May 16, 2016

North Carolina Department of Environmental Quality
Division of Waste Management, Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, North Carolina 27699

Attn: Ms. Katie Tatum
Project Manager

Re: **Potable Well Sampling Report**
Atlantic Refuse Dump
Atlantic, Carteret County, North Carolina
ID# NONCD0000199 – Task Order 199MON

Dear Ms. Tatum:

URS Corporation – North Carolina (URS) is pleased to provide the results of potable well sampling performed in the vicinity of the Atlantic Refuse Dump (the Site) in Atlantic, North Carolina. This report describes the details for potable well sampling conducted in accordance with the March 31, 2016 authorization associated with Task Order 199MON by the North Carolina Department of Environmental Quality (NCDEQ) Pre-Regulatory Landfill Unit (the Unit).

On April 20 and 21, 2016, URS was able to access and collect water samples from four residential potable wells located near the Site at the following addresses: 144 Clem Fulture Court, 267 Core Sound Loop Road, 289 Core Sound Loop Road, and 299 Core Sound Loop Road. One field duplicate sample was also collected during the sampling event from 299 Core Sound Loop Road. URS attempted to garner access at the following residences: 245 Core Sound Loop Road, 261 Core Sound Loop Road, 273 Core Sound Loop Road, and 307 Core Sound Loop Road. URS attempted to contact the property owners by knocking on each door but there was no answer. URS left copies of the unsigned permission forms in each of the mailboxes for 245 Core Sound Loop Road and 273 Core Sound Loop Road for potential signature. A mailbox was not present at 261 Core Sound Loop Road and 307 Core Sound Loop Road and therefore an unsigned permission form was not left at the residence. Permission to sample the wells from the property owners was obtained by the Unit. Field procedures were performed in accordance with the URS *Standard Operating Procedures/Quality Assurance Manual* (SOP/QAM), dated June 21, 2010. Field notes from the sampling event are included as **Attachment 1**. A photo log is provided in **Attachment 2**. A site map showing the locations of the potable wells is provided on **Figure 1**.

Water samples were collected into laboratory-supplied containers and submitted to the laboratory for the analysis of volatile organic compounds (VOCs) by SW-846 8260B, 1,4-dioxane by SW-846 8260B Select Ion Monitoring (SIM), semi-volatile organic compounds (SVOCs) by

URS Corporation – North Carolina
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560
Tel: 919-461-1100
Fax: 919-461-1415

SW-846 8270D, metals by Environmental Protection Agency (EPA) Methods 200.8 and 245.1, nitrate and sulfate by EPA Method 300/SW-846 9056A, and ammonia by EPA Method 350.1. Samples collected in the field were placed on ice in an insulated cooler and transported to the laboratory via courier as expeditiously as possible. A chain-of-custody record accompanied the shipment of samples to the laboratory. The analytical laboratory report is included as **Attachment 3**.

URS conducted a completeness check for the analytical results reported by SGS-Accutest for the Site. All documentation required by the project was included in the laboratory report. The reported detection limits for undiluted samples were less than standards that are greater than the practical quantitation limit. Samples were analyzed in accordance with laboratory protocols and analytical methods. Samples were prepared and analyzed within EPA-established holding times. Quality control results that did not meet laboratory specifications are discussed in the Case Narrative of the laboratory report, and the effect on reported sample results discussed. Potable water sample results, as reported by the laboratory, are presented in **Table 1**. Laboratory data are usable for the samples collected for their intended purpose.

Sample results were compared to EPA Maximum Contaminant Levels (MCL) and North Carolina 2L (NC 2L) groundwater standards. There were no exeedances detected in the water sample collected from 144 Clem Fulture Court (Well-144 Atlantic). Iron was detected above the NC 2L groundwater standard in the samples collected at 267 Core Sound Loop Road (Well-267 Atlantic), 289 Core Sound Loop Road (Well-289 Atlantic), and 299 Core Sound Loop Road and field duplicate sample (Well-299 Atlantic and DUP-1, respectively); however, there is currently no established EPA MCL for iron. Manganese was also detected above the NC 2L groundwater standard at 299 Core Sound Loop Road and the field duplicate sample although there is currently no established EPA MCL for manganese. Results are summarized for the sampling event in **Table 1.**

If you have any questions or require additional information, please do not hesitate to contact me at 919-461-1341.

Sincerely,
URS CORPORATION-NORTH CAROLINA

Carlin Slusher
Project Manager

Attachments:

Table 1 – Summary of Potable Well Analytical Results
Figure 1 – Site Map
Attachment 1 – Field Notes
Attachment 2 – Photo Log

Table 1
Summary of Potable Well Analytical Results
Atlantic Refuse Dump, NONCD0000199

Sample ID:	**NC 2L**	**MCL**	**WELL-144 ATLANTIC**	**WELL-267 ATLANTIC**	**WELL-289 ATLANTIC**	**WELL-299 ATLANTIC**	**DUP-1[(1)]**
Date Sampled:			**4/21/2016**	**4/21/2016**	**4/21/2016**	**4/20/2016**	**4/20/2016**
Analytes:							
Volatiles (SW-846 8260B Full Scan)	NA	NA	ND	ND	ND	ND	ND
Volatiles (SW-846 8260B SIM)							
1,4-Dioxane	0.003	NG	ND	ND	ND	ND	ND
Semivolatiles (SW-846 8270D)	NA	NA	ND	ND	ND	ND	ND
Metals (EPA 200.8 and 245.1)							
Arsenic	0.010	0.01	ND	0.000046 J	0.000067 J	0.000047 J	0.000036 J
Beryllium	0.004 (I)	0.004	ND	0.000014 J	0.000016 J	0.000015 J	0.000019 J
Chromium	0.010	0.1	0.00013 J	0.00015 J	0.00012 J	0.00019 J	ND
Copper	1	1.3	0.0025 J	0.0116	0.00084 J	0.0014 J	0.00088 J
Iron	0.300	NG	0.0058 J	**1.18**	**1.80**	**0.522**	**0.547**
Lead	0.015	0.015	0.00023 J	0.00067	0.00011 J	0.00027 J	0.00026 J
Manganese	0.050	NG	0.00022 J	0.0436	0.0468	**0.0526**	**0.0515**
Mercury	0.001	0.002	ND	ND	0.000030 J	0.000031 J	0.000035 J
Nickel	0.100	NG	ND	0.00038 J	0.00012 J	0.00015 J	ND
Thallium	0.0002 (I)	0.002	ND	0.000013 J	0.000023 J	ND	0.000017 J
Zinc	1	NG	0.0143	0.322	0.0628	0.182	0.217
Miscellaneous Chemistry (EPA 300 and 350.1)							
Ammonia (EPA 350.1)	1.5 (I)	NG	ND	0.18	0.19	0.21	0.18
Sulfate (EPA 300)	250	NG	0.69 J	ND	ND	ND	ND

Table 1
Summary of Potable Well Analytical Results
Atlantic Refuse Dump, NONCD0000199

Notes:

I - NC Interim Maximum Allow Concentration (IMAC) established under 15A NCAC 2L.0202

MCL - EPA National Primary Drinking Water Standard Maximum Contaminant Level

NC 2L - 15A NCAC 02L .0202, effective April 1, 2013

(1) DUP-1 is a field duplicate of WELL-299 ATLANTIC

EPA - Environmental Protection Agency

J - Estimated value

NA - Not applicable

ND - Not detected

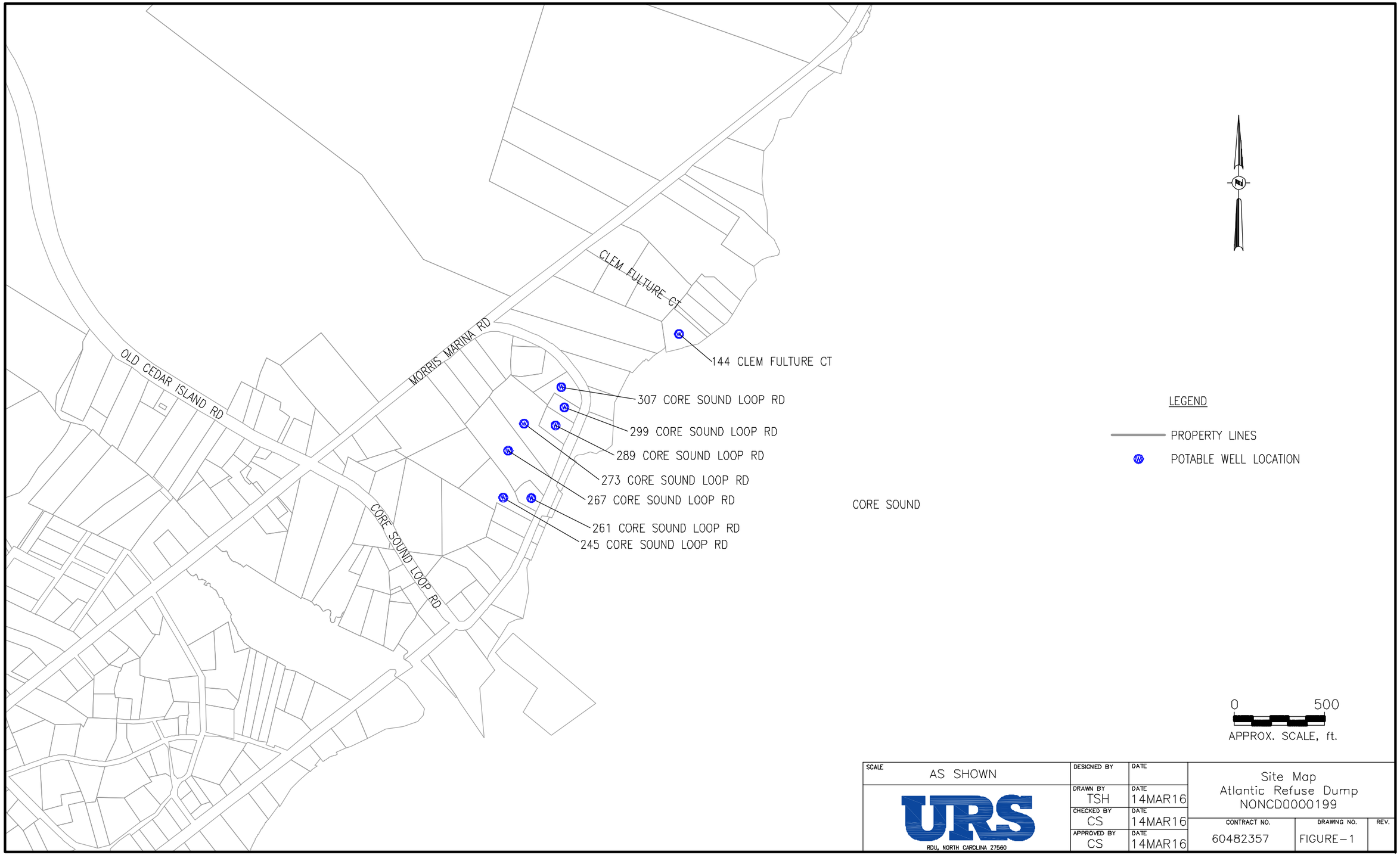
NG - No goal established

SIM - Selective Ion Monitoring

SW-846 - Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA)

This table presents the results of all detected analytes. All results are reported in milligrams per liter (mg/L).

Bold and outlined results indicate the concentration is greater than the MCL, or the NC 2L groundwater standard in absence of the MCL.



SCALE	DESIGNED BY	DATE	Site Map Atlantic Refuse Dump NONCD0000199		
AS SHOWN	DRAWN BY TSH	DATE 14MAR16			
URS RDU, NORTH CAROLINA 27560	CHECKED BY CS	DATE 14MAR16	CONTRACT NO. 60482357	DRAWING NO. FIGURE-1	REV.
	APPROVED BY CS	DATE 14MAR16			

Daily Activity Log

Project Name: Atlantic Refuse Dump
Task Order: 199MON
Field Personnel: JAbbassi ; JCorbin
Project Manager: C. Slusher
Date: 4/20/16 - 4/21/16
Weather: Sunny ~65F
Daily Objective: WSW sampling

4/20

1615 URS arrives at 299 Core Sound Loop Rd. Property owner answers the door. Property owner confirms that house to the right of her's is 307. No one is home (summer house) and there is no mailbox. URS will not sample 307. URS will sample 299 from spigot on side of house.
1620 Begin purging well.
1635 collect sample "well-299 Atlantic" and field duplicate sample (DUP-1 @ 1640).
1650 Complete sampling activities
1700 URS offsite to ship samples.

4/21

0830 URS arrives onsite at 289 Core Sound Loop Rd. Meets caretaker for property owner
0835 Begin calibration verification of field equipment and purging well. URS will sample from spigot on well house.
0920 Collect sample "well-289 Atlantic." Note: visible rust present on head of spigot.
0930 MOB to 273 Core Sound Loop Rd. No one home - no answer at door.
0935 MOB to 267. No answer at door. Have signed access agreement - URS will sample from spigot on back of house.
0946 Begin purging well.
1005 Sample "well-267 Atlantic"
1015 MOB to 261. No answer at door and no mailbox.
1020 MOB to 245. No answer at door. Left access agreement in mailbox
1025 MOB to 144 Clam Fulture Court. No answer at door. Will sample from spigot on front of house.
1045 Collect "well-144 Atlantic"
1050 Finish sampling activities and ending calibration of field equipment.
1100 URS offsite.

Water Sample Collection Field Sheet

Project Name: Atlantic Refuse Dump

Task No: 199MON

Sample ID: Well-299 Atlantic

Date/Time Collected: 4/20/16 @ 1635

Sample Method: Spigot

Personnel: J Abbassi, J Corbin

SAMPLE MEDIA: Groundwater (Potable Well) Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis
see proposal		

WELL PURGING DATA

Date: 4/20/16

Time Started: 1620

Time Completed: 1650

Well Depth (ft. BTOC): Z

Depth to Water (ft BTOC): Z

Actual Purge (liters): Z

Purge rate (liters/min): Z

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	pH	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTUs)	~~Comments~~ DO	ORP
1626	–	–	6.53	18.75	0.296	1.5	4.31	169.3
1629	–	–	6.39	18.13	0.269	1.4	3.68	183.5
1632	–	–	6.40	17.98	0.265	1.5	5.41	140.8

FIELD EQUIPMENT AND CALIBRATION

	Make/Model	Serial No	Calibration
Water Level Probe			
Pump			
Water Quality Meter			
Turbidity Meter			

GENERAL COMMENTS

DUP-1 @ 1640

Water Sample Collection Field Sheet

Project Name: Atlantic Refuse Dump

Task No: 199MON

Sample ID: Well-289 Atlantic

Date/Time Collected: 4/21/16 @ 0920

Sample Method: Spigot

Personnel: J Abbassi, J Corbin

SAMPLE MEDIA: Groundwater | Potable Well | Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis
See proposal		

WELL PURGING DATA

Date: 4/21/16

Time Started: 0900

Time Completed: 0925

Well Depth (ft. BTOC):

Depth to Water (ft BTOC):

Actual Purge (liters):

Purge rate (liters/min):

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	pH	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTUs)	~~Comments~~ DO	ORP.
0906	–	–	7.21	17.68	0.282	1.9	4.84	136.3
0909	–	–	7.57	18.11	0.283	1.6	5.38	116.0
0912	–	–	7.56	17.83	0.281	1.5	7.62	118.7
0915	–	–				1.6		

FIELD EQUIPMENT AND CALIBRATION

	Make/Model	Serial No	Calibration
Water Level Probe			
Pump			
Water Quality Meter			
Turbidity Meter			

GENERAL COMMENTS

Water Sample Collection Field Sheet

Project Name: Atlantic Refuse Dump

Task No: 199MON

Sample ID: Well-267 Atlantic

Date/Time Collected: 4/21/16 @ 1005

Personnel: J Abbasi, J Corbin

Sample Method: spigot

SAMPLE MEDIA: Groundwater (Potable Well) Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis
see proposal		

WELL PURGING DATA

Date: 4/21/16

Time Started: 0946

Time Completed:

Well Depth (ft. BTOC):

Depth to Water (ft BTOC):

Actual Purge (liters):

Purge rate (liters/min):

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	pH	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTUs)	~~Comments~~ DO	ORP
0952	–	–	7.68	20.21	0.290	8.1	3.76	117.4
0955	–	–	7.54	19.01	0.282	13	3.49	127.6
0958	–	–	7.40	18.87	0.230	14	3.42	132.0
JA ~~09~~ 1001			7.47	19.17	0.232	27	3.08	127.7

FIELD EQUIPMENT AND CALIBRATION

	Make/Model	Serial No	Calibration
Water Level Probe			
Pump			
Water Quality Meter			
Turbidity Meter			

GENERAL COMMENTS

Water Sample Collection Field Sheet

Project Name: Atlantic Refuse Dump

Task No: 199MON

Sample ID: Well-144 Atlantic

Date/Time Collected: 4/21/16 @ 1045

Sample Method: spigot

Personnel: J Abbassi, J Corbin

SAMPLE MEDIA: Groundwater (Potable Well) Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis
see proposal		

WELL PURGING DATA

Date: 4/21/16

Time Started: 1030

Time Completed: 1050

Well Depth (ft. BTOC): —

Depth to Water (ft BTOC): —

Actual Purge (liters): —

Purge rate (liters/min): —

FIELD MEASUREMENTS

Time	Amount Purged (Liters)	Depth to Water (ft)	pH	Temperature (°C)	Conductivity (mS/cm)	Turbidity (NTUs)	~~Comments~~ DO	ORP
1036	—	—	7.68	18.38	0.220	4.5	4.64	149.0
1039	—	—	7.65	18.18	0.217	2.9	3.61	152.4
1042	—	—	7.64	18.37	0.217	1.4	4.14	152.8

FIELD EQUIPMENT AND CALIBRATION

	Make/Model	Serial No	Calibration
Water Level Probe			
Pump			
Water Quality Meter			
Turbidity Meter			

GENERAL COMMENTS

4/20/16 **DAILY INSTRUMENT CALIBRATION CHECK SHEET (CONT.)**

	MANUFACTURER	MODEL # & SERIAL #	FACTORY CALIBRATION DATE	DETECTION LIMIT	PARAMETERS CALIBRATED	SUMMARY OF FIELD CALIBRATIONS (what methods, manufacturer's specifications, type of calibration gas, expiration date, etc.)
1012	YSI	07K100373	–	–	pH, ORP COND	pH 3.90 cal to 4.00 6.94 cal to 7.00 10.01 cal to 10.00 COND 1.272 cal to 1.413 ORP 204.6 cal to 200
	LaMotte	CES-2008	–	–	Turbidity	1.2 cal to 1.00 14 cal to 10.0
1241	YSI	07K100373	–	–	pH ORP COND	pH 4.92 ± 0.20 7.03 ± 0.20 9.86 ± 0.20 COND ± 20% ORP ± 20%
1640	YSI	" "	–	–	" "	pH 4.96 ± 0.20 7.04 ± 0.20 10.11 ± 0.20 COND ± 20% ORP ± 20%
4/21 0840	YSI	" "	–	–	" "	pH 4.08 ± 0.20 7.07 ± 0.20 9.89 ± 0.20 COND 1.332 cal to 1.413 ORP ± 20%
	YSI	" "	–	–	" "	pH 4.12 ± 0.20 7.06 ± 0.20 9.96 ± 0.20 COND ± 20% ORP ± 20%
1600	YSI	" "	–	–	" "	pH 4.08 ± 0.20 7.03 ± 0.20 9.82 ± 0.20 COND ± 20% ORP ± 20%
1655	YSI	" "	–	–	" "	pH 4.12 ± 0.20 6.89 ± 0.20 10.08 ± 0.20 COND ± 20% ORP ± 20%

Notes:
Field instruments must be calibrated in accordance with manufacturer specifications.
Bump calibration tests should be completed before, during, and after field evaluation to confirm calibration.
If field conditions change (e.g. barometric, temperature, humidity changes), recalibration should be completed and documented.
All field calibrations need to be documented, otherwise, the data could be rejected by NCDENR.

Site Name: Atlantic Refuse Dump	Site ID: NONCD0000199

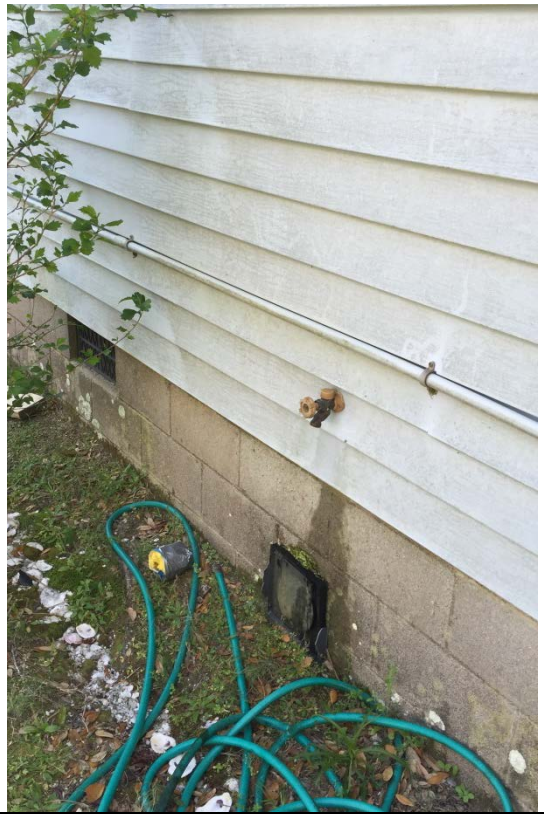


Photo 1: Spigot used to sample 267 Core Sound Loop Road

Photo 2: Spigot used to sample water supply well for 289 Core Sound Loop Road

Site Name: Atlantic Refuse Dump	Site ID: NONCD0000199

Photo 3: Spigot used to sample 299 Core Sound Loop Road

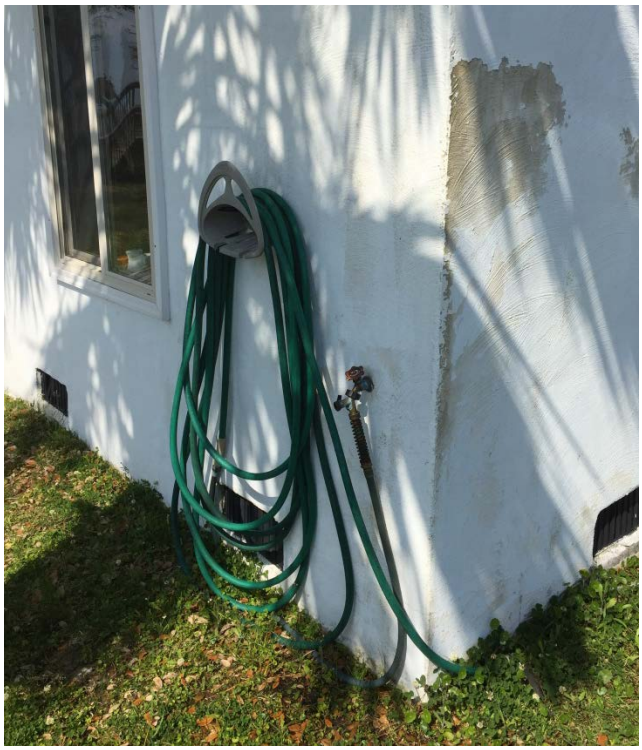


Photo 4: Spigot used to sample 144 Clem Fulture Court

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

AECOM, INC.

Atlantic Refuse Dump; NC

60494460

SGS Accutest Job Number: FA33286

Sampling Date: 04/20/16

Report to:

AECOM, INC.
1600 Perimeter Park Dr Suite 400
Morrisville, NC 27560
ncchemists@urs.com

ATTN: Martha Meyers-Lee

Total number of pages in report: 173

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (2937), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Test results relate only to samples analyzed.

SGS Accutest is the sole authority for authorizing edits or modifications to this document.
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11.2: Prep QC MP93378: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn 170

SGS Accutest

Sample Summary

AECOM, INC.

Job No: FA33286

Atlantic Refuse Dump; NC
Project No: 60494460

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA33286-1	04/20/16	00:00	JA	04/21/16	AQ	Trip Blank Water	TRIP BLANK
FA33286-2	04/20/16	16:40	JA	04/21/16	AQ	Ground Water	DUP-1
FA33286-3	04/20/16	16:35	JA	04/21/16	AQ	Ground Water	WELL-299 ATLANTIC

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job** FA33286

Site: Atlantic Refuse Dump; NC **Report Date** 5/5/2016 2:03:41 PM

2 Samples and 1 Trip Blank were collected on 04/20/2016 and were received at SGS Accutest Southeast (SASE) on 04/21/2016 properly preserved, at 2.2 Deg. C and intact. These Samples received an SASE job number of FA33286. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VA1920

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33246-1MS, FA33246-1MSD were used as the QC samples indicated.

Matrix Spike Duplicate Recovery(s) for Dibromochloromethane are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Volatiles by GCMS By Method SW846 8260B BY SIM

Matrix: AQ **Batch ID:** VZ1527

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

VZ1527-BS: No MS/MSD available for this run.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP60181

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33273-1MS, FA33273-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, Caprolactam, Di-n-octyl Phthalate, Indeno(1,2,3-cd)pyrene, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, Caprolactam, Di-n-octyl Phthalate, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Naphthalene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for 2,3,4,6-Tetrachlorophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, bis(2-Ethylhexyl)phthalate, Caprolactam, Di-n-octyl Phthalate, Dibenzo(a,h)anthracene, Hexachlorocyclopentadiene, Indeno(1,2,3-cd)pyrene, Naphthalene, Pentachlorophenol are outside control limits for sample OP60181-MSD. Probable cause is due to sample non-homogeneity.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** N: MP93378

FA33286-2, 3 for Antimony: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Arsenic: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Beryllium: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** N: MP93378

FA33286-2, 3 for Cadmium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Chromium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Copper: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Iron: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Lead: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Manganese: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Nickel: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Selenium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Silver: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33286-2, 3 for Zinc: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method EPA 245.1

Matrix: AQ **Batch ID:** MP30279

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33188-3FDUP, FA33188-3FMS, FA33188-3FMSD, FA33188-3FSDL were used as the QC samples for metals.

Matrix: AQ **Batch ID:** MP30280

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33286-3MS, FA33286-3MSD, FA33286-3SDL, FA33286-3DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP30280-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP30280-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP27816

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33280-1MSD, FA33280-1MS were used as the QC samples for Nitrogen, Nitrate, Sulfate.

Matrix Spike Recovery(s) for Nitrogen, Nitrate are outside control limits. Spike recovery outside of acceptable QC criteria due to dilution. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method EPA 350.1

Matrix: AQ **Batch ID:** GP27886

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Sample(s) FA33243-2MS, FA33243-2MSD were used as the QC samples for Nitrogen, Ammonia.

GP27886-MB1 for Nitrogen, Ammonia: MB is > MDL but is < 1/2 RL.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

Lovelie Metzgar

Date: May 5, 2016

Lovelie Metzgar, QA Officer

Laboratory Report Glossary

Client Sample ID: Normally refers to a point of collection – a monitoring well, discharge outfall, treatment facility intake, soil core grid location and depth, or any other identification client assigns to a sample.
Lab Sample ID: Letter prefix identifies one of Accutest laboratories and the rest is a consecutive number of the job (or SDG) received. Number after dash is a sample number and it is unequivocally linked in the LIMS to the Client Sample ID (see above).
Matrix (Matrix Code):

- **AQ- Water Samples**
- **SO- Soil/Solid Samples**
- **LIQ- Non-Water Liquid Samples**
- **OIL- Oil Samples**

Matrix Type:

- **SW for Surface Water**
- **SO for Soil/Sediment**
- **GW for Ground Water**
- **DW for Drinking Water**

All available definitions are found on Chain of Custody form.

Deg. C: Degrees Celsius, measurement of temperature.
Method: Analytical and preparation methods used for the analysis, with the version or revision identified.
Date Sampled: This information is entered from Chain of Custody at the time of login for every sample.
Date Received: When the job was received by Accutest Laboratories.
Percent Solids: Applicable only to SO matrix. For other matrices this field defaults to "n/a".
Run #: Provides information how many attempts were made in the analysis of the sample. LIMS can merge information from several attempts and lists all of them, including dilution, confirmation, etc. #1 designation is assigned to the analytical run with majority of analytes reported from it, not necessarily in chronological order.
File ID: Actual instrument data acquisition file that produced the final result. Letter prefix identifies the instrument; the rest is a consecutive injection number for that instrument.
DF (Dilution Factor): Most common reasons are either to fit into the range of the calibration, or alleviate matrix interference. DF other than 1 are accompanied with a comment at the end of the sample report.
Analyzed: Date of analysis.
By: Field Technician or Analyst uniquely identified by initials.
Prep Date: Date of sample preparation. If hold time is 72 hours or less, time of preparation is also indicated.
Prep Batch: Letter prefix OP followed by a consecutive number. For VOC analysis preparation happens at the time of analysis, therefore analytical batch and preparation batch are the same. Size of prep batch is limited to 20 field samples of similar matrix and the entire batch should be completed within 12 hour time.
Analytical Batch: Letter prefix identifies the instrument and is followed by a consecutive number. Not limited by a number of samples.
Initial Weight or Initial Volume: Raw sample size used for preparation.
Final Volume: Final volume of extract. If different from method-prescribed volume, reasons are reflected in the comments at the end of the report form.
CAS Number: *Chemical Abstracts Service* (CAS), a division of the *American Chemical Society*.
Compound: Most commonly used names of chemical compounds.
Result: Depending on project requirements, this field could be set up as text, such as ND (for Non Detected) or a number. The number may be reported with a qualifier.
MDL (Method Detection Limit): This value is defined as 99% probability that analyte above this concentration is positively (qualitatively) identified.
RL (Reporting Limit): This value is supported by the low calibration standard and defines lowest point of quantitative identification of analyte.
DL (Detection Limit): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration with 99% confidence. At the DL, the false positive rate (Type I error) is 1%.
LOD (Limit of Detection): The smallest concentration of a substance that must be present in a sample in order to be detected at the DL with 99% confidence. At the LOD, the false negative rate (Type II error) is 1%.
LOQ (Limit of Quantitation): The smallest concentration that produces a quantitative result with known and recorded precision and bias.

Units: ug/l (micrograms per liter) for aqueous samples and ug/kg (micrograms per kilogram) for solids (or ppb – parts per billion). The units could be set according to project or state-specific requirements, such as mg/l (milligrams per liter), or mg/kg (milligrams per kilogram).
Qualifiers (Q): Definitions of most often used qualifiers are found at the bottom of each result page. Applied depending on the program – state-specific (Florida A.C. 62-160), CLP-like, AFCEE, DOD QSM, etc.
Tentatively Identified Compound (TIC): Used when client requests a search for analytes that are not part of instrument calibration. Unknown peaks are compared with published spectral libraries and best match is reported as TIC.
Surrogate (S1, S2, S3 etc.): are positive controls that are used in most organics methods to ascertain preparation efficiency and matrix effect in individual samples. These chemicals mimic common method constituents but are unlikely to be found in real samples. Recoveries can be reported for every analytical run used in the analysis.
IS (Internal Standard IS1, IS2, IS3, etc): quantitative reference used to adjust for instrument performance fluctuations.
Area (of chromatographic peak): signal intensity directly related to compound concentration.
RT (Retention Time): time required for analyte to traverse the length of analytical column. Used for compound identification.
ICAL (Initial Calibration): Must pass calibration criteria established by method.
ICV (Independent Calibration Verification): Used to verify ICAL preparation and concentration of calibration points.
CCV (Continuing Calibration Verification): Used to assess calibration status of the instrument and must recover within established acceptance criteria.
MB (Method Blank): is a negative batch control. MB is an aliquot of matrix free of analyte of interest (either ASTM Type II water or appropriate solid substance) that is put through all the preparation and possible clean-up steps alongside investigative (field) samples. MB should be free of interferences above a set level.
BS (Blank Spike, Laboratory Fortified Blank - LFB, Laboratory Control Sample - LCS): is a positive control used to determine method accuracy - in clean matrix, i.e. matrix free of analytes of interest.
BSD (Blank Spike Duplicate): Used to assess recovery reproducibility - method precision – per analytical method requirement. %Recovery and Relative Percent Difference (%RPD) are compared with the established acceptance criteria.
MS and/or **MSD (Matrix Spike and Matrix Spike Duplicate):** positive batch controls which indicate matrix effect on the precision and accuracy of the method in given sample matrix. Results are expressed in %Recovery and Relative Percent Difference (%RPD), and compared with the established acceptance criteria.
DUP (Matrix Duplicate): Positive batch control, a way of assessing laboratory's precision; however, the composition of the samples is unknown and may not yield meaningful results.
REC (Recovery in Percent): expresses method accuracy.
RPD (Relative Percent Difference): expresses method precision.
Limits: Recovery limits for surrogates and spikes

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Accutest Laboratories Southeast, Inc.	**Job No**	FA33286
Site:	URSNCM: Atlantic Refuse Dump; NC	**Report Date**	5/5/2016 9:32:56 AM

On 04/22/2016, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 4.9 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of FA33286 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** MP93378

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) FA33323-2MS, FA33323-2MSD were used as the QC samples for metals.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: FA33286
Account: AECOM, INC.
Project: Atlantic Refuse Dump; NC
Collected: 04/20/16

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA33286-1	**TRIP BLANK**					
No hits reported in this sample.						
FA33286-2	**DUP-1**					
Arsenic [a]		0.000036 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000019 J	0.00050	0.000013	mg/l	EPA 200.8
Copper [a]		0.00088 J	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.547	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00026 J	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0515	0.0010	0.000095	mg/l	EPA 200.8
Mercury		0.000035 J	0.00050	0.000030	mg/l	EPA 245.1
Thallium [a]		0.000017 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.217	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Ammonia		0.18	0.10	0.030	mg/l	EPA 350.1
FA33286-3	**WELL-299 ATLANTIC**					
Arsenic [a]		0.000047 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000015 J	0.00050	0.000013	mg/l	EPA 200.8
Chromium [a]		0.00019 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0014 J	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.522	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00027 J	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0526	0.0010	0.000095	mg/l	EPA 200.8
Mercury		0.000031 J	0.00050	0.000030	mg/l	EPA 245.1
Nickel [a]		0.00015 J	0.0040	0.00011	mg/l	EPA 200.8
Zinc [a]		0.182	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Ammonia		0.21	0.10	0.030	mg/l	EPA 350.1

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33286-1	**Date Sampled:**	04/20/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40625.D	1	04/28/16	MM	n/a	n/a	VZ1527
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		74-125%
2037-26-5	Toluene-D8	107%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33286-1	**Date Sampled:**	04/20/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200399.D	1	04/26/16	TD	n/a	n/a	VA1920
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33286-1	**Date Sampled:**	04/20/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40626.D	1	04/28/16	MM	n/a	n/a	VZ1527
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		74-125%
2037-26-5	Toluene-D8	107%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200400.D	1	04/26/16	TD	n/a	n/a	VA1920
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		83-118%
17060-07-0	1,2-Dichloroethane-D4	102%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	99%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X046045.D	1	04/28/16	MV	04/23/16	OP60181	SX2039
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0095	0.0024	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0048	0.00071	mg/l	
95-57-8	2-Chlorophenol	ND	0.0048	0.00061	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	0.00060	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	0.00066	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.024	0.0048	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0095	0.0019	mg/l	
95-48-7	2-Methylphenol	ND	0.0048	0.00055	mg/l	
	3&4-Methylphenol	ND	0.0048	0.0010	mg/l	
88-75-5	2-Nitrophenol	ND	0.0048	0.00059	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	0.0048	mg/l	
87-86-5	Pentachlorophenol	ND	0.024	0.0048	mg/l	
108-95-2	Phenol	ND	0.0048	0.00048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	0.00086	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	0.00095	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	0.00082	mg/l	
83-32-9	Acenaphthene	ND	0.0048	0.00053	mg/l	
208-96-8	Acenaphthylene	ND	0.0048	0.00055	mg/l	
98-86-2	Acetophenone	ND	0.0048	0.00068	mg/l	
120-12-7	Anthracene	ND	0.0048	0.00058	mg/l	
1912-24-9	Atrazine	ND	0.0048	0.00060	mg/l	
100-52-7	Benzaldehyde	ND	0.024	0.0048	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0048	0.00048	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0048	0.00048	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0048	0.00051	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0048	0.00048	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0048	0.00060	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0048	0.00048	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0048	0.00048	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	0.00095	mg/l	
86-74-8	Carbazole	ND	0.0048	0.00054	mg/l	
106-47-8	4-Chloroaniline	ND	0.0048	0.00068	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0048	0.00065	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	0.00066	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0048	0.00065	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	0.00048	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0048	0.00055	mg/l	
218-01-9	Chrysene	ND	0.0048	0.00050	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0048	0.00072	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	0.00064	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0048	0.00048	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	0.00095	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	0.00095	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0048	0.00095	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	0.00095	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0048	0.00060	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	0.00056	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	0.00095	mg/l	
206-44-0	Fluoranthene	ND	0.0048	0.00048	mg/l	
86-73-7	Fluorene	ND	0.0048	0.00062	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0048	0.00052	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0048	0.00049	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0048	0.00095	mg/l	
67-72-1	Hexachloroethane	ND	0.0048	0.00049	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0048	0.00048	mg/l	
78-59-1	Isophorone	ND	0.0048	0.00064	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0048	0.00053	mg/l	
91-20-3	Naphthalene	ND	0.0048	0.00048	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	0.00067	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	0.00071	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	0.00068	mg/l	
98-95-3	Nitrobenzene	ND	0.0048	0.00062	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0048	0.00055	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	0.00066	mg/l	
85-01-8	Phenanthrene	ND	0.0048	0.00057	mg/l	
129-00-0	Pyrene	ND	0.0048	0.00053	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0048	0.00048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	48%		14-67%
4165-62-2	Phenol-d5	34%		10-50%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	80%		33-118%
4165-60-0	Nitrobenzene-d5	87%		42-108%
321-60-8	2-Fluorobiphenyl	84%		40-106%
1718-51-0	Terphenyl-d14	95%		39-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	ND	0.0020	0.00026	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.000036 J	0.0010	0.000034	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000019 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	ND	0.0040	0.00010	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.00088 J	0.0040	0.00014	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.547	0.050	0.0020	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00026 J	0.00050	0.000011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0515	0.0010	0.000095	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	0.000035 J	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	ND	0.0040	0.00011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000017 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.217	0.010	0.0012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39295
(3) Prep QC Batch: MP30279
(4) Prep QC Batch: N:MP93378

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	FA33286-2	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.18	0.10	0.030	mg/l	1	05/04/16 15:14	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/21/16 13:03	LJ	EPA 300/SW846 9056A
Sulfate	ND	2.0	0.60	mg/l	1	04/21/16 13:03	LJ	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40627.D	1	04/28/16	MM	n/a	n/a	VZ1527
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	109%		74-125%
2037-26-5	Toluene-D8	107%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200401.D	1	04/26/16	TD	n/a	n/a	VA1920
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		83-118%
17060-07-0	1,2-Dichloroethane-D4	101%		79-125%
2037-26-5	Toluene-D8	99%		85-112%
460-00-4	4-Bromofluorobenzene	98%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X046046.D	1	04/28/16	MV	04/23/16	OP60181	SX2039
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0096	0.0024	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0048	0.00071	mg/l	
95-57-8	2-Chlorophenol	ND	0.0048	0.00061	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	0.00061	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	0.00067	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.024	0.0048	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0096	0.0019	mg/l	
95-48-7	2-Methylphenol	ND	0.0048	0.00056	mg/l	
	3&4-Methylphenol	ND	0.0048	0.0010	mg/l	
88-75-5	2-Nitrophenol	ND	0.0048	0.00059	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	0.0048	mg/l	
87-86-5	Pentachlorophenol	ND	0.024	0.0048	mg/l	
108-95-2	Phenol	ND	0.0048	0.00048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	0.00087	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	0.00096	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	0.00083	mg/l	
83-32-9	Acenaphthene	ND	0.0048	0.00054	mg/l	
208-96-8	Acenaphthylene	ND	0.0048	0.00055	mg/l	
98-86-2	Acetophenone	ND	0.0048	0.00069	mg/l	
120-12-7	Anthracene	ND	0.0048	0.00059	mg/l	
1912-24-9	Atrazine	ND	0.0048	0.00061	mg/l	
100-52-7	Benzaldehyde	ND	0.024	0.0048	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0048	0.00048	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0048	0.00048	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0048	0.00052	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0048	0.00048	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0048	0.00061	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0048	0.00048	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0048	0.00048	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	0.00096	mg/l	
86-74-8	Carbazole	ND	0.0048	0.00054	mg/l	
106-47-8	4-Chloroaniline	ND	0.0048	0.00069	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0048	0.00065	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	0.00067	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0048	0.00066	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	0.00048	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0048	0.00056	mg/l	
218-01-9	Chrysene	ND	0.0048	0.00051	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0048	0.00073	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	0.00064	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0048	0.00048	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	0.00096	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	0.00096	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0048	0.00096	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	0.00096	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0048	0.00061	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	0.00056	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	0.00096	mg/l	
206-44-0	Fluoranthene	ND	0.0048	0.00048	mg/l	
86-73-7	Fluorene	ND	0.0048	0.00063	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0048	0.00052	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0048	0.00049	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0048	0.00096	mg/l	
67-72-1	Hexachloroethane	ND	0.0048	0.00049	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0048	0.00048	mg/l	
78-59-1	Isophorone	ND	0.0048	0.00064	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0048	0.00054	mg/l	
91-20-3	Naphthalene	ND	0.0048	0.00048	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	0.00068	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	0.00072	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	0.00069	mg/l	
98-95-3	Nitrobenzene	ND	0.0048	0.00063	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0048	0.00056	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	0.00067	mg/l	
85-01-8	Phenanthrene	ND	0.0048	0.00057	mg/l	
129-00-0	Pyrene	ND	0.0048	0.00053	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0048	0.00048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		14-67%
4165-62-2	Phenol-d5	23%		10-50%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	66%		33-118%
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	63%		40-106%
1718-51-0	Terphenyl-d14	81%		39-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	ND	0.0020	0.00026	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.000047 J	0.0010	0.000034	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000015 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00019 J	0.0040	0.00010	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0014 J	0.0040	0.00014	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.522	0.050	0.0020	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00027 J	0.00050	0.000011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0526	0.0010	0.000095	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	0.000031 J	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.00015 J	0.0040	0.00011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	ND	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.182	0.010	0.0012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39295
(3) Prep QC Batch: MP30280
(4) Prep QC Batch: N:MP93378

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-299 ATLANTIC		
Lab Sample ID:	FA33286-3	**Date Sampled:**	04/20/16
Matrix:	AQ - Ground Water	**Date Received:**	04/21/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.21	0.10	0.030	mg/l	1	05/04/16 15:15	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/21/16 13:21	LJ	EPA 300/SW846 9056A
Sulfate	ND	2.0	0.60	mg/l	1	04/21/16 13:21	LJ	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Analyst Legend

Parameter Certification Exceptions

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 •. FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA33286 PAGE 1 OF 1

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: URS Corporation
Address: 1600 Perimeter Park Dr
City: Morrisville State: NC Zip: 27560
Project Contact: E-mail:
Phone#: 919 461 1600
Sampler(s) Name(s) (Printed): JAbbassi JCorbin

Project Information

Project Name: Atlantic Refuse Dump
Street:
City: State:
Project #: 66494460
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	VOC (8260B)	1,4-Dioxane (8260 SIM)	SVOC (8270D)	Metals (Zn, 6020)	AMMN (350.1)	NO3+NO2 (300)						Matrix Codes	LAB USE ONLY
1	Trip Blank	—	—	—	—	6			X							X	X											
2	DCP-1	4/20	1640	JA	DW	11		X	↓		X	X				↓	↓	X	X	X	X							1640 SAMPLE
3	Well-299 Atlantic	4/20	1640 1635	JA	DW	11		X	↓		X	X				↓	↓	X	X	X	X							1635 TIME

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Accutest Laboratories
Raleigh, North Carolina
Service Center

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	4/20/16 1800	2 FX	3 FX		4 4/21/16 1015
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 2.2

5.2 5

FA33286: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA33286 CLIENT: URS Corp PROJECT: Atlantic Refuse

DATE/TIME RECEIVED: 4/21/16 1015 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: [FEDEX] UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7828 8346 8612

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [X] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [X] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [X] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.2
- [ ] OBSERVED TEMPS: 2.0
- [ ] CORRECTED TEMPS: 2.2 (USED FOR LIMS)

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#_____

{APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

TEST STRIP LOT#s pH 0-3 230315 pH 10-12 219813A OTHER (specify) _____

SUMMARY OF COMMENTS: Sample #1 (TB): COC says 6 bottles, received only 4

TECHNICIAN SIGNATURE/DATE 4/21/16 REVIEWER SIGNATURE/DATE 4-21-16

NF 11/15 RECEIPTLOG040416.xls

5.2 5

FA33286: Chain of Custody
Page 2 of 3

FA33286: Chain of Custody
Page 3 of 3

Analyst Legend

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Initials	Full Name	Analysis Type
MM	Melissa Mangual	GC/MS Volatiles
TD	Trang Diep	GC/MS Volatiles
MV	Martha Valls	GC/MS Semi-volatiles
JL	James Laureano	Metals Analysis
JK	Jenna Kravitz	General Chemistry
LJ	Luis Jimenez	General Chemistry

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1527-MB	Z40615.D	1	04/28/16	MM	n/a	n/a	VZ1527

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	1.0	0.30	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	106%	74-125%
2037-26-5	Toluene-D8	105%	88-111%

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1920-MB	A0200397.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.26	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
76-13-1	Freon 113	ND	1.0	0.32	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.23	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1920-MB	A0200397.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	0.72	2.0	0.51	ug/l	J
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	98%	83-118%

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1527-BS [a]	Z40614.D	1	04/28/16	MM	n/a	n/a	VZ1527

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	21.2	106	65-121

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	74-125%
2037-26-5	Toluene-D8	105%	88-111%

(a) No MS/MSD available for this run.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1920-BS	A0200396.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	124	99	50-147
71-43-2	Benzene	25	23.8	95	81-122
74-97-5	Bromochloromethane	25	22.6	90	76-123
75-27-4	Bromodichloromethane	25	25.2	101	79-123
75-25-2	Bromoform	25	21.2	85	66-123
78-93-3	2-Butanone (MEK)	125	113	90	56-143
75-15-0	Carbon Disulfide	25	25.3	101	66-148
56-23-5	Carbon Tetrachloride	25	26.5	106	76-136
108-90-7	Chlorobenzene	25	24.6	98	82-124
75-00-3	Chloroethane	25	26.0	104	62-144
67-66-3	Chloroform	25	24.2	97	80-124
110-82-7	Cyclohexane	25	23.8	95	73-138
124-48-1	Dibromochloromethane	25	22.3	89	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.5	94	64-123
106-93-4	1,2-Dibromoethane	25	23.9	96	75-120
75-71-8	Dichlorodifluoromethane	25	27.5	110	42-167
95-50-1	1,2-Dichlorobenzene	25	24.2	97	82-124
541-73-1	1,3-Dichlorobenzene	25	24.8	99	84-125
106-46-7	1,4-Dichlorobenzene	25	24.0	96	78-120
75-34-3	1,1-Dichloroethane	25	24.9	100	81-122
107-06-2	1,2-Dichloroethane	25	23.2	93	75-125
75-35-4	1,1-Dichloroethylene	25	24.6	98	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.1	92	78-120
156-60-5	trans-1,2-Dichloroethylene	25	26.6	106	76-127
78-87-5	1,2-Dichloropropane	25	24.2	97	76-124
10061-01-5	cis-1,3-Dichloropropene	25	24.8	99	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.2	109	80-120
100-41-4	Ethylbenzene	25	24.6	98	81-121
76-13-1	Freon 113	25	23.5	94	72-134
591-78-6	2-Hexanone	125	111	89	61-129
98-82-8	Isopropylbenzene	25	25.4	102	83-132
79-20-9	Methyl Acetate	125	114	91	65-126
74-83-9	Methyl Bromide	25	30.6	122	59-143
74-87-3	Methyl Chloride	25	24.5	98	50-159
108-87-2	Methylcyclohexane	25	24.5	98	76-129
75-09-2	Methylene Chloride	25	26.2	105	69-135

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1920-BS	A0200396.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone (MIBK)	125	113	90	66-122
1634-04-4	Methyl Tert Butyl Ether	25	23.5	94	72-117
100-42-5	Styrene	25	24.4	98	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	23.1	92	72-120
127-18-4	Tetrachloroethylene	25	29.3	117	76-135
108-88-3	Toluene	25	24.2	97	80-120
87-61-6	1,2,3-Trichlorobenzene	25	24.7	99	68-131
120-82-1	1,2,4-Trichlorobenzene	25	24.3	97	73-129
71-55-6	1,1,1-Trichloroethane	25	24.6	98	75-130
79-00-5	1,1,2-Trichloroethane	25	23.9	96	76-119
79-01-6	Trichloroethylene	25	24.1	96	81-126
75-69-4	Trichlorofluoromethane	25	27.1	108	71-156
75-01-4	Vinyl Chloride	25	26.1	104	69-159
	m,p-Xylene	50	50.8	102	79-126
95-47-6	o-Xylene	25	25.3	101	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	83-118%
17060-07-0	1,2-Dichloroethane-D4	102%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33246-1MS	A0200412.D	1	04/26/16	TD	n/a	n/a	VA1920
FA33246-1MSD	A0200413.D	1	04/26/16	TD	n/a	n/a	VA1920
FA33246-1	A0200398.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	FA33246-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	151	121	125	157	126	4	50-147/21
71-43-2	Benzene	ND		25	24.6	98	25	24.3	97	1	81-122/14
74-97-5	Bromochloromethane	ND		25	23.7	95	25	22.9	92	3	76-123/14
75-27-4	Bromodichloromethane	ND		25	25.0	100	25	22.4	90	11	79-123/19
75-25-2	Bromoform	ND		25	18.3	73	25	16.7	67	9	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	132	106	125	136	109	3	56-143/18
75-15-0	Carbon Disulfide	ND		25	24.9	100	25	22.4	90	11	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	25.9	104	25	22.6	90	14	76-136/23
108-90-7	Chlorobenzene	ND		25	25.1	100	25	24.4	98	3	82-124/14
75-00-3	Chloroethane	ND		25	30.2	121	25	30.0	120	1	62-144/20
67-66-3	Chloroform	ND		25	24.2	97	25	24.1	96	0	80-124/15
110-82-7	Cyclohexane	ND		25	23.7	95	25	23.3	93	2	73-138/18
124-48-1	Dibromochloromethane	ND		25	20.8	83	25	18.7	75*	11	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	21.6	86	25	22.5	90	4	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	23.5	94	25	23.8	95	1	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	26.3	105	25	26.8	107	2	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	24.7	99	25	24.4	98	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25	25.6	102	25	24.8	99	3	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25	25.2	101	25	24.1	96	4	78-120/15
75-34-3	1,1-Dichloroethane	ND		25	25.3	101	25	25.4	102	0	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	24.0	96	25	24.1	96	0	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	26.7	107	25	27.1	108	1	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.2	93	25	23.3	93	0	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	28.5	114	25	28.4	114	0	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	24.3	97	25	24.3	97	0	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25	22.2	89	25	19.8	79	11	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	25.1	100	25	22.1	88	13	80-120/22
100-41-4	Ethylbenzene	ND		25	25.0	100	25	24.7	99	1	81-121/14
76-13-1	Freon 113	ND		25	25.5	102	25	24.3	97	5	72-134/20
591-78-6	2-Hexanone	ND		125	129	103	125	131	105	2	61-129/18
98-82-8	Isopropylbenzene	ND		25	25.1	100	25	25.0	100	0	83-132/15
79-20-9	Methyl Acetate	ND		125	124	99	125	127	102	2	65-126/18
74-83-9	Methyl Bromide	ND		25	35.8	143	25	31.0	124	14	59-143/19
74-87-3	Methyl Chloride	ND		25	22.8	91	25	23.2	93	2	50-159/19
108-87-2	Methylcyclohexane	ND		25	24.0	96	25	23.2	93	3	76-129/17
75-09-2	Methylene Chloride	ND		25	29.5	118	25	29.4	118	0	69-135/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33246-1MS	A0200412.D	1	04/26/16	TD	n/a	n/a	VA1920
FA33246-1MSD	A0200413.D	1	04/26/16	TD	n/a	n/a	VA1920
FA33246-1	A0200398.D	1	04/26/16	TD	n/a	n/a	VA1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33286-1, FA33286-2, FA33286-3

CAS No.	Compound	FA33246-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		125	132	106	125	135	108	2	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		25	24.3	97	25	25.4	102	4	72-117/14
100-42-5	Styrene	ND		25	23.9	96	25	23.1	92	3	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.2	97	25	24.0	96	1	72-120/14
127-18-4	Tetrachloroethylene	ND		25	22.0	88	25	21.2	85	4	76-135/16
108-88-3	Toluene	ND		25	23.8	95	25	23.7	95	0	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	24.4	98	25	24.4	98	0	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	24.8	99	25	24.0	96	3	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	24.8	99	25	24.2	97	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	24.1	96	25	24.5	98	2	76-119/14
79-01-6	Trichloroethylene	ND		25	24.4	98	25	24.6	98	1	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	29.8	119	25	28.5	114	4	71-156/21
75-01-4	Vinyl Chloride	ND		25	27.3	109	25	28.1	112	3	69-159/18
	m,p-Xylene	ND		50	50.4	101	50	49.7	99	1	79-126/15
95-47-6	o-Xylene	ND		25	24.3	97	25	24.5	98	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA33246-1	Limits
1868-53-7	Dibromofluoromethane	101%	102%	102%	83-118%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	101%	79-125%
2037-26-5	Toluene-D8	97%	98%	100%	85-112%
460-00-4	4-Bromofluorobenzene	94%	95%	98%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-BFB
Lab File ID: A0200386.D
Instrument ID: GCMSA
Injection Date: 04/26/16
Injection Time: 11:17

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	84766	26.9		Pass
75	30.0 - 60.0% of mass 95	147803	46.8		Pass
95	Base peak, 100% relative abundance	315492	100.0		Pass
96	5.0 - 9.0% of mass 95	21316	6.76		Pass
173	Less than 2.0% of mass 174	2296	0.73	(0.89) [a]	Pass
174	50.0 - 100.0% of mass 95	257877	81.7		Pass
175	5.0 - 9.0% of mass 174	19093	6.05	(7.40) [a]	Pass
176	95.0 - 101.0% of mass 174	245248	77.7	(95.1) [a]	Pass
177	5.0 - 9.0% of mass 176	16402	5.20	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA1920-IC1920	A0200387.D	04/26/16	11:39	00:22	Initial cal 1
VA1920-IC1920	A0200388.D	04/26/16	11:59	00:42	Initial cal 2
VA1920-IC1920	A0200389.D	04/26/16	12:25	01:08	Initial cal 3
VA1920-IC1920	A0200390.D	04/26/16	12:50	01:33	Initial cal 4
VA1920-ICC1920	A0200391.D	04/26/16	13:16	01:59	Initial cal 5
VA1920-IC1920	A0200392.D	04/26/16	13:42	02:25	Initial cal 6
VA1920-IC1920	A0200393.D	04/26/16	14:07	02:50	Initial cal 7
VA1920-ICV1920	A0200395.D	04/26/16	14:54	03:37	Initial cal verification 5
VA1920-BS	A0200396.D	04/26/16	15:19	04:02	Blank Spike
VA1920-MB	A0200397.D	04/26/16	15:42	04:25	Method Blank
FA33246-1	A0200398.D	04/26/16	16:08	04:51	(used for QC only; not part of job FA33286)
FA33286-1	A0200399.D	04/26/16	16:34	05:17	TRIP BLANK
FA33286-2	A0200400.D	04/26/16	16:58	05:41	DUP-1
FA33286-3	A0200401.D	04/26/16	17:22	06:05	WELL-299 ATLANTIC
ZZZZZZ	A0200402.D	04/26/16	17:48	06:31	(unrelated sample)
ZZZZZZ	A0200403.D	04/26/16	18:14	06:57	(unrelated sample)
ZZZZZZ	A0200404.D	04/26/16	18:39	07:22	(unrelated sample)
ZZZZZZ	A0200406.D	04/26/16	19:31	08:14	(unrelated sample)
ZZZZZZ	A0200407.D	04/26/16	19:57	08:40	(unrelated sample)
ZZZZZZ	A0200409.D	04/26/16	20:48	09:31	(unrelated sample)
ZZZZZZ	A0200410.D	04/26/16	21:13	09:56	(unrelated sample)
ZZZZZZ	A0200411.D	04/26/16	21:39	10:22	(unrelated sample)
FA33246-1MS	A0200412.D	04/26/16	22:04	10:47	Matrix Spike
FA33246-1MSD	A0200413.D	04/26/16	22:30	11:13	Matrix Spike Duplicate

Instrument Performance Check (BFB)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-BFB
Lab File ID: A0200386.D
Instrument ID: GCMSA
Injection Date: 04/26/16
Injection Time: 11:17

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA1920-ECC1920	A0200414.D	04/26/16	22:55	11:38	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-BFB
Lab File ID: Z40545.D
Instrument ID: GCMSZ
Injection Date: 04/26/16
Injection Time: 07:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	128392	32.5		Pass
75	30.0 - 60.0% of mass 95	236224	59.9		Pass
95	Base peak, 100% relative abundance	394667	100.0		Pass
96	5.0 - 9.0% of mass 95	28008	7.10		Pass
173	Less than 2.0% of mass 174	3329	0.84	(1.04) [a]	Pass
174	50.0 - 100.0% of mass 95	320896	81.3		Pass
175	5.0 - 9.0% of mass 174	22755	5.77	(7.09) [a]	Pass
176	95.0 - 101.0% of mass 174	309333	78.4	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	18344	4.65	(5.93) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ1525-IC1525	Z40546.D	04/26/16	08:07	00:31	Initial cal 1
VZ1525-IC1525	Z40547.D	04/26/16	08:31	00:55	Initial cal 2
VZ1525-IC1525	Z40548.D	04/26/16	08:56	01:20	Initial cal 3
VZ1525-ICC1525	Z40549.D	04/26/16	09:21	01:45	Initial cal 4
VZ1525-IC1525	Z40550.D	04/26/16	09:45	02:09	Initial cal 5
VZ1525-IC1525	Z40551.D	04/26/16	10:10	02:34	Initial cal 6
VZ1525-IC1525	Z40552.D	04/26/16	10:34	02:58	Initial cal 7
VZ1525-ICV1525	Z40554.D	04/26/16	11:24	03:48	Initial cal verification 4
VZ1525-BS	Z40555.D	04/26/16	11:49	04:13	Blank Spike
VZ1525-MB	Z40557.D	04/26/16	12:38	05:02	Method Blank
ZZZZZZ	Z40558.D	04/26/16	13:02	05:26	(unrelated sample)
ZZZZZZ	Z40560.D	04/26/16	13:51	06:15	(unrelated sample)
ZZZZZZ	Z40561.D	04/26/16	14:15	06:39	(unrelated sample)
ZZZZZZ	Z40562.D	04/26/16	14:40	07:04	(unrelated sample)
ZZZZZZ	Z40563.D	04/26/16	15:05	07:29	(unrelated sample)
ZZZZZZ	Z40564.D	04/26/16	15:29	07:53	(unrelated sample)
ZZZZZZ	Z40565.D	04/26/16	15:54	08:18	(unrelated sample)
ZZZZZZ	Z40566.D	04/26/16	16:18	08:42	(unrelated sample)
ZZZZZZ	Z40567.D	04/26/16	16:43	09:07	(unrelated sample)
ZZZZZZ	Z40568.D	04/26/16	17:07	09:31	(unrelated sample)
ZZZZZZ	Z40569.D	04/26/16	17:32	09:56	(unrelated sample)
ZZZZZZ	Z40570.D	04/26/16	17:56	10:20	(unrelated sample)
ZZZZZZ	Z40571.D	04/26/16	18:21	10:45	(unrelated sample)
ZZZZZZ	Z40572.D	04/26/16	18:46	11:10	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-BFB
Lab File ID: Z40545.D
Instrument ID: GCMSZ
Injection Date: 04/26/16
Injection Time: 07:36

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
FA33287-7	Z40573.D	04/26/16	19:10	11:34	(used for QC only; not part of job FA33286)
FA33287-7MS	Z40574.D	04/26/16	19:35	11:59	Matrix Spike
FA33287-7MSD	Z40575.D	04/26/16	19:59	12:23	Matrix Spike Duplicate
VZ1525-ECC1525	Z40576.D	04/26/16	20:24	12:48	Ending cal 4

Instrument Performance Check (BFB)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1527-BFB
Lab File ID: Z40612.D
Instrument ID: GCMSZ
Injection Date: 04/28/16
Injection Time: 08:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	83000	31.3		Pass
75	30.0 - 60.0% of mass 95	152725	57.6		Pass
95	Base peak, 100% relative abundance	264939	100.0		Pass
96	5.0 - 9.0% of mass 95	18691	7.05		Pass
173	Less than 2.0% of mass 174	2303	0.87	(1.04) [a]	Pass
174	50.0 - 100.0% of mass 95	221013	83.4		Pass
175	5.0 - 9.0% of mass 174	15913	6.01	(7.20) [a]	Pass
176	95.0 - 101.0% of mass 174	211456	79.8	(95.7) [a]	Pass
177	5.0 - 9.0% of mass 176	14252	5.38	(6.74) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ1527-CC1525	Z40613.D	04/28/16	08:35	00:34	Continuing cal 4
VZ1527-BS	Z40614.D	04/28/16	09:00	00:59	Blank Spike
VZ1527-MB	Z40615.D	04/28/16	09:25	01:24	Method Blank
ZZZZZZ	Z40616.D	04/28/16	09:49	01:48	(unrelated sample)
ZZZZZZ	Z40617.D	04/28/16	10:14	02:13	(unrelated sample)
ZZZZZZ	Z40618.D	04/28/16	10:38	02:37	(unrelated sample)
ZZZZZZ	Z40619.D	04/28/16	11:03	03:02	(unrelated sample)
ZZZZZZ	Z40620.D	04/28/16	11:27	03:26	(unrelated sample)
ZZZZZZ	Z40621.D	04/28/16	11:52	03:51	(unrelated sample)
ZZZZZZ	Z40622.D	04/28/16	12:17	04:16	(unrelated sample)
ZZZZZZ	Z40623.D	04/28/16	12:41	04:40	(unrelated sample)
ZZZZZZ	Z40624.D	04/28/16	13:06	05:05	(unrelated sample)
FA33286-1	Z40625.D	04/28/16	13:31	05:30	TRIP BLANK
FA33286-2	Z40626.D	04/28/16	13:55	05:54	DUP-1
FA33286-3	Z40627.D	04/28/16	14:20	06:19	WELL-299 ATLANTIC
ZZZZZZ	Z40628.D	04/28/16	14:44	06:43	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std:	VA1920-ICC1920	**Injection Date:**	04/26/16
Lab File ID:	A0200391.D	**Injection Time:**	13:16
Instrument ID:	GCMSA	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	1390538	7.38	1002511	10.44	533397	12.79	107243	5.06
Check Std [b]	1390538	7.38	1002511	10.44	533397	12.79	107243	5.06
Upper Limit [c]	2781076	7.88	2005022	10.94	1066794	13.29	214486	5.56
Lower Limit [d]	695269	6.88	501256	9.94	266699	12.29	53622	4.56

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VA1920-BS	1355816	7.38	984363	10.44	526655	12.79	116411	5.05
VA1920-MB	1274118	7.38	895149	10.44	482400	12.79	106648	5.06
FA33246-1	1239086	7.38	895505	10.44	477437	12.79	95615	5.05
FA33286-1	1215760	7.38	879126	10.44	468394	12.79	93787	5.05
FA33286-2	1183993	7.38	858618	10.44	450015	12.79	100234	5.05
FA33286-3	1142069	7.38	829652	10.44	439042	12.79	93098	5.05
ZZZZZZ	1151262	7.38	835329	10.44	442347	12.79	102890	5.05
ZZZZZZ	1109538	7.38	810695	10.44	429134	12.79	102118	5.05
ZZZZZZ	1107023	7.38	805979	10.44	421863	12.79	103962	5.05
ZZZZZZ	1065363	7.38	769625	10.44	409162	12.79	101012	5.05
ZZZZZZ	1061695	7.38	771204	10.44	407747	12.79	98353	5.05
ZZZZZZ	1011826	7.38	728710	10.44	386892	12.79	89073	5.05
ZZZZZZ	1016813	7.38	738809	10.44	387504	12.79	93075	5.06
ZZZZZZ	1009443	7.38	725366	10.44	388763	12.79	94376	5.06
FA33246-1MS	1046072	7.38	780980	10.44	418606	12.79	88871	5.05
FA33246-1MSD	1057835	7.38	781839	10.44	424592	12.79	92385	5.06
VA1920-ECC1920	1117045	7.38	839985	10.44	449720	12.79	96007	5.06

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VA1920-ICC1920 A0200391.D 04/26/16 13:16
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std:	VZ1527-CC1525	**Injection Date:**	04/28/16
Lab File ID:	Z40613.D	**Injection Time:**	08:35
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	1205932	3.68	59764	4.26
Check Std [b]	738066	3.68	42298	4.26
Upper Limit [c]	1476132	4.18	84596	4.76
Lower Limit [d]	369033	3.18	21149	3.76

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ1527-BS [e]	743296	3.68	39489	4.25
VZ1527-MB	702442	3.68	34699	4.26
ZZZZZZ	512840	3.70	35294	4.26
ZZZZZZ	471632	3.70	34353	4.26
ZZZZZZ	534382	3.70	33878	4.26
ZZZZZZ	556858	3.68	33549	4.26
ZZZZZZ	518706	3.68	30780	4.25
ZZZZZZ	434624	3.68	29514	4.26
ZZZZZZ	644767	3.68	29967	4.26
ZZZZZZ	633616	3.68	29573	4.26
ZZZZZZ	635396	3.68	30220	4.25
FA33286-1	623147	3.68	30686	4.26
FA33286-2	618969	3.68	32106	4.26
FA33286-3	609132	3.68	31766	4.27
ZZZZZZ	614903	3.68	30799	4.27

IS 1 = Fluorobenzene
IS 2 = 1,4-Dioxane-d8

(a) Initial Cal is: VZ1525-ICC1525 Z40549.D 04/26/16 09:21
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(e) No MS/MSD available for this run.

