 | JT |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**

**Riser: 014**

**Segment Number: 6AW-08-03A**

**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001789 | | | | Tetrahydrofuran | | | ug/L | 76.0 | J |
| S09T001789 | | | | Methylene Chloride | | | ug/L | 68.0 | B |
| S09T001789 | | | BLNK | Methylene Chloride | | | ug/L | 1.83 | |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
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DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090162**
**Riser: 014**
**Segment Number: 6AW-08-03B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001797 | | O | | 2,4-Dinitrophenol | | | ug/L | 521 | T |
| S09T001797 | | O | | Methane, dichloronitro | 7119-89-3 | 4.33 | ug/L | 3.42E+03 | JNT |
| S09T001797 | | O | | Butanoic acid | 107-92-6 | 4.85 | ug/L | 1.53E+04 | JNT |
| S09T001797 | | O | | Unknown-1 | | 5.26 | ug/L | 2.88E+03 | JT |
| S09T001797 | | O | | Unknown-2 | | 5.46 | ug/L | 2.07E+03 | JT |
| S09T001797 | | O | | 3-methyl-1-nitrobut-2- | 0-00-0 | 5.66 | ug/L | 2.41E+04 | JNT |
| S09T001797 | | O | | Phosgene oxime | 1794-86-1 | 5.74 | ug/L | 7.22E+03 | JNT |
| S09T001797 | | O | | Unknown-3 | | 6.07 | ug/L | 1.14E+03 | JT |
| S09T001797 | | O | | Butyrolactone | 96-48-0 | 6.23 | ug/L | 1.50E+03 | JNT |
| S09T001797 | | O | | Unknown-4 | | 6.28 | ug/L | 4.22E+03 | JT |
| S09T001797 | | O | | Unknown-5 | | 6.50 | ug/L | 8.98E+03 | JT |
| S09T001797 | | O | | Unknown-6 | | 6.54 | ug/L | 1.25E+04 | JT |
| S09T001797 | | O | | Unknown-7 | | 6.85 | ug/L | 1.69E+03 | JT |
| S09T001797 | | O | | Unknown-8 | | 7.14 | ug/L | 1.48E+03 | JT |
| S09T001797 | | O | | Heptanoic acid | 111-14-8 | 7.96 | ug/L | 1.72E+03 | JNT |
| S09T001797 | | O | | Unknown-9 | | 8.70 | ug/L | 3.73E+03 | JT |
| S09T001797 | | O | | 2-NITROPHENOL-D4 | 0-00-0 | 8.86 | ug/L | 1.18E+03 | JNT |
| S09T001797 | | O | | Unknown-10 | | 9.00 | ug/L | 1.54E+03 | JT |
| S09T001797 | | O | | Unknown-11 | | 12.05 | ug/L | 2.28E+03 | JT |
| S09T001797 | | O | | Unknown-12 | | 12.14 | ug/L | 675 | JT |
| S09T001797 | | O | | Unknown-13 | | 17.24 | ug/L | 798 | JT |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

12-May-2009 15:4604
DSRTICHardcopy 2.7.26a
DSR.Jar v. 2.7.26a



## AW106 EVAP3
## Opportunistic Analyte Results

**Sample Group: 20090163**
**Riser: 019**
**Segment Number: 6AW-08-04B**
**Segment Portion: Grab Sample (Total)**

| Sample# | R | A# | QC Type | Analyte | CAS No. | Retention Time (Minutes) | Unit | Result | Qual Flags |
|---|---|---|---|---|---|---|---|---|---|
| S09T001801 | | | | Methylene Chloride | | | ug/L | 14.8 | BJ |
| S09T001801 | | | | Tetrahydrofuran | | | ug/L | 72.2 | J |
| S09T001801 | | | BLNK | Methylene Chloride | | | ug/L | 0.682 | J |
| S09T001809 | | O | | 2,4-Dinitrophenol | | | ug/L | 550 | T |
| S09T001809 | | O | | Methane, dichloronitro | 7119-89-3 | 4.33 | ug/L | 3.12E+03 | JNT |
| S09T001809 | | O | | Butanoic acid | 107-92-6 | 4.86 | ug/L | 1.51E+04 | JNT |
| S09T001809 | | O | | Unknown-1 | | 5.26 | ug/L | 3.13E+03 | JT |
| S09T001809 | | O | | Unknown-2 | | 5.46 | ug/L | 2.50E+03 | JT |
| S09T001809 | | O | | 3-methyl-1-nitrobut-2- | 0-00-0 | 5.65 | ug/L | 2.24E+04 | JNT |
| S09T001809 | | O | | Phosgene oxime | 1794-86-1 | 5.77 | ug/L | 6.07E+03 | JNT |
| S09T001809 | | O | | Unknown-3 | | 6.07 | ug/L | 1.26E+03 | JT |
| S09T001809 | | O | | Butyrolactone | 96-48-0 | 6.23 | ug/L | 1.30E+03 | JNT |
| S09T001809 | | O | | Unknown-4 | | 6.28 | ug/L | 5.14E+03 | JT |
| S09T001809 | | O | | Unknown-5 | | 6.50 | ug/L | 8.93E+03 | JT |
| S09T001809 | | O | | Unknown-6 | | 6.54 | ug/L | 1.50E+04 | JT |
| S09T001809 | | O | | Unknown-7 | | 6.85 | ug/L | 1.54E+03 | JT |
| S09T001809 | | O | | Unknown-8 | | 7.14 | ug/L | 1.62E+03 | JT |
| S09T001809 | | O | | Heptanoic acid | 111-14-8 | 7.97 | ug/L | 1.83E+03 | JNT |
| S09T001809 | | O | | Unknown-9 | | 8.71 | ug/L | 5.66E+03 | JT |
| S09T001809 | | O | | 2-NITROPHENOL-D4 | 0-00-0 | 8.86 | ug/L | 974 | JNT |
| S09T001809 | | O | | Octanoic Acid | 124-07-2 | 9.01 | ug/L | 1.45E+03 | JNT |
| S09T001809 | | O | | Unknown-10 | | 12.06 | ug/L | 3.56E+03 | JT |
| S09T001809 | | O | | Unknown-11 | | 14.24 | ug/L | 1.19E+03 | JT |
| S09T001809 | | O | | Unknown-12 | | 17.24 | ug/L | 1.56E+03 | JT |

NA = Not Analyzed, ND = Not Detected

B - Found in Blank
J - Estimated
N - Named TIC
T - Tentatively Identified Compound
U - Less Than Detection Limit

Attachment 6

CORRESPONDENCE

| CHARACTERIZATION DATA DEFICIENCY FORM (DDF) |
|---|
| **Name of Submitter:** Juergen Rasmussen |
| **DDF Number:** <to be entered by PNNL TWINS Technician> |
| **Date of DDF:** 9-14-09 |
| **Title of DDF:** AW-106 March 2007 sample data corrections |
| **Description of Problem:**<br>A number or discrepancies between X and the data uploaded to TWINS need to be corrected. |
| **Data and Information to be Corrected:**<br>1) U qualifier is missing from duplicate results for Ni and Si (no "< symbol in report), in sample S09T001773.<br>2) U qualifier should be applied to TOC blank result for S09T001783, since it is a difference between a nondetected total carbon and a nondetected total inorganic carbon result.<br>3) In the data summary report, CAS numbers for TC, TOC, TIC, DSC-02, DSC-01, VOL % SETS, U-238, SR-89/90, PU-238/240, ORGVOL, MASS, PH, CM-243/244, RURH-106, and other radchem analytes are missing and are replaced with analytical method identifiers. Replace with CAS#'s or leave blank if not available.<br>4) Report should not have a "<" symbol for gross alpha duplicate result for S09T001796, since result is more than twice the detection limit, and is greater than the primary result which does not have a "<" symbol.<br>5) U-233 duplicate result should have J qualifier for S09T001796.<br>6) J qualifier is missing from gross alpha duplicate result for S09T001796.<br>7) J qualifier is missing from Fe, Ni, Mo, and K duplicate results for S09T001773.<br>8) J qualifier is missing from Hg duplicate result for S09T001794. The Hg result is less than the corresponding primary Hg result, which is J-flagged.<br>9) TCD has a 10.05 unitless Standard Recovery for pH for S09T001772. Standard recovery field is blank in the data summary report.<br>10) "B" qualifier should be applied to $^{237}$Np radchem result for S09T001796 in analytical report and TCD. Blank is over 10% of result. |
| **Assignment for Making Corrections:**<br><br>**_X_ lab (222-S items 1, 2, 3, 4, and 10)**<br>**_X_ PNNL TWINS Project** |
| **Priority of Item:** <high or low> |
| **Target Due Date:** |
| **Distribution:**<br>Submitter<br>TWINS Lead<br>PNNL TWINS Technician<br>Laboratory Project Manager and/or Project Coordinator as needed<br>Others as needed |

| | |
|---|---|
| **From:** | Bushaw, Ruth A |
| **To:** | Reynolds, Jacob G |
| **Cc:** | Menjivar, Carolina S; Hansen, Daniel R |
| **Subject:** | FW: AW106 EVAP 3- Data Deficiency Form (DDF) - Corrected |
| **Date:** | Monday, August 22, 2011 3:17:05 PM |
| **Attachments:** | 6AW CHARACTERIZATION DATA DEFICIENCY FORM.doc<br>image003.png |

Jake,

Carolina Menjivar is working to get out the reissue of the AW106 EVAP 3 report from 2007 based on the attached DDF from Juergen. I'm forwarding this to you, in Juergen's absence, to make you aware that many of our responses to the DDF are that we (ATL) do not apply "J" flags to duplicate results. ATL has never applied flags to duplicate results.

The OmniLIMS administrator indicated that a "U" flag is applied to the duplicate results, but will check to see if "J" flags will also get applied when the TCD upload file is generated.

I looked at the TWINS database for about 6 or 7 tanks. The only duplicate results from 222S with flags other than "U" were pH measurements that had "J" to indicate results >13.5. As far as I know, that flag is applied automatically. In the future, pH results >13 will be flagged with an "E".

At this point, we were not planning to start manually applying flags to duplicate results, so the reissue will still not contain "J" flags on the duplicate results indicated in the DDF.

I hope this will be acceptable.

Thanks,

Ruth A. Bushaw
Project Manager
Advanced Technologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy 222-S Laboratory
373-4314

---

**From:** Menjivar, Carolina S
**Sent:** Thursday, August 18, 2011 4:25 PM
**To:** Rasmussen, Juergen H; Harrington, Stephanie J
**Cc:** Bushaw, Ruth A
**Subject:** FW: AW106 EVAP 3- Data Deficiency Form (DDF) - Corrected

Please see corrections for e-mail previously sent.

Thanks,

*Carolina S. Menjivar*
Project Manager
Advanced Tecnologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy

2704S/31B/200W
509-372-2525

---

**From:** Menjivar, Carolina S
**Sent:** Thursday, August 18, 2011 3:27 PM
**To:** Rasmussen, Juergen H
**Cc:** Harrington, Stephanie J; Bushaw, Ruth A
**Subject:** AW106 EVAP 3- Data Deficiency Form (DDF)

Juergen,

I have been assigned the task to review each of the items contained in the data deficiency form for project AW106 EVAP 3 (see attached file), and then proceed with the next step which is the reissue of the analytical report. But before I continue with this process I would like to give you an update. The following is a summary of the review performed, please feel free to call me or to e-mail me if you have any questions.

1- U qualifier is missing from duplicate results for Ni and Si (no "<symbol in report), in sample S09T001773.

**ANSWER: In the raw data, the duplicate results for nickel and silicon were above the detection limits in sample S09T001773. Therefore, there is no need for "<" symbol in report.**

**In addition, ATL does not apply U flags to duplicate results. See below:**

**Sample results for nickel:**

**S09T001773: 10.90031µg/mL, reported in OmniLIMS as 1.0900E+01 µg/mL**

**S09T001773 DUP: 8.32552µg/mL , reported in OmniLIMS as 8.3255E+00µg/mL**

**Detection limit for nickel is 8µg/mL .**

**Sample results for silicon:**

**S09T001773: 11.06417µg/mL, reported in OmniLIMS as < 1.2000E+01 µg/mL**

**S09T001173 DUP: 12.04904µg/mL, reported in OmniLIMS as 1.2049E+01 µg/mL**

**Detection limit for silicon is 12µg/mL**

2- U Qualifier should be applied to TOC blank for S09T001783, since it is a difference between a nondetected total carbon and a non detected total inorganic carbon result.

**ANSWER: ATL does not apply U flags to blank results. U Flags are applied to sample results to indicate that the analyte concentration in the sample is less than detection limit. In addition, Total organic carbon (TOC) is not calculated by difference, it is a direct measurement. The analysis is performed by introducing a small volume (~ 200 µl) of sample into a combustion furnace as described in Procedure ATL- LA-344-105 Rev. K-0.**

3- In the data summary report, CAS numbers for TC, TOC, TIC, DSC-02, DSC-01, VOL % SETS, U-238, SR-89/90, PU-238/240, ORGVOL, MASS, PH, CM-243/244, RURH-106, and other radchem analytes are missing and are replaced with analytical method identifiers. Replace with CAS#'s or leave blank if not available.

**ANSWER: A request was sent to Harold Baker for him to evaluate the possibility of fixing this issue in OmniLims. A new data summary report will be provided to customer with the reissue of the report.**

4- Report should not have a "<" symbol for gross alpha duplicate result for S09T001796, since result is more than twice the detection limit, and is greater than the primary result which does not have a "<" symbol.

**ANSWER: Both of the results are near the detection limits; however, the total counts for the sample are statistically above the critical level $L_c$ and therefore considered positive result. The duplicate counts are lower and the result is below $L_c$. Therefore, the detection limit is calculated using $R_{(max)}$, which is greater than $L_c$ leading to a detection limit that is higher than the detection limit for the sample. In this specific case, the gross alpha result for the sample S09T001796 is positive, in other words, greater than detection limit and the gross alpha result for the duplicate is less than the detection limit of the duplicate. See Procedure ATL LQ-508-102 Rev. D-0. No change is needed in the data summary report.**

**Note: $L_c$ is the critical level, which is the quantity or concentration which must be exceeded before a sample can be said to contain any activity above background level. $R_{max}$ is a less than value which is the sum of the net sample count rate (cpm) plus the one sided 95% confidence interval constructed about the net sample count rate.**

5- U-233 duplicate result should have J qualifier for S09T001796.
**ANSWER: ATL does not apply flags to duplicate sample results only to primary results.**

6- J qualifier is missing from gross alpha duplicate result for S09T001796.

**ANSWER: ATL does not apply flags to duplicate sample results only to primary results.**

7- J qualifier is missing from Fe, Ni, Mo, and K duplicate results for S09T001773.
**ANSWER: ATL does not apply flags to duplicate sample results only to primary results.**

8- J qualifier is missing from Hg duplicate result for S09T001794. The Hg result is less than the corresponding primary Hg result, which is J-flagged.
**ANSWER: ATL does not apply flags to duplicate sample results only to primary results.**

9- TCD has a 10.05 unitless Standard Recovery for pH for S09T001772. Standard recovery field is blank in the data summary report.
**ANSWER: There has never been a standard recovery for pH. See Procedure ATL LA-212-106 Rev. G-0. Data Summary Report is correct. The error could be happening during the TCD upload.**

**10-** "B" qualifier should be applied to $^{237}$Np radchem result for S09T001796 in analytical report and TCD. Blank is over 10% of result.

**ANSWER: Yes, "B" qualifier will be applied to $^{237}$Np radchem results. A new data summary report will be provided to customer with the reissue of the report.**

As soon as the items that need to be resolved are complete, a reissue of the analytical report will be provided.

Thanks,

*Carolina S. Menjivar*
Project Manager
Advanced Tecnologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy
2704S/31B/200W
509-372-2525

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| | |
|---|---|
| **From:** | Menjivar, Carolina S |
| **To:** | Rasmussen, Juergen H |
| **Cc:** | Harrington, Stephanie J; Bushaw, Ruth A; Reynolds, Jacob G |
| **Subject:** | FW: Data Summary Report for AW106 EVAP 3 |
| **Date:** | Tuesday, August 23, 2011 7:30:00 AM |
| **Attachments:** | 6AW CHARACTERIZATION DATA DEFICIENCY FORM.doc<br>image003.png |

Regarding item # 3 on the Data Deficiency Form (DDF) for AW106 EVAP103 ( see attached file), please see Harold Baker's response (see e-mail below).

Thanks,

*Carolina S. Menjivar*
Project Manager
Advanced Tecnologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy
2704S/31B/200W
509-372-2525

**From:** Baker, Harold L
**Sent:** Monday, August 22, 2011 9:27 AM
**To:** Menjivar, Carolina S
**Cc:** Prilucik, John R; Kerns, Robert E
**Subject:** RE: Data Summary Report for AW106 EVAP 3

These are not the method names they are the suto cas numbers that we have put into OmniLIMS. These cas numbers are based on that was needed to put the data into TCD and for the most part were given to us by the Tank Coordinators or we have translated ours to what they wanted. The blank ones are just ones that we haven't established a suto cas number for. I can add them if I know what they would like to see there.

Thanks

*Harold L. Baker*

**Phone:** 509-373-6979
**Cell:** 509-366-9172
**E-mail:** Harold_L_Baker@rl.gov

Washington River Protection Solutions,

contractor to the United States Department of Energy

**From:** Menjivar, Carolina S
**Sent:** Monday, August 22, 2011 9:19 AM
**To:** Baker, Harold L
**Subject:** RE: Data Summary Report for AW106 EVAP 3

Harold,
The attached file contains a copy of the data summary report for AW106 EVAP 3 project. The tank coordinator is requesting to correct the CAS #s where the method is listed instead of the CAS #s, or if the CAS# is not available to leave the space blank.

Thanks,

*Carolina S. Menjivar*
Project Manager
Advanced Technologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy
2704S/31B/200W
509-372-2525

**From:** Baker, Harold L
**Sent:** Monday, August 22, 2011 9:07 AM
**To:** Menjivar, Carolina S
**Subject:** RE: Data Summary Report for AW106 EVAP 3

See below

Thanks

*Harold L. Baker*

**Phone:** 509-373-6979
**Cell:** 509-366-9172
**E-mail:** Harold_L_Baker@rl.gov

Washington River Protection Solutions,
contractor to the United States Department of Energy

**From:** Menjivar, Carolina S
**Sent:** Thursday, August 18, 2011 2:59 PM
**To:** Baker, Harold L
**Subject:** Data Summary Report for AW106 EVAP 3

Harold,

I am in the process of preparing a reissue of the final analytical report for AW106 EVAP3. But before I can proceed, I need your help. Please see the attached files containing a Data Deficiency Form with a list of discrepancies from the Tank Coordinator. I have reviewed each of the issues listed on this form and have the following items to discuss with you:

- Item # 3 on the Data Deficiency Form needs to be fixed in OmniLIMS so that all the CAS numbers are listed or left blank if the CAS number for certain analyte is not available. Will you be able to fix this error in OmniLIMS? I run a new data summary report on 08/11/2011 and we still have several missing CAS numbers or listing the method instead of the CAS number. Send me a copy of the DSR report. I do not know why we are not getting the CAS numbers, I need to see what specifically you are talking about.
- Items # 1, 5,6,7, and 8 is a request for duplicate results to have qualifier flags. Do you know if the TCD upload takes care of this? We do not apply qualifier flags to duplicate results, so the DSR is not supposed to display any flags for dups. TCD only brings in what is in the database if they want DUPs flagged you will need to flag them.
- Item # 2 is a request for the blank results to be flagged also. Do you know if the TCD upload takes care of this? Again, we do not apply flags to blank results, so the DSR is not supposed to display any flags for blank results. TCD only brings in what is in the database if they want blanks flagged you will need to flag them.

NOTE: Project AW106 EVAP 3 includes sample groups 20090162 and 20090163.

Please advise.

Thanks,

*Carolina S. Menjivar*
Project Manager
Advanced Technologies and Laboratories International, Inc.
Contractor to the Office of River Protection
U.S. Department of Energy
2704S/31B/200W
509-372-2525

# CHARACTERIZATION CHANGE NOTICE

**Document:** RPP-PLAN-39120 R0 **Change Number:** 09-CCN-04 **DRF to TSAP Required?** No

**Requestor:** J. H. Rasmussen **Date:** 03-12-2009

**Samples Impacted:** 6AW-08-04A and 6AW-08-04B.

**Proposed Change:** Obtain VOA subsamples from sample 6AW-08-04B instead of 6AW-08-04A in section 4.1. Sample 6AW-08-04A was lost when the bottle broke during hot cell handling. Describe 6AW-08-04B VOA subsampling in analytical report narrative, and note how long 6AW-08-04B was open prior to VOA subsampling, and estimate how much headspace was in the bottle at the time.

**Date Change Effective:** 3-12-2009.

**Schedule Impact:** None.

**Authorization:**

**Tank Coordinator:** J. H. Rasmussen **Date:** 3-12-09

**Sampling:** N/A does not affect sampling **Date:**

**222-S Sample Management Office:** JR Prikrick For GSK **Date:** 3/12/09

**ATL Project Manager:** GP Peterson **Date:** 3/12/09

N/A does not affect corrosion mitigation analytical

**Other:** Corrosion Mitigation Controls / W. J. Powell **Date:** 3-12-09

**Other:** Evaporator /J. M. Conner **Date:** 3/12/09

**Other:** Environmental/ T. L. Faust **Date:** 3-12-09

cc: D. M. Nytka; R. A. Bushaw

## CHARACTERIZATION CHANGE NOTICE

**Document:** RPP-PLAN-39120, R. 0 **Change Number:** 09-CCN-07 **DRF to TSAP Required?** no

**Requestor:** J. H. Rasmussen **Date:** 5-11-09

**Samples Impacted:** All surface, subsurface, field blank, and trip blank samples identified for semivolatile organic analysis and $^{237}$Np analysis.

**Proposed Change:** 1) Add 2-butoxyethanol to semivolatile organic analytes by GC/MS. It is anticipated that this analyte will be added to future revisions of the DQO. The following QC requirements apply:

| LCS % Recovery | Spike % Recovery | Duplicate RPD |
|---|---|---|
| 70 - 130% | 30 – 110% | ≤20% |

2) Add $^{237}$Np to ICP/MS analytes. Apply same QC limits as those for $^{99}$Tc by ICP/MS, except perform a matrix duplicate instead of a matrix spike duplicate. The laboratory has proposed replacing radiochemical $^{237}$Np method with ICP/MS. Analysis by both methods provides a basis for comparison to evaluate the proposed change.

**Date Change Effective:** 5/11/09.

**Schedule Impact:** None.

**Authorization:**

**Tank Coordinator:** [signature] **Date:** 5/11/09

**Sampling:** N/A does not affect sampling [signature] **Date:** 5/11/09

**222-S Sample Management Office:** [signature] for **Date:** 5/11/09

**ATL Project Manager:** [signature] **Date:** 5/11/09

N/A does not affect Corrosion Mitigation Controls

**Other:** **Corrosion Mitigation Controls / W. J. Powell** [signature] **Date:** 5/11/09

J.M. Conner per telecon by Juergen Rasmussen [signature]

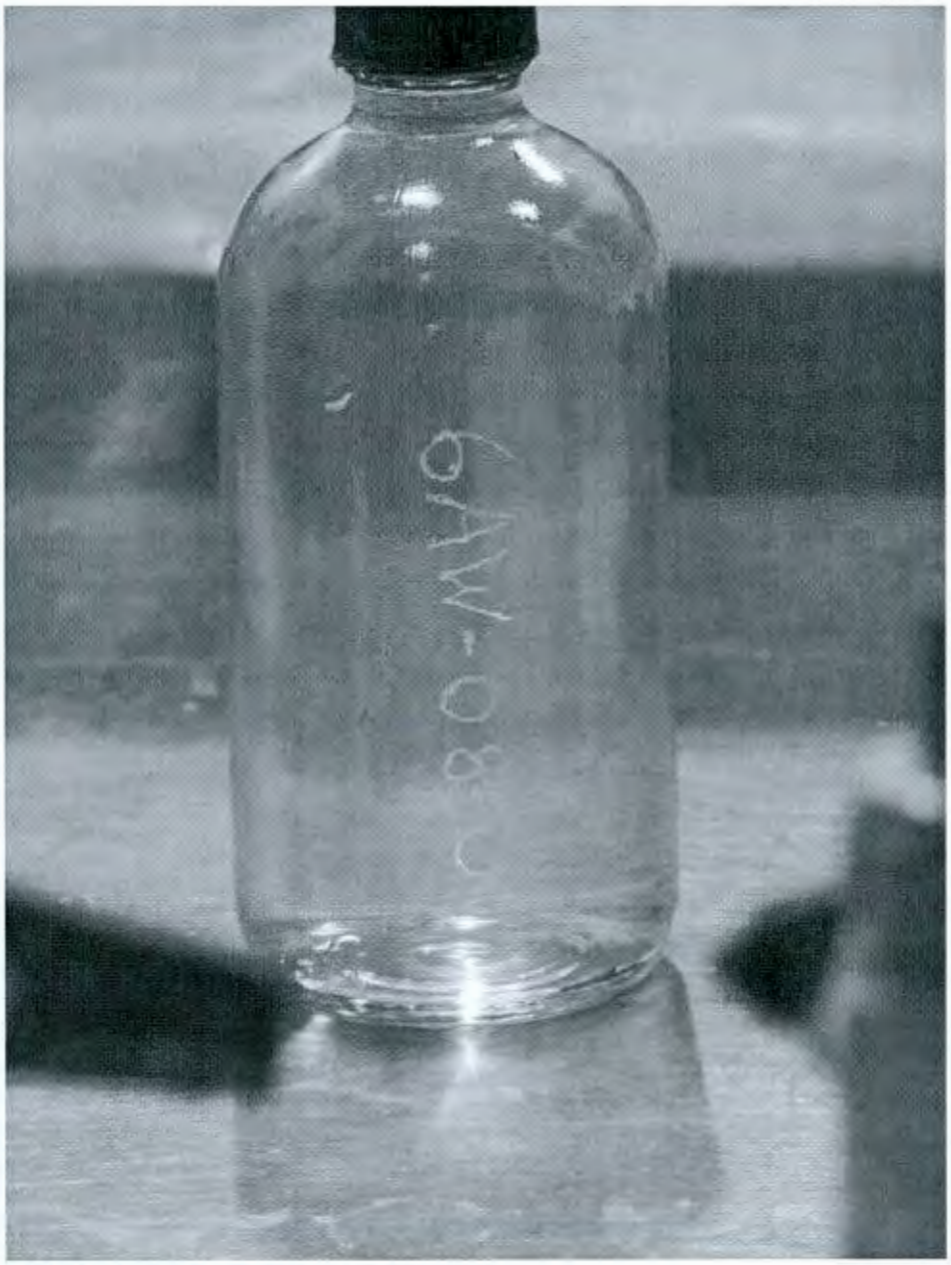
**Other:** **Evaporator /J. M. Conner** **Date:** 5/11/09

**Other:** _____ **Date:** _____

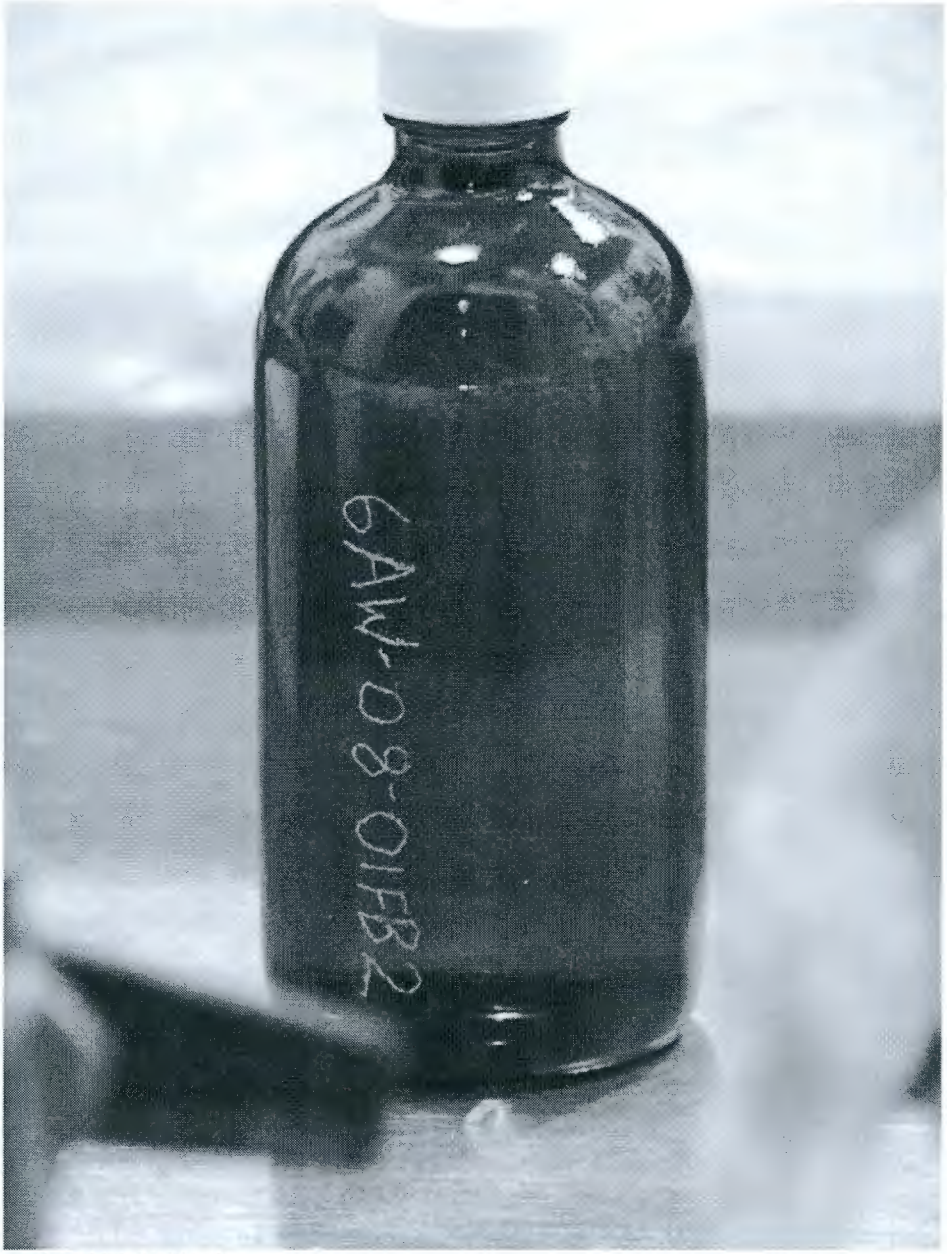
cc: R. A. Bushaw

Attachment 7

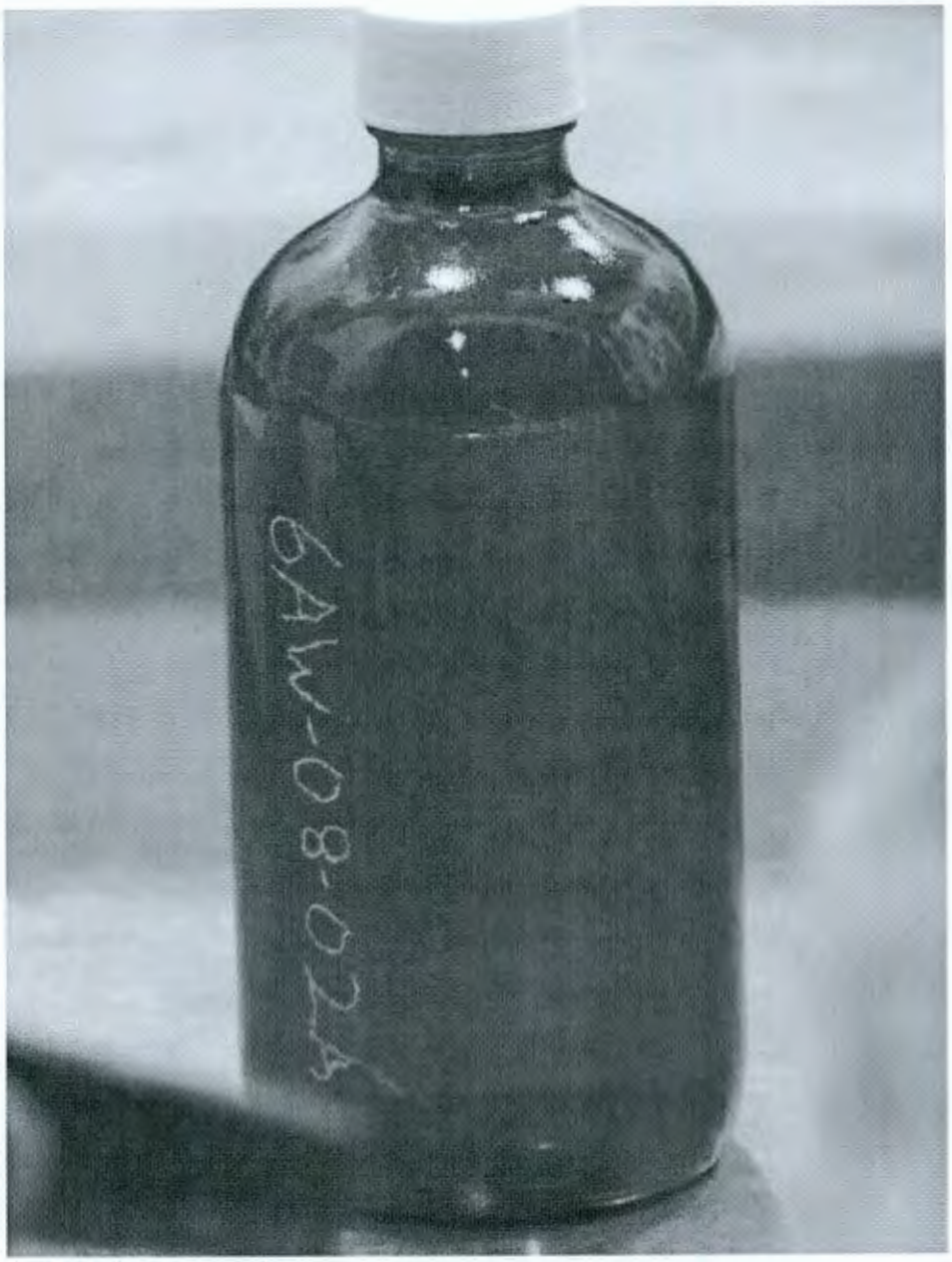
SAMPLE PHOTOGRAPHS



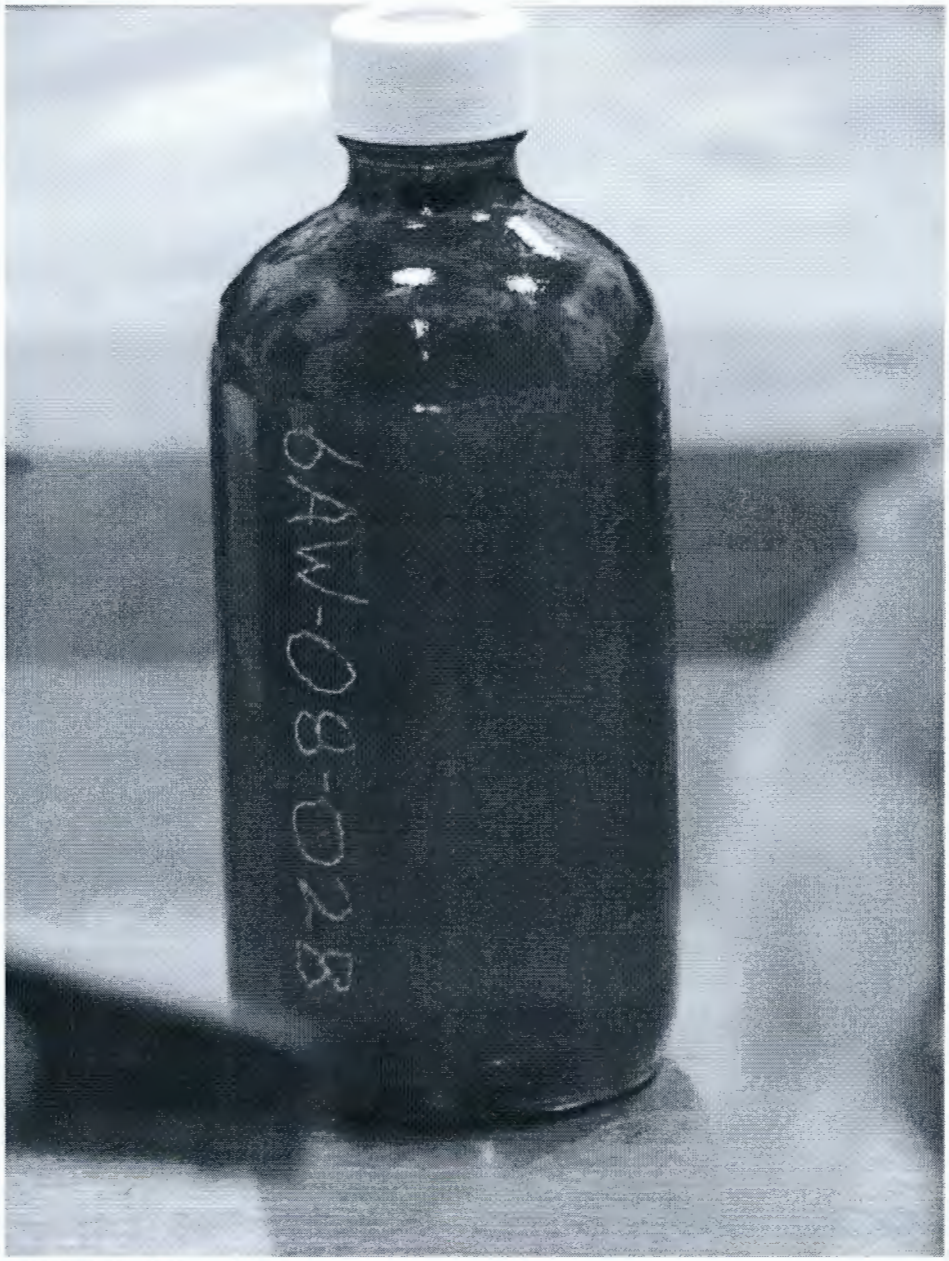

**AW-106 Grab Sample 1.**



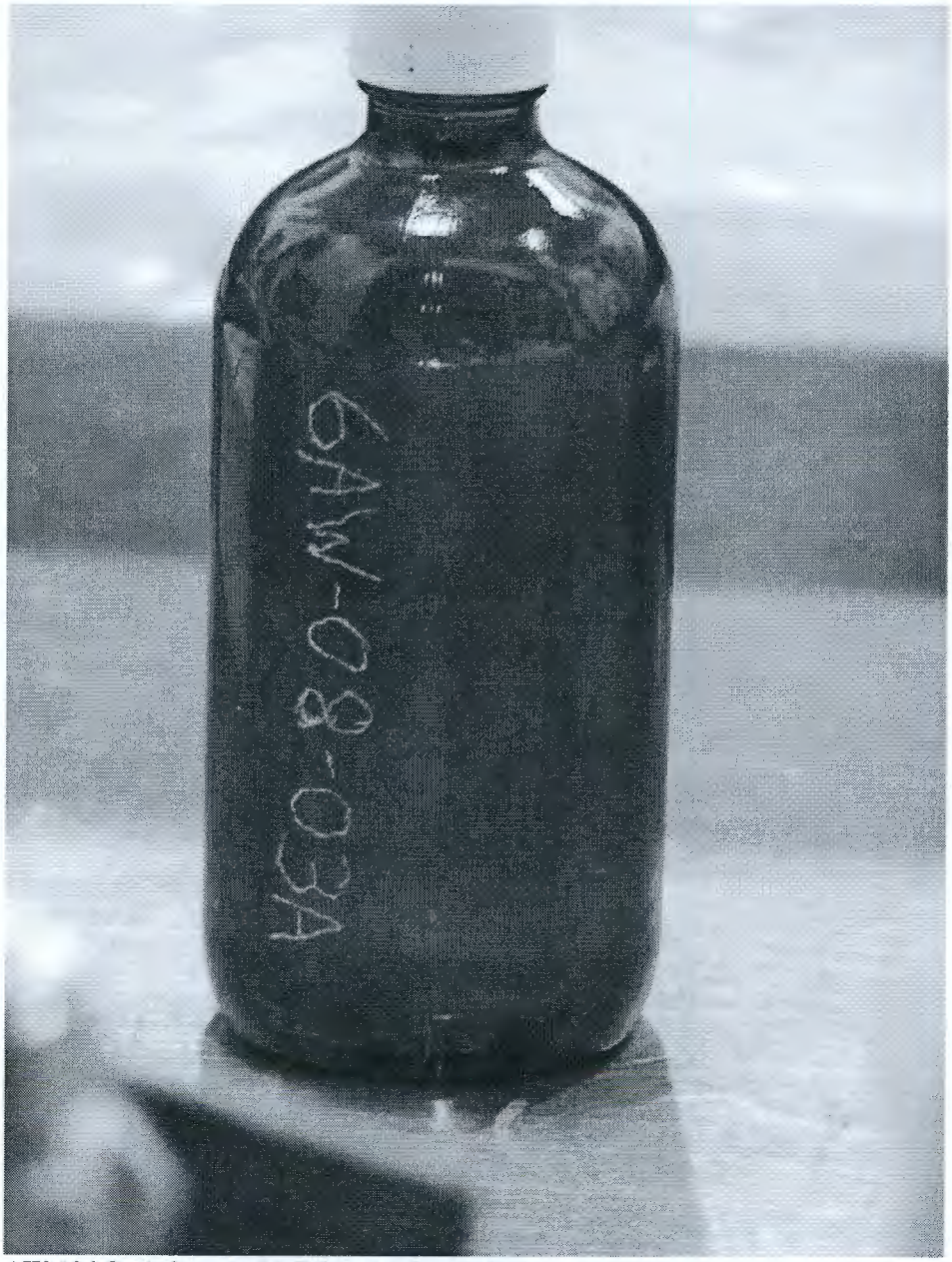

**AW-106 Field Blank 2.**



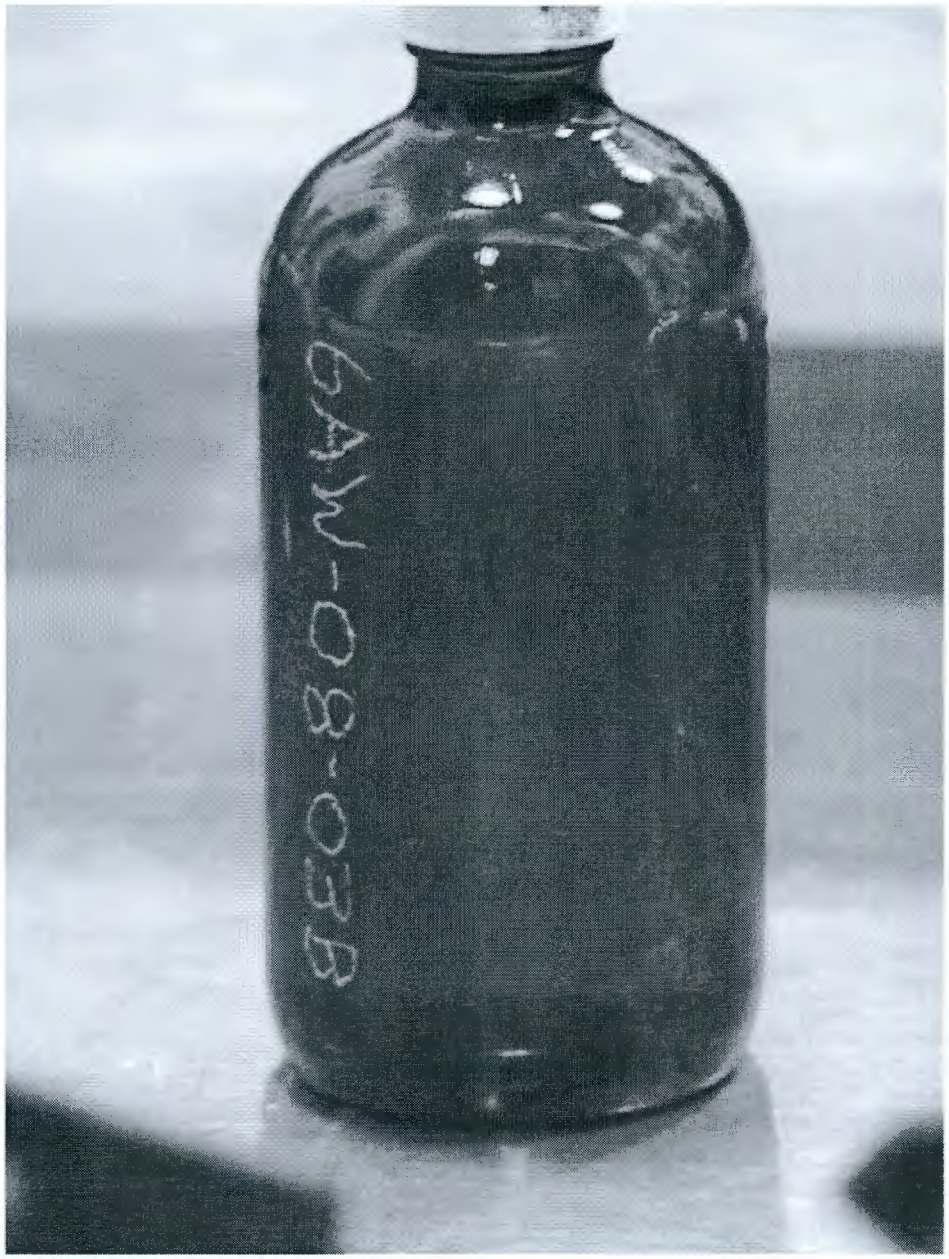

**AW-106 Grab Sample 2A.**



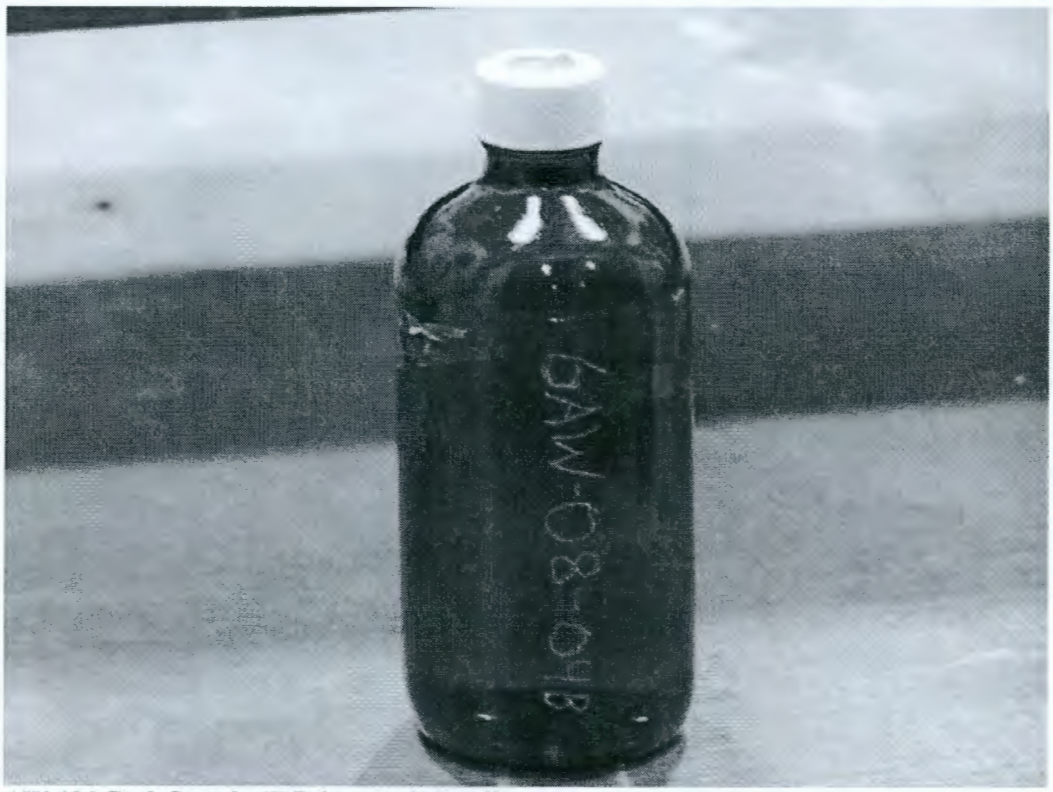

**AW-106 Grab Sample 2B.**



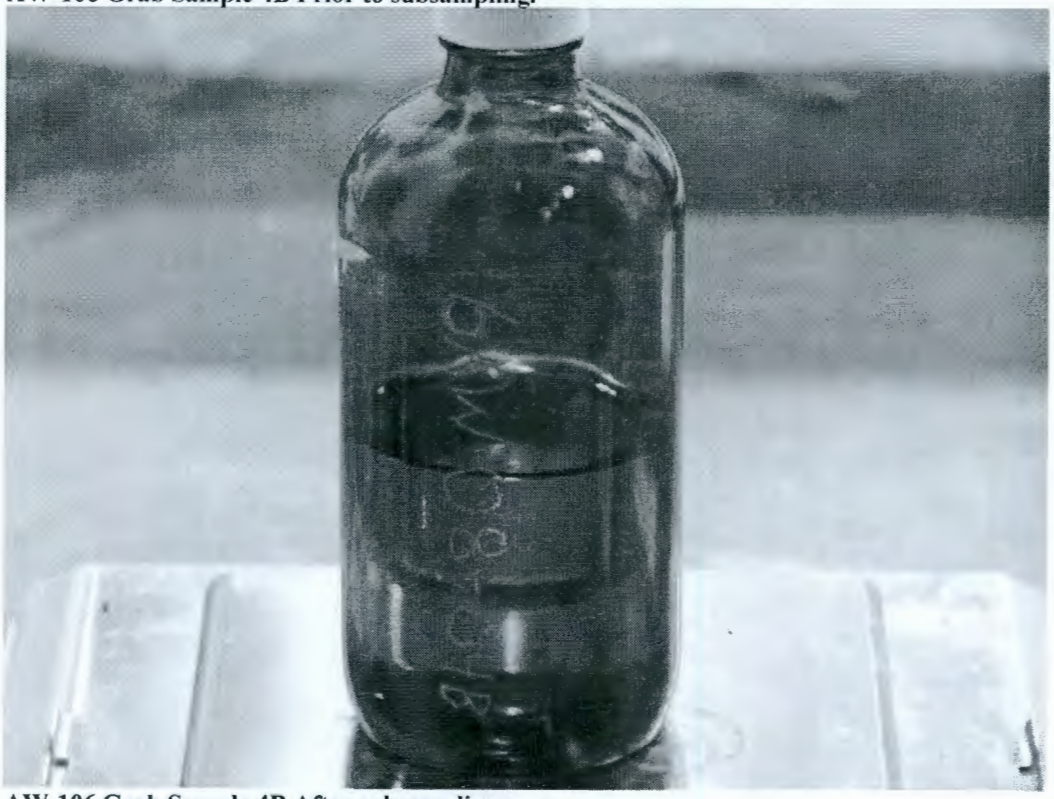

**AW-106 Grab Sample 3A Prior to subsampling.**




**AW-106 Grab Sample 3B Prior to subsampling.**




AW-106 Grab Sample 4B Prior to subsampling.



AW-106 Grab Sample 4B After subsampling.

Attachment 8

RECEIPT PAPERWORK

## CHAIN-OF-CUSTODY RECORD FOR WTS

(1) Sample Number: 6AW-08-01TB

(2) Supervisor/Sampler: R.J. Krazinski

(3) Tank: AW-106

(4) Riser: 14 *

(5) Cask/Pig Serial No.: 460-35

(6) Shipment Description:

A. Work Package Number: WFO-Wb-08-1375

B. Cask/Pig Seal Number: 10785

C. Date Sample Collected: 3-4-09

D. Time Sample Collected: 0953hrs

(7) Sampling Data

| | Y | N |
|---|---|---|
| - Lithium Bromide | ☐ | ☐ |
| Amount | | |
| Concentration | | |
| - X-Ray | ☐ | ☐ |
| - Partial Sample | ☐ | ☐ |

NA 1-19-09

Retrieved Partial Sample Stroke Length

(8) Field Comments:

*TRIP BLANK, NOT LOWERED INTO TANK 1-19-09

(9) Seal Intact Upon Release? ☒ Yes ☐ No

(10) Seal Intact Upon Receipt? ☒ Yes ☐ No

(11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No

(12) Laboratory Comments:

509 T00 1767

OMNI ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | V.P. Matthews V.P. Matthews | 3/5/09 14:05 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| V.P. Matthews V.P. Matthews | Truebloc Truebloc | 3/5/09 1445 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

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BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-01FB1 | (2) Supervisor/Sampler: Robert J Franzini | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-5 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | Y N | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |
| A. Work Package Number: WFO-WO-08-1375 | - Lithium Bromide | ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10778 | Amount | | |
| C. Date Sample Collected: 3-4-09 | Concentration | | |
| D. Time Sample Collected: 1022hrs | - X-Ray | N/A ☐ ☐ | |
| | - Partial Sample | 1-19-09 ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length | | |
| (8) Field Comments: FIELD BLANK 1-19-09 | | | |

So 9700 1751
omni ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | V.P. Matthews V.P. Matthews | 3/5/09 12:55 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| V.P. Matthews V.P. Matthews | T.H. Collock | 3/5/09 1335 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

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BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-01FB2 | (2) Supervisor/Sampler: R. Porzenik | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-23 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | Y N | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |
| A. Work Package Number: WFO-WO-08-1375 | - Lithium Bromide | ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10779 | Amount | | |
| C. Date Sample Collected: 3-4-09 | Concentration | | S097001756 |
| D. Time Sample Collected: 1027hrs | - X-Ray NA | ☐ ☐ | |
| | - Partial Sample 1-19-09 | ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length | | |
| (8) Field Comments: FIELD BLANK 1-19-09 | | | |

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | V.P. Matthews V.P. Matthews | 3/5/09 12:55 | NA |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| V.P. Matthews V.P. Matthews | T.M. Gilbert T.M. Gilbert | 3/5/09 1335 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | |
|---|---|---|
| (1) Sample Number: 6AW-08-01 | (2) Supervisor/Sampler: R.J. PRAZNIK | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 / (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-7 | (10) Seal Intact Upon Receipt? ☐ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data (Y / N) | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☐ Yes ☐ No |
| A. Work Package Number: NFOWD-08-1375 | - Lithium Bromide ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10780 | Amount: | |
| C. Date Sample Collected: 3.4.09 | Concentration: NA | |
| D. Time Sample Collected: 1036hrs | - X-Ray ☐ ☐ B 1.19.09 | |
| | - Partial Sample ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length: | |

(8) Field Comments:
SURFACE SAMPLE. B 1.19.09
• MT. DEW W/BRN TINT. B 3-4-09

(12) Laboratory Comments:
S09T001770 ✓
OMNI ✓
MARS ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Walb | BCpbell BC-pbell | 3/4/09 13:25 | NA |
| **(17) Relinquished By (Sign and PRINT)** | **(18) Received By (Sign and PRINT)** | **(19) Date/Time** | **(20) Receiver Comments** |
| B Campbell | TM Gilbert | 3-4-09 1430 | |
| **(21) Relinquished By (Sign and PRINT)** | **(22) Received By (Sign and PRINT)** | **(23) Date/Time** | **(24) Receiver Comments** |
| | | | |
| **(25) Relinquished By (Sign and PRINT)** | **(26) Received By (Sign and PRINT)** | **(27) Date/Time** | **(28) Receiver Comments** |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

# CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-02A | (2) Supervisor/Sampler: RJ Prazni | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-36 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |

(6) Shipment Description:

A. Work Package Number: WFO-WO-08-1375

B. Cask/Pig Seal Number: 10781

C. Date Sample Collected: 3-4-09

D. Time Sample Collected: 1045hr

(7) Sampling Data

| | Y | N |
|---|---|---|
| - Lithium Bromide | ☐ | ☒ |
| Amount | | |
| Concentration | | |
| - X-Ray | ☐ | ☐ |
| - Partial Sample | ☐ | ☐ |
| - Retrieved Partial Sample Stroke Length | | |

NA

3-19-09

(8) Field Comments:

AMBER Bottle 3-4-09

(12) Laboratory Comments:

S09T001776
OMNI ✓
MARS ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | B Campbell B Campbell | 3/5/09 9:20 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| B Campbell B Campbell | R A Steele | 3.5.09 1005 | N/A |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-02B | (2) Supervisor/Sampler: RJ. Pazniokas | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-34 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | Y N | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |
| A. Work Package Number: WFO-WO-08-1375 EJW 3/5/09 | - Lithium Bromide | ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: ~~10782~~ 13659 | Amount | | |
| C. Date Sample Collected: 3-4-09 | Concentration | | |
| D. Time Sample Collected: 1050hrs | - X-Ray N/A | ☐ ☐ | |
| | - Partial Sample 1-19-09 | ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length | | |

(8) Field Comments:
Amber Bottle. 3-4-09

(12) Laboratory Comments:
SO 9T00 1778 ✓
omni
MARS ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo | B Campbell | 3/5/09 09:15 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| B Campbell | [illegible] | 3/5/09 10 05 | NA |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-03A | (2) Supervisor/Sampler: R. Krazwil | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-28 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |

(6) Shipment Description:

A. Work Package Number: WFO-WO-08-1375

B. Cask/Pig Seal Number: 10783

C. Date Sample Collected: 3-4-09

D. Time Sample Collected: 1055hrs

(7) Sampling Data

| | Y | N |
|---|---|---|
| - Lithium Bromide | ☐ | ☐ |
| Amount | | |
| Concentration | | |
| - X-Ray | ☐ | ☐ |
| - Partial Sample | ☐ | ☐ |
| - Retrieved Partial Sample Stroke Length | | |

N/A

1-19-09

(8) Field Comments:

Amber bottles. 3-4-09

(12) Laboratory Comments:

S09T001788
omni ✓
MARS

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | V.P. Matthews V.P. Matthews | 3/5/09 14:07 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| V.P. Matthews V.P. Matthews | T.W. Collock T.W. Collock | 3/5/09 1445 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-03B | (2) Supervisor/Sampler: RJPenzenik | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 14 | (5) Cask/Pig Serial No.: 460-9 | (10) Seal Intact Upon Receipt? ☐ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | Y N | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☐ Yes ☐ No |
| A. Work Package Number: WFD-WO-08-1375 | - Lithium Bromide | ☐ ☒ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10784 | Amount | | |
| C. Date Sample Collected: 3-4-09 | Concentration | N/A | |
| D. Time Sample Collected: 1100hrs | - X-Ray | ☐ ☐ 3-14-09 | |
| | - Partial Sample | ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length | | |

(8) Field Comments:
Amber bottles. 3-4-09

509T001790
OMNI ✓
MARS ✓

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo | B Campbell | 3/4/09 13:45 | NA |
| **(17) Relinquished By (Sign and PRINT)** | **(18) Received By (Sign and PRINT)** | **(19) Date/Time** | **(20) Receiver Comments** |
| B Campbell | TM Collard | 3/4/09 1430 | |
| **(21) Relinquished By (Sign and PRINT)** | **(22) Received By (Sign and PRINT)** | **(23) Date/Time** | **(24) Receiver Comments** |
| | | | |
| **(25) Relinquished By (Sign and PRINT)** | **(26) Received By (Sign and PRINT)** | **(27) Date/Time** | **(28) Receiver Comments** |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | |
|---|---|---|
| (1) Sample Number: 6AW-08-04A | (2) Supervisor/Sampler: RJ. Pazniak | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 19 | (5) Cask/Pig Serial No.: 460-3 |
| | | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data (Y / N) | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |
| A. Work Package Number: WFO-WO-08-1375 | - Lithium Bromide ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10786 | Amount: | S09T001800 |
| C. Date Sample Collected: 3-9-09 | Concentration: N/A | |
| D. Time Sample Collected: 1036hrs | - X-Ray ☐ ☐ | |
| | - Partial Sample 3.19.09 ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length: | |
| (8) Field Comments: | | |

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | Dan Harris Dan Harris | 3/9/09 18:25 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| Dan Harris Dan Harris | Tim Block Tim Block | 3-9-09 1400 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

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BC-6001-326 (01/04)

## CHAIN-OF-CUSTODY RECORD FOR WTS

| | | | |
|---|---|---|---|
| (1) Sample Number: 6AW-08-04B | (2) Supervisor/Sampler: Robert Raznich | | (9) Seal Intact Upon Release? ☒ Yes ☐ No |
| (3) Tank: AW-106 | (4) Riser: 19 | (5) Cask/Pig Serial No: 460-40 | (10) Seal Intact Upon Receipt? ☒ Yes ☐ No |
| (6) Shipment Description: | (7) Sampling Data | Y N | (11) Seal Number AND Cask/Pig SERIAL Number consistent with this record? (Block 5 & 6b) ☒ Yes ☐ No |
| A. Work Package Number: WFO-WO-08-1375 | - Lithium Bromide | ☐ ☐ | (12) Laboratory Comments: |
| B. Cask/Pig Seal Number: 10787 | Amount | | S09T001802 |
| C. Date Sample Collected: 3-9-09 | Concentration | | |
| D. Time Sample Collected: 1041 hrs | - X-Ray: NA | ☐ ☐ | |
| | - Partial Sample: 1-19-09 | ☐ ☐ | |
| | - Retrieved Partial Sample Stroke Length | | |
| (8) Field Comments: | | | |

| (13) Relinquished By (Sign and PRINT) | (14) Received By (Sign and PRINT) | (15) Date/Time | (16) Receiver Comments |
|---|---|---|---|
| Eric Waldo Eric Waldo | Dan Harris Dan Harris | 3/9/09 13:15 | N/A |
| (17) Relinquished By (Sign and PRINT) | (18) Received By (Sign and PRINT) | (19) Date/Time | (20) Receiver Comments |
| Dan Harris Dan Harris | T W Colloch T W Colloch | 3-9-09 1420 | |
| (21) Relinquished By (Sign and PRINT) | (22) Received By (Sign and PRINT) | (23) Date/Time | (24) Receiver Comments |
| | | | |
| (25) Relinquished By (Sign and PRINT) | (26) Received By (Sign and PRINT) | (27) Date/Time | (28) Receiver Comments |
| | | | |

DISTRIBUTION: Original - Laboratory Copy - Sampling Operations

BC-6001-326 (01/04)

## GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number N/A various CACN/COA See TSAP Customer Identification Number N/A various

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
Tank 241-AW-106 grab samples obtained per TSAP RPP-PLAN-39120.

MSDS Available? (●) No ( ) Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?
***By checking "unknown" the customer understands that no knowledge is available following a careful search.***

| | List Federal Waste Code(s): | List Constituent(s): | | | |
|---|---|---|---|---|---|
| P Codes: | | | ( ) Yes | ( ) No | ( ) Unknown |
| U Codes: | | | ( ) Yes | ( ) No | ( ) Unknown |
| K Codes: | | | ( ) Yes | ( ) No | ( ) Unknown |
| F Codes: | F001 - F005 | | ( ) Yes | ( ) No | ( ) Unknown |

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

| | | | | | | |
|---|---|---|---|---|---|---|
| D001: | ☐ FP <100°F | ☐ FP ≥100 <140°F | ☐ DOT Oxidizer | ( ) Yes | ( ) No | ( ) Unknown |
| D002: | ☐ pH ≤2 | ☒ pH ≥12.5 | ☐ Solid Corrosive (WSC2) | (●) Yes | ( ) No | ( ) Unknown |
| D003: | ☒ Cyanide | ☒ Sulfide | ☐ Water Reactive ☐ Other _____ | (●) Yes | ( ) No | ( ) Unknown |
| D004-D043 (Identify applicable waste codes and concentrations): | | | (i.e., peroxide former, explosive, air reactive) | ( ) Yes | ( ) No | ( ) Unknown |

D004 - D011; D018, D019, D022, D028 - D030; D033 - D036; D038 - D041; D043

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):
Not needed per 222-S Environmental Compliance Officer (ECO) since waste will be returned to tank farms via 219-S.

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):
Not needed per 222-S ECO since waste will be returned to tank farms via 219-S.

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| WT01: | ( ) Yes | ( ) No | ( ) Unknown | WP01: | ( ) Yes | ( ) No | ( ) Unknown |
| WT02: | ( ) Yes | ( ) No | ( ) Unknown | WP02: | ( ) Yes | ( ) No | ( ) Unknown |
| W001: | ( ) Yes | ( ) No | ( ) Unknown | WP03: | ( ) Yes | ( ) No | ( ) Unknown |
| | | | | F003:* | ( ) Yes | ( ) No | ( ) Unknown |

(*State mixture rule for ignitability)

List constituents and concentrations:

4. Is this material TSCA regulated for PCBs? (●) Yes ( ) No ( ) Unknown ( ) Analysis Requested

List concentration if applicable: Current contents have not been analyzed for PCB's.

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

☐ PCB Liquid Waste ☐ PCB Bulk Product Waste ☐ PCB Transformer ≥500 ppm ☐ Unknown
☐ PCB Remediation Waste ☐ PCB R&D Waste ☐ PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
☐ PCB Spill Material ☐ PCB Item ☐ Other PCB Waste (list) _____

5. Is this material TRU? ( ) Yes ( ) No (●) Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Juergen H. Rasmussen [signature] Date 2/11/09



A-6002-990 (08/03)

Attachment 9

RAW DATA

# HOT CELL TESTS

# LABCORE Completed Batch Report for Batch# 00013287

**Analyst:** McColloch, Todd **Book#:**

**Instrument:** Sony Camcorder

**Method:** BREAKDOWN SAMPLE, LA-519-151 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:**

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | SAMPLE | S09T001751 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 1 | SAMPLE | S09T001751 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| Sample Sequence 2 | | | | | | | | | | | | | | | | |
| 2 | SAMPLE | S09T001767 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 2 | SAMPLE | S09T001767 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013287

3/10/09

Reviewer Signature M. A. Purcell Date

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013287

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001751 | SAMPLE | | 20090162 | 6AW-08-01FB1 | AW106 EVAP3 |
| 2 | S09T001767 | SAMPLE | | 20090162 | 6AW-08-01TB | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/5/2009 7:34:28PM
IncompleteBatchLong Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013287

**Analyst:** McColloch, Todd **Standard ID / Book#:** N/A
**Instrument:** Sony Camcorder LA-519-151 J-0
**Method:** BREAKDOWN SAMPLE, ~~LO-080-112~~ Rev/Mod ~~K-0~~ 1 AK
**Prep Batch:**
**Batch Comment:**

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001751 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001751 | 0 | | Volume % Settled Solids | LIQUID | N/A | 0 | | % |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001767 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001767 | 0 | | Volume % Settled Solids | LIQUID | N/A | 0 | | % |

## Final Page for Batch# 00013287

Analyst Signature — Date 3/5/09
Data Entry Signature — Date 3/5/09

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Project Coordinator: Klinger

## HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001751

Balance: LE-BAL # 097 Weights: 20.002 Weights: 500.038

Seal Num: 10778 Etch Num: GAW-08-01FB1 Dose Rate: <0.5

Lab Core #

Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø . mL

Gross Wt: N/A g

Tare Wt.: 174 g

Net Wt.: N/A g

Color Liquid: Colorless

Clarity: clear

Color Solids: NONE Trace Solids: Y N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g, 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g, 250mL = 174 g

Photography Complete: N/A

APPEAR01: Received a full 250ml bottle of clear colorless liquid. No solids visible. No organic layer visible..

Analyst: [signature] Date: 3/5/09

Project Coordinator: Klinger

## HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001767

Balance: LE-BAL # 097 Weights: 20.002 Weights: 500.038

Seal Num: 10785 Etch Num: 6AW-08-01TB Dose Rate: < 0.5

Lab Core # _____

Bottle Full: Y X N _____

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: N/A g

Tare Wt.: 174 g

Net Wt.: N/A g

Color Liquid: Colorless

Clarity: Clear.

Color Solids: None Trace Solids: Y ___ N X

Volume Amount of Sample: 250 mL

**Nalgene** Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (**Black Lid Jars**) 125mL = 131 g / Wheaten: (**White Lid Jars**) 500mL = 200 g

I-Chem.: (**Blue Lid Jars**) 250mL = 159 g / Spec. Wide Mouth: (**Light Blue Lids**) 500mL = 294 g / **Amber**, Small-Neck Bottles 125 m L = 95 g, 250 m L = 174 g / **Clear**, Small-Neck Bottles 125mL = 108 g, 250mL = 174 g

Photography Complete: N/A

APPEAR01: Recieved a full 250ml bottle of clear colorless liquid. No solids visible. No organic layer visible.

Analyst: [signature] Date: 3/5/09

# LABCORE Completed Batch Report for Batch# 00013284

**Analyst:** McColloch, Todd **Book#:** N/A

**Instrument:** Sony Camcorder

**Method:** BREAKDOWN PIG - HC, LA-519-151 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:**

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Color | LIQUID | N/A | Colorless | | | | | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Dose Rate | LIQUID | N/A | <0.5 | | | 0.5 | mRem/hr | | | QU |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-01F B2 | | | | | | | |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 242.5 | | | | g | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Seal Number | LIQUID | N/A | 10779 | | | | | | | |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 1 | SAMPLE | S09T001756 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |
| Sample Sequence 2 | | | | | | | | | | | | | | | | |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Dose Rate | LIQUID | N/A | 480 | | | | mRem/hr | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-02A | | | | | | | |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 301.5 | | | | g | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Seal Number | LIQUID | N/A | 10781 | | | | | | | |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 2 | SAMPLE | S09T001776 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |
| Sample Sequence 3 | | | | | | | | | | | | | | | | |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013284

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Dose Rate | LIQUID | N/A | 180 | | | | mRem/hr | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-02B | | | | | | | |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 301.7 | | | | g | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Seal Number | LIQUID | N/A | 13659 | | | | | | | |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 3 | SAMPLE | S09T001778 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |
| Sample Sequence 4 | | | | | | | | | | | | | | | | |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Dose Rate | LIQUID | N/A | 114 | | | | mRem/hr | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-03A | | | | | | | |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 301.3 | | | | g | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Seal Number | LIQUID | N/A | 10783 | | | | | | | |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 4 | SAMPLE | S09T001788 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013284

Reviewer Signature M. A. Purcell Date 3/12/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013284

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001756 | SAMPLE | | 20090162 | 6AW-08-01FB2 | AW106 EVAP3 |
| 2 | S09T001776 | SAMPLE | | 20090162 | 6AW-08-02A | AW106 EVAP3 |
| 3 | S09T001778 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 4 | S09T001788 | SAMPLE | | 20090162 | 6AW-08-03A | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/5/2009 7:01:14PM
IncompleteBatchLong Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013284

**Analyst:** McColloch, Todd **Standard ID / Book#:** N/A

**Instrument:** Sony Camcorder

**Method:** BREAKDOWN PIG - HC, LO-080-112 Rev/Mod K-0

**Prep Batch:**

**Batch Comment:**

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Color | LIQUID | N/A | Colorless | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Dose Rate | LIQUID | N/A | <0.5 | | mRem/hr |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-01FB2 | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Organic Volume Present | LIQUID | N/A | Ø | | mL |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Amount of Sample Present | LIQUID | N/A | 242.5 | | g |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Seal Number | LIQUID | N/A | 10779 | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Volume % Settled Solids | LIQUID | N/A | Ø | | % |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001756 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Clarity | LIQUID | N/A | clear | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Dose Rate | LIQUID | N/A | 95 | | mRem/hr |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-02A | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Organic Volume Present | LIQUID | N/A | Ø | | mL |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Amount of Sample Present | LIQUID | N/A | 301.5 | | g |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Seal Number | LIQUID | N/A | 10781 | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Volume % Settled Solids | LIQUID | N/A | Ø | | % |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001776 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Dose Rate | LIQUID | N/A | 180 | | mRem/hr |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-02B | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Organic Volume Present | LIQUID | N/A | Ø | | mL |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Amount of Sample Present | LIQUID | N/A | 301.7 | | g |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Seal Number | LIQUID | N/A | 13659 | | |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Volume % Settled Solids | LIQUID | N/A | Ø | | % |
| 20090162 | AW106 EV | 3 | SAMPLE | S09T001778 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Dose Rate | LIQUID | N/A | 114 | | mRem/hr |

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

3/5/2009 7:01:14PM
IncompleteBatchLong Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013284

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-03A | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Organic Volume Present | LIQUID | N/A | 0 | | mL |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Amount of Sample Present | LIQUID | N/A | 301.3 | | g |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Seal Number | LIQUID | N/A | 10783 | | |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Volume % Settled Solids | LIQUID | N/A | 0 | | % |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001788 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |

# Final Page for Batch# 00013284

Analyst Signature — Date: 3/5/09

Data Entry Signature — Date: 3/5/09

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Project Coordinator: Klinger

# HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001756

Balance: LE-BAL # 097 Weights: 20.002 Weights: 500.038

Seal Num: 10779 Etch Num: 6AW-08-01FB2 Dose Rate: <0.5

Lab Core #

Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: 0 mm

Vol. % StlSlds: 0 %

Sample Volume: 250 mL

Organic Vol. 0 mL

Gross Wt: 416.5 g

Tare Wt.: 174 g

Net Wt.: 242.5 g

Color Liquid: ~~clear~~ colorless

Clarity: ~~Color~~ clear

Color Solids: None Trace Solids: Y N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g, 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g, 250mL = 174 g

Photography Complete: Yes

APPEAR01: Recieved a full 250ml bottle of clear colorless liquid. No solids visible. No organic layer visible.

Analyst: [signature] Date: 3/5/09

RPP-RPT-40709 Rev. 1

Project Coordinator: Klinger

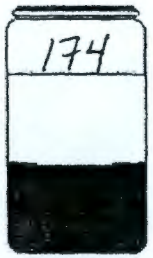
# HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001776

Balance: LE-BAL # 097 Weights: 20.001 Weights: 500.038

Seal Num: 10781 Etch Num: GAW-08-02A Dose Rate: 95

Lab Core #




Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: 475.5 g

Color Liquid: Yellow.

Tare Wt.: 174 g

Clarity: clear

Net Wt.: 301.5 g

Color Solids: NONE Trace Solids: Y N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 mL = 95 g, 250 mL = 174 g / Clear, Small-Neck Bottles 125mL = 108 g, 250mL = 174 g

Photography Complete: Yes

APPEAR01: Recieved a full 250ml bottle of clear yellow liquid. No solids visible. No organic layer visible.

Analyst: Date: 3/5/09

Project Coordinator: Klinger

## HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001778

Balance: LE-BAL # 697 Weights: 20.001 Weights: 500.038

Seal Num: 13659 Etch Num: GAW-08-02B Dose Rate: 180

Lab Core # _____

Bottle Full: Y X N _____

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: 475.7 g

Tare Wt.: 174 g

Net Wt.: 301.7 g

Color Liquid: Yellow

Clarity: clear

Color Solids: NONE Trace Solids: Y ___ N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 mL = 95 g, 250 mL = 174 g / Clear, Small-Neck Bottles 125mL = 108 g, 250mL = 174 g

Photography Complete: Yes

APPEAR01: Recieved a full 250ml bottle of clear yellow liquid. No solids visible. No organic layer visible

Analyst: [signature] Date: 3/5/09

Project Coordinator: Klinger

## HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001788

Balance: LE-BAL # 097 Weights: 20-002 Weights: 500.038

Seal Num: 10783 Etch Num: GAW-08-03A Dose Rate: ~~570~~ 114

Lab Core # _____

Bottle Full: Y X N _____

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: 475.3 g

Tare Wt.: 174 g

Net Wt.: 301.3 g

Color Liquid: Yellow.

Clarity: clear

Color Solids: None Trace Solids: Y ___ N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g 250mL = 174 g

Photography Complete: Yes

APPEAR01: Recieved a full 250 ml bottle of clear yellow liquid. No solids visible. No organic layer visible

Analyst: _____ Date: 3/5/09

RPP-RPT-40709 Rev. 1

# LABCORE Completed Batch Report for Batch# 00013253

**Analyst:** McColloch, Todd **Book#:** N/A

**Instrument:** Sony Camcorder

**Method:** BREAKDOWN PIG - HC, LA-519-151 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:**

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Dose Rate | LIQUID | N/A | 120 | | | | mRem/hr | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-01 | | | | | | | |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 306.3 | | | | g | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Seal Number | LIQUID | N/A | 10780 | | | | | | | |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 1 | SAMPLE | S09T001770 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |
| Sample Sequence 2 | | | | | | | | | | | | | | | | |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Dose Rate | LIQUID | N/A | 120 | | | | mRem/hr | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-03B | | | | | | | |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 301.6 | | | | g | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Seal Number | LIQUID | N/A | 10784 | | | | | | | |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 2 | SAMPLE | S09T001790 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013253

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013253

3/10/09

Reviewer Signature M. A. Purcell Date

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013253

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001770 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 2 | S09T001790 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

*IncompleteBatchLong Version 2.7.22*
*batchreports 2.7.25*

# LABCORE Data Entry Template for Batch# 00013253

**Analyst:** McColloch, Todd **Standard ID / Book#:** N/A
**Instrument:** Sony Camcorder
**Method:** BREAKDOWN PIG - HC, LO-080-112 Rev/Mod K-0
**Prep Batch:**
**Batch Comment:**

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Dose Rate | LIQUID | N/A | 120 | | mRem/hr |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-01 | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Organic Volume Present | LIQUID | N/A | 0 | | mL |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Amount of Sample Present | LIQUID | N/A | 306.3 | | g |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Seal Number | LIQUID | N/A | 10780 | | |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Volume % Settled Solids | LIQUID | N/A | 0 | | % |
| 20090162 | AW106 EV | 1 | SAMPLE | S09T001770 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Dose Rate | LIQUID | N/A | 120 | | mRem/hr |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-03B | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Organic Volume Present | LIQUID | N/A | 0 | | mL |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Amount of Sample Present | LIQUID | N/A | 301.6 | | g |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Seal Number | LIQUID | N/A | 10784 | | |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Volume % Settled Solids | LIQUID | N/A | 0 | | % |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001790 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |

## Final Page for Batch# 00013253

Analyst Signature — Date: 3/4/09
Data Entry Signature — Date: 3/4/09

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Project Coordinator: Klinger

## HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001770

Balance: LE-BAL # 097 Weights: 20002 Weights: 500.039

Seal Num: 10780 Etch Num: 6AW-09-01 Dose Rate: 120

Lab Core #

Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: 0 mm

Vol. % StlSlds: 0 %

Sample Volume: 250 mL

Organic Vol. 0 mL

Gross Wt: 480.3 g

Color Liquid: Yellow

Tare Wt.: 174 g

Clarity: Clear

Color Solids: None Trace Solids: Y N X

Net Wt.: 306.3 g

Volume Amount of Sample: 250 mL

**Nalgene** Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g 250mL = 174 g

Photography Complete: Yes

APPEAR01: Received a full 250 ml bottle of clear yellow liquid. No solids visible. No organic layer visible.

Analyst: [signature] Date: 3/4/09

Project Coordinator: Klinger

# HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # 509T001790

Balance: LE-BAL # 097 Weights: 20.002 Weights: 500.039

Seal Num: 10784 Etch Num: GAW-08-03B Dose Rate: 120

Lab Core #

Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: Ø %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: 475.6 g

Tare Wt.: 174 g

Net Wt.: 301.6 g

Color Liquid: Yellow

Clarity: Clear

Color Solids: NONE Trace Solids: Y N X

Volume Amount of Sample: 250 mL

**Nalgene** Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g, 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g, ~~250mL = 174 g~~

Photography Complete: Yes

APPEAR01: Recieved a full 250 ml bottle of clear yellow liquid. No solids visible. No organic layer visible.

Analyst: [signature] Date: 3/4/09

# LABCORE Completed Batch Report for Batch# 00014142

**Analyst:** McColloch, Todd **Book#:** N/A

**Instrument:**

**Method:** BREAKDOWN PIG - HC, LA-519-151 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:**

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Record Appearance | LIQUID | N/A | See Note | | | | | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Color | LIQUID | N/A | Yellow | | | | | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Clarity | LIQUID | N/A | Clear | | | | | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Dose Rate | LIQUID | N/A | 110 | | | | mRem/hr | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Etched Number | LIQUID | N/A | 6AW-08-04B | | | | | | | |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Organic Volume Present | LIQUID | N/A | 0 | | | | mL | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Photography | LIQUID | N/A | Complete | | | | | | | |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Amount of Sample Present | LIQUID | N/A | 304.1 | | | | g | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Seal Number | LIQUID | N/A | 10787 | | | | | | | |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Volume % Settled Solids | LIQUID | N/A | 0 | | | | % | | | Q |
| 1 | SAMPLE | S09T001802 | | 0 | 0 | Volume of Sample | LIQUID | N/A | 250 | | | | mL | | | Q |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00014142

5/5/09
Reviewer Signature M. A. Purcell Date

FAXED
RRT 5-5-09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

5/5/2009 1:31:30PM
IncompleteBatchLong Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00014142

**Analyst:** McColloch, Todd **Standard ID / Book#:**

**Instrument:**

**Method:** BREAKDOWN PIG - HC, LA-519-151 Rev/Mod J-0

**Prep Batch:**

**Batch Comment:**

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Record Appearance | LIQUID | N/A | SEE NOTE | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Color | LIQUID | N/A | Yellow | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Clarity | LIQUID | N/A | Clear | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Dose Rate | LIQUID | N/A | 110 | | mRem/hr |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Etched Number | LIQUID | N/A | 6AW-08-04B | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Organic Volume Present | LIQUID | N/A | Ø | | mL |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Photography | LIQUID | N/A | Complete | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Amount of Sample Present | LIQUID | N/A | 304.1 | | g |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Seal Number | LIQUID | N/A | 10787 | | |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Volume % Settled Solids | LIQUID | N/A | Ø | | % |
| 20090163 | AW106 EV | 1 | SAMPLE | S09T001802 | 0 | | Volume of Sample | LIQUID | N/A | 250 | | mL |

## Final Page for Batch# 00014142

5-5-09

Analyst Signature Date Data Entry Signature Date

FAXED
DM 5-5-09

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

# LABCORE Completed Batch Report for Batch# 00014142

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001802 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |

FAXED
DM 5-5-09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

Project Coordinator: G. S. Klinger

# HCBRKDWN / PIG - VOL% SETTLED SOLIDS

OmniLIMS # S09T001802

Balance: LE-BAL # 97 Weights: 20.004 Weights: 500.040

Seal Num: 10787 Etch Num: 6AW-08-046 Dose Rate: 110

Lab Core # S09T001802

Bottle Full: Y X N

Ht. of Sample: 125 mm

Ht. of Solids: Ø mm

Vol. % StlSlds: < 2 %

Sample Volume: 250 mL

Organic Vol. Ø mL

Gross Wt: 478.1 g

Tare Wt.: ~~478.1~~ 174 g 3909

Net Wt.: 304.1 g

Color Liquid: Yellow

Clarity: Clear

Color Solids: None Trace Solids: Y N X

Volume Amount of Sample: 250 mL

Nalgene Plastic Bottles 60mL = 14.6 g / Eagle Pitcher (Black Lid Jars) 125mL = 131 g / Wheaten: (White Lid Jars) 500mL = 200 g

I-Chem.: (Blue Lid Jars) 250mL = 159 g / Spec. Wide Mouth: (Light Blue Lids) 500mL = 294 g / Amber, Small-Neck Bottles 125 m L = 95 g 250 m L = 174 g / Clear, Small-Neck Bottles 125mL = 108 g 250mL = 174 g

Photography Complete: Yes

APPEAR01: Received a full 250ml bottle of clear yellow liquid. No solids visible. No organic layer visible.

Analyst: [signature] Date: 3/9/09

INORGANIC RAW DATA

# LABCORE Completed Batch Report for Batch# 00013353

**Analyst:** Jackson, David

**Book#:** 59N12B

**Instrument:** LE-BAL-097

**Method:** SPG - LIQUID (HC), LA-510-112 Rev/Mod I-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW-106 EVAP3 Hotcell Specific Gravity

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 STD | S0903110071 | | 0 | 0 | Specific Gravity | LIQUID | 1.3986 | 1.387 | | | 1.00E-03 | Sp.G. | 99.171 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001770 | | 0 | 0 | Specific Gravity | LIQUID | N/A | 1.208 | | | 1.00E-03 | Sp.G. | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903110077 | S09T001770 | 0 | 0 | Specific Gravity | LIQUID | 1.208 | 1.204 | | | 1.00E-03 | Sp.G. | 0.33167 | % RPD | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001778 | | 0 | 0 | Specific Gravity | LIQUID | N/A | 1.21 | | | 1.00E-03 | Sp.G. | | | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SAMPLE | S09T001790 | | 0 | 0 | Specific Gravity | LIQUID | N/A | 1.218 | | | 1.00E-03 | Sp.G. | | | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 SAMPLE | S09T001802 | | 0 | 0 | Specific Gravity | LIQUID | N/A | 1.22 | | | 1.00E-03 | Sp.G. | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013353

3/12/09

Reviewer Signature M.A. PURCELL Date

QA:

FAXED 3/19/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*



03/17/2009 07:29 FAX 509 373 1430 RPP-RPT-40709-Rev.1 LAD 001

# LABCORE Completed Batch Report for Batch# 00013353

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903110071 | STD | | | | |
| 2 | S09T001770 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 3 | S0903110077 | DUP | S09T001770 | | | |
| 4 | S09T001778 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 5 | S09T001790 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 6 | S09T001802 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |

FAXED 3/17/09 14

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Data Entry Template for Batch# 00013353

**Analyst:** Jackson, David **Standard ID / Book#:** 59N12B

**Instrument:** LE-BAL-097

**Method:** SPG - LIQUID (HC), LA-510-112 Rev/Mod I-0

**Prep Batch:**

**Batch Comment:** AW-106 EVAP3 Hotcell Specific Gravity

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | STD | | 0 | | Specific Gravity | LIQUID | 1.3986 | 1.387 | N/A | Sp.G. |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001770 | 0 | | Specific Gravity | LIQUID | N/A | 1.208 | | Sp.G. |
| | | 3 | DUP | S09T001770 | 0 | | Specific Gravity | LIQUID | 1.208 | 1.204 | N/A | Sp.G. |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001778 | 0 | | Specific Gravity | LIQUID | N/A | 1.210 | | Sp.G. |
| 20090162 | AW106 EV | 5 | SAMPLE | S09T001790 | 0 | | Specific Gravity | LIQUID | N/A | 1.218 | | Sp.G. |
| 20090163 | AW106 EV | 6 | SAMPLE | S09T001802 | 0 | | Specific Gravity | LIQUID | N/A | 1.220 | | Sp.G. |

# Final Page for Batch# 00013353

**Analyst Signature** D.R. Jackson **Date**

**Data Entry Signature** [illegible] 3-11-2009 **Date**

FAXED 3/17/09

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

## SPECIFIC GRAVITY WORKSHEET

**Batch #:** 00013353 **Project:** AW106 EVAP3

**Cell Temerature (°C):** 25.5 **Standard Book #:** 59N12B **Value (g/mL):** 1.3986

| Sample ID | OmniLIMS # | Volume mL | Tare Wt. g | Gross Wt. g | Net Wt. g | Density g/mL |
|---|---|---|---|---|---|---|
| Standard | Standard | 5.000 | 8.745 | 15.679 | 6.934 | 1.387 |
| 6AW-08-01 | S09T001770 | 5.000 | 8.632 | 14.674 | 6.042 | 1.208 |
| 6AW-08-01 | Duplicate | 5.000 | 8.926 | 14.944 | 6.018 | 1.204 |
| 6AW-08-02B | S09T001778 | 5.000 | 7.696 | 13.745 | 6.049 | 1.210 |
| 6AW-08-03B | S09T001790 | 5.000 | 8.541 | 14.631 | 6.090 | 1.218 |
| 6AW-08-04B | S09T001802 | 5.000 | 8.727 | 14.827 | 6.100 | 1.220 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | Average: | 1.212 |
| | | | | | StdDev: | 0.007 |

Verified by: M. A. Purcell (Print Name) — Signature — 3/12/2009 (Date)

FAXED 3/12/09

## SPECIFIC GRAVITY WORKSHEET

**Batch #:** _____ **Project:** **AW106 EVAP3**

**Cell Temerature (°F):** ~~25.5~~ 3/11/09 25.5 °C **Standard Book #:** 59N12B **Value (g/mL):** 1.3986

| Sample ID | OmniLIMS # | Volume mL | Tare Wt. g | Gross Wt. g | Net Wt. g | Density g/mL |
|---|---|---|---|---|---|---|
| Standard | Standard | 5 | 8.745 | 15.679 | 6.934 | 1.387 |
| 6AW-08-01 | S09T001770 | 5 | 8.632 | 14.674 | 6.042 | 1.208 |
| 6AW-08-01 | Duplicate | 5 | 8.926 | 14.944 | 6.018 | 1.204 |
| 6AW-08-02B | S09T001778 | 5 | 7.696 | 13.745 | 6.049 | 1.210 |
| 6AW-08-03B | S09T001790 | 5 | 8.541 | 14.631 | 6.090 | 1.218 |
| 6AW-08-04B | S09T001802 | 5 | 8.727 | 14.827 | 6.100 | 1.220 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | **Average:** | 1.212 |
| | | | | | **StdDev:** | 0.0068 |

99.2%

Performed by: D.R. Jackson (Print Name) Signature: Dal R. Jackson Date: 3-11-2009

FAXED 3/17/09

# LABCORE Completed Batch Report for Batch# 00013293

**Analyst:** Purinton, Tony

**Book#:** See bench Sheet

**Instrument:** PH02

**Method:** PH LIQUID, LA-212-106 Rev/Mod G-0

**Specification:** AW106 EVAP3

**Prep Batch:** NA

**Batch Comment:** Ph for AW106 adp

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICVPH | S0903060011 | | 0 | 0 | pH | LIQUID | 12 | 12 | | | 0.01 | pH | | | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001751 | | 0 | 0 | pH | LIQUID | N/A | 10.17 | | | 0.01 | pH | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903060013 | S09T001751 | 0 | 0 | pH | LIQUID | 10.17 | 10.15 | | | 0.01 | pH | 0.19685 | % RPD | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001762 | | 0 | 0 | pH | LIQUID | N/A | 6.75 | | | 0.01 | pH | | | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SAMPLE | S09T001783 | | 0 | 0 | pH | LIQUID | N/A | 13.43 | | | 0.01 | pH | | | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 CCVPH | S0903060014 | | 0 | 0 | pH | LIQUID | | 12.01 | | | 0.01 | pH | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013293

3/10/09
Reviewer Signature Date

QA: [signature] 3.17.09

PM: [signature] 3/17/09

2nd Reviewer: [signature] 3/10/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013293

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903060011 | ICVPH | | | | |
| 2 | S09T001751 | SAMPLE | | 20090162 | 6AW-08-01FB1 | AW106 EVAP3 |
| 3 | S0903060013 | DUP | S09T001751 | | | |
| 4 | S09T001762 | SAMPLE | | 20090162 | 6AW-08-01FB2 | AW106 EVAP3 |
| 5 | S09T001783 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 6 | S0903060014 | CCVPH | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Data Entry Template for Batch# 00013293

**Analyst:** Purinton, Tony **Standard ID / Book#:** 12 - #1807949

**Instrument:** PH02

**Method:** PH LIQUID, LA-212-106 Rev/Mod G O

**Prep Batch:**

**Batch Comment:** Ph for AW106 adp

| GROUP# | PROJECT | S | TYPE | SAMPLE | R | A | TEST | MATRIX | ACTUAL | FOUND | DL | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | ICVPH | | 0 | | pH | LIQUID | 12.00 | 12.04 | N/A | pH |
| 20090162 | AW106 EV | 2 | SAMPLE | S09T001751 | 0 | | pH | LIQUID | N/A | 10.17 | | pH |
| | | 3 | DUP | S09T001751 | 0 | | pH | LIQUID | 10.17 | 10.15 | N/A | pH |
| 20090162 | AW106 EV | 4 | SAMPLE | S09T001762 | 0 | | pH | LIQUID | N/A | 6.75 | | pH |
| 20090162 | AW106 EV | 5 | SAMPLE | S09T001783 | 0 | | pH | LIQUID | N/A | 13.43 | | pH |
| | | 6 | CCVPH | | 0 | | pH | LIQUID | 12.00 | 12.01 | N/A | pH |

## Final Page for Batch# 00013293

Anthony Purinton 3/5/09
**Analyst Signature** **Date**

Anthony Purinton
**Data Entry Signature** **Date**

*Data Entry Comments:*

*Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

**PROJECT:** AW 106

LA-212-106 pH __ G-O 'ORKLIST: 13293 ANALYST: ADP

Rev/Mod

Standard Book # 1807949

LIQUID ADDITION START DATE/TIME: 3/5/2009 17:30

ANALYSIS COMPLETION DATE/TIME: 3/5/2009 ###

| Sample Number Type (sam, dup) | Temperature | pH Measured | /Actual | Comments | |
|---|---|---|---|---|---|
| Calibration 1 | 72 | 10.04 | 10 | SLOPE: 100 #9007 | |
| Calibration 2 | 72 | 13.02 | 13 | # | 1901322 |
| ICV | 72 | 12.04 | 12 | # | 1807949 |
| S09T001751 | 72 | 10.17 | ---------- | | |
| S09T001751 DUP | 72 | 10.15 | | | |
| S09T001762 | 72 | 6.75 | | | |
| S09T001783 | 72 | 13.43 | | | |
| CCV | 72 | 12.01 | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
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| | | | | | |
| | | | | | |

Additional Comments

# LABCORE Completed Batch Report for Batch# 00013254

**Analyst:** Hood, Boatright Sandra **Book#:** See bench Sheet
**Instrument:** PH02
**Method:** PH LIQUID, LA-212-106 Rev/Mod G-0
**Specification:** AW106 EVAP3
**Prep Batch:** N/A
**Batch Comment:** AW 106 EVAP pH

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICVPH | S0903040023 | | 0 | 0 | pH | LIQUID | 10 | 10.05 | | | 0.01 | pH | | | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001772 | | 0 | 0 | pH | LIQUID | N/A | >13.5 | | | 0.01 | pH | | | J |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903040025 | S09T001772 | 0 | 0 | pH | LIQUID | >13.5 | >13.5 | | | 0.01 | pH | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001795 | | 0 | 0 | pH | LIQUID | N/A | >13.5 | | | 0.01 | pH | | | J |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 CCVPH | S0903040026 | | 0 | 0 | pH | LIQUID | 10 | 10.05 | | | 0.01 | pH | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013254

K B 3/10/09 QA: [signature] 3/17/09
Reviewer Signature Date

Lab Reviewer: [signature] 3/10/09 PM: Doug A. Tuggs 3/17/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013254

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903040023 | ICVPH | | | | |
| 2 | S09T001772 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 3 | S0903040025 | DUP | S09T001772 | | | |
| 4 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 5 | S0903040026 | CCVPH | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Data Entry Template for Batch# 00013254

**Analyst:** Hood, Boatright Sandra

**Standard ID / Book#:** see bench sheet

**Instrument:** PH02

**Method:** PH LIQUID, 212-106 Rev/Mod G-e

**Prep Batch:**

**Batch Comment:** AW 106 EVAP pH

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | ICVPH | | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |
| 2 | SAMPLE | S09T001772 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | pH | | | | | |
| 3 | DUP | S09T001772 | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |
| 4 | SAMPLE | S09T001795 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | pH | | | | | |
| 5 | CCVPH | | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |

## Final Page for Batch# 00013254

Sandra Hood Boatright
Analyst Signature — Date 3-4-09

Sandra Hood Boatright
Data Entry Signature — Date 3-5-09

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

**PROJECT:** EVAP

LA-212-106 pH G-0 (Rev/Mod) WORKLIST: 13254 ANALYST: SLHB

LIQUID ADDITION START DATE/TIME: 3-4-09 ~~083~~ SLHB 2030

ANALYSIS COMPLETION DATE/TIME: 3-4-09 2130

| Sample Number Type (sam, dup) | pH Measured | /Actual | Comments |
|---|---|---|---|
| Calibration 1 | 10.00 | 9.99 | SLOPE: 100.2 \| 8085-10 |
| Calibration 2 | 13.00 | 13.03 | 8066-17 |
| ICV | | 10.05 | 1805309 |
| S09T00 1772 | 13.59 | | |
| 1772 Dup | 13.61 | | |
| S09T00 1795 | 13.70 | | |
| CCV | 10.05 | | |
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Additional Comments

# LABCORE Completed Batch Report for Batch# 00013323

**Analyst:** Purinton, Tony

**Book#:** See bench Sheet

**Instrument:** PH02

**Method:** PH LIQUID, LA-212-106 Rev/Mod G-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** 2009 AW106 Evap Ph

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICVPH | S0903090065 | | 0 | 0 | pH | LIQUID | 10 | 10.05 | | | 0.01 | pH | | | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001807 | | 0 | 0 | pH | LIQUID | N/A | 13.45 | | | 0.01 | pH | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903090067 | S09T001807 | 0 | 0 | pH | LIQUID | 13.45 | 13.46 | | | 0.01 | pH | 0.074322 | % RPD | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 CCVPH | S0903090068 | | 0 | 0 | pH | LIQUID | 10 | 10.12 | | | 0.01 | pH | | | |

149

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013323

Reviewer Signature — Date 3/11/09

2nd reviewer: 3/11/09

QA: 3-17-09

PM 3/17/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013323

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903090065 | ICVPH | | | | |
| 2 | S09T001807 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |
| 3 | S0903090067 | DUP | S09T001807 | | | |
| 4 | S0903090068 | CCVPH | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/9/2009 8:51:04PM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013323

**Analyst:** Purinton, Tony

**Standard ID / Book#:** See bench sheet

**Instrument:** PH02

**Method:** PH LIQUID, LA-212-106 Rev/Mod G-0

**Prep Batch:**

**Batch Comment:** 2009 AW106 Evap Ph

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | ICVPH | | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |
| 2 | SAMPLE | S09T001807 | 0 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | pH | | | | | |
| 3 | DUP | S09T001807 | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |
| 4 | CCVPH | | 0 | | LIQUID | | |
| | Analytes Requested: | pH | | | | | |

## Final Page for Batch# 00013323

Tracy Maling — 3/09/09
Analyst Signature — Date

Tracy Maling — 3/09/09
Data Entry Signature — Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

03/09/2009 MON 22:25 [TX/RX NO 5479] 003

PROJECT: AW-106

LA-212-106 pH 6-0 Rev/Mod WORKLIST: 00013323 ANALYST: TRM

LIQUID ADDITION START DATE/TIME: 3/09/09 / 1800

ANALYSIS COMPLETION DATE/TIME: 3/09/09 / 1900

| Sample Number Type (sam, dup) | pH Measured | /Actual | Comments |
|---|---|---|---|
| Calibration 1 | | 10.0 | SLOPE: 104.0 lot# 4809204 |
| Calibration 2 | | 13.0 | lot# 1901322 |
| ICV | 10.05 | 10.0 | lot 8085-10 |
| 509T001807 | 13.45 | | |
| 1807 Dup | 13.46 | | |
| CCV | 10.12 | | |
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Additional Comments

# LABCORE Completed Batch Report for Batch# 00013294

**Analyst:** Purinton, Tony **Book#:** 62N15A
**Instrument:** Metrohm Titrator
**Method:** OH, LA-211-102 Rev/Mod I-0
**Specification:** AW106 EVAP3
**Prep Batch:**
**Batch Comment:** AW 106 FOR Oh ADP

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 STD | S0903060015 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.5719E+04 | | | 2.50E+03 | ug/mL | 96.852 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 BLNK | S0903060016 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 SAMPLE | S09T001784 | | 0 | 0 | Hydroxide | LIQUID | N/A | 8.3852E+03 | | | 2.50E+03 | ug/mL | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 DUP | S0903060017 | S09T001784 | 0 | 0 | Hydroxide | LIQUID | 8.3852E+03 | 7.9795E+03 | | | 2.50E+03 | ug/mL | 4.9581 | % RPD | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SPK | S0903060018 | S09T001784 | 0 | 0 | Hydroxide | LIQUID | 16230 | 2.3878E+04 | | | 2.50E+03 | ug/mL | 95.457 | % Recovery | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 CCV | S0903060021 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.6118E+04 | | | 2.50E+03 | ug/mL | 99.309 | % Recovery | |
| Sample Sequence 7 | | | | | | | | | | | | | | | |
| 7 CCB | S0903060022 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013294

K B 3/10/09
Reviewer Signature Date

2nd Reviewer: Brian Davis 3/10/09

PM: [illegible] 3/17/09
QA: [illegible] 3.17.09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013294

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903060015 | STD | | | | |
| 2 | S0903060016 | BLNK | | | | |
| 3 | S09T001784 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 4 | S0903060017 | DUP | S09T001784 | | | |
| 5 | S0903060018 | SPK | S09T001784 | | | |
| 6 | S0903060021 | CCV | | | | |
| 7 | S0903060022 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Data Entry Template for Batch# 00013294

**Analyst:** Purinton, Tony **Standard ID / Book#:** 62N15A

**Instrument:** Metrohm Titrator

**Method:** OH, LA-211-102 Rev/Mod I-0

**Prep Batch:**

**Batch Comment:** AW 106 FOR Oh ADP

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | STD | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 2 | BLNK | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 3 | SAMPLE | S09T001784 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Hydroxide | | | | | |
| 4 | DUP | S09T001784 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 5 | SPK | S09T001784 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 6 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 7 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |

## Final Page for Batch# 00013294

Anthony Purinton 3/5/09
**Analyst Signature** **Date**

Anthony Purinton 3/6/09
**Data Entry Signature** **Date**

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

# Determination of Free OH-/H+ Using Metrohm 682 Titroprocessor

**LA-211-102 Rev.** **Project AW106 EVAP** Worklist
Analyst Tony Purinton Date 09-03-05 Analysis Start Time 17:00
Analysis Completion Time 20:00

| | | | | |
|---|---|---|---|---|
| **Pipette #(s):** | 4476811 | ☒ | T809 | ☒ |
| **(Check box if pipette passes visual verification)** | 4430821 | ☒ | | ☐ |

OH Standard Number/Volume (mL): 62N15A / 0.05
Spike Number/Volume (mL): 62N15A / 0.05
Molarity of Titrant: 0.1985

| Sample ID #/Type (Sam, Dup) | Sample Volume (mL) | EP 1 Reading (mL) | Comments |
|---|---|---|---|
| Standard | 0.05 | 0.2328 | |
| Blank | 3 | 0.0036 | |
| S09T001784 | 0.05 | 0.1242 | |
| S09T001784 DUP | 0.05 | 0.1182 | |
| SO9T001784 SPK | 0.05 | 0.3536 | |
| CCV | 0.05 | 0.237 | |
| CCB | 3 | 0.0057 | |
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Additional Comments:

[TX/RX NO 5465] 002

Program version tiamo 1.1 - 36
2009-03-05 6:04:23 PM UTC-

## Calibration report

### Determination

Method . . . . . pH 7-10 Calibration
Determination start . . . . . 2009-03-05 18:01:41 UTC-8
User (full name) . . . . . Tony Purinton

### Results

**Cal Slope . . . . . 98.80 %**
**Temperature . . . . . 20.0 °C**



Metrohm

Program version tiamo 1.1 - 36

User adp 2009-03-05 6:17:50 PM UTC-

## Results report

### Sample data

Sample ID . . . . . .
Sample size, mL . . . . . 0.050
Standard Number . . . . . 62N15A
Standard Value . . . . . 16230

### Determination

Method . . . . . OH Std
Determination start . . . . . 2009-03-05 18:14:57 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

### End points

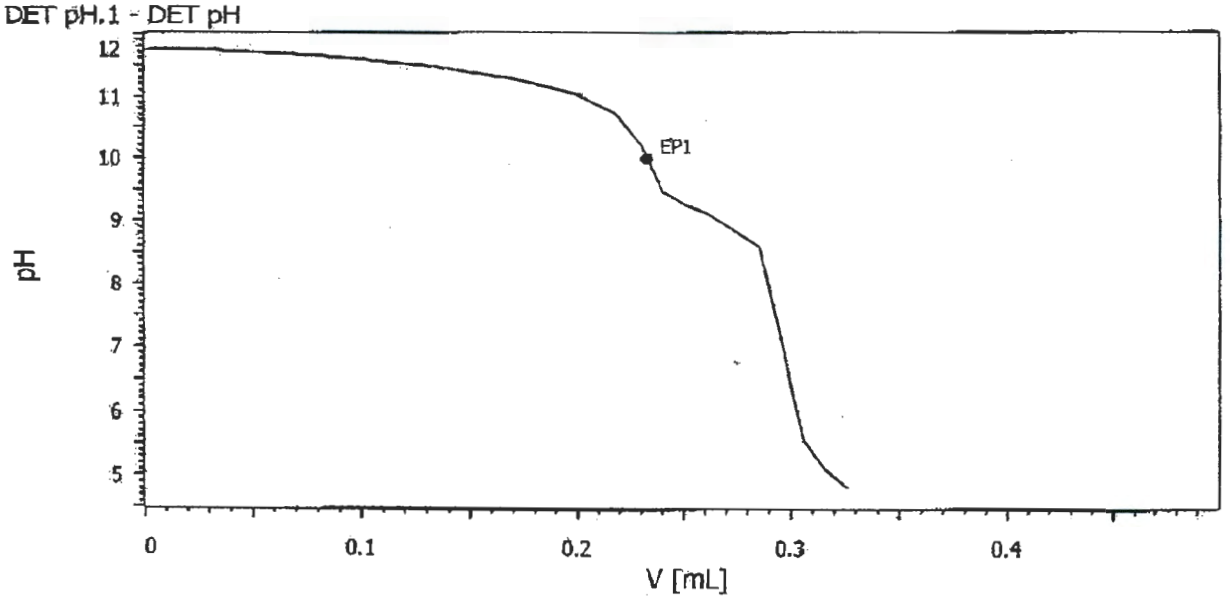
**DET pH** **DET pH.1**

EP1 . . . . . 9.988 pH . . . . . 0.2328 mL

### Results

OH . . . . . 15719.04 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 20.3 °C

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User adp 2009-03-056:21:28 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **BLANK**
Sample size,mL . . . . . 3

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-05 18:20:10 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

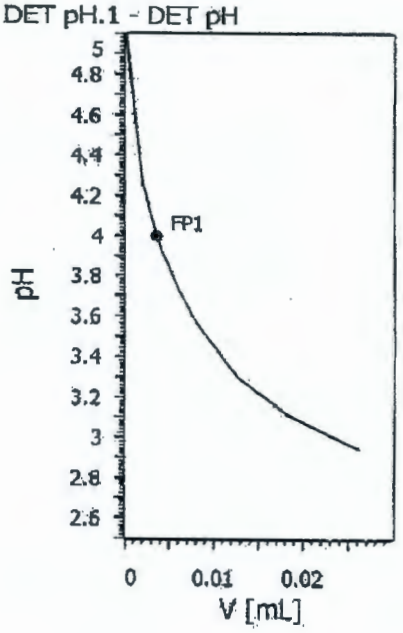
### End points

DET pH **DET pH.1**

| | | | | |
|---|---|---|---|---|
| FP1 | 4.000 | pH | 0.0036 | mL |
| FP2 | invalid | pH | invalid | mL |
| FP3 | invalid | pH | invalid | mL |

### Results

OH . . . . . 19.9 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .






Fax sent by : 5093737334 COMM RC 2859 03-06-09 09:44 Pg: 4/21

Program version tiamo 1.1 - 36

User adp 2009-03-059:17:13 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **S09T001784**
Sample size, mL . . . . . 0.050

### Determination

Method . . . . . OH Sample
Determination start . . . . . 2009-03-05 21:11:39 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

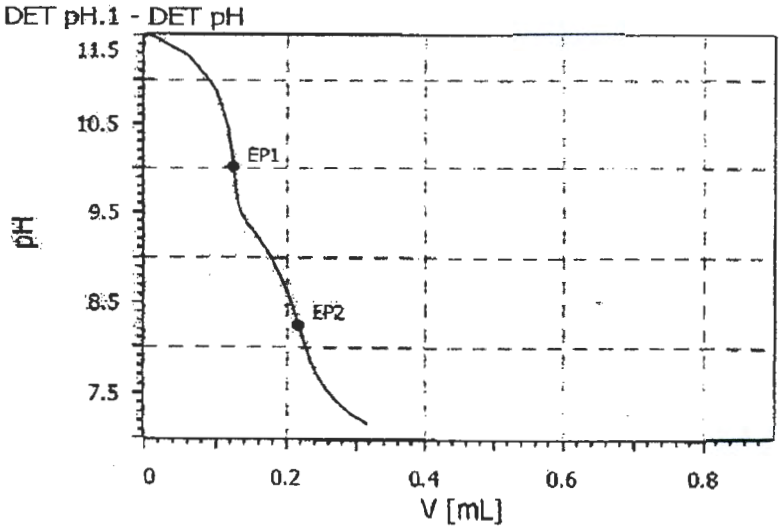
### End points

**DET pH** **DET pH.1**

EP1 . . . . . 10.007 pH . . . . . 0.1242 mL
EP2 . . . . . 8.246 pH . . . . . 0.2165 mL

### Results

OH . . . . . 8385.16 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 20.0 °C
Detection Limit . . . . . 553.40 ppm



Program version tiamo 1.1 - 36

User adp 2009-03-05 6:46:40 PM UTC-

## Results report

### Sample data

Sample ID . . . . . S09T001~~771~~ 784 DUP

Sample size, mL . . . . . 0.050

### Determination

Method . . . . . OH Sample

Determination start . . . . . 2009-03-05 18:40:16 UTC-8

User (full name) . . . . . Tony Purinton

User (short name) . . . . . adp

### End points

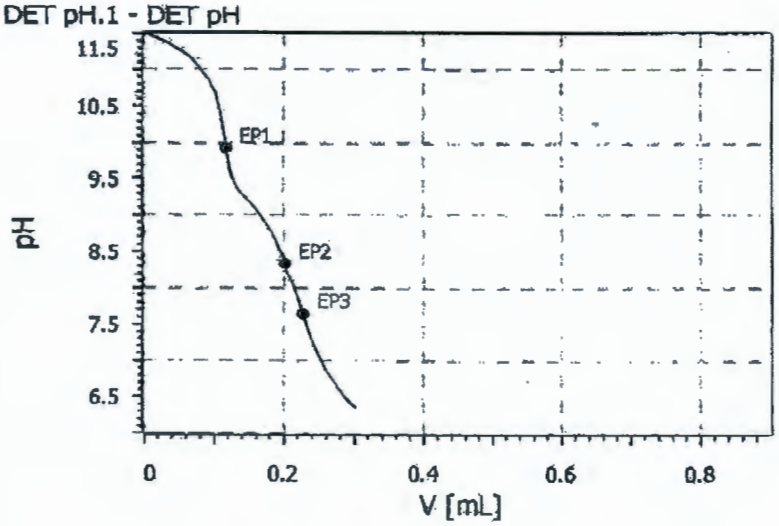
DET pH — DET pH.1

| | | | | |
|---|---|---|---|---|
| EP1 | 9.933 | pH | 0.1182 | mL |
| EP2 | 8.330 | pH | 0.2025 | mL |
| EP3 | 7.646 | pH | 0.2285 | mL |

### Results

| | | |
|---|---|---|
| OH | 7979.51 | ppm |
| Molarity of Titrant | 0.1985 | mol/L |
| Temperature | 20.2 | °C |
| Detection Limit | 553.40 | ppm |

DET pH.1 - DET pH






Fax sent by : 5093737334 CORR BC 191 03-06-09 09:45 Pg: 6/21

Program version tiamo 1.1 - 36

User adp 2009-03-056:55:51 PM UTC-

## Results report

### Sample data

| | |
|---|---|
| Sample ID | S09T001~~774~~ 784 SPK ADP 3/5/09 |
| Sample size, mL | 0.050 |
| Standard Number | 62N15A |
| Standard Value | 16230 |
| Volume Spk used | 0.050 |

### Determination

| | |
|---|---|
| Method | OH SPK |
| Determination start | 2009-03-05 18:50:55 UTC-8 |
| User (full name) | Tony Purinton |
| User (short name) | adp |

### End points

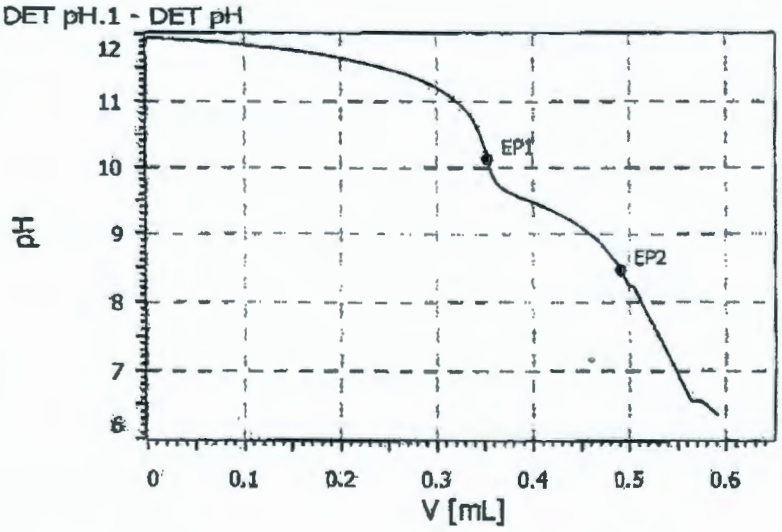
DET pH — DET pH.1

| | | | |
|---|---|---|---|
| EP1 | 10.119 pH | 0.3536 | mL |
| EP2 | 8.458 pH | 0.4911 | mL |

### Results

| | | |
|---|---|---|
| OH | 23877.75 | ppm |
| Molarity of Titrant | ~~103.44~~ ADP 3/6/09 | ~~%~~ |
| Temperature | | |
| Detection Limit | 19.8 | °C |

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User adp 2009-03-05 10:20:28 PM

## Results report

### Sample data

Sample ID . . . . . 62N15A CCV
Sample size, mL . . . . . 0.050
Standard Number . . . . . 62N25A
Standard Value . . . . . 16230

### Determination

Method . . . . . OH Std
Determination start . . . . . 2009-03-05 22:16:31 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

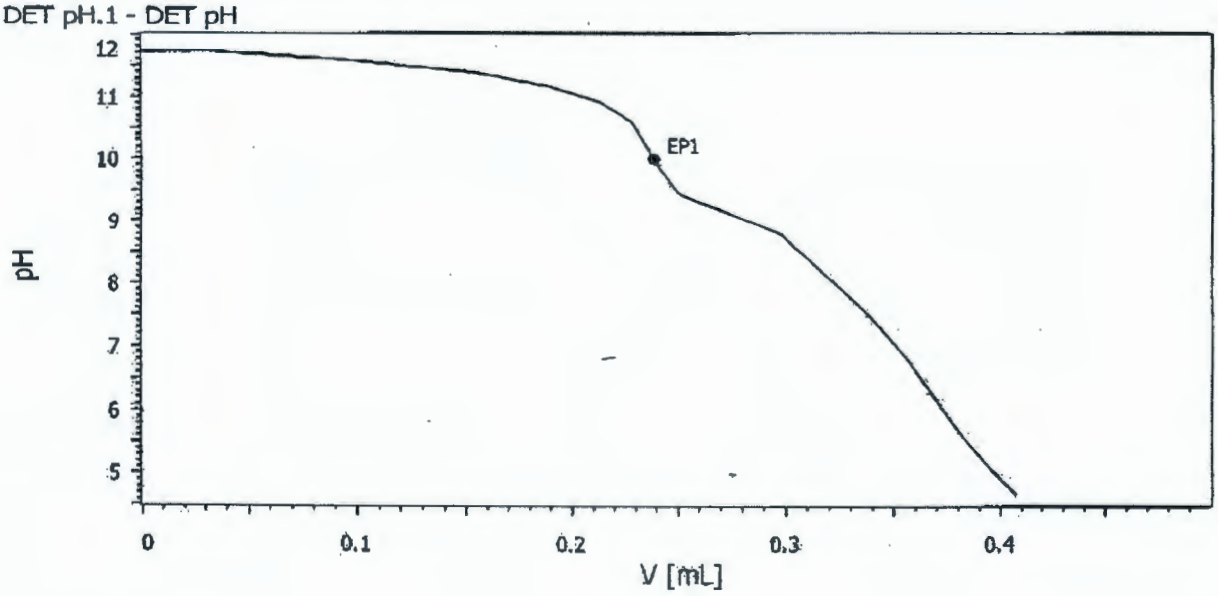
### End points

DET pH DET pH.1
EP1 . . . . . 10.010 pH . . . . . 0.2387 mL

### Results

OH . . . . . 16117.89 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 19.7 °C

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User adp 2009-03-05 10:28:48 PM

## Results report

### Sample data

Sample ID . . . . . BLANK
Sample size,mL . . . . . 3

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-05 22:27:13 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

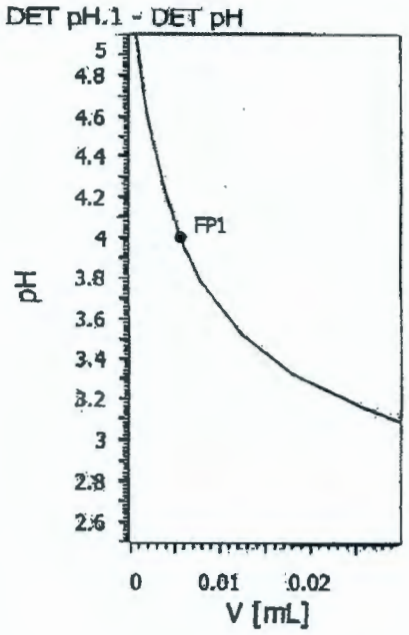
### End points

DET pH DET pH.1

| | | | | |
|---|---|---|---|---|
| FP1 | 4.000 | pH | 0.0057 | mL |
| FP2 | invalid | pH | invalid | mL |
| FP3 | invalid | pH | invalid | mL |

### Results

OH . . . . . 19.3 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .



# LABCORE Completed Batch Report for Batch# 00013269

**Analyst:** Edwards, Cheryl **Book#:** 62N15A

**Instrument:** Metrohm Titrator

**Method:** OH, LA-211-102 Rev/Mod I-0

**Specification:** AW106 EVAP3

**Prep Batch:** NA

**Batch Comment:** AW 106 EVAP3 OH

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 STD | S0903050105 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.5400E+04 | | | 2.50E+03 | ug/mL | 94.886 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 BLNK | S0903050106 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 SAMPLE | S09T001796 | | 0 | 0 | Hydroxide | LIQUID | N/A | 7.9500E+03 | | | 2.50E+03 | ug/mL | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 DUP | S0903050110 | S09T001796 | 0 | 0 | Hydroxide | LIQUID | 7.9500E+03 | 8.0100E+03 | | | 2.50E+03 | ug/mL | 0.75188 | % RPD | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SPK | S0903050108 | S09T001796 | 0 | 0 | Hydroxide | LIQUID | 16230 | 2.3600E+04 | | | 2.50E+03 | ug/mL | 96.426 | % Recovery | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 SAMPLE | S09T001773 | | 0 | 0 | Hydroxide | LIQUID | N/A | 7.5600E+03 | | | 2.50E+03 | ug/mL | | | |
| Sample Sequence 7 | | | | | | | | | | | | | | | |
| 7 CCV | S0903050111 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.5900E+04 | | | 2.50E+03 | ug/mL | 97.967 | % Recovery | |
| Sample Sequence 8 | | | | | | | | | | | | | | | |
| 8 CCB | S0903050112 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

## LABCORE Completed Batch Report for Batch# 00013269

# Final Page for Batch# 00013269

Reviewer Signature 3/5/09 Date

2nd reviewer: 3/5/09

PM: 3/17/09

QA: 3.17.09



*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013269

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903050105 | STD | | | | |
| 2 | S0903050106 | BLNK | | | | |
| 3 | S09T001796 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 4 | S0903050110 | DUP | S09T001796 | | | |
| 5 | S0903050108 | SPK | S09T001796 | | | |
| 6 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 7 | S0903050111 | CCV | | | | |
| 8 | S0903050112 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Data Entry Template for Batch# 00013269

**Analyst:** Edwards, Cheryl **Standard ID / Book#:** 62N15A

**Instrument:** Metrohm Titrator

**Method:** OH, 211-102 Rev/Mod I-0

**Prep Batch:** NA

**Batch Comment:** AW 106 EVAP3 OH

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | STD | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 2 | BLNK | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 3 | SAMPLE | S09T001796 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Hydroxide | | | | | |
| 4 | DUP | S09T001796 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 5 | SPK | S09T001796 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 6 | SAMPLE | S09T001773 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Hydroxide | | | | | |
| 7 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 8 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |

# Final Page for Batch# 00013269

Analyst Signature 3/5/09 Date

Sandra Hood Beatright Data Entry Signature 3-5-09 Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

03/04/2009 WED 22:56 [TX/RX NO 5454] 001

PROJECT: EVAP AW-106

LA-211-102 OH (Auto)

WORKLIST 13269 ANALYST CE DATE 3/4/09 TIME 0945

| | |
|---|---|
| OH Standard Number / Volume (mL) | 62N15A / .05 ml |
| Spike Number / Volume (mL) | 62N15A / .05 ml |
| Molarity of Titrant | 0.1985 |

| Sample Number Type (sam, dup) | Sample Volume (mL) | EP 1 Reading (mL) | Comments |
|---|---|---|---|
| Standard (CCV) | 0.05 | 0.2283 | |
| Blank | 3.0 | 0.0030 | |
| S09T001796 | 0.05 | 0.1178 | |
| S09T001796 D | 0.05 | 0.1187 | |
| S09T001796 Spk | 0.05 | 0.3492 | |
| S09T001773 | 0.05 | 0.1120 | |
| CCV | 0.05 | 0.2349 | |
| CCB | 3.0 | 0.0026 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Additional Comments

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| | | |
|---|---|---|
| Rev-Mod of Procedure Used | | |
| H-0 | | STD |
| Type | Sample Size (mL) | 0.050 |
| STD | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.228 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 9.06E-01 |
| Matrix | Concentration of Sample in PPM | 1.54E+04 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | |
| 62N15A | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | STD |
| Time | Concentration of Sample (MOLARITY) | 9.06E-01 |
| 9:50PM | Concentration of Sample in PPM | 1.54E+04 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



3/5/09

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | BLK |
| Type | Sample Size (mL) | 3.000 |
| BLK | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.003 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 1.99E-04 |
| Matrix | Concentration of Sample in PPM | 3.37E+00 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 4.17E+01 |
| BLNK | | |
| Instrument Code | | |
| OH-1 | * The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist. | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | BLK |
| Time | Concentration of Sample (MOLARITY) | 1.99E-04 |
| 9:50PM | Concentration of Sample in PPM | <41.6666666666667 |



3/5/09

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | Sample # |
| Type | Sample Size (mL) | 0.050 |
| Sample # | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.118 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 4.68E-01 |
| Matrix | Concentration of Sample in PPM | 7.95E+03 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 2.50E+03 |
| S09T001796 | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | Sample # |
| Time | Concentration of Sample (MOLARITY) | 4.68E-01 |
| 9:50PM | Concentration of Sample in PPM | 7.95E+03 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



KD 3/5/09

Hanford Analytical Services
Advanced Technologies and Laboratories International, Inc.

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | Dup |
| Type | Sample Size (mL) | 0.050 |
| Dup | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.119 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 4.71E-01 |
| Matrix | Concentration of Sample in PPM | 8.01E+03 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 2.50E+03 |
| S09T001796 | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | Dup |
| Time | Concentration of Sample (MOLARITY) | 4.71E-01 |
| 9:50PM | Concentration of Sample in PPM | 8.01E+03 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



KB 3/5/09

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | Spk |
| Type | Sample Size (mL) | 0.050 |
| Spk | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.349 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 1.39E+00 |
| Matrix | Concentration of Sample in PPM | 2.36E+04 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 2.50E+03 |
| S09T001796 | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | Spk |
| Time | Concentration of Sample (MOLARITY) | 1.39E+00 |
| 9:50PM | Concentration of Sample in PPM | 2.36E+04 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



$\frac{2.36E+04 - 7.95E+03}{1.683E+04} \times 100 = 96.4\%$ ~~$\frac{0.349 - 0.18}{0.240} \times 100 = 96.2$~~ 3/5/09

3/5/09

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | Sample # |
| Type | Sample Size (mL) | 0.050 |
| Sample # | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.112 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 4.45E-01 |
| Matrix | Concentration of Sample in PPM | 7.56E+03 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 2.50E+03 |
| S09T001773 | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | Sample # |
| Time | Concentration of Sample (MOLARITY) | 4.45E-01 |
| 9:50PM | Concentration of Sample in PPM | 7.56E+03 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



KB 3/5/09

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | CCV |
| Type | Sample Size (mL) | 0.050 |
| CCV | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.235 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 9.33E-01 |
| Matrix | Concentration of Sample in PPM | 1.59E+04 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 2.50E+03 |
| 62N15A | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | CCV |
| Time | Concentration of Sample (MOLARITY) | 9.33E-01 |
| 9:50PM | Concentration of Sample in PPM | 1.59E+04 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



KB 3/5/09

Hanford Analytical Services
Advanced Technologies and Laboratories International, Inc.

Spreadsheet For the Calculation of Hydroxide

OH (AUTO)

| Rev-Mod of Procedure Used | | |
|---|---|---|
| H-0 | | CCB |
| Type | Sample Size (mL) | 3.000 |
| CCB | Concentration of Titrant (Molarity) | 0.1985 |
| Batch # | Titrant volume at end-point in mL | 0.003 |
| 13269 | ***Enter Dilution Factor or 1*** | 1 |
| Test Code | | |
| OH | Concentration of Sample (MOLARITY) | 1.72E-04 |
| Matrix | Concentration of Sample in PPM | 2.92E+00 |
| Liquid | | |
| Sample # | Detection Limit (PPM) | 4.17E+01 |
| BLNK | | |
| Instrument Code | | |
| OH-1 | | |
| Analyst | | |
| CE | | |
| Date Analyzed | | |
| 3/4/09 | | CCB |
| Time | Concentration of Sample (MOLARITY) | 1.72E-04 |
| 9:50PM | Concentration of Sample in PPM | <41.6666666666667 |

* The specific formulae used in the calculation for this spreadsheet can be found in the applicable procedure, as identified on the worklist.



KB 3/5/09

Program version tiamo 1.1 - 36
2009-03-04 8:25:53 PM UTC-

## Calibration report

### Determination

Method . . . . . pH 7-10 Calibration
Determination start . . . . . 2009-03-04 20:13:31 UTC-8
User (full name) . . . . . Cheryl Edwards

### Results

Cal Slope . . . . . 97.90 %
Temperature . . . . . 21.0 °C



Metrohm

Fax sent by : 5093737334 CORR BC 8415 03-04-09 22:49 Pg: 2/10

Program version tiamo 1.1 - 36

User ce

2009-03-04 8:35:46 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **ICV**
Sample size, mL . . . . . 0.05
Standard Number . . . . . 62N15A
Standard Value . . . . . 16230

### Determination

Method . . . . . OH Std
Determination start . . . . . 2009-03-04 20:32:29 UTC-8
User (full name) . . . . . Cheryl Edwards
User (short name) . . . . . ce

### End points

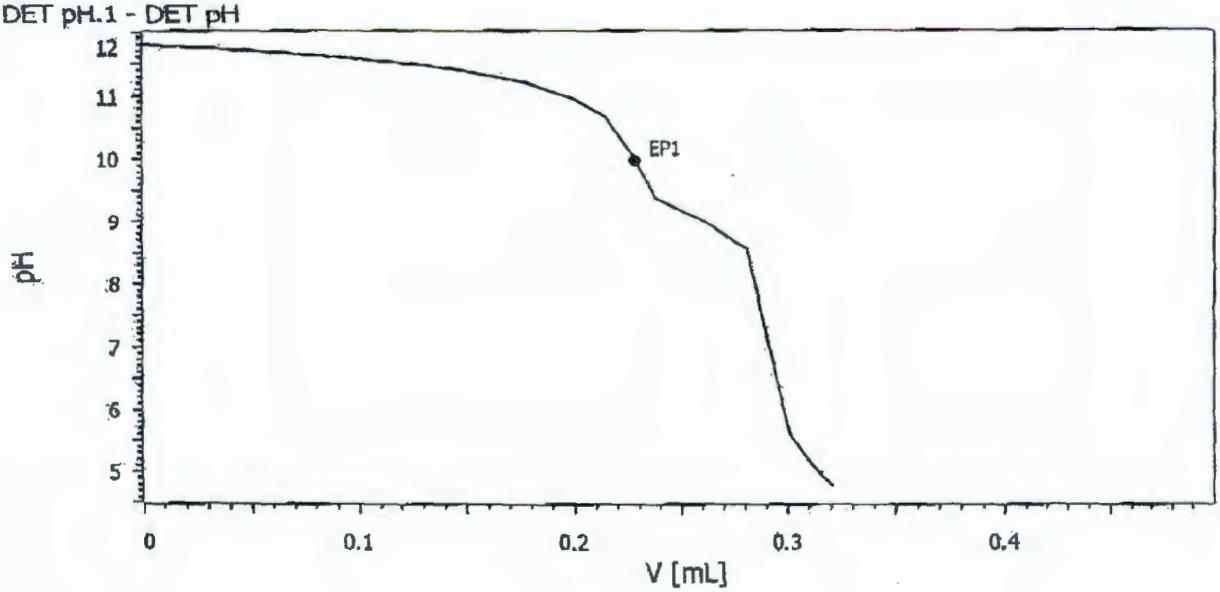
**DET pH** **DET pH.1**

EP1 . . . . . 9.973 pH . . . . . 0.2283 mL

### Results

OH . . . . . 15415.50 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 20.2 °C

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User ce 2009-03-04 8:41:48 PM UTC-

## Results report

### Sample data

Sample ID . . . . . CCB
Sample size,mL . . . . . 3.0

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-04 20:40:22 UTC-8
User (full name) . . . . . Cheryl Edwards
User (short name) . . . . . ce

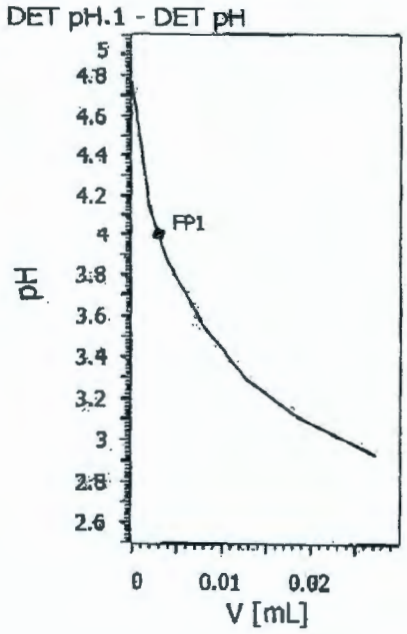
### End points

**DET pH** **DET pH.1**

FP1 . . . . . 4.000 pH . . . . . 0.0030 mL
FP2 . . . . . invalid pH . . . . . invalid mL
FP3 . . . . . invalid pH . . . . . invalid mL

### Results

OH . . . . . 20.9 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .



Program version tiamo 1.1 - 36

User ce

2009-03-04 8:56:27 PM UTC-

## Results report

### Sample data

Sample ID . . . . . S09T001~~795~~ 1796 JLHB 3-5-09

Sample size, mL . . . . . 0.05

### Determination

Method . . . . . OH Sample

Determination start . . . . . 2009-03-04 20:49:40 UTC-8

User (full name) . . . . . Cheryl Edwards

User (short name) . . . . . ce

### End points

**DET pH** **DET pH.1**

EP1 . . . . . 9.930 pH . . . . . 0.1178 mL

EP2 . . . . . 8.663 pH . . . . . 0.1829 mL

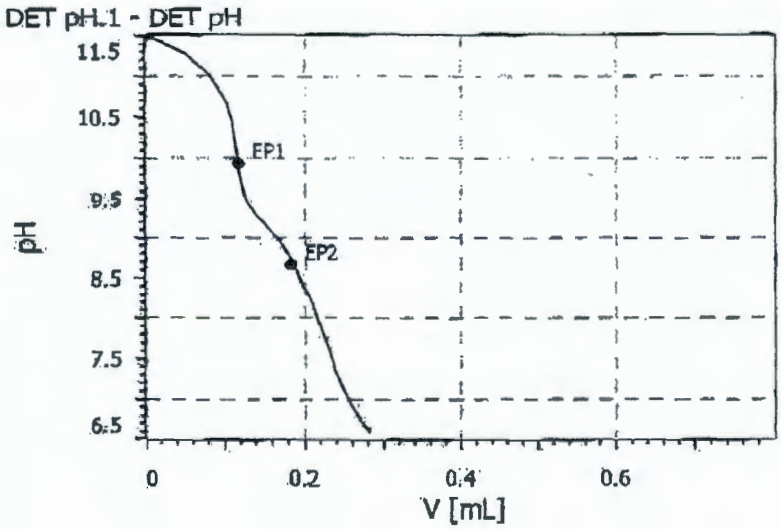
### Results

OH . . . . . 7952.26 ppm

Molarity of Titrant . . . . . 0.1985 mol/L

Temperature . . . . . 20.2 °C

Detection Limit . . . . . 553.40 ppm



Program version tiamo 1.1 - 36

User ce 2009-03-04 9:08:21 PM UTC-

## Results report

### Sample data

Sample ID . . . . . S09T001~~795~~ 1796 DUP SLHB 3-5-09

Sample size, mL . . . . . 0.05

### Determination

Method . . . . . OH Sample

Determination start . . . . . 2009-03-04 21:00:52 UTC-8

User (full name) . . . . . Cheryl Edwards

User (short name) . . . . . ce

### End points

DET pH DET pH.1

EP1 . . . . . 9.914 pH . . . . . 0.1187 mL

EP2 . . . . . 8.148 pH . . . . . 0.2107 mL

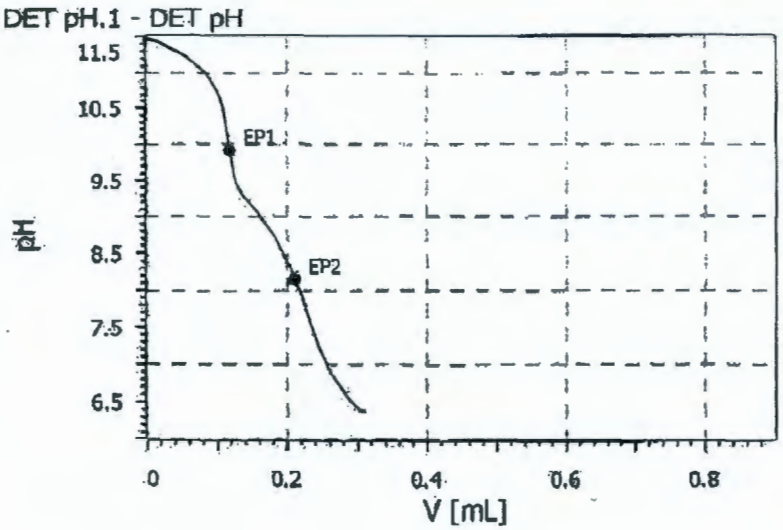
### Results

OH . . . . . 8017.13 ppm

Molarity of Titrant . . . . . 0.1985 mol/L

Temperature . . . . . 20.5 °C

Detection Limit . . . . . 553.40 ppm



Program version tiamo 1.1 - 36

User ce

2009-03-04 9:17:26 PM UTC-

## Results report

### Sample data

1796

Sample ID . . . . . S09T001~~795~~ SPK SLHB 3-5-09

Sample size, mL . . . . . 0.05

Standard Number . . . . . 62N15A

Standard Value . . . . . 16230

Volume Spk used . . . . . 0.05

### Determination

Method . . . . . OH SPK

Determination start . . . . . 2009-03-04 21:12:37 UTC-8

User (full name) . . . . . Cheryl Edwards

User (short name) . . . . . ce

### End points

**DET pH** **DET pH.1**

EP1 . . . . . 10.130 pH . . . . . 0.3492 mL

EP2 . . . . . 8.529 pH . . . . . 0.4876 mL

### Results

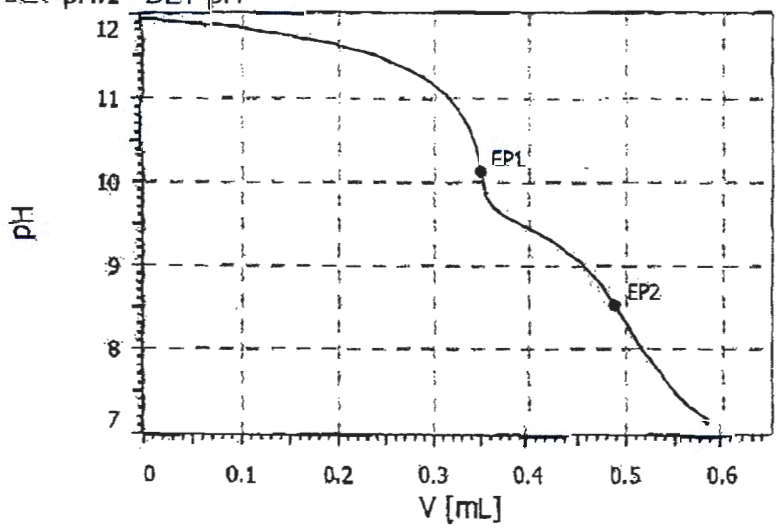
OH . . . . . 23575.91 ppm

Molarity of Titrant . . . . . 96.26 %

Temperature . . . . . .

Detection Limit . . . . . 20.3 °C

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User ce

2009-03-04 9:26:42 PM UTC-

## Results report

### Sample data

1773

Sample ID . . . . . S09T001~~772~~ SLHB

Sample size, mL . . . . . 0.05 3-5-09

### Determination

Method . . . . . OH Sample

Determination start . . . . . 2009-03-04 21:23:09 UTC-8

User (full name) . . . . . Cheryl Edwards

User (short name) . . . . . ce

### End points

**DET pH** **DET pH.1**

EP1 . . . . . 9.964 pH . . . . . 0.1120 mL

EP2 . . . . . 8.436 pH . . . . . 0.1956 mL

### Results

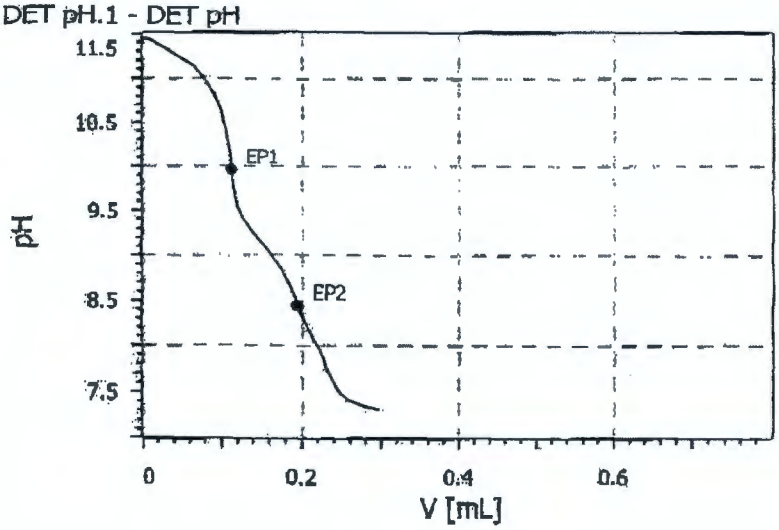
OH . . . . . 7564.31 ppm

Molarity of Titrant . . . . . 0.1985 mol/L

Temperature . . . . . 20.3 °C

Detection Limit . . . . . 553.40 ppm

DET pH.1 - DET pH






Fax sent by : 5093737334 CORR BC 184 03-04-09 22:50 Pg: 8/10

Program version tiamo 1.1 - 36

User ce 2009-03-04 9:35:54 PM UTC-

## Results report

### Sample data

Sample ID . . . . . CCV
Sample size, mL . . . . . 0.05
Standard Number . . . . . 62N15A
Standard Value . . . . . 16230

### Determination

Method . . . . . OH Std
Determination start . . . . . 2009-03-04 21:32:33 UTC-8
User (full name) . . . . . Cheryl Edwards
User (short name) . . . . . ce

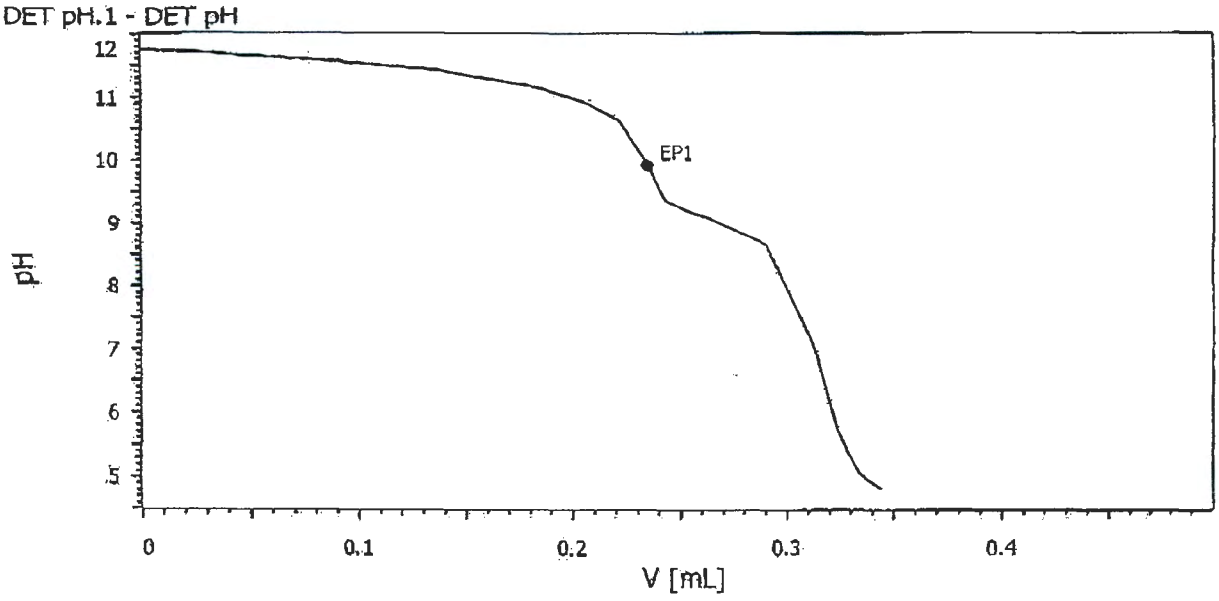
### End points

DET pH DET pH.1
EP1 . . . . . 9.929 pH . . . . . 0.2349 mL

### Results

OH . . . . . 15857.06 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 21.0 °C

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User ce

2009-03-04 9:39:26 PM UTC-

## Results report

### Sample data

Sample ID . . . . . BLANK
Sample size,mL . . . . . 3.0

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-04 21:38:11 UTC-8
User (full name) . . . . . Cheryl Edwards
User (short name) . . . . . ce

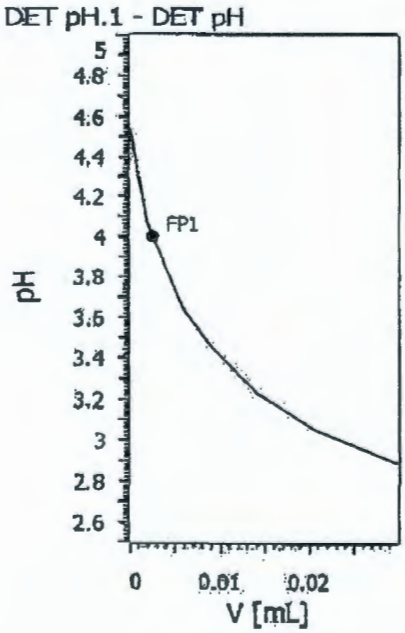
### End points

**DET pH** **DET pH.1**

| | | | | |
|---|---|---|---|---|
| FP1 | 4.000 | pH | 0.0026 | mL |
| FP2 | invalid | pH | invalid | mL |
| FP3 | invalid | pH | invalid | mL |

### Results

OH . . . . . 21.0 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .






Fax sent by : 5093737334 CORR BC 2225 03-04-09 22:50 Pg: 10/10

# LABCORE Completed Batch Report for Batch# 00013324

**Analyst:** Purinton, Tony **Book#:** 62N15A

**Instrument:** Metrohm Titrator

**Method:** OH, LA-211-102 Rev/Mod I-0

**Specification:** AW106 EVAP3

**Prep Batch:** ~~N/A~~ AW 3/11/09

**Batch Comment:** ~~AN~~ 106 Evap for Oh adp

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 STD | S0903090069 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.5143E+04 | | | 2.50E+03 | ug/mL | 93.304 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 BLNK | S0903090070 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 SAMPLE | S09T001808 | | 0 | 0 | Hydroxide | LIQUID | N/A | 7.9488E+03 | | | 2.50E+03 | ug/mL | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 DUP | S0903090071 | S09T001808 | 0 | 0 | Hydroxide | LIQUID | 7.9488E+03 | 7.8670E+03 | | | 2.50E+03 | ug/mL | 1.0342 | % RPD | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SPK | S0903090072 | S09T001808 | 0 | 0 | Hydroxide | LIQUID | 16230 | 2.4211E+04 | | | 2.50E+03 | ug/mL | 100.2 | % Recovery | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 CCV | S0903090075 | | 0 | 0 | Hydroxide | LIQUID | 16230 | 1.5001E+04 | | | 2.50E+03 | ug/mL | 92.43 | % Recovery | |
| Sample Sequence 7 | | | | | | | | | | | | | | | |
| 7 CCB | S0903090076 | | 0 | 0 | Hydroxide | LIQUID | | <4.1700E+01 | | | 41.7 | ug/mL | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013324

3/11/09
Reviewer Signature Date

2nd Reviewer: 3/11/09

PM: 3/17/09
QA: 3.17.09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013324

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903090069 | STD | | | | |
| 2 | S0903090070 | BLNK | | | | |
| 3 | S09T001808 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |
| 4 | S0903090071 | DUP | S09T001808 | | | |
| 5 | S0903090072 | SPK | S09T001808 | | | |
| 6 | S0903090075 | CCV | | | | |
| 7 | S0903090076 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/9/2009 7:18:15PM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013324

**Analyst:** Purinton, Tony **Standard ID / Book#:** 62N15A

**Instrument:** Metrohm Titrator

**Method:** OH, LA-TOC 211-102 Rev/Mod I-0

**Prep Batch:**

**Batch Comment:** AN 106 Evap for Oh adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | STD | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 2 | BLNK | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 3 | SAMPLE | S09T001808 | 0 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | Hydroxide | | | | | |
| 4 | DUP | S09T001808 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 5 | SPK | S09T001808 | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 6 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |
| 7 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Hydroxide | | | | | |

## Final Page for Batch# 00013324

Tracy Maling 3/09/09 — Analyst Signature — Date

3/11/09 — Data Entry Signature — Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

PROJECT: AW-106

LA-211-102 OH (Auto)

WORKLIST 00013324 ANALYST IRM DATE 3/09/09 TIME 1910

| | |
|---|---|
| OH Standard Number / Volume (mL) | 62N15A 10.05 |
| Spike Number / Volume (mL) | 62N15A 10.05 |
| Molarity of Titrant | 1.004 |

| Sample Number Type (sam, dup) | Sample Volume (mL) | EP 1 Reading (mL) | Comments |
|---|---|---|---|
| Standard | 0.05 | 0.2243 | |
| Blank | 3 | 0.0049 | |
| S09T001808 | 0.05 | 0.1177 | |
| 1808 Dup | 0.05 | 0.1165 | |
| 1808 SPK | 0.05 | 0.3586 | |
| CCV | 0.05 | 0.2222 | |
| CCB | 3 | 0.0054 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Additional Comments BaCl 1.00M / 30N25F
Cal Slope 99.20

tiamo™

Program version tiamo 1.1 - 36
2009-03-09 6:11:14 PM UTC-

## Calibration report

### Determination

Method . . . . . pH 7-10 Calibration
Determination start . . . . . 2009-03-09 18:08:48 UTC-8
User (full name) . . . . . Tony Purinton

### Results

Cal Slope . . . . . 99.20 %
Temperature . . . . . 19.6 °C

03/09/2009 MON 19:57 [TX/RX NO 5477] 003

Program version tiamo 1.1 - 36

User adp 2009-03-096:19:24 PM UTC-

## Results report

### Sample data

| | |
|---|---|
| Sample ID | STD ICV |
| Sample size, mL | 0.05 |
| Standard Number | 62N15A |
| Standard Value | 16230 |

### Determination

| | |
|---|---|
| Method | OH Std |
| Determination start | 2009-03-09 18:16:24 UTC-8 |
| User (full name) | Tony Purinton |
| User (short name) | adp |

### End points

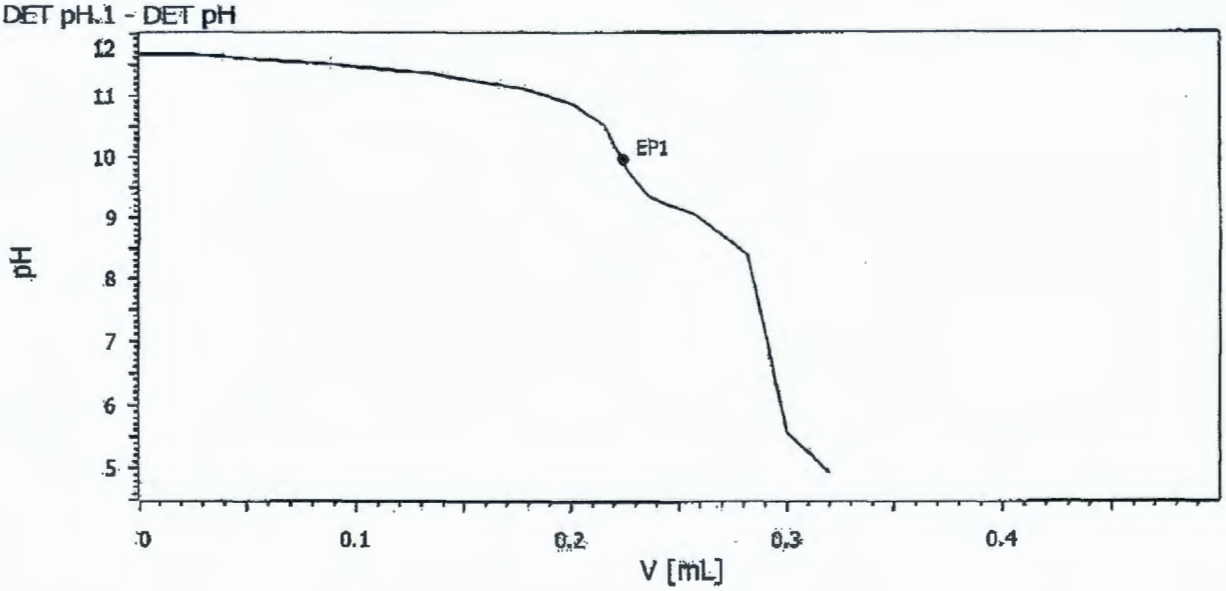
DET pH DET pH.1

EP1 9.961 pH 0.2243 mL

### Results

| | | |
|---|---|---|
| OH | 15143.25 | ppm |
| Molarity of Titrant | 0.1985 | mol/L |
| Temperature | 20.1 | °C |

DET pH.1 - DET pH



Program version tiamo 1.1 - 36

User adp 2009-03-096:22:38 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **ICB**
Sample size,mL . . . . . 3

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-09 18:21:29 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

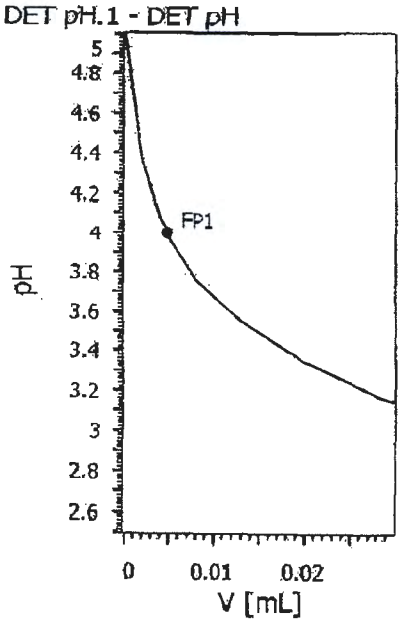
### End points

**DET pH** **DET pH.1**

| | | | | | |
|---|---|---|---|---|---|
| FP1 | 4.000 | pH | 0.0049 | mL |
| FP2 | invalid | pH | invalid | mL |
| FP3 | invalid | pH | invalid | mL |

### Results

OH . . . . . 19.6 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .



Program version tiamo 1.1 - 36

User adp

2009-03-096:30:16 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **S09T001808**
Sample size, mL . . . . . 0.05

### Determination

Method . . . . . OH Sample
Determination start . . . . . 2009-03-09 18:25:33 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

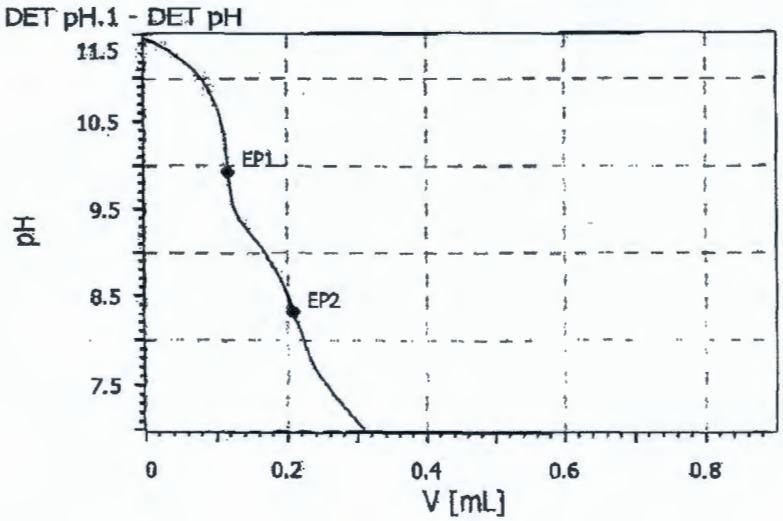
### End points

**DET pH** **DET pH.1**

EP1 . . . . . 9.927 pH . . . . . 0.1177 mL
EP2 . . . . . 8.316 pH . . . . . 0.2082 mL

### Results

OH . . . . . 7948.78 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 20.0 °C
Detection Limit . . . . . 553.40 ppm



Program version tiamo 1.1 - 36

User adp

2009-03-09 6:37:44 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **S09T001808 DUP**
Sample size, mL . . . . . 0.05

### Determination

Method . . . . . OH Sample
Determination start . . . . . 2009-03-09 18:34:10 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

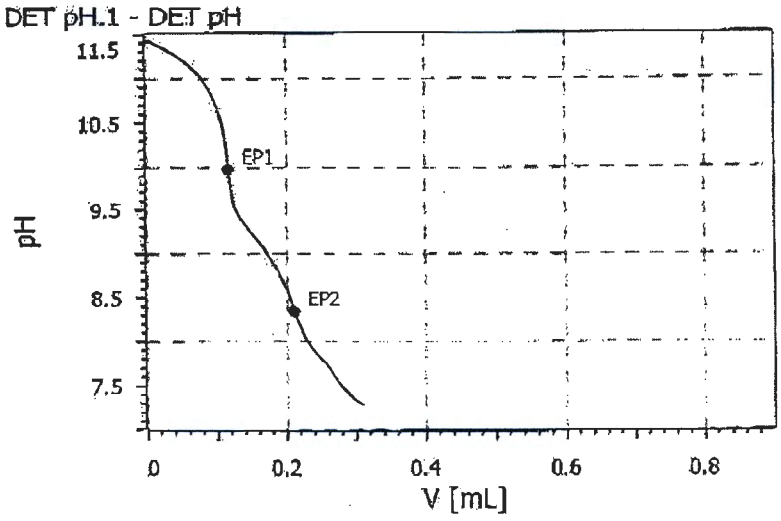
### End points

**DET pH** **DET pH.1**

EP1 . . . . . 9.979 pH . . . . . 0.1165 mL
EP2 . . . . . 8.346 pH . . . . . 0.2104 mL

### Results

OH . . . . . 7866.95 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 19.8 °C
Detection Limit . . . . . 553.40 ppm



Program version tiamo 1.1 - 36

User adp

2009-03-096:47:19 PM UTC-

## Results report

### Sample data

| | |
|---|---|
| Sample ID | **S09T001808 SPK** |
| Sample size, mL | 0.05 |
| Standard Number | 62N15A |
| Standard Value | 16230 |
| Volume Spk used | 0.05 |

### Determination

| | |
|---|---|
| Method | OH SPK |
| Determination start | 2009-03-09 18:43:12 UTC-8 |
| User (full name) | Tony Purinton |
| User (short name) | adp |

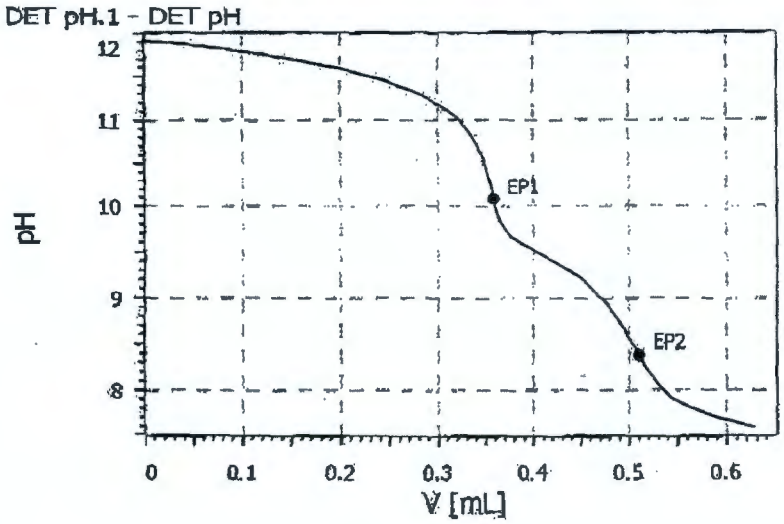
### End points

**DET pH** **DET pH.1**

| | | | | |
|---|---|---|---|---|
| EP1 | 10.089 | pH | 0.3586 | mL |
| EP2 | 8.378 | pH | 0.5104 | mL |

### Results

| | | |
|---|---|---|
| OH | 24211.03 | ppm |
| Molarity of Titrant | 100.20 | % |
| Temperature | | |
| Detection Limit | 19.4 | °C |



Program version tiamo 1.1 - 36

User adp

2009-03-096:55:48 PM UTC-

## Results report

### Sample data

Sample ID . . . . . CCV
Sample size, mL . . . . . 0.05
Standard Number . . . . . 62N15A
Standard Value . . . . . 16230

### Determination

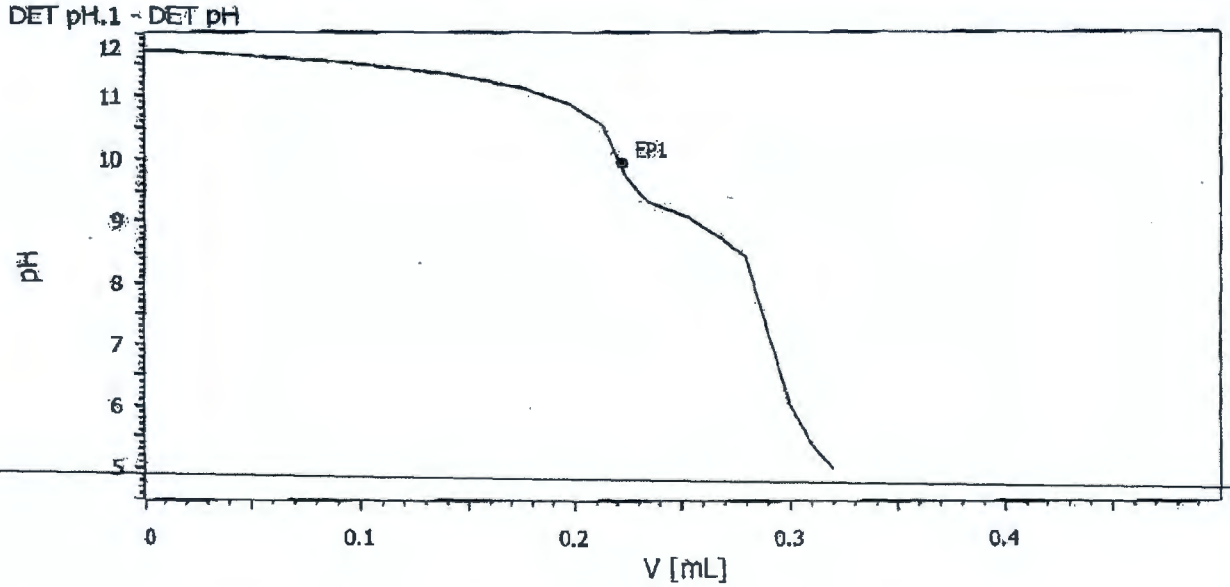
Method . . . . . OH Std
Determination start . . . . . 2009-03-09 18:53:21 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

### End points

DET pH DET pH.1
EP1 . . . . . 9.957 pH . . . . . 0.2222 mL

### Results

OH . . . . . 15001.33 ppm
Molarity of Titrant . . . . . 0.1985 mol/L
Temperature . . . . . 20.2 °C



Program version tiamo 1.1 - 36

User adp 2009-03-09 6:59:20 PM UTC-

## Results report

### Sample data

Sample ID . . . . . **CCB**
Sample size,mL . . . . . 3

### Determination

Method . . . . . OH Blank
Determination start . . . . . 2009-03-09 18:58:11 UTC-8
User (full name) . . . . . Tony Purinton
User (short name) . . . . . adp

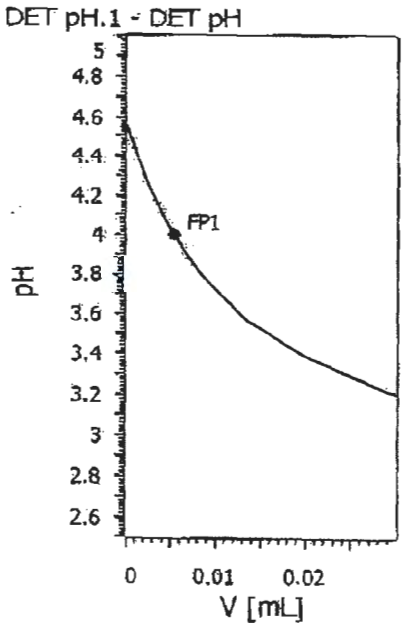
### End points

DET pH **DET pH.1**

| | | | | |
|---|---|---|---|---|
| FP1 | 4.000 | pH | 0.0054 | mL |
| FP2 | invalid | pH | invalid | mL |
| FP3 | invalid | pH | invalid | mL |

### Results

OH . . . . . 20.0 °C
Molarity of Titrant . . . . . .
Temperature . . . . . .



# LABCORE Completed Batch Report for Batch# 00013445

**Analyst:** Purinton, Tony

**Book#:** 12N14B

**Instrument:** DSC5/TGA7 Analyzer

**Method:** DSC-TA, LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** DSC for AW106 EVAP3 adp

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | LCS-INST | S0903190006 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 28.2 | | | | Joules/g | 99.121 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | | |
| 2 | LCS-INST | S0903190007 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 27.44 | | | | Joules/g | 96.45 | % Recovery | |
| Sample Sequence 3 | | | | | | | | | | | | | | | | |
| 3 | SAMPLE | S09T001795 | | 0 | 0 | DSC Exotherm | LIQUID | N/A | 0 | | | | Joules/g | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | | |
| 4 | DUP | S0903190008 | S09T001795 | 0 | 0 | DSC Exotherm | LIQUID | 0 | 0 | | | | Joules/g | 0 | % RPD | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013445

Brian Dale 3/19/09
Reviewer Signature Date

2nd reviewer: K B 3/19/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013445

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903190006 | LCS-INST | | | | |
| 2 | S0903190007 | LCS-INST | | | | |
| 3 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 4 | S0903190008 | DUP | S09T001795 | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

*3/19/2009 8:44:55AM*
*IncompleteBatchShort Version 2.7.22*
*batchreports 2.7.25*



# LABCORE Data Entry Template for Batch# 00013445

**Analyst:** Purinton, Tony **Standard ID / Book#:** 12N14B
**Instrument:** DSC5/TGA7 Analyzer
**Method:** DSC-TA, LA-514-115 Rev/Mod E-0
**Prep Batch:**
**Batch Comment:** DSC for AW106 EVAP3 adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 2 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 3 | SAMPLE | S09T001795 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 4 | DUP | S09T001795 | 0 | | LIQUID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |

## Final Page for Batch# 00013445

Tony Purinton 3/17/09
**Analyst Signature** **Date**

3/19/09
**Data Entry Signature** **Date**

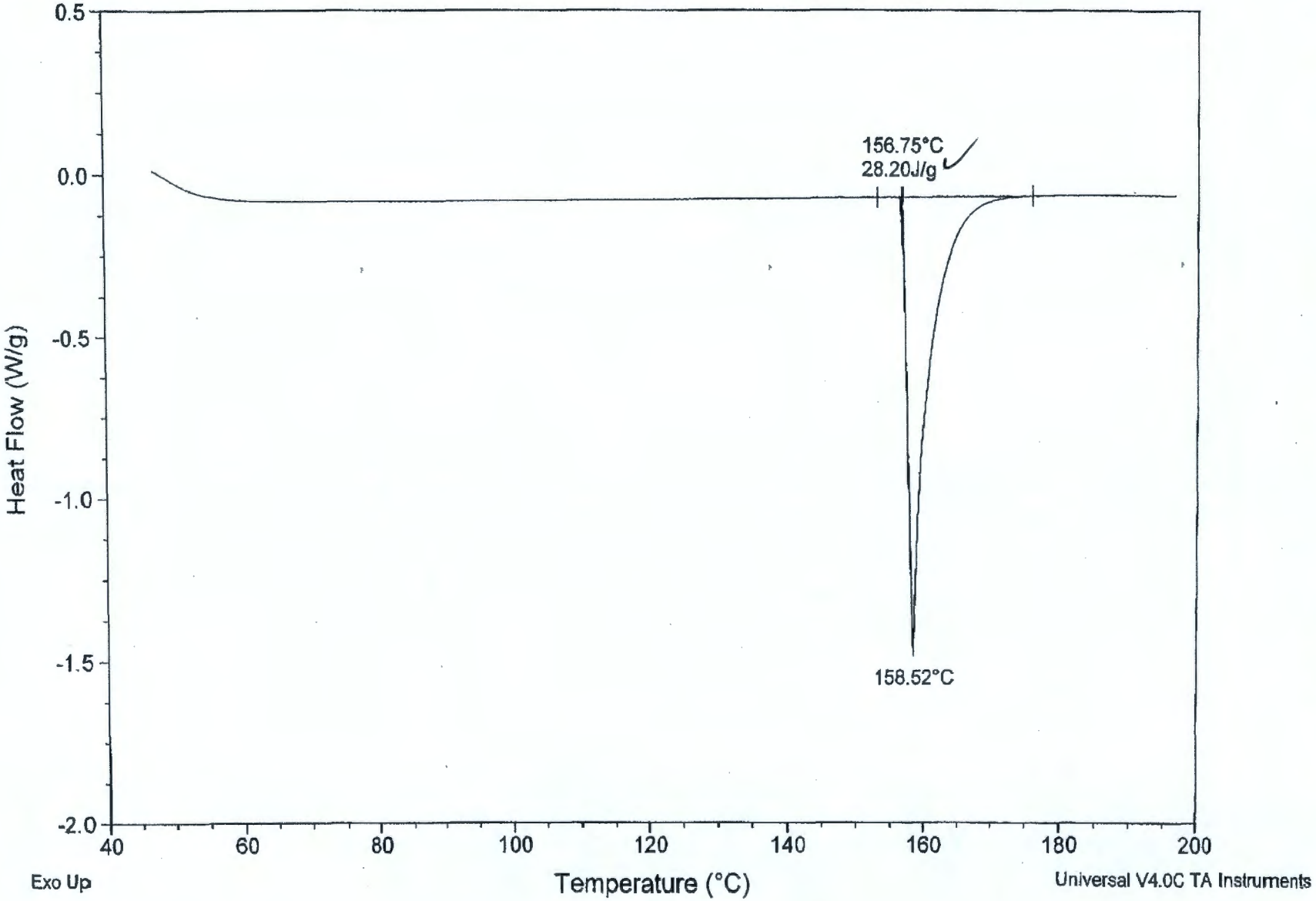
*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Sample: INDIUM
Size: 12.4600 mg
Method: Standard
Comment: 12N14B

# DSC

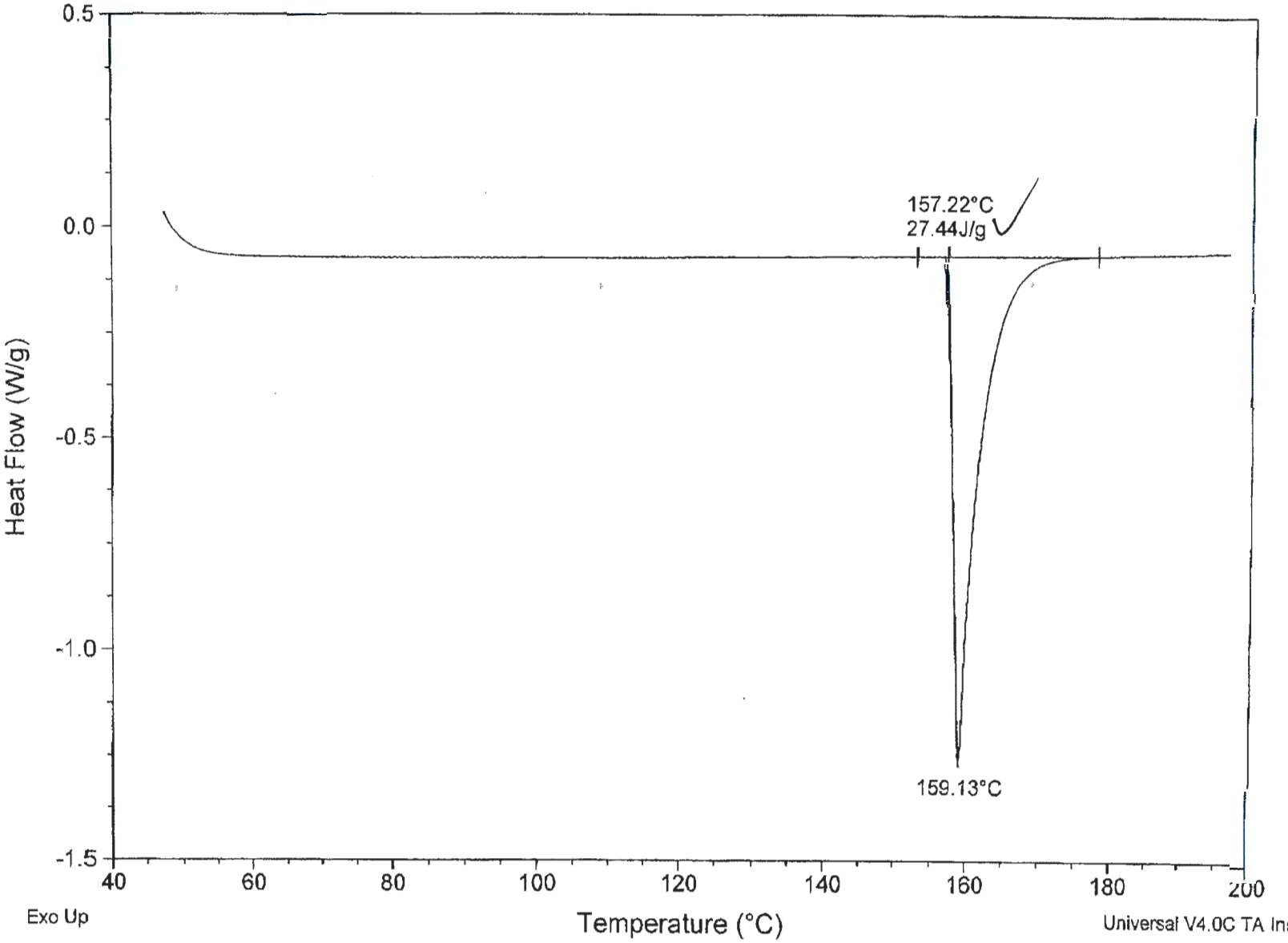
File: C:\TA\Data\DSC-5\DSC-5 2008\IN090317.B03
Operator: ADP
Run Date: 17-Mar-2009 12:12
Instrument: 2920 DSC V2.6A



Sample: INDIUM
Size: 12.2900 mg
Method: Standard
Comment: 12N14B

DSC

File: C:\TA\Data\DSC-5\DSC-5 2006\IN090317.A03
Operator: ADP
Run Date: 17-Mar-2009 12:12
Instrument: 2920 DSC V2.6A

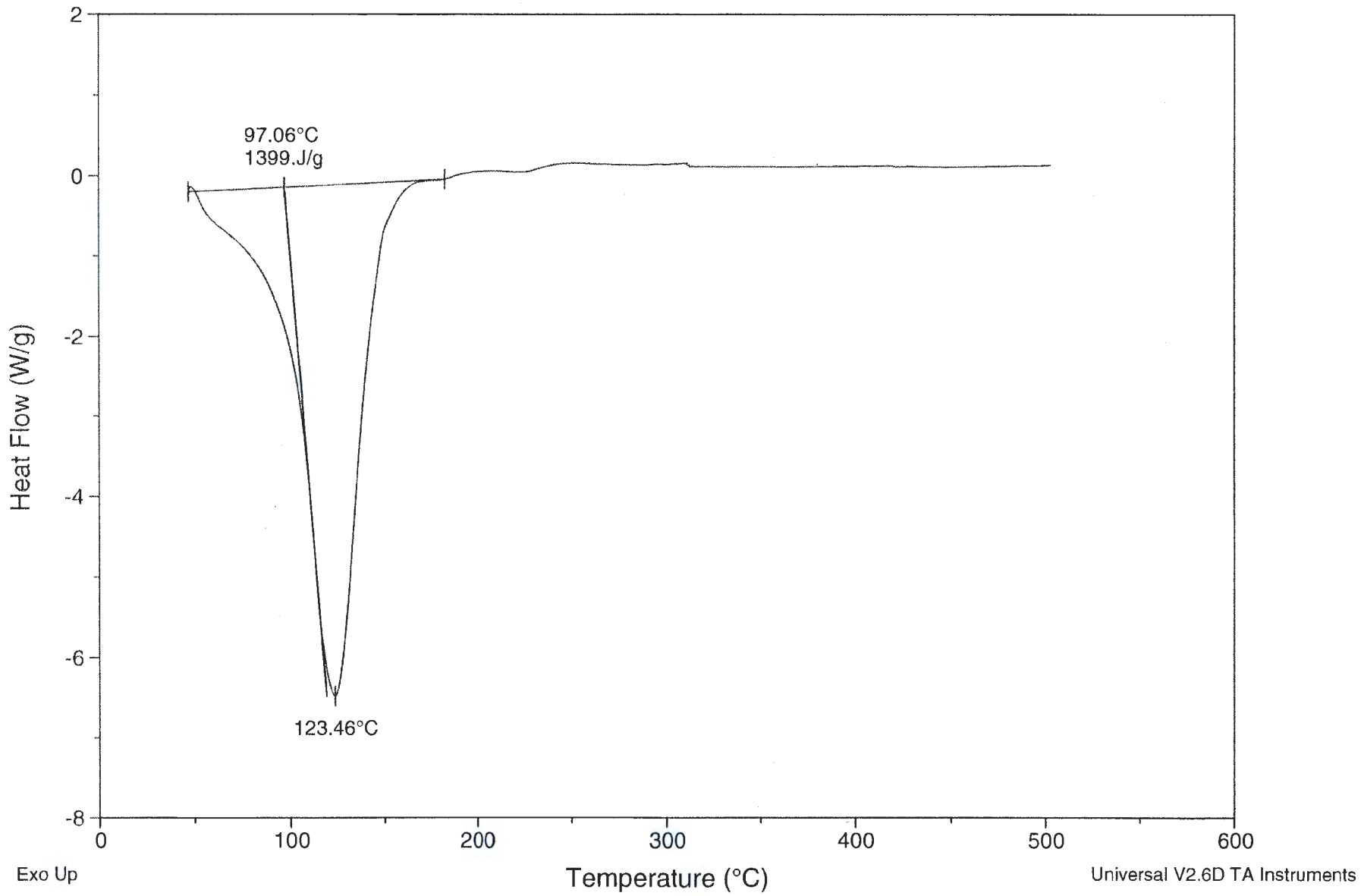



Universal V4.0C TA Instruments

Sample: S09T001795
Size: 13.1900 mg
Method: Sample
Comment: SAM

DSC

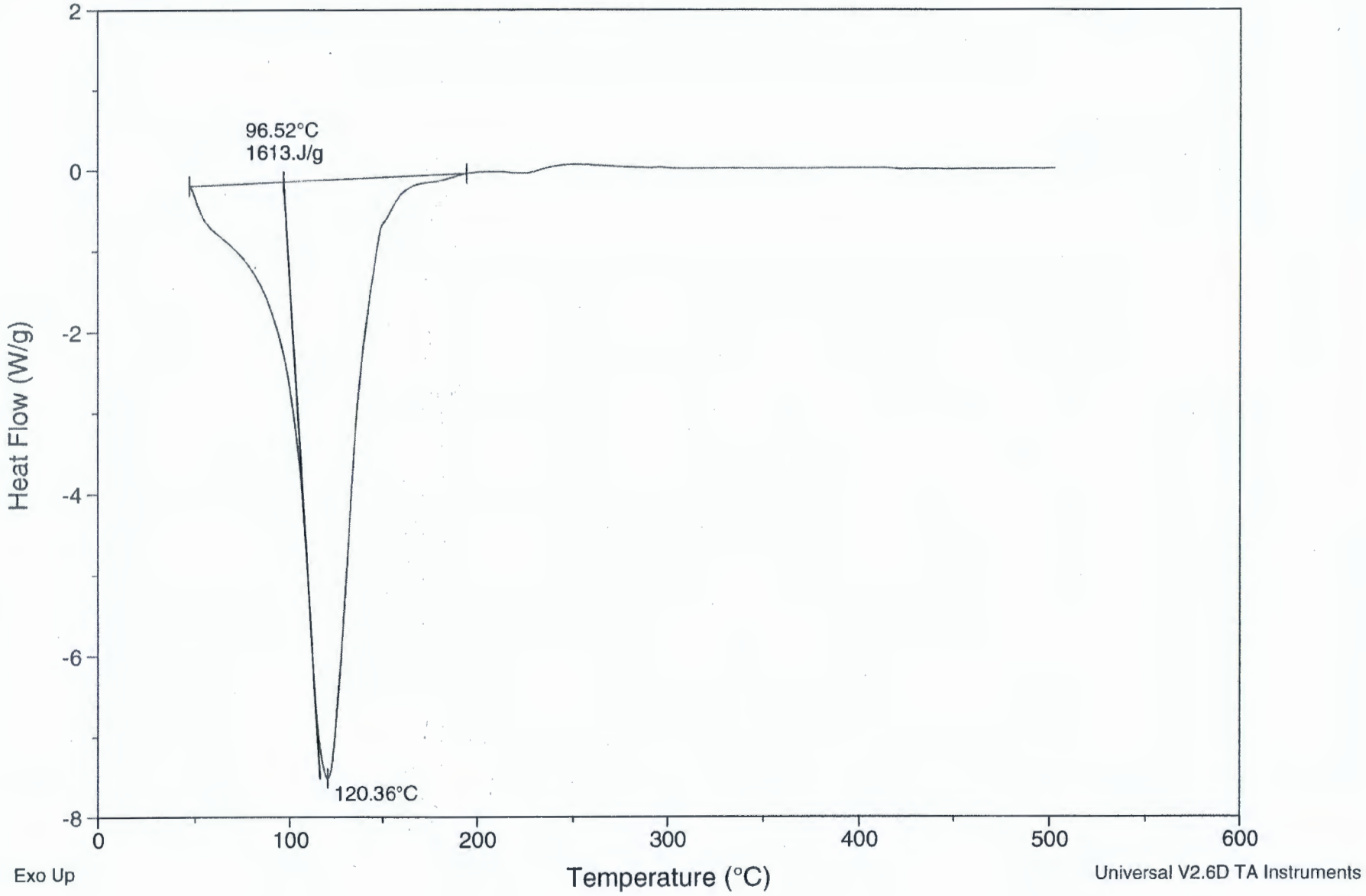
File: C:...\SAM090317.A01
Operator: ADP
Run Date: 17-Mar-09 12:58



Sample: S09T001795 D
Size: 11.1300 mg
Method: Sample
Comment: DUP

DSC

File: C:...\SAM090317.B01
Operator: ADP
Run Date: 17-Mar-09 12:58



# LABCORE Completed Batch Report for Batch# 00013448

**Analyst:** Purinton, Tony **Book#:** 12N14B

**Instrument:** DSC4/TGA6 Analyzer

**Method:** DSC-TA, LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 for DSC adp

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 LCS-INST | S0903190009 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 24.31 | | | | Joules/g | 85.448 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 LCS-INST | S0903190010 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 28.25 | | | | Joules/g | 99.297 | % Recovery | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 SAMPLE | S09T001773 | | 0 | 0 | DSC Exotherm | LIQUID | N/A | 6.55 | | | | Joules/g | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 DUP | S0903190011 | S09T001773 | 0 | 0 | DSC Exotherm | LIQUID | 6.55 | 9.403 | | | | Joules/g | 35.768 | % RPD | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SAMPLE | S09T001783 | | 0 | 0 | DSC Exotherm | LIQUID | N/A | 0 | | | | Joules/g | | | |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 SAMPLE | S09T001807 | | 0 | 0 | DSC Exotherm | LIQUID | N/A | 0 | | | | Joules/g | | | |

Re analyzed in batch #13501 BND 3/25/09

**Comments Section:** % RPD > control limit for sample S09T001773 and Dup. results. Repeat analysis might not guarantee a better result.

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013448

Brian Dank 3/19/09
Reviewer Signature Date

2nd reviewer: K B

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013448

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903190009 | LCS-INST | | | | |
| 2 | S0903190010 | LCS-INST | | | | |
| 3 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 4 | S0903190011 | DUP | S09T001773 | | | |
| 5 | S09T001783 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 6 | S09T001807 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

*3/19/2009 8:50:35AM*
*IncompleteBatchShort Version 2.7.22*
*batchreports 2.7.25*



# LABCORE Data Entry Template for Batch# 00013448

**Analyst:** Purinton, Tony **Standard ID / Book#:** 12N14B
**Instrument:** DSC4/TGA6 Analyzer
**Method:** DSC-TA, LA-514-115 Rev/Mod E-0
**Prep Batch:**
**Batch Comment:** AW106 EVAP3 for DSC adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 2 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 3 | SAMPLE | S09T001773 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 4 | DUP | S09T001773 | 0 | | LIQUID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 5 | SAMPLE | S09T001783 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 6 | SAMPLE | S09T001807 | 0 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm | | | | | |

## Final Page for Batch# 00013448

Anthony Purinton 3/17/09
**Analyst Signature** **Date**

Cheryl Edwards 3/19/09
**Data Entry Signature** **Date**

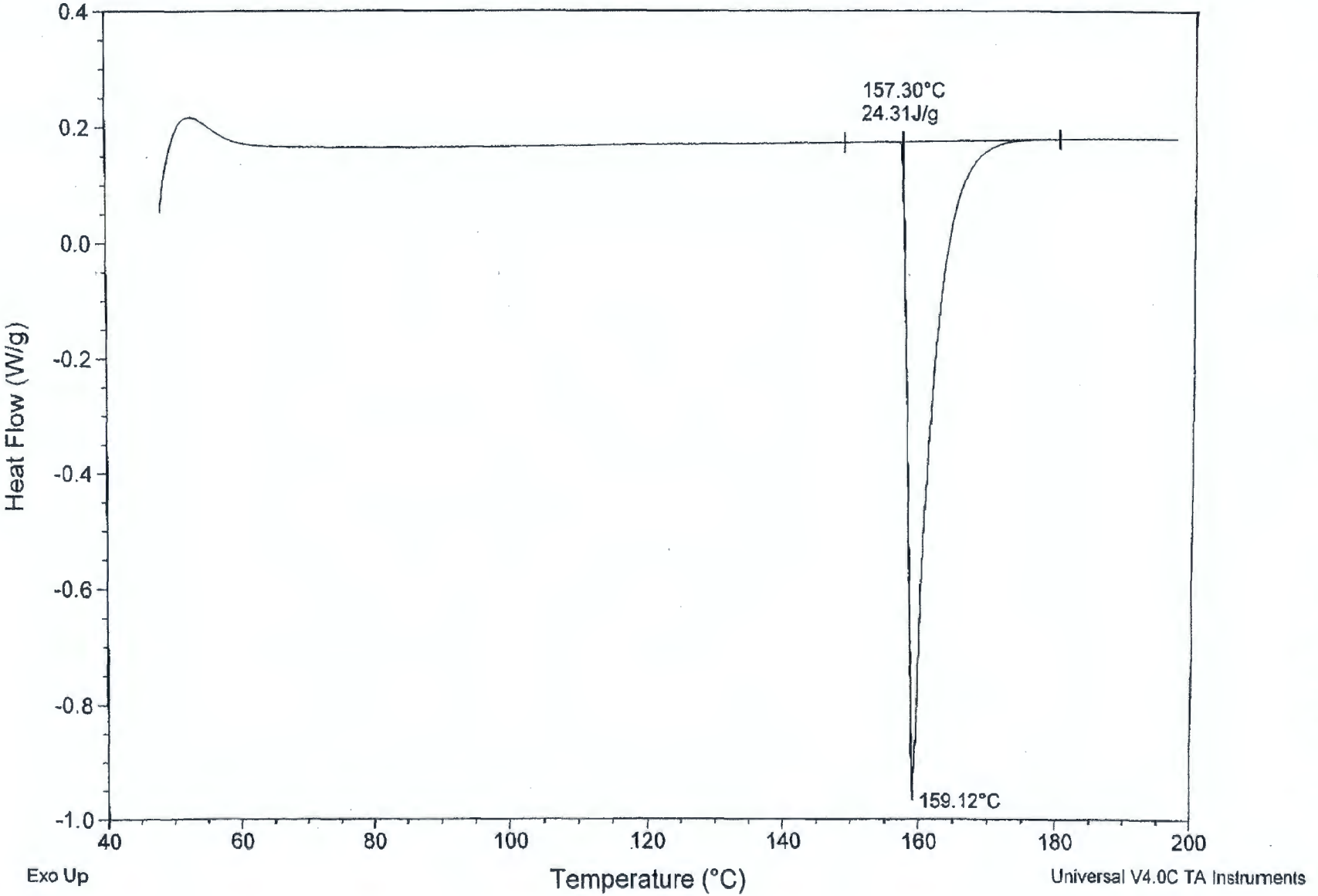
*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Sample: INDIUM
Size: 12.4600 mg
Method: Standard
Comment: 12N14B

# DSC

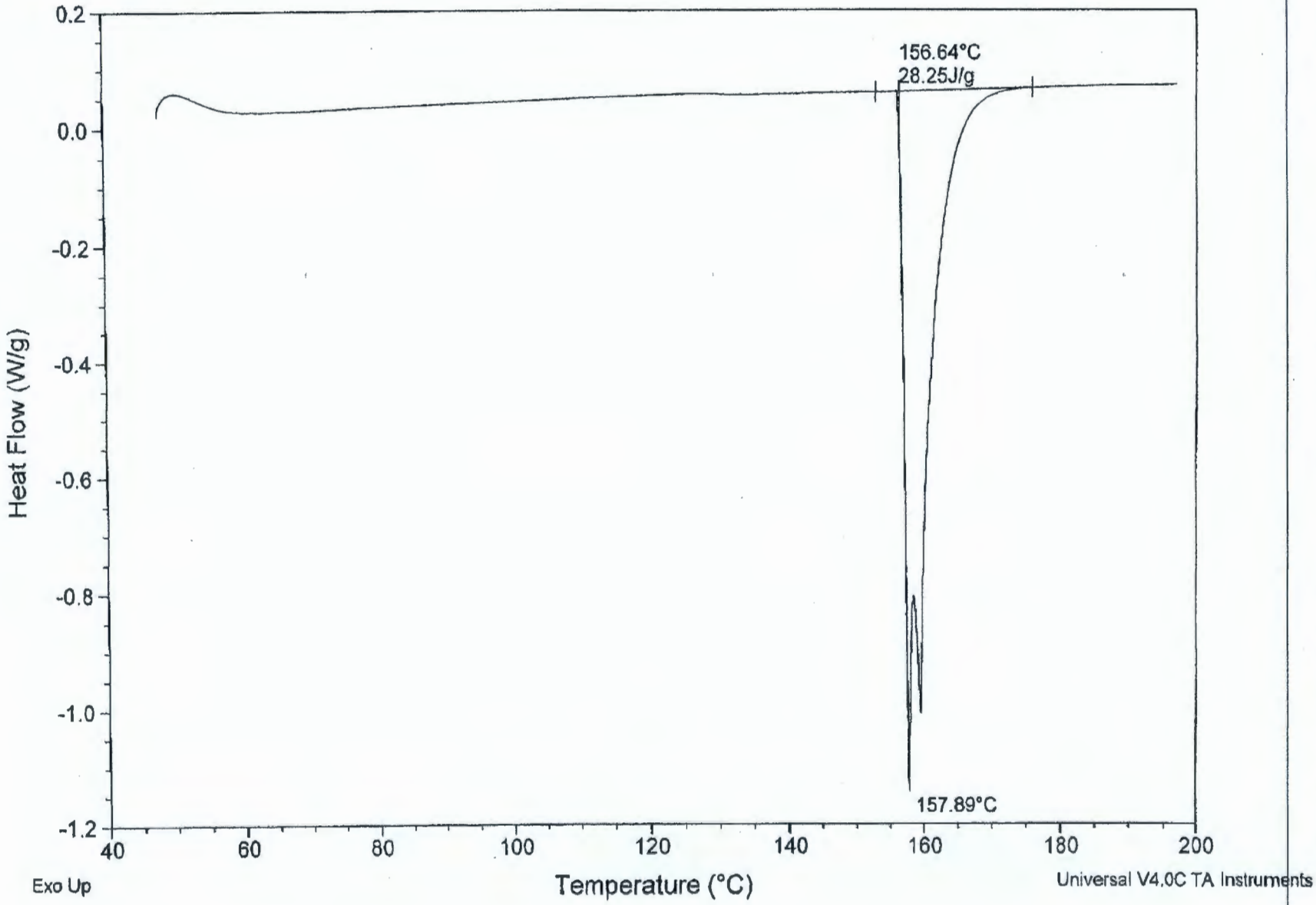
File: C:\TA\Data\DSC-4\DSC-4 2008\IN090317.A03
Operator: ADP
Run Date: 17-Mar-2009 11:18
Instrument: 2920 DSC V2.6A



Sample: INDIUM
Size: 12.4500 mg
Method: Standard
Comment: 12N14B

DSC

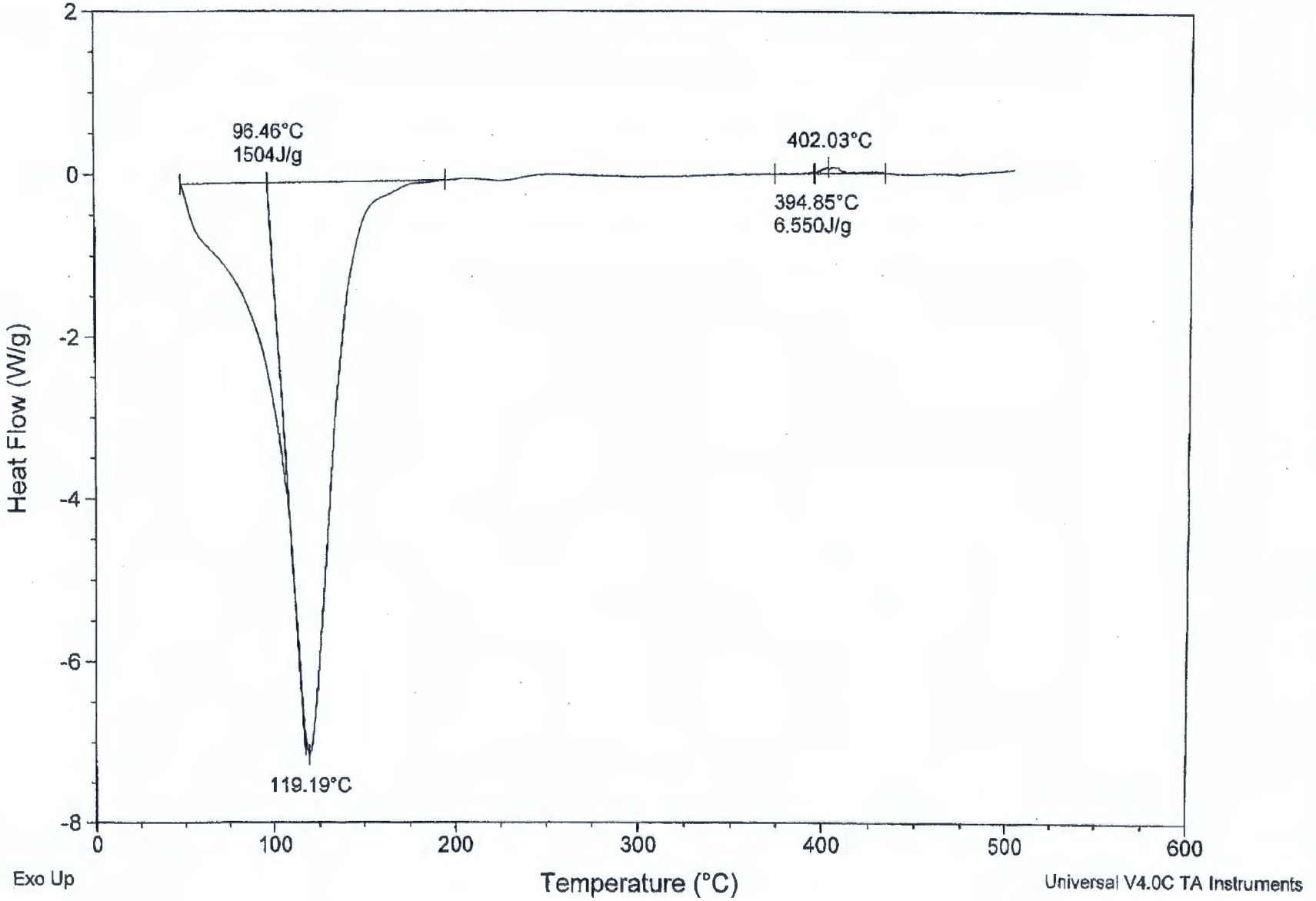
File: C:\TA\Data\DSC-4\IN090317.B03
Operator: ADP
Run Date: 17-Mar-2009 11:18
Instrument: 2920 DSC V2.6A



Sample: S09T001773
Size: 9.8000 mg
Method: Sample
Comment: SAM

# DSC

File: C:...\DSC-4\DSC-4 2008\SAM090317.A01
Operator: ADP
Run Date: 17-Mar-2009 11:55
Instrument: 2920 DSC V2.6A

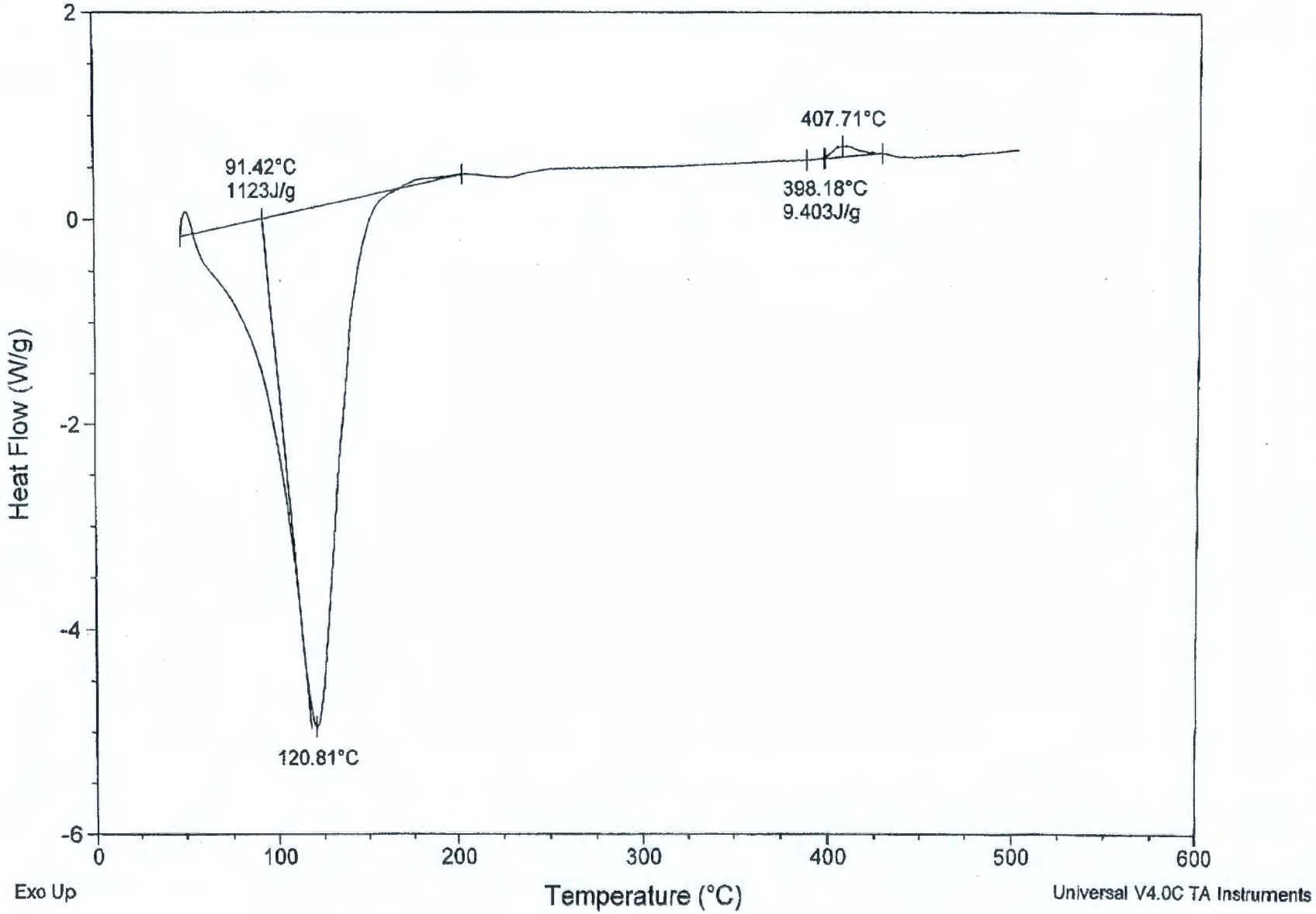


RPP-RPT-40709 Rev. 1

Sample: S09T001773D
Size: 9.1500 mg
Method: Sample
Comment: DUP

# DSC

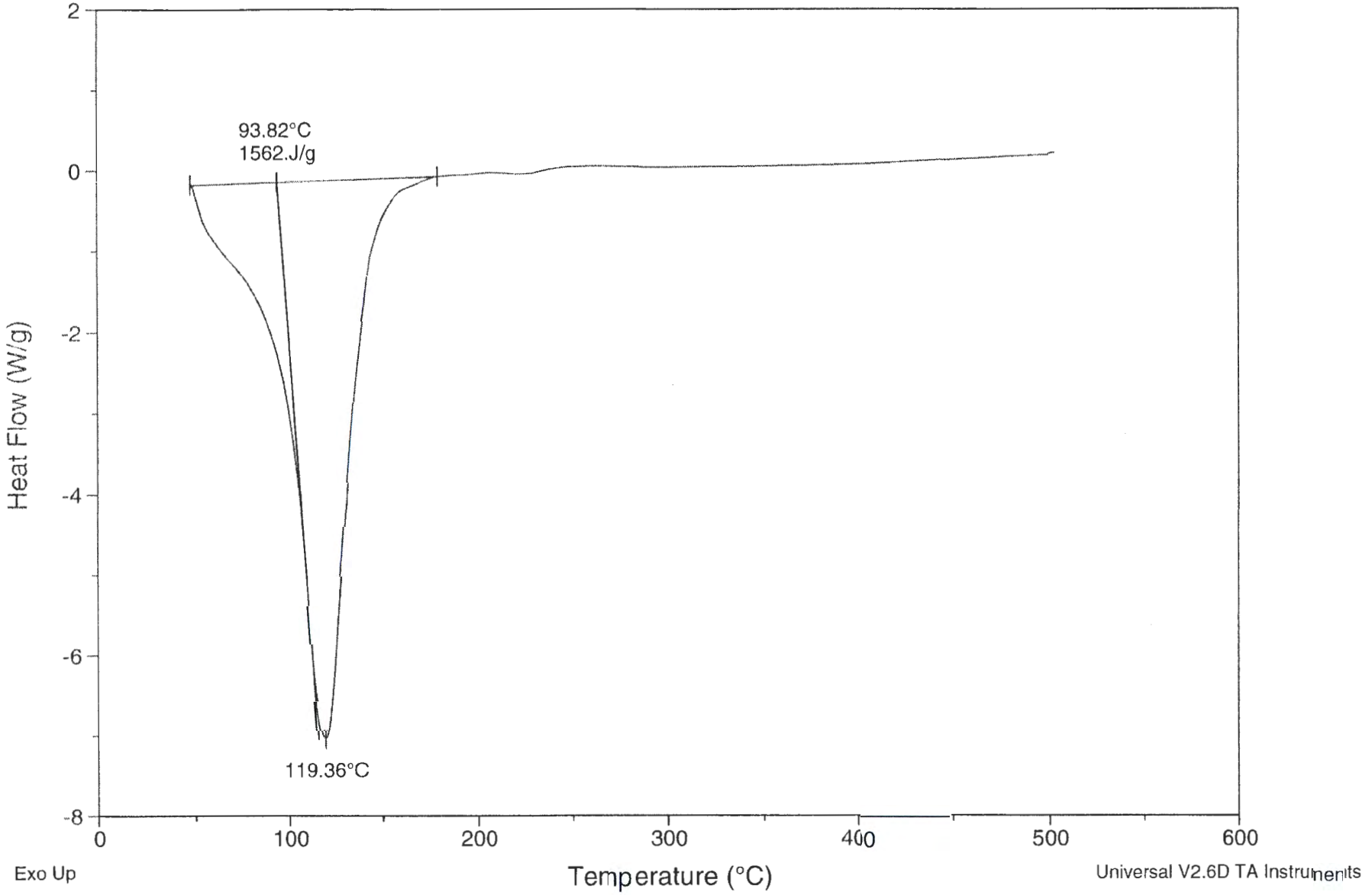
File: C:...\DSC-4\DSC-4 2008\SAM090317.B01
Operator: ADP
Run Date: 17-Mar-2009 11:55
Instrument: 2920 DSC V2.6A



Sample: S09T001783 SAM
Size: 10.8800 mg
Method: Sample
Comment: SAM

DSC

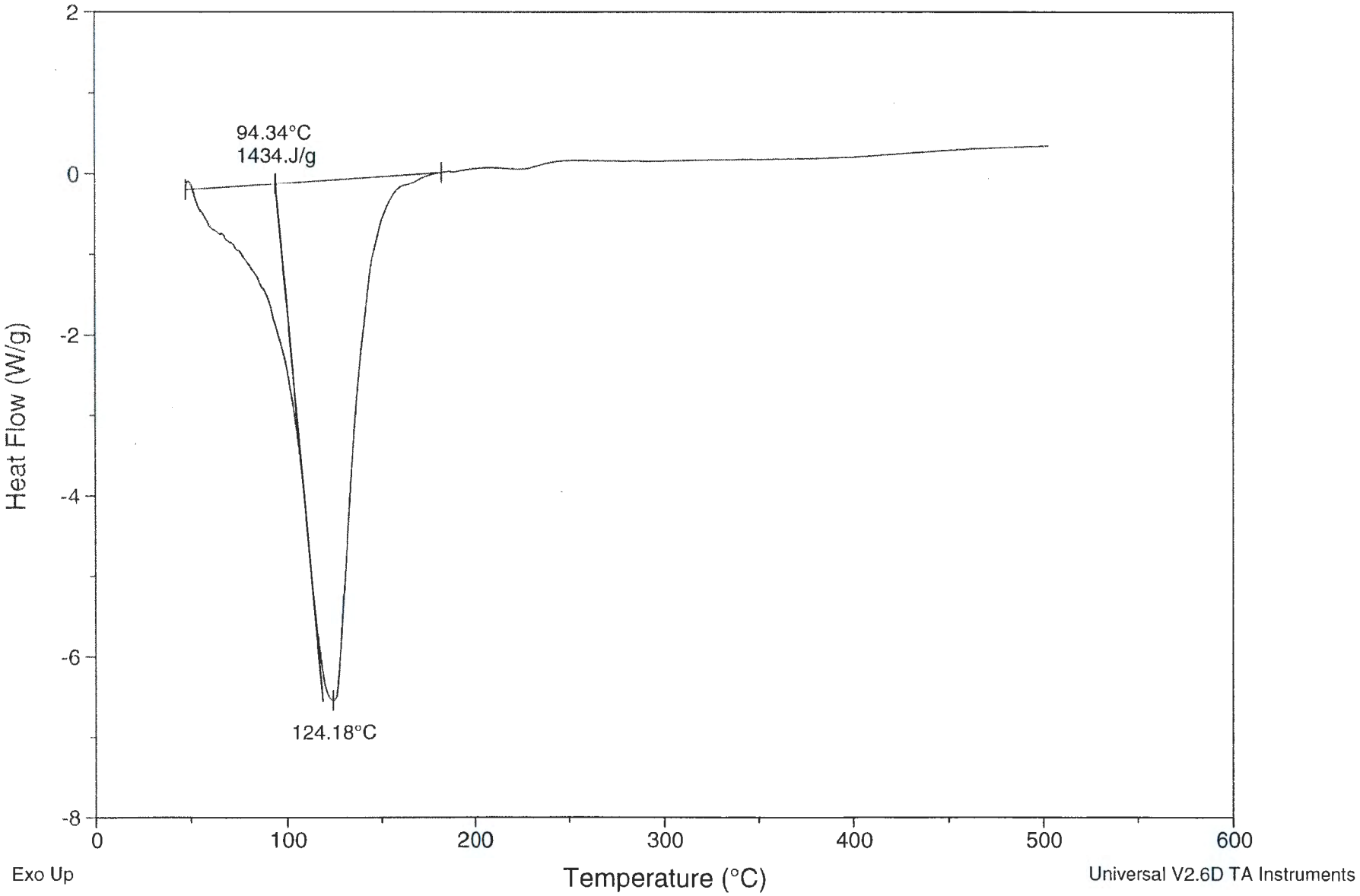
File: C:...\SAM090317.A02
Operator: ADP
Run Date: 17-Mar-09 13:27