Volatile Surrogate Recovery Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8260B BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA33286-1	Z40625.D	110	107
FA33286-2	Z40626.D	109	107
FA33286-3	Z40627.D	109	107
VZ1527-BS	Z40614.D	105	105
VZ1527-MB	Z40615.D	106	105

Surrogate Compounds	Recovery Limits
S1 = 1,2-Dichloroethane-D4	74-125%
S2 = Toluene-D8	88-111%

Volatile Surrogate Recovery Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA33286-1	A0200399.D	102	101	99	98
FA33286-2	A0200400.D	101	102	98	99
FA33286-3	A0200401.D	103	101	99	98
FA33246-1MS	A0200412.D	101	101	97	94
FA33246-1MSD	A0200413.D	102	101	98	95
VA1920-BS	A0200396.D	101	102	100	101
VA1920-MB	A0200397.D	103	102	100	98

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-ICC1920
Lab FileID: A0200391.D

Response Factor Report MSVOA10

```
Method       : C:\msdchem\1\METHODS\042616oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Tue Apr 26 14:29:22 2016
Response via : Initial Calibration

Calibration Files
1   =A0200387.D  2   =A0200388.D  3   =A0200389.D  4   =A0200390.D
5   =A0200391.D  6   =A0200392.D  7   =A0200393.D

   Compound             1     2     3     4     5     6     7     Avg   %RSD
-------------------------------------------------------------------------------

1) I   Fluorobenzene         ----------------ISTD---------------------
2)  Dichlorodifluorom 0.281 0.261 0.255 0.260 0.259 0.260 0.254 0.261   3.43
3)P Chloromethane     0.617 0.520 0.498 0.515 0.497 0.479 0.470 0.514   9.51
4)C Vinyl Chloride    0.355 0.307 0.308 0.322 0.314 0.318 0.311 0.319   5.21
5)  Bromomethane      0.150 0.113 0.099 0.101 0.083 0.079 0.073 0.100  26.26
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9932
              Response Ratio = 0.00000 + 0.07710 *A

6)  Chloroethane      0.131 0.133 0.130 0.131 0.115 0.102 0.082 0.118  16.55
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.14269 *A + -0.03021 *A^2

7)  Trichlorofluorome 0.311 0.311 0.302 0.324 0.315 0.329 0.307 0.314   3.04
8)  Ethyl Ether       0.237 0.233 0.219 0.228 0.225 0.224 0.210 0.225   4.01
9)  1,2-Dichlorotrifl 0.300 0.265 0.266 0.269 0.269 0.266 0.248 0.269   5.84
10)C 1,1-Dichloroethen 0.485 0.446 0.450 0.461 0.463 0.460 0.443 0.458   3.04
11)  Freon 113        0.269 0.245 0.245 0.247 0.251 0.241 0.231 0.247   4.69
12)  Carbon Disulfide 0.740 0.660 0.667 0.669 0.676 0.663 0.617 0.670   5.42
13)  Iodomethane      0.424 0.409 0.402 0.403 0.409 0.404 0.384 0.405   2.95
14)  Methylene Chlorid 0.810 0.553 0.486 0.471 0.465 0.453 0.430 0.524  25.17
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.44165 *A

15)  Acetone          0.125 0.087 0.083 0.080 0.078 0.076 0.072 0.086  20.85
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 0.07378 *A

16)  Methyl acetate   0.253 0.225 0.219 0.225 0.218 0.219 0.213 0.224   5.89
17)  trans-1,2-Dichlor 0.390 0.377 0.373 0.377 0.372 0.366 0.349 0.372   3.34
18)  Hexane           0.351 0.283 0.276 0.282 0.274 0.280 0.267 0.288   9.96
19)  Methyl Tert Butyl 0.613 0.591 0.573 0.583 0.566 0.562 0.548 0.577   3.69
20)  Di-isopropyl ethe 1.289 1.253 1.226 1.255 1.274 1.277 1.235 1.258   1.84
21)P 1,1-Dichloroethan 0.569 0.546 0.531 0.536 0.538 0.542 0.523 0.541   2.71
22)  Acrylonitrile    0.128 0.117 0.117 0.121 0.120 0.121 0.118 0.120   3.07
23)  ETBE             0.956 0.931 0.918 0.948 0.964 0.965 0.936 0.945   1.88
24)  Vinyl acetate    0.620 0.651 0.659 0.694 0.700 0.703 0.666 0.670   4.55
25)  cis-1,2-Dichloroe 0.317 0.288 0.287 0.289 0.290 0.292 0.285 0.293   3.73
26)  2,2-Dichloropropa 0.234 0.216 0.201 0.187 0.187 0.186 0.168 0.197  11.20
27)  Bromochloromethan 0.167 0.151 0.142 0.152 0.149 0.150 0.144 0.151   5.32
28)  Cyclohexane      0.655 0.619 0.618 0.632 0.645 0.650 0.626 0.635   2.35
29)C Chloroform       0.534 0.494 0.477 0.484 0.483 0.482 0.465 0.489   4.46
30)  Tetrahydrofuran  0.120 0.094 0.092 0.089 0.085 0.089 0.089 0.094  12.71
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9995
              Response Ratio = 0.00000 + 0.08842 *A

31)S Dibromofluorometh 0.286 0.281 0.287 0.282 0.280 0.276 0.274 0.281   1.67
```

Initial Calibration Summary

Job Number: FA33286 **Sample:** VA1920-ICC1920
Account: URSNCM AECOM, INC. **Lab FileID:** A0200391.D
Project: Atlantic Refuse Dump; NC

```
32)  Carbon Tetrachlor 0.273 0.284 0.283 0.305 0.316 0.330 0.327 0.302   7.55
33)  1,1,1-Trichloroet 0.372 0.354 0.344 0.343 0.340 0.341 0.322 0.345   4.40
34)  2-Butanone        0.141 0.124 0.126 0.128 0.128 0.132 0.128 0.130   4.28
35)  1,1-Dichloroprope 0.365 0.354 0.347 0.351 0.362 0.368 0.354 0.357   2.16
36)  tert-Butyl Format 0.086 0.100 0.127 0.115 0.123 0.140 0.139 0.119  16.84
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
              Response Ratio = 0.00000 + 0.13679 *A

37)  Benzene           1.052 0.981 0.945 0.965 0.980 0.985 0.945 0.979   3.72
38)  TAME              0.638 0.623 0.619 0.648 0.654 0.659 0.641 0.640   2.35
39)S 1,2-Dichloroethan 0.340 0.336 0.340 0.341 0.340 0.338 0.339 0.339   0.50
40)  1,2-Dichloroethan 0.504 0.418 0.398 0.409 0.411 0.417 0.406 0.423   8.53
41)  Trichloroethene   0.316 0.289 0.266 0.275 0.280 0.280 0.271 0.282   5.87
42)  Methylcyclohexane 0.451 0.432 0.430 0.454 0.466 0.467 0.446 0.449   3.34
43)  Dibromomethane    0.166 0.156 0.153 0.157 0.160 0.163 0.160 0.159   2.81
44)C 1,2-Dichloropropa 0.298 0.284 0.276 0.285 0.290 0.298 0.291 0.289   2.80
45)  Bromodichlorometh 0.276 0.281 0.279 0.300 0.315 0.329 0.325 0.301   7.52
46)  2-Chloroethyl vin 0.123 0.127 0.129 0.138 0.140 0.148 0.143 0.135   6.76
47)  cis-1,3-Dichlorop 0.307 0.315 0.320 0.346 0.363 0.387 0.384 0.346   9.54

48) I   Chlorobenzene-d5      ----------------ISTD---------------------
49)S Toluene-d8        1.216 1.221 1.233 1.213 1.228 1.232 1.233 1.225   0.69
50)C Toluene           1.445 1.325 1.310 1.321 1.374 1.389 1.339 1.358   3.54
51)  2-Nitropropane    0.060 0.055 0.059 0.069 0.076 0.085 0.087 0.070  18.36
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
              Response Ratio = 0.00000 + 0.08463 *A

52)  4-Methyl-2-pentan 0.361 0.374 0.385 0.401 0.407 0.417 0.400 0.392   4.98
53)  trans-1,3-Dichlor 0.311 0.342 0.347 0.381 0.402 0.429 0.423 0.377  11.78
54)  Tetrachloroethene 0.406 0.406 0.407 0.409 0.444 0.418 0.410 0.414   3.27
55)  1,1,2-Trichloroet 0.230 0.218 0.216 0.221 0.228 0.233 0.228 0.225   2.97
56)  Dibromochlorometh 0.228 0.261 0.260 0.297 0.313 0.336 0.339 0.291  14.44
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.33353 *A

57)  1,3-Dichloropropa 0.458 0.454 0.441 0.456 0.468 0.488 0.471 0.462   3.29
58)  1,2-Dibromoethane 0.278 0.266 0.268 0.276 0.289 0.299 0.294 0.281   4.55
59)  2-hexanone        0.241 0.247 0.256 0.267 0.268 0.275 0.268 0.260   4.76
60)  1-Chlorohexane    0.419 0.420 0.415 0.438 0.460 0.474 0.460 0.441   5.44
61)C Ethylbenzene      1.646 1.540 1.503 1.539 1.567 1.568 1.486 1.550   3.37
62)P Chlorobenzene     0.965 0.896 0.865 0.889 0.902 0.906 0.866 0.898   3.74
63)  1,1,1,2-Tetrachlo 0.289 0.304 0.311 0.328 0.347 0.358 0.353 0.327   8.20
64)  m,p-Xylene        1.141 1.158 1.145 1.184 1.222 1.214 1.147 1.173   2.91
65)  o-Xylene          1.211 1.200 1.193 1.243 1.285 1.296 1.244 1.239   3.28
66)  Styrene           0.789 0.857 0.860 0.915 0.954 0.980 0.945 0.900   7.50
67)P Bromoform         0.149 0.143 0.151 0.168 0.183 0.204 0.207 0.172  15.37
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.20217 *A

68)  Isopropylbenzene  1.455 1.508 1.500 1.571 1.628 1.641 1.563 1.552   4.41

69) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
70)S 4-Bromofluorobenz 0.897 0.898 0.915 0.916 0.924 0.920 0.942 0.916   1.68
71)  n-Propylbenzene   2.265 2.289 2.260 2.335 2.406 2.378 2.313 2.321   2.40
72)  Bromobenzene      0.678 0.721 0.713 0.729 0.742 0.745 0.735 0.723   3.18
73)P 1,1,2,2-Tetrachlo 0.652 0.651 0.671 0.686 0.684 0.688 0.685 0.674   2.40
74)  1,3,5-Trimethylbe 2.448 2.447 2.497 2.604 2.706 2.687 2.621 2.573   4.25
75)  2-Chlorotoluene   2.265 2.289 2.260 2.335 2.406 2.378 2.313 2.321   2.40
76)  trans-1,4-Dichlor 0.173 0.189 0.191 0.213 0.224 0.242 0.246 0.211  13.20
77)  1,2,3-Trichloropr 0.203 0.186 0.189 0.185 0.190 0.194 0.194 0.192   3.22
```

Initial Calibration Summary

Job Number: FA33286 **Sample:** VA1920-ICC1920
Account: URSNCM AECOM, INC. **Lab FileID:** A0200391.D
Project: Atlantic Refuse Dump; NC

```
 78)  Cyclohexanone     0.023 0.022 0.025 0.025 0.026 0.027 0.028 0.025   8.22
 79)  4-Chlorotoluene   2.008 2.075 2.046 2.126 2.196 2.219 2.155 2.118   3.70
 80)  tert-Butylbenzene 1.481 1.369 1.401 1.499 1.559 1.560 1.527 1.485   5.05
 81)  1,2,4-Trimethylbe 2.307 2.450 2.482 2.604 2.691 2.685 2.628 2.550   5.56
 82)  sec-Butylbenzene  3.193 3.118 3.201 3.349 3.488 3.455 3.370 3.310   4.27
 83)  4-Isopropyltoluen 2.485 2.638 2.738 2.889 2.990 2.985 2.906 2.805   6.81
 84)  1,3-Dichlorobenze 1.424 1.396 1.376 1.438 1.476 1.484 1.459 1.436   2.80
 85)  1,4-Dichlorobenze 1.511 1.464 1.482 1.490 1.519 1.518 1.481 1.495   1.42
 86)  n-Butylbenzene    1.359 1.480 1.514 1.605 1.663 1.675 1.630 1.561   7.38
 87)  Benzyl Chloride   0.158 0.186 0.202 0.248 0.253 0.291 0.293 0.233  22.42
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9975
               Response Ratio = 0.00000 + 0.28627 *A

 88)  1,2-Dichlorobenze 1.360 1.391 1.411 1.413 1.448 1.448 1.420 1.413   2.20
 89)  1,2-Dibromo-3-Chl 0.115 0.101 0.102 0.111 0.113 0.125 0.125 0.113   8.56
 90)  Hexachlorobutadie 0.614 0.527 0.562 0.564 0.586 0.593 0.579 0.575   4.82
 91)  1,2,4-Trichlorobe 0.962 1.016 1.020 1.024 1.073 1.073 1.058 1.032   3.83
 92)  Naphthalene       1.817 1.837 1.926 2.016 2.051 2.100 2.092 1.977   5.95
 93)  1,2,3-Trichlorobe 0.891 0.901 0.919 0.933 0.940 0.962 0.944 0.927   2.71

 94) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
 95)  Ethanol           0.448 0.205 0.155 0.148 0.162 0.163 0.154 0.205  53.02
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9982
               Response Ratio = 0.00000 + 0.15716 *A

 96)  acrolein          3.714 2.955 2.839 2.953 3.088 2.968 2.922 3.063   9.68
 97)  Tert Butyl Alcoho 2.337 1.874 1.762 1.681 1.632 1.531 1.488 1.758  16.33
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9987
               Response Ratio = 0.00000 + 1.52291 *A

 98)  tert Amyl alcohol 0.997 0.882 0.915 0.952 0.998 1.027 1.078 0.978   6.86
 99)  1,4-Dioxane       0.085 0.115 0.118 0.119 0.123 0.124 0.129 0.116  12.42
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9994
               Response Ratio = 0.00000 + 0.12650 *A

100)  3,3-Dimethyl-1-bu 0.783 0.895 1.145 1.154 1.288 1.363 1.436 1.152  20.84
             ---- Linear regr., Force(0,0) ----  Coefficient =  0.9976
               Response Ratio = 0.00000 + 1.38871 *A

 ---------------------------------------------------------------------------
 (#) = Out of Range

          042616oxy.m        Wed Apr 27 13:05:14 2016
```

6.7.1

6

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-ICV1920
Lab FileID: A0200395.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042616\A0200395.D          Vial: 10
Acq On    : 26 Apr 2016   2:54 pm                     Operator: TRANGD
Sample    : ICV1920-5                                 Inst    : MSVOA10
Misc      : MS33640,VA1920,,,,,                       Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\msdchem\1\METHODS\042616oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Tue Apr 26 14:29:22 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	100	0.00	7.38
2		Dichlorodifluoromethane	0.261	0.273	-4.6	105	0.00	2.60
3	P	Chloromethane	0.514	0.511	0.6	103	0.00	2.82
4	C	Vinyl Chloride	0.319	0.329	-3.1	105	0.00	2.93
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	45.443	-13.6	106	0.00	3.33
6		Chloroethane	40.000	42.091	-5.2	107	0.00	3.48
		----------	AvgRF	CCRF	%Dev		----------	
7		Trichlorofluoromethane	0.314	0.341	-8.6	108	0.00	3.65
8		Ethyl Ether	0.225	0.230	-2.2	102	0.00	3.95
9		1,2-Dichlorotrifluoroetha	0.269	0.270	-0.4	100	0.00	4.16
10	C	1,1-Dichloroethene	0.458	0.470	-2.6	101	0.00	4.18
11		Freon 113	0.247	0.252	-2.0	100	0.00	4.22
12		Carbon Disulfide	0.670	0.675	-0.7	100	0.00	4.24
13		Iodomethane	0.405	0.410	-1.2	100	0.00	4.35
		----------	Amount	Calc.	%Drift		----------	
14		Methylene Chloride	40.000	42.748	-6.9	101	0.00	4.79
15		Acetone	200.000	220.738	-10.4	105	0.00	4.84
		----------	AvgRF	CCRF	%Dev		----------	
16		Methyl acetate	0.224	0.232	-3.6	106	0.00	4.95
17		trans-1,2-Dichloroethene	0.372	0.377	-1.3	101	0.00	4.95
18		Hexane	0.288	0.284	1.4	104	0.00	5.01
19		Methyl Tert Butyl Ether	0.577	0.587	-1.7	103	0.00	5.05
20		Di-isopropyl ether	1.258	1.296	-3.0	102	0.00	5.42
21	P	1,1-Dichloroethane	0.541	0.543	-0.4	101	0.00	5.59
22		Acrylonitrile	0.120	0.125	-4.2	104	0.00	5.65
23		ETBE	0.945	0.974	-3.1	101	0.00	5.79
24		Vinyl acetate	0.670	0.726	-8.4	104	0.00	5.81
25		cis-1,2-Dichloroethene	0.293	0.294	-0.3	101	0.00	6.14
26		2,2-Dichloropropane	0.197	0.185	6.1	99	0.00	6.25
27		Bromochloromethane	0.151	0.149	1.3	99	0.00	6.35
28		Cyclohexane	0.635	0.649	-2.2	100	0.00	6.35
29	C	Chloroform	0.489	0.488	0.2	101	0.00	6.40
		----------	Amount	Calc.	%Drift		----------	
30		Tetrahydrofuran	40.000	42.075	-5.2	110	0.00	6.58
		----------	AvgRF	CCRF	%Dev		----------	

Initial Calibration Verification

Job Number: FA33286 **Sample:** VA1920-ICV1920
Account: URSNCM AECOM, INC. **Lab FileID:** A0200395.D
Project: Atlantic Refuse Dump; NC

31	S	Dibromofluoromethane	0.281	0.282	-0.4	100	0.00	6.58
32		Carbon Tetrachloride	0.302	0.327	-8.3	103	0.00	6.56
33		1,1,1-Trichloroethane	0.345	0.346	-0.3	101	0.00	6.62
34		2-Butanone	0.130	0.136	-4.6	106	0.00	6.70
35		1,1-Dichloropropene	0.357	0.369	-3.4	102	0.00	6.74
		----------	Amount	Calc.	%Drift		----------	
36		tert-Butyl Formate	400.000	390.941	2.3	108	0.00	6.83
		----------	AvgRF	CCRF	%Dev		----------	
37		Benzene	0.979	0.986	-0.7	100	0.00	6.99
38		TAME	0.640	0.656	-2.5	100	0.00	7.06
39	S	1,2-Dichloroethane-d4	0.339	0.347	-2.4	102	0.00	7.12
40		1,2-Dichloroethane	0.423	0.422	0.2	102	0.00	7.19
41		Trichloroethene	0.282	0.282	0.0	101	0.00	7.55
42		Methylcyclohexane	0.449	0.463	-3.1	99	0.00	7.54
43		Dibromomethane	0.159	0.164	-3.1	102	0.00	7.98
44	C	1,2-Dichloropropane	0.289	0.293	-1.4	101	0.00	8.07
45		Bromodichloromethane	0.301	0.320	-6.3	101	0.00	8.11
46		2-Chloroethyl vinyl ether	0.135	0.148	-9.6	105	0.00	8.63
47		cis-1,3-Dichloropropene	0.346	0.370	-6.9	102	0.00	8.72
48	I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00	10.44
49	S	Toluene-d8	1.225	1.214	0.9	100	0.00	8.90
50	C	Toluene	1.358	1.357	0.1	100	0.00	8.95
		----------	Amount	Calc.	%Drift		----------	
51		2-Nitropropane	200.000	182.700	8.7	103	0.00	9.18
		----------	AvgRF	CCRF	%Dev		----------	
52		4-Methyl-2-pentanone	0.392	0.420	-7.1	105	0.00	9.29
53		trans-1,3-Dichloropropene	0.377	0.412	-9.3	104	0.00	9.35
54		Tetrachloroethene	0.414	0.421	-1.7	96	0.00	9.34
55		1,1,2-Trichloroethane	0.225	0.230	-2.2	102	0.00	9.51
		----------	Amount	Calc.	%Drift		----------	
56		Dibromochloromethane	40.000	38.381	4.0	103	0.00	9.70
		----------	AvgRF	CCRF	%Dev		----------	
57		1,3-Dichloropropane	0.462	0.473	-2.4	102	0.00	9.79
58		1,2-Dibromoethane	0.281	0.292	-3.9	102	0.00	9.96
59		2-hexanone	0.260	0.275	-5.8	104	0.00	10.10
60		1-Chlorohexane	0.441	0.458	-3.9	101	0.00	10.39
61	C	Ethylbenzene	1.550	1.568	-1.2	101	0.00	10.45
62	P	Chlorobenzene	0.898	0.898	0.0	101	0.00	10.46
63		1,1,1,2-Tetrachloroethane	0.327	0.349	-6.7	102	0.00	10.51
64		m,p-Xylene	1.173	1.221	-4.1	101	0.00	10.59
65		o-Xylene	1.239	1.286	-3.8	101	0.00	11.03
66		Styrene	0.900	0.954	-6.0	101	0.00	11.08
		----------	Amount	Calc.	%Drift		----------	
67	P	Bromoform	40.000	37.124	7.2	104	0.00	11.14
		----------	AvgRF	CCRF	%Dev		----------	
68		Isopropylbenzene	1.552	1.603	-3.3	100	0.00	11.33
69	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	12.79
70	S	4-Bromofluorobenzene	0.916	0.927	-1.2	101	0.00	11.65
71		n-Propylbenzene	2.321	2.397	-3.3	101	0.00	11.94
72		Bromobenzene	0.723	0.743	-2.8	101	0.00	11.77

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-ICV1920
Lab FileID: A0200395.D

73	P	1,1,2,2-Tetrachloroethane	0.674	0.695	-3.1	103	0.00	11.83
74		1,3,5-Trimethylbenzene	2.573	2.693	-4.7	101	0.00	11.94
75		2-Chlorotoluene	2.321	2.397	-3.3	101	0.00	11.94
76		trans-1,4-Dichloro-2-Bute	0.211	0.226	-7.1	102	0.00	12.01
77		1,2,3-Trichloropropane	0.192	0.198	-3.1	105	0.00	11.99
78		Cyclohexanone	0.025	0.027	-8.0	105	0.00	12.05
79		4-Chlorotoluene	2.118	2.206	-4.2	102	0.00	12.10
80		tert-Butylbenzene	1.485	1.538	-3.6	100	0.00	12.27
81		1,2,4-Trimethylbenzene	2.550	2.643	-3.6	99	0.00	12.35
82		sec-Butylbenzene	3.310	3.426	-3.5	99	0.00	12.46
83		4-Isopropyltoluene	2.805	2.936	-4.7	99	0.00	12.59
84		1,3-Dichlorobenzene	1.436	1.475	-2.7	101	0.00	12.72
85		1,4-Dichlorobenzene	1.495	1.507	-0.8	100	0.00	12.81
86		n-Butylbenzene	1.561	1.634	-4.7	99	0.00	13.03
		----------	Amount	Calc.	%Drift		----------	
87		Benzyl Chloride	40.000	35.875	10.3	103	0.00	13.05
		----------	AvgRF	CCRF	%Dev		----------	
88		1,2-Dichlorobenzene	1.413	1.434	-1.5	100	0.00	13.24
89		1,2-Dibromo-3-Chloropropa	0.113	0.120	-6.2	107	0.00	14.00
90		Hexachlorobutadiene	0.575	0.583	-1.4	101	0.00	14.55
91		1,2,4-Trichlorobenzene	1.032	1.060	-2.7	100	0.00	14.60
92		Naphthalene	1.977	2.072	-4.8	102	0.00	14.88
93		1,2,3-Trichlorobenzene	0.927	0.945	-1.9	102	0.00	15.05
94	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	108	0.00	5.06
		----------	Amount	Calc.	%Drift		----------	
95		Ethanol	800.000	848.840	-6.1	111	0.00	4.09
		----------	AvgRF	CCRF	%Dev		----------	
96		acrolein	3.063	3.014	1.6	105	0.00	4.54
		----------	Amount	Calc.	%Drift		----------	
97		Tert Butyl Alcohol	400.000	424.014	-6.0	107	0.00	5.13
		----------	AvgRF	CCRF	%Dev		----------	
98		tert Amyl alcohol	0.978	0.972	0.6	105	0.00	7.23
		----------	Amount	Calc.	%Drift		----------	
99		1,4-Dioxane	800.000	742.733	7.2	103	0.00	8.30
100		3,3-Dimethyl-1-butanol	2000.000	1766.012	11.7	103	0.00	10.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A0200391.D 042616oxy.m Wed Apr 27 13:04:58 2016

6.7.2

6

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VA1920-ECC1920
Lab FileID: A0200414.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042616\A0200414.D          Vial: 29
Acq On    : 26 Apr 2016  10:55 pm                     Operator: TRANGD
Sample    : ECC1920-5                                 Inst    : MSVOA10
Misc      : MS33640,VA1920,,,,,                       Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\msdchem\1\METHODS\042616oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Tue Apr 26 14:29:22 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	80	0.00	7.38
2		Dichlorodifluoromethane	0.261	0.259	0.8	80	0.00	2.60
3	P	Chloromethane	0.514	0.495	3.7	80	0.00	2.82
4	C	Vinyl Chloride	0.319	0.336	-5.3	86	0.00	2.93
		----------	Amount	Calc.	%Drift		----------	
5		Bromomethane	40.000	49.280	-23.2	92	0.00	3.33
6		Chloroethane	40.000	44.663	-11.7	90	0.00	3.48
		----------	AvgRF	CCRF	%Dev		----------	
7		Trichlorofluoromethane	0.314	0.358	-14.0	91	0.00	3.65
8		Ethyl Ether	0.225	0.241	-7.1	86	0.00	3.95
9		1,2-Dichlorotrifluoroetha	0.269	0.291	-8.2	87	0.00	4.16
10	C	1,1-Dichloroethene	0.458	0.492	-7.4	85	0.00	4.18
11		Freon 113	0.247	0.262	-6.1	84	0.00	4.22
12		Carbon Disulfide	0.670	0.704	-5.1	84	0.00	4.24
13		Iodomethane	0.405	0.441	-8.9	87	0.00	4.35
		----------	Amount	Calc.	%Drift		----------	
14		Methylene Chloride	40.000	45.976	-14.9	88	0.00	4.79
15		Acetone	200.000	231.511	-15.8	88	0.00	4.84
		----------	AvgRF	CCRF	%Dev		----------	
16		Methyl acetate	0.224	0.240	-7.1	89	0.00	4.95
17		trans-1,2-Dichloroethene	0.372	0.397	-6.7	86	0.00	4.95
18		Hexane	0.288	0.288	0.0	84	0.00	5.01
19		Methyl Tert Butyl Ether	0.577	0.587	-1.7	83	0.00	5.05
20		Di-isopropyl ether	1.258	1.236	1.7	78	0.00	5.41
21	P	1,1-Dichloroethane	0.541	0.525	3.0	78	0.00	5.59
22		Acrylonitrile	0.120	0.125	-4.2	84	0.00	5.64
23		ETBE	0.945	0.901	4.7	75	0.00	5.79
24		Vinyl acetate	0.670	0.780	-16.4	90	0.00	5.81
25		cis-1,2-Dichloroethene	0.293	0.281	4.1	78	0.00	6.13
26		2,2-Dichloropropane	0.197	0.158	19.8	68	0.00	6.25
27		Bromochloromethane	0.151	0.143	5.3	77	0.00	6.34
28		Cyclohexane	0.635	0.616	3.0	77	0.00	6.35
29	C	Chloroform	0.489	0.464	5.1	77	0.00	6.40
		----------	Amount	Calc.	%Drift		----------	
30		Tetrahydrofuran	40.000	38.033	4.9	80	0.00	6.57
		----------	AvgRF	CCRF	%Dev		----------	

Continuing Calibration Summary

Job Number: FA33286 **Sample:** VA1920-ECC1920
Account: URSNCM AECOM, INC. **Lab FileID:** A0200414.D
Project: Atlantic Refuse Dump; NC

31	S	Dibromofluoromethane	0.281	0.280	0.4	80	0.00	6.58
32		Carbon Tetrachloride	0.302	0.314	-4.0	80	0.00	6.56
33		1,1,1-Trichloroethane	0.345	0.337	2.3	79	0.00	6.62
34		2-Butanone	0.130	0.134	-3.1	84	0.00	6.70
35		1,1-Dichloropropene	0.357	0.348	2.5	77	0.00	6.74
		----------	Amount	Calc.	%Drift	----------		
36		tert-Butyl Formate	400.000	323.988	19.0	72	0.00	6.83
		----------	AvgRF	CCRF	%Dev	----------		
37		Benzene	0.979	0.962	1.7	79	0.00	6.99
38		TAME	0.640	0.608	5.0	75	0.00	7.06
39	S	1,2-Dichloroethane-d4	0.339	0.346	-2.1	82	0.00	7.12
40		1,2-Dichloroethane	0.423	0.410	3.1	80	0.00	7.18
41		Trichloroethene	0.282	0.271	3.9	78	0.00	7.54
42		Methylcyclohexane	0.449	0.446	0.7	77	0.00	7.54
43		Dibromomethane	0.159	0.157	1.3	78	0.00	7.98
44	C	1,2-Dichloropropane	0.289	0.282	2.4	78	0.00	8.06
45		Bromodichloromethane	0.301	0.304	-1.0	77	0.00	8.11
46		2-Chloroethyl vinyl ether	0.135	0.143	-5.9	82	0.00	8.63
47		cis-1,3-Dichloropropene	0.346	0.345	0.3	76	0.00	8.72
48	I	Chlorobenzene-d5	1.000	1.000	0.0	84	0.00	10.44
49	S	Toluene-d8	1.225	1.186	3.2	81	0.00	8.90
50	C	Toluene	1.358	1.309	3.6	80	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
51		2-Nitropropane	200.000	155.784	22.1	72	0.00	9.18
		----------	AvgRF	CCRF	%Dev	----------		
52		4-Methyl-2-pentanone	0.392	0.416	-6.1	86	0.00	9.29
53		trans-1,3-Dichloropropene	0.377	0.376	0.3	78	0.00	9.35
54		Tetrachloroethene	0.414	0.377	8.9	71	0.00	9.34
55		1,1,2-Trichloroethane	0.225	0.218	3.1	80	0.00	9.51
		----------	Amount	Calc.	%Drift	----------		
56		Dibromochloromethane	40.000	35.864	10.3	80	0.00	9.70
		----------	AvgRF	CCRF	%Dev	----------		
57		1,3-Dichloropropane	0.462	0.445	3.7	80	0.00	9.79
58		1,2-Dibromoethane	0.281	0.274	2.5	79	0.00	9.96
59		2-hexanone	0.260	0.275	-5.8	86	0.00	10.10
60		1-Chlorohexane	0.441	0.433	1.8	79	0.00	10.39
61	C	Ethylbenzene	1.550	1.528	1.4	82	0.00	10.45
62	P	Chlorobenzene	0.898	0.882	1.8	82	0.00	10.45
63		1,1,1,2-Tetrachloroethane	0.327	0.336	-2.8	81	0.00	10.51
64		m,p-Xylene	1.173	1.178	-0.4	81	0.00	10.59
65		o-Xylene	1.239	1.217	1.8	79	0.00	11.03
66		Styrene	0.900	0.917	-1.9	81	0.00	11.08
		----------	Amount	Calc.	%Drift	----------		
67	P	Bromoform	40.000	34.614	13.5	80	0.00	11.14
		----------	AvgRF	CCRF	%Dev	----------		
68		Isopropylbenzene	1.552	1.557	-0.3	80	0.00	11.33
69	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	84	0.00	12.79
70	S	4-Bromofluorobenzene	0.916	0.882	3.7	80	0.00	11.65
71		n-Propylbenzene	2.321	2.324	-0.1	81	0.00	11.94
72		Bromobenzene	0.723	0.726	-0.4	83	0.00	11.77

Continuing Calibration Summary

Job Number: FA33286 **Sample:** VA1920-ECC1920
Account: URSNCM AECOM, INC. **Lab FileID:** A0200414.D
Project: Atlantic Refuse Dump; NC

73	P	1,1,2,2-Tetrachloroethane	0.674	0.685	-1.6	85	0.00	11.83
74		1,3,5-Trimethylbenzene	2.573	2.575	-0.1	80	0.00	11.94
75		2-Chlorotoluene	2.321	2.324	-0.1	81	0.00	11.94
76		trans-1,4-Dichloro-2-Bute	0.211	0.182	13.7	68	0.00	12.01
77		1,2,3-Trichloropropane	0.192	0.184	4.2	81	0.00	11.98
78		Cyclohexanone	0.025	0.021	16.0	69	0.00	12.05
79		4-Chlorotoluene	2.118	2.110	0.4	81	0.00	12.10
80		tert-Butylbenzene	1.485	1.472	0.9	80	0.00	12.27
81		1,2,4-Trimethylbenzene	2.550	2.578	-1.1	81	0.00	12.35
82		sec-Butylbenzene	3.310	3.340	-0.9	81	0.00	12.46
83		4-Isopropyltoluene	2.805	2.852	-1.7	80	0.00	12.59
84		1,3-Dichlorobenzene	1.436	1.440	-0.3	82	0.00	12.72
85		1,4-Dichlorobenzene	1.495	1.483	0.8	82	0.00	12.81
86		n-Butylbenzene	1.561	1.555	0.4	79	0.00	13.03
		----------	Amount	Calc.	%Drift	----------		
87		Benzyl Chloride	40.000	27.890	30.3	66	0.00	13.05
		----------	AvgRF	CCRF	%Dev	----------		
88		1,2-Dichlorobenzene	1.413	1.408	0.4	82	0.00	13.24
89		1,2-Dibromo-3-Chloropropa	0.113	0.110	2.7	82	0.00	14.00
90		Hexachlorobutadiene	0.575	0.550	4.3	79	0.00	14.55
91		1,2,4-Trichlorobenzene	1.032	1.012	1.9	80	0.00	14.60
92		Naphthalene	1.977	1.937	2.0	80	0.00	14.88
93		1,2,3-Trichlorobenzene	0.927	0.903	2.6	81	0.00	15.05
94	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	90	0.00	5.06
		----------	Amount	Calc.	%Drift	----------		
95		Ethanol	800.000	842.334	-5.3	92	0.00	4.09
		----------	AvgRF	CCRF	%Dev	----------		
96		acrolein	3.063	3.268	-6.7	95	0.00	4.54
		----------	Amount	Calc.	%Drift	----------		
97		Tert Butyl Alcohol	400.000	388.753	2.8	81	0.00	5.13
		----------	AvgRF	CCRF	%Dev	----------		
98		tert Amyl alcohol	0.978	0.792	19.0	71	0.00	7.23
		----------	Amount	Calc.	%Drift	----------		
99		1,4-Dioxane	800.000	703.787	12.0	81	0.00	8.30
100		3,3-Dimethyl-1-butanol	2000.000	1579.729	21.0	76	0.00	10.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A0200391.D 042616oxy.m Wed Apr 27 13:06:05 2016

6.7.3

6

Initial Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-ICC1525
Lab FileID: Z40549.D

```
                         Response Factor Report  MSVOA15

 Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
 Title        : 1,4-Dioxane by SIM
 Last Update  : Tue Apr 26 11:02:13 2016
 Response via : Initial Calibration

 Calibration Files
 1   =Z40546.D    2   =Z40547.D    10  =Z40548.D    40  =Z40549.D
 80  =Z40550.D    140 =Z40551.D    200 =Z40552.D

    Compound             1     2     10    40    80    140   200   Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)S 1,2-Dichloroethan 0.671 0.667 0.616 0.651 0.641 0.638 0.626 0.644   3.13
 3)S Toluene-d8        0.930 0.932 0.944 0.924 0.919 0.914 0.908 0.924   1.30

 4) I   1,4-Dioxane-d8        ----------------ISTD---------------------
 5)  1,4-Dioxane       2.051 1.688 1.652 1.590 1.712 1.794 1.826 1.759   8.63
---------------------------------------------------------------------------
(#) = Out of Range

          simm042616.m        Wed Apr 27 10:35:42 2016
```

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-ICV1525
Lab FileID: Z40554.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042616\Z40554.D            Vial: 9
Acq On    : 26 Apr 2016  11:24 am                    Operator: melissam
Sample    : ICV1525-4                                Inst    : MSVOA15
Misc      : MS33630,VZ1525,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Tue Apr 26 11:02:13 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	101	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.644	0.646	-0.3	101	0.00	3.49
3	S	Toluene-d8	0.924	0.918	0.6	101	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	89	0.00	4.27
5		1,4-Dioxane	1.759	1.884	-7.1	105	0.00	4.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40549.D simm042616.m Wed Apr 27 08:55:32 2016

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1527-CC1525
Lab FileID: Z40613.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042816\Z40613.D            Vial: 1
Acq On    : 28 Apr 2016   8:35 am                     Operator: melissam
Sample    : cc1525-4                                  Inst    : MSVOA15
Misc      : MS33630,VZ1527,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Tue Apr 26 11:02:13 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	61	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.644	0.659	-2.3	62	0.00	3.49
3	S	Toluene-d8	0.924	0.969	-4.9	64	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	71	0.00	4.26
5		1,4-Dioxane	1.759	1.720	2.2	77	0.00	4.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40549.D simm042616.m Fri Apr 29 08:57:40 2016

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	10	2.5	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	5.0	0.74	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.64	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.63	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.70	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.58	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.62	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.0	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.91	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.86	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.56	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.58	ug/l	
98-86-2	Acetophenone	ND	5.0	0.71	ug/l	
120-12-7	Anthracene	ND	5.0	0.61	ug/l	
1912-24-9	Atrazine	ND	5.0	0.63	ug/l	
100-52-7	Benzaldehyde	ND	25	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.54	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.63	ug/l	
92-52-4	1,1'-Biphenyl	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	1.0	ug/l	
86-74-8	Carbazole	ND	5.0	0.56	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.72	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.68	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.69	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.69	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	5.0	0.58	ug/l	
218-01-9	Chrysene	ND	5.0	0.53	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.76	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.67	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	1.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	1.0	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	5.0	1.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.63	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.58	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.65	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.55	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.51	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.67	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.56	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.70	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.75	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.72	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.66	ug/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	5.0	0.58	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.70	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.60	ug/l	
129-00-0	Pyrene	ND	5.0	0.55	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	14-67%

Method Blank Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	37%	10-50%
118-79-6	2,4,6-Tribromophenol	65%	33-118%
4165-60-0	Nitrobenzene-d5	76%	42-108%
321-60-8	2-Fluorobiphenyl	73%	40-106%
1718-51-0	Terphenyl-d14	83%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
301-02-0	9-Octadecenamide, (Z)-	15.16	15	ug/l	JN
	Total TIC, Semi-Volatile		15	ug/l	J

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
105-60-2	Caprolactam	50	9.9	20	11-68
59-50-7	4-Chloro-3-methyl Phenol	50	39.5	79	54-103
95-57-8	2-Chlorophenol	50	34.7	69	52-98
120-83-2	2,4-Dichlorophenol	50	39.1	78	53-103
105-67-9	2,4-Dimethylphenol	50	28.9	58	43-90
51-28-5	2,4-Dinitrophenol	100	74.9	75	44-112
534-52-1	4,6-Dinitro-o-cresol	100	87.7	88	66-121
95-48-7	2-Methylphenol	50	33.0	66	43-90
	3&4-Methylphenol	100	60.2	60	36-88
88-75-5	2-Nitrophenol	50	40.4	81	53-102
100-02-7	4-Nitrophenol	100	35.8	36	18-62
87-86-5	Pentachlorophenol	100	82.4	82	61-115
108-95-2	Phenol	50	17.4	35	19-56
58-90-2	2,3,4,6-Tetrachlorophenol	50	40.0	80	62-110
95-95-4	2,4,5-Trichlorophenol	50	41.9	84	62-109
88-06-2	2,4,6-Trichlorophenol	50	41.4	83	59-107
83-32-9	Acenaphthene	50	41.7	83	61-107
208-96-8	Acenaphthylene	50	39.4	79	60-104
98-86-2	Acetophenone	50	39.1	78	53-106
120-12-7	Anthracene	50	43.4	87	65-108
1912-24-9	Atrazine	50	42.9	86	62-114
100-52-7	Benzaldehyde	50	33.6	67	36-129
56-55-3	Benzo(a)anthracene	50	43.5	87	66-111
50-32-8	Benzo(a)pyrene	50	43.6	87	62-107
205-99-2	Benzo(b)fluoranthene	50	46.0	92	65-114
191-24-2	Benzo(g,h,i)perylene	50	43.3	87	66-116
207-08-9	Benzo(k)fluoranthene	50	44.2	88	65-114
92-52-4	1,1'-Biphenyl	50	37.3	75	57-104
101-55-3	4-Bromophenyl Phenyl Ether	50	43.4	87	65-109
85-68-7	Butyl Benzyl Phthalate	50	44.6	89	65-112
86-74-8	Carbazole	50	45.1	90	59-113
106-47-8	4-Chloroaniline	50	39.1	78	49-105
111-91-1	bis(2-Chloroethoxy)methane	50	37.2	74	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.6	73	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	42.1	84	45-106
91-58-7	2-Chloronaphthalene	50	38.5	77	57-103

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
7005-72-3	4-Chlorophenyl Phenyl Ether	50	42.5	85	62-105
218-01-9	Chrysene	50	43.9	88	66-111
53-70-3	Dibenzo(a,h)anthracene	50	44.2	88	66-119
132-64-9	Dibenzofuran	50	41.4	83	61-106
91-94-1	3,3'-Dichlorobenzidine	50	39.9	80	46-117
84-66-2	Diethyl Phthalate	50	43.2	86	64-108
131-11-3	Dimethyl Phthalate	50	42.2	84	63-106
84-74-2	Di-n-butyl Phthalate	50	46.3	93	65-107
117-84-0	Di-n-octyl Phthalate	50	45.1	90	62-118
121-14-2	2,4-Dinitrotoluene	50	43.7	87	61-110
606-20-2	2,6-Dinitrotoluene	50	40.7	81	63-108
117-81-7	bis(2-Ethylhexyl)phthalate	50	46.4	93	61-117
206-44-0	Fluoranthene	50	43.8	88	63-106
86-73-7	Fluorene	50	42.9	86	62-108
118-74-1	Hexachlorobenzene	50	41.6	83	63-108
87-68-3	Hexachlorobutadiene	50	25.3	51	42-102
77-47-4	Hexachlorocyclopentadiene	50	28.9	58	39-102
67-72-1	Hexachloroethane	50	24.7	49	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.4	87	64-119
78-59-1	Isophorone	50	38.4	77	43-87
91-57-6	2-Methylnaphthalene	50	39.0	78	51-102
91-20-3	Naphthalene	50	34.8	70	47-100
88-74-4	2-Nitroaniline	50	44.0	88	54-128
99-09-2	3-Nitroaniline	50	43.0	86	56-106
100-01-6	4-Nitroaniline	50	45.5	91	55-120
98-95-3	Nitrobenzene	50	37.3	75	50-104
621-64-7	N-Nitrosodi-n-propylamine	50	39.2	78	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.0	86	64-108
85-01-8	Phenanthrene	50	42.9	86	66-110
129-00-0	Pyrene	50	44.7	89	64-113
95-94-3	1,2,4,5-Tetrachlorobenzene	50	36.0	72	47-111

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Surrogate Recoveries	BSP	Limits
4165-62-2	Phenol-d5	30%	10-50%
118-79-6	2,4,6-Tribromophenol	88%	33-118%
4165-60-0	Nitrobenzene-d5	75%	42-108%
321-60-8	2-Fluorobiphenyl	81%	40-106%
1718-51-0	Terphenyl-d14	87%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	FA33273-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
105-60-2	Caprolactam	9.5 U		94.3	ND	0*	94.3	ND	0*	nc	11-68/39
59-50-7	4-Chloro-3-methyl Phenol	4.8 U		94.3	74.4	79	94.3	79.6	84	4	54-103/23
95-57-8	2-Chlorophenol	4.8 U		94.3	72.1	76	94.3	72.9	77	3	52-98/25
120-83-2	2,4-Dichlorophenol	4.8 U		94.3	76.5	81	94.3	78.1	83	3	53-103/26
105-67-9	2,4-Dimethylphenol	4.8 U		94.3	71.4	76	94.3	72.2	77	2	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	ND	0*	189	ND	0*	nc	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.5 U		189	92.4	49*	189	95.5	51*	62*	66-121/23
95-48-7	2-Methylphenol	4.8 U		94.3	70.8	75	94.3	66.9	71	0	43-90/28
	3&4-Methylphenol	4.8 U		189	142	75	189	142	75	11	36-88/28
88-75-5	2-Nitrophenol	4.8 U		94.3	63.7	68	94.3	67.7	72	17	53-102/29
100-02-7	4-Nitrophenol	24 U		189	ND	0*	189	ND	0*	nc	18-62/33
87-86-5	Pentachlorophenol	24 U		189	ND	0*	189	ND	0*	nc	61-115/26
108-95-2	Phenol	4.8 U		94.3	50.4	53	94.3	49.9	53	5	19-56/35
58-90-2	2,3,4,6-Tetrachlorophenol	4.8 U		94.3	62.1	66	94.3	62.1	66	27*	62-110/22
95-95-4	2,4,5-Trichlorophenol	4.8 U		94.3	75.7	80	94.3	70.0	74	14	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.8 U		94.3	68.9	73	94.3	70.9	75	11	59-107/23
83-32-9	Acenaphthene	0.65	I	94.3	82.8	87	94.3	83.4	88	4	61-107/22
208-96-8	Acenaphthylene	4.8 U		94.3	77.0	82	94.3	79.6	84	5	60-104/22
98-86-2	Acetophenone	4.8 U		94.3	77.5	82	94.3	75.4	80	4	53-106/27
120-12-7	Anthracene	4.8 U		94.3	87.6	93	94.3	83.2	88	2	65-108/20
1912-24-9	Atrazine	4.8 U		94.3	75.3	80	94.3	70.5	75	13	62-114/24
100-52-7	Benzaldehyde	24 U		94.3	ND	0*	94.3	ND	0*	nc	36-129/29
56-55-3	Benzo(a)anthracene	4.8 U		94.3	74.8	79	94.3	72.2	77	17	66-111/22
50-32-8	Benzo(a)pyrene	4.8 U		94.3	70.4	75	94.3	69.5	74	20	62-107/23
205-99-2	Benzo(b)fluoranthene	4.8 U		94.3	70.7	75	94.3	74.7	79	16	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.8 U		94.3	76.8	81	94.3	69.8	74	21	66-116/23
207-08-9	Benzo(k)fluoranthene	4.8 U		94.3	86.2	91	94.3	73.3	78	17	65-114/24
92-52-4	1,1'-Biphenyl	0.50	I	94.3	82.5	87	94.3	83.9	88	14	57-104/23
101-55-3	4-Bromophenyl Phenyl Ether	4.8 U		94.3	81.7	87	94.3	78.1	83	12	65-109/23
85-68-7	Butyl Benzyl Phthalate	4.8 U		94.3	66.2	70	94.3	71.0	75	19	65-112/24
86-74-8	Carbazole	4.8 U		94.3	85.3	90	94.3	86.3	91	1	59-113/21
106-47-8	4-Chloroaniline	4.8 U		94.3	72.2	77	94.3	76.6	81	20	49-105/27
111-91-1	bis(2-Chloroethoxy)methane	4.8 U		94.3	76.9	82	94.3	78.5	83	14	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.8 U		94.3	75.8	80	94.3	76.9	82	0	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.8 U		94.3	88.9	94	94.3	87.6	93	16	45-106/26
91-58-7	2-Chloronaphthalene	4.8 U		94.3	84.1	89	94.3	87.2	92	14	57-103/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Compound	FA33273-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl Phenyl Ether	4.8 U		94.3	85.7	91	94.3	83.0	88	2	62-105/20
218-01-9	Chrysene	4.8 U		94.3	79.9	85	94.3	80.8	86	4	66-111/22
53-70-3	Dibenzo(a,h)anthracene	4.8 U		94.3	63.1	67	94.3	57.1	61*	44*	66-119/24
132-64-9	Dibenzofuran	4.8 U		94.3	81.5	86	94.3	82.3	87	6	61-106/21
91-94-1	3,3'-Dichlorobenzidine	4.8 U		94.3	54.4	58	94.3	56.5	60	19	46-117/29
84-66-2	Diethyl Phthalate	4.8 U		94.3	86.2	91	94.3	84.6	90	3	64-108/21
131-11-3	Dimethyl Phthalate	4.8 U		94.3	81.8	87	94.3	81.8	87	1	63-106/22
84-74-2	Di-n-butyl Phthalate	4.8 U		94.3	80.5	85	94.3	78.6	83	14	65-107/21
117-84-0	Di-n-octyl Phthalate	4.8 U		94.3	55.9	59*	94.3	54.6	58*	49*	62-118/24
121-14-2	2,4-Dinitrotoluene	4.8 U		94.3	59.5	63	94.3	60.8	64	32*	61-110/21
606-20-2	2,6-Dinitrotoluene	4.8 U		94.3	64.3	68	94.3	64.5	68	20	63-108/21
117-81-7	bis(2-Ethylhexyl)phthalate	4.8 U		94.3	65.3	69	94.3	68.9	73	25*	61-117/23
206-44-0	Fluoranthene	4.8 U		94.3	79.3	84	94.3	76.6	81	11	63-106/21
86-73-7	Fluorene	0.95	I	94.3	90.2	95	94.3	87.0	91	7	62-108/20
118-74-1	Hexachlorobenzene	4.8 U		94.3	71.4	76	94.3	67.3	71	21	63-108/22
87-68-3	Hexachlorobutadiene	4.8 U		94.3	69.0	73	94.3	74.8	79	4	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.8 U		94.3	40.9	43	94.3	44.8	47	34*	39-102/29
67-72-1	Hexachloroethane	4.8 U		94.3	70.9	75	94.3	73.1	77	12	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.8 U		94.3	55.3	59*	94.3	57.7	61*	42*	64-119/24
78-59-1	Isophorone	4.8 U		94.3	76.0	81	94.3	77.0	82	5	43-87/25
91-57-6	2-Methylnaphthalene	70.9		94.3	172	107*	94.3	186	122*	23	51-102/26
91-20-3	Naphthalene	404 [b]		94.3	512	339* [a]	94.3	568	399* [a]	64*	47-100/29
88-74-4	2-Nitroaniline	4.8 U		94.3	74.4	79	94.3	77.5	82	10	54-128/24
99-09-2	3-Nitroaniline	4.8 U		94.3	69.0	73	94.3	67.3	71	12	56-106/27
100-01-6	4-Nitroaniline	4.8 U		94.3	70.1	74	94.3	64.5	68	21	55-120/24
98-95-3	Nitrobenzene	4.8 U		94.3	79.8	85	94.3	79.1	84	10	50-104/28
621-64-7	N-Nitrosodi-n-propylamine	4.8 U		94.3	79.3	84	94.3	82.4	87	19	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.8 U		94.3	89.2	95	94.3	87.3	93	7	64-108/23
85-01-8	Phenanthrene	4.8 U		94.3	88.6	94	94.3	84.7	90	2	66-110/21
129-00-0	Pyrene	4.8 U		94.3	80.2	85	94.3	82.1	87	4	64-113/23
95-94-3	1,2,4,5-Tetrachlorobenzene	4.8 U		94.3	75.0	80	94.3	75.0	80	2	47-111/27

CAS No.	Surrogate Recoveries	MS	MSD	FA33273-1	FA33273-1	Limits
367-12-4	2-Fluorophenol	59%	58%	45%	40%	14-67%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33286-2, FA33286-3