Sample: S09T001807 SAM
Size: 11.1900 mg
Method: Sample
Comment: SAM

DSC

File: C:...\SAM090317.B02
Operator: ADP
Run Date: 17-Mar-09 13:27



# LABCORE Completed Batch Report for Batch# 00013452

**Analyst:** Purinton, Tony **Book#:** 23N26A

**Instrument:** DSC4/TGA6 Analyzer

**Method:** TGA-TA, LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 for TGA adp

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 LCS-INST | S0903190026 | | 0 | 0 | %WATER | LIQUID | 59.64 | 58.84 | | | 0.01 | % | 98.659 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001773 | | 0 | 0 | %WATER | LIQUID | N/A | 70.13 | | | 0.01 | % | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903190027 | S09T001773 | 0 | 0 | %WATER | LIQUID | 70.13 | 69.32 | | | 0.01 | % | 1.1617 | % RPD | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001807 | | 0 | 0 | %WATER | LIQUID | N/A | 68.92 | | | 0.01 | % | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013452

Reviewer Signature Date 3/19/09

2nd reviewer: 3/19/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013452

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903190026 | LCS-INST | | | | |
| 2 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 3 | S0903190027 | DUP | S09T001773 | | | |
| 4 | S09T001807 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/19/2009 9:03:16AM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013452

**Analyst:** Purinton, Tony **Standard ID / Book#:** 23N26A
**Instrument:** DSC4/TGA6 Analyzer
**Method:** TGA-TA, LA-514-115 Rev/Mod E-0
**Prep Batch:**
**Batch Comment:** AW106 EVAP3 for TGA adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS-INST | | 0 | | LIQUID | | |
| | Analytes Requested: | %WATER | | | | | |
| 2 | SAMPLE | S09T001773 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | %WATER | | | | | |
| 3 | DUP | S09T001773 | 0 | | LIQUID | | |
| | Analytes Requested: | %WATER | | | | | |
| 4 | SAMPLE | S09T001807 | 0 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | %WATER | | | | | |

## Final Page for Batch# 00013452

Analyst Signature 3/16/09 Date

Data Entry Signature 3/19/09 Date

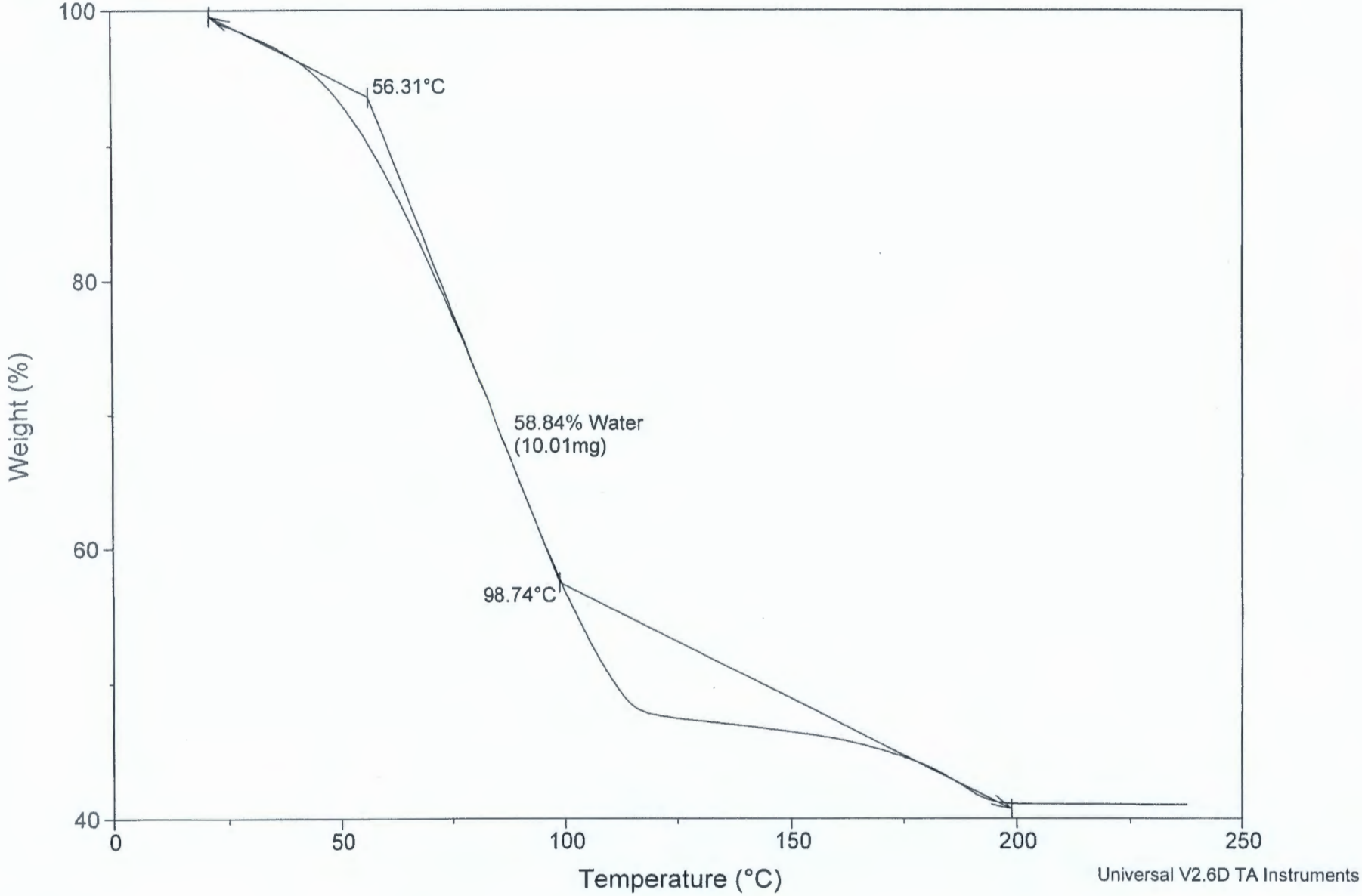
*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Sample: TERLIQ 23N26A
Size: 17.0070 mg
Method: TERLIQ
Comment: TERLIQ

TGA

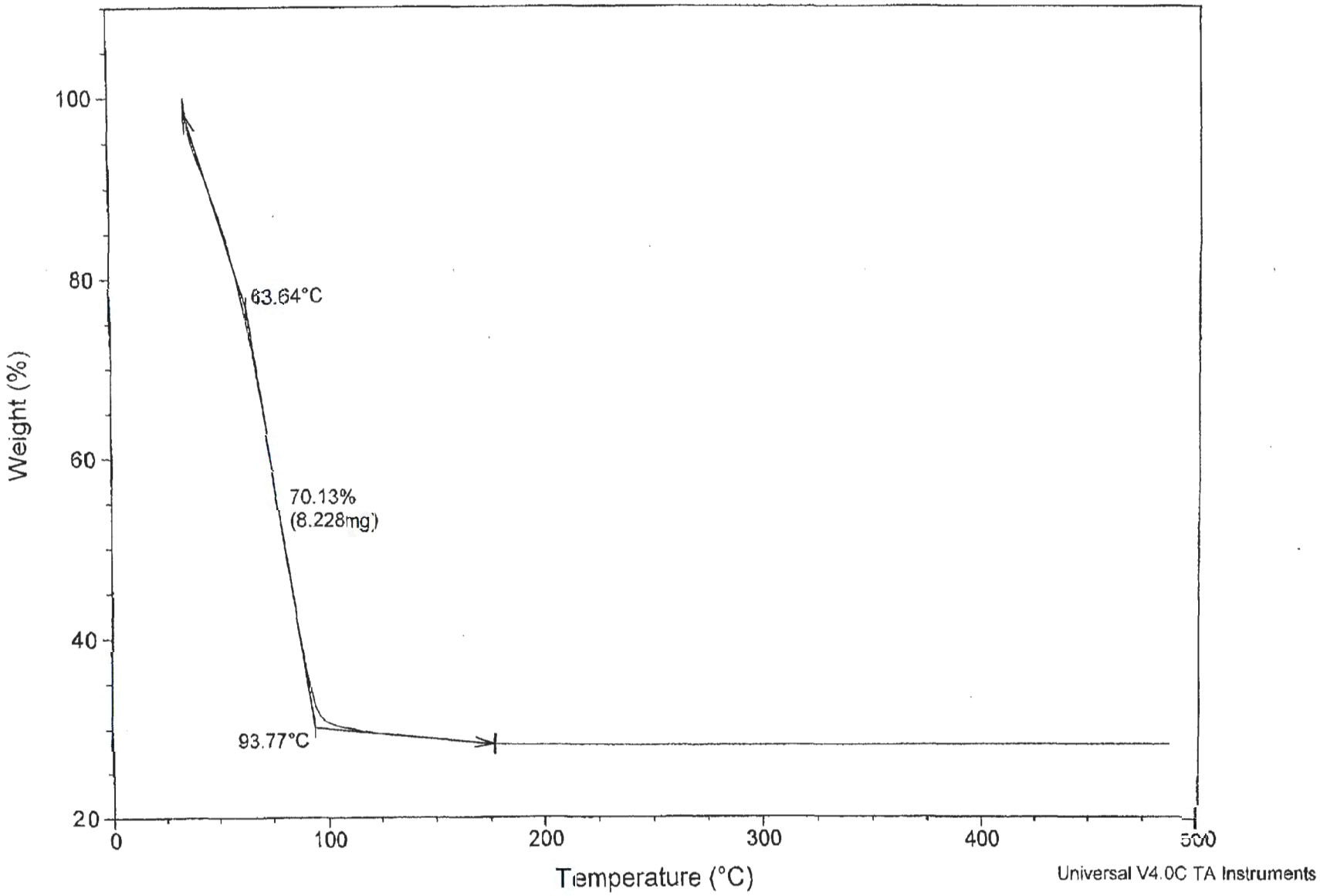
File: C:...\TER031609.001
Operator: ADP
Run Date: 16-Mar-09 08:20



Sample: S09T001773 SAM
Size: 11.7320 mg
Method: Sample
Comment: SAM

# TGA

File: C:...\TGA-6\TGA-6 2008\SAM031609.010
Operator: ADP
Run Date: 16-Mar-2009 09:28
Instrument: 2050 TGA V5.4A

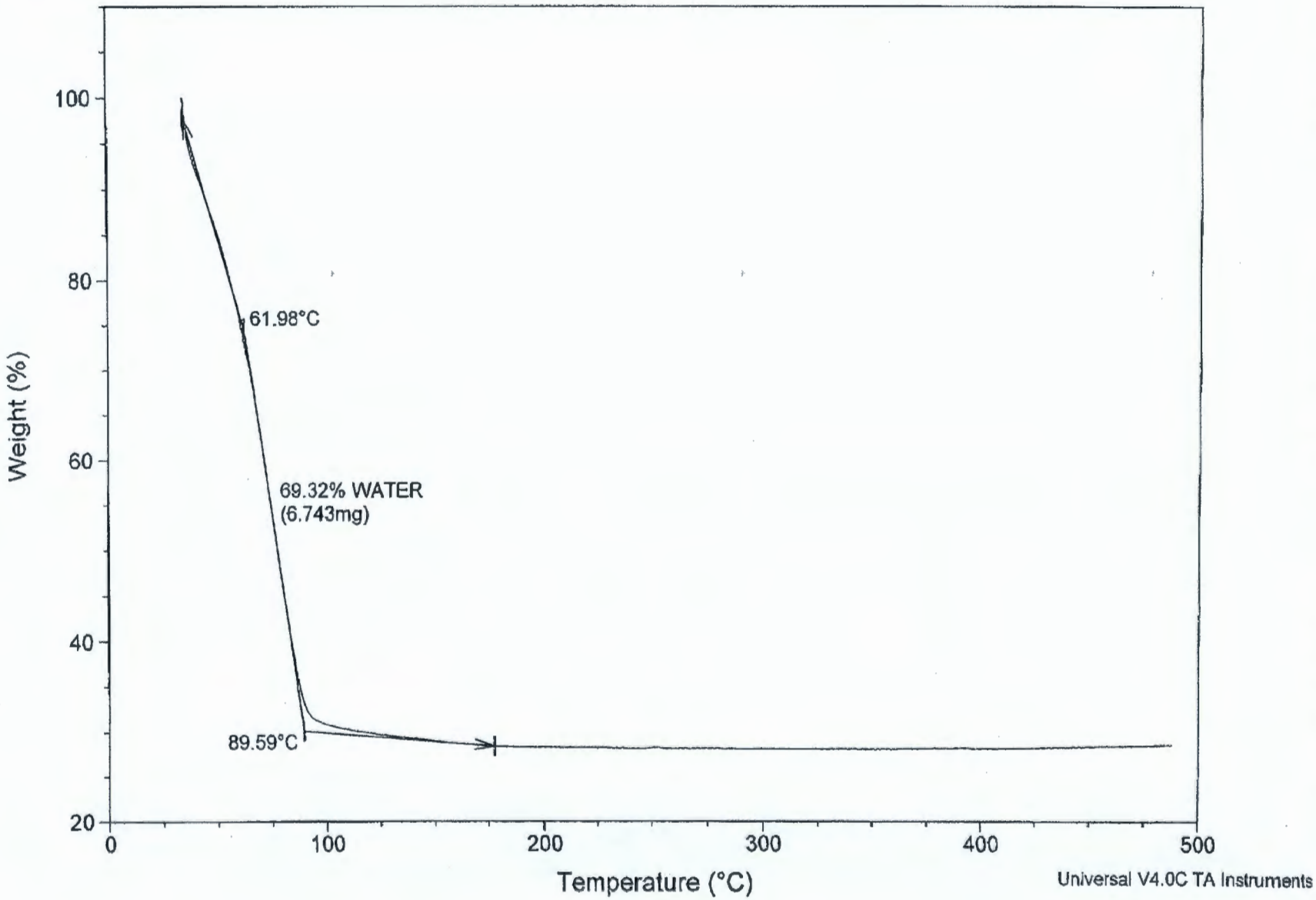


RPP-RPT-40709 Rev. 1

Sample: S09T001773 DUP
Size: 9.7280 mg
Method: Sample
Comment: DUP

# TGA

File: C:...\TGA-6\TGA-6 2008\SAM031609.011
Operator: ADP
Run Date: 16-Mar-2009 11:24
Instrument: 2050 TGA V5.4A

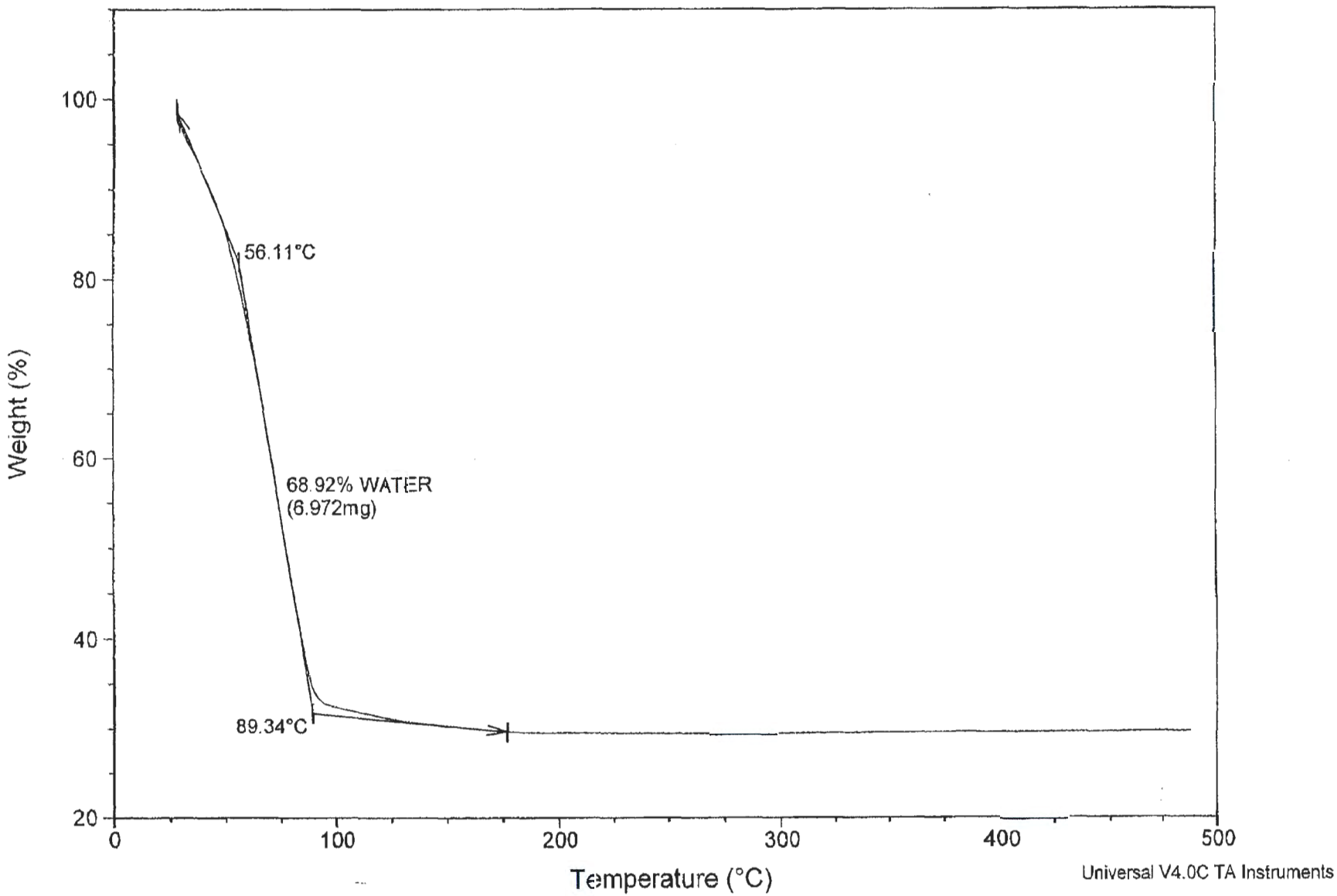


03/16/2009 MON 15:54 [TX/RX NO 5520] 005

Sample: S09T001807 SAM
Size: 10.1160 mg
Method: Sample
Comment: SAM

# TGA

File: C:...\TGA-6\TGA-6 2008\SAM031609.012
Operator: ADP
Run Date: 16-Mar-2009 13:24
Instrument: 2050 TGA V5.4A






Fax sent by : 509 376 6783

# LABCORE Completed Batch Report for Batch# 00013453

**Analyst:** Purinton, Tony **Book#:** 23N26A

**Instrument:** DSC5/TGA7 Analyzer

**Method:** TGA-TA, LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 for TGA adp

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 LCS-INST | S0903190028 | | 0 | 0 | %WATER | LIQUID | 59.64 | 58.45 | | | 0.01 | % | 98.005 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 SAMPLE | S09T001795 | | 0 | 0 | %WATER | LIQUID | N/A | 71.52 | | | 0.01 | % | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 DUP | S0903190029 | S09T001795 | 0 | 0 | %WATER | LIQUID | 71.52 | 71.6 | | | 0.01 | % | 0.11179 | % RPD | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001783 | | 0 | 0 | %WATER | LIQUID | N/A | 71.29 | | | 0.01 | % | | | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013453

Reviewer Signature Date 5/6/09

2nd reviewer: 5/6/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013453

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903190028 | LCS-INST | | | | |
| 2 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 3 | S0903190029 | DUP | S09T001795 | | | |
| 4 | S09T001783 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/19/2009 9:08:42AM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013453

**Analyst:** Purinton, Tony

**Standard ID / Book#:** 23N26 A

**Instrument:** DSC5/TGA7 Analyzer

**Method:** TGA-TA, LA-514-115 Rev/Mod E-0

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 for TGA adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS-INST | | 0 | | LIQUID | | |
| | Analytes Requested: | %WATER | | | | | |
| 2 | SAMPLE | S09T001783 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | %WATER | | | | | |
| 3 | DUP | S09T0017~~83~~95 BW 5-6-09 | 0 | | LIQUID | | |
| | Analytes Requested: | %WATER | | | | | |
| 4 | SAMPLE | S09T001795 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | %WATER | | | | | |

## Final Page for Batch# 00013453

Anthony Purinton 3/16/09
Analyst Signature Date

Tony Edwards 3/19/09
Data Entry Signature Date

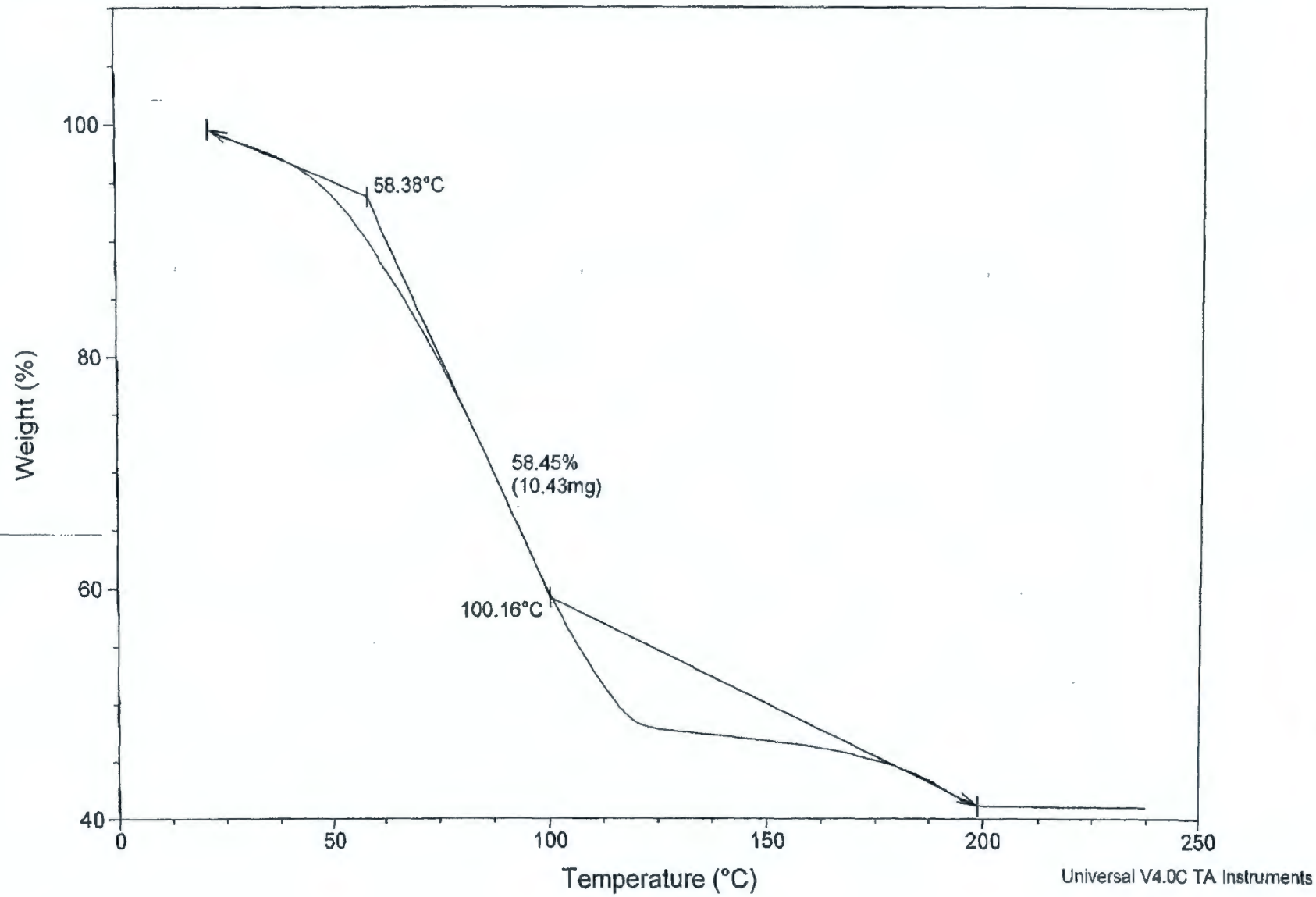
*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Sample: TERLIQ 23N26A
Size: 17.8410 mg
Method: TERLIQ
Comment: TERLIQ

# TGA

File: C:...\TGA-7\TGA-7 2008\TER031609.001
Operator: ADP
Run Date: 16-Mar-2009 08:24
Instrument: 2050 TGA V5.4A

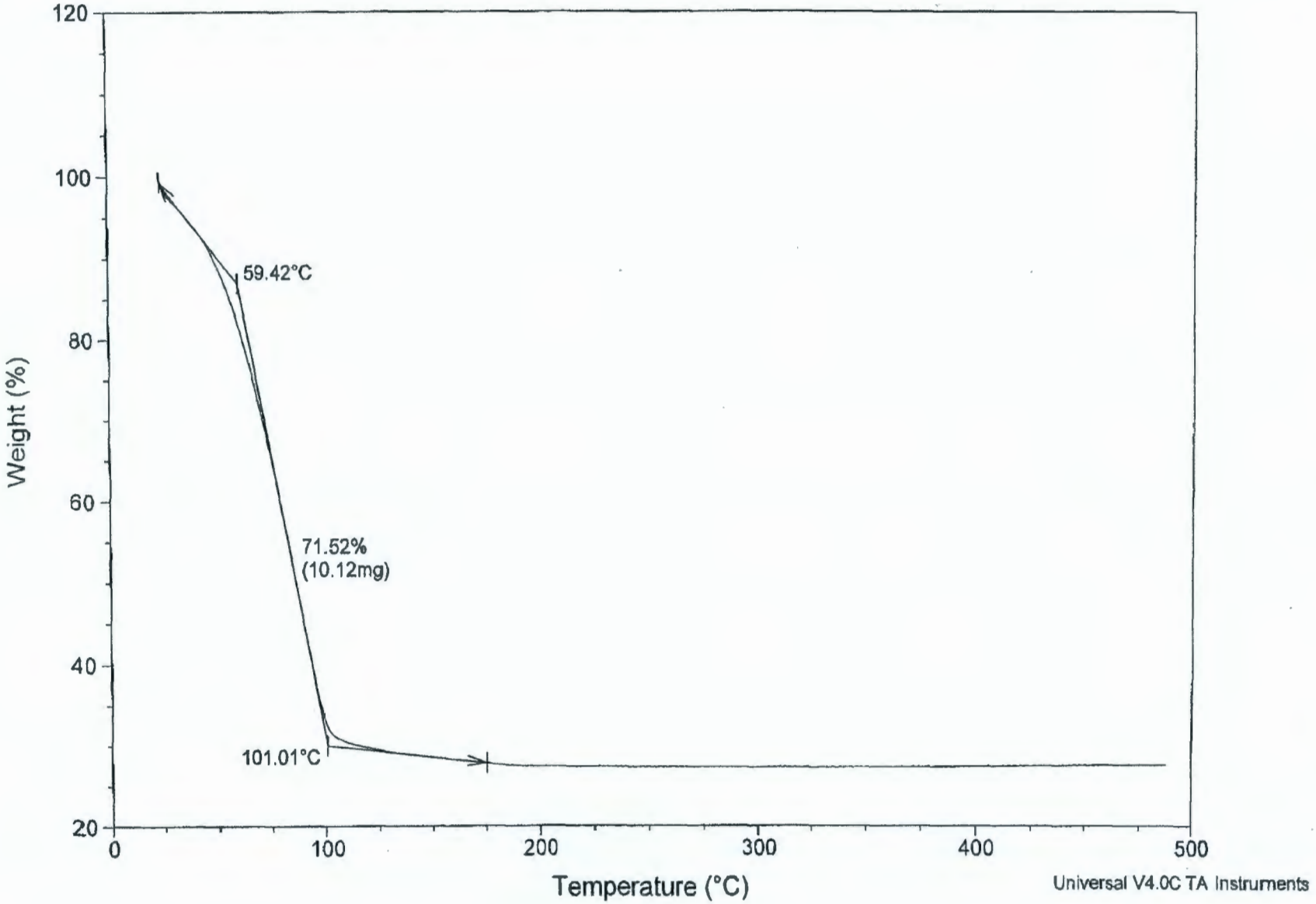


RPP-RPT-40709 Rev. 1

Sample: S09T001795 SAM
Size: 14.1470 mg
Method: Sample
Comment: SAM

# TGA

File: C:...\TGA-7\TGA-7 2008\SAM031609.001
Operator: ADP
Run Date: 16-Mar-2009 09:31
Instrument: 2050 TGA V5.4A



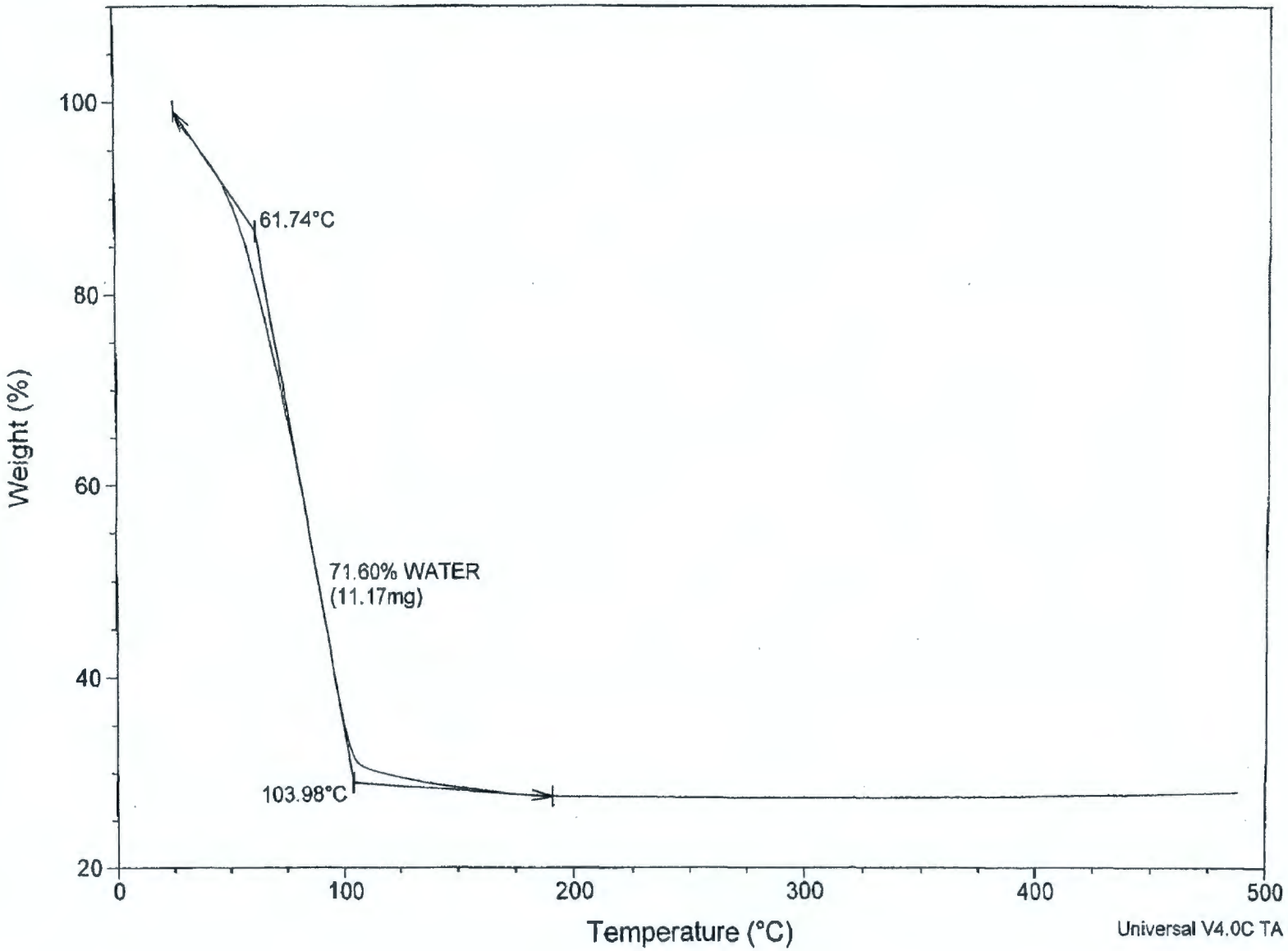

Universal V4.0C TA Instruments

RPP-RPT-40709 Rev. 1

Sample: S09T001795 DUP
Size: 15.6040 mg
Method: Sample
Comment: DUP

# TGA

File: C:...\TGA-7\TGA-7 2008\SAM031609.002
Operator: ADP
Run Date: 16-Mar-2009 11:13
Instrument: 2050 TGA V5.4A

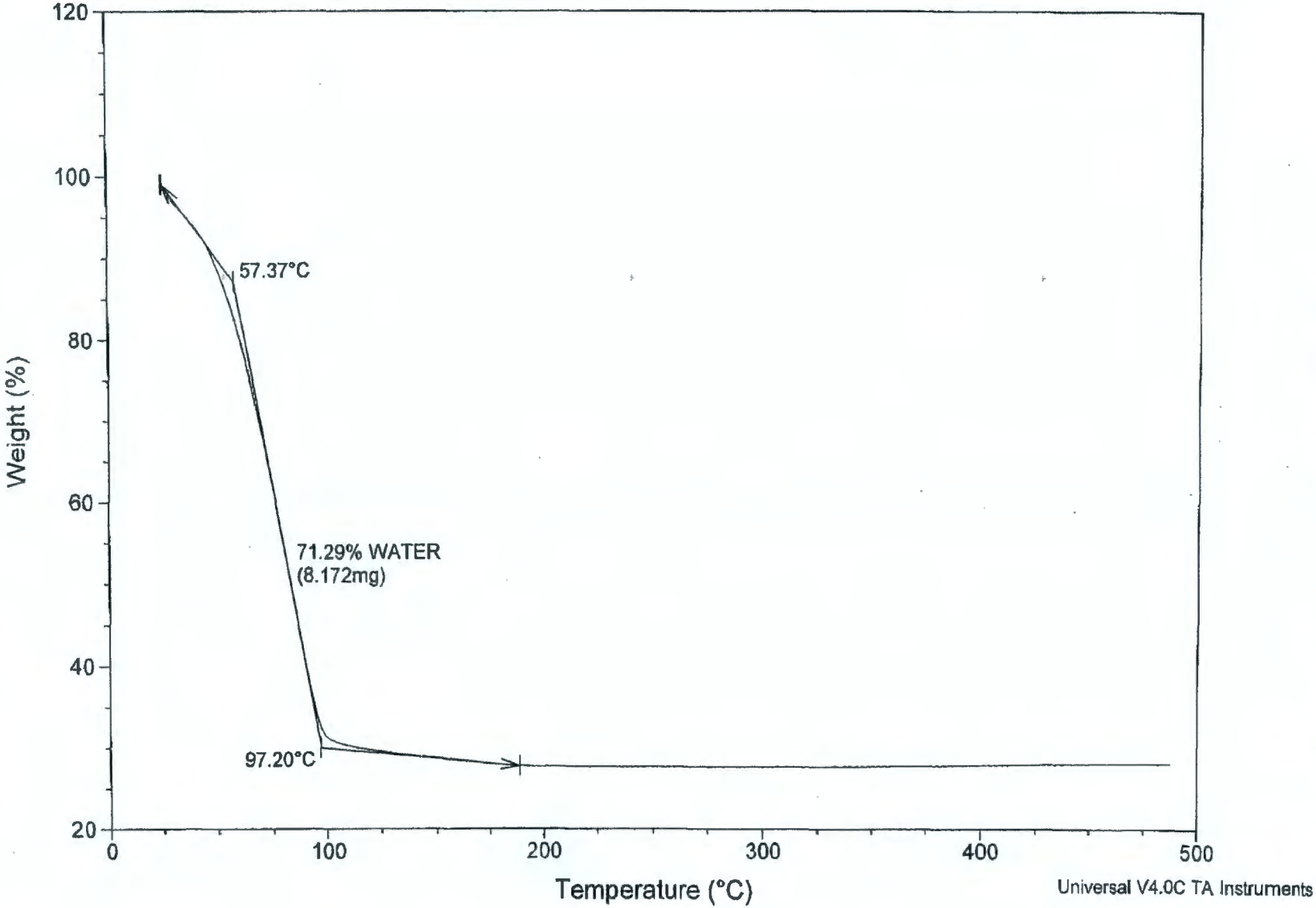



Universal V4.0C TA Instruments

Sample: S09T001783 SAM
Size: 11.4630 mg
Method: Sample
Comment: SAM

# TGA

File: C:...\TGA-7\TGA-7 2008\SAM031609.003
Operator: ADP
Run Date: 16-Mar-2009 13:13
Instrument: 2050 TGA V5.4A



# LABCORE Completed Batch Report for Batch# 00013482

**Analyst:** Purinton, Tony **Book#:** N/A

**Instrument:** DSC4/TGA6 Analyzer

**Method:** DSC - DRY CALC., LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** Dry DSC Calc for AW106 EVAP3.

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 SAMPLE | S09T001773 | | 0 | 0 | DSC Exotherm Dry | LIQUID | N/A | 21.64 | | | | Joules/g Dry | | | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 DUP | S0903230007 | S09T001773 | 0 | 0 | DSC Exotherm Dry | LIQUID | 21.64 | 31.06 | | | | Joules/g Dry | 35.750 | % RPD | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 SAMPLE | S09T001783 | | 0 | 0 | DSC Exotherm Dry | LIQUID | N/A | 0 | | | | Joules/g Dry | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001795 | | 0 | 0 | DSC Exotherm Dry | LIQUID | N/A | 0 | | | | Joules/g Dry | | | |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SAMPLE | S09T001807 | | 0 | 0 | DSC Exotherm Dry | LIQUID | N/A | 0 | | | | Joules/g Dry | | | |

Reanalyzed in batch #13516 BD 3-25-09

## Comments Section:

**Comments for sample: S09T001773, test: DSC - DRY CALC., constituent: DSC Exotherm Dry**

The %RPD for sample S09T001773 and Dup results found > control limit. Repeat analysis might not guarantee for a better result.

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013482

Reviewer Signature 3/23/09 Date

2nd reviewer: 3/23/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013482

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 2 | S0903230007 | DUP | S09T001773 | | | |
| 3 | S09T001783 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 4 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 5 | S09T001807 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/23/2009 8:39:16AM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013482

**Analyst:**

**Standard ID / Book#:** N/A

**Instrument:**

**Method:** DSC - DRY CALC., LA-514-115 Rev/Mod E-0

**Prep Batch:**

**Batch Comment:** Dry DSC Calc for AW106 EVAP3.

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | SAMPLE | S09T001773 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |
| 2 | DUP | S09T001773 | 0 | | LIQUID | | |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |
| 3 | SAMPLE | S09T001783 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |
| 4 | SAMPLE | S09T001795 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |
| 5 | SAMPLE | S09T001807 | 0 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |

## Final Page for Batch# 00013482

Anthony Purcinto 3/23/09
**Analyst Signature** **Date**

Anthony Purcinto 3/23/09
**Data Entry Signature** **Date**

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

**Applicable Procedure - LA-514-115** **TEMPLATE**

**Spreadsheet For The Calculation of Dry DSC results**

| Rev-Mod of Procedure Used |
|---|
| E-0 |
| **Batch #** |
| 13482 |
| **Test Code** |
| Dry DSC |
| **Matrix** |
| Liquids |
| **Instrument Code** |
| NA |
| **Analyst** |
| ADP |
| **Date Analyzed** |
| 3/17/09 |
| **Time** |
| 15:00 |

| Sample ID. | DSC Result (J/g) | TGA Result (% water) | TGA ave | Dry DSC result (J/g) |
|---|---|---|---|---|
| S09T001773 | 6.55 | 70.13 | 69.73 | 21.64 |
| S09T001773D | 9.40 | 69.32 | 69.73 | 31.06 |
| S09T001783 | 0 | 71.52 | 71.52 | 0 |
| S09T001795 | 0 | 71.29 | 71.29 | 0 |
| S09T001807 | 0 | 68.92 | 68.92 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |
| | | | 0 | 0 |

**Page 1 of 1**

# LABCORE Completed Batch Report for Batch# 00013501

**Analyst:** Purinton, Tony **Book#:** 12N14B

**Instrument:** DSC5/TGA7 Analyzer

**Method:** DSC-TA, LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** Rerun for AW106 DSC adp

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | |
| 1 | LCS-INST | S0903240009 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 26.83 | | | | Joules/g | 94.306 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | | |
| 2 | LCS-INST | S0903240010 | | 0 | 0 | DSC Exotherm | SOLID | 28.45 | 28.13 | | | | Joules/g | 98.875 | % Recovery | |
| Sample Sequence 3 | | | | | | | | | | | | | | | | |
| 3 | SAMPLE | S09T001773 | | 0 | 1 | DSC Exotherm | LIQUID | N/A | 0 | | | | Joules/g | | | |
| Sample Sequence 4 | | | | | | | | | | | | | | | | |
| 4 | DUP | S0903240011 | S09T001773 | 0 | 0 | DSC Exotherm | LIQUID | 0 | 0 | | | | Joules/g | 0 | % RPD | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013501

Reviewer Signature Date 3/25/09

2nd reviewer: 3/25/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013501

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903240009 | LCS-INST | | | | |
| 2 | S0903240010 | LCS-INST | | | | |
| 3 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 4 | S0903240011 | DUP | S09T001773 | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

03/24/2009 TUE 14:54 [TX/RX NO 5542] 001

3/24/2009 10:48:47AM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013501

**Analyst:** Purinton, Tony **Standard ID / Book#:** 12N14B
**Instrument:** DSC5/TGA7 Analyzer
**Method:** DSC-TA, LA-514-115 Rev/Mod ED
**Prep Batch:**
**Batch Comment:** Rerun for AW106 DSC adp

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 2 | LCS-INST | | 0 | | SOLID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 3 | SAMPLE | S09T001773 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm | | | | | |
| 4 | DUP | S09T001773 | 0 | | LIQUID | | |
| | Analytes Requested: | DSC Exotherm | | | | | |

## Final Page for Batch# 00013501

Anthony Purinton 3/24/09
Analyst Signature Date

Anthony Purinton 3/24/09
Data Entry Signature Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

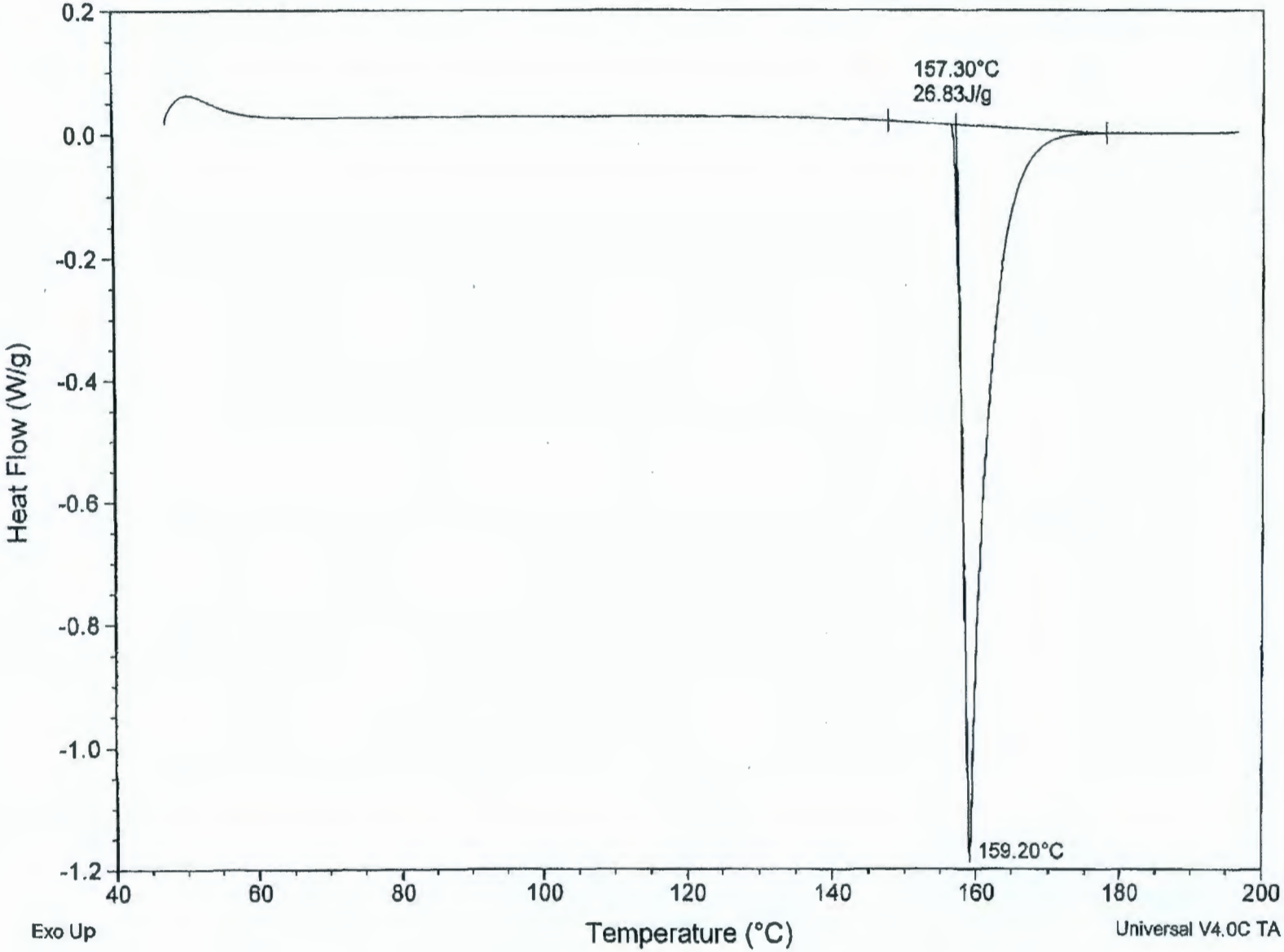
Fax sent by : 509 376 6783 SAMPLE CUSTODIAN 2B1 03-24-09 13:59 Pg: 1/5

RPP-RPT-40709 Rev. 1

Sample: 12N14B STD
Size: 12.2900 mg
Method: Standard
Comment: STD

DSC

File: C:\TA\Data\DSC-5\DSC-5 2009\IN090324.A01
Operator: ADP
Run Date: 24-Mar-2009 09:42
Instrument: 2920 DSC V2.6A



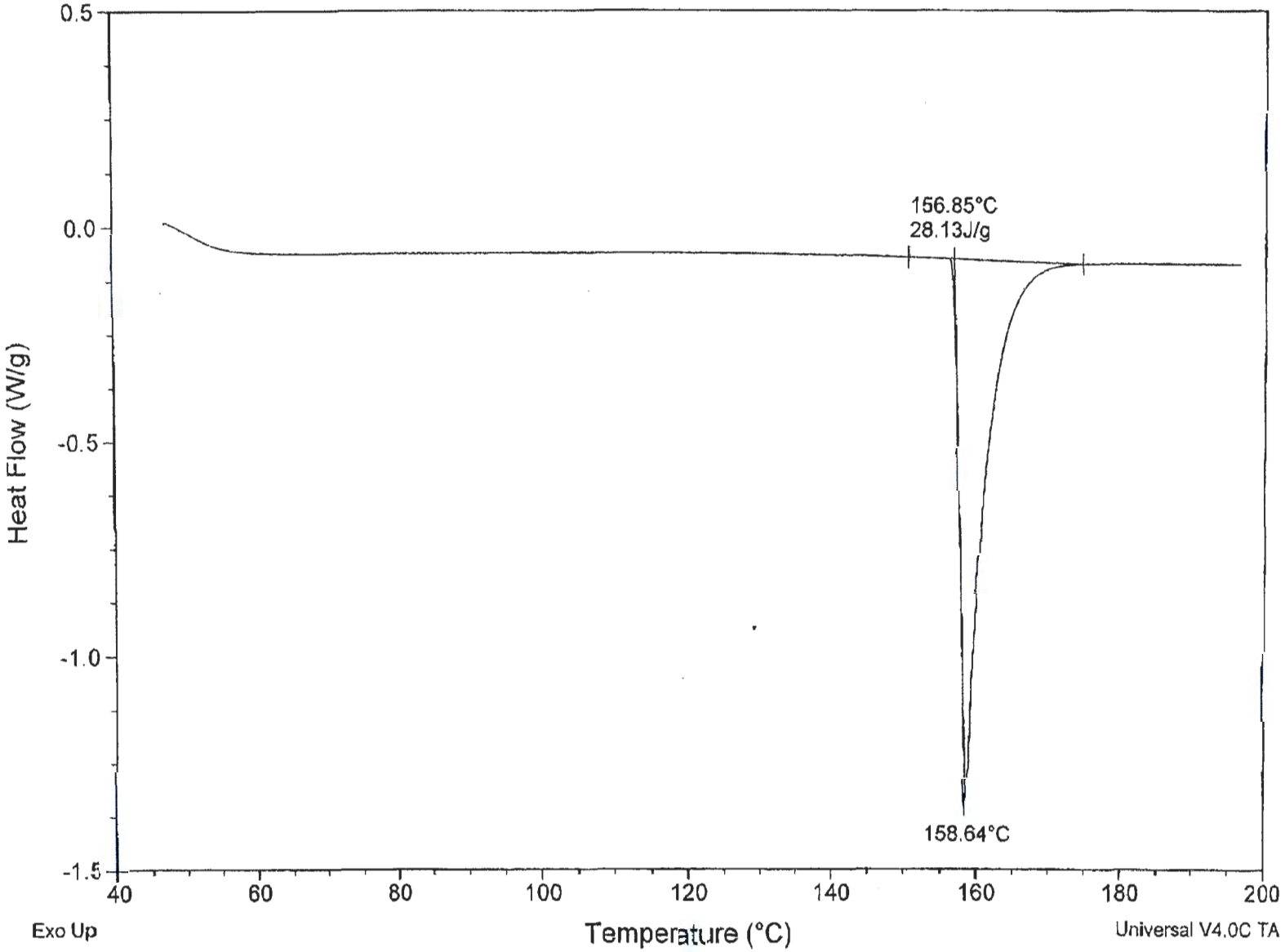

Universal V4.0C TA Instruments

RPP-RPT-40709 Rev. 1

Sample: 12N14B STD
Size: 12.4600 mg
Method: Standard
Comment: STD

# DSC

File: C:\TA\Data\DSC-5\DSC-5 2009\IN090324.B01
Operator: ADP
Run Date: 24-Mar-2009 09:42
Instrument: 2920 DSC V2.6A