CAS No.	Surrogate Recoveries	MS	MSD	FA33273-1	FA33273-1	Limits
4165-62-2	Phenol-d5	50%	47%	32%	27%	10-50%
118-79-6	2,4,6-Tribromophenol	70%	70%	89%	69%	33-118%
4165-60-0	Nitrobenzene-d5	80%	75%	60%	71%	42-108%
321-60-8	2-Fluorobiphenyl	82%	85%	75%	78%	40-106%
1718-51-0	Terphenyl-d14	81%	81%	89%	85%	39-121%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-DFTPP
Lab File ID: X045993.D
Instrument ID: GCMSX
Injection Date: 04/26/16
Injection Time: 13:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	52928	44.2		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	40123	33.5		Pass
70	Less than 2.0% of mass 69	411	0.34	(1.02) [a]	Pass
127	40.0 - 60.0% of mass 198	67312	56.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	119680	100.0		Pass
199	5.0 - 9.0% of mass 198	7449	6.22		Pass
275	10.0 - 30.0% of mass 198	22148	18.5		Pass
365	1.0 - 100.0% of mass 198	1993	1.67		Pass
441	Present, but less than mass 443	2918	2.44	(24.3) [b]	Pass
442	40.0 - 100.0% of mass 198	66344	55.4		Pass
443	17.0 - 23.0% of mass 442	12002	10.0	(18.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2038-IC2038	X045994.D	04/26/16	14:15	00:16	Initial cal 5
SX2038-IC2038	X045996.D	04/26/16	14:39	00:40	Initial cal 25
SX2038-IC2038	X045997.D	04/26/16	15:17	01:18	Initial cal 10
SX2038-ICC2038	X045998.D	04/26/16	15:41	01:42	Initial cal 50
SX2038-IC2038	X045999.D	04/26/16	16:05	02:06	Initial cal 60
SX2038-IC2038	X046000.D	04/26/16	16:29	02:30	Initial cal 75
SX2038-IC2038	X046001.D	04/26/16	16:53	02:54	Initial cal 100
SX2038-ICV2038	X046002.D	04/26/16	17:17	03:18	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046004.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 10:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	74174	48.9		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	53248	35.1		Pass
70	Less than 2.0% of mass 69	292	0.19	(0.55) [a]	Pass
127	40.0 - 60.0% of mass 198	87829	57.9		Pass
197	Less than 1.0% of mass 198	219	0.14		Pass
198	Base peak, 100% relative abundance	151664	100.0		Pass
199	5.0 - 9.0% of mass 198	9706	6.40		Pass
275	10.0 - 30.0% of mass 198	24472	16.1		Pass
365	1.0 - 100.0% of mass 198	2339	1.54		Pass
441	Present, but less than mass 443	4436	2.92	(31.5) [b]	Pass
442	40.0 - 100.0% of mass 198	73725	48.6		Pass
443	17.0 - 23.0% of mass 442	14065	9.27	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2039-CC2038	X046005.D	04/27/16	10:18	00:17	Continuing cal 50
SX2038-ICV2038	X046006.D	04/27/16	10:42	00:41	Initial cal verification 50
OP60181-BS	X046020.D	04/27/16	16:19	06:18	Blank Spike
OP60181-MB	X046021.D	04/27/16	16:43	06:42	Method Blank
FA33273-1	X046022.D	04/27/16	17:07	07:06	(used for QC only; not part of job FA33286)
OP60181-MS	X046023.D	04/27/16	17:31	07:30	Matrix Spike
OP60181-MSD	X046024.D	04/27/16	17:55	07:54	Matrix Spike Duplicate
OP60193-BS	X046025.D	04/27/16	18:19	08:18	Blank Spike
OP60193-MB	X046026.D	04/27/16	18:43	08:42	Method Blank
FA33308-5	X046027.D	04/27/16	19:07	09:06	(used for QC only; not part of job FA33286)
OP60193-MS	X046028.D	04/27/16	19:30	09:29	Matrix Spike
OP60193-MSD	X046029.D	04/27/16	19:54	09:53	Matrix Spike Duplicate
ZZZZZZ	X046030.D	04/27/16	20:18	10:17	(unrelated sample)
ZZZZZZ	X046031.D	04/27/16	20:41	10:40	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046032.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 21:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	70383	50.2		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	48659	34.7		Pass
70	Less than 2.0% of mass 69	199	0.14	(0.41) [a]	Pass
127	40.0 - 60.0% of mass 198	80149	57.2		Pass
197	Less than 1.0% of mass 198	344	0.25		Pass
198	Base peak, 100% relative abundance	140080	100.0		Pass
199	5.0 - 9.0% of mass 198	9645	6.89		Pass
275	10.0 - 30.0% of mass 198	22571	16.1		Pass
365	1.0 - 100.0% of mass 198	2185	1.56		Pass
441	Present, but less than mass 443	8449	6.03	(59.3) [b]	Pass
442	40.0 - 100.0% of mass 198	73091	52.2		Pass
443	17.0 - 23.0% of mass 442	14251	10.2	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2039-CC2038	X046033.D	04/27/16	21:20	00:16	Continuing cal 50
ZZZZZZ	X046034.D	04/27/16	21:44	00:40	(unrelated sample)
FA33273-1	X046035.D	04/27/16	22:08	01:04	(used for QC only; not part of job FA33286)
ZZZZZZ	X046038.D	04/27/16	23:19	02:15	(unrelated sample)
ZZZZZZ	X046039.D	04/27/16	23:43	02:39	(unrelated sample)
FA33140-1	X046040.D	04/28/16	00:07	03:03	(used for QC only; not part of job FA33286)
ZZZZZZ	X046043.D	04/28/16	01:18	04:14	(unrelated sample)
ZZZZZZ	X046044.D	04/28/16	01:41	04:37	(unrelated sample)
FA33286-2	X046045.D	04/28/16	02:05	05:01	DUP-1
FA33286-3	X046046.D	04/28/16	02:29	05:25	WELL-299 ATLANTIC
ZZZZZZ	X046047.D	04/28/16	02:52	05:48	(unrelated sample)
ZZZZZZ	X046048.D	04/28/16	03:16	06:12	(unrelated sample)
ZZZZZZ	X046049.D	04/28/16	03:40	06:36	(unrelated sample)
ZZZZZZ	X046050.D	04/28/16	04:04	07:00	(unrelated sample)
ZZZZZZ	X046051.D	04/28/16	04:27	07:23	(unrelated sample)
ZZZZZZ	X046052.D	04/28/16	04:51	07:47	(unrelated sample)
ZZZZZZ	X046053.D	04/28/16	05:15	08:11	(unrelated sample)
ZZZZZZ	X046054.D	04/28/16	05:38	08:34	(unrelated sample)
ZZZZZZ	X046055.D	04/28/16	06:02	08:58	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046032.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 21:04

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X046056.D	04/28/16	06:26	09:22	(unrelated sample)
ZZZZZZ	X046057.D	04/28/16	06:50	09:46	(unrelated sample)
SX2039-ECC2038	X046058.D	04/28/16	07:13	10:09	Ending cal 50

Semivolatile Internal Standard Area Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std: SX2039-CC2038 **Injection Date:** 04/27/16
Lab File ID: X046005.D **Injection Time:** 10:18
Instrument ID: GCMSX **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	284252	5.51	1023826	6.93	462831	8.98	654436	10.69	433855	13.87	358978	15.85
Check Std [b]	281546	5.51	1000860	6.93	454436	8.98	618723	10.69	412464	13.87	341688	15.85
Upper Limit [c]	563092	6.01	2001720	7.43	908872	9.48	1237446	11.19	824928	14.37	683376	16.35
Lower Limit [d]	140773	5.01	500430	6.43	227218	8.48	309362	10.19	206232	13.37	170844	15.35

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP60181-BS	303016	5.51	1143021	6.93	485397	8.98	673290	10.68	430932	13.87	345264	15.85
OP60181-MB	296115	5.51	1108118	6.93	500228	8.98	703935	10.68	440253	13.86	333934	15.84
FA33273-1	325193	5.51	1170451	6.93	552874	8.98	794519	10.68	505693	13.86	362730	15.84
OP60181-MS	304244	5.51	1112970	6.93	516179	8.98	727066	10.68	486581	13.86	352586	15.84
OP60181-MSD	315507	5.51	1136741	6.93	532461	8.98	735370	10.68	482051	13.86	360316	15.85
OP60193-BS	310853	5.51	1085204	6.93	473957	8.98	631474	10.68	400040	13.86	325496	15.84
OP60193-MB	358598	5.51	1288444	6.93	581641	8.98	778633	10.68	495079	13.86	358185	15.84
FA33308-5	328926	5.51	1185142	6.93	506172	8.98	742727	10.68	504234	13.86	374486	15.84
OP60193-MS	325969	5.51	1134030	6.93	498861	8.98	710942	10.68	486047	13.86	375451	15.84
OP60193-MSD	338873	5.51	1193443	6.93	532343	8.98	758866	10.68	502750	13.86	393237	15.85
ZZZZZZ	349650	5.51	1279118	6.93	560320	8.97	741365	10.68	458496	13.86	336390	15.83
ZZZZZZ	339251	5.51	1236477	6.93	547584	8.97	713334	10.68	446980	13.86	324510	15.84

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2038-ICC2038 X045998.D 04/26/16 15:41
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std: SX2039-CC2038 **Injection Date:** 04/27/16
Lab File ID: X046033.D **Injection Time:** 21:20
Instrument ID: GCMSX **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	284252	5.51	1023826	6.93	462831	8.98	654436	10.69	433855	13.87	358978	15.85
Check Std [b]	302353	5.51	1074182	6.93	487602	8.98	694903	10.68	455135	13.86	374396	15.84
Upper Limit [c]	604706	6.01	2148364	7.43	975204	9.48	1389806	11.18	910270	14.36	748792	16.34
Lower Limit [d]	151177	5.01	537091	6.43	243801	8.48	347452	10.18	227568	13.36	187198	15.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	406857	5.51	1231649	6.93	331617	8.98	571751	10.69	630276	13.86	513805	15.84
FA33273-1	314293	5.51	1070320	6.93	511448	8.98	733280	10.68	494207	13.86	376606	15.84
ZZZZZZ	317785	5.51	1142344	6.93	490389	8.97	644501	10.68	389883	13.86	314909	15.83
ZZZZZZ	327651	5.51	1179052	6.93	514863	8.97	687301	10.68	430011	13.86	343341	15.84
FA33140-1	305974	5.51	1108940	6.93	501413	8.97	647406	10.68	421187	13.86	327023	15.84
ZZZZZZ	381247	5.51	1359895	6.93	633659	8.97	861646	10.68	547747	13.86	423941	15.84
ZZZZZZ	332494	5.51	1225782	6.93	571033	8.98	779203	10.68	492325	13.86	366356	15.85
FA33286-2	296269	5.51	1091928	6.93	499886	8.97	673542	10.68	426932	13.86	319476	15.84
FA33286-3	321304	5.51	1185165	6.93	542414	8.97	750283	10.68	474300	13.86	354216	15.84
ZZZZZZ	308210	5.51	1147904	6.93	530932	8.97	720645	10.68	463745	13.86	346071	15.84
ZZZZZZ	302877	5.51	1118353	6.93	507011	8.97	687634	10.68	441357	13.86	326120	15.83
ZZZZZZ	305518	5.51	1122189	6.93	514857	8.97	698198	10.68	440287	13.86	327883	15.83
ZZZZZZ	318095	5.51	1188976	6.93	551122	8.97	744363	10.68	476514	13.86	358790	15.83
ZZZZZZ	314024	5.51	1162145	6.93	533054	8.97	727527	10.68	456761	13.86	343544	15.84
ZZZZZZ	320519	5.51	1179055	6.93	548010	8.97	757341	10.68	480483	13.86	356767	15.84
ZZZZZZ	302059	5.51	1124816	6.93	514315	8.97	701928	10.68	444318	13.86	325061	15.84
ZZZZZZ	319924	5.51	1161059	6.93	547471	8.97	740137	10.68	468091	13.85	349037	15.83
ZZZZZZ	309254	5.51	1132306	6.93	529994	8.97	709029	10.68	451598	13.85	330533	15.83
ZZZZZZ	304097	5.51	1134024	6.93	522936	8.97	707194	10.68	449421	13.86	319755	15.84
ZZZZZZ	321840	5.51	1167995	6.93	538424	8.97	741940	10.68	471329	13.86	353957	15.83
SX2039-ECC2038	271034	5.51	970050	6.93	440184	8.98	603150	10.68	394505	13.86	323208	15.83

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2038-ICC2038 X045998.D 04/26/16 15:41
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA33286-2	X046045.D	48	34	80	87	84	95
FA33286-3	X046046.D	33	23	66	64	63	81
OP60181-BS	X046020.D	43	30	88	75	81	87
OP60181-MB	X046021.D	48	37	65	76	73	83
OP60181-MS	X046023.D	59	50	70	80	82	81
OP60181-MSD	X046024.D	58	47	70	75	85	81

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	14-67%
S2 = Phenol-d5	10-50%
S3 = 2,4,6-Tribromophenol	33-118%
S4 = Nitrobenzene-d5	42-108%
S5 = 2-Fluorobiphenyl	40-106%
S6 = Terphenyl-d14	39-121%

Initial Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICC2038
Lab FileID: X045998.D

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Initial Calibration

Calibration Files
5 =x045994.D 10 =x045997.D 25 =x045996.D 50 =x045998.D
60 =x045999.D 75 =x046000.D 100 =x046001.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.792	0.809	0.795	0.795	0.788	0.781	0.715	0.782	3.94
3) N-nitrosodimethyl	0.814	0.880	0.826	0.827	0.821	0.804	0.733	0.815	5.36
4) Pyridine	1.966	2.117	2.049	1.987	2.034	2.003	1.786	1.992	5.18
5)P Benzaldehyde	1.371	1.342	1.325	1.209	1.129	1.021	0.904	1.186	14.94
6) Aniline	2.350	2.416	2.328	2.285	2.231	2.160	1.917	2.241	7.37
7)S 2-Fluorophenol	1.568	1.670	1.582	1.545	1.519	1.477	1.285	1.521	7.90
8)P bis(2-Chloroethyl	1.444	1.552	1.474	1.443	1.411	1.384	1.206	1.416	7.56
9)S Phenol-d5	1.714	1.789	1.684	1.577	1.546	1.469	1.275	1.579	10.94
10)P Phenol	2.033	2.092	1.986	1.735	1.677	1.628	1.411	1.795	13.92
11)P 2-Chlorophenol	1.564	1.677	1.585	1.538	1.540	1.515	1.331	1.536	6.80
12) 1,3-Dichlorobenze	1.677	1.765	1.652	1.606	1.607	1.561	1.371	1.606	7.61
13) 1,4-Dichlorobenze	1.657	1.721	1.647	1.574	1.578	1.529	1.306	1.573	8.52
14) 1,2-Dichlorobenze	1.561	1.609	1.526	1.490	1.478	1.425	1.254	1.478	7.79
15) Benzyl alcohol	0.959	1.040	0.996	0.969	0.970	0.949	0.851	0.962	5.97
16)P bis(2-chloroisopr	2.577	2.713	2.520	2.398	2.314	2.229	1.864	2.373	11.70
17)P 2-Methylphenol	1.331	1.368	1.313	1.267	1.249	1.204	1.041	1.253	8.64
18)P Acetophenone	1.930	1.902	1.777	1.745	1.730	1.697	1.614	1.771	6.33
19)P Hexachloroethane	0.611	0.648	0.604	0.588	0.572	0.557	0.480	0.580	9.10
20)P N-Nitroso-di-n-pr	0.776	0.823	0.766	0.706	0.685	0.652	0.549	0.708	12.90
21)P 3&4-Methylphenol	1.369	1.428	1.363	1.277	1.262	1.219	1.044	1.280	9.91
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.328	0.340	0.337	0.327	0.334	0.320	0.284	0.324	5.88
24)P Nitrobenzene	0.334	0.355	0.344	0.327	0.330	0.318	0.277	0.326	7.67
25)P Isophorone	0.657	0.657	0.641	0.623	0.622	0.605	0.531	0.620	7.00
26)P 2-Nitrophenol	0.163	0.186	0.194	0.202	0.213	0.210	0.192	0.194	8.75
27)P 2,4-Dimethylpheno	0.334	0.337	0.325	0.309	0.314	0.301	0.266	0.312	7.84
28) O,O,O-Triethylpho	0.149	0.136	0.137	0.132	0.139	0.130	0.129	0.136	5.08
29)P bis(2-Chloroethox	0.449	0.462	0.434	0.438	0.434	0.408	0.370	0.428	7.05
30) Benzoic Acid	0.097	0.159	0.185	0.212	0.232	0.233	0.218	0.191	25.82
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9943									
Response Ratio = 0.00000 + 0.21564 *A + 0.00322 *A^2									
31)P 2,4-Dichloropheno	0.302	0.293	0.288	0.282	0.286	0.272	0.247	0.281	6.28
32) 1,2,4-Trichlorobe	0.305	0.296	0.282	0.278	0.284	0.275	0.244	0.281	6.88
33) alpha-Terpineol								0.000	-1.00
34)P Naphthalene	1.092	1.112	1.047	0.982	0.982	0.925	0.786	0.990	11.26
35)P 4-Chloroaniline	0.478	0.478	0.449	0.422	0.426	0.403	0.347	0.429	10.75
36) 2,6-Dichloropheno	0.284	0.290	0.276	0.262	0.266	0.260	0.223	0.266	8.29
37)P Hexachlorobutadie	0.128	0.126	0.121	0.123	0.127	0.123	0.110	0.122	4.99
38)P Caprolactam	0.101	0.105	0.112	0.109	0.114	0.113	0.112	0.109	4.19
39)P 4-Chloro-3-methyl	0.251	0.274	0.267	0.260	0.265	0.254	0.227	0.257	5.92
40)P 2-Methylnaphthale	0.701	0.727	0.689	0.662	0.663	0.636	0.553	0.662	8.50
41) 1-Methylnaphthale	0.660	0.667	0.641	0.613	0.611	0.588	0.510	0.613	8.74
42)P 1,2,4,5-Tetrachlo	0.238	0.244	0.228	0.229	0.236	0.227	0.205	0.229	5.37

Initial Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICC2038
Lab FileID: X045998.D

```
43) I   Acenaphthene-d10      ----------------ISTD---------------------
44)P Hexachlorocyclope 0.213 0.240 0.268 0.275 0.300 0.309 0.286 0.270  12.48
45)P 2,4,6-Trichloroph 0.333 0.360 0.365 0.359 0.370 0.376 0.341 0.358   4.34
46)P 2,4,5-Trichloroph 0.346 0.373 0.379 0.365 0.388 0.394 0.359 0.372   4.46
47)S 2-Fluorobiphenyl  1.402 1.383 1.368 1.278 1.287 1.285 1.139 1.306   6.89
48)P 1,1'-Biphenyl     1.754 1.676 1.594 1.407 1.407 1.378 1.263 1.497  11.98
49)P 2-Chloronaphthale 1.248 1.270 1.198 1.081 1.073 1.064 0.898 1.119  11.59
50)P 2-Nitroaniline    0.272 0.328 0.356 0.347 0.343 0.349 0.315 0.330   8.81
51)  p-Dinitrobenzene  0.117 0.161 0.179 0.186 0.201 0.204 0.187 0.176  16.83
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9953
              Response Ratio = 0.00000 + 0.19810 *A + -0.00258 *A^2

52)P Acenaphthylene    2.026 2.112 2.093 1.935 1.935 1.931 1.692 1.960   7.18
53)P Dimethylphthalate 1.296 1.302 1.284 1.234 1.232 1.254 1.090 1.242   5.87
54)  m-Dinitrobenzene  0.141 0.167 0.183 0.199 0.204 0.213 0.194 0.186  13.32
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9957
              Response Ratio = 0.00000 + 0.20730 *A + -0.00352 *A^2

55)P 2,6-Dinitrotoluen 0.223 0.263 0.282 0.276 0.296 0.303 0.279 0.275   9.65
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9961
              Response Ratio = 0.00000 + 0.29907 *A + -0.00595 *A^2

56)  o-Dinitrobenzene  0.192 0.197 0.201 0.199 0.205 0.203 0.182 0.197   4.08
57)P Acenaphthene      1.235 1.285 1.210 1.147 1.140 1.147 1.010 1.168   7.53
58)P 3-Nitroaniline    0.369 0.397 0.393 0.389 0.395 0.394 0.369 0.387   3.13
59)P 2,4-Dinitrophenol       0.019 0.050 0.086 0.105 0.122 0.132 0.086  50.72
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 0.04762 *A + 0.03513 *A^2

60)P Dibenzofuran      1.675 1.696 1.624 1.510 1.521 1.535 1.343 1.558   7.75
61)P 2,4-Dinitrotoluen 0.253 0.323 0.340 0.364 0.373 0.392 0.357 0.343  13.25
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9958
              Response Ratio = 0.00000 + 0.37978 *A + -0.00584 *A^2

62)P 4-Nitrophenol     0.110 0.135 0.145 0.140 0.142 0.144 0.131 0.135   8.92
63)  2,3,5,6-Tetrachlo 0.167 0.211 0.228 0.241 0.249 0.261 0.243 0.229  13.80
64)P 2,3,4,6-Tetrachlo 0.193 0.225 0.235 0.245 0.247 0.258 0.240 0.235   8.96
65)P Fluorene          1.303 1.332 1.285 1.179 1.184 1.168 1.012 1.209   9.04
66)P 4-Chlorophenyl-ph 0.504 0.522 0.511 0.496 0.499 0.503 0.455 0.498   4.23
67)P Diethylphthalate  1.263 1.327 1.303 1.214 1.214 1.217 1.073 1.230   6.72
68)  Thionazin         0.283 0.280 0.284 0.255 0.255 0.253 0.236 0.264   7.04
69)P 4-Nitroaniline    0.321 0.369 0.364 0.354 0.363 0.370 0.334 0.354   5.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9973
              Response Ratio = 0.00000 + 0.39325 *A + -0.02137 *A^2


70) I   Phenanthrene-d10      ----------------ISTD---------------------
71)P 4,6-Dinitro-2-met 0.027 0.049 0.081 0.099 0.114 0.122 0.118 0.087  42.30
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 0.08834 *A + 0.01335 *A^2

72)P n-Nitrosodiphenyl 0.625 0.664 0.631 0.563 0.588 0.571 0.499 0.591   9.21
73)  Diphenylamine     0.750 0.797 0.757 0.675 0.705 0.685 0.599 0.710   9.21
74)  1,2-Diphenylhydra 0.871 0.888 0.864 0.770 0.834 0.812 0.679 0.817   8.89
75)S 2,4,6-Tribromophe 0.061 0.070 0.073 0.079 0.083 0.087 0.079 0.076  11.45
76)  Sulfotep          0.148 0.143 0.143 0.126 0.130 0.125 0.112 0.133   9.66
77)  Phorate           0.595 0.589 0.577 0.502 0.498 0.469 0.418 0.521  12.99
78)P 4-Bromophenyl-phe 0.181 0.187 0.181 0.175 0.177 0.182 0.153 0.176   6.15
79)P Hexachlorobenzene 0.164 0.169 0.176 0.173 0.182 0.185 0.169 0.174   4.28
```

Initial Calibration Summary

Job Number: FA33286 **Sample:** SX2038-ICC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X045998.D
Project: Atlantic Refuse Dump; NC

```
 80)  Dimethoate        0.363 0.381 0.401 0.360 0.368 0.364 0.346 0.369   4.76
 81)  Simazine          0.081 0.085 0.085 0.080 0.081 0.082 0.074 0.081   4.62
 82)P Atrazine          0.198 0.199 0.201 0.189 0.193 0.194 0.187 0.194   2.66
 83)P Pentachlorophenol       0.030 0.060 0.080 0.089 0.094 0.095 0.075  34.10
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9933
               Response Ratio = 0.00000 + 0.06668 *A + 0.01226 *A^2

 84)P Phenanthrene      1.204 1.235 1.195 1.085 1.089 1.081 0.926 1.116   9.49
 85)P Anthracene        1.186 1.246 1.200 1.086 1.110 1.071 0.924 1.118   9.57
 86)  Disulfoton        0.468 0.469 0.471 0.420 0.421 0.482 0.435 0.452   5.76
 87)P Carbazole         1.207 1.246 1.215 1.106 1.117 1.086 0.951 1.133   8.92
 88)  Methyl Parathion  0.185 0.225 0.284 0.283 0.300 0.300 0.291 0.267  16.60
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
               Response Ratio = 0.00000 + 0.28835 *A + 0.00243 *A^2

 89)P Di-n-butylphthala 1.382 1.498 1.518 1.428 1.447 1.422 1.233 1.418   6.62
 90)  Ethyl Parathion   0.102 0.125 0.150 0.159 0.167 0.169 0.163 0.148  17.14
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.15991 *A + 0.00215 *A^2

 91)P Fluoranthene      1.082 1.108 1.128 1.056 1.081 1.082 0.943 1.069   5.60

 92) I   Chrysene-d12          ----------------ISTD---------------------
 93)  Benzidine         0.888 1.014 1.048 0.939 0.910 0.838 0.639 0.897  15.01
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9972
               Response Ratio = 0.00000 + 1.25532 *A + -0.24070 *A^2

 94)P Pyrene            1.641 1.764 1.761 1.609 1.667 1.639 1.459 1.648   6.25
 95)S Terphenyl-d14     0.889 0.946 0.945 0.908 0.936 0.932 0.848 0.915   3.94
 96)  Famphur           0.497 0.525 0.589 0.557 0.580 0.584 0.582 0.559   6.34
 97)P Butylbenzylphthal 0.855 0.914 0.987 0.935 0.969 0.960 0.870 0.927   5.39
 98)P 3,3'-Dichlorobenz 0.370 0.401 0.437 0.421 0.439 0.436 0.393 0.414   6.43
 99)P Benzo[a]anthracen 1.215 1.236 1.295 1.230 1.296 1.318 1.194 1.255   3.81
100)P Chrysene          1.155 1.237 1.215 1.156 1.212 1.199 1.089 1.180   4.30
101)P bis(2-Ethylhexyl) 0.993 1.045 1.152 1.122 1.158 1.163 1.049 1.097   6.19

102) I   Perylene-d12         ----------------ISTD---------------------
103)P Di-n-octylphthala 1.939 2.018 2.291 2.282 2.377 2.317 2.145 2.196   7.53
104)P Benzo[b]fluoranth 1.164 1.199 1.288 1.187 1.223 1.218 1.144 1.203   3.88
105)P Benzo[k]fluoranth 1.117 1.256 1.226 1.191 1.249 1.194 1.024 1.179   7.04
106)P Benzo[a]pyrene    1.090 1.169 1.179 1.131 1.201 1.169 1.053 1.142   4.67
107)P Indeno[1,2,3-cd]p 0.791 0.841 0.897 0.925 0.956 0.999 0.941 0.907   7.83
108)P Dibenz[a,h]anthra 0.861 0.929 0.965 0.954 1.001 0.995 0.926 0.947   5.04
109)P Benzo[g,h,i]peryl 0.943 1.051 1.036 1.016 1.066 1.049 0.978 1.020   4.36
 ------------------------------------------------------------------------------
 (#) = Out of Range

           8270d0426.m        Wed Apr 27 11:11:20 2016
```

7.7.1

7

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046002.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2038\x046002.D          Vial: 9
Acq On    : 26 Apr 2016   5:17 pm                   Operator: marthav
Sample    : icv2038-50                              Inst    : MSBNA05
Misc      : op60029,sx2038,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	113	0.00	5.51
2		1,4-Dioxane	50.000	47.829	4.3	106	0.01	2.40
3		N-nitrosodimethylamine	50.000	51.378	-2.8	114	0.00	2.77
4		Pyridine		----------NA----------				
5	P	Benzaldehyde	50.000	47.316	5.4	105	0.00	5.05
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	48.660	2.7	108	0.00	5.28
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	48.333	3.3	113	0.00	5.23
11	P	2-Chlorophenol	50.000	48.968	2.1	110	0.00	5.32
12		1,3-Dichlorobenzene	50.000	49.196	1.6	111	0.00	5.47
13		1,4-Dichlorobenzene	50.000	49.218	1.6	111	0.00	5.53
14		1,2-Dichlorobenzene	50.000	48.902	2.2	109	0.00	5.73
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	49.783	0.4	111	0.00	5.88
17	P	2-Methylphenol	50.000	45.755	8.5	102	0.00	5.87
18	P	Acetophenone	50.000	44.509	11.0	102	0.00	5.99
19	P	Hexachloroethane	50.000	47.467	5.1	106	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	50.000	44.032	11.9	100	0.00	6.03
21	P	3&4-Methylphenol	100.000	86.000	14.0	112	0.00	6.04
22	I	Naphthalene-d8	40.000	40.000	0.0	105	0.00	6.93
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	50.160	-0.3	105	0.00	6.17
25	P	Isophorone	50.000	47.061	5.9	98	0.00	6.44
26	P	2-Nitrophenol	50.000	53.655	-7.3	109	0.00	6.53
27	P	2,4-Dimethylphenol	50.000	44.918	10.2	96	0.00	6.62
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan	50.000	45.561	8.9	94	0.00	6.72
		----------	Amount	Calc.	%Drift	----------		
30		Benzoic Acid	100.000	99.509	0.5	104	0.06	6.80
		----------	Amount	Calc.	%Drift	----------		
31	P	2,4-Dichlorophenol	50.000	48.016	4.0	101	0.00	6.81
32		1,2,4-Trichlorobenzene	50.000	48.810	2.4	104	0.00	6.90
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	50.000	48.566	2.9	103	0.00	6.96
35	P	4-Chloroaniline		----------NA----------				
36		2,6-Dichlorophenol	50.000	48.177	3.6	103	0.00	7.07
37	P	Hexachlorobutadiene	50.000	49.769	0.5	104	0.00	7.19

Initial Calibration Verification

Job Number: FA33286 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	50.000	44.235	11.5	93	0.04	7.44
39	P	4-Chloro-3-methylphenol	50.000	45.824	8.4	95	0.00	7.65
40	P	2-Methylnaphthalene		----------NA----------				
41		1-Methylnaphthalene	50.000	48.940	2.1	103	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	50.000	46.506	7.0	98	0.00	8.00
43	I	Acenaphthene-d10	40.000	40.000	0.0	103	0.00	8.98
44	P	Hexachlorocyclopentadiene	50.000	53.850	-7.7	109	0.00	8.03
45	P	2,4,6-Trichlorophenol	50.000	49.430	1.1	101	0.00	8.13
46	P	2,4,5-Trichlorophenol	50.000	49.548	0.9	104	0.00	8.18
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl	50.000	45.398	9.2	99	0.00	8.31
49	P	2-Chloronaphthalene	50.000	48.151	3.7	102	0.00	8.31
50	P	2-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
52	P	Acenaphthylene	50.000	48.350	3.3	101	0.00	8.80
53	P	Dimethylphthalate	50.000	49.118	1.8	101	0.00	8.75
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene		----------NA----------				
55	P	2,6-Dinitrotoluene	50.000	42.903	14.2	93	0.00	8.82
		----------	Amount	Calc.	%Drift		----------	
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene	50.000	48.945	2.1	102	0.00	9.02
58	P	3-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	100.000	84.363	15.6	82	0.00	9.09
		----------	Amount	Calc.	%Drift		----------	
60	P	Dibenzofuran		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	46.930	6.1	99	0.00	9.27
		----------	Amount	Calc.	%Drift		----------	
62	P	4-Nitrophenol	100.000	98.003	2.0	107	0.00	9.21
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol	50.000	44.523	11.0	87	0.00	9.41
65	P	Fluorene	50.000	46.978	6.0	99	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	50.000	47.305	5.4	98	0.00	9.63
67	P	Diethylphthalate	50.000	46.941	6.1	98	0.00	9.59
68		Thionazin		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
70	I	Phenanthrene-d10	40.000	40.000	0.0	93	0.00	10.69
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	100.000	100.311	-0.3	96	0.00	9.74
		----------	Amount	Calc.	%Drift		----------	

Initial Calibration Verification

Job Number: FA33286 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	50.000	48.141	3.7	79	0.00	9.78
73		Diphenylamine	50.000	40.118	19.8	79	0.00	9.78
74		1,2-Diphenylhydrazine	50.000	49.744	0.5	98	0.00	9.81
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
78	P	4-Bromophenyl-phenylether	50.000	52.461	-4.9	99	0.00	10.19
79	P	Hexachlorobenzene	50.000	48.392	3.2	90	0.00	10.34
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine	50.000	47.223	5.6	91	0.00	10.47
		----------	Amount	Calc.	%Drift	----------		
83	P	Pentachlorophenol	100.000	95.255	4.7	89	0.00	10.56
		----------	Amount	Calc.	%Drift	----------		
84	P	Phenanthrene	50.000	49.488	1.0	95	0.00	10.72
85	P	Anthracene	50.000	49.402	1.2	95	0.00	10.76
86		Disulfoton		----------NA----------				
87	P	Carbazole		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
88		Methyl Parathion		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
89	P	Di-n-butylphthalate	50.000	51.142	-2.3	95	0.00	11.51
		----------	Amount	Calc.	%Drift	----------		
90		Ethyl Parathion		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
91	P	Fluoranthene	50.000	47.692	4.6	90	0.00	12.11
92	I	Chrysene-d12	40.000	40.000	0.0	91	0.00	13.87
		----------	Amount	Calc.	%Drift	----------		
93		Benzidine		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
94	P	Pyrene	50.000	48.829	2.3	91	0.00	12.37
95	S	Terphenyl-d14		----------NA----------				
96		Famphur		----------NA----------				
97	P	Butylbenzylphthalate	50.000	48.550	2.9	88	0.00	13.27
98	P	3,3'-Dichlorobenzidine		----------NA----------				
99	P	Benzo[a]anthracene	50.000	48.058	3.9	90	0.00	13.85
100	P	Chrysene	50.000	48.919	2.2	91	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	50.000	49.655	0.7	89	-0.01	14.09
102	I	Perylene-d12	40.000	40.000	0.0	86	-0.01	15.85
103	P	Di-n-octylphthalate	50.000	50.421	-0.8	84	-0.01	14.96
104	P	Benzo[b]fluoranthene	50.000	49.322	1.4	86	0.00	15.34
105	P	Benzo[k]fluoranthene	50.000	51.927	-3.9	89	0.00	15.38
106	P	Benzo[a]pyrene	50.000	51.525	-3.0	90	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	50.000	52.965	-5.9	89	0.00	17.19
108	P	Dibenz[a,h]anthracene	50.000	50.892	-1.8	87	0.00	17.23
109	P	Benzo[g,h,i]perylene	50.000	52.673	-5.3	91	0.00	17.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.2

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Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046002.D

```
x045998.D  8270d0426.m       Wed Apr 27 11:05:08 2016
```

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046005.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2039\x046005.D          Vial: 2
Acq On    : 27 Apr 2016  10:18 am                   Operator: marthav
Sample    : cc2038-50                               Inst    : MSBNA05
Misc      : op60029,sx2039,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	5.51
2		1,4-Dioxane	0.782	0.799	-2.2	100	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.845	-3.7	101	0.00	2.76
4		Pyridine	1.992	2.058	-3.3	103	0.00	2.75
5	P	Benzaldehyde	1.186	1.133	4.5	93	0.00	5.05
6		Aniline	2.241	2.271	-1.3	98	0.00	5.21
7	S	2-Fluorophenol	1.521	1.563	-2.8	100	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.422	-0.4	98	0.00	5.28
9	S	Phenol-d5	1.579	1.565	0.9	98	0.00	5.22
10	P	Phenol	1.795	1.894	-5.5	108	0.00	5.23
11	P	2-Chlorophenol	1.536	1.561	-1.6	101	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.645	-2.4	101	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.608	-2.2	101	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.506	-1.9	100	0.00	5.73
15		Benzyl alcohol	0.962	0.970	-0.8	99	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.406	-1.4	99	0.00	5.88
17	P	2-Methylphenol	1.253	1.278	-2.0	100	0.00	5.87
18	P	Acetophenone	1.771	1.749	1.2	99	0.00	5.99
19	P	Hexachloroethane	0.580	0.587	-1.2	99	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	0.708	0.692	2.3	97	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.301	-1.6	101	0.00	6.04
22	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.326	-0.6	97	0.00	6.15
24	P	Nitrobenzene	0.326	0.326	0.0	97	0.00	6.17
25	P	Isophorone	0.620	0.620	0.0	97	0.00	6.44
26	P	2-Nitrophenol	0.194	0.205	-5.7	99	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.317	-1.6	100	0.00	6.62
28		O,O,O-Triethylphosphoroth	0.136	0.138	-1.5	102	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.446	-4.2	100	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	47.367	5.3	96	0.02	6.75
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.289	-2.8	100	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.285	-1.4	100	0.00	6.90
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	1.003	-1.3	100	0.00	6.96
35	P	4-Chloroaniline	0.429	0.434	-1.2	101	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.270	-1.5	101	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.126	-3.3	100	0.00	7.19

7.7.3

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Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046005.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.111	-1.8	100	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.262	-1.9	98	0.00	7.66
40	P	2-Methylnaphthalene	0.662	0.681	-2.9	100	0.00	7.75
41		1-Methylnaphthalene	0.613	0.621	-1.3	99	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.234	-2.2	100	0.00	8.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	98	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.286	-5.9	102	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.363	-1.4	99	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.380	-2.2	102	0.00	8.18
47	S	2-Fluorobiphenyl	1.306	1.287	1.5	99	0.00	8.22
48	P	1,1'-Biphenyl	1.497	1.477	1.3	103	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.109	0.9	101	0.00	8.31
50	P	2-Nitroaniline	0.330	0.342	-3.6	97	0.00	8.49
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene	50.000	47.508	5.0	98	0.00	8.62
		----------	AvgRF	CCRF	%Dev		----------	
52	P	Acenaphthylene	1.960	1.988	-1.4	101	0.00	8.80
53	P	Dimethylphthalate	1.242	1.248	-0.5	99	0.00	8.76
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	49.580	0.8	99	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	50.135	-0.3	104	0.00	8.82
		----------	AvgRF	CCRF	%Dev		----------	
56		o-Dinitrobenzene	0.197	0.195	1.0	96	0.00	8.89
57	P	Acenaphthene	1.168	1.163	0.4	99	0.00	9.02
58	P	3-Nitroaniline	0.387	0.398	-2.8	100	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	50.000	46.682	6.6	94	0.00	9.08
		----------	AvgRF	CCRF	%Dev		----------	
60	P	Dibenzofuran	1.558	1.555	0.2	101	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	49.639	0.7	100	0.00	9.27
		----------	AvgRF	CCRF	%Dev		----------	
62	P	4-Nitrophenol	0.135	0.135	0.0	95	0.00	9.21
63		2,3,5,6-Tetrachlorophenol	0.229	0.234	-2.2	95	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.237	-0.9	95	0.00	9.41
65	P	Fluorene	1.209	1.209	0.0	101	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.506	-1.6	100	0.00	9.63
67	P	Diethylphthalate	1.230	1.236	-0.5	100	0.00	9.59
68		Thionazin	0.264	0.263	0.4	101	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	49.202	1.6	100	0.00	9.69
		----------	AvgRF	CCRF	%Dev		----------	
70	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.00	10.69
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	50.000	48.891	2.2	97	0.00	9.74
		----------	AvgRF	CCRF	%Dev		----------	

7.7.3

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Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046005.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.605	-2.4	102	0.00	9.78
73		Diphenylamine	0.710	0.726	-2.3	102	0.00	9.78
74		1,2-Diphenylhydrazine	0.817	0.791	3.2	97	0.00	9.81
75	S	2,4,6-Tribromophenol	0.076	0.083	-9.2	99	0.00	9.91
76		Sulfotep	0.133	0.132	0.8	99	0.00	10.11
77		Phorate	0.521	0.524	-0.6	99	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.184	-4.5	100	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.183	-5.2	100	0.00	10.34
80		Dimethoate	0.369	0.378	-2.4	99	0.00	10.37
81		Simazine	0.081	0.085	-4.9	101	0.00	10.42
82	P	Atrazine	0.194	0.199	-2.6	100	0.00	10.47
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	49.492	1.0	95	0.00	10.57
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.153	-3.3	100	0.00	10.72
85	P	Anthracene	1.118	1.148	-2.7	100	0.00	10.76
86		Disulfoton	0.452	0.441	2.4	99	0.00	10.79
87	P	Carbazole	1.133	1.170	-3.3	100	0.00	10.98
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	51.969	-3.9	101	0.00	11.23
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.484	-4.7	98	0.00	11.51
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	51.421	-2.8	99	0.00	11.71
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.109	-3.7	99	0.00	12.12
92	I	Chrysene-d12	1.000	1.000	0.0	95	0.00	13.87
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	47.193	5.6	93	0.00	12.31
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.693	-2.7	100	0.00	12.37
95	S	Terphenyl-d14	0.915	0.945	-3.3	99	0.00	12.62
96		Famphur	0.559	0.590	-5.5	101	0.00	13.21
97	P	Butylbenzylphthalate	0.927	0.970	-4.6	99	0.00	13.27
98	P	3,3'-Dichlorobenzidine	0.414	0.443	-7.0	100	0.00	13.87
99	P	Benzo[a]anthracene	1.255	1.309	-4.3	101	0.00	13.85
100	P	Chrysene	1.180	1.208	-2.4	99	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.144	-4.3	97	0.00	14.09
102	I	Perylene-d12	1.000	1.000	0.0	95	-0.01	15.85
103	P	Di-n-octylphthalate	2.196	2.380	-8.4	99	0.00	14.96
104	P	Benzo[b]fluoranthene	1.203	1.289	-7.1	103	0.00	15.34
105	P	Benzo[k]fluoranthene	1.179	1.180	-0.1	94	0.00	15.37
106	P	Benzo[a]pyrene	1.142	1.176	-3.0	99	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.950	-4.7	98	0.00	17.19
108	P	Dibenz[a,h]anthracene	0.947	0.989	-4.4	99	0.00	17.23
109	P	Benzo[g,h,i]perylene	1.020	1.073	-5.2	100	0.00	17.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.3

7

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046005.D

```
x045998.D  8270d0426.m       Thu Apr 28 10:47:04 2016
```

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2039\x046006.D          Vial: 3
Acq On    : 27 Apr 2016  10:42 am                   Operator: marthav
Sample    : icv2038-50                              Inst    : MSBNA05
Misc      : op60029,sx2038,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	114	0.00	5.51
2		1,4-Dioxane		NA				
3		N-nitrosodimethylamine		NA				
4		Pyridine	50.000	45.099	9.8	103	0.00	2.75
5	P	Benzaldehyde		NA				
6		Aniline	50.000	45.054	9.9	101	0.00	5.21
7	S	2-Fluorophenol		NA				
8	P	bis(2-Chloroethyl)ether		NA				
9	S	Phenol-d5		NA				
10	P	Phenol		NA				
11	P	2-Chlorophenol		NA				
12		1,3-Dichlorobenzene		NA				
13		1,4-Dichlorobenzene		NA				
14		1,2-Dichlorobenzene		NA				
15		Benzyl alcohol	50.000	47.471	5.1	107	0.00	5.70
16	P	bis(2-chloroisopropyl)eth		NA				
17	P	2-Methylphenol		NA				
18	P	Acetophenone		NA				
19	P	Hexachloroethane		NA				
20	P	N-Nitroso-di-n-propylamin		NA				
21	P	3&4-Methylphenol		NA				
22	I	Naphthalene-d8	40.000	40.000	0.0	114	0.00	6.93
23	S	Nitrobenzene-d5		NA				
24	P	Nitrobenzene		NA				
25	P	Isophorone		NA				
26	P	2-Nitrophenol		NA				
27	P	2,4-Dimethylphenol		NA				
28		O,O,O-Triethylphosphoroth	50.000	48.546	2.9	113	0.00	6.74
29	P	bis(2-Chloroethoxy)methan		NA				
		----------	Amount	Calc.	%Drift	----------		
30		Benzoic Acid		NA				
		----------	Amount	Calc.	%Drift	----------		
31	P	2,4-Dichlorophenol		NA				
32		1,2,4-Trichlorobenzene		NA				
33		alpha-Terpineol		NA				
34	P	Naphthalene		NA				
35	P	4-Chloroaniline	50.000	51.011	-2.0	118	0.00	7.06
36		2,6-Dichlorophenol		NA				
37	P	Hexachlorobutadiene		NA				

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

38	P	Caprolactam		----------NA----------				
39	P	4-Chloro-3-methylphenol		----------NA----------				
40	P	2-Methylnaphthalene	50.000	47.539	4.9	108	0.00	7.75
41		1-Methylnaphthalene		----------NA----------				
42	P	1,2,4,5-Tetrachlorobenzen		----------NA----------				
43	I	Acenaphthene-d10	40.000	40.000	0.0	112	0.00	8.98
44	P	Hexachlorocyclopentadiene		----------NA----------				
45	P	2,4,6-Trichlorophenol		----------NA----------				
46	P	2,4,5-Trichlorophenol		----------NA----------				
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl		----------NA----------				
49	P	2-Chloronaphthalene		----------NA----------				
50	P	2-Nitroaniline	50.000	53.316	-6.6	114	0.00	8.49
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
52	P	Acenaphthylene		----------NA----------				
53	P	Dimethylphthalate		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	45.296	9.4	104	0.00	8.75
55	P	2,6-Dinitrotoluene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene		----------NA----------				
58	P	3-Nitroaniline	50.000	50.344	-0.7	112	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
60	P	Dibenzofuran	50.000	48.790	2.4	113	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
62	P	4-Nitrophenol		----------NA----------				
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol		----------NA----------				
65	P	Fluorene		----------NA----------				
66	P	4-Chlorophenyl-phenylethe		----------NA----------				
67	P	Diethylphthalate		----------NA----------				
68		Thionazin	50.000	51.602	-3.2	120	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	49.802	0.4	116	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
70	I	Phenanthrene-d10	40.000	40.000	0.0	110	0.00	10.68
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	

7.7.4

7

Initial Calibration Verification

Job Number: FA33286 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046006.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	60.000	61.702	-2.8	119	0.00	9.77
73		Diphenylamine	50.000	51.418	-2.8	119	0.00	9.77
74		1,2-Diphenylhydrazine		----------NA----------				
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep	50.000	50.053	-0.1	115	0.00	10.11
77		Phorate	50.000	49.751	0.5	113	0.00	10.18
78	P	4-Bromophenyl-phenylether		----------NA----------				
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate	50.000	51.654	-3.3	116	0.00	10.37
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
83	P	Pentachlorophenol		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
86		Disulfoton	50.000	50.469	-0.9	119	0.00	10.79
87	P	Carbazole	50.000	50.314	-0.6	113	0.00	10.98
		---------- Amount	Calc.	%Drift	----------			
88		Methyl Parathion	50.000	48.463	3.1	109	0.00	11.22
		---------- Amount	Calc.	%Drift	----------			
89	P	Di-n-butylphthalate		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
90		Ethyl Parathion	50.000	48.737	2.5	109	0.00	11.71
		---------- Amount	Calc.	%Drift	----------			
91	P	Fluoranthene		----------NA----------				
92	I	Chrysene-d12	40.000	40.000	0.0	109	-0.01	13.86
		---------- Amount	Calc.	%Drift	----------			
93		Benzidine	50.000	64.196	-28.4#	129	0.00	12.31
		---------- Amount	Calc.	%Drift	----------			
94	P	Pyrene		----------NA----------				
95	S	Terphenyl-d14		----------NA----------				
96		Famphur	50.000	45.513	9.0	100	0.00	13.20
97	P	Butylbenzylphthalate		----------NA----------				
98	P	3,3'-Dichlorobenzidine	50.000	51.042	-2.1	110	0.00	13.87
99	P	Benzo[a]anthracene		----------NA----------				
100	P	Chrysene		----------NA----------				
101	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
102	I	Perylene-d12	40.000	40.000	0.0	106	-0.01	15.85
103	P	Di-n-octylphthalate		----------NA----------				
104	P	Benzo[b]fluoranthene		----------NA----------				
105	P	Benzo[k]fluoranthene		----------NA----------				
106	P	Benzo[a]pyrene		----------NA----------				
107	P	Indeno[1,2,3-cd]pyrene		----------NA----------				
108	P	Dibenz[a,h]anthracene		----------NA----------				
109	P	Benzo[g,h,i]perylene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.4

7

Initial Calibration Verification

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

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x045998.D  8270d0426.m       Thu Apr 28 12:03:34 2016
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Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046033.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2039\x046033.D Vial: 30
Acq On : 27 Apr 2016 9:20 pm Operator: marthav
Sample : cc2038-50 Inst : MSBNA05
Misc : op60029,sx2039,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	5.51
2		1,4-Dioxane	0.782	0.769	1.7	103	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.832	-2.1	107	0.00	2.76
4		Pyridine	1.992	1.962	1.5	105	0.00	2.75
5	P	Benzaldehyde	1.186	1.177	0.8	104	0.00	5.05
6		Aniline	2.241	2.230	0.5	104	0.00	5.21
7	S	2-Fluorophenol	1.521	1.533	-0.8	106	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.407	0.6	104	0.00	5.28
9	S	Phenol-d5	1.579	1.542	2.3	104	0.00	5.22
10	P	Phenol	1.795	1.855	-3.3	114	0.00	5.23
11	P	2-Chlorophenol	1.536	1.523	0.8	105	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.590	1.0	105	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.540	2.1	104	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.455	1.6	104	0.00	5.73
15		Benzyl alcohol	0.962	0.947	1.6	104	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.418	-1.9	107	0.00	5.88
17	P	2-Methylphenol	1.253	1.250	0.2	105	0.00	5.87
18	P	Acetophenone	1.771	1.723	2.7	105	0.00	5.99
19	P	Hexachloroethane	0.580	0.571	1.6	103	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	0.708	0.688	2.8	104	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.261	1.5	105	0.00	6.03
22	I	Naphthalene-d8	1.000	1.000	0.0	105	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.324	0.0	104	0.00	6.15
24	P	Nitrobenzene	0.326	0.326	0.0	104	0.00	6.17
25	P	Isophorone	0.620	0.620	0.0	104	0.00	6.44
26	P	2-Nitrophenol	0.194	0.206	-6.2	107	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.306	1.9	104	0.00	6.61
28		O,O,O-Triethylphosphoroth	0.136	0.130	4.4	103	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.412	3.7	99	0.00	6.72
			Amount	Calc.	%Drift			
30		Benzoic Acid	50.000	47.924	4.2	104	0.02	6.75
			AvgRF	CCRF	%Dev			
31	P	2,4-Dichlorophenol	0.281	0.273	2.8	101	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.275	2.1	104	0.00	6.89
33		alpha-Terpineol		NA				
34	P	Naphthalene	0.990	0.966	2.4	103	0.00	6.96
35	P	4-Chloroaniline	0.429	0.422	1.6	105	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.260	2.3	104	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.121	0.8	103	0.00	7.19

Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046033.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.111	-1.8	106	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.264	-2.7	106	0.00	7.65
40	P	2-Methylnaphthalene	0.662	0.665	-0.5	105	0.00	7.75
41		1-Methylnaphthalene	0.613	0.605	1.3	104	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.226	1.3	104	0.00	7.99
43	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.274	-1.5	105	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.358	0.0	105	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.370	0.5	107	0.00	8.17
47	S	2-Fluorobiphenyl	1.306	1.264	3.2	104	0.00	8.22
48	P	1,1'-Biphenyl	1.497	1.403	6.3	105	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.080	3.5	105	0.00	8.31
50	P	2-Nitroaniline	0.330	0.342	-3.6	104	0.00	8.48
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene	50.000	48.865	2.3	108	0.00	8.61
		----------	AvgRF	CCRF	%Dev		----------	
52	P	Acenaphthylene	1.960	1.910	2.6	104	0.00	8.80
53	P	Dimethylphthalate	1.242	1.211	2.5	103	0.00	8.75
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	48.899	2.2	105	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	49.426	1.1	110	0.00	8.82
		----------	AvgRF	CCRF	%Dev		----------	
56		o-Dinitrobenzene	0.197	0.202	-2.5	107	0.00	8.89
57	P	Acenaphthene	1.168	1.144	2.1	105	0.00	9.02
58	P	3-Nitroaniline	0.387	0.384	0.8	104	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	50.000	51.969	-3.9	118	0.00	9.09
		----------	AvgRF	CCRF	%Dev		----------	
60	P	Dibenzofuran	1.558	1.489	4.4	104	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	49.447	1.1	107	0.00	9.27
		----------	AvgRF	CCRF	%Dev		----------	
62	P	4-Nitrophenol	0.135	0.132	2.2	99	0.00	9.21
63		2,3,5,6-Tetrachlorophenol	0.229	0.231	-0.9	101	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.237	-0.9	102	0.00	9.41
65	P	Fluorene	1.209	1.178	2.6	105	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.501	-0.6	106	0.00	9.63
67	P	Diethylphthalate	1.230	1.211	1.5	105	0.00	9.59
68		Thionazin	0.264	0.259	1.9	107	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	49.946	0.1	109	0.00	9.69
		----------	AvgRF	CCRF	%Dev		----------	
70	I	Phenanthrene-d10	1.000	1.000	0.0	106	0.00	10.68
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	50.000	51.174	-2.3	115	0.00	9.74
		----------	AvgRF	CCRF	%Dev		----------	

7.7.5

7

Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046033.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.588	0.5	111	0.00	9.77
73		Diphenylamine	0.710	0.706	0.6	111	0.00	9.77
74		1,2-Diphenylhydrazine	0.817	0.775	5.1	107	0.00	9.81
75	S	2,4,6-Tribromophenol	0.076	0.079	-3.9	107	0.00	9.91
76		Sulfotep	0.133	0.129	3.0	108	0.00	10.11
77		Phorate	0.521	0.499	4.2	106	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.175	0.6	107	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.176	-1.1	108	0.00	10.34
80		Dimethoate	0.369	0.365	1.1	108	0.00	10.37
81		Simazine	0.081	0.081	0.0	108	0.00	10.41
82	P	Atrazine	0.194	0.188	3.1	106	0.00	10.46
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	51.211	-2.4	111	0.00	10.56
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.096	1.8	107	0.00	10.71
85	P	Anthracene	1.118	1.106	1.1	108	0.00	10.76
86		Disulfoton	0.452	0.427	5.5	108	0.00	10.79
87	P	Carbazole	1.133	1.110	2.0	107	0.00	10.97
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	50.324	-0.6	110	0.00	11.22
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.434	-1.1	107	0.00	11.51
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	51.597	-3.2	112	-0.01	11.70
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.065	0.4	107	0.00	12.11
92	I	Chrysene-d12	1.000	1.000	0.0	105	-0.01	13.86
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	46.476	7.0	101	0.00	12.30
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.619	1.8	106	0.00	12.37
95	S	Terphenyl-d14	0.915	0.895	2.2	103	-0.01	12.61
96		Famphur	0.559	0.560	-0.2	106	-0.01	13.20
97	P	Butylbenzylphthalate	0.927	0.923	0.4	104	-0.01	13.27
98	P	3,3'-Dichlorobenzidine	0.414	0.419	-1.2	104	-0.01	13.87
99	P	Benzo[a]anthracene	1.255	1.242	1.0	106	-0.01	13.84
100	P	Chrysene	1.180	1.178	0.2	107	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.105	-0.7	103	-0.02	14.08
102	I	Perylene-d12	1.000	1.000	0.0	104	-0.02	15.84
103	P	Di-n-octylphthalate	2.196	2.274	-3.6	104	-0.01	14.96
104	P	Benzo[b]fluoranthene	1.203	1.188	1.2	104	-0.01	15.33
105	P	Benzo[k]fluoranthene	1.179	1.224	-3.8	107	0.00	15.37
106	P	Benzo[a]pyrene	1.142	1.150	-0.7	106	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.917	-1.1	103	-0.01	17.18
108	P	Dibenz[a,h]anthracene	0.947	0.938	1.0	103	-0.01	17.22
109	P	Benzo[g,h,i]perylene	1.020	0.997	2.3	102	0.00	17.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046033.D

```
x045998.D  8270d0426.m       Thu Apr 28 10:47:06 2016
```

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-ECC2038
Lab FileID: X046058.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2039\x046058.D          Vial: 50
Acq On    : 28 Apr 2016   7:13 am                   Operator: marthav
Sample    : ecc2038-50                              Inst    : MSBNA05
Misc      : op60029,sx2039,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	5.51
2		1,4-Dioxane	0.782	0.772	1.3	93	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.859	-5.4	99	0.00	2.76
4		Pyridine	1.992	1.992	0.0	96	0.00	2.75
5	P	Benzaldehyde	1.186	1.102	7.1	87	0.00	5.05
6		Aniline	2.241	2.330	-4.0	97	0.00	5.20
7	S	2-Fluorophenol	1.521	1.580	-3.9	98	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.452	-2.5	96	0.00	5.28
9	S	Phenol-d5	1.579	1.607	-1.8	97	0.00	5.22
10	P	Phenol	1.795	1.931	-7.6	106	0.00	5.23
11	P	2-Chlorophenol	1.536	1.576	-2.6	98	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.649	-2.7	98	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.608	-2.2	97	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.507	-2.0	96	0.00	5.73
15		Benzyl alcohol	0.962	0.991	-3.0	98	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.514	-5.9	100	0.00	5.88
17	P	2-Methylphenol	1.253	1.297	-3.5	98	0.00	5.87
18	P	Acetophenone	1.771	1.777	-0.3	97	0.00	5.99
19	P	Hexachloroethane	0.580	0.585	-0.9	95	0.00	6.06
20	P	N-Nitroso-di-n-propylamin	0.708	0.734	-3.7	99	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.333	-4.1	100	0.00	6.03
22	I	Naphthalene-d8	1.000	1.000	0.0	95	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.340	-4.9	98	0.00	6.15
24	P	Nitrobenzene	0.326	0.335	-2.8	97	0.00	6.17
25	P	Isophorone	0.620	0.643	-3.7	98	0.00	6.43
26	P	2-Nitrophenol	0.194	0.212	-9.3	99	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.323	-3.5	99	0.00	6.61
28		O,O,O-Triethylphosphoroth	0.136	0.136	0.0	97	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.431	-0.7	93	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	52.142	-4.3	103	0.02	6.75
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.285	-1.4	96	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.284	-1.1	97	0.00	6.89
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	0.996	-0.6	96	0.00	6.96
35	P	4-Chloroaniline	0.429	0.439	-2.3	98	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.269	-1.1	97	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.122	0.0	94	0.00	7.18

Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046058.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.115	-5.5	100	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.267	-3.9	97	0.00	7.65
40	P	2-Methylnaphthalene	0.662	0.674	-1.8	96	0.00	7.75
41		1-Methylnaphthalene	0.613	0.624	-1.8	96	0.00	7.87
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.232	-1.3	96	0.00	7.99
43	I	Acenaphthene-d10	1.000	1.000	0.0	95	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.222	17.8	77	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.355	0.8	94	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.377	-1.3	98	0.00	8.17
47	S	2-Fluorobiphenyl	1.306	1.318	-0.9	98	0.00	8.21
48	P	1,1'-Biphenyl	1.497	1.476	1.4	100	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.116	0.3	98	0.00	8.30
50	P	2-Nitroaniline	0.330	0.368	-11.5	101	0.00	8.48
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene	50.000	51.281	-2.6	102	0.00	8.61
		----------	AvgRF	CCRF	%Dev		----------	
52	P	Acenaphthylene	1.960	1.958	0.1	96	0.00	8.79
53	P	Dimethylphthalate	1.242	1.262	-1.6	97	0.00	8.75
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	51.737	-3.5	100	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	50.579	-1.2	102	0.00	8.82
		----------	AvgRF	CCRF	%Dev		----------	
56		o-Dinitrobenzene	0.197	0.212	-7.6	101	0.00	8.89
57	P	Acenaphthene	1.168	1.164	0.3	96	0.00	9.01
58	P	3-Nitroaniline	0.387	0.412	-6.5	101	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	50.000	41.647	16.7	77	0.00	9.08
		----------	AvgRF	CCRF	%Dev		----------	
60	P	Dibenzofuran	1.558	1.559	-0.1	98	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	50.848	-1.7	99	0.00	9.27
		----------	AvgRF	CCRF	%Dev		----------	
62	P	4-Nitrophenol	0.135	0.139	-3.0	94	0.00	9.20
63		2,3,5,6-Tetrachlorophenol	0.229	0.242	-5.7	96	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.244	-3.8	95	0.00	9.41
65	P	Fluorene	1.209	1.237	-2.3	100	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.504	-1.2	97	0.00	9.63
67	P	Diethylphthalate	1.230	1.258	-2.3	99	0.00	9.59
68		Thionazin	0.264	0.264	0.0	99	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	50.831	-1.7	100	0.00	9.69
		----------	AvgRF	CCRF	%Dev		----------	
70	I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00	10.68
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	50.000	47.649	4.7	92	0.00	9.74
		----------	AvgRF	CCRF	%Dev		----------	

7.7.6

7

Continuing Calibration Summary

Job Number: FA33286 **Sample:** SX2039-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046058.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.617	-4.4	101	0.00	9.77
73		Diphenylamine	0.710	0.740	-4.2	101	0.00	9.77
74		1,2-Diphenylhydrazine	0.817	0.818	-0.1	98	0.00	9.80
75	S	2,4,6-Tribromophenol	0.076	0.083	-9.2	98	0.00	9.91
76		Sulfotep	0.133	0.135	-1.5	99	-0.01	10.11
77		Phorate	0.521	0.538	-3.3	99	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.187	-6.3	99	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.177	-1.7	94	0.00	10.34
80		Dimethoate	0.369	0.389	-5.4	100	0.00	10.37
81		Simazine	0.081	0.084	-3.7	98	0.00	10.41
82	P	Atrazine	0.194	0.196	-1.0	96	0.00	10.46
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	50.057	-0.1	94	0.00	10.56
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.150	-3.0	98	0.00	10.71
85	P	Anthracene	1.118	1.160	-3.8	98	0.00	10.76
86		Disulfoton	0.452	0.451	0.2	99	-0.01	10.79
87	P	Carbazole	1.133	1.180	-4.1	98	0.00	10.97
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	54.673	-9.3	104	-0.01	11.22
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.527	-7.7	99	-0.01	11.50
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	54.860	-9.7	103	-0.01	11.70
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.119	-4.7	98	-0.01	12.11
92	I	Chrysene-d12	1.000	1.000	0.0	91	-0.02	13.86
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	43.723	12.6	84	-0.01	12.30
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.712	-3.9	97	-0.01	12.36
95	S	Terphenyl-d14	0.915	0.969	-5.9	97	-0.02	12.60
96		Famphur	0.559	0.592	-5.9	97	-0.01	13.20
97	P	Butylbenzylphthalate	0.927	0.987	-6.5	96	-0.02	13.26
98	P	3,3'-Dichlorobenzidine	0.414	0.439	-6.0	95	-0.02	13.86
99	P	Benzo[a]anthracene	1.255	1.311	-4.5	97	-0.02	13.83
100	P	Chrysene	1.180	1.238	-4.9	97	-0.01	13.89
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.195	-8.9	97	-0.02	14.08
102	I	Perylene-d12	1.000	1.000	0.0	90	-0.02	15.83
103	P	Di-n-octylphthalate	2.196	2.442	-11.2	96	-0.02	14.95
104	P	Benzo[b]fluoranthene	1.203	1.318	-9.6	100	-0.01	15.33
105	P	Benzo[k]fluoranthene	1.179	1.189	-0.8	90	-0.01	15.36
106	P	Benzo[a]pyrene	1.142	1.197	-4.8	95	-0.01	15.76
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.989	-9.0	96	-0.02	17.18
108	P	Dibenz[a,h]anthracene	0.947	1.004	-6.0	95	-0.02	17.21
109	P	Benzo[g,h,i]perylene	1.020	1.097	-7.5	97	-0.01	17.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.6

7

Continuing Calibration Summary

Job Number: FA33286
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-ECC2038
Lab FileID: X046058.D

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x045998.D  8270d0426.m       Thu Apr 28 10:46:41 2016
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Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
Analyst: JL
Parameters: Hg

Date Analyzed: 04/26/16 Methods: EPA 245.1
Run ID: MA13112

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:55	MA13112-STD1	1		STD1
11:57	MA13112-STD2	1		STD2
11:58	MA13112-STD3	1		STD3
12:00	MA13112-STD4	1		STD4
12:01	MA13112-STD5	1		STD5
12:03	MA13112-STD6	1		STD6
12:05	MA13112-HSTD1	1		
12:07	MA13112-ICV1	1		
12:09	MA13112-ICB1	1		
12:11	MA13112-CRI1	1		
12:13	MA13112-CCV1	1		
12:14	MA13112-CCB1	1		
12:16	MP30277-MB1	1		
12:18	MP30277-B1	1		
12:19	FA33143-2	1		(sample used for QC only; not part of login FA33286)
12:21	MP30277-D1	1		
12:22	MP30277-SD1	5		
12:24	MP30277-S1	1		
12:25	MP30277-S2	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:32	MA13112-CCV2	1		
12:33	MA13112-CCB2	1		
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:44	MP30278-MB1	1		
12:45	MP30278-B1	1		
12:47	FA33182-6	1		(sample used for QC only; not part of login FA33286)

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
Date Analyzed: 04/26/16
Methods: EPA 245.1
Analyst: JL
Run ID: MA13112
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:48	MP30278-D1	1		
12:50	MA13112-CCV3	1		
12:51	MA13112-CCB3	1		
12:53	MP30278-SD1	5		
12:55	MP30278-S1	1		
12:56	MP30278-S2	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	MA13112-CCV4	1		
13:10	MA13112-CCB4	1		
13:12	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	MP30278-MB2A	1		
13:16	MP30279-MB1	1		
13:17	MP30279-B1	1		
13:19	FA33188-3F	1		(sample used for QC only; not part of login FA33286)
13:21	MP30279-D1	1		
13:22	MP30279-SD1	5		
13:24	MP30279-S1	1		
13:25	MP30279-S2	1		
13:27	MA13112-CCV5	1		
13:29	MA13112-CCB5	1		
13:31	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:38	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
Analyst: JL Run ID: MA13112
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	13:39	ZZZZZZ	1		
	13:41	ZZZZZZ	1		
	13:42	FA33286-2	1		
	13:44	MP30279-MB2A	1		
	13:45	MA13112-CCV6	1		
	13:47	MA13112-CCB6	1		
	13:49	MP30280-MB1	1		
	13:50	MP30280-B1	1		
	13:51	FA33286-3	1		
	13:53	MP30280-D1	1		
	13:55	MP30280-SD1	5		
	13:56	MP30280-S1	1		
	13:58	MP30280-S2	1		
---------->	Last reportable sample/prep for job FA33286				
	14:00	ZZZZZZ	1		
	14:01	ZZZZZZ	1		
	14:03	ZZZZZZ	1		
	14:04	MA13112-CCV7	1		
	14:06	MA13112-CCB7	1		
	14:08	ZZZZZZ	1		
	14:09	ZZZZZZ	1		
	14:11	ZZZZZZ	1		
	14:12	ZZZZZZ	1		
	14:13	ZZZZZZ	1		
	14:15	ZZZZZZ	1		
	14:16	MA13112-CRI2	1		
	14:18	MA13112-CCV8	1		
	14:19	MA13112-CCB8	1		
---------->	Last reportable CCB for job FA33286				

Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			12:09		12:14		12:33		12:51	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0054	<0.50	0.013	<0.50	0.0080	<0.50	0.0089	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			13:10		13:29		13:47		14:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0092	<0.50	0.0067	<0.50	0.0092	<0.50	0.0075	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			14:19	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.50	.03	0.015	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		12:07			12:13			12:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		12:50			13:08			13:27	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	2.9	96.7	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		13:45			14:04			14:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	2.9	96.7	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

HIGH STANDARD CHECK SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: 95 to 105 % Recovery

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:		12:05	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.9	98.3

(*) Outside of QC limits
(anr) Analyte not requested

8.1.3

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: 80 to 120 % Recovery

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			12:11		14:16	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.19	95.0	0.18	90.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30279
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date:				04/26/16		04/26/16	
Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Mercury	0.50	.03	.03	0.0058	<0.50	0.040	<0.50

Associated samples MP30279: FA33286-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30279
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16 04/26/16

Metal	FA33188-3F Original	DUP	RPD	QC Limits	FA33188-3F Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	2.9	3	96.7	70-130

Associated samples MP30279: FA33286-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.2.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30279 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/26/16

Metal	FA33188-3F Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.8	3	93.3	3.5	

Associated samples MP30279: FA33286-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.2.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30279
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP30279: FA33286-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30279
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	FA33188-3F Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP30279: FA33286-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.0031	<0.50

Associated samples MP30280: FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.3.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16 04/26/16

Metal	FA33286-3 Original	DUP	RPD	QC Limits	FA33286-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.031	0.0	200.0(a)	0-10	0.031	3.0	3	99.0	70-130

Associated samples MP30280: FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/26/16

Metal	FA33286-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.031	3.0	3	99.0	0.0	

Associated samples MP30280: FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.3.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP30280: FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.3.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	FA33286-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.0308	0.00	100.0(a)	0-10

Associated samples MP30280: FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.3.4

8

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP27816/GN70632	2.0	0.0	mg/l	50	50.9	101.8	90-110%
Nitrogen, Ammonia	GP27886/GN70793	0.10	0.040(a)	mg/l	2.5	2.49	99.6	90-110%
Nitrogen, Nitrate	GP27816/GN70632	0.10	0.0	mg/l	2.5	2.39	95.6	90-110%
Sulfate	GP27816/GN70632	2.0	0.0	mg/l	50	50.7	101.4	90-110%

Associated Samples:
Batch GP27816: FA33286-2, FA33286-3
Batch GP27886: FA33286-2, FA33286-3
(*) Outside of QC limits
(a) MB is > MDL but is < 1/2 RL.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP27816/GN70632	FA33280-1	mg/l	549	50	602	106.0	90-110%
Nitrogen, Ammonia	GP27886/GN70793	FA33243-2	mg/l	0.081	2.5	2.6	100.8	90-110%
Nitrogen, Nitrate	GP27816/GN70632	FA33280-1	mg/l	3.7	2.5	6.5	112.0N(a)	90-110%
Sulfate	GP27816/GN70632	FA33280-1	mg/l	1500	50	1510	20.0(b)	90-110%

Associated Samples:
Batch GP27816: FA33286-2, FA33286-3
Batch GP27886: FA33286-2, FA33286-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria due to dilution.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP27816/GN70632	FA33280-1	mg/l	549	50	590	2.0	20%
Nitrogen, Ammonia	GP27886/GN70793	FA33243-2	mg/l	0.081	2.5	2.6	0.0	20%
Nitrogen, Nitrate	GP27816/GN70632	FA33280-1	mg/l	3.7	2.5	5.7	13.1	20%
Sulfate	GP27816/GN70632	FA33280-1	mg/l	1500	50	1520	0.7	20%

Associated Samples:
Batch GP27816: FA33286-2, FA33286-3
Batch GP27886: FA33286-2, FA33286-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: 316042101.TXT Date Analyzed: 04/21/16 Methods: EPA 300/SW846 9056A
Analyst: LJ Run ID: GN70632
Parameters: Nitrogen, Nitrate,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:39	GN70632-CCV1	1		
08:56	GP27816-MB1	1		
09:13	GP27816-B1	1		
09:31	ZZZZZZ	2		
09:49	ZZZZZZ	2		
11:16	FA33280-1	25		(sample used for QC only; not part of login FA33286)
11:34	GP27816-S1	25		
11:52	GP27816-S2	25		
12:10	GN70632-CCV2	1		
12:27	GN70632-CCB1	1		
12:45	ZZZZZZ	1		
13:03	FA33286-2	1		
13:21	FA33286-3	1		
13:39	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:15	ZZZZZZ	1		
14:33	ZZZZZZ	1		
14:50	ZZZZZZ	1		
15:08	FA33287-7	1		(sample used for QC only; not part of login FA33286)
15:26	GP27816-S3	1		
15:44	GN70632-CCV3	1		
16:02	GN70632-CCB2	1		
16:20	GP27816-S4	1		
16:38	ZZZZZZ	5		
16:56	ZZZZZZ	200		
17:14	ZZZZZZ	200		
17:32	ZZZZZZ	100		
17:50	ZZZZZZ	200		
18:08	ZZZZZZ	200		
18:25	ZZZZZZ	200		
18:43	GN70632-CCV4	1		
19:01	GN70632-CCB3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: 316042101.TXT
Date Analyzed: 04/21/16
Run ID: GN70632
Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70632-CCV1	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70632-CCV1	Sulfate	50.6	2.0	0.60	50	101.2	90-110
GN70632-CCV2	Nitrogen, Nitrate	2.5	0.10	0.050	2.5	100.0	90-110
GN70632-CCV2	Sulfate	50.8	2.0	0.60	50	101.6	90-110
GN70632-CCB1	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70632-CCB1	Sulfate	0.60 U	2.0	0.60			
GN70632-CCV3	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70632-CCV3	Sulfate	50.8	2.0	0.60	50	101.6	90-110
GN70632-CCB2	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70632-CCB2	Sulfate	0.60 U	2.0	0.60			
GN70632-CCV4	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70632-CCV4	Sulfate	51.3	2.0	0.60	50	102.6	90-110
GN70632-CCB3	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70632-CCB3	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050416AMN1.CSV Date Analyzed: 05/04/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70793
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:39	GN70793-ICV1	1		
14:40	GN70793-CCV1	1		
14:41	GN70793-CCB1	1		
14:43	GP27886-MB1	1		
14:44	GP27886-B1	1		
14:47	GP27886-S1	1		
14:48	GP27886-S2	1		
14:49	FA33243-2	1		(sample used for QC only; not part of login FA33286)
14:50	ZZZZZZ	1		
14:51	ZZZZZZ	1		
14:53	ZZZZZZ	1		
14:54	GN70793-CCV2	1		
14:55	GN70793-CCB2	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:58	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:03	GP27886-S3	1		
15:04	GP27886-S4	1		
15:05	FA33445-7	1		(sample used for QC only; not part of login FA33286)
15:06	ZZZZZZ	1		
15:07	GN70793-CCV3	1		
15:08	GN70793-CCB3	1		
15:09	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:14	FA33286-2	1		
15:15	FA33286-3	1		
15:16	ZZZZZZ	1		
15:17	ZZZZZZ	1		
15:18	GP27887-MB1	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050416AMN1.CSV Date Analyzed: 05/04/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70793
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:19	GP27887-B1	1		
15:20	GN70793-CCV4	1		
15:22	GN70793-CCB4	1		
15:23	GP27887-S1	1		
15:24	GP27887-S2	1		
15:25	FA33287-4	1		(sample used for QC only; not part of login FA33286)
15:26	ZZZZZZ	1		
15:27	ZZZZZZ	1		
15:28	ZZZZZZ	1		
15:29	ZZZZZZ	1		
15:31	ZZZZZZ	1		
15:32	ZZZZZZ	1		
15:33	ZZZZZZ	1		
15:34	GN70793-CCV5	1		
15:35	GN70793-CCB5	1		
15:36	ZZZZZZ	1		
15:37	GP27887-S3	1		
15:38	GP27887-S4	1		
15:40	FA33473-7	1		(sample used for QC only; not part of login FA33286)
15:41	ZZZZZZ	1		
15:42	ZZZZZZ	1		
15:43	ZZZZZZ	1		
15:44	ZZZZZZ	1		
15:45	ZZZZZZ	1		
15:47	GN70793-CCV6	1		
15:48	GN70793-CCB6	1		
15:50	ZZZZZZ	1		
15:53	ZZZZZZ	10		
15:56	GN70793-CCV7	1		
15:57	GN70793-CCB7	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA33286
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050416AMN1.CSV
Date Analyzed: 05/04/16
Run ID: GN70793
Methods: EPA 350.1
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70793-ICV1	Nitrogen, Ammonia	2.6	0.10	0.030	2.5	104.0	90-110
GN70793-CCV1	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70793-CCB1	Nitrogen, Ammonia	-0.037	0.10	0.030			
GN70793-CCV2	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70793-CCB2	Nitrogen, Ammonia	-0.030	0.10	0.030			
GN70793-CCV3	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70793-CCB3	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70793-CCV4	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70793-CCB4	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70793-CCV5	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70793-CCB5	Nitrogen, Ammonia	-0.050	0.10	0.030			
GN70793-CCV6	Nitrogen, Ammonia	2.6	0.10	0.030	2.5	104.0	90-110
GN70793-CCB6	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70793-CCV7	Nitrogen, Ammonia	2.6	0.10	0.030	2.5	104.0	90-110
GN70793-CCB7	Nitrogen, Ammonia	-0.033	0.10	0.030			

(!) Outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody
- Analyst Legend

CHAIN OF CUSTODY

4405 Vineland Rd, Suite C-15, Orlando, FL 32811
TEL. 407-425-6700 FAX. 407-425-0707
www.sgs.com

FED-EX Tracking # 6623 7871 0752
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job FA33286

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 4405 Vineland Rd, Suite C-15
City: Orlando State: FL Zip: 32811
Project Contact: heatherw E-mail: heatherw@accutest.com
Phone #: 407-425-6700 Fax #:
Sampler(s) Name(s): JA Phone:

Project Information

Project Name: Atlantic Refuse Dump; NC
Street
City State
Project #
Client Purchase Order #
Project Manager

Billing Information (if different from Report to)

Company Name
Street Address
City State Zip
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	,FEMS ,XMETHSLMS 200.8	LAB USE ONLY
2	DUP-1		4/20/16	4:40:00 PM	JA	AQ	1			1						X	
3	WELL-299 ATLANTIC		4/20/16	4:35:00 PM	JA	AQ	1			1						X	FL

Turnaround Time (Business days)

- [ ] 10 Day (business)
- [ ] 5-7 Day
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [X] other 14

Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1, Results Only)
- [ ] Commercial "B" (Level 2, Results + QC summary)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] DOD FULT1 (Level 4)
- [X] Other REDT1
- [ ] EDD Format

Comments / Special Instructions

ALNJ

INITIAL ASESSMENT Am JA

LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time	Received By:	Relinquished By:	Date Time:	Received By:
1	4/21/16 1700	1 FX	2 FX	4-22-16 950	2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [ ] Not intact	Preserved where applicable AU

On Ice [ ] Cooler Temp. 4.5°C NP

10.1 10

FA33286: Chain of Custody
Page 1 of 2
SGS Accutest New Jersey

SGS Accutest Sample Receipt Summary

Job Number: FA33286 **Client:** _____ **Project:** _____

Date / Time Received: 4/22/2016 9:50:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (4.5);

Cooler Temps (Corrected) °C: Cooler 1: (4.9);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☑	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

10.1

10

FA33286: Chain of Custody

Page 2 of 2

Analyst Legend

Job Number: FA33286
Account: ALSE Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

Initials	Full Name	Analysis Type
JO	Jaclyn O'Connor	Metals Analysis

Metals Analysis

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:17	MA39295-STD1	1		STDA
09:22	MA39295-STD2	1		STDA
09:26	MA39295-STD3	1		STDA
09:31	MA39295-STD4	1		STDA
09:35	MA39295-STD5	1		STDB
09:40	MA39295-STD6	1		STDC
09:44	MA39295-STD7	1		STDD
09:48	MA39295-STD8	1		STDE
09:53	MA39295-STD9	1		STDF
09:57	MA39295-STD10	1		STDG
10:02	MA39295-STD11	1		STDH
10:06	MA39295-STD12	1		STDI
10:11	MA39295-STD13	1		STDJ
10:25	ZZZZZZ	1		
10:30	MA39295-ICVA1	1		
10:34	MA39295-ICV1	1		60ppb Al.
10:38	MA39295-ICB1	1		
10:43	MA39295-CCVA1	1		
10:47	MA39295-CCB1	1		
10:52	MA39295-CRI1	1		
10:56	ZZZZZZ	1		
11:01	ZZZZZZ	1		
11:05	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:23	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:36	ZZZZZZ	1		
11:40	MA39295-ICSA1	1		
11:45	MA39295-ICSAB1	1		
11:49	ZZZZZZ	1		
11:54	MA39295-CCVA2	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:58	MA39295-CCB2	1		
12:04	ZZZZZZ	1		
12:11	ZZZZZZ	10		
12:15	ZZZZZZ	5		
12:20	ZZZZZZ	5		
12:24	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:39	MA39295-CRI2	1		
12:43	MA39295-CCVA3	1		
12:47	MA39295-CCB3	1		
12:52	MP93378-MB1	1		
12:56	MP93378-B1	1		
13:01	MP93378-B1	2		
13:05	MP93378-S1	1		
13:10	MP93378-S1	2		
13:14	MP93378-S2	1		
13:18	MP93378-S2	2		
13:23	ZZZZZZ	1		
13:27	FA33323-2	1		(sample used for QC only; not part of login FA33286)
13:32	MA39295-CCVA4	1		
13:36	MA39295-CCB4	1		
13:41	FA33286-2	1		
13:45	FA33286-3	1		
---------->	Last reportable sample/prep for job FA33286			
13:49	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:20	MA39295-CCVA5	1		
14:25	MA39295-CCB5	1		
---------->	Last reportable CCB for job FA33286			

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:29	MP93359-MB1	1		
14:34	MP93359-B1	1		
14:38	MP93359-B1	2		
14:43	MP93359-S1	1		
14:47	MP93359-S2	1		
14:51	JC18650-23	1		(sample used for QC only; not part of login FA33286)
14:56	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:09	MA39295-CCVA6	1		
15:13	MA39295-CCB6	1		
15:18	MP93391-MB1	1		
15:22	MP93391-B1	1		
15:27	MP93391-S1	1		
15:31	MP93391-S2	1		
15:36	ZZZZZZ	1		
15:40	JC18739-12	1		(sample used for QC only; not part of login FA33286)
15:44	ZZZZZZ	1		
15:49	ZZZZZZ	1		
15:54	MA39295-CCVA7	1		
15:58	MA39295-CCB7	1		
16:02	MP93359-S1	2		
16:07	MP93359-S2	2		
16:11	ZZZZZZ	10		
16:16	ZZZZZZ	1		
16:20	ZZZZZZ	1		
16:25	MP93391-B1	2		Ag
16:30	MP93391-S1	2		Ag
16:34	MP93391-S2	2		
16:39	ZZZZZZ	1		
16:43	MA39295-CCVA8	1		
16:48	MA39295-CCB8	1		
16:52	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:57	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:05	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:36	MA39295-CCVA9	1		
17:41	MA39295-CCB9	1		
17:45	MP93407-MB1	1		
17:50	MP93407-B1	1		
17:54	MP93407-B1	2		
17:59	MP93407-S1	1		
18:03	MP93407-S1	2		
18:07	MP93407-S2	1		
18:12	MP93407-S2	2		
18:16	ZZZZZZ	1		
18:21	JC19016-17	1		(sample used for QC only; not part of login FA33286)
18:25	MA39295-CCVA10	1		
18:30	MA39295-CCB10	1		
18:34	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:43	ZZZZZZ	1		
18:47	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:05	ZZZZZZ	1		
19:09	MA39295-CCVA11	1		
19:14	MA39295-CCB11	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
09:17	MA39295-STD1	100	100	100	100	100	100	100	100
09:22	MA39295-STD2	100	100	100	100	100	100	100	100
09:26	MA39295-STD3	100	100	100	100	100	100	100	100
09:31	MA39295-STD4	100	100	100	100	100	100	100	100
09:35	MA39295-STD5	99.929	99.242	99.524	98.622	100.209	100.799	99.604	99.188
09:40	MA39295-STD6	99.487	98.599	99.029	98.968	100.538	100.148	99.23	99.034
09:44	MA39295-STD7	99.628	98.151	99.532	98.448	99.923	100.347	100.054	98.885
09:48	MA39295-STD8	99.998	98.289	98.136	97.669	98.731	100.455	97.884	97.984
09:53	MA39295-STD9	100.704	97.399	98.695	98.672	98.753	100.03	98.726	97.971
09:57	MA39295-STD10	99.396	97.741	98.618	96.682	98.329	99.671	98.57	96.921
10:02	MA39295-STD11	100.451	98.738	99.452	99.082	98.319	99.791	97.244	97.779
10:06	MA39295-STD12	101.224	99.951	99.798	97.994	97.857	99.367	97.308	97.297
10:11	MA39295-STD13	100.95	99.874	100.061	98.524	98.917	98.895	98.063	96.369
10:25	ZZZZZZ	103.327	100.371	101.967	100.241	99.757	102.421	98.712	100.385
10:30	MA39295-ICVA1	103.237	101.07	101.471	99.368	100.109	100.347	98.202	98.546
10:34	MA39295-ICV1	101.975	99.127	99.973	97.594	99.298	99.224	98.02	100.036
10:38	MA39295-ICB1	102.286	99.347	99.112	97.64	98.892	98.971	97.799	100.021
10:43	MA39295-CCVA1	102.788	101.553	100.951	99.564	100.43	100.108	97.417	98.851
10:47	MA39295-CCB1	103.514	100.718	101.392	99.667	99.641	100.371	98.295	101.406
10:52	MA39295-CRI1	102.416	100.273	100.609	98.816	99.149	100.419	98.198	100.621
10:56	ZZZZZZ	98.304	99.468	101.968	102.178	95.801	97.394	96.488	90.626
11:01	ZZZZZZ	99.583	102.749	104.407	102.454	98.654	99.077	95.946	92.338
11:05	ZZZZZZ	100.796	102.641	102.654	99.744	102.466	103.609	99.842	103.964
11:13	ZZZZZZ	97.231	100.731	103.72	100.392	96.278	99.777	95.395	90.869
11:18	ZZZZZZ	97.257	99.972	102.163	101.581	96.264	98.915	96.288	90.938
11:23	ZZZZZZ	100.659	101.918	101.703	98.928	102.17	103.609	98.926	103.494
11:27	ZZZZZZ	98.429	99.961	102.291	98.19	99.925	102.554	97.4	100.104
11:31	ZZZZZZ	99.956	100.581	101.209	99.224	100.765	102.484	98.341	102.046
11:36	ZZZZZZ	101.98	101.728	102.585	101.443	101.948	102.758	100.529	103.738
11:40	MA39295-ICSA1	99.428	101.824	105.47	103.096	97.638	100.247	97.824	92.323
11:45	MA39295-ICSAB1	99.237	102.823	106.392	103.671	98.847	101.819	98.436	92.662
11:49	ZZZZZZ	102.811	106.591	105.884	102.717	106.019	105.489	102.216	106.238
11:54	MA39295-CCVA2	100.851	104.055	104.222	102.936	102.694	104.962	102.567	101.158

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:58	MA39295-CCB2	103.073	103.503	104.323	103.485	103.486	104.065	101.102	104.057
12:04	ZZZZZZ	105.176	104.873	106.444	105.386	104.182	106.597	104.106	104.831
12:11	ZZZZZZ	107.399	107.415	109.401	105.862	106.752	107.829	103.739	105.772
12:15	ZZZZZZ	107.65	104.398	103.865	106.497	103.641	104.893	105.201	103.215
12:20	ZZZZZZ	110.148	107.036	107.173	107.433	105.919	106.037	106.606	105.979
12:24	ZZZZZZ	110.851	109.467	108.973	108.782	106.323	107.612	105.922	107.441
12:28	ZZZZZZ	111.647	110.421	109.404	110.197	108.022	107.824	105.537	107.332
12:34	ZZZZZZ	111.543	110.152	108.914	109.809	107.362	107.408	106.349	107.342
12:39	MA39295-CRI2	112.452	110.35	110.223	110.109	108.311	106.375	107.748	107.43
12:43	MA39295-CCVA3	111.455	110.267	110.193	109.78	107.779	106.469	105.135	104.648
12:47	MA39295-CCB3	112.03	109.416	108.415	108.964	106.541	106.396	105.486	106.799
12:52	MP93378-MB1	113.807	110.72	107.157	110.118	108.242	105.157	106.26	106.993
12:56	MP93378-B1	113.086	111.515	110.454	115.374	109.981	108.941	110.547	108.002
13:01	MP93378-B1	112.898	111.149	109.81	110.631	109.195	108.131	106.759	107.033
13:05	MP93378-S1	110.367	112.652	109.467	109.222	105.751	106.199	104.822	102.154
13:10	MP93378-S1	112.102	110.794	107.305	110.386	106.219	105.787	105.806	102.269
13:14	MP93378-S2	110.89	111.508	108.652	109.401	104.693	104.883	104.784	100.416
13:18	MP93378-S2	112.875	109.854	108.08	109.33	105.795	106.002	105.568	102.296
13:23	ZZZZZZ	115.973	110.07	108.634	109.491	107.108	105.915	105.529	106.858
13:27	FA33323-2	113.397	111.183	107.42	110.018	103.665	105.343	104.185	100.725
13:32	MA39295-CCVA4	115.422	108.318	108.745	108.298	105.882	105.844	105.526	103.408
13:36	MA39295-CCB4	114.867	109.289	107.861	109.473	107.157	105.28	105.434	106.231
13:41	FA33286-2	113.2	109.303	109.635	109.901	106.093	107.115	105.832	101.668
13:45	FA33286-3	115.502	110.025	109.638	111.14	105.306	105.943	105.563	102.463
13:49	ZZZZZZ	113.948	109.61	108.292	109.633	104.158	104.975	104.421	101.346
13:54	ZZZZZZ	112.379	107.419	106.739	106.342	102.523	104.54	102.342	100.713
13:58	ZZZZZZ	110.332	108.355	107.612	107.784	102.684	103.491	104.018	97.776
14:03	ZZZZZZ	114.436	109.867	109.257	110.447	102.908	105.497	105.102	100.566
14:07	ZZZZZZ	115.118	108.72	107.745	109.52	104.31	105.023	104.245	100.306
14:12	ZZZZZZ	112.144	107.797	105.994	106.594	102.609	101.777	101.432	96.643
14:16	ZZZZZZ	113.09	110.902	107.473	108.113	102.661	103.459	102.917	99.094
14:20	MA39295-CCVA5	114.424	107.144	106.291	106.94	104.742	104.429	102.921	101.765
14:25	MA39295-CCB5	114.61	107.728	106.536	106.74	104.915	104.271	102.666	104.437

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
14:29	MP93359-MB1	113.456	106.523	105.729	105.875	104.823	103.907	102.485	104.261
14:34	MP93359-B1	112.707	106.617	105.635	106.098	106.107	105.205	103.927	104.128
14:38	MP93359-B1	110.214	103.847	104.856	104.42	102.088	103.219	102.707	101.508
14:43	MP93359-S1	106.502	105.414	104.161	102.185	101.743	101.714	98.394	95.312
14:47	MP93359-S2	103.257	102.639	101.734	100.285	98.997	99.868	97.276	93.236
14:51	JC18650-23	103.333	102.832	101.342	100.681	98.796	99.773	97.282	93.561
14:56	ZZZZZZ	105.769	101.984	101.358	101.392	99.439	100.594	99.031	96.693
15:00	ZZZZZZ	105.253	100.911	101.052	100.189	98.072	101.047	97.732	96.01
15:05	ZZZZZZ	103.423	99.973	99.407	99.802	97.416	98.433	96.799	95.448
15:09	MA39295-CCVA6	104.403	99.369	99.325	99.938	97.635	99.586	97.656	95.783
15:13	MA39295-CCB6	106.176	101.034	101.464	101.303	100.448	100.901	100.167	100.344
15:18	MP93391-MB1	106.362	101.616	101.162	105.603	100.3	100.14	101.987	101.056
15:22	MP93391-B1	107.753	101.942	101.096	101.012	100.916	101.2	101.177	99.807
15:27	MP93391-S1	104.004	100.812	99.531	98.869	98.426	97.873	96.445	92.473
15:31	MP93391-S2	103.368	100.508	97.899	97.561	97.721	96.732	95.006	92.374
15:36	ZZZZZZ	105.255	99.983	98.485	98.458	99.295	99.508	97.438	99.542
15:40	JC18739-12	103.195	98.868	97.319	98.032	95.725	95.611	95.045	91.635
15:44	ZZZZZZ	97.1	98.21	99.762	96.36	92.875	93.943	90.573	86.264
15:49	ZZZZZZ	98.695	100.496	102.438	101.843	95.457	97.774	95.053	88.337
15:54	MA39295-CCVA7	100.384	97.743	100.586	96.83	96.592	100.414	94.036	95.255
15:58	MA39295-CCB7	93.74	92.105	94.773	91.606	90.824	95.727	91.596	93.819
16:02	MP93359-S1	95.312	95.191	97.008	94.576	94.725	97.816	94.7	92.037
16:07	MP93359-S2	97.49	96.64	97.249	95.035	95.523	99.168	93.953	92.944
16:11	ZZZZZZ	87.959	93.044	93.315	91.755	90.827	97.042	94.408	87.537
16:16	ZZZZZZ	97.961	98.501	96.772	95.591	100.011	100.091	95.754	101.802
16:20	ZZZZZZ	95.25	95.996	96.471	94.074	99.34	100.635	95.571	101.954
16:25	MP93391-B1	95.872	97.029	96.48	94.831	99.567	100.22	96.904	100.515
16:30	MP93391-S1	95.45	95.343	95.508	94.857	96.467	99.121	95.278	95.138
16:34	MP93391-S2	96.123	95.457	94.402	93.752	96.669	96.909	93.801	95.028
16:39	ZZZZZZ	97.175	95.023	94.688	94.01	96.329	97.186	93.935	98.555
16:43	MA39295-CCVA8	96.301	93.955	94.23	88.408	95.881	97.06	88.291	95.75
16:48	MA39295-CCB8	97.768	94.548	94.618	94.179	96.857	97.586	94.77	98.302
16:52	ZZZZZZ	94.866	97.296	95.587	93.354	93.872	93.837	91.308	90.598

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
16:57	ZZZZZZ	95.137	96.374	95.406	94.038	94.743	96.036	92.459	91.236
17:01	ZZZZZZ	94.935	95.766	94.534	92.444	94.293	95.664	91.327	89.09
17:05	ZZZZZZ	101.262	97.601	97.481	94.811	98.346	98.793	93.808	99.169
17:10	ZZZZZZ	96.802	95.947	95.566	94.148	93.987	95.868	92.507	91.062
17:14	ZZZZZZ	98.798	96.561	97.232	95.636	94.691	96.742	94.405	91.542
17:19	ZZZZZZ	101.073	98.626	96.748	95.922	95.543	96.814	95.504	92.497
17:23	ZZZZZZ	102.144	98.994	98.253	98.106	96.81	97.258	95.826	92.7
17:28	ZZZZZZ	109.023	102.653	100.197	88.261	102.213	101.759	86.799	103.287
17:32	ZZZZZZ	102.111	97.841	98.374	100.696	95.574	97.909	97.353	91.37
17:36	MA39295-CCVA9	104.012	99.232	99.04	98.124	98.764	99.706	97.639	98.79
17:41	MA39295-CCB9	103.891	98.803	97.517	96.73	99.204	99.259	96.577	101.201
17:45	MP93407-MB1	101.701	98.765	97.369	96.494	99.707	99.136	96.533	99.994
17:50	MP93407-B1	100.271	97.069	95.973	94.445	98.665	98.054	94.863	97.777
17:54	MP93407-B1	100.479	95.537	96.126	95.845	96.768	99.312	95.23	97.278
17:59	MP93407-S1	99.328	96.773	95.588	95.04	96.995	97.783	95.869	95.697
18:03	MP93407-S1	100.304	96.759	96.352	95.897	97.115	99.105	95.727	96.387
18:07	MP93407-S2	100.641	97.924	96.461	95.798	97.648	99.163	95.724	96.929
18:12	MP93407-S2	100.853	97.719	96.8	96.208	98.895	99.778	95.931	97.612
18:16	ZZZZZZ	101.783	97.693	96.597	95.104	97.976	97.876	96.085	99.149
18:21	JC19016-17	101.529	98.227	97.637	95.136	97.874	99.526	94.655	97.89
18:25	MA39295-CCVA10	101.828	98.546	97.416	96.533	99.097	98.587	95.806	98.76
18:30	MA39295-CCB10	102.408	97.259	97.57	96.121	98.152	98.906	96.068	99.737
18:34	ZZZZZZ	103.15	99.141	97.494	97.74	99.747	99.25	96.138	98.592
18:38	ZZZZZZ	101.142	98.382	96.869	95.836	98.472	97.307	95.509	96.871
18:43	ZZZZZZ	101.945	98.546	97.176	100.154	99.992	98.972	100.164	101.112
18:47	ZZZZZZ	101.019	100.538	98.939	98.016	99.156	99.25	97.508	98.161
18:52	ZZZZZZ	101.218	98.344	98.147	97.728	97.817	99.163	96.284	97.671
18:56	ZZZZZZ	101.602	98.841	96.614	97.476	99.659	98.965	97.148	98.245
19:01	ZZZZZZ	99.461	97.239	96.324	95.662	97.942	98.741	95.777	95.132
19:05	ZZZZZZ	102.624	99.333	98.948	97.54	100.592	99.942	97.117	101.798
19:09	MA39295-CCVA11	101.975	100.016	99.28	98.795	100.552	101.201	97.807	99.833
19:14	MA39295-CCB11	102.818	98.866	98.054	97.634	100.026	100.101	97.23	101.845

! = Outside limits.

INTERNAL STANDARD SUMMARY

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Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	60-125 %	60-125 %
Istd#2	Scandium (45-1)	60-125 %	60-125 %
Istd#3	Scandium (45-2)	60-125 %	60-125 %
Istd#4	Scandium (45-3)	60-125 %	60-125 %
Istd#5	Germanium (74-1)	60-125 %	60-125 %
Istd#6	Germanium (74-2)	60-125 %	60-125 %
Istd#7	Germanium (74-3)	60-125 %	60-125 %
Istd#8	Rhodium (103-1)	60-125 %	60-125 %

INTERNAL STANDARD SUMMARY

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Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
09:17	MA39295-STD1	100	100	100	100	100	100	100	100
09:22	MA39295-STD2	100	100	100	100	100	100	100	100
09:26	MA39295-STD3	100	100	100	100	100	100	100	100
09:31	MA39295-STD4	100	100	100	100	100	100	100	100
09:35	MA39295-STD5	99.751	100.133	99.425	100.105	99.524	99.477	100.063	100.279
09:40	MA39295-STD6	99.034	100.697	98.527	99.144	99.374	98.547	99.738	98.806
09:44	MA39295-STD7	98.216	100.177	98.404	99.161	99.638	98.873	99.014	99.077
09:48	MA39295-STD8	98.267	98.69	98.515	98.743	99.121	99.369	99.288	99.297
09:53	MA39295-STD9	99.269	99.578	98.355	99.363	99.344	99.312	100.127	99.132
09:57	MA39295-STD10	97.861	97.918	98.378	99.809	98.666	99.286	98.864	98.696
10:02	MA39295-STD11	98.908	98.48	98.591	99.901	99.26	99.872	100.578	99.409
10:06	MA39295-STD12	97.956	97.512	99.87	99.264	101.594	101.044	99.496	101.449
10:11	MA39295-STD13	96.7	96.824	98.084	98.356	101.089	100.225	99.568	101.112
10:25	ZZZZZZ	101.649	100.498	101.028	102.642	101.014	101.331	100.311	102.083
10:30	MA39295-ICVA1	98.335	97.812	99.75	100.71	101.719	102.226	100.015	102.455
10:34	MA39295-ICV1	100.233	100.012	99.242	100.732	101.01	100.574	100.636	100.875
10:38	MA39295-ICB1	100.675	99.431	100.73	100.757	100.75	100.149	99.378	100.898
10:43	MA39295-CCVA1	98.788	98.201	100.146	100.306	100.968	101.128	100.262	102.07
10:47	MA39295-CCB1	102.36	100.87	101.221	102.234	102.388	101.772	100.706	102.328
10:52	MA39295-CRI1	101.448	99.908	101.387	101.802	101.074	100.812	100.702	101.763
10:56	ZZZZZZ	90.382	90.705	94.355	93.749	98.266	97.099	96.232	98.632
11:01	ZZZZZZ	91.211	90.58	96.963	95.796	100.853	98.076	96.203	101.405
11:05	ZZZZZZ	103.015	101.547	105.108	104.88	103.694	102.882	101.027	104.125
11:13	ZZZZZZ	90.133	89.221	95.511	94.664	98.425	97.489	94.668	99.069
11:18	ZZZZZZ	90.919	90.218	95.504	94.675	99.191	97.824	95.546	99.49
11:23	ZZZZZZ	102.538	100.99	104.853	104.59	104.456	103.881	100.355	104.421
11:27	ZZZZZZ	101.715	98.267	101.828	103.532	103.58	104.418	101.002	104.328
11:31	ZZZZZZ	102.721	101.177	103.535	103.664	103.29	102.992	100.323	104.327
11:36	ZZZZZZ	103.824	102.841	103.979	104.59	104.165	104.147	101.623	104.082
11:40	MA39295-ICSA1	91.932	91.058	96.882	95.683	99.691	98.837	96.379	100.542
11:45	MA39295-ICSAB1	93.015	91.239	97.337	97.769	100.928	99.269	96.285	101.263
11:49	ZZZZZZ	105.415	103.349	107.897	107.188	105.862	104.595	102.061	105.905
11:54	MA39295-CCVA2	103.403	101.073	103.359	104.564	105.394	105.81	101.966	105.799

INTERNAL STANDARD SUMMARY

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Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
11:58	MA39295-CCB2	104.643	102.964	105.376	105.246	105.037	103.877	101.813	106.024
12:04	ZZZZZZ	106.207	102.704	105.652	106.5	105.581	105.324	102.577	106.075
12:11	ZZZZZZ	106.918	103.633	106.382	107.036	107.717	106.591	103.254	108.354
12:15	ZZZZZZ	103.716	104.768	104.242	102.387	105.008	102.423	102.715	105.004
12:20	ZZZZZZ	106.849	106.042	106.039	105.396	106.077	104.013	103.69	106.512
12:24	ZZZZZZ	107.162	106.3	107.414	105.382	107.904	104.336	103.076	107.846
12:28	ZZZZZZ	106.764	106.181	108.039	105.964	107.996	103.99	102.913	108.07
12:34	ZZZZZZ	107.099	106.103	107.585	105.288	107.937	103.811	103.126	107.55
12:39	MA39295-CRI2	106.722	105.553	107.35	104.843	107.351	102.93	102.619	107.804
12:43	MA39295-CCVA3	104.224	102.293	105.985	103.747	106.16	103.542	100.913	107.567
12:47	MA39295-CCB3	106.532	104.614	106.879	104.541	107.122	102.266	101.478	107.505
12:52	MP93378-MB1	105.011	105.381	108.534	103.922	107.511	101.786	102.421	107.915
12:56	MP93378-B1	106.927	110.532	108.117	105.418	108.278	104.398	107.871	109.823
13:01	MP93378-B1	106.711	105.117	107.226	104.983	107.198	104.875	103.08	108.186
13:05	MP93378-S1	102.6	100.743	104.867	103.35	106.439	103.502	102.952	107.571
13:10	MP93378-S1	102.818	102.68	105.748	102.823	106.552	102.928	103.202	107.417
13:14	MP93378-S2	101.083	99.946	103.688	102.467	104.81	103.625	102.196	106.593
13:18	MP93378-S2	103.132	102.006	104.634	102.361	105.908	103.671	102.266	106.579
13:23	ZZZZZZ	107.555	105.094	106.853	104.384	107.273	103.267	102.274	107.398
13:27	FA33323-2	101.496	100.16	103.3	101.299	105.841	102.188	101.766	106.676
13:32	MA39295-CCVA4	104.591	102.143	104.408	102.29	106.874	103.436	102.574	108.564
13:36	MA39295-CCB4	106.342	104.959	106.016	103.405	106.81	102.684	101.299	106.516
13:41	FA33286-2	103.157	101.669	105.433	104.082	105.98	103.861	101.99	107.026
13:45	FA33286-3	103.586	102.131	105.382	103.648	106.755	103.606	103.141	107.9
13:49	ZZZZZZ	102.199	101.158	103.565	102.671	105.623	104	102.614	106.207
13:54	ZZZZZZ	101.787	98.452	103.304	102.567	104.549	102.805	99.867	105.165
13:58	ZZZZZZ	98.203	97.587	102.02	100.223	104.348	101.314	100.564	104.67
14:03	ZZZZZZ	103.608	101.883	104.125	103.269	105.149	103.107	102.414	105.742
14:07	ZZZZZZ	102.618	100.84	103.382	101.521	104.785	102.224	100.896	104.861
14:12	ZZZZZZ	98.034	96.06	101.513	99.362	102.948	101.186	99.53	104.812
14:16	ZZZZZZ	101.006	98.864	103.425	101.899	103.793	102.061	100.712	104.729
14:20	MA39295-CCVA5	103.128	101.155	103.401	101.194	105.467	102.863	101.036	105.854
14:25	MA39295-CCB5	105.24	102.214	104.844	102.267	105.807	102.213	100.58	106.442

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
14:29	MP93359-MB1	105.356	102.961	104.599	102.06	104.86	102.184	100.269	105.502
14:34	MP93359-B1	105.719	102.531	104.286	102.926	105.727	104.793	101.871	106.732
14:38	MP93359-B1	103.368	100.932	102.316	101.539	102.883	102.005	100.532	104.218
14:43	MP93359-S1	96.552	94.034	98.153	97.832	102.971	100.623	97.986	103.205
14:47	MP93359-S2	93.966	92.932	96.858	96.058	100.668	100.545	98.375	101.755
14:51	JC18650-23	94.293	92.174	96.578	97.013	101.37	99.8	98.092	102.071
14:56	ZZZZZZ	98.842	96.335	100.433	100.741	102.122	101.722	99.186	102.092
15:00	ZZZZZZ	98.425	95.67	99.988	101.042	101.565	102.168	99.021	102.292
15:05	ZZZZZZ	96.434	95.612	97.804	97.444	99.29	98.465	98.146	100.197
15:09	MA39295-CCVA6	98.505	96.72	98.155	98.269	100.635	100.362	98.445	100.493
15:13	MA39295-CCB6	101.951	100.605	101.136	101.117	102.045	100.853	98.467	102.447
15:18	MP93391-MB1	102.622	104.07	101.657	100.135	101.941	100.904	102.846	103.309
15:22	MP93391-B1	101.315	99.804	101.117	99.784	103.077	101.139	100.449	103.704
15:27	MP93391-S1	93.872	91.497	95.022	94.467	99.979	98.048	95.993	100.071
15:31	MP93391-S2	93.276	90.222	95.819	93.945	100.125	97.84	95.504	101.013
15:36	ZZZZZZ	100.276	98.769	99.828	98.678	100.944	98.832	97.804	101.321
15:40	JC18739-12	92.081	90.827	94.337	93.598	98.22	97.225	95.975	99.41
15:44	ZZZZZZ	85.842	83.56	89.935	91.498	93.827	92.654	89.748	94.618
15:49	ZZZZZZ	88.05	87.046	93.042	93.937	96.832	95.017	93.2371	97.454
15:54	MA39295-CCVA7	99.025	95.093	97.472	101.596	99.376	102.522	99.121	100.167
15:58	MA39295-CCB7	97.663	94.54	94.848	98.897	95.781	98.557	95.289	95.985
16:02	MP93359-S1	94.774	92.477	94.876	97.11	98.186	100.308	97.378	97.921
16:07	MP93359-S2	96.259	92.025	95.405	98.258	99.857	100.989	98.341	100.315
16:11	ZZZZZZ	90.486	88.046	94.635	96.375	100.493	100.188	98.249	101.243
16:16	ZZZZZZ	103.022	98.209	103.727	103.673	104.864	104.614	99.591	105.308
16:20	ZZZZZZ	103.242	99.277	103.009	103.504	104.578	104.927	99.697	104.634
16:25	MP93391-B1	103.249	98.076	102.831	103.809	105.701	106.351	100.765	106.245
16:30	MP93391-S1	97.699	93.545	98.107	98.908	102.386	103.202	99.055	103.666
16:34	MP93391-S2	97.118	92.78	97.87	97.915	101.861	102.314	98.252	103.224
16:39	ZZZZZZ	100.203	97.066	99.481	100.332	101.435	101.265	97.585	101.015
16:43	MA39295-CCVA8	99.098	89.55	98.606	98.754	102.056	102.913	92.972	102.378
16:48	MA39295-CCB8	100.881	97.496	99.786	101.422	102.643	101.843	98.829	103.145
16:52	ZZZZZZ	93.533	89.157	94.721	95.11	100.371	101.267	97.064	101.305

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Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
16:57	ZZZZZZ	93.365	88.831	95.475	95.83	100.555	100.373	96.653	101.039
17:01	ZZZZZZ	91.507	87.716	93.114	95.325	99.735	99.68	94.391	100.74
17:05	ZZZZZZ	101.306	97.649	100.783	101.536	102.979	101.857	98.847	103.106
17:10	ZZZZZZ	93.145	89.537	95.641	95.684	100.238	99.398	95.643	100.161
17:14	ZZZZZZ	94.79	91.4	95.281	96.194	100.359	100.05	97.264	101.572
17:19	ZZZZZZ	93.202	90.493	95.337	95.774	100.709	100.669	95.847	102.24
17:23	ZZZZZZ	94.315	91.637	96.203	96.857	101.156	100.532	97.92	102.524
17:28	ZZZZZZ	104.436	88.183	104.094	101.959	105.338	104.199	88.479	105.477
17:32	ZZZZZZ	94.147	93.955	96.138	96.373	99.56	100.394	99.889	100.949
17:36	MA39295-CCVA9	100.352	97.814	100.473	100.867	103.459	103.672	101.019	104.72
17:41	MA39295-CCB9	102.705	98.268	101.663	100.825	103.81	101.76	98.11	104.871
17:45	MP93407-MB1	101.247	98.888	102.121	101.309	103.379	102.015	98.851	103.617
17:50	MP93407-B1	100.434	96.589	100.555	99.416	101.986	101.655	98.458	102.497
17:54	MP93407-B1	100.568	97.732	99.712	99.95	101.759	101.778	99.065	101.824
17:59	MP93407-S1	98.984	95.517	98.415	98.845	101.552	102.85	99.282	101.718
18:03	MP93407-S1	100.061	96.364	98.98	100.152	100.428	102.269	100.112	101.581
18:07	MP93407-S2	99.671	96.061	99.659	100.457	101.845	103.674	99.83	102.836
18:12	MP93407-S2	101.098	97.036	100.738	100.791	102.389	103.901	99.754	103.144
18:16	ZZZZZZ	101.232	98.244	100.779	99.59	102.242	101.845	97.712	103.041
18:21	JC19016-17	100.202	96.125	101.635	101.787	103.092	103.234	98.921	103.932
18:25	MA39295-CCVA10	100.174	96.475	100.292	100.028	104.452	103.074	99.005	104.798
18:30	MA39295-CCB10	102.41	98.058	100.897	100.682	102.866	102.878	98.356	104.082
18:34	ZZZZZZ	102.03	97.887	102.067	101.966	104.097	103.941	100.5	104.715
18:38	ZZZZZZ	99.19	95.347	100.999	100.674	103.282	102.425	99.044	104.225
18:43	ZZZZZZ	102.605	101.763	102.182	101.963	104.664	104.439	102.645	105.367
18:47	ZZZZZZ	100.658	97.401	100.958	100.356	104.139	103.676	100.655	104.916
18:52	ZZZZZZ	101.321	98.764	100.505	101.715	103.012	103.597	100.678	103.471
18:56	ZZZZZZ	100.525	97.195	102.082	100.797	104.434	103.238	100.418	105.287
19:01	ZZZZZZ	98.483	93.975	99.303	99.595	102.312	102.985	98.393	103.282
19:05	ZZZZZZ	103.682	100.523	102.897	103.693	104.876	105.525	101.267	105.048
19:09	MA39295-CCVA11	102.38	98.274	102.414	102.529	105.213	105.992	101.419	106.464
19:14	MA39295-CCB11	103.638	100.263	103.273	102.411	104.882	104.674	100.76	105.454

! = Outside limits.

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#9	Rhodium (103-2)	60-125 %	60-125 %
Istd#10	Rhodium (103-3)	60-125 %	60-125 %
Istd#11	Indium (115-1)	60-125 %	60-125 %
Istd#12	Indium (115-2)	60-125 %	60-125 %
Istd#13	Terbium (159-1)	60-125 %	60-125 %
Istd#14	Terbium (159-2)	60-125 %	60-125 %
Istd#15	Terbium (159-3)	60-125 %	60-125 %
Istd#16	Holmium (165-1)	60-125 %	60-125 %

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
09:17	MA39295-STD1	100	100	100
09:22	MA39295-STD2	100	100	100
09:26	MA39295-STD3	100	100	100
09:31	MA39295-STD4	100	100	100
09:35	MA39295-STD5	100.093	101.1	100.476
09:40	MA39295-STD6	99.536	99.981	100.454
09:44	MA39295-STD7	98.437	100.293	99.09
09:48	MA39295-STD8	98.668	100.48	99.924
09:53	MA39295-STD9	100.163	99.863	99.997
09:57	MA39295-STD10	99.753	97.976	98.922
10:02	MA39295-STD11	100.365	98.565	99.995
10:06	MA39295-STD12	101.277	99.132	99.138
10:11	MA39295-STD13	101.143	97.245	96.955
10:25	ZZZZZZ	102.225	101	101.835
10:30	MA39295-ICVA1	102.132	99.389	100.265
10:34	MA39295-ICV1	101.124	101.325	100.413
10:38	MA39295-ICB1	100.738	100.681	100.964
10:43	MA39295-CCVA1	102.157	100.236	100.001
10:47	MA39295-CCB1	102.645	101.949	102.21
10:52	MA39295-CRI1	101.458	101.761	101.192
10:56	ZZZZZZ	98.459	91.538	90.518
11:01	ZZZZZZ	98.262	92.403	90.794
11:05	ZZZZZZ	102.688	102.751	101.843
11:13	ZZZZZZ	97.726	92.162	90.94
11:18	ZZZZZZ	98.057	91.237	91.027
11:23	ZZZZZZ	104.03	103.181	102.803
11:27	ZZZZZZ	105.153	101.444	102.335
11:31	ZZZZZZ	103.376	102.755	102.425
11:36	ZZZZZZ	104.375	103.533	103.124
11:40	MA39295-ICSA1	99.66	92.591	92.001
11:45	MA39295-ICSAB1	99.909	92.799	91.833
11:49	ZZZZZZ	105.612	103.416	104.303
11:54	MA39295-CCVA2	106.661	102.117	102.51

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
11:58	MA39295-CCB2	104.81	103.885	103.773
12:04	ZZZZZZ	106.587	106.515	106.875
12:11	ZZZZZZ	107.772	106.469	106.045
12:15	ZZZZZZ	103.488	105.621	103.024
12:20	ZZZZZZ	105.407	106.229	104.874
12:24	ZZZZZZ	105.319	105.996	104.499
12:28	ZZZZZZ	105.052	107.021	103.772
12:34	ZZZZZZ	104.196	105.459	103.346
12:39	MA39295-CRI2	104.221	105.709	104.075
12:43	MA39295-CCVA3	104.469	103.433	101.13
12:47	MA39295-CCB3	103.298	105.263	101.605
12:52	MP93378-MB1	101.885	108.313	103.282
12:56	MP93378-B1	105.837	106.545	104.443
13:01	MP93378-B1	106.001	105.876	104.337
13:05	MP93378-S1	105.23	103.263	101.533
13:10	MP93378-S1	104.256	105.479	102.887
13:14	MP93378-S2	103.571	103.433	100.896
13:18	MP93378-S2	104.555	104.545	102.946
13:23	ZZZZZZ	104.078	106.686	102.831
13:27	FA33323-2	103.323	103.694	100.851
13:32	MA39295-CCVA4	104.594	103.997	101.757
13:36	MA39295-CCB4	103.68	105.739	103.082
13:41	FA33286-2	104.799	103.657	102.135
13:45	FA33286-3	105.073	104.056	102.514
13:49	ZZZZZZ	104.246	104.141	102.561
13:54	ZZZZZZ	103.571	103.055	101.338
13:58	ZZZZZZ	102.264	99.323	96.643
14:03	ZZZZZZ	104.546	103.368	101.834
14:07	ZZZZZZ	103.573	102.742	101.683
14:12	ZZZZZZ	102.047	99.132	96.6
14:16	ZZZZZZ	103.263	101.313	99.817
14:20	MA39295-CCVA5	103.732	101.687	99.275
14:25	MA39295-CCB5	102.81	104.704	102.056

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
14:29	MP93359-MB1	102.623	105.897	103.777
14:34	MP93359-B1	105.225	104.275	104.123
14:38	MP93359-B1	102.905	102.43	101.942
14:43	MP93359-S1	101.75	95.409	94.397
14:47	MP93359-S2	102.018	94.579	94.013
14:51	JC18650-23	100.878	94.608	93.132
14:56	ZZZZZZ	102.082	99.35	99.959
15:00	ZZZZZZ	102.364	99.644	99.126
15:05	ZZZZZZ	99.469	97.364	97.198
15:09	MA39295-CCVA6	101.488	97.59	97.969
15:13	MA39295-CCB6	101.353	100.704	100.684
15:18	MP93391-MB1	101.729	102.588	101.284
15:22	MP93391-B1	102.608	102.247	100.772
15:27	MP93391-S1	98.873	94.257	92.779
15:31	MP93391-S2	98.94	94.235	92.457
15:36	ZZZZZZ	100.081	99.176	98.333
15:40	JC18739-12	97.121	93.407	91.997
15:44	ZZZZZZ	94.657	85.231	84.449
15:49	ZZZZZZ	96.261	86.042	85.927
15:54	MA39295-CCVA7	103.266	96.317	99.623
15:58	MA39295-CCB7	99.73	95.201	98.462
16:02	MP93359-S1	101.123	93.473	95.349
16:07	MP93359-S2	103.068	95.127	96.937
16:11	ZZZZZZ	101.713	74.928	71.899
16:16	ZZZZZZ	105.483	104.806	103.13
16:20	ZZZZZZ	105.346	103.913	104.392
16:25	MP93391-B1	107.382	113.364	111.983
16:30	MP93391-S1	104.438	104.183	103.47
16:34	MP93391-S2	102.871	101.517	100.933
16:39	ZZZZZZ	102.067	101.048	100.954
16:43	MA39295-CCVA8	103.246	103.566	103.079
16:48	MA39295-CCB8	103.288	101.562	102.008
16:52	ZZZZZZ	102.282	95.361	95.564

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
16:57	ZZZZZZ	101.867	94.35	94.798
17:01	ZZZZZZ	100.584	92.387	92.826
17:05	ZZZZZZ	103.425	103.514	103.888
17:10	ZZZZZZ	100.409	94.305	93.597
17:14	ZZZZZZ	101.21	95.229	95.79
17:19	ZZZZZZ	101.263	95.326	94.267
17:23	ZZZZZZ	101.015	95.299	94.805
17:28	ZZZZZZ	104.941	105.665	104.427
17:32	ZZZZZZ	101.199	94.378	95.101
17:36	MA39295-CCVA9	103.846	102.976	102.549
17:41	MA39295-CCB9	102.661	102.715	100.647
17:45	MP93407-MB1	102.825	103.823	103.409
17:50	MP93407-B1	102.395	103.965	102.134
17:54	MP93407-B1	102.937	101.605	102.462
17:59	MP93407-S1	103.748	100.912	101.955
18:03	MP93407-S1	102.709	101.478	102.213
18:07	MP93407-S2	104.756	101.883	102.472
18:12	MP93407-S2	104.274	102.034	103.355
18:16	ZZZZZZ	102.034	101.175	101.029
18:21	JC19016-17	104.541	102.832	104.219
18:25	MA39295-CCVA10	104.142	101.876	100.6
18:30	MA39295-CCB10	102.615	101.525	102.025
18:34	ZZZZZZ	104.56	104.637	104.546
18:38	ZZZZZZ	103.079	102.561	101.582
18:43	ZZZZZZ	104.861	104.751	104.649
18:47	ZZZZZZ	104.77	103.422	103.012
18:52	ZZZZZZ	104.318	103.164	103.43
18:56	ZZZZZZ	103.513	103.12	101.955
19:01	ZZZZZZ	103.942	99.552	99.99
19:05	ZZZZZZ	105.381	105.21	106.02
19:09	MA39295-CCVA11	106.682	102.312	103.304
19:14	MA39295-CCB11	104.293	104.617	103.215

! = Outside limits.