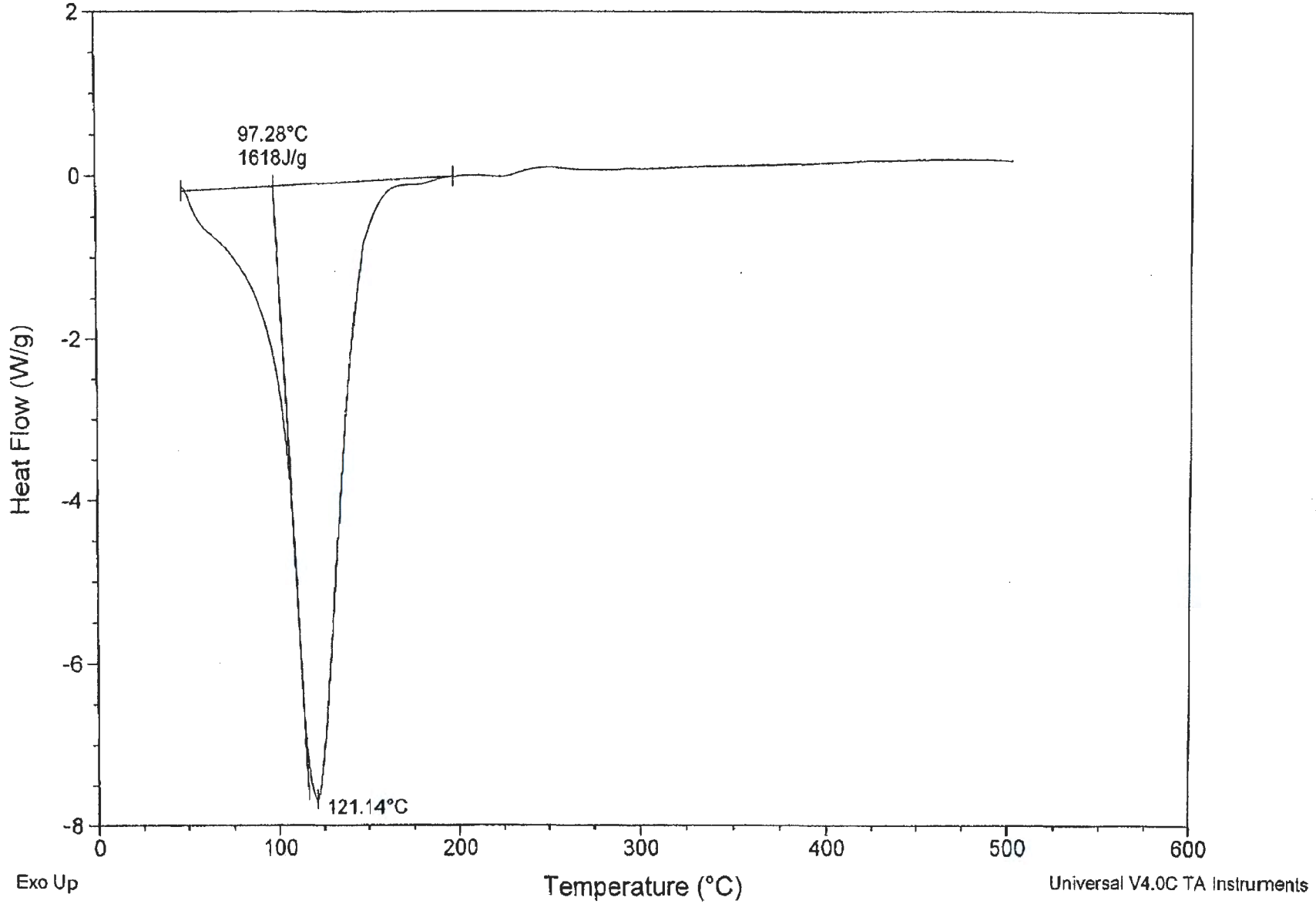

Universal V4.0C TA Instruments

RPP-RPT-40709 Rev. 1

Sample: S09T001773 SAM
Size: 11.4700 mg
Method: Sample
Comment: SAMPLE

# DSC

File: C:...\DSC-5\DSC-5 2009\SAM090324.A01
Operator: ADP
Run Date: 24-Mar-2009 11:13
Instrument: 2920 DSC V2.6A

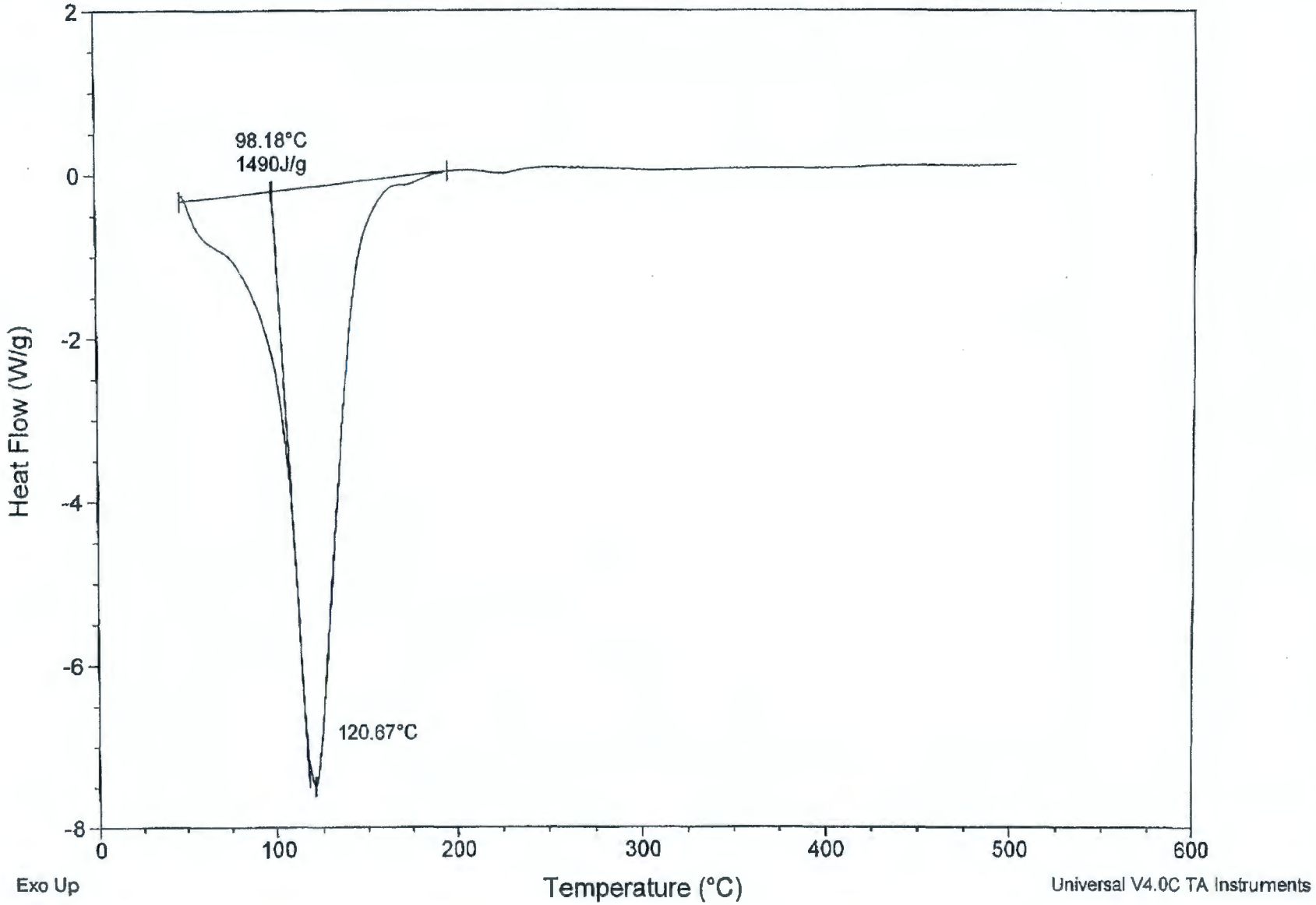


RPP-RPT-40709 Rev. 1

Sample: S09T001773 DUP
Size: 10.8400 mg
Method: Sample
Comment: DUP

# DSC

File: C:...\DSC-5\DSC-5 2009\SAM090324.B01
Operator: ADP
Run Date: 24-Mar-2009 11:13
Instrument: 2920 DSC V2.6A



# LABCORE Completed Batch Report for Batch# 00013516

**Analyst:** Purinton, Tony **Book#:** NA

**Instrument:** DSC5/TGA7 Analyzer

**Method:** DSC - DRY CALC., LA-514-115 Rev/Mod E-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 for dry DSC calculation.

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 SAMPLE | S09T001773 | | 0 | 1 | DSC Exotherm Dry | LIQUID | N/A | 0 | | | | Joules/g Dry | | | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 DUP | S0903240059 | S09T001773 | 0 | 0 | DSC Exotherm Dry | LIQUID | 0 | 0 | | | | Joules/g Dry | 0 | % RPD | |

## Comments Section:

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013516

Brian Dunk 3/25/09
Reviewer Signature Date

2nd reviewer: K B 3/25/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013516

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S09T001773 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 2 | S0903240059 | DUP | S09T001773 | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

*3/24/2009 3:22:11PM*
*IncompleteBatchShort Version 2.7.22*
*batchreports 2.7.25*



# LABCORE Data Entry Template for Batch# 00013516

**Analyst:** Purinton, Tony **Standard ID / Book#:** 12W148
**Instrument:** DSC5/TGA7 Analyzer
**Method:** DSC - DRY CALC., LA-514-115 Rev/Mod E0
**Prep Batch:**
**Batch Comment:** AW106 EVAP3 for dry DSC calculation.

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | SAMPLE | S09T001773 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |
| 2 | DUP | S09T001773 | 0 | | LIQUID | | |
| | Analytes Requested: | DSC Exotherm Dry | | | | | |

## Final Page for Batch# 00013516

Anthony Purinton 3/24/09
Analyst Signature Date

Anthony Purinton 3/24/09
Data Entry Signature Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

**Applicable Procedure - LA-514-115** **TEMPLATE**

**Spreadsheet For The Calculation of Dry DSC results**

| Rev-Mod of Procedure Used |
|---|
| E-0 |
| **Batch #** |
| 13516 |
| **Test Code** |
| Dry DSC |
| **Matrix** |
| Liquid |
| **Instrument Code** |
| NA |
| **Analyst** |
| ADP |
| **Date Analyzed** |
| 3/24/2009 |
| **Time** |
| 15:00 |

| Sample ID. | DSC Result (J/g) | TGA Result (% water) | TGA ave | Dry DSC result (J/g) |
|---|---|---|---|---|
| S09T001773 | 0 | 70.13 | 69.73 | 0.00 |
| S09T001773D | 0 | 69.32 | 69.73 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |
| | | | 0.00 | 0.00 |

**Page 1 of 1**

# LABCORE Completed Batch Report for Batch# 00014209

**Analyst:** Maling, Tracy **Book#:** Bench sheet

**Instrument:** Hg by Cold Vapor by FIAS

**Method:** HG, LA-325-106 Rev/Mod G-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 rerun and MAPEP20 for hg trm tjh

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICV | S0905110013 | | 0 | 0 | Mercury | LIQUID | .01 | 9.8120E-03 | | | 1.00E-04 | ug/mL | 98.12 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 ICB | S0905110014 | | 0 | 0 | Mercury | LIQUID | | <1.0000E-04 | | | 1.00E-04 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 LLS | S0905110015 | | 0 | 0 | Mercury | LIQUID | .001 | 9.4800E-04 | | | 1.00E-04 | ug/mL | 94.8 | % Recovery | |
| Sample Sequence 4 | | | | | | | | | | | | | | | |
| 4 SAMPLE | S09T001751 | | 0 | 1 | Mercury | LIQUID | N/A | <1.0000E-03 | | | 1.00E-03 | ug/mL | | | U |
| Sample Sequence 5 | | | | | | | | | | | | | | | |
| 5 SAMPLE | S09T001761 | | 0 | 1 | Mercury | LIQUID | N/A | <2.0000E-03 | | | 2.00E-03 | ug/mL | | | U |
| Sample Sequence 6 | | | | | | | | | | | | | | | |
| 6 SAMPLE | S09T001772 | | 0 | 1 | Mercury | LIQUID | N/A | 6.8400E-03 | | | 1.00E-03 | ug/mL | | | J |
| Sample Sequence 7 | | | | | | | | | | | | | | | |
| 7 SAMPLE | S09T001782 | | 0 | 1 | Mercury | LIQUID | N/A | 5.5100E-03 | | | 1.00E-03 | ug/mL | | | J |
| Sample Sequence 8 | | | | | | | | | | | | | | | |
| 8 SAMPLE | S09T001794 | | 0 | 1 | Mercury | LIQUID | N/A | 4.7600E-03 | | | 1.00E-03 | ug/mL | | | Jb |
| Sample Sequence 9 | | | | | | | | | | | | | | | |
| 9 DUP | S0903240063 | S09T001794 | 0 | 1 | Mercury | LIQUID | 4.7600E-03 | 4.5800E-03 | | | 1.00E-03 | ug/mL | 3.8544 | % RPD | |
| Sample Sequence 10 | | | | | | | | | | | | | | | |
| 10 SPK-PREDIG | S0903240069 | S09T001794 | 0 | 1 | Mercury | LIQUID | .05 | 3.2960E-02 | | | 1.00E-03 | ug/mL | 56.4 | % Recovery | |
| Sample Sequence 11 | | | | | | | | | | | | | | | |
| 11 SPK-POST | S0903240068 | S09T001794 | 0 | 1 | Mercury | LIQUID | 5 | 5.6889E-02 | | | 1.00E-03 | ug/mL | 98.84 | % Recovery | |
| Sample Sequence 12 | | | | | | | | | | | | | | | |
| 12 SAMPLE | S09T001806 | | 0 | 1 | Mercury | LIQUID | N/A | 4.8200E-03 | | | 1.00E-03 | ug/mL | | | J |
| Sample Sequence 13 | | | | | | | | | | | | | | | |
| 13 CCV | S0905110019 | | 0 | 0 | Mercury | LIQUID | .01 | 1.0180E-02 | | | 1.00E-04 | ug/mL | 101.8 | % Recovery | |
| Sample Sequence 14 | | | | | | | | | | | | | | | |
| 14 CCB | S0905110020 | | 0 | 0 | Mercury | LIQUID | | <1.0000E-04 | | | 1.00E-04 | ug/mL | | | |
| Sample Sequence 16 | | | | | | | | | | | | | | | |
| 16 DUP | S0905110022 | S09Q000019 | 0 | 0 | Mercury | LIQUID | | | | | 1.00E-03 | ug/mL | 0.70505 | % RPD | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00014209

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 17 | | | | | | | | | | | | | | | |
| 17 SPK-PREDIG | S0905110021 | S09Q000019 | 0 | 0 | Mercury | LIQUID | | | | | 1.00E-03 | ug/mL | 1.0974 | % Recovery | |
| Sample Sequence 18 | | | | | | | | | | | | | | | |
| 18 CCV | S0905050165 | | 0 | 0 | Mercury | LIQUID | .01 | 9.9670E-03 | | | 1.00E-04 | ug/mL | 99.67 | % Recovery | |
| Sample Sequence 19 | | | | | | | | | | | | | | | |
| 19 CCB | S0905050166 | | 0 | 0 | Mercury | LIQUID | | <1.0000E-04 | | | 1.00E-04 | ug/mL | | | |

## Comments Section:

**Comments for sample: S0903240069, test: HG, constituent: Mercury**

This is a repeat analysis for AW 106, a post spike was performed due to SpK predig out of control limit.

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00014209

Brian Davis 5/11/09
Reviewer Signature Date

2nd reviewer: Carl M. Pang 5/11/09

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00014209

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0905110013 | ICV | | | | |
| 2 | S0905110014 | ICB | | | | |
| 3 | S0905110015 | LLS | | | | |
| 4 | S09T001751 | SAMPLE | | 20090162 | 6AW-08-01FB1 | AW106 EVAP3 |
| 5 | S09T001761 | SAMPLE | | 20090162 | 6AW-08-01FB2 | AW106 EVAP3 |
| 6 | S09T001772 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 7 | S09T001782 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 8 | S09T001794 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 9 | S0903240063 | DUP | S09T001794 | | | |
| 10 | S0903240069 | SPK-PREDIG | S09T001794 | | | |
| 11 | S0903240068 | SPK-POST | S09T001794 | | | |
| 12 | S09T001806 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |
| 13 | S0905110019 | CCV | | | | |
| 14 | S0905110020 | CCB | | | | |
| 16 | S0905110022 | DUP | S09Q000019 | | | |
| 17 | S0905110021 | SPK-PREDIG | S09Q000019 | | | |
| 18 | S0905050165 | CCV | | | | |
| 19 | S0905050166 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

5/11/2009 9:34:11AM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00014209

**Analyst:** Maling, Tracy **Standard ID / Book#:**

**Instrument:** Hg by Cold Vapor by FIAS

**Method:** HG, LA 325-106 Rev/Mod G/0

**Prep Batch:**

**Batch Comment:** AW106 rerun and MAPEP20 for hg trm tjh

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | ICV | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 2 | ICB | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 3 | LLS | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 4 | SAMPLE | S09T001751 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 5 | SAMPLE | S09T001761 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 6 | SAMPLE | S09T001772 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 7 | SAMPLE | S09T001782 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 8 | SAMPLE | S09T001794 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 9 | DUP | S09T001794 | 1 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 10 | SPK-PREDIG | S09T001794 | 1 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 11 | SPK-POST | S09T001794 | 1 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 12 | SAMPLE | S09T001806 | 1 | | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | Mercury | | | | | |
| 13 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 14 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 15 | SAMPLE | S09Q000019 | 0 | | LIQUID | 20090197 | MAPEP 20 |
| | Analytes Requested: | Mercury | | | | | |
| 16 | DUP | S09Q000019 | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 17 | SPK-PREDIG | S09Q000019 | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 18 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |
| 19 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Mercury | | | | | |

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

*5/11/2009 9:34:11AM*
*IncompleteBatchShort Version 2.7.22*
*batchreports 2.7.25*



## LABCORE Data Entry Template for Batch# 00014209

# Final Page for Batch# 00014209

| Analyst Signature | Date | Data Entry Signature | Date |
|---|---|---|---|
| | 5/11/09 | | 5/11/09 |

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Fax sent by : 5093131334 05/08/2009 FRI 14:44 [TX/RX NO 5737] 001

## MERCURY PREPARATION and INSTRUMENTATION BENCH SHEET

**Project:** AW-106 + MAPEP 20

Analyst TRM Prep. Date 5/08/09 Run Date 5/08/09 Batch # 00014209

Tube Lot ID N/A *Final Volume 50 mL (20mL for Liquid & Solids) Cal. Corr. Coeff. 0.9996

For Calibration & LLS[a] use _____ 0.1 µg/mL "Calibration Std" Lot 118N11B Expires 6/01/09

For ICV, CCV, & RLS/RLS Dup[a] use _ 0.1 µg/mL "LCS0.1 Std" Lot 119N11B Expires 6/01/09

*For LCS &LCS Dup[a] use _____ 1.0µg/mL "LCS1.0 Std" Lot N/A Expires N/A

Digestion Acids: Conc. $H_2SO_4$ Lot 3102111 Conc. $HNO_3$ Lot C40037 Conc. HCl Lot E16071

Dilution Acid: 2% $HNO_3$ used (20mL conc. $HNO_3$ to 1L with reagent water) or readymade by Standard Lab.

Balance IDs LE-BAL-023/LE-BAL-014 Pipette IDs E0607325F, 3396 15 ✓ checked

$SnCl_2$ Lot B13T021 Mass (g) 20.038 (Every 20g $SnCl_2$, 8.26 mL conc. HCl diluted to 200mL reagent water).

Instrument ID: [✓] LA-325-106 Rev. 6-0 [ ] LA-325-107 Rev. ____ Highest calibration standard[b] abs: 0.242

| | Standard/Sample ID. | mL or g | DF[c] | | Standard/Sample ID. | mL or g | DF[c] |
|---|---|---|---|---|---|---|---|
| 1 | ICV | 2.0 | | 23 | | | |
| 2 | ICB | NA | | 24 | | | |
| 3 | LLS | 0.2 | | 25 | | | |
| 4 | S09T001751 | 2.0mL | | 26 | | | |
| 5 | 1761 * | 1.0mL | | 27 | | | |
| 6 | 1772 | 2.0mL | | 28 | | | |
| 7 | 1782 | 2.0mL | | 29 | | | |
| 8 | 1794 | 2.0mL | | 30 | | | |
| 9 | 1794 Dup | 2.0mL | | 31 | | | |
| 10 | 1794 Pre Spk*** | 2.0mL+1.0mL SPK | | 32 | | | |
| 11 | 1806 | 2.0mL | | 33 | | | |
| 12 | CCV | 2.0mL | | 34 | | | |
| 13 | CCB | N/A | | 35 | | | |
| 14 | S09Q000019 | 2.0mL | | 36 | | | |
| 15 | 19 Dup | 2.0mL | | 37 | | | |
| 16 | 19 Pre Spk** | 2.0mL+1.0mL SPK | | 38 | | | |
| 17 | CCV | | | 39 | | | |
| 18 | CCB | | | 40 | | | |
| 19 | | | | 41 | | | |
| 20 | | | | 42 | | | |
| 21 | | | | 43 | | | |
| 22 | | | | 44 | | | |

*** 1794 Post Spk after 794 pre spk

Comments: * Only had one mL of sample S09T001761

** Spike with 1.0mL of 119N11B

*** 1794 Post Spk = 9.5mL of 1794 sample + .5mL SPK of 119N11B

* For IH Vapor Tube. LCS & LCS Dup: 0.3mL of the "LCS1.0" to final volume of 50mL; If there are RLS&RLS Dup: 0.5 mL of the "LCS0.1" std to final volume of 50mL.

(a) Calibration, ICV, CCV, LLS, Matrix predigest spike, and Post digest spike: Preparation in LA-325-106 or 325-107 for more details.

(b) If the "Instr. abs" for the highest calibration standard (20 µg/L) is <0.13 abs, instrument troubleshooting maintenance is needed (See LA-325-106 or -107 in Appendices or contact the responsible scientist).

(c) DF: Dilution Factor, none means 1 and other than 1 if indicated.

05/08/2009 FRI 14:44 [TX/RX NO 5737] 001

| Seq. No. | 1 | AS Loc: | 1 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | Calib Blank | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.0010 | 0.0033 | | 0.0010 | | 14:01:50 |
| Auto-zero performed. | | | | | | | | |
| Mean: | | | 0.0010 | | | | | |
| SD: | | | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 2 | AS Loc: | 2 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1.00 ppb Hg 118N11A | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.0128 | 0.0604 | | 0.0138 | | 14:02:50 |
| Standard number 1 applied. [1.00] | | | | | | | | |
| Correlation Coefficient: 1.0000 | | Slope: 0.0128 | | | | | | |
| Mean: | | | 0.0128 | | | | | |
| SD: | | | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 3 | AS Loc: | 3 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 5.00 ppb Hg 118N11A | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.0636 | 0.2945 | | 0.0646 | | 14:03:50 |
| Standard number 2 applied. [5.00] | | | | | | | | |
| Correlation Coefficient: 1.0000 | | Slope: 0.0127 | | | | | | |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | | | 0.0636 | | | | | |
| SD: | | | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 4 | AS Loc: | 4 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 10.0 ppb Hg 118N11A | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.1252 | 0.5816 | | 0.1261 | | 14:05:12 |
| Standard number 3 applied. [10.0] | | | | | | | | |
| Correlation Coefficient: 1.0000 | | Slope: 0.0125 | | | | | | |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | | | 0.1252 | | | | | |
| SD: | | | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 5 | AS Loc: | 5 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 15 .0 ppb Hg118N11A | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.1886 | 0.8796 | | 0.1896 | | 14:06:36 |
| Standard number 4 applied. [15.0] | | | | | | | | |
| Correlation Coefficient: 1.0000 | | Slope: 0.0125 | | | | | | |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | | | 0.1886 | | | | | |
| SD: | | | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 6 | AS Loc: | 6 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 20.0 ppb Hg 118N11A | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | | | 0.2418 | 1.1286 | | 0.2428 | | 14:08:01 |

Standard number 5 applied. [20.0]
Hg
Correlation Coefficient: 0.9996 Slope: 0.0122
Mean: 0.2418
SD:
%RSD:

Seq. No. 7 AS Loc: 1 Date: 5/ 8/2009
Sample ID: ICV

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | 9.812µg/L | 9.812µg/L | 0.1214 | 0.5739 | | 0.1223 | | 14:13:32 |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 9.812µg/L | 9.812µg/L | 0.1214 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Seq. No. 8 AS Loc: 2 Date: 5/ 8/2009
Sample ID: ICB

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | -0.136µg/L | -0.136µg/L | -0.0001 | 0.0020 | | 0.0009 | | 14:14:53 |
| Mean: | -0.136µg/L | -0.136µg/L | -0.0001 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Seq. No. 9 AS Loc: 3 Date: 5/ 8/2009
Sample ID: LLS

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | 0.948µg/L | 0.948µg/L | 0.0131 | 0.0654 | | 0.0141 | | 14:15:53 |
| Mean: | 0.948µg/L | 0.948µg/L | 0.0131 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Seq. No. 10 AS Loc: 4 Date: 5/ 8/2009
Sample ID: S09T001751

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | -0.140µg/L | -0.140µg/L | -0.0002 | 0.0013 | | 0.0008 | | 14:16:53 |
| Mean: | -0.140µg/L | -0.140µg/L | -0.0002 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Seq. No. 11 AS Loc: 5 Date: 5/ 8/2009
Sample ID: 1761

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | -0.157µg/L | -0.157µg/L | -0.0004 | 0.0018 | | 0.0006 | | 14:17:53 |
| Mean: | -0.157µg/L | -0.157µg/L | -0.0004 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Seq. No. 12 AS Loc: 6 Date: 5/ 8/2009
Sample ID: 1772

| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
|---|---|---|---|---|---|---|---|---|
| Hg | 0.684µg/L | 0.684µg/L | 0.0099 | 0.0520 | | 0.0109 | | 14:18:53 |
| Mean: | 0.684µg/L | 0.684µg/L | 0.0099 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Fax sent by

| Seq. No. | 13 | AS Loc: | 7 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1782 | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.551µg/L | 0.551µg/L | 0.0083 | 0.0429 | | 0.0093 | | 14:19:53 |
| Mean: | 0.551µg/L | 0.551µg/L | 0.0083 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 14 | AS Loc: | 8 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1794 | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.476µg/L | 0.476µg/L | 0.0074 | 0.0358 | | 0.0084 | | 14:20:53 |
| Mean: | 0.476µg/L | 0.476µg/L | 0.0074 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 15 | AS Loc: | 9 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1794 DUP | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.458µg/L | 0.458µg/L | 0.0071 | 0.0384 | | 0.0081 | | 14:21:57 |
| Mean: | 0.458µg/L | 0.458µg/L | 0.0071 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 16 | AS Loc: | 10 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1794 PRE DIG SPK | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 3.296µg/L | 3.296µg/L | 0.0418 | 0.2260 | | 0.0428 | | 14:22:56 |
| An extra autosampler wash has been performed. | | | | | | | | |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 3.296 | 3.296 | 0.0418 | | | | | |
| SD: | 0.000 | 0.000 | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 17 | AS Loc: | 10 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1794 Post DIG SPK | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 5.418µg/L | 5.418µg/L | 0.0677 | 0.3325 | | 0.0687 | | 14:30:24 |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 5.418µg/L | 5.418µg/L | 0.0677 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 18 | AS Loc: | 11 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 1806 | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.482µg/L | 0.482µg/L | 0.0074 | 0.0383 | | 0.0084 | | 14:31:45 |
| Mean: | 0.482µg/L | 0.482µg/L | 0.0074 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Fax sent by : 5095151351

| Seq. No. | 19 | AS Loc: | 12 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 10.18µg/L | 10.18µg/L | 0.1259 | 0.6060 | | 0.1269 | | 14:32:44 |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 10.18µg/L | 10.18µg/L | 0.1259 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 20 | AS Loc: | 13 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCB | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | -0.151µg/L | -0.151µg/L | -0.0003 | 0.0026 | | 0.0007 | | 14:34:07 |
| Mean: | -0.151µg/L | -0.151µg/L | -0.0003 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 21 | AS Loc: | 14 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | S09Q000019 | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.424µg/L | 0.424µg/L | 0.0067 | 0.0336 | | 0.0077 | | 14:35:06 |
| Mean: | 0.424µg/L | 0.424µg/L | 0.0067 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 22 | AS Loc: | 15 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 19 DUP | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 0.427µg/L | 0.427µg/L | 0.0068 | 0.0358 | | 0.0078 | | 14:36:07 |
| Mean: | 0.427µg/L | 0.427µg/L | 0.0068 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 23 | AS Loc: | 16 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | 19 PRE DIG SPK | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 5.911µg/L | 5.911µg/L | 0.0737 | 0.3561 | | 0.0747 | | 14:37:07 |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 5.911µg/L | 5.911µg/L | 0.0737 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

| Seq. No. | 24 | AS Loc: | 17 | Date: | 5/ 8/2009 | | | |
|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCV | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time |
| Hg | 9.967µg/L | 9.967µg/L | 0.1233 | 0.5899 | | 0.1242 | | 14:38:32 |
| An extra autosampler wash has been performed. | | | | | | | | |
| Mean: | 9.967µg/L | 9.967µg/L | 0.1233 | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | |
| %RSD: | | | | | | | | |

Fax sent by

| Seq. No. | 25 | AS Loc: | 18 | Date: | 5/ 8/2009 | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | CCB | | | | | | | | |
| Elem | SampleConc | StndConc | Blank Corr Signal | Pk Area | BG Area | Pk Ht | BG Ht | Time | |
| Hg | -0.155µg/L | -0.155µg/L | -0.0003 | 0.0010 | | 0.0007 | | 14:39:59 | |
| Mean: | -0.155µg/L | -0.155µg/L | -0.0003 | | | | | | |
| SD: | 0.000µg/L | 0.000µg/L | | | | | | | |
| %RSD: | | | | | | | | | |

**222-S Advanced Technologies and Laboratories** **Ion Chromatography Data Review Checklist**

Worklist/Project: 13337/AW106 EVAP3 20090162 Check Procedure Used: ☒ LA-533-101 (Cat) ☐ LA-533-107 (846 Anions) ☐ LA-533-115 (IC6 Anions)

Run Date: 3/10/09 Instrument ID: IC 5 Prep Batches Analyzed (Worklist #): 13335 Prep Method: LA544-112

| Review Items | Yes | No | N/A | Comments/Samples Affected |
|---|---|---|---|---|
| **A. Calibration/Instrument Run QC** | | | | |
| 1. Instrument calibrated per procedure and at specified levels? | ✓ | | | |
| 2. If the Calibration date is different, has the change been recorded with the calibration record? | | | ✓ | |
| 3. Calibration curve correlation coefficient ≥0.995 linear or ≥0.999 quadratic? | ✓ | | | |
| 4. ICV/CCV analyzed at appropriate frequency and within control limits (Recovery: 90-110%)? | ✓ | | | |
| 5. ICB/CCB analyzed at required frequency and < EQL (or RL) or <5% of the lowest sample result? | ✓ | | | |
| 6. LLS run and within control limits? For IH, recovery is mandatory to verify RL SW-846 9056A requirement ☒ 75-125% ☐ 50-150% | ✓ | | | |
| **B. Sample Results** | | | | |
| 1. Were samples with concentrations > linear range for any analyte diluted and reanalyzed? | | | ✓ | |
| 2. Are all reported results bracketed by in-control QC? | ✓ | | | |
| 3. Are there 10 or fewer samples runs between bracketed, in-control QC? | ✓ | | | |
| **C. Preparation/Matrix QC** | | | | |
| 1. LCS/Prep Std prepared per prep batch and within control limits? Recovery: ☒ 80-120% or ☐ Statistical _____ | ✓ | | | |
| 2. LCS Dup (Prep Std Dup) prepared per prep batch, if required, and within control limits? Recovery: ☐ 80-120% or ☐ Statistical _____; RPD: ☐ ≤20% or ☐ Statistical _____ | | | ✓ | |
| 3. IH RLS run (when required) and within mandatory control limits (Recovery: 75-125%)? | | | ✓ | |
| 4. Method/Media Blank prepared per prep batch and < EQL (or RL) or <5% of the lowest sample result? | ✓ | | | |
| 5. Duplicate or MS Duplicate run at required frequency and within control limits? %RPD: ☒ ≤20% or ☐ Client-specified _____ | ✓ | | | |
| 6. MS run at required frequency and within control limit? Recovery: ☒ 75-125% or ☐ Client-specified _____ | ✓ | | | |
| **D. Other** | | | | |
| 1. Are all problems and nonconformance issues documented appropriately? | ✓ | | | |
| 2. Are current IDL/MDL/EQL/RL/Calibration data on file? | ✓ | | | |
| 3. Calculations/transcriptions checked for errors? | ✓ | | | |
| 4. Are all raw data complete and verified in Omni LIMS? | ✓ | | | |
| 5. All client/project specific requirements met (e.g., MDL, Holding time, etc.)? | ✓ | | | |
| 6. Date/time of analysis verified as correct? | ✓ | | | |
| 7. All Benchsheet(s)/Worklist(s) properly completed and included, as required? | ✓ | | | |
| 8. IH Only: Media Blank subtracted from Sample results? | | | ✓ | |

1st Data Reviewer [signature] Date: 3/17/09 2nd Data Reviewer: [signature] Date: 03/17/09

# LABCORE Completed Batch Report for Batch# 00013337

**Analyst:** Thorndike, Kathy **Book#:** 115N28A

**Instrument:** IC-5 (IC-NH4)

**Method:** IC - NH4, LA-533-101 Rev/Mod 0-0

**Specification:** AW106 EVAP3

**Prep Batch:** 00013335

**Batch Comment:** AW103 EVAP3 NH4 DISTILATION INSTRUMENT RUN

| Seq | Type | Sample# | Assoc. Sample | RepR | | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | | | |
| 1 | ICV | S0903100037 | | 0 | 0 | | Ammonium | LIQUID | 2.554458 | 2.5506E+00 | | | 0.012 | ug/mL | 99.851 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | | | |
| 2 | ICB | S0903100038 | | 0 | 0 | | Ammonium | LIQUID | | <1.2000E-02 | | | 0.012 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | | | |
| 3 | LLS | S0903100039 | | 0 | 0 | | Ammonium | LIQUID | .1011876 | 7.9690E-02 | | | 0.012 | ug/mL | 78.755 | % Recovery | |
| Sample Sequence 4 | | | | | | | | | | | | | | | | | |
| 4 | BLNK-PREP | S0903100019 | | 0 | 0 | S | Ammonium | LIQUID | | 1.7462E+00 | | | 0.12 | ug/mL | | | |
| Sample Sequence 5 | | | | | | | | | | | | | | | | | |
| 5 | LCS | S0903100018 | | 0 | 0 | S | Ammonium | LIQUID | 258 | 2.4967E+02 | | | 0.6 | ug/mL | 96.771 | % Recovery | |
| Sample Sequence 6 | | | | | | | | | | | | | | | | | |
| 6 | SAMPLE | S09T001755 | | 0 | 0 | S | Ammonium | LIQUID | N/A | <1.2000E-01 | | | 0.12 | ug/mL | | | U |
| Sample Sequence 7 | | | | | | | | | | | | | | | | | |
| 7 | SAMPLE | S09T001766 | | 0 | 0 | S | Ammonium | LIQUID | N/A | <1.2000E-01 | | | 0.12 | ug/mL | | | U |
| Sample Sequence 8 | | | | | | | | | | | | | | | | | |
| 8 | SAMPLE | S09T001787 | | 0 | 0 | S | Ammonium | LIQUID | N/A | 8.3449E+01 | | | 0.12 | ug/mL | | | |
| Sample Sequence 9 | | | | | | | | | | | | | | | | | |
| 9 | SAMPLE | S09T001799 | | 0 | 0 | S | Ammonium | LIQUID | N/A | 8.4648E+01 | | | 0.12 | ug/mL | | | |
| Sample Sequence 10 | | | | | | | | | | | | | | | | | |
| 10 | DUP | S0903100020 | S09T001799 | 0 | 0 | S | Ammonium | LIQUID | 8.4648E+01 | 8.3285E+01 | | | 0.12 | ug/mL | 1.6234 | % RPD | |
| Sample Sequence 11 | | | | | | | | | | | | | | | | | |
| 11 | SPK-PREDIG | S0903100021 | S09T001799 | 0 | 0 | S | Ammonium | LIQUID | 25.8 | 1.0603E+02 | | | 0.12 | ug/mL | 82.866 | % Recovery | |
| Sample Sequence 12 | | | | | | | | | | | | | | | | | |
| 12 | SPK-IC | S0903100041 | S09T001799 | 0 | 0 | | Ammonium | LIQUID | 258 | 1.1039E+01 | | | 0.012 | ug/mL | 99.763 | % Recovery | |
| Sample Sequence 13 | | | | | | | | | | | | | | | | | |
| 13 | SAMPLE | S09T001811 | | 0 | 0 | S | Ammonium | LIQUID | N/A | 8.4406E+01 | | | 0.12 | ug/mL | | | |
| Sample Sequence 14 | | | | | | | | | | | | | | | | | |
| 14 | CCV | S0903100043 | | 0 | 0 | | Ammonium | LIQUID | 2.554458 | 2.5582E+00 | | | 0.012 | ug/mL | 100.14 | % Recovery | |
| Sample Sequence 15 | | | | | | | | | | | | | | | | | |
| 15 | CCB | S0903100044 | | 0 | 0 | | Ammonium | LIQUID | | <1.2000E-02 | | | 0.012 | ug/mL | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013337

## Comments Section:

**Comments for sample: S0903100037, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_003.DXD

**Comments for sample: S0903100020, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_012.DXD

**Comments for sample: S0903100021, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_013.DXD

**Comments for sample: S0903100041, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_014.DXD

**Comments for sample: S09T001811, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_015.DXD

**Comments for sample: S0903100043, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_016.DXD

**Comments for sample: S0903100044, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_017.DXD

**Comments for sample: S0903100038, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_004.DXD

**Comments for sample: S0903100039, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_005.DXD

**Comments for sample: S0903100019, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_006.DXD

**Comments for sample: S0903100018, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_007.DXD

**Comments for sample: S09T001755, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_008.DXD

**Comments for sample: S09T001766, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_009.DXD

**Comments for sample: S09T001787, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_010.DXD

**Comments for sample: S09T001799, test: IC - NH4**
r:\PKNTTR~1\090310h3\09031000_011.DXD

Data Flagger Status:
Flagging Completed

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013337

## Final Page for Batch# 00013337

Reviewer Signature 3/17/09 Date

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013337

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903100037 | ICV | | | | |
| 2 | S0903100038 | ICB | | | | |
| 3 | S0903100039 | LLS | | | | |
| 4 | S0903100019 | BLNK-PREP | | | | |
| 5 | S0903100018 | LCS | | | | |
| 6 | S09T001755 | SAMPLE | | 20090162 | 6AW-08-01FB1 | AW106 EVAP3 |
| 7 | S09T001766 | SAMPLE | | 20090162 | 6AW-08-01FB2 | AW106 EVAP3 |
| 8 | S09T001787 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 9 | S09T001799 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 10 | S0903100020 | DUP | S09T001799 | | | |
| 11 | S0903100021 | SPK-PREDIG | S09T001799 | | | |
| 12 | S0903100041 | SPK-IC | S09T001799 | | | |
| 13 | S09T001811 | SAMPLE | | 20090163 | 6AW-08-04B | AW106 EVAP3 |
| 14 | S0903100043 | CCV | | | | |
| 15 | S0903100044 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

3/10/2009 2:43:08PM
IncompleteBatchShort Version 2.7.22
batchreports 2.7.25



# LABCORE Data Entry Template for Batch# 00013337

**Analyst:**

**Standard ID / Book#:** See Bench Sheet

**Instrument:**

**Method:** IC - NH4, WA-583-101 Rev/Mod 0-Ø

**Prep Batch:** 00013335

**Batch Comment:** AW103 EVAP3 NH4 DISTILATION INSTRUMENT RUN

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | ICV | | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 2 | ICB | | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 3 | LLS | | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 4 | BLNK-PREP | | 0 | S | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 5 | LCS | | 0 | S | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 6 | SAMPLE | S09T001755 | 0 | S | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Ammonium | | | | | |
| 7 | SAMPLE | S09T001766 | 0 | S | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Ammonium | | | | | |
| 8 | SAMPLE | S09T001787 | 0 | S | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Ammonium | | | | | |
| 9 | SAMPLE | S09T001799 | 0 | S | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Ammonium | | | | | |
| 10 | DUP | S09T001799 | 0 | S | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 11 | SPK-PREDIG | S09T001799 | 0 | S | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 12 | SPK-IC | S09T001799 | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 13 | SAMPLE | S09T001811 | 0 | S | LIQUID | 20090163 | AW106 EVAP3 |
| | Analytes Requested: | Ammonium | | | | | |
| 14 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |
| 15 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Ammonium | | | | | |

## Final Page for Batch# 00013337

KS Phondike 3-10-09
**Analyst Signature** **Date**

KS Phondike 3-16-09
**Data Entry Signature** **Date**

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

03/11/2009 WED 09:05 [TX/RX NO 5488] ☑003

## Appendix B. IC Instrument Run Bench Sheet

Project # __AW106_____ Batch # 13337

Analyst __KJ THORNDIKE_____ Date __03/10/09_____

| Procedure/Method | Calibration Date | Eluent Type | Eluent ID[1] | Expiration Date |
|---|---|---|---|---|
| [ X] LA-533-101-ICCAT | 03/09/09 | $H_2SO_4$ | 090310-7 | 04/10/09 |
| [ ] LA-533-107-IC846 | | $Na_2CO_3$ | | |
| | | $NaHCO_3$ | | |
| | | $Na_2CO_3/NaHCO_3$ | | |
| [ ] LA-533-115-IC6 | | EG40 | | |

IC Note Book # _HNF-N-577 1_____ Page(s) __26_____

| Standard Type | Std ID[1] | Expiration Date |
|---|---|---|
| Calibration | NA | |
| CCV | 115N28A | 03/13/09 |
| ICV | NA | |

| Standard Type | Std ID[1] | Expiration Date |
|---|---|---|
| LLS | 115N28A | 03/13/09 |
| Spike[2] | 115N28A | 03/13/09 |
| Pipette ID | D61799,E0607304F,G10779 | |

| # | Sample Number/Std Type | Dilution Factor (DF) | Dilution Description[3] |
|---|---|---|---|
| 1 | CCV | 101 | 0.100ML-10.0ML |
| 2 | CCB | 1 | |
| 3 | LLS | 2550 | 0.200ML-9.8ML-0.200ML-10.0ML |
| 4 | PREP BLANK | 1 | |
| 5 | PREP STD | 1 | |
| 6 | S09T001755 | 1 | |
| 7 | S09T001766 | 1 | |
| 8 | S09T001787 | 1 | |
| 9 | S09T001799 | 1 | |
| 10 | S09T001799 DUP | 1 | |
| 11 | S09T001799 SPK | 1 | |
| 12 | S09T001799 POST SPK | 1.01 | 0.025ML-2.5ML SAMPLE |
| 13 | S09T001811 | 1 | |
| 14 | CCV | 101 | 0.100ML-10.0ML |
| 15 | CCB | 1 | |
| 16 | | | |
| 17 | | | |
| 18 | | | |

# LABCORE Data Entry Template for Batch# 00013335

**Analyst:** Thorndike, Kathy **Standard ID / Book#:**

**Instrument:**

**Method:** NH4 DIST, LA-544-112 Rev/Mod D-0

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 NH4 DISTILLATION

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | LCS | | | S | LIQUID | | |
| 2 | BLNK-PREP | | | S | LIQUID | | |
| 3 | SAMPLE | S09T001755 | | S | LIQUID | 20090162 | AW106 EVAP3 |
| 4 | SAMPLE | S09T001766 | | S | LIQUID | 20090162 | AW106 EVAP3 |
| 5 | SAMPLE | S09T001787 | | S | LIQUID | 20090162 | AW106 EVAP3 |
| 6 | SAMPLE | S09T001799 | | S | LIQUID | 20090162 | AW106 EVAP3 |
| 7 | DUP | S09T001799 | | S | LIQUID | | |
| 8 | SPK-PREDIG | S09T001799 | | S | LIQUID | | |
| 9 | SAMPLE | S09T001811 | | S | LIQUID | 20090163 | AW106 EVAP3 |

## Final Page for Batch# 00013335

KS Thorndike 3-10-09
Analyst Signature Date

KS Thorndike 3-10-09
Data Entry Signature Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

Appendix A. Ammonia Micro-distillation Bench Sheet

PROJECT _AW106_____

TUBE LOT ID # _____NA_____

BATCH # _____

ANALYST NAME ___KJ THORNDIKE_____ DATE __03/10/09_____

| Standard | Book # or Vendor Cat # | Expiration Date |
|---|---|---|
| Predist/LCS Standard | 115N28A | 03/13/09 |
| Post Spike Standard | 115N28A | 03/13/09 |
| Pipette Id/Date | D61799, E0607304F,G10779 | |

| Sample Name/Number | Volume Of Standard | Total Volume | Dilution Factor (DF) | Dilution Description |
|---|---|---|---|---|
| Prep Std (LCS) | 0.200ML | 10.0ML | 50 | |
| PREP BLANK | NA | 10.0ML | | |
| S09T001755 | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001766 | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001787 | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001799 SAM | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001799 DUP | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001799 SPK | 0.100ML | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| S09T001811 | NA | 10.0ML | 10 | 1.0ML DILUTED TO 10ML |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |

# Sample Analysis Report

Sample Name : CCV 101 115N28A
Data File Name : C:\PEAKNET\DATA\09031000_003.DXD

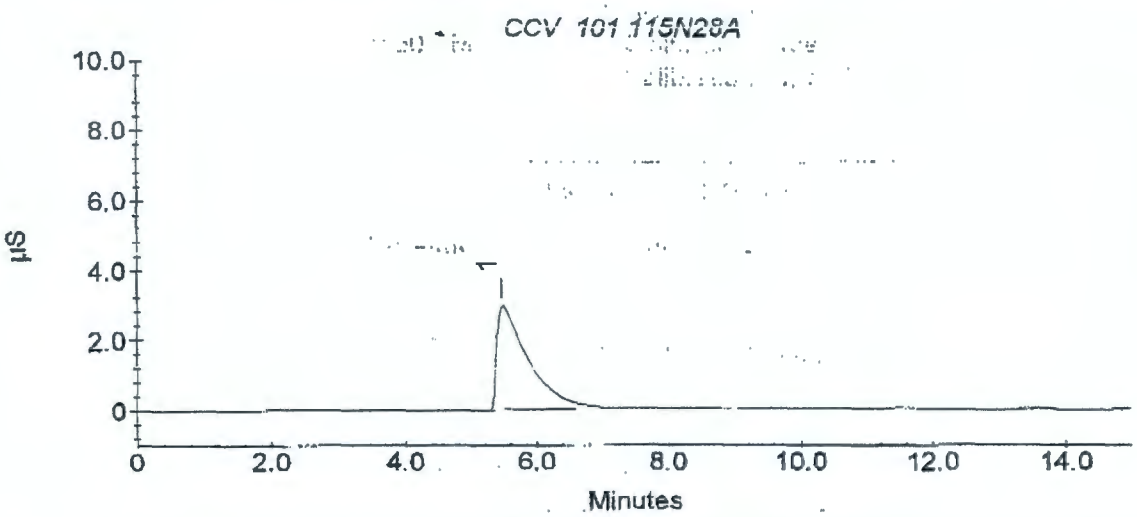
Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 2:10:50 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Ammonium | 5.46 | 2.55065 | 986465 | 29393 |

99.8%




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 14:25:51



03/11/2009 WED 09:05 [TX/RX NO 5488] 005

# Sample Analysis Report

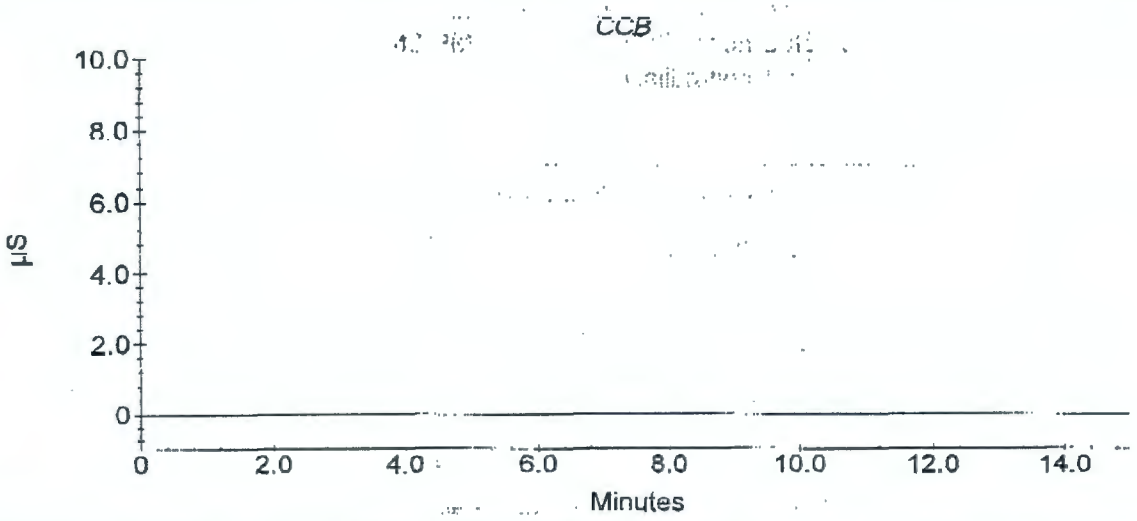
**Sample Name : CCB**
**Data File Name : C:\PEAKNET\DATA\09031000_004.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 2:27:49 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|



# Sample Analysis Report

**Sample Name : LLS 2550 115N28A**
**Data File Name : C:\PEAKNET\DATA\09031000_005.DXD**

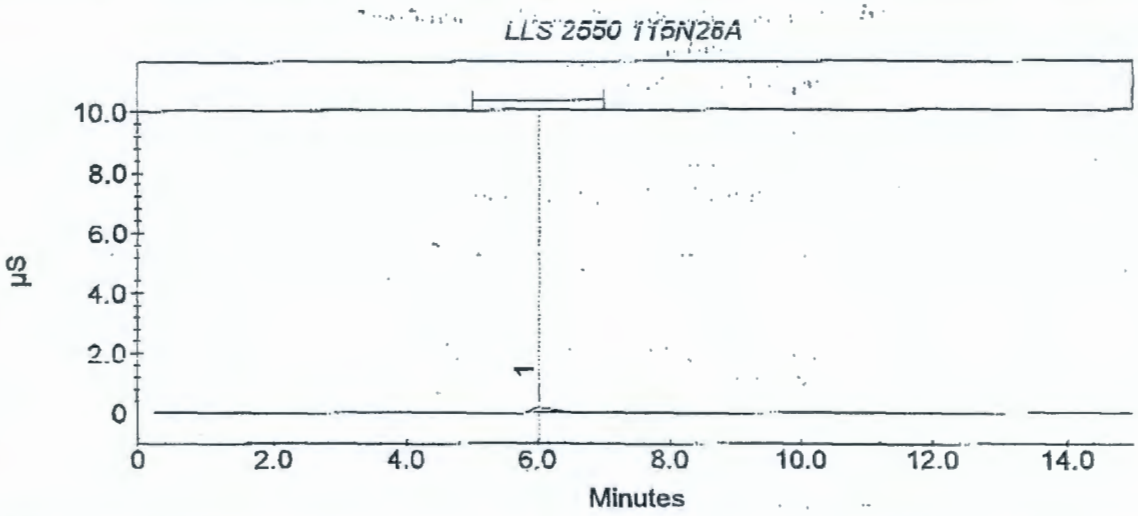
Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 2:44:47 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/11/09 8:22:15 AM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Ammonium | 6.02 | 0.07969 | 36459 | 1618 |