INTERNAL STANDARD SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#17	Holmium (165-2)	60-125 %	60-125 %
Istd#18	Bismuth (209-1)	60-125 %	60-125 %
Istd#19	Bismuth (209-2)	60-125 %	60-125 %

11.1.1

11

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39295 Units: ug/l

Time:			10:38		10:47		11:58		12:47	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	25	.34								
Antimony	2.0	.12	-0.37	<2.0	-0.21	<2.0	-0.22	<2.0	-0.21	<2.0
Arsenic	0.50	.025	-0.012	<0.50	-0.010	<0.50	0.0094	<0.50	0.0082	<0.50
Barium	1.0	.011								
Beryllium	0.50	.004	0.00066	<0.50	0.013	<0.50	0.011	<0.50	0.015	<0.50
Boron	25	3.2								
Cadmium	0.50	.011	0.0092	<0.50	0.011	<0.50	0.018	<0.50	0.033	<0.50
Calcium	250	2.7								
Chromium	1.0	.016	0.013	<1.0	-0.00048	<1.0	-0.019	<1.0	-0.0031	<1.0
Cobalt	0.50	.003								
Copper	2.0	.1	0.054	<2.0	0.054	<2.0	0.11	<2.0	0.093	<2.0
Iron	25	.51	-0.025	<25	0.51	<25	1.5	<25	1.1	<25
Lead	0.50	.009	0.00084	<0.50	0.019	<0.50	0.017	<0.50	0.020	<0.50
Magnesium	250	.39								
Manganese	1.0	.02	0.0020	<1.0	0.010	<1.0	0.023	<1.0	0.019	<1.0
Molybdenum	1.0	.02								
Nickel	1.0	.025	-0.014	<1.0	-0.030	<1.0	0.0092	<1.0	-0.015	<1.0
Potassium	250	4.9								
Selenium	0.50	.031	0.0074	<0.50	0.021	<0.50	-0.0055	<0.50	0.023	<0.50
Silver	0.50	.019	0.0041	<0.50	0.017	<0.50	0.014	<0.50	0.011	<0.50
Sodium	250	8.7								
Strontium	5.0	.009								
Thallium	0.50	.016	0.0092	<0.50	0.051	<0.50	0.052	<0.50	0.048	<0.50
Tin	5.0	.019								
Titanium	1.0	.047								
Vanadium	1.0	.045								
Zinc	5.0	.11	-0.077	<5.0	-0.034	<5.0	-0.033	<5.0	0.40	<5.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39295 Units: ug/l

Time:			13:36		14:25	
Sample ID:			CCB4		CCB5	
Metal	RL	IDL	raw	final	raw	final
Aluminum	25	.34				
Antimony	2.0	.12	-0.15	<2.0	-0.22	<2.0
Arsenic	0.50	.025	0.033	<1.0	0.017	<1.0
Barium	1.0	.011				
Beryllium	0.50	.004	0.023	<0.50	0.019	<0.50
Boron	25	3.2				
Cadmium	0.50	.011	0.024	<0.50	0.0099	<0.50
Calcium	250	2.7				
Chromium	1.0	.016	0.032	<4.0	0.024	<4.0
Cobalt	0.50	.003				
Copper	2.0	.1	0.083	<4.0	0.078	<4.0
Iron	25	.51	1.4	<50	1.3	<50
Lead	0.50	.009	0.025	<0.50	0.020	<0.50
Magnesium	250	.39				
Manganese	1.0	.02	0.028	<1.0	0.023	<1.0
Molybdenum	1.0	.02				
Nickel	1.0	.025	-0.000048	<4.0	0.011	<4.0
Potassium	250	4.9				
Selenium	0.50	.031	0.049	<1.0	0.022	<1.0
Silver	0.50	.019	0.023	<2.0	0.013	<2.0
Sodium	250	8.7				
Strontium	5.0	.009				
Thallium	0.50	.016	0.069	<0.50	0.056	<0.50
Tin	5.0	.019				
Titanium	1.0	.047				
Vanadium	1.0	.045				
Zinc	5.0	.11	0.40	<10	0.41	<10

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		10:30			10:34			10:43	
Sample ID:	ICVA	ICVA1		ICV	ICV1		CCVA	CCVA1	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	60	60.9	101.5				50	52.7	105.4
Arsenic	60	56.7	94.5				50	48.6	97.2
Barium									
Beryllium	60	56.2	93.7				50	49.7	99.4
Boron									
Cadmium	60	55.5	92.5				50	48.3	96.6
Calcium									
Chromium	60	55.8	93.0				50	49.2	98.4
Cobalt									
Copper	60	55.3	92.2				50	48.4	96.8
Iron	5500	5260	95.6				5000	4950	99.0
Lead	60	57.4	95.7				50	49.7	99.4
Magnesium									
Manganese	60	56.3	93.8				50	48.8	97.6
Molybdenum									
Nickel	60	55.3	92.2				50	48.6	97.2
Potassium									
Selenium	60	56.2	93.7				50	50.0	100.0
Silver	60	58.1	96.8				50	48.0	96.0
Sodium									
Strontium									
Thallium	60	59.2	98.7				50	49.4	98.8
Tin									
Titanium									
Vanadium									
Zinc	60	54.7	91.2				50	47.9	95.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		11:54			12:43			13:32	
Sample ID:	CCVA	CCVA2		CCVA	CCVA3		CCVA	CCVA4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	52.5	105.0	50	53.3	106.6	50	53.0	106.0
Arsenic	50	50.2	100.4	50	48.0	96.0	50	48.4	96.8
Barium									
Beryllium	50	50.8	101.6	50	52.3	104.6	50	51.4	102.8
Boron									
Cadmium	50	49.2	98.4	50	49.1	98.2	50	50.3	100.6
Calcium									
Chromium	50	49.6	99.2	50	49.0	98.0	50	49.6	99.2
Cobalt									
Copper	50	48.7	97.4	50	48.3	96.6	50	48.9	97.8
Iron	5000	5020	100.4	5000	4920	98.4	5000	4980	99.6
Lead	50	50.0	100.0	50	50.4	100.8	50	50.7	101.4
Magnesium									
Manganese	50	49.7	99.4	50	48.3	96.6	50	48.3	96.6
Molybdenum									
Nickel	50	48.5	97.0	50	48.4	96.8	50	48.6	97.2
Potassium									
Selenium	50	49.7	99.4	50	49.3	98.6	50	49.4	98.8
Silver	50	48.0	96.0	50	48.8	97.6	50	48.4	96.8
Sodium									
Strontium									
Thallium	50	50.0	100.0	50	50.4	100.8	50	50.3	100.6
Tin									
Titanium									
Vanadium									
Zinc	50	48.6	97.2	50	47.2	94.4	50	47.9	95.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		14:20	
Sample ID:	CCVA	CCVA5	
Metal	True	Results	% Rec
Aluminum			
Antimony	50	52.3	104.6
Arsenic	50	48.0	96.0
Barium			
Beryllium	50	50.5	101.0
Boron			
Cadmium	50	49.6	99.2
Calcium			
Chromium	50	49.3	98.6
Cobalt			
Copper	50	48.6	97.2
Iron	5000	4910	98.2
Lead	50	50.2	100.4
Magnesium			
Manganese	50	48.2	96.4
Molybdenum			
Nickel	50	48.4	96.8
Potassium			
Selenium	50	48.7	97.4
Silver	50	47.7	95.4
Sodium			
Strontium			
Thallium	50	50.1	100.2
Tin			
Titanium			
Vanadium			
Zinc	50	47.0	94.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 70 to 130 % Recovery Run ID: MA39295 Units: ug/l

Time:			10:52		12:39	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	25	25				
Antimony	2.0	0.25	2.0	100.0	1.9	95.0
Arsenic	0.50	0.50	0.52	104.0	0.50	100.0
Barium	1.0	0.50				
Beryllium	0.50	0.25	0.50	100.0	0.51	102.0
Boron	25	2.5				
Cadmium	0.50	0.25	0.53	106.0	0.56	112.0
Calcium	250	125				
Chromium	1.0	2.0	1.0	100.0	1.0	100.0
Cobalt	0.50	0.25				
Copper	2.0	2.0	2.2	110.0	2.2	110.0
Iron	25	25	25.9	103.6	25.6	102.4
Lead	0.50	0.25	0.50	100.0	0.50	100.0
Magnesium	250	125				
Manganese	0.50	0.25	0.54	108.0	0.52	104.0
Molybdenum	1.0	0.50				
Nickel	1.0	2.0	1.1	110.0	0.98	98.0
Potassium	250	125				
Selenium	0.50	0.50	0.57	114.0	0.53	106.0
Silver	0.50	1.0	0.51	102.0	0.52	104.0
Sodium	250	125				
Strontium	5.0	0.50				
Thallium	0.50	0.25	0.48	96.0	0.48	96.0
Tin	5.0	0.50				
Titanium	1.0	0.50				
Vanadium	1.0	2.0				
Zinc	5.0	2.0	5.2	104.0	4.9	98.0

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA39295 Units: ug/l

Time:			11:40		11:45	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	82700	82.7	84300	84.3
Antimony			-0.22		-0.21	
Arsenic		20	0.15		18.8	94.0
Barium			0.20		0.22	
Beryllium			0.027		0.045	
Boron			1.9		1.6	
Cadmium		20	0.78		19.3	96.5
Calcium	100000	100000	91700	91.7	92700	92.7
Chromium		20	1.2		19.5	97.5
Cobalt		20	0.090		18.0	90.0
Copper		20	0.80		17.5	87.5
Iron	100000	100000	84100	84.1	85600	85.6
Lead			0.23		0.25	
Magnesium	100000	100000	87500	87.5	88200	88.2
Manganese		20	0.39		18.9	94.5
Molybdenum	2000	2000	1920	96.0	1940	97.0
Nickel		20	0.74		17.8	89.0
Potassium	100000	100000	96100	96.1	97200	97.2
Selenium		20	0.062		18.5	92.5
Silver		20	0.041		18.4	92.0
Sodium	100000	100000	90600	90.6	91500	91.5
Strontium	2000	2000	2200	110.0	2240	112.0
Thallium			0.019		0.030	
Tin	2000	2000	1910	95.5	2040	102.0
Titanium	2000	2000	1980	99.0	2000	100.0
Vanadium		20	0.25		20.6	103.0
Zinc		20	1.9		17.5	87.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93378
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.34	1.3		
Antimony	2.0	.12	.26	-0.15	<2.0
Arsenic	1.0	.025	.034	0.019	<1.0
Barium	1.0	.011	.028		
Beryllium	0.50	.004	.013	0.012	<0.50
Boron	50	3.2			
Cadmium	0.50	.011	.12	0.0065	<0.50
Calcium	250	2.7	3.7		
Chromium	4.0	.016	.1	0.14	<4.0
Cobalt	0.50	.003	.018		
Copper	4.0	.1	.14	0.49	<4.0
Iron	50	.51	2	4.9	<50
Lead	0.50	.009	.011	0.021	<0.50
Magnesium	250	.39	3.6		
Manganese	1.0	.02	.095	0.097	<1.0
Molybdenum	1.0	.02	.23		
Nickel	4.0	.025	.11	0.014	<4.0
Potassium	250	4.9	8.8		
Selenium	1.0	.031	.12	0.0078	<1.0
Silver	2.0	.019	.041	0.0022	<2.0
Sodium	250	8.7	2.5		
Strontium	5.0	.009	.015		
Thallium	0.50	.016	.013	0.011	<0.50
Tin	5.0	.019	.38		
Titanium	1.0	.047	.56		
Vanadium	4.0	.045	.2		
Zinc	10	.11	1.2	1.8	<10

Associated samples MP93378: FA33286-2, FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93378
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	FA33323-2 Original	MS	Spikelot MPXDW7	% Rec	QC Limits
Aluminum					
Antimony	0.0	104	100	104.0	70-130
Arsenic	0.067	92.9	100	92.8	70-130
Barium					
Beryllium	0.021	103	100	103.0	70-130
Boron					
Cadmium	0.017	95.3	100	95.3	70-130
Calcium					
Chromium	0.50	98.0	100	97.5	70-130
Cobalt					
Copper	1.1	94.2	100	93.1	70-130
Iron	1130	2880	2000	87.5	70-130
Lead	0.055	99.0	100	98.9	70-130
Magnesium					
Manganese	87.9	180	100	92.1	70-130
Molybdenum					
Nickel	0.18	93.3	100	93.1	70-130
Potassium					
Selenium	0.077	194	200	97.0	70-130
Silver	0.0	97.6	100	97.6	70-130
Sodium					
Strontium					
Thallium	0.027	99.4	100	99.4	70-130
Tin					
Titanium					
Vanadium					
Zinc	15.6	108	100	92.4	70-130

Associated samples MP93378: FA33286-2, FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93378
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	FA33323-2 Original	MSD	Spikelot MPXDW7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	104	100	104.0	0.0	10
Arsenic	0.067	91.5	100	91.4	1.5	10
Barium						
Beryllium	0.021	102	100	102.0	1.0	10
Boron						
Cadmium	0.017	94.3	100	94.3	1.1	10
Calcium						
Chromium	0.50	96.4	100	95.9	1.6	10
Cobalt						
Copper	1.1	94.1	100	93.0	0.1	11
Iron	1130	2840	2000	85.5	1.4	10
Lead	0.055	96.5	100	96.4	2.6	10
Magnesium						
Manganese	87.9	176	100	88.1	2.2	10
Molybdenum						
Nickel	0.18	92.9	100	92.7	0.4	10
Potassium						
Selenium	0.077	193	200	96.5	0.5	10
Silver	0.0	96.5	100	96.5	1.1	10
Sodium						
Strontium						
Thallium	0.027	96.2	100	96.2	3.3	10
Tin						
Titanium						
Vanadium						
Zinc	15.6	103	100	87.4	4.7	10

Associated samples MP93378: FA33286-2, FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33286
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93378
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	BSP Result	Spikelot MPXDW7	% Rec	QC Limits
Aluminum				
Antimony	105	100	105.0	85-115
Arsenic	92.7	100	92.7	85-115
Barium				
Beryllium	101	100	101.0	85-115
Boron				
Cadmium	95.9	100	95.9	85-115
Calcium				
Chromium	98.0	100	98.0	85-115
Cobalt				
Copper	96.0	100	96.0	85-115
Iron	1810	2000	90.5	85-115
Lead	97.8	100	97.8	85-115
Magnesium				
Manganese	95.9	100	95.9	85-115
Molybdenum				
Nickel	95.8	100	95.8	85-115
Potassium				
Selenium	187	200	93.5	85-115
Silver	98.1	100	98.1	85-115
Sodium				
Strontium				
Thallium	97.5	100	97.5	85-115
Tin				
Titanium				
Vanadium				
Zinc	90.9	100	90.9	85-115

Associated samples MP93378: FA33286-2, FA33286-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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e-Hardcopy 2.0
Automated Report

Technical Report for

AECOM, INC.

Atlantic Refuse Dump; NC

60494460

SGS Accutest Job Number: FA33324

Sampling Date: 04/21/16

Report to:

AECOM, INC.
1600 Perimeter Park Dr Suite 400
Morrisville, NC 27560
ncchemists@urs.com

ATTN: Martha Meyers-Lee

Total number of pages in report: **199**

Norm Farmer
Technical Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Heather Wandrey 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001) DoD ELAP (L-A-B L2229), CA (2937), TX (T104704404), PA (68-03573), VA (460177), AK, AR, GA, KY, MA, NV, OK, UT, WA

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Test results relate only to samples analyzed.

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SGS Accutest

Sample Summary

AECOM, INC.

Job No: FA33324

Atlantic Refuse Dump; NC
Project No: 60494460

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA33324-1	04/21/16	00:00	JAJC	04/22/16	AQ	Trip Blank Water	TRIP BLANK
FA33324-2	04/21/16	09:20	JAJC	04/22/16	AQ	Ground Water	WELL-289 ATLANTIC
FA33324-3	04/21/16	10:05	JAJC	04/22/16	AQ	Ground Water	WELL-267 ATLANTIC
FA33324-4	04/21/16	10:45	JAJC	04/22/16	AQ	Ground Water	WELL-144 ATLANTIC

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FA33324

Site: Atlantic Refuse Dump; NC **Report Date** 5/6/2016 11:11:45 AM

3 Samples and 1 Trip Blank were collected on 04/21/2016 and were received at SGS Accutest Southeast (SASE) on 04/22/2016 properly preserved, at 3 Deg. C and intact. These Samples received an SASE job number of FA33324. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VB4575

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33377-1MS, FA33377-1MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Trichloroethylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Volatiles by GCMS By Method SW846 8260B BY SIM

Matrix: AQ **Batch ID:** VZ1528

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33427-3AMS, FA33427-3AMSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP60181

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33273-1MS, FA33273-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, Caprolactam, Di-n-octyl Phthalate, Indeno(1,2,3-cd)pyrene, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, Caprolactam, Di-n-octyl Phthalate, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Pentachlorophenol are outside control limits. Probable cause is due to matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for Naphthalene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for 2,3,4,6-Tetrachlorophenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 4,6-Dinitro-o-cresol, 4-Nitrophenol, Benzaldehyde, bis(2-Ethylhexyl)phthalate, Caprolactam, Di-n-octyl Phthalate, Dibenzo(a,h)anthracene, Hexachlorocyclopentadiene, Indeno(1,2,3-cd)pyrene, Naphthalene, Pentachlorophenol are outside control limits for sample OP60181-MSD. Probable cause is due to sample non-homogeneity.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** N: MP93359

FA33324-2, 3, 4 for Antimony: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Arsenic: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Beryllium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Cadmium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Chromium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Copper: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** N: MP93359

FA33324-2, 3, 4 for Iron: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Lead: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Manganese: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Nickel: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Selenium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Silver: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33324-2, 3, 4 for Zinc: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method EPA 245.1

Matrix: AQ **Batch ID:** MP30280

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33286-3MS, FA33286-3MSD, FA33286-3SDL, FA33286-3DUP were used as the QC samples for metals.

RPD(s) for Duplicate for Mercury are outside control limits for sample MP30280-D1. RPD acceptable due to low duplicate and sample concentrations.

RPD(s) for Serial Dilution for Mercury are outside control limits for sample MP30280-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix: AQ **Batch ID:** MP30308

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33324-3DUP, FA33324-3MS, FA33324-3MSD, FA33324-3SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP27828

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33324-4MS, FA33324-4MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.

Matrix Spike Recovery(s) for Nitrogen, Nitrate are outside control limits. Spike recovery indicates possible matrix interference. For method performance in a clean matrix, refer to Blank Spike.

Wet Chemistry By Method EPA 350.1

Matrix: AQ **Batch ID:** GP27897

All samples were prepped within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33362-1MS, FA33362-1MSD were used as the QC samples for Nitrogen, Ammonia.

SGS Accutest (SASE) certifies that this report meets the project requirements for analytical data produced for the samples as received at SASE and as stated on the COC. SASE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SASE Quality Manual except as noted above. This report is to be used in its entirety. SASE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

Lovelie Metzgar

Date: May 6, 2016

Lovelie Metzgar, QA Officer

Laboratory Report Glossary

Client Sample ID: Normally refers to a point of collection – a monitoring well, discharge outfall, treatment facility intake, soil core grid location and depth, or any other identification client assigns to a sample.
Lab Sample ID: Letter prefix identifies one of Accutest laboratories and the rest is a consecutive number of the job (or SDG) received. Number after dash is a sample number and it is unequivocally linked in the LIMS to the Client Sample ID (see above).
Matrix (Matrix Code):

- **AQ- Water Samples**
- **SO- Soil/Solid Samples**
- **LIQ- Non-Water Liquid Samples**
- **OIL- Oil Samples**

Matrix Type:

- **SW for Surface Water**
- **SO for Soil/Sediment**
- **GW for Ground Water**
- **DW for Drinking Water**

All available definitions are found on Chain of Custody form.

Deg. C: Degrees Celsius, measurement of temperature.
Method: Analytical and preparation methods used for the analysis, with the version or revision identified.
Date Sampled: This information is entered from Chain of Custody at the time of login for every sample.
Date Received: When the job was received by Accutest Laboratories.
Percent Solids: Applicable only to SO matrix. For other matrices this field defaults to "n/a".
Run #: Provides information how many attempts were made in the analysis of the sample. LIMS can merge information from several attempts and lists all of them, including dilution, confirmation, etc. #1 designation is assigned to the analytical run with majority of analytes reported from it, not necessarily in chronological order.
File ID: Actual instrument data acquisition file that produced the final result. Letter prefix identifies the instrument; the rest is a consecutive injection number for that instrument.
DF (Dilution Factor): Most common reasons are either to fit into the range of the calibration, or alleviate matrix interference. DF other than 1 are accompanied with a comment at the end of the sample report.
Analyzed: Date of analysis.
By: Field Technician or Analyst uniquely identified by initials.
Prep Date: Date of sample preparation. If hold time is 72 hours or less, time of preparation is also indicated.
Prep Batch: Letter prefix OP followed by a consecutive number. For VOC analysis preparation happens at the time of analysis, therefore analytical batch and preparation batch are the same. Size of prep batch is limited to 20 field samples of similar matrix and the entire batch should be completed within 12 hour time.
Analytical Batch: Letter prefix identifies the instrument and is followed by a consecutive number. Not limited by a number of samples.
Initial Weight or Initial Volume: Raw sample size used for preparation.
Final Volume: Final volume of extract. If different from method-prescribed volume, reasons are reflected in the comments at the end of the report form.
CAS Number: *Chemical Abstracts Service* (CAS), a division of the *American Chemical Society*.
Compound: Most commonly used names of chemical compounds.
Result: Depending on project requirements, this field could be set up as text, such as ND (for Non Detected) or a number. The number may be reported with a qualifier.
MDL (Method Detection Limit): This value is defined as 99% probability that analyte above this concentration is positively (qualitatively) identified.
RL (Reporting Limit): This value is supported by the low calibration standard and defines lowest point of quantitative identification of analyte.
DL (Detection Limit): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration with 99% confidence. At the DL, the false positive rate (Type I error) is 1%.
LOD (Limit of Detection): The smallest concentration of a substance that must be present in a sample in order to be detected at the DL with 99% confidence. At the LOD, the false negative rate (Type II error) is 1%.
LOQ (Limit of Quantitation): The smallest concentration that produces a quantitative result with known and recorded precision and bias.

Units: ug/l (micrograms per liter) for aqueous samples and ug/kg (micrograms per kilogram) for solids (or ppb – parts per billion). The units could be set according to project or state-specific requirements, such as mg/l (milligrams per liter), or mg/kg (milligrams per kilogram).
Qualifiers (Q): Definitions of most often used qualifiers are found at the bottom of each result page. Applied depending on the program – state-specific (Florida A.C. 62-160), CLP-like, AFCEE, DOD QSM, etc.
Tentatively Identified Compound (TIC): Used when client requests a search for analytes that are not part of instrument calibration. Unknown peaks are compared with published spectral libraries and best match is reported as TIC.
Surrogate (S1, S2, S3 etc.): are positive controls that are used in most organics methods to ascertain preparation efficiency and matrix effect in individual samples. These chemicals mimic common method constituents but are unlikely to be found in real samples. Recoveries can be reported for every analytical run used in the analysis.
IS (Internal Standard IS1, IS2, IS3, etc): quantitative reference used to adjust for instrument performance fluctuations.
Area (of chromatographic peak): signal intensity directly related to compound concentration.
RT (Retention Time): time required for analyte to traverse the length of analytical column. Used for compound identification.
ICAL (Initial Calibration): Must pass calibration criteria established by method.
ICV (Independent Calibration Verification): Used to verify ICAL preparation and concentration of calibration points.
CCV (Continuing Calibration Verification): Used to assess calibration status of the instrument and must recover within established acceptance criteria.
MB (Method Blank): is a negative batch control. MB is an aliquot of matrix free of analyte of interest (either ASTM Type II water or appropriate solid substance) that is put through all the preparation and possible clean-up steps alongside investigative (field) samples. MB should be free of interferences above a set level.
BS (Blank Spike, Laboratory Fortified Blank - LFB, Laboratory Control Sample - LCS): is a positive control used to determine method accuracy - in clean matrix, i.e. matrix free of analytes of interest.
BSD (Blank Spike Duplicate): Used to assess recovery reproducibility - method precision – per analytical method requirement. %Recovery and Relative Percent Difference (%RPD) are compared with the established acceptance criteria.
MS and/or **MSD (Matrix Spike and Matrix Spike Duplicate):** positive batch controls which indicate matrix effect on the precision and accuracy of the method in given sample matrix. Results are expressed in %Recovery and Relative Percent Difference (%RPD), and compared with the established acceptance criteria.
DUP (Matrix Duplicate): Positive batch control, a way of assessing laboratory's precision; however, the composition of the samples is unknown and may not yield meaningful results.
REC (Recovery in Percent): expresses method accuracy.
RPD (Relative Percent Difference): expresses method precision.
Limits: Recovery limits for surrogates and spikes

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Accutest Laboratories Southeast, Inc.	**Job No**	FA33324
Site:	URSNCM: Atlantic Refuse Dump; NC	**Report Date**	5/5/2016 11:45:58 AM

On 04/26/2016, 3 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 4.1 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of FA33324 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** MP93359

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC18650-23MS, JC18650-23MSD were used as the QC samples for metals.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Summary of Hits

Job Number: FA33324
Account: AECOM, INC.
Project: Atlantic Refuse Dump; NC
Collected: 04/21/16

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA33324-1	**TRIP BLANK**					
Toluene		0.00024 J	0.0010	0.00020	mg/l	SW846 8260B
FA33324-2	**WELL-289 ATLANTIC**					
Arsenic [a]		0.000067 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000016 J	0.00050	0.000013	mg/l	EPA 200.8
Chromium [a]		0.00012 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.00084 J	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		1.80	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00011 J	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0468	0.0010	0.000095	mg/l	EPA 200.8
Mercury		0.000030 J	0.00050	0.000030	mg/l	EPA 245.1
Nickel [a]		0.00012 J	0.0040	0.00011	mg/l	EPA 200.8
Thallium [a]		0.000023 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.0628	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Ammonia		0.19	0.10	0.030	mg/l	EPA 350.1
FA33324-3	**WELL-267 ATLANTIC**					
Arsenic [a]		0.000046 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000014 J	0.00050	0.000013	mg/l	EPA 200.8
Chromium [a]		0.00015 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0116	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		1.18	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00067	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0436	0.0010	0.000095	mg/l	EPA 200.8
Nickel [a]		0.00038 J	0.0040	0.00011	mg/l	EPA 200.8
Thallium [a]		0.000013 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.322	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Ammonia		0.18	0.10	0.030	mg/l	EPA 350.1
FA33324-4	**WELL-144 ATLANTIC**					
Chromium [a]		0.00013 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0025 J	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.0058 J	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00023 J	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.00022 J	0.0010	0.000095	mg/l	EPA 200.8
Zinc [a]		0.0143	0.010	0.0012	mg/l	EPA 200.8
Sulfate		0.69 J	2.0	0.60	mg/l	EPA 300/SW846 9056A

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33324-1	**Date Sampled:**	04/21/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/22/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40643.D	1	04/29/16	MM	n/a	n/a	VZ1528
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	111%		74-125%
2037-26-5	Toluene-D8	110%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33324-1	**Date Sampled:**	04/21/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B113371.D	1	04/29/16	WV	n/a	n/a	VB4575
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	FA33324-1	**Date Sampled:**	04/21/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	0.00024	0.0010	0.00020	mg/l	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	113%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40644.D	1	04/29/16	MM	n/a	n/a	VZ1528
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		74-125%
2037-26-5	Toluene-D8	109%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B113374.D	1	04/29/16	WV	n/a	n/a	VB4575
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	114%		79-125%
2037-26-5	Toluene-D8	98%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X046055.D	1	04/28/16	MV	04/23/16	OP60181	SX2039
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0094	0.0024	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0047	0.00070	mg/l	
95-57-8	2-Chlorophenol	ND	0.0047	0.00060	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0047	0.00060	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0047	0.00066	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.024	0.0047	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0094	0.0019	mg/l	
95-48-7	2-Methylphenol	ND	0.0047	0.00055	mg/l	
	3&4-Methylphenol	ND	0.0047	0.00099	mg/l	
88-75-5	2-Nitrophenol	ND	0.0047	0.00058	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	0.0047	mg/l	
87-86-5	Pentachlorophenol	ND	0.024	0.0047	mg/l	
108-95-2	Phenol	ND	0.0047	0.00047	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0047	0.00086	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0047	0.00094	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0047	0.00081	mg/l	
83-32-9	Acenaphthene	ND	0.0047	0.00053	mg/l	
208-96-8	Acenaphthylene	ND	0.0047	0.00054	mg/l	
98-86-2	Acetophenone	ND	0.0047	0.00067	mg/l	
120-12-7	Anthracene	ND	0.0047	0.00058	mg/l	
1912-24-9	Atrazine	ND	0.0047	0.00060	mg/l	
100-52-7	Benzaldehyde	ND	0.024	0.0047	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0047	0.00047	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0047	0.00047	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0047	0.00051	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0047	0.00047	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0047	0.00059	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0047	0.00047	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0047	0.00047	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0047	0.00094	mg/l	
86-74-8	Carbazole	ND	0.0047	0.00053	mg/l	
106-47-8	4-Chloroaniline	ND	0.0047	0.00067	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0047	0.00064	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0047	0.00065	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0047	0.00065	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0047	0.00047	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0047	0.00055	mg/l	
218-01-9	Chrysene	ND	0.0047	0.00050	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0047	0.00072	mg/l	
132-64-9	Dibenzofuran	ND	0.0047	0.00063	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0047	0.00047	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0047	0.00094	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0047	0.00094	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0047	0.00094	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0047	0.00094	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0047	0.00059	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0047	0.00055	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0047	0.00094	mg/l	
206-44-0	Fluoranthene	ND	0.0047	0.00047	mg/l	
86-73-7	Fluorene	ND	0.0047	0.00061	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0047	0.00052	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0047	0.00048	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0047	0.00094	mg/l	
67-72-1	Hexachloroethane	ND	0.0047	0.00048	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0047	0.00047	mg/l	
78-59-1	Isophorone	ND	0.0047	0.00063	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0047	0.00053	mg/l	
91-20-3	Naphthalene	ND	0.0047	0.00047	mg/l	
88-74-4	2-Nitroaniline	ND	0.0047	0.00066	mg/l	
99-09-2	3-Nitroaniline	ND	0.0047	0.00071	mg/l	
100-01-6	4-Nitroaniline	ND	0.0047	0.00068	mg/l	
98-95-3	Nitrobenzene	ND	0.0047	0.00062	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0047	0.00055	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0047	0.00066	mg/l	
85-01-8	Phenanthrene	ND	0.0047	0.00056	mg/l	
129-00-0	Pyrene	ND	0.0047	0.00052	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0047	0.00047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		14-67%
4165-62-2	Phenol-d5	29%		10-50%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	75%		33-118%
4165-60-0	Nitrobenzene-d5	77%		42-108%
321-60-8	2-Fluorobiphenyl	74%		40-106%
1718-51-0	Terphenyl-d14	90%		39-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	ND	0.0020	0.00026	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.000067 J	0.0010	0.000034	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000016 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00012 J	0.0040	0.00010	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.00084 J	0.0040	0.00014	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	1.80	0.050	0.0020	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00011 J	0.00050	0.000011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0468	0.0010	0.000095	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	0.000030 J	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.00012 J	0.0040	0.00011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000023 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0628	0.010	0.0012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39295
(3) Prep QC Batch: MP30280
(4) Prep QC Batch: N:MP93359

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-289 ATLANTIC		
Lab Sample ID:	FA33324-2	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.19	0.10	0.030	mg/l	1	05/05/16 14:47	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/22/16 16:55	LJ	EPA 300/SW846 9056A
Sulfate	ND	2.0	0.60	mg/l	1	04/22/16 16:55	LJ	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40645.D	1	04/29/16	MM	n/a	n/a	VZ1528
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		74-125%
2037-26-5	Toluene-D8	109%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B113375.D	1	04/29/16	WV	n/a	n/a	VB4575
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		83-118%
17060-07-0	1,2-Dichloroethane-D4	114%		79-125%
2037-26-5	Toluene-D8	103%		85-112%
460-00-4	4-Bromofluorobenzene	102%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X046056.D	1	04/28/16	MV	04/23/16	OP60181	SX2039
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0096	0.0024	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0048	0.00071	mg/l	
95-57-8	2-Chlorophenol	ND	0.0048	0.00061	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	0.00061	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	0.00067	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.024	0.0048	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0096	0.0019	mg/l	
95-48-7	2-Methylphenol	ND	0.0048	0.00056	mg/l	
	3&4-Methylphenol	ND	0.0048	0.0010	mg/l	
88-75-5	2-Nitrophenol	ND	0.0048	0.00059	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	0.0048	mg/l	
87-86-5	Pentachlorophenol	ND	0.024	0.0048	mg/l	
108-95-2	Phenol	ND	0.0048	0.00048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	0.00087	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	0.00096	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	0.00083	mg/l	
83-32-9	Acenaphthene	ND	0.0048	0.00054	mg/l	
208-96-8	Acenaphthylene	ND	0.0048	0.00055	mg/l	
98-86-2	Acetophenone	ND	0.0048	0.00069	mg/l	
120-12-7	Anthracene	ND	0.0048	0.00059	mg/l	
1912-24-9	Atrazine	ND	0.0048	0.00061	mg/l	
100-52-7	Benzaldehyde	ND	0.024	0.0048	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0048	0.00048	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0048	0.00048	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0048	0.00052	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0048	0.00048	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0048	0.00061	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0048	0.00048	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0048	0.00048	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	0.00096	mg/l	
86-74-8	Carbazole	ND	0.0048	0.00054	mg/l	
106-47-8	4-Chloroaniline	ND	0.0048	0.00069	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0048	0.00065	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	0.00067	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0048	0.00066	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	0.00048	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0048	0.00056	mg/l	
218-01-9	Chrysene	ND	0.0048	0.00051	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0048	0.00073	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	0.00064	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0048	0.00048	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	0.00096	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	0.00096	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0048	0.00096	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	0.00096	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0048	0.00061	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	0.00056	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	0.00096	mg/l	
206-44-0	Fluoranthene	ND	0.0048	0.00048	mg/l	
86-73-7	Fluorene	ND	0.0048	0.00063	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0048	0.00052	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0048	0.00049	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0048	0.00096	mg/l	
67-72-1	Hexachloroethane	ND	0.0048	0.00049	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0048	0.00048	mg/l	
78-59-1	Isophorone	ND	0.0048	0.00064	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0048	0.00054	mg/l	
91-20-3	Naphthalene	ND	0.0048	0.00048	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	0.00068	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	0.00072	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	0.00069	mg/l	
98-95-3	Nitrobenzene	ND	0.0048	0.00063	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0048	0.00056	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	0.00067	mg/l	
85-01-8	Phenanthrene	ND	0.0048	0.00057	mg/l	
129-00-0	Pyrene	ND	0.0048	0.00053	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0048	0.00048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	38%		14-67%
4165-62-2	Phenol-d5	26%		10-50%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	67%		33-118%
4165-60-0	Nitrobenzene-d5	72%		42-108%
321-60-8	2-Fluorobiphenyl	70%		40-106%
1718-51-0	Terphenyl-d14	83%		39-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: WELL-267 ATLANTIC
Lab Sample ID: FA33324-3
Matrix: AQ - Ground Water
Project: Atlantic Refuse Dump; NC

Date Sampled: 04/21/16
Date Received: 04/22/16
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	ND	0.0020	0.00026	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.000046 J	0.0010	0.000034	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000014 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00015 J	0.0040	0.00010	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0116	0.0040	0.00014	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	1.18	0.050	0.0020	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00067	0.00050	0.000011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0436	0.0010	0.000095	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	05/03/16	05/03/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.00038 J	0.0040	0.00011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000013 J	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.322	0.010	0.0012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13131
(2) Instrument QC Batch: N:MA39295
(3) Prep QC Batch: MP30308
(4) Prep QC Batch: N:MP93359

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-267 ATLANTIC		
Lab Sample ID:	FA33324-3	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.18	0.10	0.030	mg/l	1	05/05/16 14:48	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/22/16 15:07	LJ	EPA 300/SW846 9056A
Sulfate	ND	2.0	0.60	mg/l	1	04/22/16 15:07	LJ	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40646.D	1	04/29/16	MM	n/a	n/a	VZ1528
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	0.0010	0.00030	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	112%		74-125%
2037-26-5	Toluene-D8	110%		88-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B113376.D	1	04/29/16	WV	n/a	n/a	VB4575
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.025	0.010	mg/l	
71-43-2	Benzene	ND	0.0010	0.00020	mg/l	
74-97-5	Bromochloromethane	ND	0.0010	0.00042	mg/l	
75-27-4	Bromodichloromethane	ND	0.0010	0.00024	mg/l	
75-25-2	Bromoform	ND	0.0010	0.00046	mg/l	
78-93-3	2-Butanone (MEK)	ND	0.0050	0.0026	mg/l	
75-15-0	Carbon Disulfide	ND	0.0020	0.00023	mg/l	
56-23-5	Carbon Tetrachloride	ND	0.0010	0.00030	mg/l	
108-90-7	Chlorobenzene	ND	0.0010	0.00020	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00063	mg/l	
67-66-3	Chloroform	ND	0.0010	0.00030	mg/l	
110-82-7	Cyclohexane	ND	0.0010	0.00026	mg/l	
124-48-1	Dibromochloromethane	ND	0.0010	0.00026	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0050	0.00081	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00033	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.00050	mg/l	
95-50-1	1,2-Dichlorobenzene	ND	0.0010	0.00027	mg/l	
541-73-1	1,3-Dichlorobenzene	ND	0.0010	0.00024	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	0.0010	0.00039	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00026	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00028	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0010	0.00022	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0010	0.00031	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.0010	0.00033	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0010	0.00034	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0010	0.00026	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0010	0.00025	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00025	mg/l	
76-13-1	Freon 113	ND	0.0010	0.00032	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0020	mg/l	
98-82-8	Isopropylbenzene	ND	0.0010	0.00033	mg/l	
79-20-9	Methyl Acetate	ND	0.020	0.0050	mg/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

VOA TCL List (SOM02.0)

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl Bromide	ND	0.0020	0.00050	mg/l	
74-87-3	Methyl Chloride	ND	0.0020	0.00050	mg/l	
108-87-2	Methylcyclohexane	ND	0.0010	0.00023	mg/l	
75-09-2	Methylene Chloride	ND	0.0050	0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0050	0.0014	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	0.00020	mg/l	
100-42-5	Styrene	ND	0.0010	0.00024	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0010	0.00033	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0010	0.00030	mg/l	
108-88-3	Toluene	ND	0.0010	0.00020	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.00051	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00050	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00037	mg/l	
79-01-6	Trichloroethylene	ND	0.0010	0.00027	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.00050	mg/l	
75-01-4	Vinyl Chloride	ND	0.0010	0.00031	mg/l	
	m,p-Xylene	ND	0.0020	0.00030	mg/l	
95-47-6	o-Xylene	ND	0.0010	0.00026	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		83-118%
17060-07-0	1,2-Dichloroethane-D4	114%		79-125%
2037-26-5	Toluene-D8	95%		85-112%
460-00-4	4-Bromofluorobenzene	105%		83-118%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X046057.D	1	04/28/16	MV	04/23/16	OP60181	SX2039
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0096	0.0024	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0048	0.00071	mg/l	
95-57-8	2-Chlorophenol	ND	0.0048	0.00061	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0048	0.00061	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0048	0.00067	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.024	0.0048	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0096	0.0019	mg/l	
95-48-7	2-Methylphenol	ND	0.0048	0.00056	mg/l	
	3&4-Methylphenol	ND	0.0048	0.0010	mg/l	
88-75-5	2-Nitrophenol	ND	0.0048	0.00059	mg/l	
100-02-7	4-Nitrophenol	ND	0.024	0.0048	mg/l	
87-86-5	Pentachlorophenol	ND	0.024	0.0048	mg/l	
108-95-2	Phenol	ND	0.0048	0.00048	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0048	0.00087	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0048	0.00096	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0048	0.00083	mg/l	
83-32-9	Acenaphthene	ND	0.0048	0.00054	mg/l	
208-96-8	Acenaphthylene	ND	0.0048	0.00055	mg/l	
98-86-2	Acetophenone	ND	0.0048	0.00069	mg/l	
120-12-7	Anthracene	ND	0.0048	0.00059	mg/l	
1912-24-9	Atrazine	ND	0.0048	0.00061	mg/l	
100-52-7	Benzaldehyde	ND	0.024	0.0048	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0048	0.00048	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0048	0.00048	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0048	0.00052	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0048	0.00048	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0048	0.00061	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0048	0.00048	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0048	0.00048	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0048	0.00096	mg/l	
86-74-8	Carbazole	ND	0.0048	0.00054	mg/l	
106-47-8	4-Chloroaniline	ND	0.0048	0.00069	mg/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0048	0.00065	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0048	0.00067	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0048	0.00066	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0048	0.00048	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0048	0.00056	mg/l	
218-01-9	Chrysene	ND	0.0048	0.00051	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0048	0.00073	mg/l	
132-64-9	Dibenzofuran	ND	0.0048	0.00064	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0048	0.00048	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0048	0.00096	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0048	0.00096	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0048	0.00096	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0048	0.00096	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0048	0.00061	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0048	0.00056	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0048	0.00096	mg/l	
206-44-0	Fluoranthene	ND	0.0048	0.00048	mg/l	
86-73-7	Fluorene	ND	0.0048	0.00063	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0048	0.00052	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0048	0.00049	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0048	0.00096	mg/l	
67-72-1	Hexachloroethane	ND	0.0048	0.00049	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0048	0.00048	mg/l	
78-59-1	Isophorone	ND	0.0048	0.00064	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0048	0.00054	mg/l	
91-20-3	Naphthalene	ND	0.0048	0.00048	mg/l	
88-74-4	2-Nitroaniline	ND	0.0048	0.00068	mg/l	
99-09-2	3-Nitroaniline	ND	0.0048	0.00072	mg/l	
100-01-6	4-Nitroaniline	ND	0.0048	0.00069	mg/l	
98-95-3	Nitrobenzene	ND	0.0048	0.00063	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0048	0.00056	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0048	0.00067	mg/l	
85-01-8	Phenanthrene	ND	0.0048	0.00057	mg/l	
129-00-0	Pyrene	ND	0.0048	0.00053	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0048	0.00048	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	42%		14-67%
4165-62-2	Phenol-d5	30%		10-50%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Atlantic Refuse Dump; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	77%		33-118%
4165-60-0	Nitrobenzene-d5	82%		42-108%
321-60-8	2-Fluorobiphenyl	81%		40-106%
1718-51-0	Terphenyl-d14	91%		39-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	ND	0.0020	0.00026	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	ND	0.0010	0.000034	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	ND	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00013 J	0.0040	0.00010	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0025 J	0.0040	0.00014	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.0058 J	0.050	0.0020	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00023 J	0.00050	0.000011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.00022 J	0.0010	0.000095	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	05/03/16	05/03/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	ND	0.0040	0.00011	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	ND	0.00050	0.000013	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0143	0.010	0.0012	mg/l	1	04/27/16	04/29/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13131
(2) Instrument QC Batch: N:MA39295
(3) Prep QC Batch: MP30308
(4) Prep QC Batch: N:MP93359

(a) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit
ND = Not detected
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	WELL-144 ATLANTIC		
Lab Sample ID:	FA33324-4	**Date Sampled:**	04/21/16
Matrix:	AQ - Ground Water	**Date Received:**	04/22/16
		Percent Solids:	n/a
Project:	Atlantic Refuse Dump; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	ND	0.10	0.030	mg/l	1	05/05/16 14:49	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/22/16 15:25	LJ	EPA 300/SW846 9056A
Sulfate	0.69 J	2.0	0.60	mg/l	1	04/22/16 15:25	LJ	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

ND = Not detected
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Chain of Custody
- Analyst Legend

Parameter Certification Exceptions

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

The following parameters included in this report are exceptions to NELAC certification.
The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Freon 113	76-13-1	**SW846 8260B**	AQ	Certified by SOP MS005

Accutest Laboratories Southeast
Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA33324 PAGE 1 OF 1

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: URS Corporation
Address: 1600 Perimeter Park Dr
City: Morrisville State: NC Zip: 27560
Project Contact: Carlin Skinner E-mail:
Phone#: 919-461-1100
Sampler(s) Name(s) (Printed): JAbbassi ; J Corbin

Project Information

Project Name: Atlantic Refuse Dump
Street:
City: State:
Project #: 66494460
Fax #:
Client Purchase Order #:

Analytical Information

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaHSO4/ZnAc	5X WATER	MeOH	VOCs (8260B)	VOCs (8260B) Sim	SVOCs (8270D)	Metals (200.8+245.1)	AMMN (350.1)	NO3+SO4 (300)
1	Trip Blank	–	–	–	–	6			X							X	X				
2	Well-289 Atlantic	4/21/16	0920	JA	DW	11		X			X	X						X	X	X	X
3	Well-267 Atlantic	↓	1005	↓	↓	↓		↓	↓		↓	↓				↓	↓	↓	↓	↓	↓
4	Well-144 Atlantic	↓	1145	↓	↓	↓		↓	↓		↓	↓				↓	↓	↓	↓	↓	↓

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [x] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Accutest Laboratories
Raleigh, North Carolina
Service Center

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by :	Date Time:	Received By:
1	4/21/16 1800	2 fx	3 fx	4	930 4/22/16
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.0

5.2 5

FA33324: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA33324 CLIENT: URS PROJECT: Atlantic Refuse Dump

DATE/TIME RECEIVED: 4/22/16 930 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7828 9213 8590

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.2
- [ ] OBSERVED TEMPS: 2.8
- [ ] CORRECTED TEMPS: 3.0 (USED FOR LIMS)

TRIP BLANK INFORMATION

- [x] TRIP BLANK PROVIDED
- [ ] TRIP BLANK NOT PROVIDED
- [ ] TRIP BLANK NOT ON COC
- [x] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [x] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

SAMPLE INFORMATION

- [x] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT LOT#
  {APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM 5-GRAM

NUMBER OF 5035 FIELD KITS ?

NUMBER OF LAB FILTERED METALS ?

TEST STRIP LOT#s (pH 0-3 230315) pH 10-12 219813A OTHER (specify)

SUMMARY OF COMMENTS: TB received (2) vials. COC says (4) vials. Will label (1) vial for 8260 and one for 010x.

TECHNICIAN SIGNATURE/DATE 4/22/16 REVIEWER SIGNATURE/DATE 4-22-16

NF 11/15 RECEIPTLOG040416.xls

5.2 5

ORIGIN ID:ILMA (850) 51[illegible]-7093
JOHN CORBIN
AECOM
1600 PERIMETER PARK DR

MORRISVILLE, NC 27560
UNITED STATES US

SHIP DATE: 21APR16
ACTWGT: 30.10 LB
CAD: 006894295/SSFE1703
DIMS: 16x9x15 IN

BILL THIRD PARTY

TO SAMPLE MANAGEMENT
ACCUTEST LABS
4405 VINELAND RD STE C15

ORLANDO FL 32811
(407) 426-6700 REF:
INV: DEPT:
PO:

FedEx Express

FRI - 22 APR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7828 9213 8590

XH TIXA

32811
FL-US MCO

UNV12113
MADE IN USA

FA33324: Chain of Custody
Page 3 of 3

Analyst Legend

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Initials	Full Name	Analysis Type
MM	Melissa Mangual	GC/MS Volatiles
WV	Wilfredo Vazquez	GC/MS Volatiles
MV	Martha Valls	GC/MS Semi-volatiles
JL	James Laureano	Metals Analysis
JK	Jenna Kravitz	General Chemistry
LJ	Luis Jimenez	General Chemistry

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1528-MB	Z40635.D	1	04/29/16	MM	n/a	n/a	VZ1528

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	1.0	0.30	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	109%	74-125%
2037-26-5	Toluene-D8	109%	88-111%

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4575-MB	B113369.D	1	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	10	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.42	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.24	ug/l	
75-25-2	Bromoform	ND	1.0	0.46	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	2.6	ug/l	
75-15-0	Carbon Disulfide	ND	2.0	0.23	ug/l	
56-23-5	Carbon Tetrachloride	ND	1.0	0.30	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.63	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.26	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.26	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.81	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.33	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.50	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.27	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.39	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.26	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.28	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.22	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.33	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.34	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.26	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
76-13-1	Freon 113	ND	1.0	0.32	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.33	ug/l	
79-20-9	Methyl Acetate	ND	20	5.0	ug/l	
74-83-9	Methyl Bromide	ND	2.0	0.50	ug/l	
74-87-3	Methyl Chloride	ND	2.0	0.50	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.23	ug/l	
75-09-2	Methylene Chloride	ND	5.0	2.0	ug/l	

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4575-MB	B113369.D	1	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Result	RL	MDL	Units	Q
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.4	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.24	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.33	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.51	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.37	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.27	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
75-01-4	Vinyl Chloride	ND	1.0	0.31	ug/l	
	m,p-Xylene	ND	2.0	0.30	ug/l	
95-47-6	o-Xylene	ND	1.0	0.26	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	115%	79-125%
2037-26-5	Toluene-D8	100%	85-112%
460-00-4	4-Bromofluorobenzene	100%	83-118%

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1528-BS	Z40634.D	1	04/29/16	MM	n/a	n/a	VZ1528

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	20.5	103	65-121

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	74-125%
2037-26-5	Toluene-D8	107%	88-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4575-BS	B113368.D	1	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	120	96	50-147
71-43-2	Benzene	25	25.0	100	81-122
74-97-5	Bromochloromethane	25	24.1	96	76-123
75-27-4	Bromodichloromethane	25	27.7	111	79-123
75-25-2	Bromoform	25	23.3	93	66-123
78-93-3	2-Butanone (MEK)	125	117	94	56-143
75-15-0	Carbon Disulfide	25	26.6	106	66-148
56-23-5	Carbon Tetrachloride	25	29.8	119	76-136
108-90-7	Chlorobenzene	25	24.6	98	82-124
75-00-3	Chloroethane	25	27.1	108	62-144
67-66-3	Chloroform	25	26.7	107	80-124
110-82-7	Cyclohexane	25	24.7	99	73-138
124-48-1	Dibromochloromethane	25	26.1	104	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.6	90	64-123
106-93-4	1,2-Dibromoethane	25	23.4	94	75-120
75-71-8	Dichlorodifluoromethane	25	29.5	118	42-167
95-50-1	1,2-Dichlorobenzene	25	25.9	104	82-124
541-73-1	1,3-Dichlorobenzene	25	25.9	104	84-125
106-46-7	1,4-Dichlorobenzene	25	26.3	105	78-120
75-34-3	1,1-Dichloroethane	25	27.5	110	81-122
107-06-2	1,2-Dichloroethane	25	27.3	109	75-125
75-35-4	1,1-Dichloroethylene	25	29.0	116	78-137
156-59-2	cis-1,2-Dichloroethylene	25	25.0	100	78-120
156-60-5	trans-1,2-Dichloroethylene	25	28.6	114	76-127
78-87-5	1,2-Dichloropropane	25	25.2	101	76-124
10061-01-5	cis-1,3-Dichloropropene	25	26.5	106	75-118
10061-02-6	trans-1,3-Dichloropropene	25	27.7	111	80-120
100-41-4	Ethylbenzene	25	25.8	103	81-121
76-13-1	Freon 113	25	26.9	108	72-134
591-78-6	2-Hexanone	125	111	89	61-129
98-82-8	Isopropylbenzene	25	27.1	108	83-132
79-20-9	Methyl Acetate	125	126	101	65-126
74-83-9	Methyl Bromide	25	27.0	108	59-143
74-87-3	Methyl Chloride	25	26.9	108	50-159
108-87-2	Methylcyclohexane	25	26.9	108	76-129
75-09-2	Methylene Chloride	25	24.5	98	69-135

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB4575-BS	B113368.D	1	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone (MIBK)	125	115	92	66-122
1634-04-4	Methyl Tert Butyl Ether	25	23.2	93	72-117
100-42-5	Styrene	25	22.9	92	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	22.9	92	72-120
127-18-4	Tetrachloroethylene	25	26.9	108	76-135
108-88-3	Toluene	25	24.6	98	80-120
87-61-6	1,2,3-Trichlorobenzene	25	26.1	104	68-131
120-82-1	1,2,4-Trichlorobenzene	25	27.1	108	73-129
71-55-6	1,1,1-Trichloroethane	25	28.5	114	75-130
79-00-5	1,1,2-Trichloroethane	25	24.1	96	76-119
79-01-6	Trichloroethylene	25	27.4	110	81-126
75-69-4	Trichlorofluoromethane	25	34.0	136	71-156
75-01-4	Vinyl Chloride	25	27.1	108	69-159
	m,p-Xylene	50	53.0	106	79-126
95-47-6	o-Xylene	25	24.8	99	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	83-118%
17060-07-0	1,2-Dichloroethane-D4	112%	79-125%
2037-26-5	Toluene-D8	97%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33427-3AMS	Z40656.D	1	04/29/16	MM	n/a	n/a	VZ1528
FA33427-3AMSD	Z40657.D	1	04/29/16	MM	n/a	n/a	VZ1528
FA33427-3A	Z40637.D	1	04/29/16	MM	n/a	n/a	VZ1528

The QC reported here applies to the following samples: **Method:** SW846 8260B BY SIM

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	FA33427-3A ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
123-91-1	1,4-Dioxane	ND		20	20.1	101	20	19.9	100	1	65-121/27

CAS No.	Surrogate Recoveries	MS	MSD	FA33427-3A	Limits
17060-07-0	1,2-Dichloroethane-D4	109%	109%	111%	74-125%
2037-26-5	Toluene-D8	109%	108%	109%	88-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33377-1MS	B113380.D	100	04/29/16	WV	n/a	n/a	VB4575
FA33377-1MSD	B113381.D	100	04/29/16	WV	n/a	n/a	VB4575
FA33377-1	B113377.D	100	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	FA33377-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		12500	11400	91	12500	12000	96	5	50-147/21
71-43-2	Benzene	ND		2500	2440	98	2500	2490	100	2	81-122/14
74-97-5	Bromochloromethane	ND		2500	2410	96	2500	2450	98	2	76-123/14
75-27-4	Bromodichloromethane	ND		2500	2800	112	2500	2770	111	1	79-123/19
75-25-2	Bromoform	ND		2500	2340	94	2500	2220	89	5	66-123/21
78-93-3	2-Butanone (MEK)	ND		12500	11700	94	12500	11700	94	0	56-143/18
75-15-0	Carbon Disulfide	ND		2500	2600	104	2500	2440	98	6	66-148/23
56-23-5	Carbon Tetrachloride	ND		2500	3220	129	2500	2960	118	8	76-136/23
108-90-7	Chlorobenzene	ND		2500	2540	102	2500	2540	102	0	82-124/14
75-00-3	Chloroethane	ND		2500	2590	104	2500	2560	102	1	62-144/20
67-66-3	Chloroform	ND		2500	2750	110	2500	2850	114	4	80-124/15
110-82-7	Cyclohexane	ND		2500	2460	98	2500	2470	99	0	73-138/18
124-48-1	Dibromochloromethane	ND		2500	2590	104	2500	2460	98	5	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		2500	2230	89	2500	2090	84	6	64-123/18
106-93-4	1,2-Dibromoethane	ND		2500	2500	100	2500	2350	94	6	75-120/13
75-71-8	Dichlorodifluoromethane	ND		2500	3080	123	2500	3000	120	3	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		2500	2520	101	2500	2500	100	1	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		2500	2600	104	2500	2570	103	1	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		2500	2590	104	2500	2530	101	2	78-120/15
75-34-3	1,1-Dichloroethane	ND		2500	2790	112	2500	2810	112	1	81-122/15
107-06-2	1,2-Dichloroethane	ND		2500	2850	114	2500	2820	113	1	75-125/14
75-35-4	1,1-Dichloroethylene	ND		2500	2980	119	2500	3040	122	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	5770		2500	8620	114	2500	8690	117	1	78-120/15
156-60-5	trans-1,2-Dichloroethylene	68.7		2500	3010	118	2500	2970	116	1	76-127/17
78-87-5	1,2-Dichloropropane	ND		2500	2490	100	2500	2550	102	2	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		2500	2580	103	2500	2550	102	1	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		2500	2820	113	2500	2630	105	7	80-120/22
100-41-4	Ethylbenzene	ND		2500	2710	108	2500	2570	103	5	81-121/14
76-13-1	Freon 113	ND		2500	2900	116	2500	2710	108	7	72-134/20
591-78-6	2-Hexanone	ND		12500	10800	86	12500	11300	90	5	61-129/18
98-82-8	Isopropylbenzene	ND		2500	2580	103	2500	2640	106	2	83-132/15
79-20-9	Methyl Acetate	ND		12500	12800	102	12500	13500	108	5	65-126/18
74-83-9	Methyl Bromide	ND		2500	2620	105	2500	2610	104	0	59-143/19
74-87-3	Methyl Chloride	ND		2500	2650	106	2500	2700	108	2	50-159/19
108-87-2	Methylcyclohexane	ND		2500	2580	103	2500	2630	105	2	76-129/17
75-09-2	Methylene Chloride	ND		2500	2630	105	2500	2610	104	1	69-135/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33377-1MS	B113380.D	100	04/29/16	WV	n/a	n/a	VB4575
FA33377-1MSD	B113381.D	100	04/29/16	WV	n/a	n/a	VB4575
FA33377-1	B113377.D	100	04/29/16	WV	n/a	n/a	VB4575

The QC reported here applies to the following samples: **Method:** SW846 8260B

FA33324-1, FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	FA33377-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		12500	11300	90	12500	11900	95	5	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		2500	2360	94	2500	2400	96	2	72-117/14
100-42-5	Styrene	ND		2500	2350	94	2500	2410	96	3	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		2500	2280	91	2500	2300	92	1	72-120/14
127-18-4	Tetrachloroethylene	ND		2500	2670	107	2500	2620	105	2	76-135/16
108-88-3	Toluene	93.9		2500	2670	103	2500	2620	101	2	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		2500	2480	99	2500	2550	102	3	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		2500	2470	99	2500	2500	100	1	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		2500	2960	118	2500	2910	116	2	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		2500	2570	103	2500	2480	99	4	76-119/14
79-01-6	Trichloroethylene	35300	E	2500	43800	340* [a]	2500	42700	296* [a]	3	81-126/15
75-69-4	Trichlorofluoromethane	ND		2500	3650	146	2500	3510	140	4	71-156/21
75-01-4	Vinyl Chloride	1040		2500	3620	103	2500	3720	107	3	69-159/18
	m,p-Xylene	48.8		5000	5480	109	5000	5430	108	1	79-126/15
95-47-6	o-Xylene	ND		2500	2650	106	2500	2690	108	1	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA33377-1	Limits
1868-53-7	Dibromofluoromethane	111%	114%	105%	83-118%
17060-07-0	1,2-Dichloroethane-D4	123%	115%	113%	79-125%
2037-26-5	Toluene-D8	101%	99%	99%	85-112%
460-00-4	4-Bromofluorobenzene	103%	97%	104%	83-118%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4571-BFB
Lab File ID: B113295.D
Instrument ID: GCMSB
Injection Date: 04/26/16
Injection Time: 18:22

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	20709	22.4		Pass
75	30.0 - 60.0% of mass 95	43517	47.1		Pass
95	Base peak, 100% relative abundance	92440	100.0		Pass
96	5.0 - 9.0% of mass 95	6490	7.02		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	77360	83.7		Pass
175	5.0 - 9.0% of mass 174	6092	6.59	(7.87) [a]	Pass
176	95.0 - 101.0% of mass 174	77917	84.3	(100.7) [a]	Pass
177	5.0 - 9.0% of mass 176	5087	5.50	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VB4571-IC4571	B113297.D	04/26/16	19:16	00:54	Initial cal 1
VB4571-IC4571	B113298.D	04/26/16	19:42	01:20	Initial cal 2
VB4571-IC4571	B113299.D	04/26/16	20:09	01:47	Initial cal 3
VB4571-ICC4571	B113300.D	04/26/16	20:35	02:13	Initial cal 4
VB4571-IC4571	B113301.D	04/26/16	21:02	02:40	Initial cal 5
VB4571-IC4571	B113302.D	04/26/16	21:29	03:07	Initial cal 6
VB4571-IC4571	B113303.D	04/26/16	21:55	03:33	Initial cal 7
VB4571-ICV4571	B113305.D	04/26/16	22:48	04:26	Initial cal verification 1

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-BFB
Lab File ID: B113366.D
Instrument ID: GCMSB
Injection Date: 04/29/16
Injection Time: 09:57

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	39005	25.4		Pass
75	30.0 - 60.0% of mass 95	75965	49.5		Pass
95	Base peak, 100% relative abundance	153451	100.0		Pass
96	5.0 - 9.0% of mass 95	10239	6.67		Pass
173	Less than 2.0% of mass 174	449	0.29	(0.36) [a]	Pass
174	50.0 - 100.0% of mass 95	123736	80.6		Pass
175	5.0 - 9.0% of mass 174	9419	6.14	(7.61) [a]	Pass
176	95.0 - 101.0% of mass 174	121659	79.3	(98.3) [a]	Pass
177	5.0 - 9.0% of mass 176	7849	5.11	(6.45) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VB4575-CC4571	B113367.D	04/29/16	10:34	00:37	Continuing cal 5
VB4575-BS	B113368.D	04/29/16	11:06	01:09	Blank Spike
VB4575-MB	B113369.D	04/29/16	11:32	01:35	Method Blank
ZZZZZZ	B113370.D	04/29/16	11:59	02:02	(unrelated sample)
FA33324-1	B113371.D	04/29/16	12:26	02:29	TRIP BLANK
ZZZZZZ	B113372.D	04/29/16	12:52	02:55	(unrelated sample)
ZZZZZZ	B113373.D	04/29/16	13:19	03:22	(unrelated sample)
FA33324-2	B113374.D	04/29/16	13:46	03:49	WELL-289 ATLANTIC
FA33324-3	B113375.D	04/29/16	14:11	04:14	WELL-267 ATLANTIC
FA33324-4	B113376.D	04/29/16	14:38	04:41	WELL-144 ATLANTIC
FA33377-1	B113377.D	04/29/16	15:04	05:07	(used for QC only; not part of job FA33324)
ZZZZZZ	B113378.D	04/29/16	15:31	05:34	(unrelated sample)
ZZZZZZ	B113379.D	04/29/16	15:58	06:01	(unrelated sample)
FA33377-1MS	B113380.D	04/29/16	16:24	06:27	Matrix Spike
FA33377-1MSD	B113381.D	04/29/16	16:51	06:54	Matrix Spike Duplicate
ZZZZZZ	B113382.D	04/29/16	17:17	07:20	(unrelated sample)
ZZZZZZ	B113383.D	04/29/16	17:44	07:47	(unrelated sample)
ZZZZZZ	B113384.D	04/29/16	18:11	08:14	(unrelated sample)
ZZZZZZ	B113385.D	04/29/16	18:37	08:40	(unrelated sample)
ZZZZZZ	B113386.D	04/29/16	19:04	09:07	(unrelated sample)
ZZZZZZ	B113387.D	04/29/16	19:30	09:33	(unrelated sample)
ZZZZZZ	B113388.D	04/29/16	19:57	10:00	(unrelated sample)
ZZZZZZ	B113389.D	04/29/16	20:23	10:26	(unrelated sample)
ZZZZZZ	B113390.D	04/29/16	20:50	10:53	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-BFB
Lab File ID: B113366.D
Instrument ID: GCMSB
Injection Date: 04/29/16
Injection Time: 09:57

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	B113391.D	04/29/16	21:16	11:19	(unrelated sample)
VB4575-ECC4571	B113392.D	04/29/16	21:43	11:46	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-BFB
Lab File ID: Z40545.D
Instrument ID: GCMSZ
Injection Date: 04/26/16
Injection Time: 07:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	128392	32.5		Pass
75	30.0 - 60.0% of mass 95	236224	59.9		Pass
95	Base peak, 100% relative abundance	394667	100.0		Pass
96	5.0 - 9.0% of mass 95	28008	7.10		Pass
173	Less than 2.0% of mass 174	3329	0.84	(1.04) [a]	Pass
174	50.0 - 100.0% of mass 95	320896	81.3		Pass
175	5.0 - 9.0% of mass 174	22755	5.77	(7.09) [a]	Pass
176	95.0 - 101.0% of mass 174	309333	78.4	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	18344	4.65	(5.93) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ1525-IC1525	Z40546.D	04/26/16	08:07	00:31	Initial cal 1
VZ1525-IC1525	Z40547.D	04/26/16	08:31	00:55	Initial cal 2
VZ1525-IC1525	Z40548.D	04/26/16	08:56	01:20	Initial cal 3
VZ1525-ICC1525	Z40549.D	04/26/16	09:21	01:45	Initial cal 4
VZ1525-IC1525	Z40550.D	04/26/16	09:45	02:09	Initial cal 5
VZ1525-IC1525	Z40551.D	04/26/16	10:10	02:34	Initial cal 6
VZ1525-IC1525	Z40552.D	04/26/16	10:34	02:58	Initial cal 7
VZ1525-ICV1525	Z40554.D	04/26/16	11:24	03:48	Initial cal verification 4
VZ1525-BS	Z40555.D	04/26/16	11:49	04:13	Blank Spike
VZ1525-MB	Z40557.D	04/26/16	12:38	05:02	Method Blank
ZZZZZZ	Z40558.D	04/26/16	13:02	05:26	(unrelated sample)
ZZZZZZ	Z40560.D	04/26/16	13:51	06:15	(unrelated sample)
ZZZZZZ	Z40561.D	04/26/16	14:15	06:39	(unrelated sample)
ZZZZZZ	Z40562.D	04/26/16	14:40	07:04	(unrelated sample)
ZZZZZZ	Z40563.D	04/26/16	15:05	07:29	(unrelated sample)
ZZZZZZ	Z40564.D	04/26/16	15:29	07:53	(unrelated sample)
ZZZZZZ	Z40565.D	04/26/16	15:54	08:18	(unrelated sample)
ZZZZZZ	Z40566.D	04/26/16	16:18	08:42	(unrelated sample)
ZZZZZZ	Z40567.D	04/26/16	16:43	09:07	(unrelated sample)
ZZZZZZ	Z40568.D	04/26/16	17:07	09:31	(unrelated sample)
ZZZZZZ	Z40569.D	04/26/16	17:32	09:56	(unrelated sample)
ZZZZZZ	Z40570.D	04/26/16	17:56	10:20	(unrelated sample)
ZZZZZZ	Z40571.D	04/26/16	18:21	10:45	(unrelated sample)
ZZZZZZ	Z40572.D	04/26/16	18:46	11:10	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-BFB
Lab File ID: Z40545.D
Instrument ID: GCMSZ
Injection Date: 04/26/16
Injection Time: 07:36

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
FA33287-7	Z40573.D	04/26/16	19:10	11:34	(used for QC only; not part of job FA33324)
FA33287-7MS	Z40574.D	04/26/16	19:35	11:59	Matrix Spike
FA33287-7MSD	Z40575.D	04/26/16	19:59	12:23	Matrix Spike Duplicate
VZ1525-ECC1525	Z40576.D	04/26/16	20:24	12:48	Ending cal 4

Instrument Performance Check (BFB)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1528-BFB
Lab File ID: Z40632.D
Instrument ID: GCMSZ
Injection Date: 04/29/16
Injection Time: 07:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	81957	29.0		Pass
75	30.0 - 60.0% of mass 95	161195	57.0		Pass
95	Base peak, 100% relative abundance	283029	100.0		Pass
96	5.0 - 9.0% of mass 95	19165	6.77		Pass
173	Less than 2.0% of mass 174	2070	0.73	(0.91) [a]	Pass
174	50.0 - 100.0% of mass 95	226304	80.0		Pass
175	5.0 - 9.0% of mass 174	18259	6.45	(8.07) [a]	Pass
176	95.0 - 101.0% of mass 174	216064	76.3	(95.5) [a]	Pass
177	5.0 - 9.0% of mass 176	15372	5.43	(7.11) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VZ1528-CC1525	Z40633.D	04/29/16	08:19	00:34	Continuing cal 4
VZ1528-BS	Z40634.D	04/29/16	08:44	00:59	Blank Spike
VZ1528-MB	Z40635.D	04/29/16	09:09	01:24	Method Blank
ZZZZZZ	Z40636.D	04/29/16	09:36	01:51	(unrelated sample)
FA33427-3A	Z40637.D	04/29/16	10:01	02:16	(used for QC only; not part of job FA33324)
ZZZZZZ	Z40638.D	04/29/16	10:25	02:40	(unrelated sample)
ZZZZZZ	Z40639.D	04/29/16	10:50	03:05	(unrelated sample)
ZZZZZZ	Z40641.D	04/29/16	11:39	03:54	(unrelated sample)
ZZZZZZ	Z40642.D	04/29/16	12:04	04:19	(unrelated sample)
FA33324-1	Z40643.D	04/29/16	12:28	04:43	TRIP BLANK
FA33324-2	Z40644.D	04/29/16	12:53	05:08	WELL-289 ATLANTIC
FA33324-3	Z40645.D	04/29/16	13:17	05:32	WELL-267 ATLANTIC
FA33324-4	Z40646.D	04/29/16	13:42	05:57	WELL-144 ATLANTIC
ZZZZZZ	Z40647.D	04/29/16	14:06	06:21	(unrelated sample)
ZZZZZZ	Z40648.D	04/29/16	14:31	06:46	(unrelated sample)
ZZZZZZ	Z40649.D	04/29/16	14:55	07:10	(unrelated sample)
ZZZZZZ	Z40650.D	04/29/16	15:21	07:36	(unrelated sample)
ZZZZZZ	Z40651.D	04/29/16	15:45	08:00	(unrelated sample)
ZZZZZZ	Z40652.D	04/29/16	16:10	08:25	(unrelated sample)
FA33427-3AMS	Z40656.D	04/29/16	17:48	10:03	Matrix Spike
FA33427-3AMSD	Z40657.D	04/29/16	18:13	10:28	Matrix Spike Duplicate
VZ1528-ECC1525	Z40658.D	04/29/16	18:38	10:53	Ending cal 4

Volatile Internal Standard Area Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std:	VB4575-CC4571	**Injection Date:**	04/29/16
Lab File ID:	B113367.D	**Injection Time:**	10:34
Instrument ID:	GCMSB	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Initial Cal [a]	800461	9.83	653423	13.06	361403	15.60	85576	7.07
Check Std [b]	639081	9.83	517954	13.06	295262	15.60	62279	7.09
Upper Limit [c]	1278162	10.33	1035908	13.56	590524	16.10	124558	7.59
Lower Limit [d]	319541	9.33	258977	12.56	147631	15.10	31140	6.59

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VB4575-BS	660894	9.83	546317	13.06	297655	15.60	64568	7.08
VB4575-MB	646543	9.83	523482	13.06	309360	15.60	63899	7.07
ZZZZZZ	652906	9.84	513578	13.06	294954	15.60	49578	7.08
FA33324-1	621844	9.83	505087	13.06	290660	15.60	51795	7.08
ZZZZZZ	615360	9.83	491741	13.06	275733	15.60	52042	7.08
ZZZZZZ	595377	9.83	474248	13.06	279936	15.60	54044	7.07
FA33324-2	591057	9.83	467283	13.06	265180	15.60	53559	7.08
FA33324-3	574578	9.83	435289	13.06	259507	15.60	52139	7.08
FA33324-4	576346	9.84	466023	13.06	260045	15.60	54043	7.08
FA33377-1	577794	9.84	464387	13.06	259769	15.60	52058	7.08
ZZZZZZ	560219	9.83	439071	13.06	258147	15.60	52578	7.08
ZZZZZZ	555288	9.84	438096	13.06	254154	15.60	54427	7.08
FA33377-1MS	544971	9.84	443797	13.06	264776	15.60	53479	7.08
FA33377-1MSD	570988	9.83	473394	13.06	273742	15.60	59389	7.08
ZZZZZZ	566692	9.83	470660	13.06	256316	15.60	54151	7.08
ZZZZZZ	572938	9.84	436603	13.06	254694	15.60	51849	7.09
ZZZZZZ	550467	9.84	447792	13.06	255753	15.60	49950	7.08
ZZZZZZ	540307	9.84	447261	13.06	250262	15.60	51510	7.08
ZZZZZZ	525769	9.84	442637	13.06	240145	15.60	51749	7.08
ZZZZZZ	512650	9.84	421967	13.06	245199	15.60	52560	7.08
ZZZZZZ	515375	9.83	427421	13.06	230541	15.60	48454	7.08
ZZZZZZ	510050	9.84	408817	13.06	237504	15.60	49902	7.08
ZZZZZZ	501820	9.83	408384	13.06	240715	15.60	49152	7.08
ZZZZZZ	517504	9.84	418478	13.06	238536	15.60	52144	7.09
VB4575-ECC4571	523569	9.84	411529	13.06	253678	15.60	50681	7.09

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Initial Cal is: VB4571-ICC4571 B113300.D 04/26/16 20:35
(b) Check Std Limit = -50 to + 100% of initial cal area.

Volatile Internal Standard Area Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std:	VB4575-CC4571	**Injection Date:**	04/29/16
Lab File ID:	B113367.D	**Injection Time:**	10:34
Instrument ID:	GCMSB	**Method:**	SW846 8260B

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std:	VZ1528-CC1525	**Injection Date:**	04/29/16
Lab File ID:	Z40633.D	**Injection Time:**	08:19
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	1205932	3.68	59764	4.26
Check Std [b]	787009	3.68	47332	4.27
Upper Limit [c]	1574018	4.18	94664	4.77
Lower Limit [d]	393505	3.18	23666	3.77

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ1528-BS	788382	3.68	44007	4.25
VZ1528-MB	749706	3.69	37139	4.27
ZZZZZZ	744128	3.68	35048	4.26
FA33427-3A	722881	3.68	32843	4.26
ZZZZZZ	713970	3.68	41007	4.26
ZZZZZZ	718896	3.68	37611	4.26
ZZZZZZ	755857	3.68	49085	4.26
ZZZZZZ	727926	3.68	46234	4.26
FA33324-1	695819	3.68	38562	4.27
FA33324-2	690280	3.68	38056	4.26
FA33324-3	714476	3.68	42785	4.26
FA33324-4	676675	3.68	35696	4.27
ZZZZZZ	673532	3.68	35135	4.27
ZZZZZZ	686236	3.68	40197	4.26
ZZZZZZ	674074	3.68	42174	4.26
ZZZZZZ	683899	3.68	39125	4.26
ZZZZZZ	707114	3.69	39905	4.27
ZZZZZZ	666496	3.68	41124	4.26
FA33427-3AMS	668255	3.68	37654	4.27
FA33427-3AMSD	683500	3.68	38470	4.26
VZ1528-ECC1525	686711	3.68	39968	4.26

IS 1 = Fluorobenzene
IS 2 = 1,4-Dioxane-d8

(a) Initial Cal is: VZ1525-ICC1525 Z40549.D 04/26/16 09:21
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8260B BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA33324-1	Z40643.D	111	110
FA33324-2	Z40644.D	110	109
FA33324-3	Z40645.D	110	109
FA33324-4	Z40646.D	112	110
FA33427-3AMS	Z40656.D	109	109
FA33427-3AMSD	Z40657.D	109	108
VZ1528-BS	Z40634.D	106	107
VZ1528-MB	Z40635.D	109	109

Surrogate Compounds	Recovery Limits
S1 = 1,2-Dichloroethane-D4	74-125%
S2 = Toluene-D8	88-111%

Volatile Surrogate Recovery Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
FA33324-1	B113371.D	105	113	98	102
FA33324-2	B113374.D	104	114	98	102
FA33324-3	B113375.D	109	114	103	102
FA33324-4	B113376.D	104	114	95	105
FA33377-1MS	B113380.D	111	123	101	103
FA33377-1MSD	B113381.D	114	115	99	97
VB4575-BS	B113368.D	106	112	97	103
VB4575-MB	B113369.D	105	115	100	100

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	83-118%
S2 = 1,2-Dichloroethane-D4	79-125%
S3 = Toluene-D8	85-112%
S4 = 4-Bromofluorobenzene	83-118%

Initial Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4571-ICC4571
Lab FileID: B113300.D

Response Factor Report MSVOA4

Method : C:\msdchem\1\METHODS\B-APR26.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Wed Apr 27 08:27:31 2016
Response via : Initial Calibration

Calibration Files
1 =B113297.D 2 =B113298.D 3 =B113299.D 4 =B113300.D
5 =B113301.D 6 =B113302.D 7 =B113303.D

Compound	1	2	3	4	5	6	7	Avg	%RSD
1) I Fluorobenzene	----------ISTD----------								
2) Dichlorodifluorom	0.285	0.427	0.389	0.410	0.420	0.428	0.412	0.396	12.77
3)P Chloromethane	0.426	0.457	0.429	0.456	0.469	0.479	0.457	0.453	4.29
4)C Vinyl Chloride	0.267	0.336	0.305	0.336	0.337	0.352	0.334	0.324	8.85
5) Bromomethane	0.208	0.205	0.191	0.185	0.187	0.180	0.165	0.189	7.84
6) Chloroethane	0.157	0.162	0.156	0.156	0.153	0.151	0.135	0.153	5.51
7) Trichlorofluorome	0.349	0.430	0.404	0.452	0.441	0.456	0.432	0.423	8.70
8) Ethyl Ether	0.232	0.246	0.214	0.201	0.222	0.219	0.200	0.219	7.47
9) 1,2-Dichlorotrifl	0.277	0.279	0.248	0.250	0.254	0.265	0.242	0.259	5.66
10) Freon 113	0.291	0.336	0.293	0.317	0.320	0.333	0.311	0.315	5.60
11)C 1,1-Dichloroethen	0.459	0.531	0.462	0.508	0.504	0.527	0.504	0.499	5.69
12) Acetone	0.117	0.105	0.091	0.090	0.095	0.092	0.088	0.097	10.76
13) Iodomethane	0.514	0.523	0.509	0.531	0.533	0.556	0.527	0.528	2.88
14) Carbon Disulfide	0.913	0.950	0.878	0.934	0.937	0.988	0.925	0.932	3.63
15) Methyl acetate	0.250	0.264	0.242	0.238	0.248	0.249	0.237	0.247	3.77
16) Methylene Chlorid	0.753	0.604	0.539	0.542	0.546	0.574	0.527	0.583	13.55
17) Methyl Tert Butyl	0.863	0.877	0.823	0.832	0.873	0.895	0.835	0.857	3.16
18) trans-1,2-Dichlor	0.482	0.482	0.448	0.453	0.459	0.479	0.453	0.465	3.27
19) Acrylonitrile	0.119	0.137	0.126	0.125	0.126	0.133	0.123	0.127	4.72
20) Hexane	0.479	0.548	0.492	0.496	0.521	0.536	0.513	0.512	4.83
21) Di-isopropyl ethe	1.415	1.451	1.342	1.327	1.324	1.367	1.265	1.356	4.55
22) Vinyl acetate	0.837	0.914	0.871	0.757	0.807	0.835	0.734	0.822	7.62
23)P 1,1-Dichloroethan	0.541	0.582	0.548	0.538	0.540	0.564	0.532	0.549	3.25
24) ETBE	1.120	1.173	1.084	1.118	1.175	1.189	1.146	1.144	3.33
25) 2-Butanone	0.153	0.153	0.144	0.137	0.145	0.146	0.138	0.145	4.43
26) 2,2-Dichloropropa	0.439	0.423	0.387	0.401	0.398	0.427	0.397	0.410	4.66
27) cis-1,2-Dichloroe	0.322	0.355	0.305	0.315	0.333	0.336	0.322	0.327	5.00
28) Bromochloromethan	0.164	0.170	0.153	0.155	0.162	0.168	0.160	0.162	3.89
29) Tetrahydrofuran	0.135	0.109	0.098	0.095	0.097	0.102	0.097	0.105	13.50
30)C Chloroform	0.568	0.564	0.498	0.518	0.528	0.553	0.526	0.536	4.87
31)S Dibromofluorometh	0.266	0.266	0.271	0.277	0.272	0.280	0.270	0.272	1.89
32) 1,1,1-Trichloroet	0.489	0.509	0.456	0.484	0.500	0.526	0.508	0.496	4.49
33) Cyclohexane	0.648	0.755	0.662	0.660	0.675	0.704	0.667	0.682	5.43
34) Carbon Tetrachlor	0.426	0.431	0.414	0.428	0.439	0.457	0.447	0.434	3.28
35) 1,1-Dichloroprope	0.362	0.414	0.383	0.387	0.396	0.404	0.391	0.391	4.19
36)S 1,2-Dichloroethan	0.332	0.347	0.346	0.347	0.343	0.353	0.346	0.345	1.84
37) TAME	0.890	0.922	0.845	0.875	0.922	0.910	0.883	0.892	3.14
38) Benzene	1.160	1.186	1.112	1.079	1.126	1.130	1.076	1.124	3.59
39) 1,2-Dichloroethan	0.521	0.505	0.444	0.450	0.473	0.484	0.466	0.477	5.90
40) Trichloroethene	0.312	0.293	0.286	0.302	0.302	0.310	0.299	0.301	2.97
41) Methylcyclohexane	0.513	0.556	0.504	0.524	0.532	0.541	0.520	0.527	3.38
42)C 1,2-Dichloropropa	0.353	0.352	0.337	0.340	0.347	0.335	0.333	0.342	2.41
43) Dibromomethane	0.185	0.186	0.187	0.182	0.188	0.191	0.182	0.186	1.83
44) Bromodichlorometh	0.361	0.407	0.388	0.393	0.414	0.435	0.409	0.401	5.79
45) 2-Chloroethyl vin	0.178	0.212	0.206	0.201	0.208	0.201	0.184	0.199	6.26
46) 2-Nitropropane	0.087	0.094	0.087	0.089	0.095	0.097	0.094	0.092	4.45

Initial Calibration Summary

Job Number: FA33324 **Sample:** VB4571-ICC4571
Account: URSNCM AECOM, INC. **Lab FileID:** B113300.D
Project: Atlantic Refuse Dump; NC

47)	cis-1,3-Dichlorop	0.441	0.490	0.453	0.464	0.488	0.508	0.481	0.475	4.91
48)	4-Methyl-2-pentan	0.343	0.359	0.332	0.316	0.328	0.322	0.305	0.329	5.44
49) I	Chlorobenzene-d5	----------ISTD----------								
50)S	Toluene-d8	1.228	1.201	1.192	1.212	1.193	1.241	1.278	1.221	2.53
51)C	Toluene	1.780	1.578	1.485	1.443	1.470	1.531	1.459	1.535	7.65
52)	trans-1,3-Dichlor	0.466	0.500	0.491	0.498	0.521	0.542	0.538	0.508	5.33
53)	1,1,2-Trichloroet	0.274	0.282	0.269	0.270	0.278	0.280	0.284	0.277	2.12
54)	Tetrachloroethene	0.403	0.398	0.382	0.386	0.391	0.399	0.415	0.396	2.79
55)	2-hexanone	0.282	0.299	0.280	0.278	0.287	0.276	0.272	0.282	3.11
56)	1,3-Dichloropropa	0.609	0.614	0.550	0.556	0.569	0.550	0.550	0.571	4.98
57)	Dibromochlorometh	0.345	0.406	0.367	0.379	0.399	0.421	0.418	0.391	7.23
58)	1,2-Dibromoethane	0.346	0.377	0.355	0.341	0.362	0.373	0.374	0.361	3.91
59)	1-Chlorohexane	0.479	0.534	0.498	0.509	0.521	0.541	0.532	0.516	4.31
60)P	Chlorobenzene	1.228	1.144	1.066	1.048	1.064	1.081	1.033	1.095	6.26
61)C	Ethylbenzene	1.895	1.941	1.727	1.702	1.730	1.809	1.731	1.791	5.24
62)	1,1,1,2-Tetrachlo	0.393	0.416	0.381	0.388	0.381	0.404	0.397	0.394	3.19
63)	m,p-Xylene	1.421	1.504	1.380	1.317	1.336	1.334	1.306	1.371	5.15
64)	o-Xylene	1.628	1.585	1.463	1.415	1.473	1.434	1.376	1.482	6.18
65)	Styrene	1.223	1.300	1.166	1.166	1.196	1.179	1.135	1.195	4.50
66)P	Bromoform	0.265	0.271	0.239	0.246	0.258	0.274	0.277	0.261	5.57
67) I	1,4-Dichlorobenzene-d	----------ISTD----------								
68)	Isopropylbenzene	3.257	3.564	3.253	3.341	3.398	3.217	3.304	3.333	3.56
69)	Cyclohexanone	0.085	0.055	0.050	0.046	0.048	0.049	0.047	0.054	25.20
	---- Linear regr., Force(0,0) ---- Coefficient = 0.9996									
	Response Ratio = 0.00000 + 0.04786 *A									
70)S	4-Bromofluorobenz	0.875	0.936	0.921	0.950	0.941	0.904	0.931	0.923	2.77
71)P	1,1,2,2-Tetrachlo	0.886	0.910	0.822	0.774	0.798	0.796	0.808	0.828	6.11
72)	trans-1,4-Dichlor	0.200	0.210	0.204	0.215	0.246	0.242	0.257	0.225	10.23
73)	n-Propylbenzene	3.882	3.992	3.738	3.678	3.832	3.713	3.718	3.793	2.99
74)	Bromobenzene	0.960	0.948	0.897	0.901	0.920	0.904	0.912	0.920	2.66
75)	1,2,3-Trichloropr	0.209	0.238	0.237	0.219	0.238	0.221	0.232	0.228	4.91
76)	1,3,5-Trimethylbe	3.055	3.223	2.873	2.980	2.954	2.852	2.859	2.971	4.50
77)	2-Chlorotoluene	2.691	2.870	2.528	2.617	2.575	2.491	2.512	2.612	5.09
78)	4-Chlorotoluene	2.588	2.602	2.461	2.452	2.577	2.453	2.460	2.513	2.84
79)	tert-Butylbenzene	1.671	1.788	1.635	1.634	1.722	1.657	1.694	1.686	3.26
80)	1,2,4-Trimethylbe	3.080	3.244	2.997	3.032	3.003	2.979	2.943	3.040	3.28
81)	sec-Butylbenzene	3.825	3.993	3.580	3.705	3.800	3.695	3.652	3.750	3.62
82)	4-Isopropyltoluen	3.109	3.304	3.005	3.099	3.191	3.110	3.121	3.134	2.95
83)	1,3-Dichlorobenze	1.755	1.729	1.684	1.668	1.711	1.667	1.675	1.698	2.00
84)	1,4-Dichlorobenze	1.777	1.798	1.676	1.696	1.736	1.665	1.672	1.717	3.13
85)	Benzyl Chloride	1.339	1.494	1.326	1.355	1.436	1.399	1.426	1.397	4.33
86)	n-Butylbenzene	2.999	3.276	2.896	2.991	3.050	2.937	2.955	3.015	4.16
87)	1,2-Dichlorobenze	1.702	1.794	1.674	1.638	1.659	1.654	1.623	1.678	3.41
88)	1,2-Dibromo-3-Chl	0.200	0.179	0.168	0.164	0.167	0.165	0.168	0.173	7.32
89)	1,2,4-Trichlorobe	1.312	1.368	1.231	1.313	1.324	1.317	1.325	1.313	3.11
90)	Hexachlorobutadie	0.519	0.617	0.541	0.572	0.582	0.588	0.610	0.576	6.13
91)	Naphthalene	2.615	2.766	2.605	2.574	2.653	2.638	2.660	2.644	2.31
92)	1,2,3-Trichlorobe	1.102	1.246	1.151	1.165	1.178	1.187	1.210	1.177	3.85
93) I	Tert Butyl alcohol-d1	----------ISTD----------								
94)	Acrolein	2.876	3.103	2.570	2.631	2.647	2.578	2.542	2.707	7.65
95)	Tert-Butyl Alcoho	1.361	1.536	1.396	1.323	1.385	1.400	1.371	1.396	4.81
96)	Tert amyl alcohol	0.869	1.188	1.073	1.005	1.092	1.089	1.109	1.061	9.45
97)	1,4-Dioxane	0.091	0.129	0.131	0.131	0.136	0.135	0.136	0.127	12.81

(#) = Out of Range

6.7.1

6

Initial Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4571-ICC4571
Lab FileID: B113300.D

B-APR26.m Wed Apr 27 08:29:26 2016

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4571-ICV4571
Lab FileID: B113305.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\042616\B113305.D Vial: 10
Acq On : 26 Apr 2016 10:48 pm Operator: WILFREDO
Sample : ICV4571-1 Inst : MSVOA4
Misc : MS33684,VB4571,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\B-APR26.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Wed Apr 27 08:27:31 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	101	0.00	9.83
2		Dichlorodifluoromethane	0.396	0.423	-6.8	101	0.00	4.29
3	P	Chloromethane	0.453	0.474	-4.6	102	0.00	4.60
4	C	Vinyl Chloride	0.324	0.340	-4.9	101	0.00	4.84
5		Bromomethane	0.189	0.187	1.1	100	0.00	5.39
6		Chloroethane	0.153	0.155	-1.3	102	0.00	5.52
7		Trichlorofluoromethane	0.423	0.469	-10.9	107	0.00	5.96
8		Ethyl Ether	0.219	0.199	9.1	90	0.00	6.24
9		1,2-Dichlorotrifluoroetha	0.259	0.259	0.0	103	0.00	6.22
10		Freon 113	0.315	0.309	1.9	97	0.00	6.60
11	C	1,1-Dichloroethene	0.499	0.519	-4.0	104	0.00	6.61
12		Acetone	0.097	0.095	2.1	100	0.00	6.59
13		Iodomethane	0.528	0.537	-1.7	101	0.00	6.86
14		Carbon Disulfide	0.932	0.986	-5.8	106	0.00	6.99
15		Methyl acetate	0.247	0.257	-4.0	105	0.00	6.98
16		Methylene Chloride	0.583	0.558	4.3	103	0.00	7.17
17		Methyl Tert Butyl Ether	0.857	0.836	2.5	96	0.00	7.48
18		trans-1,2-Dichloroethene	0.465	0.500	-7.5	109	0.00	7.51
19		Acrylonitrile	0.127	0.127	0.0	101	0.00	7.40
20		Hexane	0.512	0.546	-6.6	105	0.00	7.79
21		Di-isopropyl ether	1.356	1.302	4.0	99	0.00	7.97
22		Vinyl acetate	0.822	0.782	4.9	97	0.00	7.93
23	P	1,1-Dichloroethane	0.549	0.562	-2.4	105	0.00	7.98
24		ETBE	1.144	1.090	4.7	93	0.00	8.38
25		2-Butanone	0.145	0.153	-5.5	106	0.00	8.54
26		2,2-Dichloropropane	0.410	0.458	-11.7	116	0.00	8.64
27		cis-1,2-Dichloroethene	0.327	0.320	2.1	96	0.00	8.60
28		Bromochloromethane	0.162	0.156	3.7	97	0.00	8.87
29		Tetrahydrofuran	0.105	0.097	7.6	100	0.00	8.93
30	C	Chloroform	0.536	0.544	-1.5	104	0.00	8.91
31	S	Dibromofluoromethane	0.272	0.272	0.0	101	0.00	9.08
32		1,1,1-Trichloroethane	0.496	0.505	-1.8	101	0.00	9.19
33		Cyclohexane	0.682	0.691	-1.3	103	0.00	9.30
34		Carbon Tetrachloride	0.434	0.467	-7.6	107	0.00	9.39
35		1,1-Dichloropropene	0.391	0.416	-6.4	106	0.00	9.35
36	S	1,2-Dichloroethane-d4	0.345	0.340	1.4	100	0.00	9.47
37		TAME	0.892	0.820	8.1	89	0.00	9.61
38		Benzene	1.124	1.099	2.2	98	0.00	9.58
39		1,2-Dichloroethane	0.477	0.477	0.0	101	0.00	9.55
40		Trichloroethene	0.301	0.311	-3.3	103	0.00	10.23
41		Methylcyclohexane	0.527	0.559	-6.1	105	0.00	10.49
42	C	1,2-Dichloropropane	0.342	0.353	-3.2	102	0.00	10.46

Initial Calibration Verification

Job Number: FA33324 **Sample:** VB4571-ICV4571
Account: URSNCM AECOM, INC. **Lab FileID:** B113305.D
Project: Atlantic Refuse Dump; NC

43		Dibromomethane	0.186	0.195	-4.8	104	0.00	10.60
44		Bromodichloromethane	0.401	0.417	-4.0	101	0.00	10.71
45		2-Chloroethyl vinyl ether	0.199	0.218	-9.5	105	0.00	10.93
46		2-Nitropropane	0.092	0.095	-3.3	100	0.00	10.90
47		cis-1,3-Dichloropropene	0.475	0.495	-4.2	102	0.00	11.16
48		4-Methyl-2-pentanone	0.329	0.337	-2.4	103	0.00	11.26
49	I	Chlorobenzene-d5	1.000	1.000	0.0	98	0.00	13.06
50	S	Toluene-d8	1.221	1.247	-2.1	102	0.00	11.49
51	C	Toluene	1.535	1.532	0.2	102	0.00	11.57
52		trans-1,3-Dichloropropene	0.508	0.569	-12.0	107	0.00	11.71
53		1,1,2-Trichloroethane	0.277	0.279	-0.7	98	0.00	11.94
54		Tetrachloroethene	0.396	0.405	-2.3	101	0.00	12.19
55		2-hexanone	0.282	0.293	-3.9	99	0.00	12.12
56		1,3-Dichloropropane	0.571	0.559	2.1	96	0.00	12.13
57		Dibromochloromethane	0.391	0.419	-7.2	103	0.00	12.41
58		1,2-Dibromoethane	0.361	0.372	-3.0	100	0.00	12.59
59		1-Chlorohexane	0.516	0.544	-5.4	102	0.00	12.96
60	P	Chlorobenzene	1.095	1.104	-0.8	101	0.00	13.10
61	C	Ethylbenzene	1.791	1.873	-4.6	106	0.00	13.17
62		1,1,1,2-Tetrachloroethane	0.394	0.411	-4.3	105	0.00	13.15
63		m,p-Xylene	1.371	1.407	-2.6	103	0.00	13.28
64		o-Xylene	1.482	1.495	-0.9	99	0.00	13.73
65		Styrene	1.195	1.164	2.6	95	0.00	13.73
66	P	Bromoform	0.261	0.270	-3.4	102	0.00	13.99
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	15.60
68		Isopropylbenzene	3.333	3.655	-9.7	105	0.00	14.11
		----------	Amount	Calc.	%Drift		----------	
69		Cyclohexanone	200.000	177.623	11.2	85	0.00	14.25
		----------	AvgRF	CCRF	%Dev		----------	
70	S	4-Bromofluorobenzene	0.923	0.948	-2.7	98	0.00	14.31
71	P	1,1,2,2-Tetrachloroethane	0.828	0.824	0.5	101	0.00	14.38
72		trans-1,4-Dichloro-2-Bute	0.225	0.246	-9.3	97	0.00	14.43
73		n-Propylbenzene	3.793	4.232	-11.6	107	0.00	14.56
74		Bromobenzene	0.920	0.952	-3.5	101	0.00	14.53
75		1,2,3-Trichloropropane	0.228	0.241	-5.7	99	0.00	14.47
76		1,3,5-Trimethylbenzene	2.971	3.102	-4.4	102	0.00	14.72
77		2-Chlorotoluene	2.612	2.793	-6.9	106	0.00	14.72
78		4-Chlorotoluene	2.513	2.683	-6.8	101	0.00	14.82
79		tert-Butylbenzene	1.686	1.778	-5.5	100	0.00	15.11
80		1,2,4-Trimethylbenzene	3.040	3.090	-1.6	100	0.00	15.16
81		sec-Butylbenzene	3.750	4.078	-8.7	104	0.00	15.36
82		4-Isopropyltoluene	3.134	3.385	-8.0	103	0.00	15.48
83		1,3-Dichlorobenzene	1.698	1.798	-5.9	102	0.00	15.54
84		1,4-Dichlorobenzene	1.717	1.810	-5.4	101	0.00	15.63
85		Benzyl Chloride	1.397	1.595	-14.2	108	0.00	15.74
86		n-Butylbenzene	3.015	3.229	-7.1	103	0.00	15.93
87		1,2-Dichlorobenzene	1.678	1.752	-4.4	103	0.00	16.06
88		1,2-Dibromo-3-Chloropropa	0.173	0.165	4.6	96	0.00	16.88
89		1,2,4-Trichlorobenzene	1.313	1.389	-5.8	102	0.00	17.86
90		Hexachlorobutadiene	0.576	0.627	-8.9	105	0.00	18.02
91		Naphthalene	2.644	2.886	-9.2	106	0.00	18.18
92		1,2,3-Trichlorobenzene	1.177	1.259	-7.0	104	0.00	18.48
93	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	99	0.00	7.08
94		Acrolein	2.707	2.766	-2.2	103	0.00	6.42
95		Tert-Butyl Alcohol	1.396	1.365	2.2	97	0.00	7.17

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4571-ICV4571
Lab FileID: B113305.D

96	Tert amyl alcohol	1.061	1.086	-2.4	98	0.00	9.38
97	1,4-Dioxane	0.127	0.134	-5.5	97	0.00	10.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
B113301.D B-APR26.m Wed Apr 27 08:29:18 2016

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-CC4571
Lab FileID: B113367.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\042916\B113367.D Vial: 2
Acq On : 29 Apr 2016 10:34 am Operator: WILFREDO
Sample : CC4571-5 Inst : MSVOA4
Misc : MS33724,VB4575,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\B-APR26.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Wed Apr 27 08:27:31 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	80	0.00	9.83
2		Dichlorodifluoromethane	0.396	0.509	-28.5#	97	0.01	4.30
3	P	Chloromethane	0.453	0.471	-4.0	81	0.01	4.61
4	C	Vinyl Chloride	0.324	0.336	-3.7	80	0.01	4.85
5		Bromomethane	0.189	0.201	-6.3	86	0.01	5.40
6		Chloroethane	0.153	0.155	-1.3	81	0.00	5.53
7		Trichlorofluoromethane	0.423	0.598	-41.4#	109	0.01	5.97
8		Ethyl Ether	0.219	0.209	4.6	76	0.00	6.25
9		1,2-Dichlorotrifluoroetha	0.259	0.277	-6.9	88	0.02	6.24
10		Freon 113	0.315	0.371	-17.8	93	0.00	6.61
11	C	1,1-Dichloroethene	0.499	0.595	-19.2	95	0.00	6.62
12		Acetone	0.097	0.115	-18.6	97	0.00	6.60
13		Iodomethane	0.528	0.602	-14.0	91	0.00	6.86
14		Carbon Disulfide	0.932	1.014	-8.8	87	0.00	7.00
15		Methyl acetate	0.247	0.264	-6.9	86	0.00	6.98
16		Methylene Chloride	0.583	0.618	-6.0	91	0.00	7.17
17		Methyl Tert Butyl Ether	0.857	0.886	-3.4	82	0.00	7.48
18		trans-1,2-Dichloroethene	0.465	0.506	-8.8	89	0.00	7.51
19		Acrylonitrile	0.127	0.129	-1.6	82	0.00	7.40
20		Hexane	0.512	0.590	-15.2	91	0.00	7.80
21		Di-isopropyl ether	1.356	1.453	-7.2	88	0.00	7.98
22		Vinyl acetate	0.822	0.934	-13.6	93	0.00	7.93
23	P	1,1-Dichloroethane	0.549	0.606	-10.4	90	0.00	7.98
24		ETBE	1.144	1.245	-8.8	85	0.00	8.38
25		2-Butanone	0.145	0.162	-11.7	90	0.00	8.54
26		2,2-Dichloropropane	0.410	0.557	-35.9#	112	0.00	8.65
27		cis-1,2-Dichloroethene	0.327	0.353	-8.0	85	0.00	8.61
28		Bromochloromethane	0.162	0.172	-6.2	85	0.00	8.88
29		Tetrahydrofuran	0.105	0.103	1.9	85	0.00	8.93
30	C	Chloroform	0.536	0.603	-12.5	92	0.00	8.91
31	S	Dibromofluoromethane	0.272	0.290	-6.6	86	0.00	9.08
32		1,1,1-Trichloroethane	0.496	0.596	-20.2#	96	0.00	9.20
33		Cyclohexane	0.682	0.722	-5.9	86	0.00	9.30
34		Carbon Tetrachloride	0.434	0.549	-26.5#	101	0.00	9.39
35		1,1-Dichloropropene	0.391	0.446	-14.1	91	0.00	9.35
36	S	1,2-Dichloroethane-d4	0.345	0.391	-13.3	92	0.00	9.47
37		TAME	0.892	0.957	-7.3	83	0.00	9.61
38		Benzene	1.124	1.173	-4.4	84	0.00	9.58
39		1,2-Dichloroethane	0.477	0.561	-17.6	95	0.00	9.55
40		Trichloroethene	0.301	0.332	-10.3	88	0.00	10.23
41		Methylcyclohexane	0.527	0.588	-11.6	89	0.00	10.49
42	C	1,2-Dichloropropane	0.342	0.357	-4.4	83	0.00	10.46

Continuing Calibration Summary

Job Number: FA33324 **Sample:** VB4575-CC4571
Account: URSNCM AECOM, INC. **Lab FileID:** B113367.D
Project: Atlantic Refuse Dump; NC

43		Dibromomethane	0.186	0.201	-8.1	86	0.00	10.60
44		Bromodichloromethane	0.401	0.470	-17.2	91	0.00	10.71
45		2-Chloroethyl vinyl ether	0.199	0.193	3.0	75	0.00	10.93
46		2-Nitropropane	0.092	0.109	-18.5	92	0.00	10.90
47		cis-1,3-Dichloropropene	0.475	0.531	-11.8	87	0.00	11.17
48		4-Methyl-2-pentanone	0.329	0.380	-15.5	93	0.00	11.26
49	I	Chlorobenzene-d5	1.000	1.000	0.0	79	0.00	13.06
50	S	Toluene-d8	1.221	1.169	4.3	77	0.00	11.49
51	C	Toluene	1.535	1.601	-4.3	86	0.00	11.57
52		trans-1,3-Dichloropropene	0.508	0.593	-16.7	90	0.00	11.72
53		1,1,2-Trichloroethane	0.277	0.290	-4.7	82	0.00	11.94
54		Tetrachloroethene	0.396	0.446	-12.6	90	0.00	12.19
55		2-hexanone	0.282	0.331	-17.4	91	0.00	12.12
56		1,3-Dichloropropane	0.571	0.603	-5.6	84	0.00	12.13
57		Dibromochloromethane	0.391	0.451	-15.3	89	0.00	12.41
58		1,2-Dibromoethane	0.361	0.390	-8.0	85	0.00	12.59
59		1-Chlorohexane	0.516	0.582	-12.8	88	0.00	12.96
60	P	Chlorobenzene	1.095	1.153	-5.3	86	0.00	13.10
61	C	Ethylbenzene	1.791	1.958	-9.3	89	0.00	13.17
62		1,1,1,2-Tetrachloroethane	0.394	0.444	-12.7	92	0.00	13.15
63		m,p-Xylene	1.371	1.504	-9.7	89	0.00	13.28
64		o-Xylene	1.482	1.570	-5.9	84	0.00	13.73
65		Styrene	1.195	1.214	-1.6	80	0.00	13.73
66	P	Bromoform	0.261	0.293	-12.3	90	0.00	13.99
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	82	0.00	15.60
68		Isopropylbenzene	3.333	3.549	-6.5	86	0.00	14.11
		----------	Amount	Calc.	%Drift	----------		
69		Cyclohexanone	200.000	205.055	-2.5	83	0.00	14.25
		----------	AvgRF	CCRF	%Dev	----------		
70	S	4-Bromofluorobenzene	0.923	0.951	-3.0	83	0.00	14.31
71	P	1,1,2,2-Tetrachloroethane	0.828	0.834	-0.7	86	0.00	14.38
72		trans-1,4-Dichloro-2-Bute	0.225	0.290	-28.9#	97	0.00	14.43
73		n-Propylbenzene	3.793	4.201	-10.8	90	0.00	14.56
74		Bromobenzene	0.920	0.980	-6.5	87	0.00	14.53
75		1,2,3-Trichloropropane	0.228	0.244	-7.0	84	0.00	14.47
76		1,3,5-Trimethylbenzene	2.971	3.217	-8.3	89	0.00	14.72
77		2-Chlorotoluene	2.612	2.819	-7.9	90	0.00	14.72
78		4-Chlorotoluene	2.513	2.751	-9.5	88	0.00	14.82
79		tert-Butylbenzene	1.686	1.943	-15.2	93	0.00	15.11
80		1,2,4-Trimethylbenzene	3.040	3.328	-9.5	91	0.00	15.16
81		sec-Butylbenzene	3.750	4.143	-10.5	89	0.00	15.36
82		4-Isopropyltoluene	3.134	3.394	-8.3	87	0.00	15.48
83		1,3-Dichlorobenzene	1.698	1.791	-5.5	86	0.00	15.54
84		1,4-Dichlorobenzene	1.717	1.845	-7.5	87	0.00	15.63
85		Benzyl Chloride	1.397	1.850	-32.4#	106	0.00	15.74
86		n-Butylbenzene	3.015	3.321	-10.1	89	0.00	15.94
87		1,2-Dichlorobenzene	1.678	1.820	-8.5	90	0.00	16.06
88		1,2-Dibromo-3-Chloropropa	0.173	0.181	-4.6	89	0.00	16.88
89		1,2,4-Trichlorobenzene	1.313	1.502	-14.4	93	0.00	17.85
90		Hexachlorobutadiene	0.576	0.693	-20.3#	98	0.00	18.01
91		Naphthalene	2.644	2.819	-6.6	87	0.00	18.18
92		1,2,3-Trichlorobenzene	1.177	1.357	-15.3	94	0.00	18.48
93	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	74	0.00	7.09
94		Acrolein	2.707	3.038	-12.2	85	0.00	6.42
95		Tert-Butyl Alcohol	1.396	1.506	-7.9	80	0.01	7.19

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-CC4571
Lab FileID: B113367.D

96	Tert amyl alcohol	1.061	1.160	-9.3	79	0.00	9.39
97	1,4-Dioxane	0.127	0.146	-15.0	80	0.00	10.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
B113301.D B-APR26.m Fri Apr 29 11:32:58 2016

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-ECC4571
Lab FileID: B113392.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\042916\B113392.D Vial: 24
Acq On : 29 Apr 2016 9:43 pm Operator: WILFREDO
Sample : ECC4571-5 Inst : MSVOA4
Misc : MS33741,VB4575,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\B-APR26.m (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Wed Apr 27 08:27:31 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	66	0.00	9.84
2		Dichlorodifluoromethane	0.396	0.490	-23.7	77	0.00	4.30
3	P	Chloromethane	0.453	0.451	0.4	63	0.00	4.61
4	C	Vinyl Chloride	0.324	0.305	5.9	60	0.00	4.84
5		Bromomethane	0.189	0.182	3.7	64	0.00	5.39
6		Chloroethane	0.153	0.144	5.9	62	0.00	5.53
7		Trichlorofluoromethane	0.423	0.598	-41.4	89	0.00	5.96
8		Ethyl Ether	0.219	0.210	4.1	62	0.00	6.25
9		1,2-Dichlorotrifluoroetha	0.259	0.264	-1.9	69	0.01	6.23
10		Freon 113	0.315	0.346	-9.8	71	0.00	6.61
11	C	1,1-Dichloroethene	0.499	0.553	-10.8	72	0.00	6.62
12		Acetone	0.097	0.108	-11.3	75	0.00	6.59
13		Iodomethane	0.528	0.525	0.6	65	0.00	6.86
14		Carbon Disulfide	0.932	0.949	-1.8	67	0.00	6.99
15		Methyl acetate	0.247	0.252	-2.0	67	0.00	6.98
16		Methylene Chloride	0.583	0.596	-2.2	72	0.00	7.17
17		Methyl Tert Butyl Ether	0.857	0.840	2.0	63	0.00	7.48
18		trans-1,2-Dichloroethene	0.465	0.467	-0.4	67	0.00	7.51
19		Acrylonitrile	0.127	0.119	6.3	62	0.00	7.40
20		Hexane	0.512	0.470	8.2	59	0.00	7.80
21		Di-isopropyl ether	1.356	1.340	1.2	67	0.00	7.98
22		Vinyl acetate	0.822	0.860	-4.6	70	0.00	7.93
23	P	1,1-Dichloroethane	0.549	0.561	-2.2	68	0.00	7.98
24		ETBE	1.144	1.111	2.9	62	0.00	8.38
25		2-Butanone	0.145	0.149	-2.8	68	0.00	8.54
26		2,2-Dichloropropane	0.410	0.406	1.0	67	0.00	8.65
27		cis-1,2-Dichloroethene	0.327	0.313	4.3	62	0.00	8.60
28		Bromochloromethane	0.162	0.161	0.6	66	0.00	8.87
29		Tetrahydrofuran	0.105	0.091	13.3	62	0.00	8.93
30	C	Chloroform	0.536	0.572	-6.7	71	0.00	8.91
31	S	Dibromofluoromethane	0.272	0.308	-13.2	75	0.00	9.08
32		1,1,1-Trichloroethane	0.496	0.576	-16.1	76	0.00	9.20
33		Cyclohexane	0.682	0.651	4.5	64	0.00	9.30
34		Carbon Tetrachloride	0.434	0.528	-21.7	79	0.00	9.39
35		1,1-Dichloropropene	0.391	0.420	-7.4	70	0.00	9.35
36	S	1,2-Dichloroethane-d4	0.345	0.421	-22.0	81	0.00	9.47
37		TAME	0.892	0.849	4.8	61	0.00	9.61
38		Benzene	1.124	1.067	5.1	62	0.00	9.58
39		1,2-Dichloroethane	0.477	0.557	-16.8	77	0.00	9.55
40		Trichloroethene	0.301	0.310	-3.0	68	0.00	10.23
41		Methylcyclohexane	0.527	0.515	2.3	64	0.00	10.49
42	C	1,2-Dichloropropane	0.342	0.339	0.9	64	0.00	10.46

Continuing Calibration Summary

Job Number: FA33324 **Sample:** VB4575-ECC4571
Account: URSNCM AECOM, INC. **Lab FileID:** B113392.D
Project: Atlantic Refuse Dump; NC

43		Dibromomethane	0.186	0.191	-2.7	67	0.00	10.60
44		Bromodichloromethane	0.401	0.452	-12.7	72	0.00	10.71
45		2-Chloroethyl vinyl ether	0.199	0.175	12.1	55	0.00	10.93
46		2-Nitropropane	0.092	0.106	-15.2	74	0.00	10.90
47		cis-1,3-Dichloropropene	0.475	0.457	3.8	62	0.00	11.17
48		4-Methyl-2-pentanone	0.329	0.362	-10.0	73	0.00	11.26
49	I	Chlorobenzene-d5	1.000	1.000	0.0	63	0.00	13.06
50	S	Toluene-d8	1.221	1.271	-4.1	67	0.00	11.49
51	C	Toluene	1.535	1.531	0.3	65	0.00	11.57
52		trans-1,3-Dichloropropene	0.508	0.533	-4.9	64	0.00	11.71
53		1,1,2-Trichloroethane	0.277	0.285	-2.9	64	0.00	11.94
54		Tetrachloroethene	0.396	0.421	-6.3	68	0.00	12.19
55		2-hexanone	0.282	0.322	-14.2	70	0.00	12.12
56		1,3-Dichloropropane	0.571	0.580	-1.6	64	0.00	12.14
57		Dibromochloromethane	0.391	0.432	-10.5	68	0.00	12.41
58		1,2-Dibromoethane	0.361	0.373	-3.3	65	0.00	12.59
59		1-Chlorohexane	0.516	0.518	-0.4	62	0.00	12.96
60	P	Chlorobenzene	1.095	1.079	1.5	64	0.00	13.10
61	C	Ethylbenzene	1.791	1.865	-4.1	68	0.00	13.17
62		1,1,1,2-Tetrachloroethane	0.394	0.432	-9.6	71	0.00	13.15
63		m,p-Xylene	1.371	1.395	-1.8	65	0.00	13.28
64		o-Xylene	1.482	1.556	-5.0	66	0.00	13.73
65		Styrene	1.195	1.191	0.3	63	0.00	13.73
66	P	Bromoform	0.261	0.266	-1.9	65	0.00	13.99
67	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00	15.60
68		Isopropylbenzene	3.333	3.201	4.0	66	0.00	14.11
		----------	Amount	Calc.	%Drift	----------		
69		Cyclohexanone	200.000	88.178	55.9#	31	0.00	14.25
		----------	AvgRF	CCRF	%Dev	----------		
70	S	4-Bromofluorobenzene	0.923	0.940	-1.8	70	0.00	14.31
71	P	1,1,2,2-Tetrachloroethane	0.828	0.778	6.0	69	0.00	14.38
72		trans-1,4-Dichloro-2-Bute	0.225	0.209	7.1	60	0.00	14.43
73		n-Propylbenzene	3.793	3.786	0.2	70	0.00	14.56
74		Bromobenzene	0.920	0.869	5.5	67	0.00	14.53
75		1,2,3-Trichloropropane	0.228	0.234	-2.6	69	0.00	14.47
76		1,3,5-Trimethylbenzene	2.971	2.920	1.7	70	0.00	14.72
77		2-Chlorotoluene	2.612	2.549	2.4	70	0.00	14.72
78		4-Chlorotoluene	2.513	2.436	3.1	67	0.00	14.82
79		tert-Butylbenzene	1.686	1.768	-4.9	72	0.00	15.11
80		1,2,4-Trimethylbenzene	3.040	2.929	3.7	69	0.00	15.15
81		sec-Butylbenzene	3.750	3.584	4.4	66	0.00	15.36
82		4-Isopropyltoluene	3.134	3.048	2.7	67	0.00	15.48
83		1,3-Dichlorobenzene	1.698	1.619	4.7	67	0.00	15.54
84		1,4-Dichlorobenzene	1.717	1.659	3.4	67	0.00	15.63
85		Benzyl Chloride	1.397	1.097	21.5	54	0.00	15.74
86		n-Butylbenzene	3.015	3.016	-0.0	70	0.00	15.93
87		1,2-Dichlorobenzene	1.678	1.655	1.4	70	0.00	16.06
88		1,2-Dibromo-3-Chloropropa	0.173	0.164	5.2	69	0.00	16.88
89		1,2,4-Trichlorobenzene	1.313	1.271	3.2	68	0.00	17.85
90		Hexachlorobutadiene	0.576	0.606	-5.2	73	0.00	18.01
91		Naphthalene	2.644	2.559	3.2	68	0.00	18.18
92		1,2,3-Trichlorobenzene	1.177	1.180	-0.3	71	0.00	18.48
93	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	60	0.00	7.09
94		Acrolein	2.707	2.691	0.6	61	0.00	6.42
95		Tert-Butyl Alcohol	1.396	1.428	-2.3	62	0.00	7.18

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VB4575-ECC4571
Lab FileID: B113392.D

96	Tert amyl alcohol	1.061	1.039	2.1	57	0.00	9.39
97	1,4-Dioxane	0.127	0.124	2.4	55	0.01	10.56

(#) = Out of Range SPCC's out = 0 CCC's out = 0
B113301.D B-APR26.m Mon May 02 09:25:42 2016

Initial Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-ICC1525
Lab FileID: Z40549.D

```
                         Response Factor Report  MSVOA15

 Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
 Title        : 1,4-Dioxane by SIM
 Last Update  : Tue Apr 26 11:02:13 2016
 Response via : Initial Calibration

 Calibration Files
 1   =Z40546.D    2   =Z40547.D    10  =Z40548.D    40  =Z40549.D
 80  =Z40550.D    140 =Z40551.D    200 =Z40552.D

    Compound             1     2     10    40    80    140   200   Avg   %RSD
 ---------------------------------------------------------------------------

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)S 1,2-Dichloroethan 0.671 0.667 0.616 0.651 0.641 0.638 0.626 0.644   3.13
 3)S Toluene-d8        0.930 0.932 0.944 0.924 0.919 0.914 0.908 0.924   1.30

 4) I   1,4-Dioxane-d8        ----------------ISTD---------------------
 5)  1,4-Dioxane       2.051 1.688 1.652 1.590 1.712 1.794 1.826 1.759   8.63
---------------------------------------------------------------------------
(#) = Out of Range

          simm042616.m        Wed Apr 27 10:35:42 2016
```

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1525-ICV1525
Lab FileID: Z40554.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042616\Z40554.D            Vial: 9
Acq On    : 26 Apr 2016  11:24 am                     Operator: melissam
Sample    : ICV1525-4                                 Inst    : MSVOA15
Misc      : MS33630,VZ1525,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Tue Apr 26 11:02:13 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	101	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.644	0.646	-0.3	101	0.00	3.49
3	S	Toluene-d8	0.924	0.918	0.6	101	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	89	0.00	4.27
5		1,4-Dioxane	1.759	1.884	-7.1	105	0.00	4.29

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40549.D simm042616.m Wed Apr 27 08:55:32 2016

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1528-CC1525
Lab FileID: Z40633.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042916\Z40633.D            Vial: 1
Acq On    : 29 Apr 2016   8:19 am                    Operator: melissam
Sample    : cc1525-4                                 Inst    : MSVOA15
Misc      : MS33630,VZ1528,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Tue Apr 26 11:02:13 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	65	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.644	0.671	-4.2	67	0.00	3.49
3	S	Toluene-d8	0.924	0.997	-7.9	70	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	79	0.00	4.27
5		1,4-Dioxane	1.759	1.746	0.7	87	0.00	4.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40549.D simm042616.m Mon May 02 08:33:25 2016

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: VZ1528-ECC1525
Lab FileID: Z40658.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042916\Z40658.D            Vial: 25
Acq On    : 29 Apr 2016   6:38 pm                    Operator: melissam
Sample    : ECC1525-4                                Inst    : MSVOA15
Misc      : MS33732,VZ1528,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm042616.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Tue Apr 26 11:02:13 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  50%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	57	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.644	0.698	-8.4	61	0.00	3.49
3	S	Toluene-d8	0.924	1.009	-9.2	62	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	67	0.00	4.26
5		1,4-Dioxane	1.759	1.715	2.5	72	0.00	4.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40549.D simm042616.m Mon May 02 08:33:43 2016

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	10	2.5	ug/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	5.0	0.74	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.64	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.63	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	0.70	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	5.0	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	2.0	ug/l	
95-48-7	2-Methylphenol	ND	5.0	0.58	ug/l	
	3&4-Methylphenol	ND	5.0	1.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	0.62	ug/l	
100-02-7	4-Nitrophenol	ND	25	5.0	ug/l	
87-86-5	Pentachlorophenol	ND	25	5.0	ug/l	
108-95-2	Phenol	ND	5.0	0.50	ug/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.91	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	1.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.86	ug/l	
83-32-9	Acenaphthene	ND	5.0	0.56	ug/l	
208-96-8	Acenaphthylene	ND	5.0	0.58	ug/l	
98-86-2	Acetophenone	ND	5.0	0.71	ug/l	
120-12-7	Anthracene	ND	5.0	0.61	ug/l	
1912-24-9	Atrazine	ND	5.0	0.63	ug/l	
100-52-7	Benzaldehyde	ND	25	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	0.50	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	0.50	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.54	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	0.50	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	0.63	ug/l	
92-52-4	1,1'-Biphenyl	ND	5.0	0.50	ug/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	5.0	0.50	ug/l	
85-68-7	Butyl Benzyl Phthalate	ND	5.0	1.0	ug/l	
86-74-8	Carbazole	ND	5.0	0.56	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.72	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.68	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.69	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.69	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.50	ug/l	

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Result	RL	MDL	Units	Q
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	5.0	0.58	ug/l	
218-01-9	Chrysene	ND	5.0	0.53	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	0.76	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.67	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.50	ug/l	
84-66-2	Diethyl Phthalate	ND	5.0	1.0	ug/l	
131-11-3	Dimethyl Phthalate	ND	5.0	1.0	ug/l	
84-74-2	Di-n-butyl Phthalate	ND	5.0	1.0	ug/l	
117-84-0	Di-n-octyl Phthalate	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	0.63	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.58	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	1.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.50	ug/l	
86-73-7	Fluorene	ND	5.0	0.65	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.55	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.51	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	1.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.51	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	0.50	ug/l	
78-59-1	Isophorone	ND	5.0	0.67	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	0.56	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.70	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.75	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.72	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.66	ug/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	5.0	0.58	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.70	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.60	ug/l	
129-00-0	Pyrene	ND	5.0	0.55	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	5.0	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	48%	14-67%