79.4%




: PeakNet 5.21



Current Date : 3/11/0
Current Time : 08:22:33



03/11/2009 WED 09:05 [TX/RX NO 5488] 007

# Sample Analysis Report

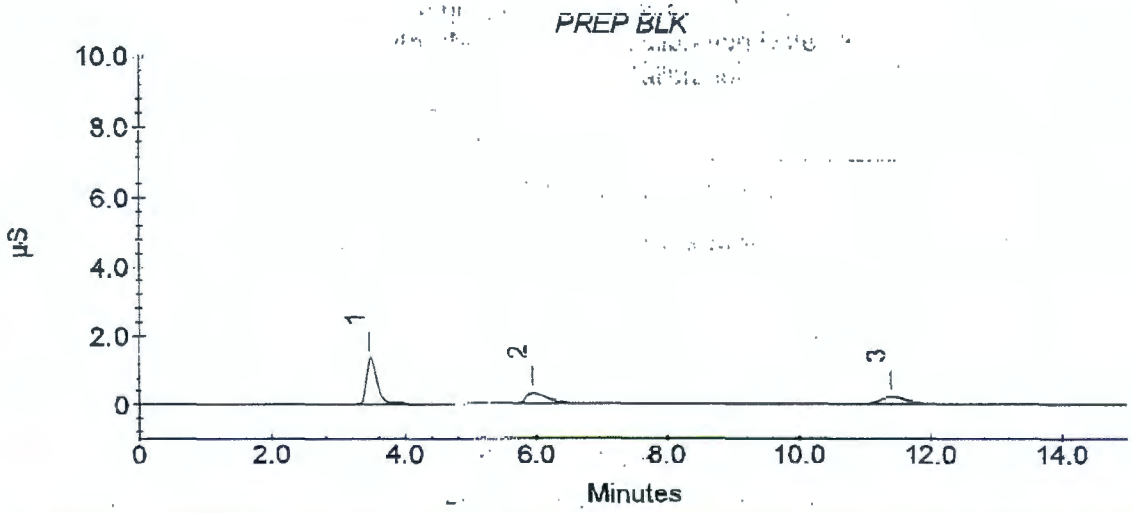
**Sample Name : PREP BLK**
**Data File Name : C:\PEAKNET\DATA\09031000_006.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 3:01:45 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 145687 | 12916 |
| 2 | Ammonium | 5.94 | 0.17462 | 79240 | 3234 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 61127 | 2042 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 15:16:47



03/11/2009 WED 09:05 [TX/RX NO 5488] 008

# Sample Analysis Report

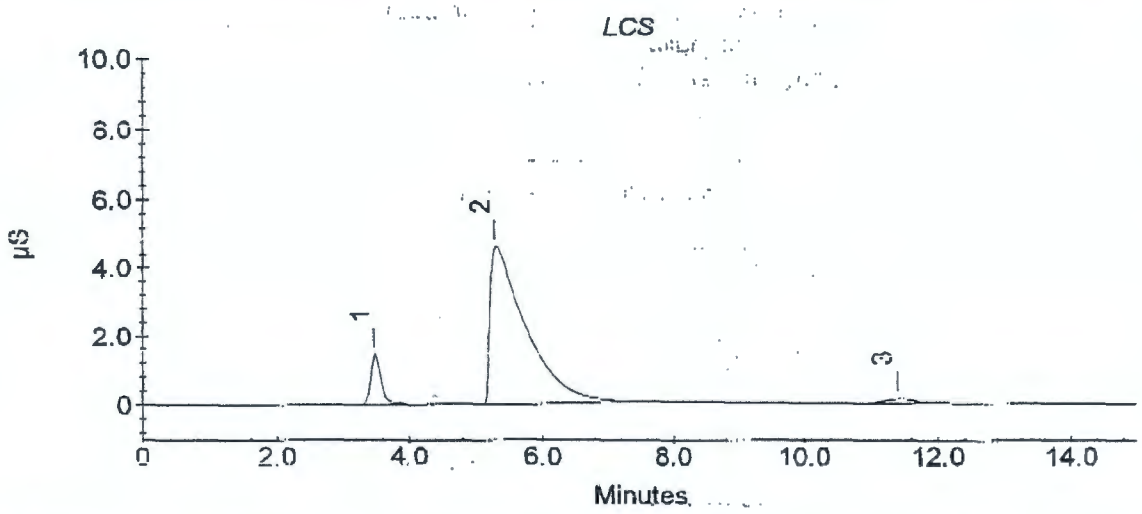
**Sample Name : LCS**
**Data File Name : C:\PEAKNET\DATA\09031000_007.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 3:18:44 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 153451 | 14021 |
| 2 | Ammonium | 5.29 | 4.99340 | 96.8% 1724125 | 45967 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 36061 | 1205 |




; PeakNet 5.21



Current Date : 3/10/0
Current Time : 15:33:46

# Sample Analysis Report

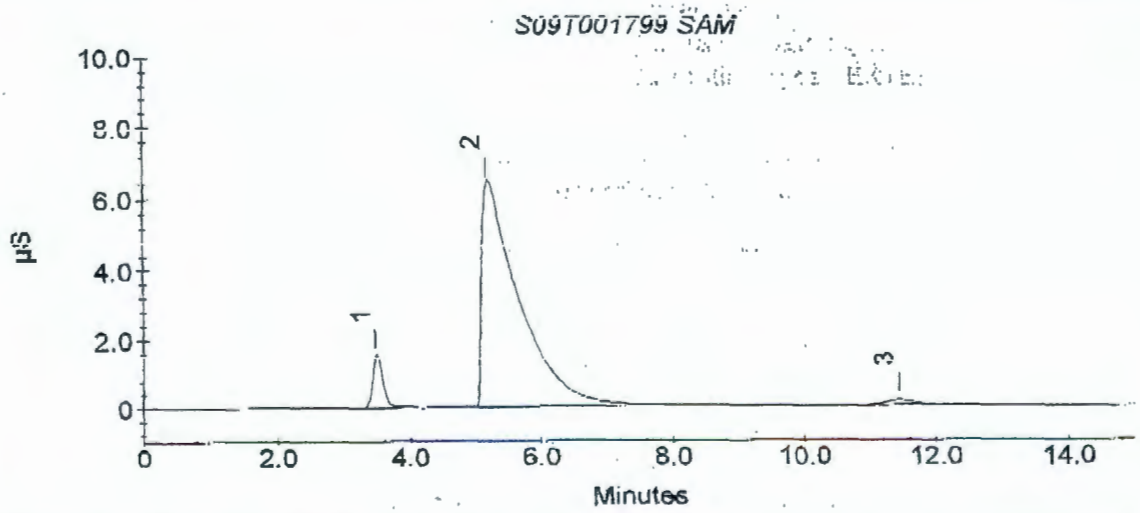
**Sample Name : S09T001799 SAM**
**Data File Name : C:\PEAKNET\DATA\09031000_011.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 4:26:41 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 169682 | 14988 |
| 2 | Ammonium | 5.16 | 8.46475 | 2594476 | 63585 |
| 3 | Unknown 2 | 11.44 | 0.00000 | 47029 | 1587 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 16:41:42



03/11/2009 WED 09:05 [TX/RX NO 5488] 013

# Sample Analysis Report

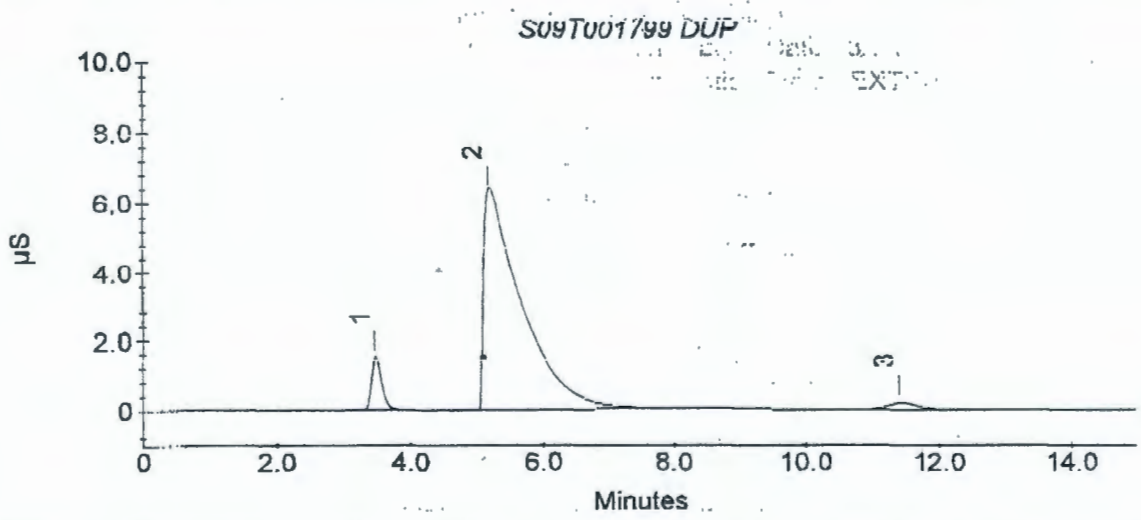
**Sample Name : S09T001799 DUP**
**Data File Name : C:\PEAKNET\DATA\09031000_012.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 4:43:40 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 167571 | 14766 |
| 2 | Ammonium | 5.16 | 8.32849 | 2563090 | 62458 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 58535 | 1921 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 16:58:40



03/11/2009 WED 09:05 [TX/RX NO 5488] 014

# Sample Analysis Report

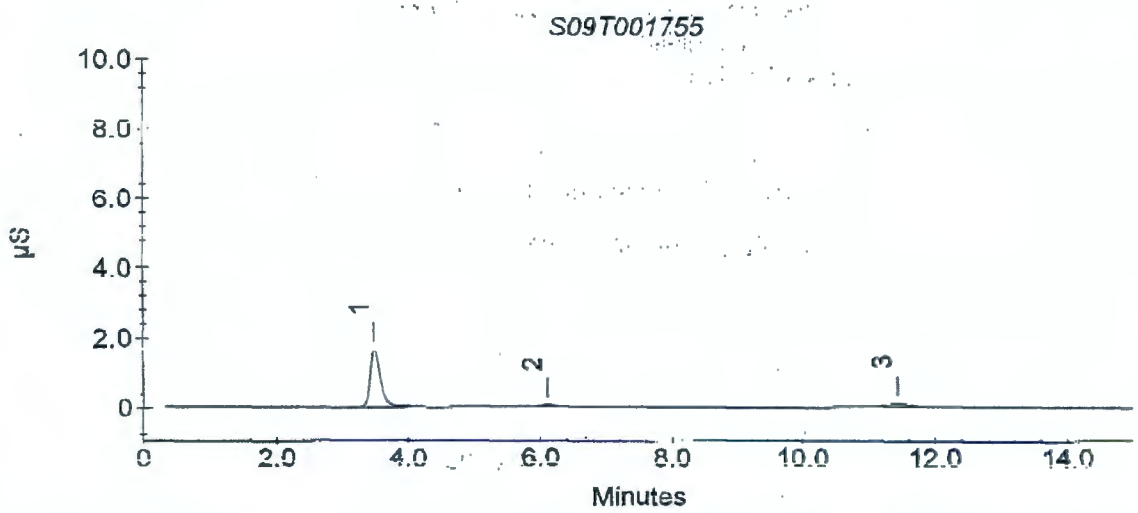
**Sample Name : S09T001755**
**Data File Name : C:\PEAKNET\DATA\09031000_008.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 3:35:44 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 182727 | 16295 |
| 2 | Unknown 2 | 6.11 | 0.00000 | 9774 | 467 |
| 3 | Unknown 3 | 11.44 | 0.00000 | 32942 | 1126 |



# Sample Analysis Report

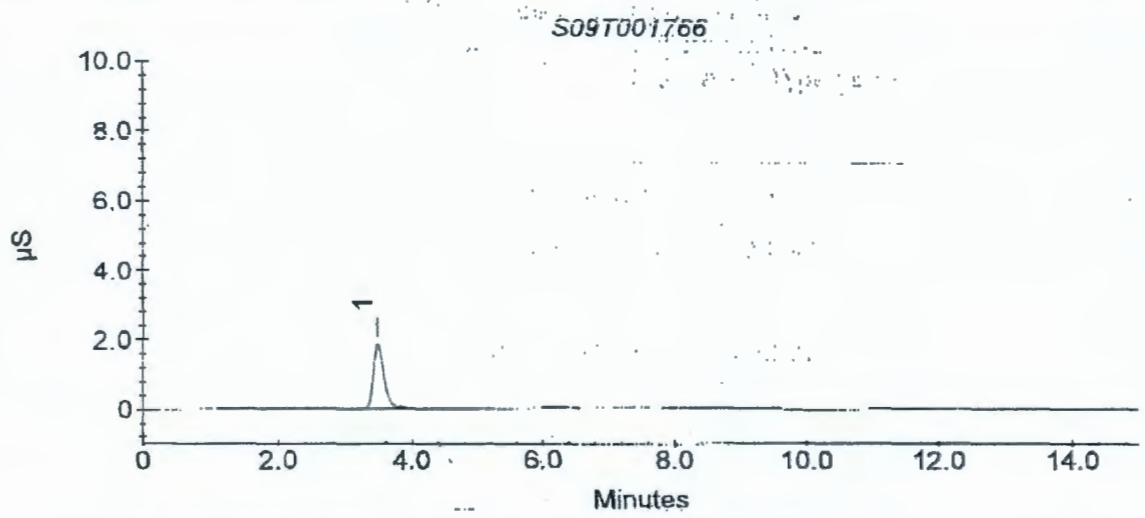
**Sample Name : S09T001766**
**Data File Name : C:\PEAKNET\DATA\09031000_009.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 3:52:43 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 197665 | 17945 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 16:07:44

# Sample Analysis Report

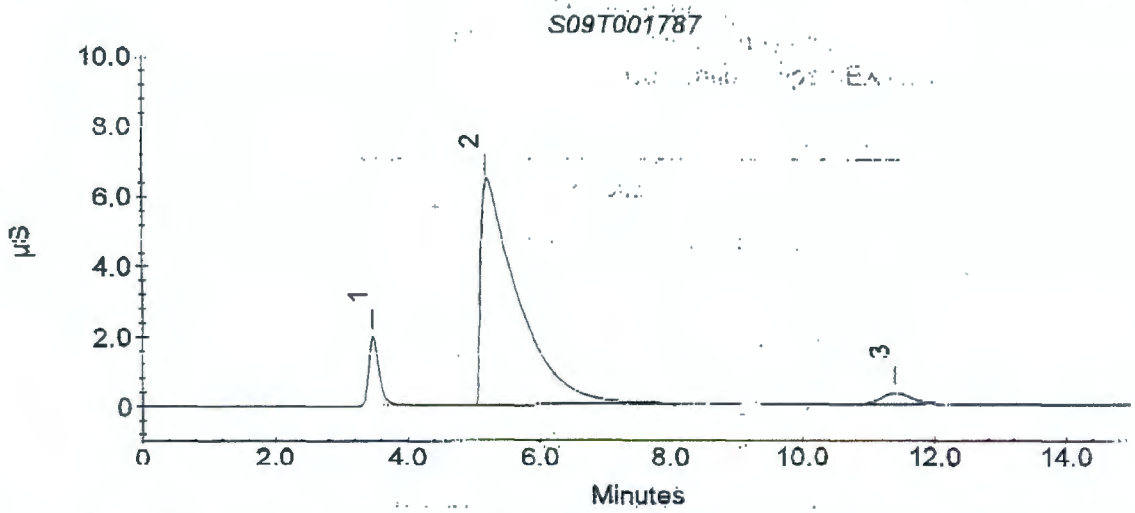
Sample Name : S09T001787
Data File Name : C:\PEAKNET\DATA\09031000_010.DXD

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 4:09:42 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 213377 | 19303 |
| 2 | Ammonium | 5.16 | 8.34490 | 2566880 | 63256 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 95577 | 3135 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 16:24:43



03/11/2009 WED 09:05 [TX/RX NO 5488] 012

# Sample Analysis Report

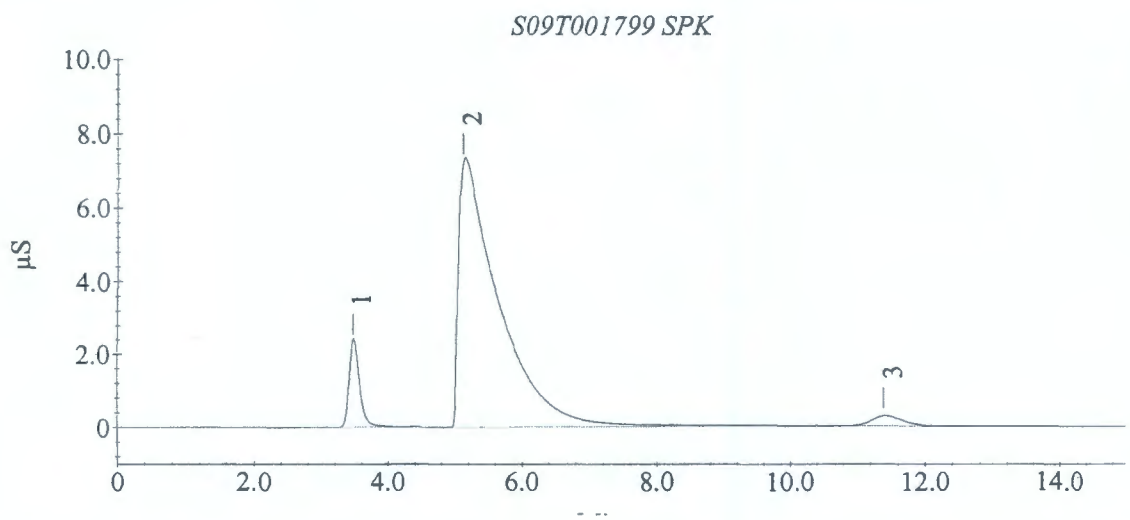
**Sample Name : S09T001799 SPK**
**Data File Name : M:\PKNT TRANSFER FILES\090310H3\09031000_013.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/2009 6:00:38 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/2009 3:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 262660 | 23174 |
| 2 | Ammonium | 5.11 | 10.60273 | 3064098 | 72241 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 85580 | 2810 |



# Sample Analysis Report

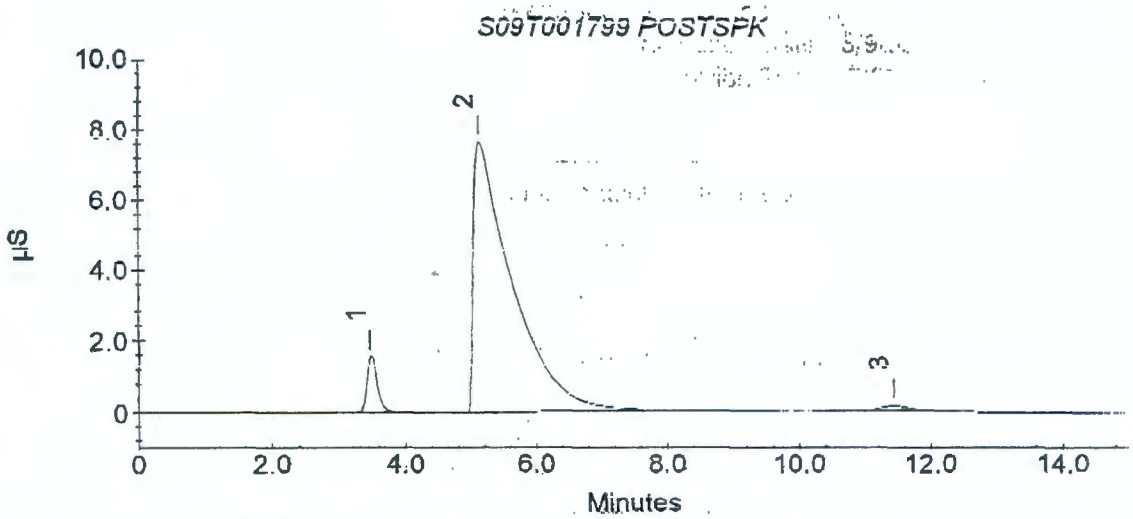
**Sample Name : S09T001799 POSTSPK**
**Data File Name : C:\PEAKNET\DATA\09031000_014.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 5:17:38 PM
System Operator : KJT
Dilution Factor : 1.01

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 170627 | 15176 |
| 2 | Ammonium | 5.11 | 11.03864 | 3132440 | 76205 |
| 3 | Unknown 2 | 11.44 | 0.00000 | 49437 | 1653 |




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 17:32:39



03/11/2009 WED 09:05 [TX/RX NO 5488] 016

# Sample Analysis Report

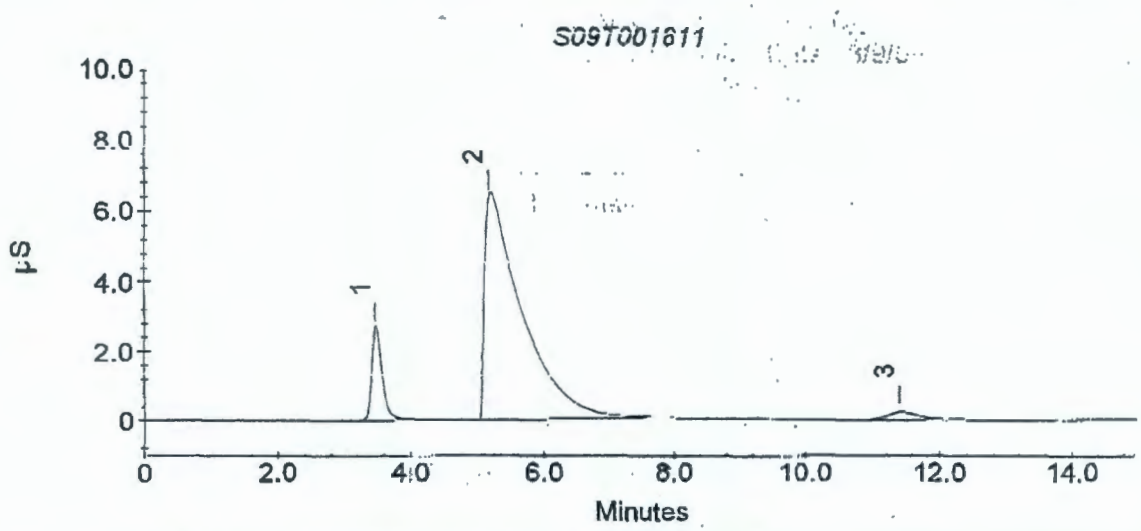
**Sample Name : S09T001811**
**Data File Name : C:\PEAKNET\DATA\09031000_015.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 5:34:36 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 3.47 | 0.00000 | 293918 | 26163 |
| 2 | Ammonium | 5.16 | 8.44060 | 2588928 | 63382 |
| 3 | Unknown 2 | 11.40 | 0.00000 | 66915 | 2178 |



# Sample Analysis Report

**Sample Name : CCV 115N28A**
**Data File Name : C:\PEAKNET\DATA\09031000_016.DXD**

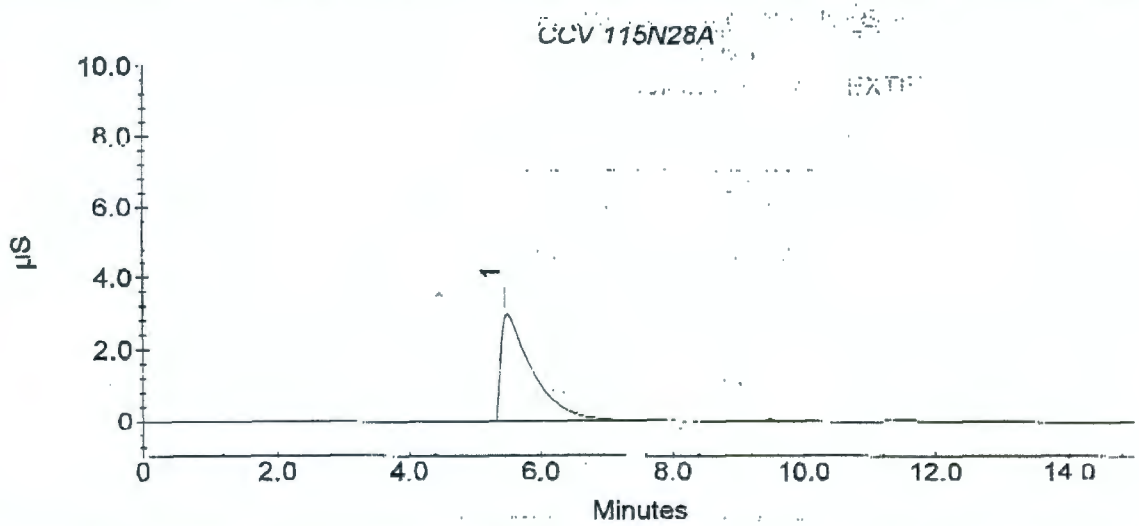
Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 5:51:35 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Ammonium | 5.46 | 2.55816 | 988965 | 29190 |

100.1%




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 18:06:36



03/11/2009 WED 09:05 [TX/RX NO 5488] 018

# Sample Analysis Report

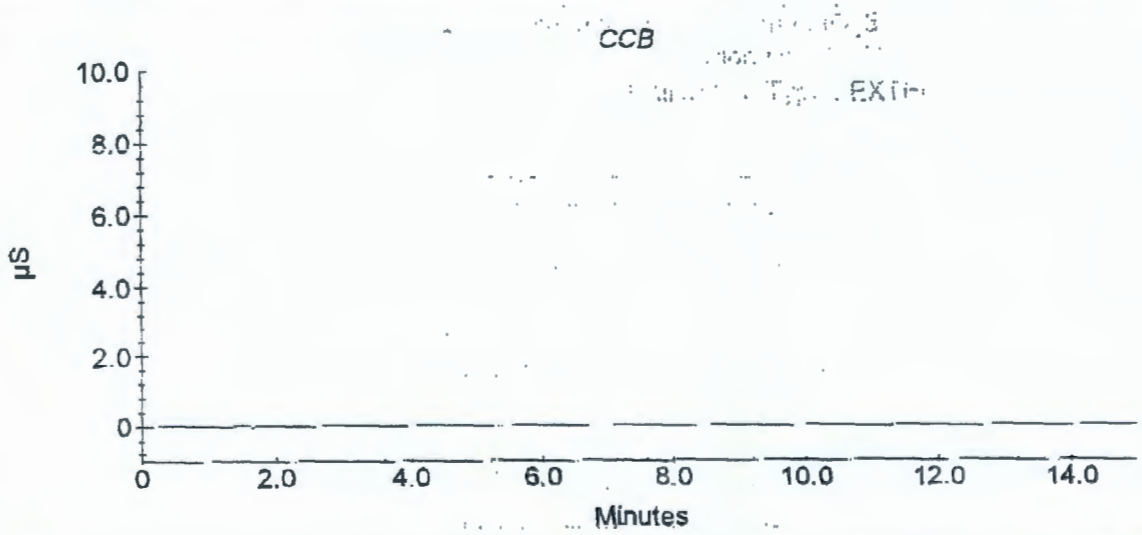
**Sample Name : CCB**
**Data File Name : C:\PEAKNET\DATA\09031000_017.DXD**

Method File Name : c:\peaknet\method\nh4green.met
Date Time Collected : 3/10/09 6:08:36 PM
System Operator : KJT
Dilution Factor : 1.00

System Name : IC_5
Calibration Date : 3/9/09 2:15:32 PM
Calibration Type : EXTERNAL

Peak Information : All Peaks

| Peak # | Component | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|




: PeakNet 5.21



Current Date : 3/10/0
Current Time : 16:23:36

**222-S Advanced Technologies and Laboratories** **Ion Chromatography Data Review Checklist**

Worklist/Project: 13359 / AW10G EVAP 20090162 Check Procedure Used: ☐ LA-533-101 (Cat) ☐ LA-533-107 (846 Anions) ☑ LA-533-115 (IC6 Anions)

Run Date: 3/9/09 Instrument ID: IC-6 Prep Batches Analyzed (Worklist #): N/A Prep Method: N/A

| Review Items | Yes | No | N/A | Comments/Samples Affected |
|---|---|---|---|---|
| **A. Calibration/Instrument Run QC** | | | | |
| 1. Instrument calibrated per procedure and at specified levels? | ✓ | | | |
| 2. If the Calibration date is different, has the change been recorded with the calibration record? | | | ✓ | |
| 3. Calibration curve correlation coefficient ≥0.995 linear or ≥0.999 quadratic? | ✓ | | | |
| 4. ICV/CCV analyzed at appropriate frequency and within control limits (Recovery: 90-110%)? | ✓ | | | |
| 5. ICB/CCB analyzed at required frequency and < EQL (or RL) or <5% of the lowest sample result? | ✓ | | | |
| 6. LLS run and within control limits? For IH, recovery is mandatory to verify RL ☐ 75-125% SW-846 9056A requirement ☑ 50-150% | ✓ | | | |
| **B. Sample Results** | | | | |
| 1. Were samples with concentrations > linear range for any analyte diluted and reanalyzed? | ✓ | | | Samples 1772, 1783 re-run on later date. |
| 2. Are all reported results bracketed by in-control QC? | ✓ | | | |
| 3. Are there 10 or fewer samples runs between bracketed, in-control QC? | ✓ | | | |
| **C. Preparation/Matrix QC** | | | | |
| 1. LCS/Prep Std prepared per prep batch and within control limits? Recovery: ☐ 80-120% or ☐ Statistical _____ | | | ✓ | |
| 2. LCS Dup (Prep Std Dup) prepared per prep batch, if required, and within control limits? Recovery: ☐ 80-120% or ☐ Statistical _____; RPD: ☐ ≤20% or ☐ Statistical _____ | | | ✓ | |
| 3. IH RLS run (when required) and within mandatory control limits (Recovery: 75-125%)? | | | ✓ | |
| 4. Method/Media Blank prepared per prep batch and < EQL (or RL) or <5% of the lowest sample result? | | | ✓ | |
| 5. Duplicate or MS Duplicate run at required frequency and within control limits? %RPD: ☑ ≤20% or ☐ Client-specified _____ | ✓ | | | |
| 6. MS run at required frequency and within control limit? Recovery: ☑ 75-125% or ☐ Client-specified _____ | ✓ | | | |
| **D. Other** | | | | |
| 1. Are all problems and nonconformance issues documented appropriately? | ✓ | | | |
| 2. Are current IDL/MDL/EQL/RL/Calibration data on file? | ✓ | | | |
| 3. Calculations/transcriptions checked for errors? | ✓ | | | |
| 4. Are all raw data complete and verified in Omni LIMS? | ✓ | | | |
| 5. All client/project specific requirements met (e.g., MDL, Holding time, etc.)? | ✓ | | | |
| 6. Date/time of analysis verified as correct? | ✓ | | | |
| 7. All Benchsheet(s)/Worklist(s) properly completed and included, as required? | ✓ | | | |
| 8. IH Only: Media Blank subtracted from Sample results? | | | ✓ | |

1st Data Reviewer K B Date: 3/12/09 2nd Data Reviewer: C Emerson Date: 03/12/09

QA: [signature] 3.17.09

Page 1 of 1

# LABCORE Completed Batch Report for Batch# 00013359

**Analyst:** Edwards, Cheryl **Book#:** 113N28C

**Instrument:** IC-6 (SMALL ORG ACIDS)

**Method:** IC - ANIONS/SMALL ORG. ACIDS, LA-533-115 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 IC6

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICV | S0903110085 | | 0 | 0 | Fluoride | LIQUID | .4729856 | 4.5737E-01 | | | 1.61E-03 | ug/mL | 96.699 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Glycolate | LIQUID | 2.976 | 2.9306E+00 | | | 9.37E-03 | ug/mL | 98.474 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Acetate | LIQUID | 3.5712 | 3.6903E+00 | | | 6.04E-03 | ug/mL | 103.33 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Formate | LIQUID | 3.53152 | 3.4983E+00 | | | 4.67E-03 | ug/mL | 99.058 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Chloride | LIQUID | .678528 | 6.7168E-01 | | | 9.98E-03 | ug/mL | 98.991 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Nitrite | LIQUID | 4.372736 | 4.2502E+00 | | | 0.0192 | ug/mL | 97.198 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Sulfate | LIQUID | 5.142528 | 5.1280E+00 | | | 0.0187 | ug/mL | 99.717 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Oxalate | LIQUID | 4.190208 | 4.1422E+00 | | | 0.0231 | ug/mL | 98.853 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Bromide | LIQUID | 4.7616 | 4.3364E+00 | | | 0.058 | ug/mL | 91.071 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Nitrate | LIQUID | 4.3648 | 4.1925E+00 | | | 0.0208 | ug/mL | 96.053 | % Recovery | |
| 1 ICV | S0903110085 | | 0 | 0 | Phosphate | LIQUID | 4.372736 | 4.2871E+00 | | | 0.0167 | ug/mL | 98.042 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Fluoride | LIQUID | | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Glycolate | LIQUID | | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Acetate | LIQUID | | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Formate | LIQUID | | <4.6700E-03 | | | 4.67E-03 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Chloride | LIQUID | | <9.9800E-03 | | | 9.98E-03 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Nitrite | LIQUID | | <1.9200E-02 | | | 0.0192 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Sulfate | LIQUID | | <1.8700E-02 | | | 0.0187 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Oxalate | LIQUID | | <2.3100E-02 | | | 0.0231 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Bromide | LIQUID | | <5.8000E-02 | | | 0.058 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Nitrate | LIQUID | | <2.0800E-02 | | | 0.0208 | ug/mL | | | |
| 2 ICB | S0903110086 | | 0 | 0 | Phosphate | LIQUID | | <1.6700E-02 | | | 0.0167 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 LLS | S0903110087 | | 0 | 0 | Fluoride | LIQUID | .029651 | 2.4900E-02 | | | 1.61E-03 | ug/mL | 83.977 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Glycolate | LIQUID | .1865625 | 1.5411E-01 | | | 9.37E-03 | ug/mL | 82.605 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Acetate | LIQUID | .223875 | 1.9856E-01 | | | 6.04E-03 | ug/mL | 88.692 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Formate | LIQUID | .2213875 | 2.1189E-01 | | | 4.67E-03 | ug/mL | 95.71 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Chloride | LIQUID | .04253625 | 4.1290E-02 | | | 9.98E-03 | ug/mL | 97.07 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Nitrite | LIQUID | .2741225 | 2.5044E-01 | | | 0.0192 | ug/mL | 91.361 | % Recovery | |
| 3 LLS | S0903110087 | | 0 | 0 | Sulfate | LIQUID | .32238 | 2.9872E-01 | | | 0.0187 | ug/mL | 92.661 | % Recovery | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013359

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | LLS | S0903110087 | | 0 | 0 | Oxalate | LIQUID | .26268 | 2.2694E-01 | | | 0.0231 | ug/mL | 86.394 | % Recovery | |
| 3 | LLS | S0903110087 | | 0 | 0 | Bromide | LIQUID | .2985 | 2.1749E-01 | | | 0.058 | ug/mL | 72.861 | % Recovery | |
| 3 | LLS | S0903110087 | | 0 | 0 | Nitrate | LIQUID | .273625 | 2.2107E-01 | | | 0.0208 | ug/mL | 80.793 | % Recovery | |
| 3 | LLS | S0903110087 | | 0 | 0 | Phosphate | LIQUID | .2741225 | 2.1775E-01 | | | 0.0167 | ug/mL | 79.435 | % Recovery | |
| Sample Sequence 4 | | | | | | | | | | | | | | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Fluoride | LIQUID | N/A | 3.2972E+02 | | | 1.7887 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Glycolate | LIQUID | N/A | 2.1065E+02 | | | 10.41 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Acetate | LIQUID | N/A | 3.6371E+02 | | | 6.7104 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Formate | LIQUID | N/A | 6.8743E+02 | | | 5.1884 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Chloride | LIQUID | N/A | 1.5710E+03 | | | 11.088 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Sulfate | LIQUID | N/A | 6.6396E+03 | | | 20.776 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Oxalate | LIQUID | N/A | 1.6320E+03 | | | 25.664 | ug/mL | | | |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Bromide | LIQUID | N/A | <6.4438E+01 | | | 64.438 | ug/mL | | | U |
| 4 | SAMPLE | S09T001772 | | 0 | 1 | Phosphate | LIQUID | N/A | 2.6265E+03 | | | 18.554 | ug/mL | | | |
| Sample Sequence 5 | | | | | | | | | | | | | | | | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Fluoride | LIQUID | 3.2972E+02 | 3.3115E+02 | | | 1.7887 | ug/mL | 0.43276 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Glycolate | LIQUID | 2.1065E+02 | 2.1102E+02 | | | 10.41 | ug/mL | 0.17549 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Acetate | LIQUID | 3.6371E+02 | 3.6656E+02 | | | 6.7104 | ug/mL | 0.78053 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Formate | LIQUID | 6.8743E+02 | 6.8798E+02 | | | 5.1884 | ug/mL | 0.079976 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Chloride | LIQUID | 1.5710E+03 | 1.5710E+03 | | | 11.088 | ug/mL | 0 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Sulfate | LIQUID | 6.6396E+03 | 6.6658E+03 | | | 20.776 | ug/mL | 0.39383 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Oxalate | LIQUID | 1.6320E+03 | 1.6376E+03 | | | 25.664 | ug/mL | 0.34255 | % RPD | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Bromide | LIQUID | <6.4438E+01 | <6.4438E+01 | | | 64.438 | ug/mL | | | |
| 5 | DUP | S0903110088 | S09T001772 | 0 | 0 | Phosphate | LIQUID | 2.6265E+03 | 2.6116E+03 | | | 18.554 | ug/mL | 0.56891 | % RPD | |
| Sample Sequence 6 | | | | | | | | | | | | | | | | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Fluoride | LIQUID | 59.6 | 9.1523E+02 | | | 1.61E-03 | ug/mL | 97.267 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Glycolate | LIQUID | 375 | 4.1399E+03 | | | 9.37E-03 | ug/mL | 103.74 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Acetate | LIQUID | 450 | 5.3315E+03 | | | 6.04E-03 | ug/mL | 109.3 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Formate | LIQUID | 445 | 5.2704E+03 | | | 4.67E-03 | ug/mL | 101.97 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Chloride | LIQUID | 85.5 | 2.2973E+03 | | | 9.98E-03 | ug/mL | 84.104 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Sulfate | LIQUID | 648 | 1.2729E+04 | | | 0.0187 | ug/mL | 93.034 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Oxalate | LIQUID | 528 | 6.8210E+03 | | | 0.0231 | ug/mL | 97.304 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Bromide | LIQUID | 600 | 5.7386E+03 | | | 0.058 | ug/mL | 94.697 | % Recovery | |
| 6 | SPK-IC | S0903110089 | S09T001772 | 0 | 0 | Phosphate | LIQUID | 551 | 8.0828E+03 | | | 0.0167 | ug/mL | 98.046 | % Recovery | |
| Sample Sequence 7 | | | | | | | | | | | | | | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Fluoride | LIQUID | N/A | 3.1520E+02 | | | 1.7887 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Glycolate | LIQUID | N/A | 2.0273E+02 | | | 10.41 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Acetate | LIQUID | N/A | 3.4736E+02 | | | 6.7104 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Formate | LIQUID | N/A | 6.5437E+02 | | | 5.1884 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Chloride | LIQUID | N/A | 1.5084E+03 | | | 11.088 | ug/mL | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013359

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Sulfate | LIQUID | N/A | 6.4106E+03 | | | 20.776 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Oxalate | LIQUID | N/A | 1.5614E+03 | | | 25.664 | ug/mL | | | |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Bromide | LIQUID | N/A | <6.4438E+01 | | | 64.438 | ug/mL | | | U |
| 7 | SAMPLE | S09T001783 | | 0 | 1 | Phosphate | LIQUID | N/A | 2.5055E+03 | | | 18.554 | ug/mL | | | |
| Sample Sequence 8 | | | | | | | | | | | | | | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Fluoride | LIQUID | N/A | 3.6365E+02 | | | 1.7887 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Glycolate | LIQUID | N/A | 2.3290E+02 | | | 10.41 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Acetate | LIQUID | N/A | 4.0485E+02 | | | 6.7104 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Formate | LIQUID | N/A | 7.5231E+02 | | | 5.1884 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Chloride | LIQUID | N/A | 1.7226E+03 | | | 11.088 | ug/mL | | | |
| 8 | SAMPLE | S09T001795 | | 0 | 0 | Nitrite | LIQUID | N/A | 3.1530E+04 | | | 195.86 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Sulfate | LIQUID | N/A | 7.3102E+03 | | | 20.776 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Oxalate | LIQUID | N/A | 1.7901E+03 | | | 25.664 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Bromide | LIQUID | N/A | <6.4438E+01 | | | 64.438 | ug/mL | | | U |
| 8 | SAMPLE | S09T001795 | | 0 | 0 | Nitrate | LIQUID | N/A | 1.0808E+05 | | | 212.18 | ug/mL | | | |
| 9 | SAMPLE | S09T001795 | | 0 | 1 | Phosphate | LIQUID | N/A | 2.8733E+03 | | | 18.554 | ug/mL | | | |
| Sample Sequence 10 | | | | | | | | | | | | | | | | |
| 10 | CCV | S0903110090 | | 0 | 0 | Fluoride | LIQUID | .4729856 | 4.6363E-01 | | | 1.61E-03 | ug/mL | 98.022 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Glycolate | LIQUID | 2.976 | 2.9951E+00 | | | 9.37E-03 | ug/mL | 100.64 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Acetate | LIQUID | 3.5712 | 3.8048E+00 | | | 6.04E-03 | ug/mL | 106.54 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Formate | LIQUID | 3.53152 | 3.5723E+00 | | | 4.67E-03 | ug/mL | 101.16 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Chloride | LIQUID | .678528 | 6.8018E-01 | | | 9.98E-03 | ug/mL | 100.24 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Nitrite | LIQUID | 4.372736 | 4.3410E+00 | | | 0.0192 | ug/mL | 99.275 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Sulfate | LIQUID | 5.142528 | 5.1927E+00 | | | 0.0187 | ug/mL | 100.98 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Oxalate | LIQUID | 4.190208 | 4.2004E+00 | | | 0.0231 | ug/mL | 100.24 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Bromide | LIQUID | 4.7616 | 4.3969E+00 | | | 0.058 | ug/mL | 92.341 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Nitrate | LIQUID | 4.3648 | 4.2710E+00 | | | 0.0208 | ug/mL | 97.85 | % Recovery | |
| 10 | CCV | S0903110090 | | 0 | 0 | Phosphate | LIQUID | 4.372736 | 4.3445E+00 | | | 0.0167 | ug/mL | 99.355 | % Recovery | |
| Sample Sequence 11 | | | | | | | | | | | | | | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Fluoride | LIQUID | | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Glycolate | LIQUID | | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Acetate | LIQUID | | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Formate | LIQUID | | <4.6700E-03 | | | 4.67E-03 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Chloride | LIQUID | | <9.9800E-03 | | | 9.98E-03 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Nitrite | LIQUID | | <1.9200E-02 | | | 0.0192 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Sulfate | LIQUID | | <1.8700E-02 | | | 0.0187 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Oxalate | LIQUID | | <2.3100E-02 | | | 0.0231 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Bromide | LIQUID | | <5.8000E-02 | | | 0.058 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Nitrate | LIQUID | | <2.0800E-02 | | | 0.0208 | ug/mL | | | |
| 11 | CCB | S0903110091 | | 0 | 0 | Phosphate | LIQUID | | <1.6700E-02 | | | 0.0167 | ug/mL | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013359

## Comments Section:

**Comments for sample: S0903110085, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_004.DXD

**Comments for sample: S0903110090, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_014.DXD

**Comments for sample: S0903110091, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_015.DXD

**Comments for sample: S0903110086, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_005.DXD

**Comments for sample: S0903110087, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_006.DXD

**Comments for sample: S09T001772, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_008.DXD

**Comments for sample: S0903110088, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_009.DXD

**Comments for sample: S0903110089, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_010.DXD

**Comments for sample: S09T001783, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_011.DXD

**Comments for sample: S09T001795, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_007.DXD

**Comments for sample: S09T001795, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090309~1\009030900_012.DXD

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013359

Reviewer Signature 3/12/09 Date

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013359

| Seq | Sample# | QC Type | Assoc. Sample | Sample Group | Customer Id | Specification |
|---|---|---|---|---|---|---|
| 1 | S0903110085 | ICV | | | | |
| 2 | S0903110086 | ICB | | | | |
| 3 | S0903110087 | LLS | | | | |
| 4 | S09T001772 | SAMPLE | | 20090162 | 6AW-08-01 | AW106 EVAP3 |
| 5 | S0903110088 | DUP | S09T001772 | | | |
| 6 | S0903110089 | SPK-IC | S09T001772 | | | |
| 7 | S09T001783 | SAMPLE | | 20090162 | 6AW-08-02B | AW106 EVAP3 |
| 8 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 9 | S09T001795 | SAMPLE | | 20090162 | 6AW-08-03B | AW106 EVAP3 |
| 10 | S0903110090 | CCV | | | | |
| 11 | S0903110091 | CCB | | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

Schedule File: C:\PeakNet\Schedule\AP108,WP165.sas

| Line | Vial # | Inj./Vial | Volume | Inj. Type | Cut Vol. | Syr. Spd. | Sample | Sample Type | Level | Method | Sample Prep. | Data File | Dilution |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 25 | Full | 0 | 5 | CCB | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 2 | 2 | 2 | 25 | Full | 0 | 5 | CCV 113N28C 126 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 3 | 1 | 1 | 25 | Full | 0 | 5 | CCB | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 4 | 3 | 1 | 25 | Full | 0 | 5 | LLS 113N28C 2010 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 5 | 4 | 1 | 25 | Full | 0 | 5 | S09T001795 SAM 10201 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 6 | 5 | 1 | 25 | Full | 0 | 5 | S09T001772 SAM 1111 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 7 | 6 | 1 | 25 | Full | 0 | 5 | S09T001772 DUP 1111 | Sample | | as15hood4_new08090300.met | | 009030900 | 21 |
| 8 | 7 | 1 | 25 | Full | 0 | 5 | S09T001772 SPK 1111 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 9 | 8 | 1 | 25 | Full | 0 | 5 | S09T001783 SAM 1111 | Sample | | as15hood4_new08090300.met | | 009030900 | 10 |
| 10 | 9 | 1 | 25 | Full | 0 | 5 | S09T001795 1111 | Sample | | as15hood4_new08090300.met | | 009030900 | 2 |
| 11 | 2 | 2 | 25 | Full | 0 | 5 | CCV 113N28C 126 | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 12 | 1 | 1 | 25 | Full | 0 | 5 | CCB | Sample | | as15hood4_new08090300.met | | 009030900 | 1 |
| 13 | 1 | 1 | 25 | Full | 0 | 5 | STOP | Sample | | 30 deg stop hood 4.met | | 009030900 | 1 |
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File#
090309 H14



Fax sent by : 303 376 6783 RIPP-RIPP-40709R0011 03-09-09 21:56 Pg: 1/19
285 03/09/2009 MON 22:50 [TX/RX NO 5480] 001

# LABCORE Data Entry Template for Batch# 00013359

**Analyst:** Edwards, Cheryl **Standard ID / Book#:** 113N28C

**Instrument:** IC-6 (SMALL ORG ACIDS)

**Method:** IC - ANIONS/SMALL ORG. ACIDS, LA-533-115 Rev/Mod J-0

**Prep Batch:**

**Batch Comment:** AW106 EVAP3 IC6

| S | Type | Sample | R | A | Matrix | Group# | Project |
|---|---|---|---|---|---|---|---|
| 1 | ICV | | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |
| 2 | ICB | | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |
| 3 | LLS | | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |
| 4 | SAMPLE | S09T001772 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Oxalate, Phosphate, Sulfate | | | | | |
| 5 | DUP | S09T001772 | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Oxalate, Phosphate, Sulfate | | | | | |
| 6 | SPK-IC | S09T001772 | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Oxalate, Phosphate, Sulfate | | | | | |
| 7 | SAMPLE | S09T001783 | 1 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Oxalate, Phosphate, Sulfate | | | | | |
| 8 | SAMPLE | S09T001795 | 0 | | LIQUID | 20090162 | AW106 EVAP3 |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |
| 10 | CCV | | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |
| 11 | CCB | | 0 | | LIQUID | | |
| | Analytes Requested: | Acetate, Bromide, Chloride, Fluoride, Formate, Glycolate, Nitrate, Nitrite, Oxalate, Phosphate, Sulfate | | | | | |

## Final Page for Batch# 00013359

Cheryl Edwards 3/11/09 — Analyst Signature — Date

K S Thomadsen 3-11-09 — Data Entry Signature — Date

*Data Entry Comments:*

*S = Batch Slot Number, R = Retest Number, A = Aliquot Code.*

# ATL 222-S Laboratory: IC Instrument Run Bench Sheet

**Project #** _AW 106 EVAP 3_____ **Batch #** 13359

**Analyst** _C EDWARDS_____ **Date** __03/09/09_____

| Procedure | Calibration Date | Eluent Type | Eluent ID[1] | Expiration Date |
|---|---|---|---|---|
| [ ] LA-533-101 | | $H_2SO_4$ | | |
| [ ] LA-533-107 | | $Na_2CO_3/NaHCO_3$ | | |
| [X] LA-533-115 | 02/03/09 | EG40 | SER # 080510687010 | |

**IC Log Book #** __HNF-N-577 1_____ **Page(s)** ____26_____

| Standard Type | Std ID[1] | Expiration Date |
|---|---|---|
| Calibration | N/A | N/A |
| CCV | 113N28C | |
| ICV | 113N28C | |

| Standard Type | Std ID[1] | Expiration Date |
|---|---|---|
| LLS | 113N28C | 3/13/2009 |
| Spike[2] | 113N28C | 3/13/09 |
| Pipette ID | D61799, G10779 | 435870, 437916 |

| # | Sample Number/Std Type | Dil Factor (DF) | Dilution Description[3] |
|---|---|---|---|
| 1 | ICV 090309-4 | 126 | 0.08ML-10ML |
| 2 | ICB | 1 | DIRECT |
| 3 | LLS 090309-3 | 2010 | 1ML 59N28D+9MLQH2O-0.05ML+10ML |
| 4 | S09T001795 SAM | 10201 | .1ML-10ML-.1-10Ml |
| 5 | S09T001772 SAM | 1111 | .1ML-10ML-.1-10Ml |
| 6 | S09T001772 DUP | 1111 | .1ML-10ML-.1-10Ml |
| 7 | S09T001772 SPK | 1111 | .1Ml-10Ml-.500Ml-10Ml |
| 8 | S09T001783 SAM | 1111 | .1ML-10ML-.500ML-10ML |
| 9 | S09T001795 SAM | 1111 | .1ML-10ML-.500ML-10ML |
| 10 | CCV 113N28C | 126 | 0.80ML-10ML |
| 11 | CCB | 1 | DIRECT |
| 12 | | | |
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Page 1 of ___