Method Blank Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MB	X046021.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	37%	10-50%
118-79-6	2,4,6-Tribromophenol	65%	33-118%
4165-60-0	Nitrobenzene-d5	76%	42-108%
321-60-8	2-Fluorobiphenyl	73%	40-106%
1718-51-0	Terphenyl-d14	83%	39-121%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
301-02-0	9-Octadecenamide, (Z)-	15.16	15	ug/l	JN
	Total TIC, Semi-Volatile		15	ug/l	J

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
105-60-2	Caprolactam	50	9.9	20	11-68
59-50-7	4-Chloro-3-methyl Phenol	50	39.5	79	54-103
95-57-8	2-Chlorophenol	50	34.7	69	52-98
120-83-2	2,4-Dichlorophenol	50	39.1	78	53-103
105-67-9	2,4-Dimethylphenol	50	28.9	58	43-90
51-28-5	2,4-Dinitrophenol	100	74.9	75	44-112
534-52-1	4,6-Dinitro-o-cresol	100	87.7	88	66-121
95-48-7	2-Methylphenol	50	33.0	66	43-90
	3&4-Methylphenol	100	60.2	60	36-88
88-75-5	2-Nitrophenol	50	40.4	81	53-102
100-02-7	4-Nitrophenol	100	35.8	36	18-62
87-86-5	Pentachlorophenol	100	82.4	82	61-115
108-95-2	Phenol	50	17.4	35	19-56
58-90-2	2,3,4,6-Tetrachlorophenol	50	40.0	80	62-110
95-95-4	2,4,5-Trichlorophenol	50	41.9	84	62-109
88-06-2	2,4,6-Trichlorophenol	50	41.4	83	59-107
83-32-9	Acenaphthene	50	41.7	83	61-107
208-96-8	Acenaphthylene	50	39.4	79	60-104
98-86-2	Acetophenone	50	39.1	78	53-106
120-12-7	Anthracene	50	43.4	87	65-108
1912-24-9	Atrazine	50	42.9	86	62-114
100-52-7	Benzaldehyde	50	33.6	67	36-129
56-55-3	Benzo(a)anthracene	50	43.5	87	66-111
50-32-8	Benzo(a)pyrene	50	43.6	87	62-107
205-99-2	Benzo(b)fluoranthene	50	46.0	92	65-114
191-24-2	Benzo(g,h,i)perylene	50	43.3	87	66-116
207-08-9	Benzo(k)fluoranthene	50	44.2	88	65-114
92-52-4	1,1'-Biphenyl	50	37.3	75	57-104
101-55-3	4-Bromophenyl Phenyl Ether	50	43.4	87	65-109
85-68-7	Butyl Benzyl Phthalate	50	44.6	89	65-112
86-74-8	Carbazole	50	45.1	90	59-113
106-47-8	4-Chloroaniline	50	39.1	78	49-105
111-91-1	bis(2-Chloroethoxy)methane	50	37.2	74	51-102
111-44-4	bis(2-Chloroethyl)ether	50	36.6	73	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	42.1	84	45-106
91-58-7	2-Chloronaphthalene	50	38.5	77	57-103

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
7005-72-3	4-Chlorophenyl Phenyl Ether	50	42.5	85	62-105
218-01-9	Chrysene	50	43.9	88	66-111
53-70-3	Dibenzo(a,h)anthracene	50	44.2	88	66-119
132-64-9	Dibenzofuran	50	41.4	83	61-106
91-94-1	3,3'-Dichlorobenzidine	50	39.9	80	46-117
84-66-2	Diethyl Phthalate	50	43.2	86	64-108
131-11-3	Dimethyl Phthalate	50	42.2	84	63-106
84-74-2	Di-n-butyl Phthalate	50	46.3	93	65-107
117-84-0	Di-n-octyl Phthalate	50	45.1	90	62-118
121-14-2	2,4-Dinitrotoluene	50	43.7	87	61-110
606-20-2	2,6-Dinitrotoluene	50	40.7	81	63-108
117-81-7	bis(2-Ethylhexyl)phthalate	50	46.4	93	61-117
206-44-0	Fluoranthene	50	43.8	88	63-106
86-73-7	Fluorene	50	42.9	86	62-108
118-74-1	Hexachlorobenzene	50	41.6	83	63-108
87-68-3	Hexachlorobutadiene	50	25.3	51	42-102
77-47-4	Hexachlorocyclopentadiene	50	28.9	58	39-102
67-72-1	Hexachloroethane	50	24.7	49	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	43.4	87	64-119
78-59-1	Isophorone	50	38.4	77	43-87
91-57-6	2-Methylnaphthalene	50	39.0	78	51-102
91-20-3	Naphthalene	50	34.8	70	47-100
88-74-4	2-Nitroaniline	50	44.0	88	54-128
99-09-2	3-Nitroaniline	50	43.0	86	56-106
100-01-6	4-Nitroaniline	50	45.5	91	55-120
98-95-3	Nitrobenzene	50	37.3	75	50-104
621-64-7	N-Nitrosodi-n-propylamine	50	39.2	78	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.0	86	64-108
85-01-8	Phenanthrene	50	42.9	86	66-110
129-00-0	Pyrene	50	44.7	89	64-113
95-94-3	1,2,4,5-Tetrachlorobenzene	50	36.0	72	47-111

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	43%	14-67%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-BS	X046020.D	1	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Surrogate Recoveries	BSP	Limits
4165-62-2	Phenol-d5	30%	10-50%
118-79-6	2,4,6-Tribromophenol	88%	33-118%
4165-60-0	Nitrobenzene-d5	75%	42-108%
321-60-8	2-Fluorobiphenyl	81%	40-106%
1718-51-0	Terphenyl-d14	87%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	FA33273-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
105-60-2	Caprolactam	9.5 U		94.3	ND	0*	94.3	ND	0*	nc	11-68/39
59-50-7	4-Chloro-3-methyl Phenol	4.8 U		94.3	74.4	79	94.3	79.6	84	4	54-103/23
95-57-8	2-Chlorophenol	4.8 U		94.3	72.1	76	94.3	72.9	77	3	52-98/25
120-83-2	2,4-Dichlorophenol	4.8 U		94.3	76.5	81	94.3	78.1	83	3	53-103/26
105-67-9	2,4-Dimethylphenol	4.8 U		94.3	71.4	76	94.3	72.2	77	2	43-90/27
51-28-5	2,4-Dinitrophenol	24 U		189	ND	0*	189	ND	0*	nc	44-112/25
534-52-1	4,6-Dinitro-o-cresol	9.5 U		189	92.4	49*	189	95.5	51*	62*	66-121/23
95-48-7	2-Methylphenol	4.8 U		94.3	70.8	75	94.3	66.9	71	0	43-90/28
	3&4-Methylphenol	4.8 U		189	142	75	189	142	75	11	36-88/28
88-75-5	2-Nitrophenol	4.8 U		94.3	63.7	68	94.3	67.7	72	17	53-102/29
100-02-7	4-Nitrophenol	24 U		189	ND	0*	189	ND	0*	nc	18-62/33
87-86-5	Pentachlorophenol	24 U		189	ND	0*	189	ND	0*	nc	61-115/26
108-95-2	Phenol	4.8 U		94.3	50.4	53	94.3	49.9	53	5	19-56/35
58-90-2	2,3,4,6-Tetrachlorophenol	4.8 U		94.3	62.1	66	94.3	62.1	66	27*	62-110/22
95-95-4	2,4,5-Trichlorophenol	4.8 U		94.3	75.7	80	94.3	70.0	74	14	62-109/22
88-06-2	2,4,6-Trichlorophenol	4.8 U		94.3	68.9	73	94.3	70.9	75	11	59-107/23
83-32-9	Acenaphthene	0.65	I	94.3	82.8	87	94.3	83.4	88	4	61-107/22
208-96-8	Acenaphthylene	4.8 U		94.3	77.0	82	94.3	79.6	84	5	60-104/22
98-86-2	Acetophenone	4.8 U		94.3	77.5	82	94.3	75.4	80	4	53-106/27
120-12-7	Anthracene	4.8 U		94.3	87.6	93	94.3	83.2	88	2	65-108/20
1912-24-9	Atrazine	4.8 U		94.3	75.3	80	94.3	70.5	75	13	62-114/24
100-52-7	Benzaldehyde	24 U		94.3	ND	0*	94.3	ND	0*	nc	36-129/29
56-55-3	Benzo(a)anthracene	4.8 U		94.3	74.8	79	94.3	72.2	77	17	66-111/22
50-32-8	Benzo(a)pyrene	4.8 U		94.3	70.4	75	94.3	69.5	74	20	62-107/23
205-99-2	Benzo(b)fluoranthene	4.8 U		94.3	70.7	75	94.3	74.7	79	16	65-114/23
191-24-2	Benzo(g,h,i)perylene	4.8 U		94.3	76.8	81	94.3	69.8	74	21	66-116/23
207-08-9	Benzo(k)fluoranthene	4.8 U		94.3	86.2	91	94.3	73.3	78	17	65-114/24
92-52-4	1,1'-Biphenyl	0.50	I	94.3	82.5	87	94.3	83.9	88	14	57-104/23
101-55-3	4-Bromophenyl Phenyl Ether	4.8 U		94.3	81.7	87	94.3	78.1	83	12	65-109/23
85-68-7	Butyl Benzyl Phthalate	4.8 U		94.3	66.2	70	94.3	71.0	75	19	65-112/24
86-74-8	Carbazole	4.8 U		94.3	85.3	90	94.3	86.3	91	1	59-113/21
106-47-8	4-Chloroaniline	4.8 U		94.3	72.2	77	94.3	76.6	81	20	49-105/27
111-91-1	bis(2-Chloroethoxy)methane	4.8 U		94.3	76.9	82	94.3	78.5	83	14	51-102/28
111-44-4	bis(2-Chloroethyl)ether	4.8 U		94.3	75.8	80	94.3	76.9	82	0	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	4.8 U		94.3	88.9	94	94.3	87.6	93	16	45-106/26
91-58-7	2-Chloronaphthalene	4.8 U		94.3	84.1	89	94.3	87.2	92	14	57-103/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Compound	FA33273-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
7005-72-3	4-Chlorophenyl Phenyl Ether	4.8 U		94.3	85.7	91	94.3	83.0	88	2	62-105/20
218-01-9	Chrysene	4.8 U		94.3	79.9	85	94.3	80.8	86	4	66-111/22
53-70-3	Dibenzo(a,h)anthracene	4.8 U		94.3	63.1	67	94.3	57.1	61*	44*	66-119/24
132-64-9	Dibenzofuran	4.8 U		94.3	81.5	86	94.3	82.3	87	6	61-106/21
91-94-1	3,3'-Dichlorobenzidine	4.8 U		94.3	54.4	58	94.3	56.5	60	19	46-117/29
84-66-2	Diethyl Phthalate	4.8 U		94.3	86.2	91	94.3	84.6	90	3	64-108/21
131-11-3	Dimethyl Phthalate	4.8 U		94.3	81.8	87	94.3	81.8	87	1	63-106/22
84-74-2	Di-n-butyl Phthalate	4.8 U		94.3	80.5	85	94.3	78.6	83	14	65-107/21
117-84-0	Di-n-octyl Phthalate	4.8 U		94.3	55.9	59*	94.3	54.6	58*	49*	62-118/24
121-14-2	2,4-Dinitrotoluene	4.8 U		94.3	59.5	63	94.3	60.8	64	32*	61-110/21
606-20-2	2,6-Dinitrotoluene	4.8 U		94.3	64.3	68	94.3	64.5	68	20	63-108/21
117-81-7	bis(2-Ethylhexyl)phthalate	4.8 U		94.3	65.3	69	94.3	68.9	73	25*	61-117/23
206-44-0	Fluoranthene	4.8 U		94.3	79.3	84	94.3	76.6	81	11	63-106/21
86-73-7	Fluorene	0.95	I	94.3	90.2	95	94.3	87.0	91	7	62-108/20
118-74-1	Hexachlorobenzene	4.8 U		94.3	71.4	76	94.3	67.3	71	21	63-108/22
87-68-3	Hexachlorobutadiene	4.8 U		94.3	69.0	73	94.3	74.8	79	4	42-102/28
77-47-4	Hexachlorocyclopentadiene	4.8 U		94.3	40.9	43	94.3	44.8	47	34*	39-102/29
67-72-1	Hexachloroethane	4.8 U		94.3	70.9	75	94.3	73.1	77	12	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	4.8 U		94.3	55.3	59*	94.3	57.7	61*	42*	64-119/24
78-59-1	Isophorone	4.8 U		94.3	76.0	81	94.3	77.0	82	5	43-87/25
91-57-6	2-Methylnaphthalene	70.9		94.3	172	107*	94.3	186	122*	23	51-102/26
91-20-3	Naphthalene	404 [b]		94.3	512	339* [a]	94.3	568	399* [a]	64*	47-100/29
88-74-4	2-Nitroaniline	4.8 U		94.3	74.4	79	94.3	77.5	82	10	54-128/24
99-09-2	3-Nitroaniline	4.8 U		94.3	69.0	73	94.3	67.3	71	12	56-106/27
100-01-6	4-Nitroaniline	4.8 U		94.3	70.1	74	94.3	64.5	68	21	55-120/24
98-95-3	Nitrobenzene	4.8 U		94.3	79.8	85	94.3	79.1	84	10	50-104/28
621-64-7	N-Nitrosodi-n-propylamine	4.8 U		94.3	79.3	84	94.3	82.4	87	19	52-104/25
86-30-6	N-Nitrosodiphenylamine	4.8 U		94.3	89.2	95	94.3	87.3	93	7	64-108/23
85-01-8	Phenanthrene	4.8 U		94.3	88.6	94	94.3	84.7	90	2	66-110/21
129-00-0	Pyrene	4.8 U		94.3	80.2	85	94.3	82.1	87	4	64-113/23
95-94-3	1,2,4,5-Tetrachlorobenzene	4.8 U		94.3	75.0	80	94.3	75.0	80	2	47-111/27

CAS No.	Surrogate Recoveries	MS	MSD	FA33273-1	FA33273-1	Limits
367-12-4	2-Fluorophenol	59%	58%	45%	40%	14-67%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60181-MS	X046023.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
OP60181-MSD	X046024.D	10	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046035.D	1	04/27/16	MV	04/23/16	OP60181	SX2039
FA33273-1	X046022.D	10	04/27/16	MV	04/23/16	OP60181	SX2039

The QC reported here applies to the following samples: **Method:** SW846 8270D

FA33324-2, FA33324-3, FA33324-4

CAS No.	Surrogate Recoveries	MS	MSD	FA33273-1	FA33273-1	Limits
4165-62-2	Phenol-d5	50%	47%	32%	27%	10-50%
118-79-6	2,4,6-Tribromophenol	70%	70%	89%	69%	33-118%
4165-60-0	Nitrobenzene-d5	80%	75%	60%	71%	42-108%
321-60-8	2-Fluorobiphenyl	82%	85%	75%	78%	40-106%
1718-51-0	Terphenyl-d14	81%	81%	89%	85%	39-121%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Result is from Run #2.

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-DFTPP
Lab File ID: X045993.D
Instrument ID: GCMSX
Injection Date: 04/26/16
Injection Time: 13:59

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	52928	44.2		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	40123	33.5		Pass
70	Less than 2.0% of mass 69	411	0.34	(1.02) [a]	Pass
127	40.0 - 60.0% of mass 198	67312	56.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	119680	100.0		Pass
199	5.0 - 9.0% of mass 198	7449	6.22		Pass
275	10.0 - 30.0% of mass 198	22148	18.5		Pass
365	1.0 - 100.0% of mass 198	1993	1.67		Pass
441	Present, but less than mass 443	2918	2.44	(24.3) [b]	Pass
442	40.0 - 100.0% of mass 198	66344	55.4		Pass
443	17.0 - 23.0% of mass 442	12002	10.0	(18.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2038-IC2038	X045994.D	04/26/16	14:15	00:16	Initial cal 5
SX2038-IC2038	X045996.D	04/26/16	14:39	00:40	Initial cal 25
SX2038-IC2038	X045997.D	04/26/16	15:17	01:18	Initial cal 10
SX2038-ICC2038	X045998.D	04/26/16	15:41	01:42	Initial cal 50
SX2038-IC2038	X045999.D	04/26/16	16:05	02:06	Initial cal 60
SX2038-IC2038	X046000.D	04/26/16	16:29	02:30	Initial cal 75
SX2038-IC2038	X046001.D	04/26/16	16:53	02:54	Initial cal 100
SX2038-ICV2038	X046002.D	04/26/16	17:17	03:18	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046004.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 10:01

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	74174	48.9		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	53248	35.1		Pass
70	Less than 2.0% of mass 69	292	0.19	(0.55) [a]	Pass
127	40.0 - 60.0% of mass 198	87829	57.9		Pass
197	Less than 1.0% of mass 198	219	0.14		Pass
198	Base peak, 100% relative abundance	151664	100.0		Pass
199	5.0 - 9.0% of mass 198	9706	6.40		Pass
275	10.0 - 30.0% of mass 198	24472	16.1		Pass
365	1.0 - 100.0% of mass 198	2339	1.54		Pass
441	Present, but less than mass 443	4436	2.92	(31.5) [b]	Pass
442	40.0 - 100.0% of mass 198	73725	48.6		Pass
443	17.0 - 23.0% of mass 442	14065	9.27	(19.1) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2039-CC2038	X046005.D	04/27/16	10:18	00:17	Continuing cal 50
SX2038-ICV2038	X046006.D	04/27/16	10:42	00:41	Initial cal verification 50
OP60181-BS	X046020.D	04/27/16	16:19	06:18	Blank Spike
OP60181-MB	X046021.D	04/27/16	16:43	06:42	Method Blank
FA33273-1	X046022.D	04/27/16	17:07	07:06	(used for QC only; not part of job FA33324)
OP60181-MS	X046023.D	04/27/16	17:31	07:30	Matrix Spike
OP60181-MSD	X046024.D	04/27/16	17:55	07:54	Matrix Spike Duplicate
OP60193-BS	X046025.D	04/27/16	18:19	08:18	Blank Spike
OP60193-MB	X046026.D	04/27/16	18:43	08:42	Method Blank
FA33308-5	X046027.D	04/27/16	19:07	09:06	(used for QC only; not part of job FA33324)
OP60193-MS	X046028.D	04/27/16	19:30	09:29	Matrix Spike
OP60193-MSD	X046029.D	04/27/16	19:54	09:53	Matrix Spike Duplicate
ZZZZZZ	X046030.D	04/27/16	20:18	10:17	(unrelated sample)
ZZZZZZ	X046031.D	04/27/16	20:41	10:40	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046032.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 21:04

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	70383	50.2		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	48659	34.7		Pass
70	Less than 2.0% of mass 69	199	0.14	(0.41) [a]	Pass
127	40.0 - 60.0% of mass 198	80149	57.2		Pass
197	Less than 1.0% of mass 198	344	0.25		Pass
198	Base peak, 100% relative abundance	140080	100.0		Pass
199	5.0 - 9.0% of mass 198	9645	6.89		Pass
275	10.0 - 30.0% of mass 198	22571	16.1		Pass
365	1.0 - 100.0% of mass 198	2185	1.56		Pass
441	Present, but less than mass 443	8449	6.03	(59.3) [b]	Pass
442	40.0 - 100.0% of mass 198	73091	52.2		Pass
443	17.0 - 23.0% of mass 442	14251	10.2	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SX2039-CC2038	X046033.D	04/27/16	21:20	00:16	Continuing cal 50
ZZZZZZ	X046034.D	04/27/16	21:44	00:40	(unrelated sample)
FA33273-1	X046035.D	04/27/16	22:08	01:04	(used for QC only; not part of job FA33324)
ZZZZZZ	X046038.D	04/27/16	23:19	02:15	(unrelated sample)
ZZZZZZ	X046039.D	04/27/16	23:43	02:39	(unrelated sample)
FA33140-1	X046040.D	04/28/16	00:07	03:03	(used for QC only; not part of job FA33324)
ZZZZZZ	X046043.D	04/28/16	01:18	04:14	(unrelated sample)
ZZZZZZ	X046044.D	04/28/16	01:41	04:37	(unrelated sample)
ZZZZZZ	X046045.D	04/28/16	02:05	05:01	(unrelated sample)
ZZZZZZ	X046046.D	04/28/16	02:29	05:25	(unrelated sample)
ZZZZZZ	X046047.D	04/28/16	02:52	05:48	(unrelated sample)
ZZZZZZ	X046048.D	04/28/16	03:16	06:12	(unrelated sample)
ZZZZZZ	X046049.D	04/28/16	03:40	06:36	(unrelated sample)
ZZZZZZ	X046050.D	04/28/16	04:04	07:00	(unrelated sample)
ZZZZZZ	X046051.D	04/28/16	04:27	07:23	(unrelated sample)
ZZZZZZ	X046052.D	04/28/16	04:51	07:47	(unrelated sample)
ZZZZZZ	X046053.D	04/28/16	05:15	08:11	(unrelated sample)
ZZZZZZ	X046054.D	04/28/16	05:38	08:34	(unrelated sample)
FA33324-2	X046055.D	04/28/16	06:02	08:58	WELL-289 ATLANTIC

Instrument Performance Check (DFTPP)

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-DFTPP
Lab File ID: X046032.D
Instrument ID: GCMSX
Injection Date: 04/27/16
Injection Time: 21:04

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
FA33324-3	X046056.D	04/28/16	06:26	09:22	WELL-267 ATLANTIC
FA33324-4	X046057.D	04/28/16	06:50	09:46	WELL-144 ATLANTIC
SX2039-ECC2038	X046058.D	04/28/16	07:13	10:09	Ending cal 50

Semivolatile Internal Standard Area Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std: SX2039-CC2038 **Injection Date:** 04/27/16
Lab File ID: X046005.D **Injection Time:** 10:18
Instrument ID: GCMSX **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	284252	5.51	1023826	6.93	462831	8.98	654436	10.69	433855	13.87	358978	15.85
Check Std [b]	281546	5.51	1000860	6.93	454436	8.98	618723	10.69	412464	13.87	341688	15.85
Upper Limit [c]	563092	6.01	2001720	7.43	908872	9.48	1237446	11.19	824928	14.37	683376	16.35
Lower Limit [d]	140773	5.01	500430	6.43	227218	8.48	309362	10.19	206232	13.37	170844	15.35

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP60181-BS	303016	5.51	1143021	6.93	485397	8.98	673290	10.68	430932	13.87	345264	15.85
OP60181-MB	296115	5.51	1108118	6.93	500228	8.98	703935	10.68	440253	13.86	333934	15.84
FA33273-1	325193	5.51	1170451	6.93	552874	8.98	794519	10.68	505693	13.86	362730	15.84
OP60181-MS	304244	5.51	1112970	6.93	516179	8.98	727066	10.68	486581	13.86	352586	15.84
OP60181-MSD	315507	5.51	1136741	6.93	532461	8.98	735370	10.68	482051	13.86	360316	15.85
OP60193-BS	310853	5.51	1085204	6.93	473957	8.98	631474	10.68	400040	13.86	325496	15.84
OP60193-MB	358598	5.51	1288444	6.93	581641	8.98	778633	10.68	495079	13.86	358185	15.84
FA33308-5	328926	5.51	1185142	6.93	506172	8.98	742727	10.68	504234	13.86	374486	15.84
OP60193-MS	325969	5.51	1134030	6.93	498861	8.98	710942	10.68	486047	13.86	375451	15.84
OP60193-MSD	338873	5.51	1193443	6.93	532343	8.98	758866	10.68	502750	13.86	393237	15.85
ZZZZZZ	349650	5.51	1279118	6.93	560320	8.97	741365	10.68	458496	13.86	336390	15.83
ZZZZZZ	339251	5.51	1236477	6.93	547584	8.97	713334	10.68	446980	13.86	324510	15.84

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2038-ICC2038 X045998.D 04/26/16 15:41
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Check Std: SX2039-CC2038 **Injection Date:** 04/27/16
Lab File ID: X046033.D **Injection Time:** 21:20
Instrument ID: GCMSX **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Initial Cal [a]	284252	5.51	1023826	6.93	462831	8.98	654436	10.69	433855	13.87	358978	15.85
Check Std [b]	302353	5.51	1074182	6.93	487602	8.98	694903	10.68	455135	13.86	374396	15.84
Upper Limit [c]	604706	6.01	2148364	7.43	975204	9.48	1389806	11.18	910270	14.36	748792	16.34
Lower Limit [d]	151177	5.01	537091	6.43	243801	8.48	347452	10.18	227568	13.36	187198	15.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
ZZZZZZ	406857	5.51	1231649	6.93	331617	8.98	571751	10.69	630276	13.86	513805	15.84
FA33273-1	314293	5.51	1070320	6.93	511448	8.98	733280	10.68	494207	13.86	376606	15.84
ZZZZZZ	317785	5.51	1142344	6.93	490389	8.97	644501	10.68	389883	13.86	314909	15.83
ZZZZZZ	327651	5.51	1179052	6.93	514863	8.97	687301	10.68	430011	13.86	343341	15.84
FA33140-1	305974	5.51	1108940	6.93	501413	8.97	647406	10.68	421187	13.86	327023	15.84
ZZZZZZ	381247	5.51	1359895	6.93	633659	8.97	861646	10.68	547747	13.86	423941	15.84
ZZZZZZ	332494	5.51	1225782	6.93	571033	8.98	779203	10.68	492325	13.86	366356	15.85
ZZZZZZ	296269	5.51	1091928	6.93	499886	8.97	673542	10.68	426932	13.86	319476	15.84
ZZZZZZ	321304	5.51	1185165	6.93	542414	8.97	750283	10.68	474300	13.86	354216	15.84
ZZZZZZ	308210	5.51	1147904	6.93	530932	8.97	720645	10.68	463745	13.86	346071	15.84
ZZZZZZ	302877	5.51	1118353	6.93	507011	8.97	687634	10.68	441357	13.86	326120	15.83
ZZZZZZ	305518	5.51	1122189	6.93	514857	8.97	698198	10.68	440287	13.86	327883	15.83
ZZZZZZ	318095	5.51	1188976	6.93	551122	8.97	744363	10.68	476514	13.86	358790	15.83
ZZZZZZ	314024	5.51	1162145	6.93	533054	8.97	727527	10.68	456761	13.86	343544	15.84
ZZZZZZ	320519	5.51	1179055	6.93	548010	8.97	757341	10.68	480483	13.86	356767	15.84
ZZZZZZ	302059	5.51	1124816	6.93	514315	8.97	701928	10.68	444318	13.86	325061	15.84
ZZZZZZ	319924	5.51	1161059	6.93	547471	8.97	740137	10.68	468091	13.85	349037	15.83
FA33324-2	309254	5.51	1132306	6.93	529994	8.97	709029	10.68	451598	13.85	330533	15.83
FA33324-3	304097	5.51	1134024	6.93	522936	8.97	707194	10.68	449421	13.86	319755	15.84
FA33324-4	321840	5.51	1167995	6.93	538424	8.97	741940	10.68	471329	13.86	353957	15.83
SX2039-ECC2038	271034	5.51	970050	6.93	440184	8.98	603150	10.68	394505	13.86	323208	15.83

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Initial Cal is: SX2038-ICC2038 X045998.D 04/26/16 15:41
(b) Check Std Limit = -50 to + 100% of initial cal area.
(c) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(d) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
FA33324-2	X046055.D	41	29	75	77	74	90
FA33324-3	X046056.D	38	26	67	72	70	83
FA33324-4	X046057.D	42	30	77	82	81	91
OP60181-BS	X046020.D	43	30	88	75	81	87
OP60181-MB	X046021.D	48	37	65	76	73	83
OP60181-MS	X046023.D	59	50	70	80	82	81
OP60181-MSD	X046024.D	58	47	70	75	85	81

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	14-67%
S2 = Phenol-d5	10-50%
S3 = 2,4,6-Tribromophenol	33-118%
S4 = Nitrobenzene-d5	42-108%
S5 = 2-Fluorobiphenyl	40-106%
S6 = Terphenyl-d14	39-121%

Initial Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICC2038
Lab FileID: X045998.D

Response Factor Report MSBNA05

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Initial Calibration

Calibration Files
5 =x045994.D 10 =x045997.D 25 =x045996.D 50 =x045998.D
60 =x045999.D 75 =x046000.D 100 =x046001.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.792	0.809	0.795	0.795	0.788	0.781	0.715	0.782	3.94
3) N-nitrosodimethyl	0.814	0.880	0.826	0.827	0.821	0.804	0.733	0.815	5.36
4) Pyridine	1.966	2.117	2.049	1.987	2.034	2.003	1.786	1.992	5.18
5)P Benzaldehyde	1.371	1.342	1.325	1.209	1.129	1.021	0.904	1.186	14.94
6) Aniline	2.350	2.416	2.328	2.285	2.231	2.160	1.917	2.241	7.37
7)S 2-Fluorophenol	1.568	1.670	1.582	1.545	1.519	1.477	1.285	1.521	7.90
8)P bis(2-Chloroethyl	1.444	1.552	1.474	1.443	1.411	1.384	1.206	1.416	7.56
9)S Phenol-d5	1.714	1.789	1.684	1.577	1.546	1.469	1.275	1.579	10.94
10)P Phenol	2.033	2.092	1.986	1.735	1.677	1.628	1.411	1.795	13.92
11)P 2-Chlorophenol	1.564	1.677	1.585	1.538	1.540	1.515	1.331	1.536	6.80
12) 1,3-Dichlorobenze	1.677	1.765	1.652	1.606	1.607	1.561	1.371	1.606	7.61
13) 1,4-Dichlorobenze	1.657	1.721	1.647	1.574	1.578	1.529	1.306	1.573	8.52
14) 1,2-Dichlorobenze	1.561	1.609	1.526	1.490	1.478	1.425	1.254	1.478	7.79
15) Benzyl alcohol	0.959	1.040	0.996	0.969	0.970	0.949	0.851	0.962	5.97
16)P bis(2-chloroisopr	2.577	2.713	2.520	2.398	2.314	2.229	1.864	2.373	11.70
17)P 2-Methylphenol	1.331	1.368	1.313	1.267	1.249	1.204	1.041	1.253	8.64
18)P Acetophenone	1.930	1.902	1.777	1.745	1.730	1.697	1.614	1.771	6.33
19)P Hexachloroethane	0.611	0.648	0.604	0.588	0.572	0.557	0.480	0.580	9.10
20)P N-Nitroso-di-n-pr	0.776	0.823	0.766	0.706	0.685	0.652	0.549	0.708	12.90
21)P 3&4-Methylphenol	1.369	1.428	1.363	1.277	1.262	1.219	1.044	1.280	9.91
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.328	0.340	0.337	0.327	0.334	0.320	0.284	0.324	5.88
24)P Nitrobenzene	0.334	0.355	0.344	0.327	0.330	0.318	0.277	0.326	7.67
25)P Isophorone	0.657	0.657	0.641	0.623	0.622	0.605	0.531	0.620	7.00
26)P 2-Nitrophenol	0.163	0.186	0.194	0.202	0.213	0.210	0.192	0.194	8.75
27)P 2,4-Dimethylpheno	0.334	0.337	0.325	0.309	0.314	0.301	0.266	0.312	7.84
28) O,O,O-Triethylpho	0.149	0.136	0.137	0.132	0.139	0.130	0.129	0.136	5.08
29)P bis(2-Chloroethox	0.449	0.462	0.434	0.438	0.434	0.408	0.370	0.428	7.05
30) Benzoic Acid	0.097	0.159	0.185	0.212	0.232	0.233	0.218	0.191	25.82
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9943									
Response Ratio = 0.00000 + 0.21564 *A + 0.00322 *A^2									
31)P 2,4-Dichloropheno	0.302	0.293	0.288	0.282	0.286	0.272	0.247	0.281	6.28
32) 1,2,4-Trichlorobe	0.305	0.296	0.282	0.278	0.284	0.275	0.244	0.281	6.88
33) alpha-Terpineol								0.000	-1.00
34)P Naphthalene	1.092	1.112	1.047	0.982	0.982	0.925	0.786	0.990	11.26
35)P 4-Chloroaniline	0.478	0.478	0.449	0.422	0.426	0.403	0.347	0.429	10.75
36) 2,6-Dichloropheno	0.284	0.290	0.276	0.262	0.266	0.260	0.223	0.266	8.29
37)P Hexachlorobutadie	0.128	0.126	0.121	0.123	0.127	0.123	0.110	0.122	4.99
38)P Caprolactam	0.101	0.105	0.112	0.109	0.114	0.113	0.112	0.109	4.19
39)P 4-Chloro-3-methyl	0.251	0.274	0.267	0.260	0.265	0.254	0.227	0.257	5.92
40)P 2-Methylnaphthale	0.701	0.727	0.689	0.662	0.663	0.636	0.553	0.662	8.50
41) 1-Methylnaphthale	0.660	0.667	0.641	0.613	0.611	0.588	0.510	0.613	8.74
42)P 1,2,4,5-Tetrachlo	0.238	0.244	0.228	0.229	0.236	0.227	0.205	0.229	5.37

Initial Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICC2038
Lab FileID: X045998.D

```
43) I   Acenaphthene-d10      ----------------ISTD---------------------
44)P Hexachlorocyclope 0.213 0.240 0.268 0.275 0.300 0.309 0.286 0.270  12.48
45)P 2,4,6-Trichloroph 0.333 0.360 0.365 0.359 0.370 0.376 0.341 0.358   4.34
46)P 2,4,5-Trichloroph 0.346 0.373 0.379 0.365 0.388 0.394 0.359 0.372   4.46
47)S 2-Fluorobiphenyl  1.402 1.383 1.368 1.278 1.287 1.285 1.139 1.306   6.89
48)P 1,1'-Biphenyl     1.754 1.676 1.594 1.407 1.407 1.378 1.263 1.497  11.98
49)P 2-Chloronaphthale 1.248 1.270 1.198 1.081 1.073 1.064 0.898 1.119  11.59
50)P 2-Nitroaniline    0.272 0.328 0.356 0.347 0.343 0.349 0.315 0.330   8.81
51)  p-Dinitrobenzene  0.117 0.161 0.179 0.186 0.201 0.204 0.187 0.176  16.83
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9953
              Response Ratio = 0.00000 + 0.19810 *A + -0.00258 *A^2

52)P Acenaphthylene    2.026 2.112 2.093 1.935 1.935 1.931 1.692 1.960   7.18
53)P Dimethylphthalate 1.296 1.302 1.284 1.234 1.232 1.254 1.090 1.242   5.87
54)  m-Dinitrobenzene  0.141 0.167 0.183 0.199 0.204 0.213 0.194 0.186  13.32
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9957
              Response Ratio = 0.00000 + 0.20730 *A + -0.00352 *A^2

55)P 2,6-Dinitrotoluen 0.223 0.263 0.282 0.276 0.296 0.303 0.279 0.275   9.65
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9961
              Response Ratio = 0.00000 + 0.29907 *A + -0.00595 *A^2

56)  o-Dinitrobenzene  0.192 0.197 0.201 0.199 0.205 0.203 0.182 0.197   4.08
57)P Acenaphthene      1.235 1.285 1.210 1.147 1.140 1.147 1.010 1.168   7.53
58)P 3-Nitroaniline    0.369 0.397 0.393 0.389 0.395 0.394 0.369 0.387   3.13
59)P 2,4-Dinitrophenol       0.019 0.050 0.086 0.105 0.122 0.132 0.086  50.72
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 0.04762 *A + 0.03513 *A^2

60)P Dibenzofuran      1.675 1.696 1.624 1.510 1.521 1.535 1.343 1.558   7.75
61)P 2,4-Dinitrotoluen 0.253 0.323 0.340 0.364 0.373 0.392 0.357 0.343  13.25
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9958
              Response Ratio = 0.00000 + 0.37978 *A + -0.00584 *A^2

62)P 4-Nitrophenol     0.110 0.135 0.145 0.140 0.142 0.144 0.131 0.135   8.92
63)  2,3,5,6-Tetrachlo 0.167 0.211 0.228 0.241 0.249 0.261 0.243 0.229  13.80
64)P 2,3,4,6-Tetrachlo 0.193 0.225 0.235 0.245 0.247 0.258 0.240 0.235   8.96
65)P Fluorene          1.303 1.332 1.285 1.179 1.184 1.168 1.012 1.209   9.04
66)P 4-Chlorophenyl-ph 0.504 0.522 0.511 0.496 0.499 0.503 0.455 0.498   4.23
67)P Diethylphthalate  1.263 1.327 1.303 1.214 1.214 1.217 1.073 1.230   6.72
68)  Thionazin         0.283 0.280 0.284 0.255 0.255 0.253 0.236 0.264   7.04
69)P 4-Nitroaniline    0.321 0.369 0.364 0.354 0.363 0.370 0.334 0.354   5.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9973
              Response Ratio = 0.00000 + 0.39325 *A + -0.02137 *A^2


70) I   Phenanthrene-d10      ----------------ISTD---------------------
71)P 4,6-Dinitro-2-met 0.027 0.049 0.081 0.099 0.114 0.122 0.118 0.087  42.30
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 0.08834 *A + 0.01335 *A^2

72)P n-Nitrosodiphenyl 0.625 0.664 0.631 0.563 0.588 0.571 0.499 0.591   9.21
73)  Diphenylamine     0.750 0.797 0.757 0.675 0.705 0.685 0.599 0.710   9.21
74)  1,2-Diphenylhydra 0.871 0.888 0.864 0.770 0.834 0.812 0.679 0.817   8.89
75)S 2,4,6-Tribromophe 0.061 0.070 0.073 0.079 0.083 0.087 0.079 0.076  11.45
76)  Sulfotep          0.148 0.143 0.143 0.126 0.130 0.125 0.112 0.133   9.66
77)  Phorate           0.595 0.589 0.577 0.502 0.498 0.469 0.418 0.521  12.99
78)P 4-Bromophenyl-phe 0.181 0.187 0.181 0.175 0.177 0.182 0.153 0.176   6.15
79)P Hexachlorobenzene 0.164 0.169 0.176 0.173 0.182 0.185 0.169 0.174   4.28
```

7.7.1

7

Initial Calibration Summary

Job Number: FA33324 **Sample:** SX2038-ICC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X045998.D
Project: Atlantic Refuse Dump; NC

```
 80)  Dimethoate        0.363 0.381 0.401 0.360 0.368 0.364 0.346 0.369   4.76
 81)  Simazine          0.081 0.085 0.085 0.080 0.081 0.082 0.074 0.081   4.62
 82)P Atrazine          0.198 0.199 0.201 0.189 0.193 0.194 0.187 0.194   2.66
 83)P Pentachlorophenol       0.030 0.060 0.080 0.089 0.094 0.095 0.075  34.10
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9933
               Response Ratio = 0.00000 + 0.06668 *A + 0.01226 *A^2

 84)P Phenanthrene      1.204 1.235 1.195 1.085 1.089 1.081 0.926 1.116   9.49
 85)P Anthracene        1.186 1.246 1.200 1.086 1.110 1.071 0.924 1.118   9.57
 86)  Disulfoton        0.468 0.469 0.471 0.420 0.421 0.482 0.435 0.452   5.76
 87)P Carbazole         1.207 1.246 1.215 1.106 1.117 1.086 0.951 1.133   8.92
 88)  Methyl Parathion  0.185 0.225 0.284 0.283 0.300 0.300 0.291 0.267  16.60
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9985
               Response Ratio = 0.00000 + 0.28835 *A + 0.00243 *A^2

 89)P Di-n-butylphthala 1.382 1.498 1.518 1.428 1.447 1.422 1.233 1.418   6.62
 90)  Ethyl Parathion   0.102 0.125 0.150 0.159 0.167 0.169 0.163 0.148  17.14
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9980
               Response Ratio = 0.00000 + 0.15991 *A + 0.00215 *A^2

 91)P Fluoranthene      1.082 1.108 1.128 1.056 1.081 1.082 0.943 1.069   5.60

 92) I   Chrysene-d12          ----------------ISTD---------------------
 93)  Benzidine         0.888 1.014 1.048 0.939 0.910 0.838 0.639 0.897  15.01
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9972
               Response Ratio = 0.00000 + 1.25532 *A + -0.24070 *A^2

 94)P Pyrene            1.641 1.764 1.761 1.609 1.667 1.639 1.459 1.648   6.25
 95)S Terphenyl-d14     0.889 0.946 0.945 0.908 0.936 0.932 0.848 0.915   3.94
 96)  Famphur           0.497 0.525 0.589 0.557 0.580 0.584 0.582 0.559   6.34
 97)P Butylbenzylphthal 0.855 0.914 0.987 0.935 0.969 0.960 0.870 0.927   5.39
 98)P 3,3'-Dichlorobenz 0.370 0.401 0.437 0.421 0.439 0.436 0.393 0.414   6.43
 99)P Benzo[a]anthracen 1.215 1.236 1.295 1.230 1.296 1.318 1.194 1.255   3.81
100)P Chrysene          1.155 1.237 1.215 1.156 1.212 1.199 1.089 1.180   4.30
101)P bis(2-Ethylhexyl) 0.993 1.045 1.152 1.122 1.158 1.163 1.049 1.097   6.19

102) I   Perylene-d12         ----------------ISTD---------------------
103)P Di-n-octylphthala 1.939 2.018 2.291 2.282 2.377 2.317 2.145 2.196   7.53
104)P Benzo[b]fluoranth 1.164 1.199 1.288 1.187 1.223 1.218 1.144 1.203   3.88
105)P Benzo[k]fluoranth 1.117 1.256 1.226 1.191 1.249 1.194 1.024 1.179   7.04
106)P Benzo[a]pyrene    1.090 1.169 1.179 1.131 1.201 1.169 1.053 1.142   4.67
107)P Indeno[1,2,3-cd]p 0.791 0.841 0.897 0.925 0.956 0.999 0.941 0.907   7.83
108)P Dibenz[a,h]anthra 0.861 0.929 0.965 0.954 1.001 0.995 0.926 0.947   5.04
109)P Benzo[g,h,i]peryl 0.943 1.051 1.036 1.016 1.066 1.049 0.978 1.020   4.36
 ---------------------------------------------------------------------------
 (#) = Out of Range

           8270d0426.m        Wed Apr 27 11:11:20 2016
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7.7.1

7

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046002.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2038\x046002.D Vial: 9
Acq On : 26 Apr 2016 5:17 pm Operator: marthav
Sample : icv2038-50 Inst : MSBNA05
Misc : op60029,sx2038,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	113	0.00	5.51
2		1,4-Dioxane	50.000	47.829	4.3	106	0.01	2.40
3		N-nitrosodimethylamine	50.000	51.378	-2.8	114	0.00	2.77
4		Pyridine		----------NA----------				
5	P	Benzaldehyde	50.000	47.316	5.4	105	0.00	5.05
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
8	P	bis(2-Chloroethyl)ether	50.000	48.660	2.7	108	0.00	5.28
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	48.333	3.3	113	0.00	5.23
11	P	2-Chlorophenol	50.000	48.968	2.1	110	0.00	5.32
12		1,3-Dichlorobenzene	50.000	49.196	1.6	111	0.00	5.47
13		1,4-Dichlorobenzene	50.000	49.218	1.6	111	0.00	5.53
14		1,2-Dichlorobenzene	50.000	48.902	2.2	109	0.00	5.73
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	49.783	0.4	111	0.00	5.88
17	P	2-Methylphenol	50.000	45.755	8.5	102	0.00	5.87
18	P	Acetophenone	50.000	44.509	11.0	102	0.00	5.99
19	P	Hexachloroethane	50.000	47.467	5.1	106	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	50.000	44.032	11.9	100	0.00	6.03
21	P	3&4-Methylphenol	100.000	86.000	14.0	112	0.00	6.04
22	I	Naphthalene-d8	40.000	40.000	0.0	105	0.00	6.93
23	S	Nitrobenzene-d5		----------NA----------				
24	P	Nitrobenzene	50.000	50.160	-0.3	105	0.00	6.17
25	P	Isophorone	50.000	47.061	5.9	98	0.00	6.44
26	P	2-Nitrophenol	50.000	53.655	-7.3	109	0.00	6.53
27	P	2,4-Dimethylphenol	50.000	44.918	10.2	96	0.00	6.62
28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan	50.000	45.561	8.9	94	0.00	6.72
		----------	Amount	Calc.	%Drift	----------		
30		Benzoic Acid	100.000	99.509	0.5	104	0.06	6.80
		----------	Amount	Calc.	%Drift	----------		
31	P	2,4-Dichlorophenol	50.000	48.016	4.0	101	0.00	6.81
32		1,2,4-Trichlorobenzene	50.000	48.810	2.4	104	0.00	6.90
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	50.000	48.566	2.9	103	0.00	6.96
35	P	4-Chloroaniline		----------NA----------				
36		2,6-Dichlorophenol	50.000	48.177	3.6	103	0.00	7.07
37	P	Hexachlorobutadiene	50.000	49.769	0.5	104	0.00	7.19

Initial Calibration Verification

Job Number: FA33324 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	50.000	44.235	11.5	93	0.04	7.44
39	P	4-Chloro-3-methylphenol	50.000	45.824	8.4	95	0.00	7.65
40	P	2-Methylnaphthalene		----------NA----------				
41		1-Methylnaphthalene	50.000	48.940	2.1	103	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	50.000	46.506	7.0	98	0.00	8.00
43	I	Acenaphthene-d10	40.000	40.000	0.0	103	0.00	8.98
44	P	Hexachlorocyclopentadiene	50.000	53.850	-7.7	109	0.00	8.03
45	P	2,4,6-Trichlorophenol	50.000	49.430	1.1	101	0.00	8.13
46	P	2,4,5-Trichlorophenol	50.000	49.548	0.9	104	0.00	8.18
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl	50.000	45.398	9.2	99	0.00	8.31
49	P	2-Chloronaphthalene	50.000	48.151	3.7	102	0.00	8.31
50	P	2-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
52	P	Acenaphthylene	50.000	48.350	3.3	101	0.00	8.80
53	P	Dimethylphthalate	50.000	49.118	1.8	101	0.00	8.75
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene		----------NA----------				
55	P	2,6-Dinitrotoluene	50.000	42.903	14.2	93	0.00	8.82
		----------	Amount	Calc.	%Drift		----------	
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene	50.000	48.945	2.1	102	0.00	9.02
58	P	3-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	100.000	84.363	15.6	82	0.00	9.09
		----------	Amount	Calc.	%Drift		----------	
60	P	Dibenzofuran		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	46.930	6.1	99	0.00	9.27
		----------	Amount	Calc.	%Drift		----------	
62	P	4-Nitrophenol	100.000	98.003	2.0	107	0.00	9.21
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol	50.000	44.523	11.0	87	0.00	9.41
65	P	Fluorene	50.000	46.978	6.0	99	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	50.000	47.305	5.4	98	0.00	9.63
67	P	Diethylphthalate	50.000	46.941	6.1	98	0.00	9.59
68		Thionazin		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
70	I	Phenanthrene-d10	40.000	40.000	0.0	93	0.00	10.69
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	100.000	100.311	-0.3	96	0.00	9.74
		----------	Amount	Calc.	%Drift		----------	

Initial Calibration Verification

Job Number: FA33324 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	50.000	48.141	3.7	79	0.00	9.78
73		Diphenylamine	50.000	40.118	19.8	79	0.00	9.78
74		1,2-Diphenylhydrazine	50.000	49.744	0.5	98	0.00	9.81
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
78	P	4-Bromophenyl-phenylether	50.000	52.461	-4.9	99	0.00	10.19
79	P	Hexachlorobenzene	50.000	48.392	3.2	90	0.00	10.34
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine	50.000	47.223	5.6	91	0.00	10.47
		----------	Amount	Calc.	%Drift	----------		
83	P	Pentachlorophenol	100.000	95.255	4.7	89	0.00	10.56
		----------	Amount	Calc.	%Drift	----------		
84	P	Phenanthrene	50.000	49.488	1.0	95	0.00	10.72
85	P	Anthracene	50.000	49.402	1.2	95	0.00	10.76
86		Disulfoton		----------NA----------				
87	P	Carbazole		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
88		Methyl Parathion		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
89	P	Di-n-butylphthalate	50.000	51.142	-2.3	95	0.00	11.51
		----------	Amount	Calc.	%Drift	----------		
90		Ethyl Parathion		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
91	P	Fluoranthene	50.000	47.692	4.6	90	0.00	12.11
92	I	Chrysene-d12	40.000	40.000	0.0	91	0.00	13.87
		----------	Amount	Calc.	%Drift	----------		
93		Benzidine		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
94	P	Pyrene	50.000	48.829	2.3	91	0.00	12.37
95	S	Terphenyl-d14		----------NA----------				
96		Famphur		----------NA----------				
97	P	Butylbenzylphthalate	50.000	48.550	2.9	88	0.00	13.27
98	P	3,3'-Dichlorobenzidine		----------NA----------				
99	P	Benzo[a]anthracene	50.000	48.058	3.9	90	0.00	13.85
100	P	Chrysene	50.000	48.919	2.2	91	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	50.000	49.655	0.7	89	-0.01	14.09
102	I	Perylene-d12	40.000	40.000	0.0	86	-0.01	15.85
103	P	Di-n-octylphthalate	50.000	50.421	-0.8	84	-0.01	14.96
104	P	Benzo[b]fluoranthene	50.000	49.322	1.4	86	0.00	15.34
105	P	Benzo[k]fluoranthene	50.000	51.927	-3.9	89	0.00	15.38
106	P	Benzo[a]pyrene	50.000	51.525	-3.0	90	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	50.000	52.965	-5.9	89	0.00	17.19
108	P	Dibenz[a,h]anthracene	50.000	50.892	-1.8	87	0.00	17.23
109	P	Benzo[g,h,i]perylene	50.000	52.673	-5.3	91	0.00	17.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.2

7

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046002.D

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x045998.D  8270d0426.m       Wed Apr 27 11:05:08 2016
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Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046005.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2039\x046005.D Vial: 2
Acq On : 27 Apr 2016 10:18 am Operator: marthav
Sample : cc2038-50 Inst : MSBNA05
Misc : op60029,sx2039,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	5.51
2		1,4-Dioxane	0.782	0.799	-2.2	100	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.845	-3.7	101	0.00	2.76
4		Pyridine	1.992	2.058	-3.3	103	0.00	2.75
5	P	Benzaldehyde	1.186	1.133	4.5	93	0.00	5.05
6		Aniline	2.241	2.271	-1.3	98	0.00	5.21
7	S	2-Fluorophenol	1.521	1.563	-2.8	100	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.422	-0.4	98	0.00	5.28
9	S	Phenol-d5	1.579	1.565	0.9	98	0.00	5.22
10	P	Phenol	1.795	1.894	-5.5	108	0.00	5.23
11	P	2-Chlorophenol	1.536	1.561	-1.6	101	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.645	-2.4	101	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.608	-2.2	101	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.506	-1.9	100	0.00	5.73
15		Benzyl alcohol	0.962	0.970	-0.8	99	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.406	-1.4	99	0.00	5.88
17	P	2-Methylphenol	1.253	1.278	-2.0	100	0.00	5.87
18	P	Acetophenone	1.771	1.749	1.2	99	0.00	5.99
19	P	Hexachloroethane	0.580	0.587	-1.2	99	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	0.708	0.692	2.3	97	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.301	-1.6	101	0.00	6.04
22	I	Naphthalene-d8	1.000	1.000	0.0	98	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.326	-0.6	97	0.00	6.15
24	P	Nitrobenzene	0.326	0.326	0.0	97	0.00	6.17
25	P	Isophorone	0.620	0.620	0.0	97	0.00	6.44
26	P	2-Nitrophenol	0.194	0.205	-5.7	99	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.317	-1.6	100	0.00	6.62
28		O,O,O-Triethylphosphoroth	0.136	0.138	-1.5	102	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.446	-4.2	100	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	47.367	5.3	96	0.02	6.75
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.289	-2.8	100	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.285	-1.4	100	0.00	6.90
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	1.003	-1.3	100	0.00	6.96
35	P	4-Chloroaniline	0.429	0.434	-1.2	101	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.270	-1.5	101	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.126	-3.3	100	0.00	7.19

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046005.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.111	-1.8	100	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.262	-1.9	98	0.00	7.66
40	P	2-Methylnaphthalene	0.662	0.681	-2.9	100	0.00	7.75
41		1-Methylnaphthalene	0.613	0.621	-1.3	99	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.234	-2.2	100	0.00	8.00
43	I	Acenaphthene-d10	1.000	1.000	0.0	98	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.286	-5.9	102	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.363	-1.4	99	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.380	-2.2	102	0.00	8.18
47	S	2-Fluorobiphenyl	1.306	1.287	1.5	99	0.00	8.22
48	P	1,1'-Biphenyl	1.497	1.477	1.3	103	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.109	0.9	101	0.00	8.31
50	P	2-Nitroaniline	0.330	0.342	-3.6	97	0.00	8.49
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene	50.000	47.508	5.0	98	0.00	8.62
		----------	AvgRF	CCRF	%Dev		----------	
52	P	Acenaphthylene	1.960	1.988	-1.4	101	0.00	8.80
53	P	Dimethylphthalate	1.242	1.248	-0.5	99	0.00	8.76
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	49.580	0.8	99	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	50.135	-0.3	104	0.00	8.82
		----------	AvgRF	CCRF	%Dev		----------	
56		o-Dinitrobenzene	0.197	0.195	1.0	96	0.00	8.89
57	P	Acenaphthene	1.168	1.163	0.4	99	0.00	9.02
58	P	3-Nitroaniline	0.387	0.398	-2.8	100	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	50.000	46.682	6.6	94	0.00	9.08
		----------	AvgRF	CCRF	%Dev		----------	
60	P	Dibenzofuran	1.558	1.555	0.2	101	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	49.639	0.7	100	0.00	9.27
		----------	AvgRF	CCRF	%Dev		----------	
62	P	4-Nitrophenol	0.135	0.135	0.0	95	0.00	9.21
63		2,3,5,6-Tetrachlorophenol	0.229	0.234	-2.2	95	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.237	-0.9	95	0.00	9.41
65	P	Fluorene	1.209	1.209	0.0	101	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.506	-1.6	100	0.00	9.63
67	P	Diethylphthalate	1.230	1.236	-0.5	100	0.00	9.59
68		Thionazin	0.264	0.263	0.4	101	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	49.202	1.6	100	0.00	9.69
		----------	AvgRF	CCRF	%Dev		----------	
70	I	Phenanthrene-d10	1.000	1.000	0.0	95	0.00	10.69
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	50.000	48.891	2.2	97	0.00	9.74
		----------	AvgRF	CCRF	%Dev		----------	

7.7.3

7

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046005.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.605	-2.4	102	0.00	9.78
73		Diphenylamine	0.710	0.726	-2.3	102	0.00	9.78
74		1,2-Diphenylhydrazine	0.817	0.791	3.2	97	0.00	9.81
75	S	2,4,6-Tribromophenol	0.076	0.083	-9.2	99	0.00	9.91
76		Sulfotep	0.133	0.132	0.8	99	0.00	10.11
77		Phorate	0.521	0.524	-0.6	99	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.184	-4.5	100	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.183	-5.2	100	0.00	10.34
80		Dimethoate	0.369	0.378	-2.4	99	0.00	10.37
81		Simazine	0.081	0.085	-4.9	101	0.00	10.42
82	P	Atrazine	0.194	0.199	-2.6	100	0.00	10.47
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	49.492	1.0	95	0.00	10.57
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.153	-3.3	100	0.00	10.72
85	P	Anthracene	1.118	1.148	-2.7	100	0.00	10.76
86		Disulfoton	0.452	0.441	2.4	99	0.00	10.79
87	P	Carbazole	1.133	1.170	-3.3	100	0.00	10.98
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	51.969	-3.9	101	0.00	11.23
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.484	-4.7	98	0.00	11.51
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	51.421	-2.8	99	0.00	11.71
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.109	-3.7	99	0.00	12.12
92	I	Chrysene-d12	1.000	1.000	0.0	95	0.00	13.87
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	47.193	5.6	93	0.00	12.31
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.693	-2.7	100	0.00	12.37
95	S	Terphenyl-d14	0.915	0.945	-3.3	99	0.00	12.62
96		Famphur	0.559	0.590	-5.5	101	0.00	13.21
97	P	Butylbenzylphthalate	0.927	0.970	-4.6	99	0.00	13.27
98	P	3,3'-Dichlorobenzidine	0.414	0.443	-7.0	100	0.00	13.87
99	P	Benzo[a]anthracene	1.255	1.309	-4.3	101	0.00	13.85
100	P	Chrysene	1.180	1.208	-2.4	99	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.144	-4.3	97	0.00	14.09
102	I	Perylene-d12	1.000	1.000	0.0	95	-0.01	15.85
103	P	Di-n-octylphthalate	2.196	2.380	-8.4	99	0.00	14.96
104	P	Benzo[b]fluoranthene	1.203	1.289	-7.1	103	0.00	15.34
105	P	Benzo[k]fluoranthene	1.179	1.180	-0.1	94	0.00	15.37
106	P	Benzo[a]pyrene	1.142	1.176	-3.0	99	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.950	-4.7	98	0.00	17.19
108	P	Dibenz[a,h]anthracene	0.947	0.989	-4.4	99	0.00	17.23
109	P	Benzo[g,h,i]perylene	1.020	1.073	-5.2	100	0.00	17.49

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.3

7

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046005.D

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x045998.D  8270d0426.m       Thu Apr 28 10:47:04 2016
```