# Sample Analysis Report

**Sample Name : CCV 113N28C 126**
**Data File Name : c:\peaknet\data\009030900_004.DXD**

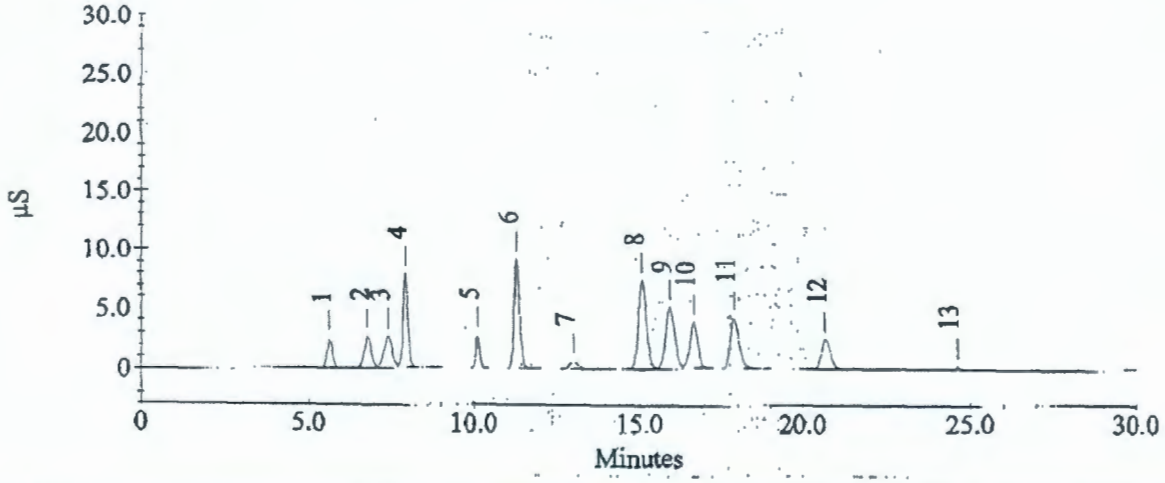
Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/09 2:46:45 PM
System Operator : CE
Dilution Factor : 1.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/09 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.62 | 0.45737 96.69 | 272972 | 23513 |
| 2 | GLYCOLATE | 6.77 | 2.93058 98.47 | 391172 | 26079 |
| 3 | ACETATE | 7.39 | 3.69027 103.33 | 457829 | 25761 |
| 4 | FORMATE | 7.91 | 3.49826 99.05 | 793143 | 77850 |
| 5 | CHLORIDE | 10.11 | 0.67168 98.78 | 224753 | 27109 |
| 6 | NITRITE | 11.28 | 4.25022 97.19 | 1047775 | 92089 |
| 7 | Unknown 1 | 12.99 | 0.00000 | 116305 | 5969 |
| 8 | SULFATE | 15.06 | 5.12800 99.71 | 1266341 | 73753 |
| 9 | OXALATE | 15.91 | 4.14216 98.87 | 995011 | 50330 |
| 10 | BROMIDE | 16.63 | 4.33643 91.06 | 660669 | 38120 |
| 11 | NITRATE | 17.87 | 4.19253 96.05 | 800576 | 41990 |
| 12 | PHOSPHATE | 20.66 | 4.28712 98.04 | 480096 | 24556 |
| 13 | Unknown 2 | 24.60 | 0.00000 | 15603 | 2487 |

*CCV 113N28C 126*



# Sample Analysis Report

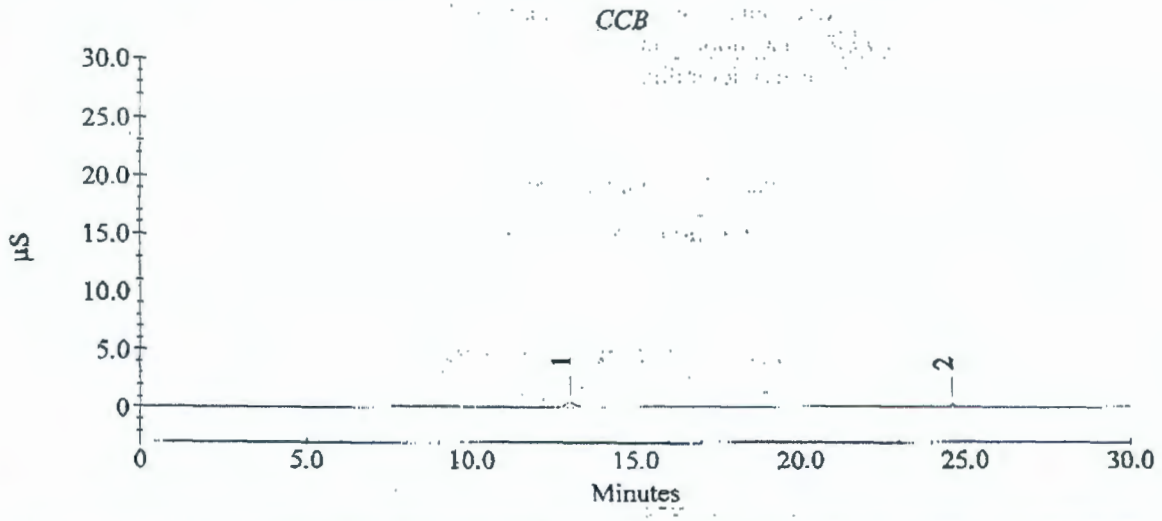
**Sample Name : CCB**
**Data File Name : c:\peaknet\data\009030900_005.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/09 3:18:43 PM
System Operator : CE
Dilution Factor : 1.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/09 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 13.01 | 0.00000 | 81165 | 4252 |
| 2 | Unknown 2 | 24.60 | 0.00000 | 15583 | 2472 |



# Sample Analysis Report

**Sample Name : LLS 113N28C 2010**
**Data File Name : c:\peaknet\data\009030900_006.DXD**

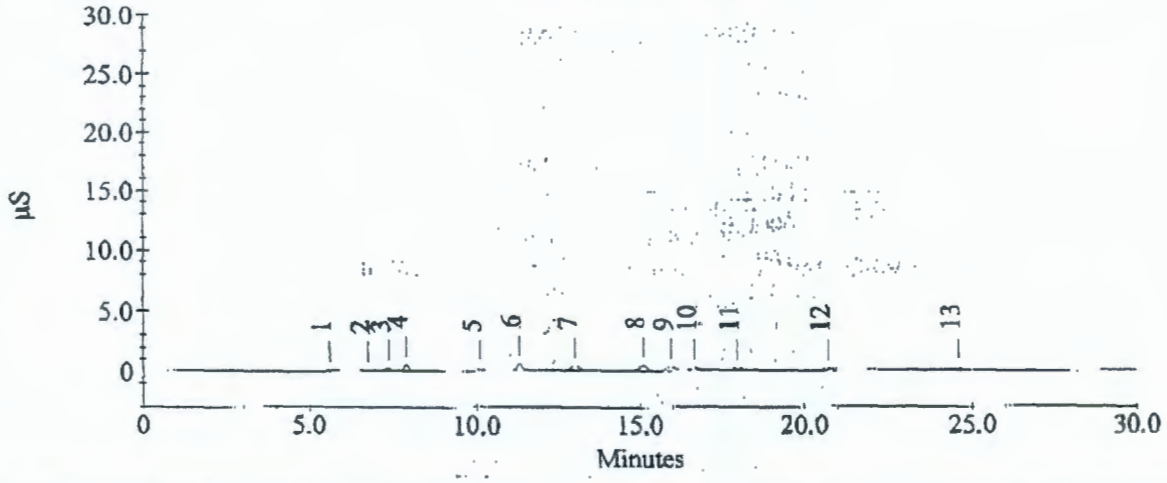
Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/09 3:50:38 PM
System Operator : CE
Dilution Factor : 1.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/09 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.62 | 0.02490 | 14893 | 1331 |
| 2 | GLYCOLATE | 6.77 | 0.15411 | 20969 | 1544 |
| 3 | ACETATE | 7.38 | 0.19856 | 29315 | 1984 |
| 4 | FORMATE | 7.91 | 0.21189 | 50522 | 5464 |
| 5 | CHLORIDE | 10.11 | 0.04129 | 13740 | 1734 |
| 6 | NITRITE | 11.30 | 0.25044 | 62674 | 5946 |
| 7 | Unknown 1 | 13.01 | 0.00000 | 84759 | 4466 |
| 8 | SULFATE | 15.10 | 0.29872 | 73585 | 4522 |
| 9 | OXALATE | 15.96 | 0.22694 | 56528 | 3264 |
| 10 | BROMIDE | 16.69 | 0.21749 | 32976 | 2333 |
| 11 | NITRATE | 17.98 | 0.22107 | 42026 | 2462 |
| 12 | PHOSPHATE | 20.73 | 0.21775 | 24274 | 1425 |
| 13 | Unknown 2 | 24.60 | 0.00000 | 14830 | 2418 |

*LLS 113N28C 2010*



# Sample Analysis Report

**Sample Name : S09T001795 SAM 10201**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_007.DXD**

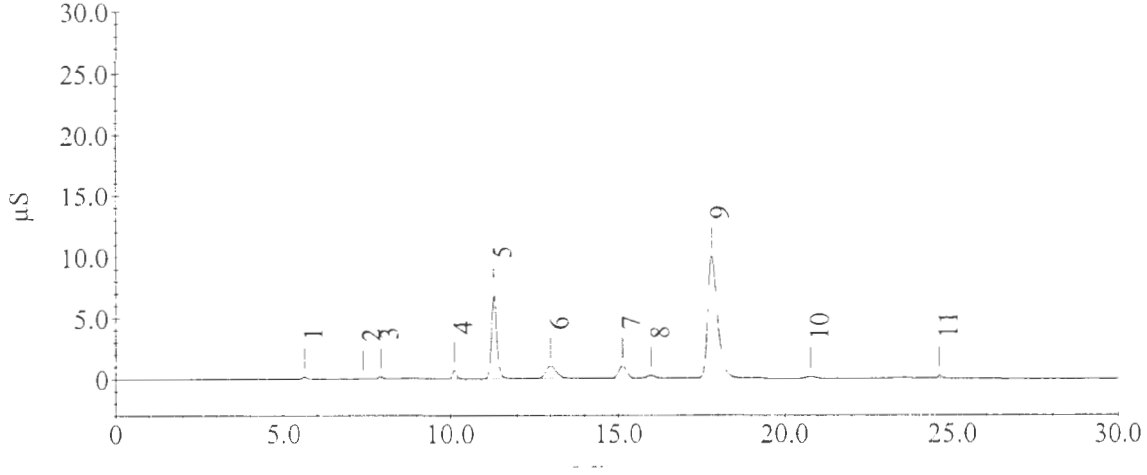
Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 5:22:35 PM
System Operator : CE
Dilution Factor : 10201.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/2009 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.61 | 318.35973 | 18665 | 1717 |
| 2 | ACETATE | 7.37 | 183.77568 | 2692 | 250 |
| 3 | FORMATE | 7.91 | 614.72547 | 14404 | 1649 |
| 4 | CHLORIDE | 10.11 | 1700.44890 | 55529 | 6864 |
| 5 | NITRITE | 11.28 | 31529.74708 ✓ | 765234 | 67939 |
| 6 | Unknown 1 | 12.99 | 0.00000 | 212582 | 9971 |
| 7 | SULFATE | 15.11 | 7122.38342 | 172028 | 10327 |
| 8 | OXALATE | 15.97 | 1407.49327 ✓ | 34399 | 2092 |
| 9 | NITRATE | 17.77 | 108084.40040 | 2038161 | 99481 |
| 10 | PHOSPHATE | 20.77 | 2564.90425 | 28030 | 1546 |
| 11 | Unknown 2 | 24.60 | 0.00000 | 14361 | 2375 |

*S09T001795 SAM 10201*



# Sample Analysis Report

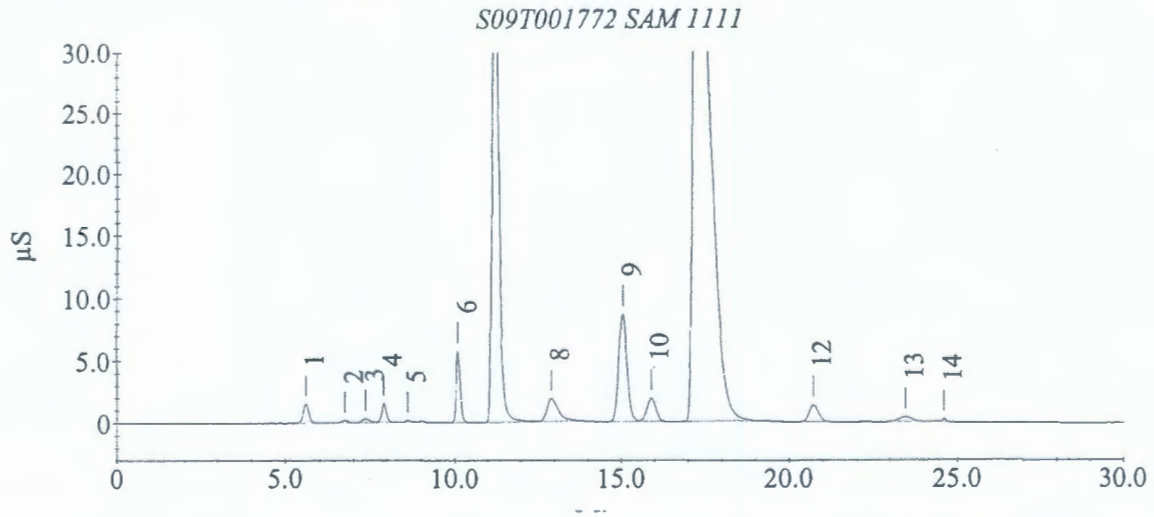
**Sample Name : S09T001772 SAM 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_008.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 5:54:31 PM
System Operator : CE
Dilution Factor : 1111.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/2009 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.61 | 329.71782 | 177261 | 15321 |
| 2 | GLYCOLATE | 6.75 | 210.65219 | 25793 | 1875 |
| 3 | ACETATE | 7.36 | 363.70797 | 47937 | 3085 |
| 4 | FORMATE | 7.90 | 687.42816 | 146551 | 15043 |
| 5 | Unknown 1 | 8.60 | 0.00000 | 9826 | 1384 |
| 6 | CHLORIDE | 10.10 | 1570.98616 | 476331 | 57262 |
| 7 | NITRITE | 11.19 | 27250.60646 | 5652991 | 423283 |
| 8 | Unknown 2 | 12.90 | 0.00000 | 434502 | 18362 |
| 9 | SULFATE | 15.04 | 6639.64773 | 1476465 | 86035 |
| 10 | OXALATE | 15.90 | 1631.95987 | 361551 | 19161 |
| 11 | Unknown 3 | 17.24 | 0.00000 | 16647175 | 533039 |
| 12 | PHOSPHATE | 20.72 | 2626.46724 | 264169 | 13663 |
| 13 | Unknown 4 | 23.45 | 0.00000 | 101119 | 4030 |
| 14 | Unknown 5 | 24.60 | 0.00000 | 12550 | 2298 |



# Sample Analysis Report

**Sample Name : S09T001772 DUP 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_009.DXD**

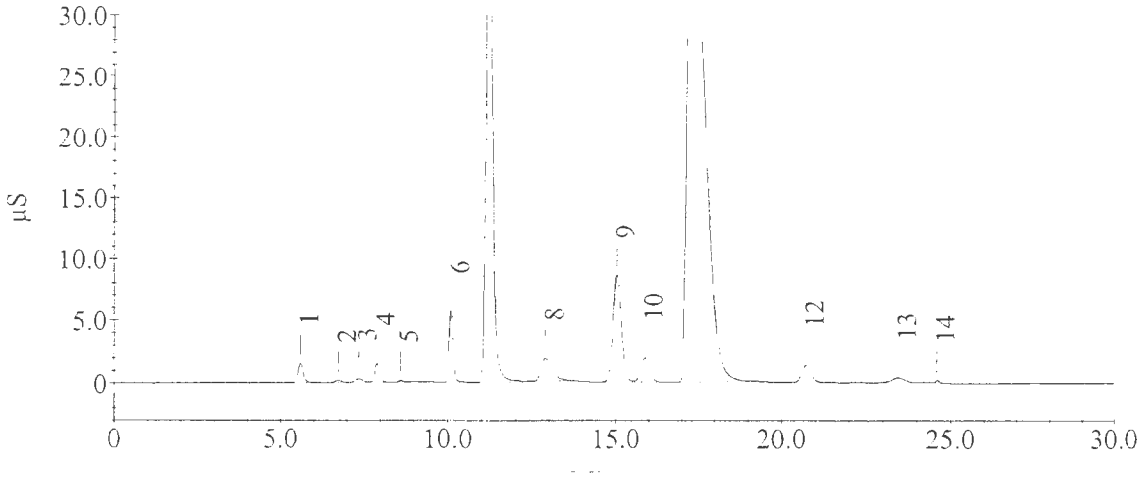
Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 6:26:29 PM
System Operator : CE
Dilution Factor : 1111.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/2009 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.61 | 331.15437 | 178033 | 15360 |
| 2 | GLYCOLATE | 6.75 | 211.02266 | 25838 | 1865 |
| 3 | ACETATE | 7.35 | 366.55786 | 48305 | 3106 |
| 4 | FORMATE | 7.90 | 687.98242 | 146668 | 15047 |
| 5 | Unknown 1 | 8.60 | 0.00000 | 9661 | 1402 |
| 6 | CHLORIDE | 10.10 | 1570.95197 | 476321 | 57255 |
| 7 | NITRITE | 11.19 | 27340.19651 | 5670197 | 424946 |
| 8 | Unknown 2 | 12.90 | 0.00000 | 425746 | 18159 |
| 9 | SULFATE | 15.03 | 6665.83276 | 1482306 | 86151 |
| 10 | OXALATE | 15.90 | 1637.57081 | 362777 | 19231 |
| 11 | Unknown 3 | 17.24 | 0.00000 | 16686158 | 533976 |
| 12 | PHOSPHATE | 20.73 | 2611.60676 | 262670 | 13698 |
| 13 | Unknown 4 | 23.46 | 0.00000 | 99545 | 3995 |
| 14 | Unknown 5 | 24.59 | 0.00000 | 12285 | 2130 |

*S09T001772 DUP 1111*



# Sample Analysis Report

**Sample Name : S09T001772 SPK 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_010.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 6:58:27 PM
System Operator : CE
Dilution Factor : 1111.00

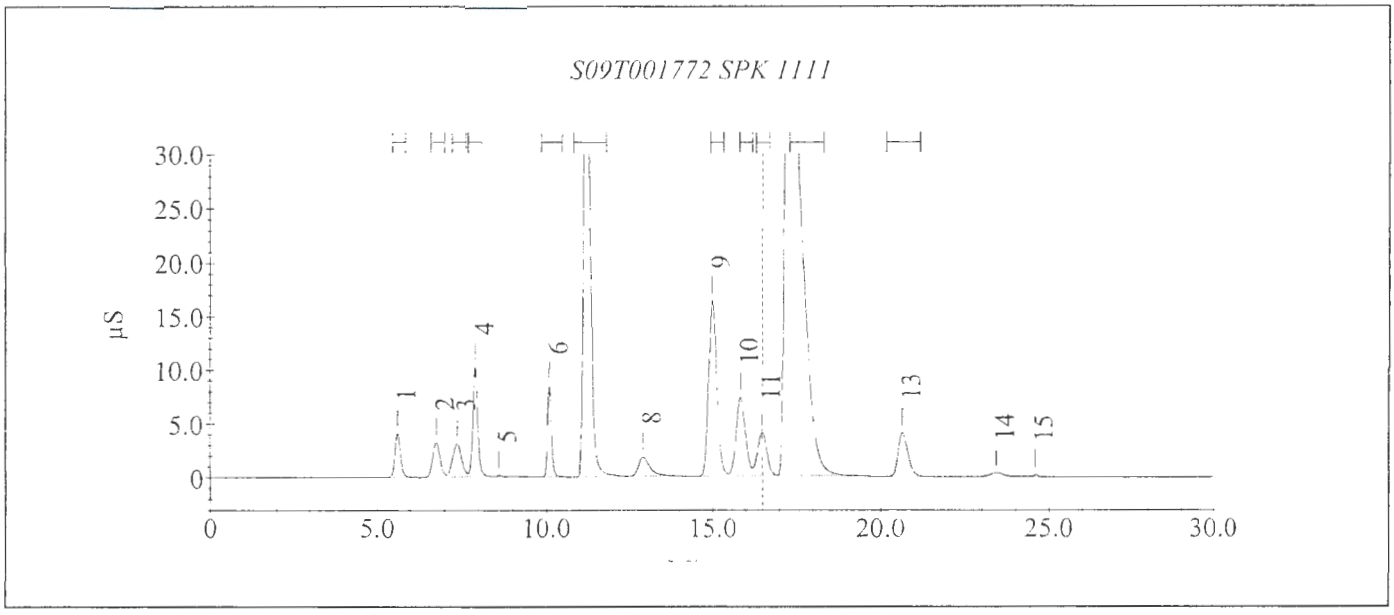
System Name : HD4-ANION_WC80541
Calibration Date : 3/11/2009 2:30:45 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.61 | 915.22761 | 490796 | 40968 |
| 2 | GLYCOLATE | 6.76 | 4139.93842 | 494751 | 32266 |
| 3 | ACETATE | 7.38 | 5331.50726 | 571223 | 30931 |
| 4 | FORMATE | 7.91 | 5270.39993 | 1057099 | 101594 |
| 5 | Unknown 1 | 8.60 | 0.00000 | 8843 | 1249 |
| 6 | CHLORIDE | 10.10 | 2297.26986 | 700742 | 83706 |
| 7 | NITRITE | 11.19 | 30233.53796 | 6221751 | 458325 |
| 8 | Unknown 2 | 12.90 | 0.00000 | 417863 | 17742 |
| 9 | SULFATE | 14.98 | 12728.51105 | 2838489 | 163216 |
| 10 | OXALATE | 15.84 | 6820.99340 | 1449771 | 72993 |
| 11 | BROMIDE | 16.50 | 5738.64009 | 787724 | 39914 |
| 12 | Unknown 3 | 17.25 | 0.00000 | 16007658 | 517079 |
| 13 | PHOSPHATE | 20.64 | 8082.81626 | 817494 | 40819 |
| 14 | Unknown 4 | 23.43 | 0.00000 | 90528 | 3632 |
| 15 | Unknown 5 | 24.59 | 0.00000 | 12983 | 2231 |

# Sample Analysis Report

**Sample Name : S09T001772 SPK 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_010.DXD**



# Sample Analysis Report

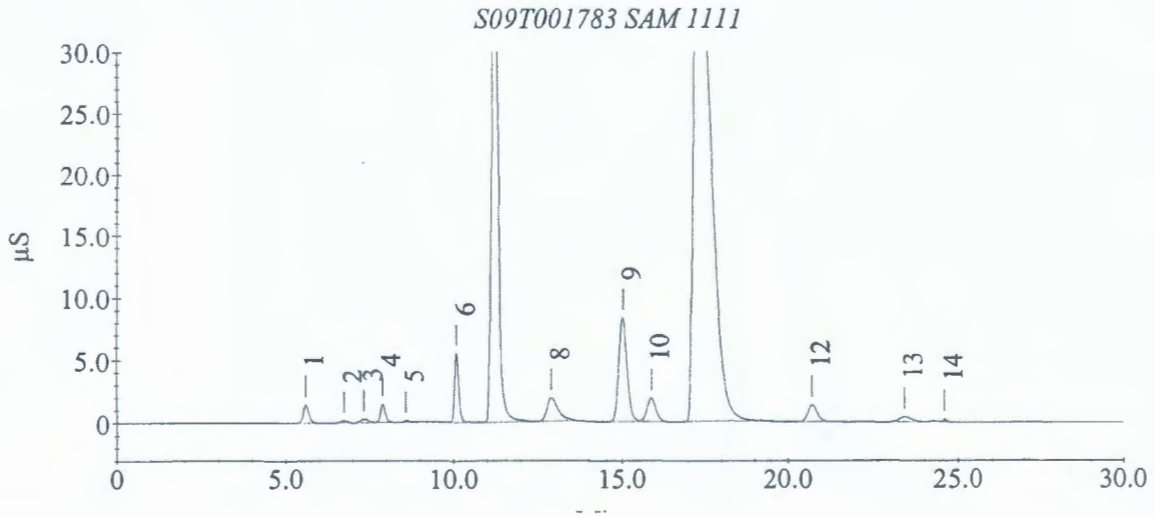
**Sample Name : S09T001783 SAM 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_011.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 7:30:26 PM
System Operator : CE
Dilution Factor : 1111.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/2009 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.60 | 315.20209 ✓ | 169468 | 14597 |
| 2 | GLYCOLATE | 6.75 | 202.72892 ✓ | 24824 | 1795 |
| 3 | ACETATE | 7.35 | 347.35925 ✓ | 45825 | 2962 |
| 4 | FORMATE | 7.90 | 654.36636 ✓ | 139570 | 14457 |
| 5 | Unknown 1 | 8.59 | 0.00000 | 9230 | 1329 |
| 6 | CHLORIDE | 10.10 | 1508.42341 ✓ | 457128 | 54896 |
| 7 | NITRITE | 11.19 | 26290.18261 | 5468054 | 410376 |
| 8 | Unknown 2 | 12.90 | 0.00000 | 429881 | 18194 |
| 9 | SULFATE | 15.03 | 6410.56983 ✓ | 1425374 | 82875 |
| 10 | OXALATE | 15.90 | 1561.36745 ✓ | 346119 | 18408 |
| 11 | Unknown 3 | 17.26 | 0.00000 | 16042512 | 518133 |
| 12 | PHOSPHATE | 20.72 | 2505.48895 ✓ | 251970 | 13158 |
| 13 | Unknown 4 | 23.43 | 0.00000 | 99305 | 3904 |
| 14 | Unknown 5 | 24.60 | 0.00000 | 12773 | 2346 |




: PeakNet 5.21



Current Date : 3/11/2009
Current Time : 14:32:48

# Sample Analysis Report

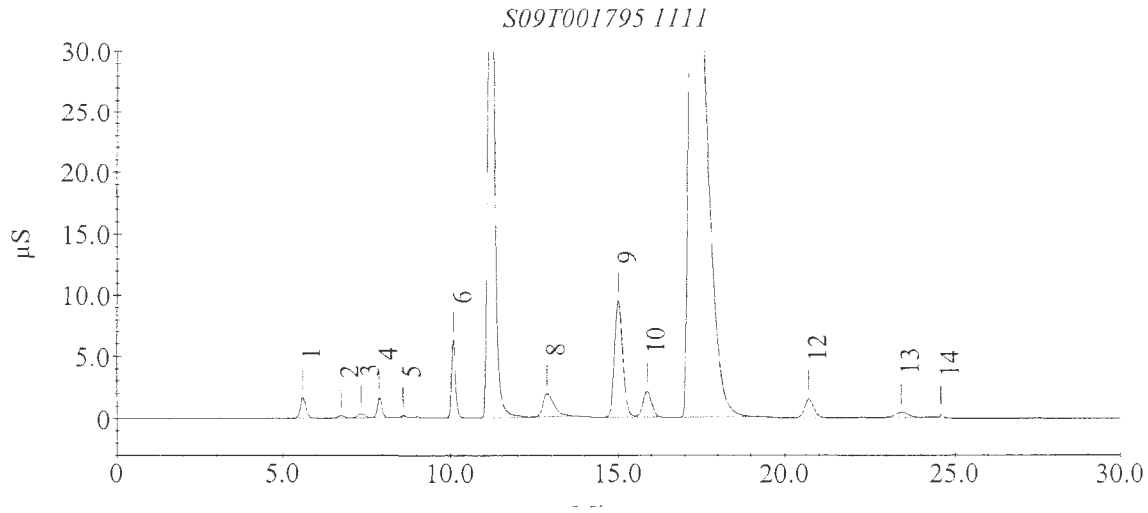
**Sample Name : S09T001795 1111**
**Data File Name : R:\PKNT TRANSFER FILES\090309 IC-6\009030900_012.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/2009 8:02:22 PM
System Operator : CE
Dilution Factor : 1111.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/2009 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.60 | 363.65212 | 195476 | 16654 |
| 2 | GLYCOLATE | 6.75 | 232.89627 | 28513 | 2060 |
| 3 | ACETATE | 7.35 | 404.85450 | 53236 | 3409 |
| 4 | FORMATE | 7.90 | 752.30697 | 160231 | 16413 |
| 5 | Unknown 1 | 8.60 | 0.00000 | 10805 | 1553 |
| 6 | CHLORIDE | 10.10 | 1722.58749 | 522949 | 62547 |
| 7 | NITRITE | 11.19 | 29945.28358 | 6167154 | 455666 |
| 8 | Unknown 2 | 12.88 | 0.00000 | 443805 | 18716 |
| 9 | SULFATE | 15.01 | 7310.22797 | 1626089 | 94537 |
| 10 | OXALATE | 15.88 | 1790.11926 | 396059 | 20936 |
| 11 | Unknown 3 | 17.21 | 0.00000 | 18295324 | 568635 |
| 12 | PHOSPHATE | 20.71 | 2873.34010 | 289071 | 15044 |
| 13 | Unknown 4 | 23.43 | 0.00000 | 112847 | 4447 |
| 14 | Unknown 5 | 24.60 | 0.00000 | 13218 | 2390 |



# Sample Analysis Report

**Sample Name : CCV 113N28C 126**
**Data File Name : c:\peaknet\data\009030900_014.DXD**

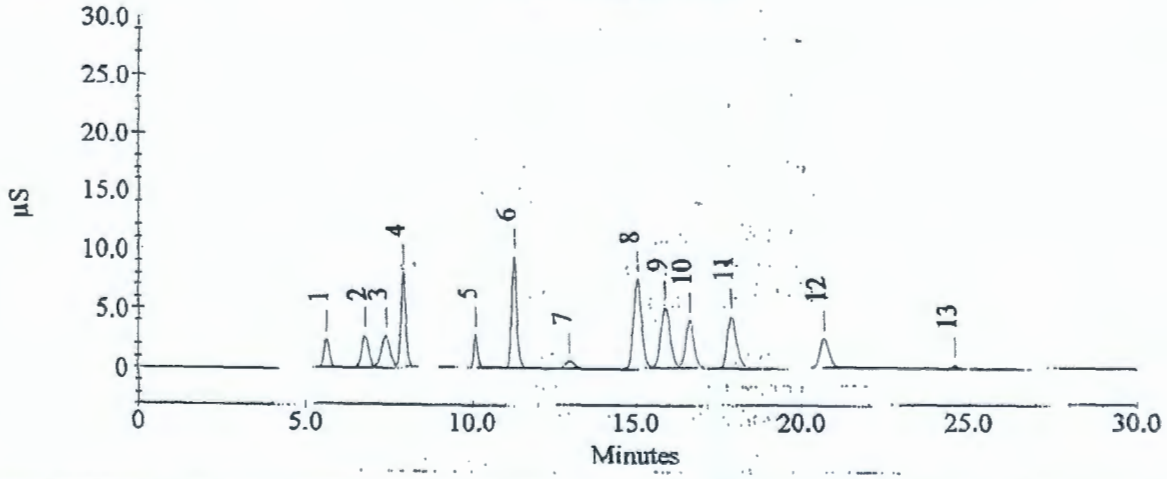
Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/09 8:06:11 PM
System Operator : CE
Dilution Factor : 1.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/09 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | FLUORIDE | 5.62 | 0.46363 98.02 | 276700 | 23847 |
| 2 | GLYCOLATE | 6.77 | 2.99511 100.64 | 399612 | 26509 |
| 3 | ACETATE | 7.39 | 3.80479 106.53 | 469919 | 26271 |
| 4 | FORMATE | 7.91 | 3.57233 101.15 | 809084 | 79524 |
| 5 | CHLORIDE | 10.11 | 0.68018 100.24 | 227616 | 27524 |
| 6 | NITRITE | 11.28 | 4.34105 99.27 | 1069810 | 93750 |
| 7 | Unknown 1 | 12.99 | 0.00000 | 123221 | 6266 |
| 8 | SULFATE | 15.05 | 5.19273 100.97 | 1282368 | 74568 |
| 9 | OXALATE | 15.90 | 4.20041 100.24 | 1008488 | 50928 |
| 10 | BROMIDE | 16.64 | 4.39691 92.34 | 669932 | 39331 |
| 11 | NITRATE | 17.88 | 4.27095 97.84 | 815623 | 42629 |
| 12 | PHOSPHATE | 20.67 | 4.34454 99.35 | 486559 | 24850 |
| 13 | Unknown 2 | 24.60 | 0.00000 | 15370 | 2543 |

*CCV 113N28C 126*






Fax sent by : 509 376 6183 03-09-09 21:57 Pg: 18/19
298
RPD-RPT-40709 Rev. 1 MON 22:50 [TX/RX NO 5480] 018

# Sample Analysis Report

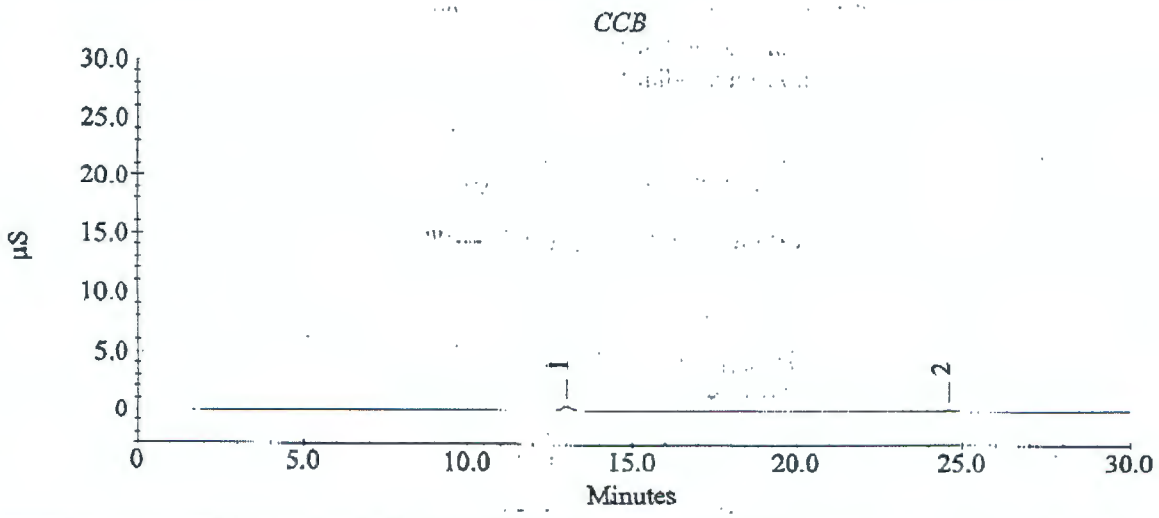
**Sample Name : CCB**
**Data File Name : c:\peaknet\data\009030900_015.DXD**

Method File Name : ...\as15hood4_new08090300.met
Date Time Collected : 3/9/09 8:38:07 PM
System Operator : CE
Dilution Factor : 1.00

System Name : HD4-ANION_WC80541
Calibration Date : 3/3/09 3:44:38 PM
Calibration Level : 0

Peak Information : All Peaks

| Peak # | Component Name | Retention Time | Amount (µg/mL) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 1 | Unknown 1 | 13.00 | 0.00000 | 80582 | 4303 |
| 2 | Unknown 2 | 24.60 | 0.00000 | 15426 | 2556 |




: PeakNet 5.21



Current Date : 3/9/0
Current Time : 21:08:58

**222-S Advanced Technologies and Laboratories** **Ion Chromatography Data Review Checklist**

Worklist/Project: 13338 / AW-106 EVAP3 20090162 Check Procedure Used: ☐ LA-533-101 (Cat) ☐ LA-533-107 (846 Anions) ☒ LA-533-115 (IC6 Anions)

Run Date: 3/6/09 Instrument ID: IC-6 Prep Batches Analyzed (Worklist #): N/A Prep Method: NA.

| Review Items | Yes | No | N/A | Comments/Samples Affected |
|---|---|---|---|---|
| **A. Calibration/Instrument Run QC** | | | | |
| 1. Instrument calibrated per procedure and at specified levels? | ✓ | | | |
| 2. If the Calibration date is different, has the change been recorded with the calibration record? | | | ✓ | |
| 3. Calibration curve correlation coefficient ≥0.995 linear or ≥0.999 quadratic? | ✓ | | | |
| 4. ICV/CCV analyzed at appropriate frequency and within control limits (Recovery: 90-110%)? | ✓ | | | |
| 5. ICB/CCB analyzed at required frequency and < EQL (or RL) or <5% of the lowest sample result? | ✓ | | | |
| 6. LLS run and within control limits? For IH, recovery is mandatory to verify RL ☐ 75-125% SW-846 9056A requirement ☒ 50-150% | ✓ | | | |
| **B. Sample Results** | | | | |
| 1. Were samples with concentrations > linear range for any analyte diluted and reanalyzed? | ✓ | | | |
| 2. Are all reported results bracketed by in-control QC? | ✓ | | | |
| 3. Are there 10 or fewer samples runs between bracketed, in-control QC? | ✓ | | | |
| **C. Preparation/Matrix QC** | | | | |
| 1. LCS/Prep Std prepared per prep batch and within control limits? Recovery: ☐ 80-120% or ☐ Statistical _____ | | | ✓ | |
| 2. LCS Dup (Prep Std Dup) prepared per prep batch, if required, and within control limits? Recovery: ☐ 80-120% or ☐ Statistical _____; RPD: ☐ ≤20% or ☐ Statistical _____ | | | ✓ | |
| 3. IH RLS run (when required) and within mandatory control limits (Recovery: 75-125%)? | | | ✓ | |
| 4. Method/Media Blank prepared per prep batch and < EQL (or RL) or <5% of the lowest sample result? | ✓ | | | |
| 5. Duplicate or MS Duplicate run at required frequency and within control limits? %RPD: ☒ ≤20% or ☐ Client-specified _____ | ✓ | | | |
| 6. MS run at required frequency and within control limit? Recovery: ☒ 75-125% or ☐ Client-specified _____ | ✓ | | | |
| **D. Other** | | | | |
| 1. Are all problems and nonconformance issues documented appropriately? | ✓ | | | |
| 2. Are current IDL/MDL/EQL/RL/Calibration data on file? | ✓ | | | |
| 3. Calculations/transcriptions checked for errors? | ✓ | | | |
| 4. Are all raw data complete and verified in Omni LIMS? | ✓ | | | |
| 5. All client/project specific requirements met (e.g., MDL, Holding time, etc.)? | ✓ | | | |
| 6. Date/time of analysis verified as correct? | ✓ | | | |
| 7. All Benchsheet(s)/Worklist(s) properly completed and included, as required? | ✓ | | | |
| 8. IH Only: Media Blank subtracted from Sample results? | | | ✓ | |

1st Data Reviewer [signature] Date: 3/11/09 2nd Data Reviewer: [signature] Date: 03/11/09

QA: [signature] 3.17.09

# LABCORE Completed Batch Report for Batch# 00013338

**Analyst:** Edwards, Cheryl **Book#:** 113N28C

**Instrument:** IC-6 (SMALL ORG ACIDS)

**Method:** IC - ANIONS/SMALL ORG. ACIDS, LA-533-115 Rev/Mod J-0

**Specification:** AW106 EVAP3

**Prep Batch:** N/A

**Batch Comment:** AW 106 Instrument Run

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 1 | | | | | | | | | | | | | | | |
| 1 ICV | S0903100045 | | 0 | 0 | Fluoride | LIQUID | .4729856 | 4.7473E-01 | | | 1.61E-03 | ug/mL | 100.37 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Glycolate | LIQUID | 2.976 | 3.0445E+00 | | | 9.37E-03 | ug/mL | 102.3 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Acetate | LIQUID | 3.5712 | 3.8312E+00 | | | 6.04E-03 | ug/mL | 107.28 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Formate | LIQUID | 3.53152 | 3.6250E+00 | | | 4.67E-03 | ug/mL | 102.65 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Chloride | LIQUID | .678528 | 7.1490E-01 | | | 9.98E-03 | ug/mL | 105.36 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Nitrite | LIQUID | 4.372736 | 4.4115E+00 | | | 0.0192 | ug/mL | 100.89 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Sulfate | LIQUID | 5.142528 | 5.2939E+00 | | | 0.0187 | ug/mL | 102.94 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Oxalate | LIQUID | 4.190208 | 4.2692E+00 | | | 0.0231 | ug/mL | 101.88 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Bromide | LIQUID | 4.7616 | 4.4756E+00 | | | 0.058 | ug/mL | 93.994 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Nitrate | LIQUID | 4.3648 | 4.3431E+00 | | | 0.0208 | ug/mL | 99.503 | % Recovery | |
| 1 ICV | S0903100045 | | 0 | 0 | Phosphate | LIQUID | 4.372736 | 4.4567E+00 | | | 0.0167 | ug/mL | 101.92 | % Recovery | |
| Sample Sequence 2 | | | | | | | | | | | | | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Fluoride | LIQUID | | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Glycolate | LIQUID | | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Acetate | LIQUID | | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Formate | LIQUID | | <4.6700E-03 | | | 4.67E-03 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Chloride | LIQUID | | <9.9800E-03 | | | 9.98E-03 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Nitrite | LIQUID | | <1.9200E-02 | | | 0.0192 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Sulfate | LIQUID | | <1.8700E-02 | | | 0.0187 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Oxalate | LIQUID | | <2.3100E-02 | | | 0.0231 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Bromide | LIQUID | | <5.8000E-02 | | | 0.058 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Nitrate | LIQUID | | <2.0800E-02 | | | 0.0208 | ug/mL | | | |
| 2 ICB | S0903100046 | | 0 | 0 | Phosphate | LIQUID | | <1.6700E-02 | | | 0.0167 | ug/mL | | | |
| Sample Sequence 3 | | | | | | | | | | | | | | | |
| 3 LLS | S0903100047 | | 0 | 0 | Fluoride | LIQUID | .029651 | 2.48E-02 | | | 1.61E-03 | ug/mL | 83.538 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Glycolate | LIQUID | .1865625 | 1.56E-01 | | | 9.37E-03 | ug/mL | 83.682 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Acetate | LIQUID | .223875 | 2.04E-01 | | | 6.04E-03 | ug/mL | 91.346 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Formate | LIQUID | .2213875 | 2.15E-01 | | | 4.67E-03 | ug/mL | 97.088 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Chloride | LIQUID | .04253625 | 4.11E-02 | | | 9.98E-03 | ug/mL | 96.647 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Nitrite | LIQUID | .2741225 | 2.60E-01 | | | 0.0192 | ug/mL | 94.939 | % Recovery | |
| 3 LLS | S0903100047 | | 0 | 0 | Sulfate | LIQUID | .32238 | 3.03E-01 | | | 0.0187 | ug/mL | 93.855 | % Recovery | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013338

| Seq | Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | LLS | S0903100047 | | 0 0 | | Oxalate | LIQUID | .26268 | 2.32E-01 | | | 0.0231 | ug/mL | 88.183 | % Recovery | |
| 3 | LLS | S0903100047 | | 0 0 | | Bromide | LIQUID | .2985 | 2.17E-01 | | | 0.058 | ug/mL | 72.854 | % Recovery | |
| 3 | LLS | S0903100047 | | 0 0 | | Nitrate | LIQUID | .273625 | 2.35E-01 | | | 0.0208 | ug/mL | 85.942 | % Recovery | |
| 3 | LLS | S0903100047 | | 0 0 | | Phosphate | LIQUID | .2741225 | 2.44E-01 | | | 0.0167 | ug/mL | 89.175 | % Recovery | |
| Sample Sequence 4 | | | | | | | | | | | | | | | | |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Fluoride | LIQUID | N/A | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Glycolate | LIQUID | N/A | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Acetate | LIQUID | N/A | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Formate | LIQUID | N/A | <4.6700E-03 | | | 4.67E-03 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Chloride | LIQUID | N/A | 3.2540E-02 | | | 9.98E-03 | ug/mL | | | J |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Nitrite | LIQUID | N/A | <1.9200E-02 | | | 0.0192 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Sulfate | LIQUID | N/A | <1.8700E-02 | | | 0.0187 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Oxalate | LIQUID | N/A | <2.3100E-02 | | | 0.0231 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Bromide | LIQUID | N/A | <5.8000E-02 | | | 0.058 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Nitrate | LIQUID | N/A | <2.0800E-02 | | | 0.0208 | ug/mL | | | U |
| 4 | SAMPLE | S09T001751 | | 0 0 | | Phosphate | LIQUID | N/A | <1.6700E-02 | | | 0.0167 | ug/mL | | | U |
| Sample Sequence 5 | | | | | | | | | | | | | | | | |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Fluoride | LIQUID | N/A | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Glycolate | LIQUID | N/A | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Acetate | LIQUID | N/A | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Formate | LIQUID | N/A | 5.7000E-03 | | | 4.67E-03 | ug/mL | | | J |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Chloride | LIQUID | N/A | 8.0850E-02 | | | 9.98E-03 | ug/mL | | | J |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Nitrite | LIQUID | N/A | <1.9200E-02 | | | 0.0192 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Sulfate | LIQUID | N/A | <1.8700E-02 | | | 0.0187 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Oxalate | LIQUID | N/A | <2.3100E-02 | | | 0.0231 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Bromide | LIQUID | N/A | <5.8000E-02 | | | 0.058 | ug/mL | | | U |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Nitrate | LIQUID | N/A | 9.5120E-02 | | | 0.0208 | ug/mL | | | J |
| 5 | SAMPLE | S09T001762 | | 0 0 | | Phosphate | LIQUID | N/A | <1.6700E-02 | | | 0.0167 | ug/mL | | | U |
| Sample Sequence 6 | | | | | | | | | | | | | | | | |
| 6 | SAMPLE | S09T001783 | | 0 0 | | Nitrite | LIQUID | N/A | 3.3612E+04 | | | 195.86 | ug/mL | | | |
| 6 | SAMPLE | S09T001783 | | 0 0 | | Nitrate | LIQUID | N/A | 1.1529E+05 | | | 212.18 | ug/mL | | | |
| Sample Sequence 7 | | | | | | | | | | | | | | | | |
| 7 | SAMPLE | S09T001772 | | 0 0 | | Nitrite | LIQUID | N/A | 3.2143E+04 | | | 195.86 | ug/mL | | | |
| 7 | SAMPLE | S09T001772 | | 0 0 | | Nitrate | LIQUID | N/A | 1.0993E+05 | | | 212.18 | ug/mL | | | |
| Sample Sequence 8 | | | | | | | | | | | | | | | | |
| 8 | DUP | S0903100048 | S09T001772 | 0 0 | | Nitrite | LIQUID | 3.2143E+04 | 3.2728E+04 | | | 195.86 | ug/mL | 1.8028 | % RPD | |
| 8 | DUP | S0903100048 | S09T001772 | 0 0 | | Nitrate | LIQUID | 1.0993E+05 | 1.1244E+05 | | | 212.18 | ug/mL | 2.2596 | % RPD | |
| Sample Sequence 9 | | | | | | | | | | | | | | | | |
| 9 | SPK-IC | S0903100049 | S09T001772 | 0 0 | | Nitrite | LIQUID | 551 | 8.6964E+04 | | | 0.0192 | ug/mL | 98.508 | % Recovery | |
| 9 | SPK-IC | S0903100049 | S09T001772 | 0 0 | | Nitrate | LIQUID | 550 | 1.6421E+05 | | | 0.0208 | ug/mL | 97.712 | % Recovery | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013338

| Seq Type | Sample# | Assoc. Sample | RepR | A | Test | Matrix | Actual | Found | Blank | CTR | Limit (DL/RL/UL) | Unit | Yield | Yield Unit | Flags |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Sequence 10 | | | | | | | | | | | | | | | |
| 10 CCV | S0903100050 | | 0 | 0 | Fluoride | LIQUID | .4729856 | 4.7405E-01 | | | 1.61E-03 | ug/mL | 100.23 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Glycolate | LIQUID | 2.976 | 3.0380E+00 | | | 9.37E-03 | ug/mL | 102.08 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Acetate | LIQUID | 3.5712 | 3.8283E+00 | | | 6.04E-03 | ug/mL | 107.2 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Formate | LIQUID | 3.53152 | 3.6101E+00 | | | 4.67E-03 | ug/mL | 102.23 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Chloride | LIQUID | .678528 | 7.1044E-01 | | | 9.98E-03 | ug/mL | 104.7 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Nitrite | LIQUID | 4.372736 | 4.3915E+00 | | | 0.0192 | ug/mL | 100.43 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Sulfate | LIQUID | 5.142528 | 5.2680E+00 | | | 0.0187 | ug/mL | 102.44 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Oxalate | LIQUID | 4.190208 | 4.2556E+00 | | | 0.0231 | ug/mL | 101.56 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Bromide | LIQUID | 4.7616 | 4.4456E+00 | | | 0.058 | ug/mL | 93.363 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Nitrate | LIQUID | 4.3648 | 4.3128E+00 | | | 0.0208 | ug/mL | 98.808 | % Recovery | |
| 10 CCV | S0903100050 | | 0 | 0 | Phosphate | LIQUID | 4.372736 | 4.4274E+00 | | | 0.0167 | ug/mL | 101.25 | % Recovery | |
| Sample Sequence 11 | | | | | | | | | | | | | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Fluoride | LIQUID | | <1.6100E-03 | | | 1.61E-03 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Glycolate | LIQUID | | <9.3700E-03 | | | 9.37E-03 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Acetate | LIQUID | | <6.0400E-03 | | | 6.04E-03 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Formate | LIQUID | | <4.6700E-03 | | | 4.67E-03 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Chloride | LIQUID | | <9.9800E-03 | | | 9.98E-03 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Nitrite | LIQUID | | <1.9200E-02 | | | 0.0192 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Sulfate | LIQUID | | <1.8700E-02 | | | 0.0187 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Oxalate | LIQUID | | <2.3100E-02 | | | 0.0231 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Bromide | LIQUID | | <5.8000E-02 | | | 0.058 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Nitrate | LIQUID | | <2.0800E-02 | | | 0.0208 | ug/mL | | | |
| 11 CCB | S0903100051 | | 0 | 0 | Phosphate | LIQUID | | <1.6700E-02 | | | 0.0167 | ug/mL | | | |

*Units shown for QC (BLK/BKG) may not reflect the actual units.*

# LABCORE Completed Batch Report for Batch# 00013338

## Comments Section:

**Comments for sample: S0903100045, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_005.DXD

**Comments for sample: S0903100050, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_016.DXD

**Comments for sample: S0903100051, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_018.DXD

**Comments for sample: S0903100046, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_006.DXD

**Comments for sample: S0903100047, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_007.DXD

**Comments for sample: S09T001751, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_008.DXD

**Comments for sample: S09T001762, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_009.DXD

**Comments for sample: S09T001783, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_010.DXD

**Comments for sample: S09T001772, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_013.DXD

**Comments for sample: S0903100048, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_014.DXD

**Comments for sample: S0903100049, test: IC - ANIONS/SMALL ORG. ACIDS**
r:\PKNTTR~1\090306~1\009030600_015.DXD

Data Flagger Status:
Flagging Completed

## Final Page for Batch# 00013338

K B 3/11/09
Reviewer Signature Date

*Units shown for QC (BLK/BKG) may not reflect the actual units.*