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2039\x046006.D          Vial: 3
Acq On    : 27 Apr 2016  10:42 am                   Operator: marthav
Sample    : icv2038-50                              Inst    : MSBNA05
Misc      : op60029,sx2038,1000,,,1,1,water         Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev :  20%     Max. Rel. Area : 200%
```

		Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	114	0.00	5.51
2		1,4-Dioxane		NA				
3		N-nitrosodimethylamine		NA				
4		Pyridine	50.000	45.099	9.8	103	0.00	2.75
5	P	Benzaldehyde		NA				
6		Aniline	50.000	45.054	9.9	101	0.00	5.21
7	S	2-Fluorophenol		NA				
8	P	bis(2-Chloroethyl)ether		NA				
9	S	Phenol-d5		NA				
10	P	Phenol		NA				
11	P	2-Chlorophenol		NA				
12		1,3-Dichlorobenzene		NA				
13		1,4-Dichlorobenzene		NA				
14		1,2-Dichlorobenzene		NA				
15		Benzyl alcohol	50.000	47.471	5.1	107	0.00	5.70
16	P	bis(2-chloroisopropyl)eth		NA				
17	P	2-Methylphenol		NA				
18	P	Acetophenone		NA				
19	P	Hexachloroethane		NA				
20	P	N-Nitroso-di-n-propylamin		NA				
21	P	3&4-Methylphenol		NA				
22	I	Naphthalene-d8	40.000	40.000	0.0	114	0.00	6.93
23	S	Nitrobenzene-d5		NA				
24	P	Nitrobenzene		NA				
25	P	Isophorone		NA				
26	P	2-Nitrophenol		NA				
27	P	2,4-Dimethylphenol		NA				
28		O,O,O-Triethylphosphoroth	50.000	48.546	2.9	113	0.00	6.74
29	P	bis(2-Chloroethoxy)methan		NA				
		----------	Amount	Calc.	%Drift	----------		
30		Benzoic Acid		NA				
		----------	Amount	Calc.	%Drift	----------		
31	P	2,4-Dichlorophenol		NA				
32		1,2,4-Trichlorobenzene		NA				
33		alpha-Terpineol		NA				
34	P	Naphthalene		NA				
35	P	4-Chloroaniline	50.000	51.011	-2.0	118	0.00	7.06
36		2,6-Dichlorophenol		NA				
37	P	Hexachlorobutadiene		NA				

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

38	P	Caprolactam		----------NA----------				
39	P	4-Chloro-3-methylphenol		----------NA----------				
40	P	2-Methylnaphthalene	50.000	47.539	4.9	108	0.00	7.75
41		1-Methylnaphthalene		----------NA----------				
42	P	1,2,4,5-Tetrachlorobenzen		----------NA----------				
43	I	Acenaphthene-d10	40.000	40.000	0.0	112	0.00	8.98
44	P	Hexachlorocyclopentadiene		----------NA----------				
45	P	2,4,6-Trichlorophenol		----------NA----------				
46	P	2,4,5-Trichlorophenol		----------NA----------				
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl		----------NA----------				
49	P	2-Chloronaphthalene		----------NA----------				
50	P	2-Nitroaniline	50.000	53.316	-6.6	114	0.00	8.49
		----------	Amount	Calc.	%Drift	----------		
51		p-Dinitrobenzene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
52	P	Acenaphthylene		----------NA----------				
53	P	Dimethylphthalate		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
54		m-Dinitrobenzene	50.000	45.296	9.4	104	0.00	8.75
55	P	2,6-Dinitrotoluene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene		----------NA----------				
58	P	3-Nitroaniline	50.000	50.344	-0.7	112	0.00	8.97
		----------	Amount	Calc.	%Drift	----------		
59	P	2,4-Dinitrophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
60	P	Dibenzofuran	50.000	48.790	2.4	113	0.00	9.20
		----------	Amount	Calc.	%Drift	----------		
61	P	2,4-Dinitrotoluene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
62	P	4-Nitrophenol		----------NA----------				
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol		----------NA----------				
65	P	Fluorene		----------NA----------				
66	P	4-Chlorophenyl-phenylethe		----------NA----------				
67	P	Diethylphthalate		----------NA----------				
68		Thionazin	50.000	51.602	-3.2	120	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
69	P	4-Nitroaniline	50.000	49.802	0.4	116	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
70	I	Phenanthrene-d10	40.000	40.000	0.0	110	0.00	10.68
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		

7.7.4

7

Initial Calibration Verification

Job Number: FA33324 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046006.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	60.000	61.702	-2.8	119	0.00	9.77
73		Diphenylamine	50.000	51.418	-2.8	119	0.00	9.77
74		1,2-Diphenylhydrazine		----------NA----------				
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep	50.000	50.053	-0.1	115	0.00	10.11
77		Phorate	50.000	49.751	0.5	113	0.00	10.18
78	P	4-Bromophenyl-phenylether		----------NA----------				
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate	50.000	51.654	-3.3	116	0.00	10.37
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
83	P	Pentachlorophenol		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
86		Disulfoton	50.000	50.469	-0.9	119	0.00	10.79
87	P	Carbazole	50.000	50.314	-0.6	113	0.00	10.98
		---------- Amount	Calc.	%Drift	----------			
88		Methyl Parathion	50.000	48.463	3.1	109	0.00	11.22
		---------- Amount	Calc.	%Drift	----------			
89	P	Di-n-butylphthalate		----------NA----------				
		---------- Amount	Calc.	%Drift	----------			
90		Ethyl Parathion	50.000	48.737	2.5	109	0.00	11.71
		---------- Amount	Calc.	%Drift	----------			
91	P	Fluoranthene		----------NA----------				
92	I	Chrysene-d12	40.000	40.000	0.0	109	-0.01	13.86
		---------- Amount	Calc.	%Drift	----------			
93		Benzidine	50.000	64.196	-28.4#	129	0.00	12.31
		---------- Amount	Calc.	%Drift	----------			
94	P	Pyrene		----------NA----------				
95	S	Terphenyl-d14		----------NA----------				
96		Famphur	50.000	45.513	9.0	100	0.00	13.20
97	P	Butylbenzylphthalate		----------NA----------				
98	P	3,3'-Dichlorobenzidine	50.000	51.042	-2.1	110	0.00	13.87
99	P	Benzo[a]anthracene		----------NA----------				
100	P	Chrysene		----------NA----------				
101	P	bis(2-Ethylhexyl)phthalat		----------NA----------				
102	I	Perylene-d12	40.000	40.000	0.0	106	-0.01	15.85
103	P	Di-n-octylphthalate		----------NA----------				
104	P	Benzo[b]fluoranthene		----------NA----------				
105	P	Benzo[k]fluoranthene		----------NA----------				
106	P	Benzo[a]pyrene		----------NA----------				
107	P	Indeno[1,2,3-cd]pyrene		----------NA----------				
108	P	Dibenz[a,h]anthracene		----------NA----------				
109	P	Benzo[g,h,i]perylene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.4

7

Initial Calibration Verification

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2038-ICV2038
Lab FileID: X046006.D

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x045998.D  8270d0426.m       Thu Apr 28 12:03:34 2016
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Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046033.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2039\x046033.D Vial: 30
Acq On : 27 Apr 2016 9:20 pm Operator: marthav
Sample : cc2038-50 Inst : MSBNA05
Misc : op60029,sx2039,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	106	0.00	5.51
2		1,4-Dioxane	0.782	0.769	1.7	103	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.832	-2.1	107	0.00	2.76
4		Pyridine	1.992	1.962	1.5	105	0.00	2.75
5	P	Benzaldehyde	1.186	1.177	0.8	104	0.00	5.05
6		Aniline	2.241	2.230	0.5	104	0.00	5.21
7	S	2-Fluorophenol	1.521	1.533	-0.8	106	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.407	0.6	104	0.00	5.28
9	S	Phenol-d5	1.579	1.542	2.3	104	0.00	5.22
10	P	Phenol	1.795	1.855	-3.3	114	0.00	5.23
11	P	2-Chlorophenol	1.536	1.523	0.8	105	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.590	1.0	105	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.540	2.1	104	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.455	1.6	104	0.00	5.73
15		Benzyl alcohol	0.962	0.947	1.6	104	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.418	-1.9	107	0.00	5.88
17	P	2-Methylphenol	1.253	1.250	0.2	105	0.00	5.87
18	P	Acetophenone	1.771	1.723	2.7	105	0.00	5.99
19	P	Hexachloroethane	0.580	0.571	1.6	103	0.00	6.07
20	P	N-Nitroso-di-n-propylamin	0.708	0.688	2.8	104	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.261	1.5	105	0.00	6.03
22	I	Naphthalene-d8	1.000	1.000	0.0	105	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.324	0.0	104	0.00	6.15
24	P	Nitrobenzene	0.326	0.326	0.0	104	0.00	6.17
25	P	Isophorone	0.620	0.620	0.0	104	0.00	6.44
26	P	2-Nitrophenol	0.194	0.206	-6.2	107	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.306	1.9	104	0.00	6.61
28		O,O,O-Triethylphosphoroth	0.136	0.130	4.4	103	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.412	3.7	99	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	47.924	4.2	104	0.02	6.75
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.273	2.8	101	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.275	2.1	104	0.00	6.89
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	0.966	2.4	103	0.00	6.96
35	P	4-Chloroaniline	0.429	0.422	1.6	105	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.260	2.3	104	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.121	0.8	103	0.00	7.19

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046033.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.111	-1.8	106	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.264	-2.7	106	0.00	7.65
40	P	2-Methylnaphthalene	0.662	0.665	-0.5	105	0.00	7.75
41		1-Methylnaphthalene	0.613	0.605	1.3	104	0.00	7.88
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.226	1.3	104	0.00	7.99
43	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.274	-1.5	105	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.358	0.0	105	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.370	0.5	107	0.00	8.17
47	S	2-Fluorobiphenyl	1.306	1.264	3.2	104	0.00	8.22
48	P	1,1'-Biphenyl	1.497	1.403	6.3	105	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.080	3.5	105	0.00	8.31
50	P	2-Nitroaniline	0.330	0.342	-3.6	104	0.00	8.48
		----------	Amount	Calc.	%Drift	----------		
51		p-Dinitrobenzene	50.000	48.865	2.3	108	0.00	8.61
		----------	AvgRF	CCRF	%Dev	----------		
52	P	Acenaphthylene	1.960	1.910	2.6	104	0.00	8.80
53	P	Dimethylphthalate	1.242	1.211	2.5	103	0.00	8.75
		----------	Amount	Calc.	%Drift	----------		
54		m-Dinitrobenzene	50.000	48.899	2.2	105	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	49.426	1.1	110	0.00	8.82
		----------	AvgRF	CCRF	%Dev	----------		
56		o-Dinitrobenzene	0.197	0.202	-2.5	107	0.00	8.89
57	P	Acenaphthene	1.168	1.144	2.1	105	0.00	9.02
58	P	3-Nitroaniline	0.387	0.384	0.8	104	0.00	8.97
		----------	Amount	Calc.	%Drift	----------		
59	P	2,4-Dinitrophenol	50.000	51.969	-3.9	118	0.00	9.09
		----------	AvgRF	CCRF	%Dev	----------		
60	P	Dibenzofuran	1.558	1.489	4.4	104	0.00	9.20
		----------	Amount	Calc.	%Drift	----------		
61	P	2,4-Dinitrotoluene	50.000	49.447	1.1	107	0.00	9.27
		----------	AvgRF	CCRF	%Dev	----------		
62	P	4-Nitrophenol	0.135	0.132	2.2	99	0.00	9.21
63		2,3,5,6-Tetrachlorophenol	0.229	0.231	-0.9	101	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.237	-0.9	102	0.00	9.41
65	P	Fluorene	1.209	1.178	2.6	105	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.501	-0.6	106	0.00	9.63
67	P	Diethylphthalate	1.230	1.211	1.5	105	0.00	9.59
68		Thionazin	0.264	0.259	1.9	107	0.00	9.68
		----------	Amount	Calc.	%Drift	----------		
69	P	4-Nitroaniline	50.000	49.946	0.1	109	0.00	9.69
		----------	AvgRF	CCRF	%Dev	----------		
70	I	Phenanthrene-d10	1.000	1.000	0.0	106	0.00	10.68
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno	50.000	51.174	-2.3	115	0.00	9.74
		----------	AvgRF	CCRF	%Dev	----------		

7.7.5

7

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046033.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.588	0.5	111	0.00	9.77
73		Diphenylamine	0.710	0.706	0.6	111	0.00	9.77
74		1,2-Diphenylhydrazine	0.817	0.775	5.1	107	0.00	9.81
75	S	2,4,6-Tribromophenol	0.076	0.079	-3.9	107	0.00	9.91
76		Sulfotep	0.133	0.129	3.0	108	0.00	10.11
77		Phorate	0.521	0.499	4.2	106	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.175	0.6	107	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.176	-1.1	108	0.00	10.34
80		Dimethoate	0.369	0.365	1.1	108	0.00	10.37
81		Simazine	0.081	0.081	0.0	108	0.00	10.41
82	P	Atrazine	0.194	0.188	3.1	106	0.00	10.46
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	51.211	-2.4	111	0.00	10.56
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.096	1.8	107	0.00	10.71
85	P	Anthracene	1.118	1.106	1.1	108	0.00	10.76
86		Disulfoton	0.452	0.427	5.5	108	0.00	10.79
87	P	Carbazole	1.133	1.110	2.0	107	0.00	10.97
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	50.324	-0.6	110	0.00	11.22
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.434	-1.1	107	0.00	11.51
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	51.597	-3.2	112	-0.01	11.70
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.065	0.4	107	0.00	12.11
92	I	Chrysene-d12	1.000	1.000	0.0	105	-0.01	13.86
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	46.476	7.0	101	0.00	12.30
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.619	1.8	106	0.00	12.37
95	S	Terphenyl-d14	0.915	0.895	2.2	103	-0.01	12.61
96		Famphur	0.559	0.560	-0.2	106	-0.01	13.20
97	P	Butylbenzylphthalate	0.927	0.923	0.4	104	-0.01	13.27
98	P	3,3'-Dichlorobenzidine	0.414	0.419	-1.2	104	-0.01	13.87
99	P	Benzo[a]anthracene	1.255	1.242	1.0	106	-0.01	13.84
100	P	Chrysene	1.180	1.178	0.2	107	0.00	13.90
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.105	-0.7	103	-0.02	14.08
102	I	Perylene-d12	1.000	1.000	0.0	104	-0.02	15.84
103	P	Di-n-octylphthalate	2.196	2.274	-3.6	104	-0.01	14.96
104	P	Benzo[b]fluoranthene	1.203	1.188	1.2	104	-0.01	15.33
105	P	Benzo[k]fluoranthene	1.179	1.224	-3.8	107	0.00	15.37
106	P	Benzo[a]pyrene	1.142	1.150	-0.7	106	0.00	15.77
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.917	-1.1	103	-0.01	17.18
108	P	Dibenz[a,h]anthracene	0.947	0.938	1.0	103	-0.01	17.22
109	P	Benzo[g,h,i]perylene	1.020	0.997	2.3	102	0.00	17.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.5

7

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-CC2038
Lab FileID: X046033.D

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x045998.D  8270d0426.m       Thu Apr 28 10:47:06 2016
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Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-ECC2038
Lab FileID: X046058.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\sx2039\x046058.D Vial: 50
Acq On : 28 Apr 2016 7:13 am Operator: marthav
Sample : ecc2038-50 Inst : MSBNA05
Misc : op60029,sx2039,1000,,,1,1,water Multiplr: 1.00
MS Integration Params: lscint.p

Method : C:\msdchem\1\METHODS\8270d0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Wed Apr 27 11:02:58 2016
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 50% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00	5.51
2		1,4-Dioxane	0.782	0.772	1.3	93	0.00	2.39
3		N-nitrosodimethylamine	0.815	0.859	-5.4	99	0.00	2.76
4		Pyridine	1.992	1.992	0.0	96	0.00	2.75
5	P	Benzaldehyde	1.186	1.102	7.1	87	0.00	5.05
6		Aniline	2.241	2.330	-4.0	97	0.00	5.20
7	S	2-Fluorophenol	1.521	1.580	-3.9	98	0.00	4.21
8	P	bis(2-Chloroethyl)ether	1.416	1.452	-2.5	96	0.00	5.28
9	S	Phenol-d5	1.579	1.607	-1.8	97	0.00	5.22
10	P	Phenol	1.795	1.931	-7.6	106	0.00	5.23
11	P	2-Chlorophenol	1.536	1.576	-2.6	98	0.00	5.32
12		1,3-Dichlorobenzene	1.606	1.649	-2.7	98	0.00	5.47
13		1,4-Dichlorobenzene	1.573	1.608	-2.2	97	0.00	5.53
14		1,2-Dichlorobenzene	1.478	1.507	-2.0	96	0.00	5.73
15		Benzyl alcohol	0.962	0.991	-3.0	98	0.00	5.70
16	P	bis(2-chloroisopropyl)eth	2.373	2.514	-5.9	100	0.00	5.88
17	P	2-Methylphenol	1.253	1.297	-3.5	98	0.00	5.87
18	P	Acetophenone	1.771	1.777	-0.3	97	0.00	5.99
19	P	Hexachloroethane	0.580	0.585	-0.9	95	0.00	6.06
20	P	N-Nitroso-di-n-propylamin	0.708	0.734	-3.7	99	0.00	6.03
21	P	3&4-Methylphenol	1.280	1.333	-4.1	100	0.00	6.03
22	I	Naphthalene-d8	1.000	1.000	0.0	95	0.00	6.93
23	S	Nitrobenzene-d5	0.324	0.340	-4.9	98	0.00	6.15
24	P	Nitrobenzene	0.326	0.335	-2.8	97	0.00	6.17
25	P	Isophorone	0.620	0.643	-3.7	98	0.00	6.43
26	P	2-Nitrophenol	0.194	0.212	-9.3	99	0.00	6.53
27	P	2,4-Dimethylphenol	0.312	0.323	-3.5	99	0.00	6.61
28		O,O,O-Triethylphosphoroth	0.136	0.136	0.0	97	0.00	6.74
29	P	bis(2-Chloroethoxy)methan	0.428	0.431	-0.7	93	0.00	6.72
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	52.142	-4.3	103	0.02	6.75
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.285	-1.4	96	0.00	6.81
32		1,2,4-Trichlorobenzene	0.281	0.284	-1.1	97	0.00	6.89
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	0.996	-0.6	96	0.00	6.96
35	P	4-Chloroaniline	0.429	0.439	-2.3	98	0.00	7.06
36		2,6-Dichlorophenol	0.266	0.269	-1.1	97	0.00	7.07
37	P	Hexachlorobutadiene	0.122	0.122	0.0	94	0.00	7.18

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046058.D
Project: Atlantic Refuse Dump; NC

38	P	Caprolactam	0.109	0.115	-5.5	100	0.03	7.43
39	P	4-Chloro-3-methylphenol	0.257	0.267	-3.9	97	0.00	7.65
40	P	2-Methylnaphthalene	0.662	0.674	-1.8	96	0.00	7.75
41		1-Methylnaphthalene	0.613	0.624	-1.8	96	0.00	7.87
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.232	-1.3	96	0.00	7.99
43	I	Acenaphthene-d10	1.000	1.000	0.0	95	0.00	8.98
44	P	Hexachlorocyclopentadiene	0.270	0.222	17.8	77	0.00	8.03
45	P	2,4,6-Trichlorophenol	0.358	0.355	0.8	94	0.00	8.13
46	P	2,4,5-Trichlorophenol	0.372	0.377	-1.3	98	0.00	8.17
47	S	2-Fluorobiphenyl	1.306	1.318	-0.9	98	0.00	8.21
48	P	1,1'-Biphenyl	1.497	1.476	1.4	100	0.00	8.31
49	P	2-Chloronaphthalene	1.119	1.116	0.3	98	0.00	8.30
50	P	2-Nitroaniline	0.330	0.368	-11.5	101	0.00	8.48
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene	50.000	51.281	-2.6	102	0.00	8.61
		----------	AvgRF	CCRF	%Dev		----------	
52	P	Acenaphthylene	1.960	1.958	0.1	96	0.00	8.79
53	P	Dimethylphthalate	1.242	1.262	-1.6	97	0.00	8.75
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene	50.000	51.737	-3.5	100	0.00	8.75
55	P	2,6-Dinitrotoluene	50.000	50.579	-1.2	102	0.00	8.82
		----------	AvgRF	CCRF	%Dev		----------	
56		o-Dinitrobenzene	0.197	0.212	-7.6	101	0.00	8.89
57	P	Acenaphthene	1.168	1.164	0.3	96	0.00	9.01
58	P	3-Nitroaniline	0.387	0.412	-6.5	101	0.00	8.97
		----------	Amount	Calc.	%Drift		----------	
59	P	2,4-Dinitrophenol	50.000	41.647	16.7	77	0.00	9.08
		----------	AvgRF	CCRF	%Dev		----------	
60	P	Dibenzofuran	1.558	1.559	-0.1	98	0.00	9.20
		----------	Amount	Calc.	%Drift		----------	
61	P	2,4-Dinitrotoluene	50.000	50.848	-1.7	99	0.00	9.27
		----------	AvgRF	CCRF	%Dev		----------	
62	P	4-Nitrophenol	0.135	0.139	-3.0	94	0.00	9.20
63		2,3,5,6-Tetrachlorophenol	0.229	0.242	-5.7	96	0.00	9.36
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.244	-3.8	95	0.00	9.41
65	P	Fluorene	1.209	1.237	-2.3	100	0.00	9.60
66	P	4-Chlorophenyl-phenylethe	0.498	0.504	-1.2	97	0.00	9.63
67	P	Diethylphthalate	1.230	1.258	-2.3	99	0.00	9.59
68		Thionazin	0.264	0.264	0.0	99	0.00	9.68
		----------	Amount	Calc.	%Drift		----------	
69	P	4-Nitroaniline	50.000	50.831	-1.7	100	0.00	9.69
		----------	AvgRF	CCRF	%Dev		----------	
70	I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00	10.68
		----------	Amount	Calc.	%Drift		----------	
71	P	4,6-Dinitro-2-methylpheno	50.000	47.649	4.7	92	0.00	9.74
		----------	AvgRF	CCRF	%Dev		----------	

7.7.6

7

Continuing Calibration Summary

Job Number: FA33324 **Sample:** SX2039-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046058.D
Project: Atlantic Refuse Dump; NC

72	P	n-Nitrosodiphenylamine	0.591	0.617	-4.4	101	0.00	9.77
73		Diphenylamine	0.710	0.740	-4.2	101	0.00	9.77
74		1,2-Diphenylhydrazine	0.817	0.818	-0.1	98	0.00	9.80
75	S	2,4,6-Tribromophenol	0.076	0.083	-9.2	98	0.00	9.91
76		Sulfotep	0.133	0.135	-1.5	99	-0.01	10.11
77		Phorate	0.521	0.538	-3.3	99	0.00	10.18
78	P	4-Bromophenyl-phenylether	0.176	0.187	-6.3	99	0.00	10.19
79	P	Hexachlorobenzene	0.174	0.177	-1.7	94	0.00	10.34
80		Dimethoate	0.369	0.389	-5.4	100	0.00	10.37
81		Simazine	0.081	0.084	-3.7	98	0.00	10.41
82	P	Atrazine	0.194	0.196	-1.0	96	0.00	10.46
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	50.057	-0.1	94	0.00	10.56
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.150	-3.0	98	0.00	10.71
85	P	Anthracene	1.118	1.160	-3.8	98	0.00	10.76
86		Disulfoton	0.452	0.451	0.2	99	-0.01	10.79
87	P	Carbazole	1.133	1.180	-4.1	98	0.00	10.97
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	54.673	-9.3	104	-0.01	11.22
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.527	-7.7	99	-0.01	11.50
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	54.860	-9.7	103	-0.01	11.70
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.119	-4.7	98	-0.01	12.11
92	I	Chrysene-d12	1.000	1.000	0.0	91	-0.02	13.86
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	43.723	12.6	84	-0.01	12.30
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.712	-3.9	97	-0.01	12.36
95	S	Terphenyl-d14	0.915	0.969	-5.9	97	-0.02	12.60
96		Famphur	0.559	0.592	-5.9	97	-0.01	13.20
97	P	Butylbenzylphthalate	0.927	0.987	-6.5	96	-0.02	13.26
98	P	3,3'-Dichlorobenzidine	0.414	0.439	-6.0	95	-0.02	13.86
99	P	Benzo[a]anthracene	1.255	1.311	-4.5	97	-0.02	13.83
100	P	Chrysene	1.180	1.238	-4.9	97	-0.01	13.89
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.195	-8.9	97	-0.02	14.08
102	I	Perylene-d12	1.000	1.000	0.0	90	-0.02	15.83
103	P	Di-n-octylphthalate	2.196	2.442	-11.2	96	-0.02	14.95
104	P	Benzo[b]fluoranthene	1.203	1.318	-9.6	100	-0.01	15.33
105	P	Benzo[k]fluoranthene	1.179	1.189	-0.8	90	-0.01	15.36
106	P	Benzo[a]pyrene	1.142	1.197	-4.8	95	-0.01	15.76
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.989	-9.0	96	-0.02	17.18
108	P	Dibenz[a,h]anthracene	0.947	1.004	-6.0	95	-0.02	17.21
109	P	Benzo[g,h,i]perylene	1.020	1.097	-7.5	97	-0.01	17.48

(#) = Out of Range SPCC's out = 0 CCC's out = 0

7.7.6

7

Continuing Calibration Summary

Job Number: FA33324
Account: URSNCM AECOM, INC.
Project: Atlantic Refuse Dump; NC

Sample: SX2039-ECC2038
Lab FileID: X046058.D

```
x045998.D  8270d0426.m       Thu Apr 28 10:46:41 2016
```

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
Date Analyzed: 04/26/16
Methods: EPA 245.1
Analyst: JL
Run ID: MA13112
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:55	MA13112-STD1	1		STD1
11:57	MA13112-STD2	1		STD2
11:58	MA13112-STD3	1		STD3
12:00	MA13112-STD4	1		STD4
12:01	MA13112-STD5	1		STD5
12:03	MA13112-STD6	1		STD6
12:05	MA13112-HSTD1	1		
12:07	MA13112-ICV1	1		
12:09	MA13112-ICB1	1		
12:11	MA13112-CRI1	1		
12:13	MA13112-CCV1	1		
12:14	MA13112-CCB1	1		
12:16	MP30277-MB1	1		
12:18	MP30277-B1	1		
12:19	FA33143-2	1		(sample used for QC only; not part of login FA33324)
12:21	MP30277-D1	1		
12:22	MP30277-SD1	5		
12:24	MP30277-S1	1		
12:25	MP30277-S2	1		
12:27	ZZZZZZ	1		
12:29	ZZZZZZ	1		
12:30	ZZZZZZ	1		
12:32	MA13112-CCV2	1		
12:33	MA13112-CCB2	1		
12:35	ZZZZZZ	1		
12:36	ZZZZZZ	1		
12:38	ZZZZZZ	1		
12:39	ZZZZZZ	1		
12:41	ZZZZZZ	1		
12:42	ZZZZZZ	1		
12:44	MP30278-MB1	1		
12:45	MP30278-B1	1		
12:47	FA33182-6	1		(sample used for QC only; not part of login FA33324)

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
Date Analyzed: 04/26/16
Methods: EPA 245.1
Analyst: JL
Run ID: MA13112
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:48	MP30278-D1	1		
12:50	MA13112-CCV3	1		
12:51	MA13112-CCB3	1		
12:53	MP30278-SD1	5		
12:55	MP30278-S1	1		
12:56	MP30278-S2	1		
12:58	ZZZZZZ	1		
13:00	ZZZZZZ	1		
13:01	ZZZZZZ	1		
13:03	ZZZZZZ	1		
13:04	ZZZZZZ	1		
13:05	ZZZZZZ	1		
13:07	ZZZZZZ	1		
13:08	MA13112-CCV4	1		
13:10	MA13112-CCB4	1		
13:12	ZZZZZZ	1		
13:13	ZZZZZZ	1		
13:14	MP30278-MB2A	1		
13:16	MP30279-MB1	1		
13:17	MP30279-B1	1		
13:19	FA33188-3F	1		(sample used for QC only; not part of login FA33324)
13:21	MP30279-D1	1		
13:22	MP30279-SD1	5		
13:24	MP30279-S1	1		
13:25	MP30279-S2	1		
13:27	MA13112-CCV5	1		
13:29	MA13112-CCB5	1		
13:31	ZZZZZZ	1		
13:32	ZZZZZZ	1		
13:34	ZZZZZZ	1		
13:35	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:38	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
Analyst: JL Run ID: MA13112
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
13:39	ZZZZZZ	1		
13:41	ZZZZZZ	1		
13:42	ZZZZZZ	1		
13:44	MP30279-MB2A	1		
13:45	MA13112-CCV6	1		
13:47	MA13112-CCB6	1		
13:49	MP30280-MB1	1		
13:50	MP30280-B1	1		
13:51	FA33286-3	1		(sample used for QC only; not part of login FA33324)
13:53	MP30280-D1	1		
13:55	MP30280-SD1	5		
13:56	MP30280-S1	1		
13:58	MP30280-S2	1		
14:00	ZZZZZZ	1		
14:01	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:04	MA13112-CCV7	1		
14:06	MA13112-CCB7	1		
14:08	ZZZZZZ	1		
14:09	ZZZZZZ	1		
14:11	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:13	ZZZZZZ	1		
14:15	FA33324-2	1		

----------> Last reportable sample/prep for job FA33324

14:16	MA13112-CRI2	1		
14:18	MA13112-CCV8	1		
14:19	MA13112-CCB8	1		

----------> Last reportable CCB for job FA33324
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			12:09		12:14		12:33		12:51	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0054	<0.50	0.013	<0.50	0.0080	<0.50	0.0089	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			13:10		13:29		13:47		14:06	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0092	<0.50	0.0067	<0.50	0.0092	<0.50	0.0075	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: result < RL

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			14:19	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Mercury	0.50	.03	0.015	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.1.1
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		12:07			12:13			12:32	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		12:50			13:08			13:27	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	2.9	96.7	3	2.9	96.7

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV Date Analyzed: 04/26/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13112 Units: ug/l

Time:		13:45			14:04			14:18	
Sample ID:	CCV	CCV6		CCV	CCV7		CCV	CCV8	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3	2.9	96.7	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.2
8

HIGH STANDARD CHECK SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: 95 to 105 % Recovery

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:		12:05	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	5.9	98.3

(*) Outside of QC limits
(anr) Analyte not requested

8.1.3

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H50426W2.CSV
QC Limits: 80 to 120 % Recovery

Date Analyzed: 04/26/16
Run ID: MA13112

Methods: EPA 245.1
Units: ug/l

Time:			12:11		14:16	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.19	95.0	0.18	90.0

(*) Outside of QC limits
(anr) Analyte not requested

8.1.4

8

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV Date Analyzed: 05/03/16 Methods: EPA 245.1
Analyst: JL Run ID: MA13131
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
10:56	MA13131-STD1	1		STD1
10:57	MA13131-STD2	1		STD2
10:58	MA13131-STD3	1		STD3
11:00	MA13131-STD4	1		STD4
11:01	MA13131-STD5	1		STD5
11:03	MA13131-STD6	1		STD6
11:05	MA13131-HSTD1	1		
11:07	MA13131-ICV1	1		
11:08	MA13131-ICB1	1		
11:10	MA13131-CRI1	1		
11:11	MA13131-CCV1	1		
11:13	MA13131-CCB1	1		
11:14	MP30308-MB1	1		
11:16	MP30308-B1	1		
11:17	FA33324-3	1		
11:19	MP30308-D1	1		
11:20	MP30308-SD1	5		
11:21	MP30308-S1	1		
11:23	MP30308-S2	1		
11:24	FA33324-4	1		
---------->	Last reportable sample/prep for job FA33324			
11:26	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:29	MA13131-CCV2	1		
11:30	MA13131-CCB2	1		
11:32	ZZZZZZ	1		
11:33	ZZZZZZ	1		
11:34	ZZZZZZ	1		
11:36	ZZZZZZ	1		
11:37	ZZZZZZ	1		
11:38	ZZZZZZ	1		
11:39	MP30309-MB1	1		
11:41	MP30309-B1	1		
11:42	FA33368-1F	1		(sample used for QC only; not part of login FA33324)

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV
Analyst: JL
Parameters: Hg

Date Analyzed: 05/03/16 Methods: EPA 245.1
Run ID: MA13131

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:44	MP30309-D1	1		
11:45	MA13131-CCV3	1		
11:46	MA13131-CCB3	1		
11:48	MP30309-SD1	5		
11:49	MP30309-S1	1		
11:51	MP30309-S2	1		
11:52	ZZZZZZ	1		
11:54	ZZZZZZ	1		
11:56	ZZZZZZ	1		
11:57	ZZZZZZ	1		
11:58	ZZZZZZ	1		
11:59	ZZZZZZ	1		
12:01	ZZZZZZ	1		
12:02	MA13131-CCV4	1		
12:03	MA13131-CCB4	1		
12:05	ZZZZZZ	1		
12:06	ZZZZZZ	1		
12:08	MP30309-MB2A	1		
12:09	MP30310-MB1	1		
12:10	MP30310-B1	1		
12:12	FA33427-5A	1		(sample used for QC only; not part of login FA33324)
12:13	MP30310-D1	1		
12:15	MP30310-SD1	5		
12:16	MP30310-S1	1		
12:17	MP30310-S2	1		
12:19	MA13131-CCV5	1		
12:21	MA13131-CCB5	1		
12:22	ZZZZZZ	1		
12:24	ZZZZZZ	1		
12:25	ZZZZZZ	1		
12:26	ZZZZZZ	1		
12:28	MA13131-CRI2	1		
12:29	MA13131-CCV6	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV Date Analyzed: 05/03/16 Methods: EPA 245.1
Analyst: JL Run ID: MA13131
Parameters: Hg

Time	Sample Description	Dilution Factor	PS Recov	Comments
12:30	MA13131-CCB6	1		

----------> Last reportable CCB for job FA33324
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV
QC Limits: result < RL

Date Analyzed: 05/03/16
Run ID: MA13131

Methods: EPA 245.1
Units: ug/l

Time:			11:08		11:13		11:30		11:46	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Mercury	0.50	.03	-0.00060	<0.50	-0.00020	<0.50	-0.0027	<0.50	0.0035	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV
QC Limits: result < RL

Date Analyzed: 05/03/16
Run ID: MA13131

Methods: EPA 245.1
Units: ug/l

Time:			12:03		12:21		12:30	
Sample ID:			CCB4		CCB5		CCB6	
Metal	RL	IDL	raw	final	raw	final	raw	final
Mercury	0.50	.03	0.0035	<0.50	-0.0034	<0.50	0.0065	<0.50

(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV Date Analyzed: 05/03/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13131 Units: ug/l

Time:		11:07			11:11			11:29	
Sample ID:	ICV	ICV1		CCV	CCV1		CCV	CCV2	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3	2.9	96.7	3	3.1	103.3	3	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV Date Analyzed: 05/03/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13131 Units: ug/l

Time:		11:45			12:02			12:19	
Sample ID:	CCV	CCV3		CCV	CCV4		CCV	CCV5	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Mercury	3.0	3.0	100.0	3.0	3.0	100.0	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV Date Analyzed: 05/03/16 Methods: EPA 245.1
QC Limits: 90 to 110 % Recovery Run ID: MA13131 Units: ug/l

Time:		12:29	
Sample ID:	CCV	CCV6	
Metal	True	Results	% Rec
Mercury	3.0	3.0	100.0

(*) Outside of QC limits
(anr) Analyte not requested

8.2.2
8

HIGH STANDARD CHECK SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV
QC Limits: 95 to 105 % Recovery

Date Analyzed: 05/03/16
Run ID: MA13131

Methods: EPA 245.1
Units: ug/l

Time:		11:05	
Sample ID:	HSTD	HSTD1	
Metal	True	Results	% Rec
Mercury	6	6.1	101.7

(*) Outside of QC limits
(anr) Analyte not requested

8.2.3

8

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: H40503W2.CSV
QC Limits: 80 to 120 % Recovery

Date Analyzed: 05/03/16
Run ID: MA13131

Methods: EPA 245.1
Units: ug/l

Time:			11:10		12:28	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Mercury	0.20		0.19	95.0	0.19	95.0

(*) Outside of QC limits
(anr) Analyte not requested

8.2.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.0031	<0.50

Associated samples MP30280: FA33324-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.3.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16 04/26/16

Metal	FA33286-3 Original	DUP	RPD	QC Limits	FA33286-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.031	0.0	200.0(a)	0-10	0.031	3.0	3	99.0	70-130

Associated samples MP30280: FA33324-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	FA33286-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.031	3.0	3	99.0	0.0	

Associated samples MP30280: FA33324-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.3.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP30280: FA33324-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.3.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30280
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	FA33286-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.0308	0.00	100.0(a)	0-10

Associated samples MP30280: FA33324-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.3.4

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30308
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 05/03/16

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	-0.0047	<0.50

Associated samples MP30308: FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.4.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30308
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 05/03/16 05/03/16

Metal	FA33324-3 Original	DUP	RPD	QC Limits	FA33324-3 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	3.1	3	103.3	70-130

Associated samples MP30308: FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.4.2
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30308 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/03/16

Metal	FA33324-3 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.1	3	103.3	0.0	

Associated samples MP30308: FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30308
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 05/03/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.2	3	106.7	85-115

Associated samples MP30308: FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.4.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

QC Batch ID: MP30308
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 05/03/16

Metal	FA33324-3 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP30308: FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.4.4

8

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP27828/GN70666	2.0	0.0	mg/l	50	50.8	101.6	90-110%
Nitrogen, Ammonia	GP27897/GN70817	0.10	0.0	mg/l	2.5	2.48	99.2	90-110%
Nitrogen, Nitrate	GP27828/GN70666	0.10	0.0	mg/l	2.5	2.36	94.4	90-110%
Sulfate	GP27828/GN70666	2.0	0.0	mg/l	50	51.0	102.0	90-110%

Associated Samples:
Batch GP27828: FA33324-2, FA33324-3, FA33324-4
Batch GP27897: FA33324-2, FA33324-3, FA33324-4
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP27828/GN70666	FA33324-4	mg/l	11.6	50	59.3	95.4	90-110%
Nitrogen, Ammonia	GP27897/GN70817	FA33362-1	mg/l	0.030 U	2.5	2.5	100.0	90-110%
Nitrogen, Nitrate	GP27828/GN70666	FA33324-4	mg/l	0.0	2.5	2.1	84.0N(a)	90-110%
Sulfate	GP27828/GN70666	FA33324-4	mg/l	0.69	50	48.3	95.2	90-110%

Associated Samples:
Batch GP27828: FA33324-2, FA33324-3, FA33324-4
Batch GP27897: FA33324-2, FA33324-3, FA33324-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chloride	GP27828/GN70666	FA33324-4	mg/l	11.6	50	59.3	0.0	20%
Nitrogen, Ammonia	GP27897/GN70817	FA33362-1	mg/l	0.030 U	2.5	2.5	0.0	20%
Nitrogen, Nitrate	GP27828/GN70666	FA33324-4	mg/l	0.0	2.5	2.2	4.7	20%
Sulfate	GP27828/GN70666	FA33324-4	mg/l	0.69	50	48.4	0.2	20%

Associated Samples:
Batch GP27828: FA33324-2, FA33324-3, FA33324-4
Batch GP27897: FA33324-2, FA33324-3, FA33324-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: 316042201.TXT Date Analyzed: 04/22/16 Methods: EPA 300/SW846 9056A
Analyst: LJ Run ID: GN70666
Parameters: Nitrogen, Nitrate,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:04	GN70666-CCV1	1		
09:22	GP27828-MB1	1		
09:39	GP27828-B1	1		
09:57	ZZZZZZ	200		
10:15	ZZZZZZ	200		
10:33	ZZZZZZ	1		
10:50	ZZZZZZ	1		
11:30	ZZZZZZ	1		
11:51	ZZZZZZ	1		
12:08	ZZZZZZ	1		
12:26	FA33328-6	1		(sample used for QC only; not part of login FA33324)
12:44	GN70666-CCV2	1		
13:02	GN70666-CCB1	1		
13:20	ZZZZZZ	1		
13:38	GP27828-S1	1		
13:56	GP27828-S2	1		
14:13	ZZZZZZ	1		
14:31	ZZZZZZ	1		
15:07	FA33324-3	1		
15:25	FA33324-4	1		
15:43	GP27828-S3	1		
16:01	GP27828-S4	1		
16:19	GN70666-CCV3	1		
16:37	GN70666-CCB2	1		
16:55	FA33324-2	1		
17:49	ZZZZZZ	200		
18:06	ZZZZZZ	200		
18:24	ZZZZZZ	200		
18:42	ZZZZZZ	200		
19:00	ZZZZZZ	200		
19:18	ZZZZZZ	200		
19:36	GN70666-CCV4	1		
19:54	GN70666-CCB3	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: 316042201.TXT
Date Analyzed: 04/22/16
Run ID: GN70666
Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70666-CCV1	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70666-CCV1	Sulfate	51.5	2.0	0.60	50	103.0	90-110
GN70666-CCV2	Nitrogen, Nitrate	2.3	0.10	0.050	2.5	92.0	90-110
GN70666-CCV2	Sulfate	51.0	2.0	0.60	50	102.0	90-110
GN70666-CCB1	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70666-CCB1	Sulfate	0.60 U	2.0	0.60			
GN70666-CCV3	Nitrogen, Nitrate	2.3	0.10	0.050	2.5	92.0	90-110
GN70666-CCV3	Sulfate	51.4	2.0	0.60	50	102.8	90-110
GN70666-CCB2	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70666-CCB2	Sulfate	0.60 U	2.0	0.60			
GN70666-CCV4	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70666-CCV4	Sulfate	52.0	2.0	0.60	50	104.0	90-110
GN70666-CCB3	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70666-CCB3	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050516AMN1.CSV Date Analyzed: 05/05/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70817
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:28	GN70817-ICV1	1		
14:29	GN70817-CCV1	1		
14:30	GN70817-CCB1	1		
14:31	GP27897-MB1	1		
14:32	GP27897-B1	1		
14:36	GP27897-S1	1		
14:37	GP27897-S2	1		
14:38	FA33362-1	1		(sample used for QC only; not part of login FA33324)
14:39	ZZZZZZ	1		
14:40	ZZZZZZ	1		
14:41	ZZZZZZ	1		
14:42	GN70817-CCV2	1		
14:44	GN70817-CCB2	1		
14:45	ZZZZZZ	1		
14:46	ZZZZZZ	1		
14:47	FA33324-2	1		
14:48	FA33324-3	1		
14:49	FA33324-4	1		
14:50	ZZZZZZ	1		
14:51	GP27897-S3	1		
14:52	GP27897-S4	1		
14:54	FA33368-1	1		(sample used for QC only; not part of login FA33324)
14:55	ZZZZZZ	1		
14:56	GN70817-CCV3	1		
14:57	GN70817-CCB3	1		
14:58	ZZZZZZ	1		
14:59	ZZZZZZ	1		
15:00	ZZZZZZ	1		
15:01	ZZZZZZ	1		
15:03	ZZZZZZ	1		
15:04	ZZZZZZ	1		
15:05	ZZZZZZ	1		
15:06	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050516AMN1.CSV Date Analyzed: 05/05/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70817
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:09	GN70817-CCV4	1		
15:10	GN70817-CCB4	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA33324
Account: URSNCM - AECOM, INC.
Project: Atlantic Refuse Dump; NC

File ID: B050516AMN1.CSV
Date Analyzed: 05/05/16
Run ID: GN70817
Methods: EPA 350.1
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70817-ICV1	Nitrogen, Ammonia	2.6	0.10	0.030	2.5	104.0	90-110
GN70817-CCV1	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70817-CCB1	Nitrogen, Ammonia	-0.052	0.10	0.030			
GN70817-CCV2	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70817-CCB2	Nitrogen, Ammonia	-0.051	0.10	0.030			
GN70817-CCV3	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70817-CCB3	Nitrogen, Ammonia	-0.066	0.10	0.030			
GN70817-CCV4	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70817-CCB4	Nitrogen, Ammonia	0.030 U	0.10	0.030			

(!) Outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody
- Analyst Legend

CHAIN OF CUSTODY

4405 Vineland Rd, Suite C-15, Orlando, FL 32811
TEL. 407-425-6700 FAX. 407-425-0707
www.sgs.com

FED-EX Tracking # 6623 7371 1108
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job FA33324

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 4405 Vineland Rd, Suite C-15
City: Orlando State: FL Zip: 32811
Project Contact: heatherw E-mail: heatherw@accutest.com
Phone #: 407-425-6700 Fax #:
Sampler(s) Name(s): JAJC Phone:

Project Information

Project Name: Atlantic Refuse Dump; NC
Street
City State
Project #
Client Purchase Order #
Project Manager

Billing Information (if different from Report to)

Company Name
Street Address
City State Zip
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	FEMS_XMETHISLMS, 200.8	LAB USE ONLY
2	WELL-289 ATLANTIC		4/21/16	9:20:00 AM	JAJC	AQ	1			1						X	
3	WELL-267 ATLANTIC		4/21/16	10:05:00 AM	JAJC	AQ	1			1						X	FL
4	WELL-144 ATLANTIC		4/21/16	10:45:00 AM	JAJC	AQ	1			1						X	

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- ☐ 10 Day (business)
- ☐ 5-7 Day
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☒ other 14

Rush T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "A" (Level 1, Results Only)
- ☐ Commercial "B" (Level 2, Results + QC summary)
- ☐ REDT1 (Level 3)
- ☐ FULT1 (Level 4)
- ☐ DOD FULT1 (Level 4)
- ☒ Other REDT1
- ☐ EDD Format

Comments / Special Instructions

ALNJ

INITIAL ASESSMENT Am 04
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 ALSE	4/22/16 1700	1 FED EX	2 FED EX	4-26-16 9:45	2
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact Preserved where applicable On Ice ☐ Cooler Temp. 3.7°C

10.1 10

FA33324: Chain of Custody
Page 1 of 2
SGS Accutest New Jersey

SGS Accutest Sample Receipt Summary

Job Number: FA33324 **Client:** _____ **Project:** _____

Date / Time Received: 4/26/2016 9:45:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.7);

Cooler Temps (Corrected) °C: Cooler 1: (4.1);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR Gun	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☑	☐
2. Trip Blank listed on COC:	☐	☑	☐
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

10.1

10

FA33324: Chain of Custody

Page 2 of 2

Analyst Legend

Job Number: FA33324
Account: ALSE Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

Initials	Full Name	Analysis Type
JO	Jaclyn O'Connor	Metals Analysis

Metals Analysis

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:17	MA39295-STD1	1		STDA
09:22	MA39295-STD2	1		STDA
09:26	MA39295-STD3	1		STDA
09:31	MA39295-STD4	1		STDA
09:35	MA39295-STD5	1		STDB
09:40	MA39295-STD6	1		STDC
09:44	MA39295-STD7	1		STDD
09:48	MA39295-STD8	1		STDE
09:53	MA39295-STD9	1		STDF
09:57	MA39295-STD10	1		STDG
10:02	MA39295-STD11	1		STDH
10:06	MA39295-STD12	1		STDI
10:11	MA39295-STD13	1		STDJ
10:25	ZZZZZZ	1		
10:30	MA39295-ICVA1	1		
10:34	MA39295-ICV1	1		60ppb Al.
10:38	MA39295-ICB1	1		
10:43	MA39295-CCVA1	1		
10:47	MA39295-CCB1	1		
10:52	MA39295-CRI1	1		
10:56	ZZZZZZ	1		
11:01	ZZZZZZ	1		
11:05	ZZZZZZ	1		
11:13	ZZZZZZ	1		
11:18	ZZZZZZ	1		
11:23	ZZZZZZ	1		
11:27	ZZZZZZ	1		
11:31	ZZZZZZ	1		
11:36	ZZZZZZ	1		
11:40	MA39295-ICSA1	1		
11:45	MA39295-ICSAB1	1		
11:49	ZZZZZZ	1		
11:54	MA39295-CCVA2	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:58	MA39295-CCB2	1		
12:04	ZZZZZZ	1		
12:11	ZZZZZZ	10		
12:15	ZZZZZZ	5		
12:20	ZZZZZZ	5		
12:24	ZZZZZZ	1		
12:28	ZZZZZZ	1		
12:34	ZZZZZZ	1		
12:39	MA39295-CRI2	1		
12:43	MA39295-CCVA3	1		
12:47	MA39295-CCB3	1		
12:52	MP93378-MB1	1		
12:56	MP93378-B1	1		
13:01	MP93378-B1	2		
13:05	MP93378-S1	1		
13:10	MP93378-S1	2		
13:14	MP93378-S2	1		
13:18	MP93378-S2	2		
13:23	ZZZZZZ	1		
13:27	FA33323-2	1		(sample used for QC only; not part of login FA33324)
13:32	MA39295-CCVA4	1		
13:36	MA39295-CCB4	1		
13:41	ZZZZZZ	1		
13:45	ZZZZZZ	1		
13:49	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:58	ZZZZZZ	1		
14:03	ZZZZZZ	1		
14:07	ZZZZZZ	1		
14:12	ZZZZZZ	1		
14:16	ZZZZZZ	1		
14:20	MA39295-CCVA5	1		
14:25	MA39295-CCB5	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	14:29	MP93359-MB1	1		
	14:34	MP93359-B1	1		
	14:38	MP93359-B1	2		
	14:43	MP93359-S1	1		
	14:47	MP93359-S2	1		
	14:51	JC18650-23	1		(sample used for QC only; not part of login FA33324)
	14:56	FA33324-2	1		
	15:00	FA33324-3	1		
	15:05	FA33324-4	1		
	15:09	MA39295-CCVA6	1		
	15:13	MA39295-CCB6	1		
	15:18	MP93391-MB1	1		
	15:22	MP93391-B1	1		
	15:27	MP93391-S1	1		
	15:31	MP93391-S2	1		
	15:36	ZZZZZZ	1		
	15:40	JC18739-12	1		(sample used for QC only; not part of login FA33324)
	15:44	ZZZZZZ	1		
	15:49	ZZZZZZ	1		
	15:54	MA39295-CCVA7	1		
	15:58	MA39295-CCB7	1		
	16:02	MP93359-S1	2		
	16:07	MP93359-S2	2		
---------->	Last reportable sample/prep for job FA33324				
	16:11	ZZZZZZ	10		
	16:16	ZZZZZZ	1		
	16:20	ZZZZZZ	1		
	16:25	MP93391-B1	2		Ag
	16:30	MP93391-S1	2		Ag
	16:34	MP93391-S2	2		
	16:39	ZZZZZZ	1		
	16:43	MA39295-CCVA8	1		
	16:48	MA39295-CCB8	1		
---------->	Last reportable CCB for job FA33324				
	16:52	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:57	ZZZZZZ	1		
17:01	ZZZZZZ	1		
17:05	ZZZZZZ	1		
17:10	ZZZZZZ	1		
17:14	ZZZZZZ	1		
17:19	ZZZZZZ	1		
17:23	ZZZZZZ	1		
17:28	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:36	MA39295-CCVA9	1		
17:41	MA39295-CCB9	1		
17:45	MP93407-MB1	1		
17:50	MP93407-B1	1		
17:54	MP93407-B1	2		
17:59	MP93407-S1	1		
18:03	MP93407-S1	2		
18:07	MP93407-S2	1		
18:12	MP93407-S2	2		
18:16	ZZZZZZ	1		
18:21	JC19016-17	1		(sample used for QC only; not part of login FA33324)
18:25	MA39295-CCVA10	1		
18:30	MA39295-CCB10	1		
18:34	ZZZZZZ	1		
18:38	ZZZZZZ	1		
18:43	ZZZZZZ	1		
18:47	ZZZZZZ	1		
18:52	ZZZZZZ	1		
18:56	ZZZZZZ	1		
19:01	ZZZZZZ	1		
19:05	ZZZZZZ	1		
19:09	MA39295-CCVA11	1		
19:14	MA39295-CCB11	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
09:17	MA39295-STD1	100	100	100	100	100	100	100	100
09:22	MA39295-STD2	100	100	100	100	100	100	100	100
09:26	MA39295-STD3	100	100	100	100	100	100	100	100
09:31	MA39295-STD4	100	100	100	100	100	100	100	100
09:35	MA39295-STD5	99.929	99.242	99.524	98.622	100.209	100.799	99.604	99.188
09:40	MA39295-STD6	99.487	98.599	99.029	98.968	100.538	100.148	99.23	99.034
09:44	MA39295-STD7	99.628	98.151	99.532	98.448	99.923	100.347	100.054	98.885
09:48	MA39295-STD8	99.998	98.289	98.136	97.669	98.731	100.455	97.884	97.984
09:53	MA39295-STD9	100.704	97.399	98.695	98.672	98.753	100.03	98.726	97.971
09:57	MA39295-STD10	99.396	97.741	98.618	96.682	98.329	99.671	98.57	96.921
10:02	MA39295-STD11	100.451	98.738	99.452	99.082	98.319	99.791	97.244	97.779
10:06	MA39295-STD12	101.224	99.951	99.798	97.994	97.857	99.367	97.308	97.297
10:11	MA39295-STD13	100.95	99.874	100.061	98.524	98.917	98.895	98.063	96.369
10:25	ZZZZZZ	103.327	100.371	101.967	100.241	99.757	102.421	98.712	100.385
10:30	MA39295-ICVA1	103.237	101.07	101.471	99.368	100.109	100.347	98.202	98.546
10:34	MA39295-ICV1	101.975	99.127	99.973	97.594	99.298	99.224	98.02	100.036
10:38	MA39295-ICB1	102.286	99.347	99.112	97.64	98.892	98.971	97.799	100.021
10:43	MA39295-CCVA1	102.788	101.553	100.951	99.564	100.43	100.108	97.417	98.851
10:47	MA39295-CCB1	103.514	100.718	101.392	99.667	99.641	100.371	98.295	101.406
10:52	MA39295-CRI1	102.416	100.273	100.609	98.816	99.149	100.419	98.198	100.621
10:56	ZZZZZZ	98.304	99.468	101.968	102.178	95.801	97.394	96.488	90.626
11:01	ZZZZZZ	99.583	102.749	104.407	102.454	98.654	99.077	95.946	92.338
11:05	ZZZZZZ	100.796	102.641	102.654	99.744	102.466	103.609	99.842	103.964
11:13	ZZZZZZ	97.231	100.731	103.72	100.392	96.278	99.777	95.395	90.869
11:18	ZZZZZZ	97.257	99.972	102.163	101.581	96.264	98.915	96.288	90.938
11:23	ZZZZZZ	100.659	101.918	101.703	98.928	102.17	103.609	98.926	103.494
11:27	ZZZZZZ	98.429	99.961	102.291	98.19	99.925	102.554	97.4	100.104
11:31	ZZZZZZ	99.956	100.581	101.209	99.224	100.765	102.484	98.341	102.046
11:36	ZZZZZZ	101.98	101.728	102.585	101.443	101.948	102.758	100.529	103.738
11:40	MA39295-ICSA1	99.428	101.824	105.47	103.096	97.638	100.247	97.824	92.323
11:45	MA39295-ICSAB1	99.237	102.823	106.392	103.671	98.847	101.819	98.436	92.662
11:49	ZZZZZZ	102.811	106.591	105.884	102.717	106.019	105.489	102.216	106.238
11:54	MA39295-CCVA2	100.851	104.055	104.222	102.936	102.694	104.962	102.567	101.158

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
11:58	MA39295-CCB2	103.073	103.503	104.323	103.485	103.486	104.065	101.102	104.057
12:04	ZZZZZZ	105.176	104.873	106.444	105.386	104.182	106.597	104.106	104.831
12:11	ZZZZZZ	107.399	107.415	109.401	105.862	106.752	107.829	103.739	105.772
12:15	ZZZZZZ	107.65	104.398	103.865	106.497	103.641	104.893	105.201	103.215
12:20	ZZZZZZ	110.148	107.036	107.173	107.433	105.919	106.037	106.606	105.979
12:24	ZZZZZZ	110.851	109.467	108.973	108.782	106.323	107.612	105.922	107.441
12:28	ZZZZZZ	111.647	110.421	109.404	110.197	108.022	107.824	105.537	107.332
12:34	ZZZZZZ	111.543	110.152	108.914	109.809	107.362	107.408	106.349	107.342
12:39	MA39295-CRI2	112.452	110.35	110.223	110.109	108.311	106.375	107.748	107.43
12:43	MA39295-CCVA3	111.455	110.267	110.193	109.78	107.779	106.469	105.135	104.648
12:47	MA39295-CCB3	112.03	109.416	108.415	108.964	106.541	106.396	105.486	106.799
12:52	MP93378-MB1	113.807	110.72	107.157	110.118	108.242	105.157	106.26	106.993
12:56	MP93378-B1	113.086	111.515	110.454	115.374	109.981	108.941	110.547	108.002
13:01	MP93378-B1	112.898	111.149	109.81	110.631	109.195	108.131	106.759	107.033
13:05	MP93378-S1	110.367	112.652	109.467	109.222	105.751	106.199	104.822	102.154
13:10	MP93378-S1	112.102	110.794	107.305	110.386	106.219	105.787	105.806	102.269
13:14	MP93378-S2	110.89	111.508	108.652	109.401	104.693	104.883	104.784	100.416
13:18	MP93378-S2	112.875	109.854	108.08	109.33	105.795	106.002	105.568	102.296
13:23	ZZZZZZ	115.973	110.07	108.634	109.491	107.108	105.915	105.529	106.858
13:27	FA33323-2	113.397	111.183	107.42	110.018	103.665	105.343	104.185	100.725
13:32	MA39295-CCVA4	115.422	108.318	108.745	108.298	105.882	105.844	105.526	103.408
13:36	MA39295-CCB4	114.867	109.289	107.861	109.473	107.157	105.28	105.434	106.231
13:41	ZZZZZZ	113.2	109.303	109.635	109.901	106.093	107.115	105.832	101.668
13:45	ZZZZZZ	115.502	110.025	109.638	111.14	105.306	105.943	105.563	102.463
13:49	ZZZZZZ	113.948	109.61	108.292	109.633	104.158	104.975	104.421	101.346
13:54	ZZZZZZ	112.379	107.419	106.739	106.342	102.523	104.54	102.342	100.713
13:58	ZZZZZZ	110.332	108.355	107.612	107.784	102.684	103.491	104.018	97.776
14:03	ZZZZZZ	114.436	109.867	109.257	110.447	102.908	105.497	105.102	100.566
14:07	ZZZZZZ	115.118	108.72	107.745	109.52	104.31	105.023	104.245	100.306
14:12	ZZZZZZ	112.144	107.797	105.994	106.594	102.609	101.777	101.432	96.643
14:16	ZZZZZZ	113.09	110.902	107.473	108.113	102.661	103.459	102.917	99.094
14:20	MA39295-CCVA5	114.424	107.144	106.291	106.94	104.742	104.429	102.921	101.765
14:25	MA39295-CCB5	114.61	107.728	106.536	106.74	104.915	104.271	102.666	104.437

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
14:29	MP93359-MB1	113.456	106.523	105.729	105.875	104.823	103.907	102.485	104.261
14:34	MP93359-B1	112.707	106.617	105.635	106.098	106.107	105.205	103.927	104.128
14:38	MP93359-B1	110.214	103.847	104.856	104.42	102.088	103.219	102.707	101.508
14:43	MP93359-S1	106.502	105.414	104.161	102.185	101.743	101.714	98.394	95.312
14:47	MP93359-S2	103.257	102.639	101.734	100.285	98.997	99.868	97.276	93.236
14:51	JC18650-23	103.333	102.832	101.342	100.681	98.796	99.773	97.282	93.561
14:56	FA33324-2	105.769	101.984	101.358	101.392	99.439	100.594	99.031	96.693
15:00	FA33324-3	105.253	100.911	101.052	100.189	98.072	101.047	97.732	96.01
15:05	FA33324-4	103.423	99.973	99.407	99.802	97.416	98.433	96.799	95.448
15:09	MA39295-CCVA6	104.403	99.369	99.325	99.938	97.635	99.586	97.656	95.783
15:13	MA39295-CCB6	106.176	101.034	101.464	101.303	100.448	100.901	100.167	100.344
15:18	MP93391-MB1	106.362	101.616	101.162	105.603	100.3	100.14	101.987	101.056
15:22	MP93391-B1	107.753	101.942	101.096	101.012	100.916	101.2	101.177	99.807
15:27	MP93391-S1	104.004	100.812	99.531	98.869	98.426	97.873	96.445	92.473
15:31	MP93391-S2	103.368	100.508	97.899	97.561	97.721	96.732	95.006	92.374
15:36	ZZZZZZ	105.255	99.983	98.485	98.458	99.295	99.508	97.438	99.542
15:40	JC18739-12	103.195	98.868	97.319	98.032	95.725	95.611	95.045	91.635
15:44	ZZZZZZ	97.1	98.21	99.762	96.36	92.875	93.943	90.573	86.264
15:49	ZZZZZZ	98.695	100.496	102.438	101.843	95.457	97.774	95.053	88.337
15:54	MA39295-CCVA7	100.384	97.743	100.586	96.83	96.592	100.414	94.036	95.255
15:58	MA39295-CCB7	93.74	92.105	94.773	91.606	90.824	95.727	91.596	93.819
16:02	MP93359-S1	95.312	95.191	97.008	94.576	94.725	97.816	94.7	92.037
16:07	MP93359-S2	97.49	96.64	97.249	95.035	95.523	99.168	93.953	92.944
16:11	ZZZZZZ	87.959	93.044	93.315	91.755	90.827	97.042	94.408	87.537
16:16	ZZZZZZ	97.961	98.501	96.772	95.591	100.011	100.091	95.754	101.802
16:20	ZZZZZZ	95.25	95.996	96.471	94.074	99.34	100.635	95.571	101.954
16:25	MP93391-B1	95.872	97.029	96.48	94.831	99.567	100.22	96.904	100.515
16:30	MP93391-S1	95.45	95.343	95.508	94.857	96.467	99.121	95.278	95.138
16:34	MP93391-S2	96.123	95.457	94.402	93.752	96.669	96.909	93.801	95.028
16:39	ZZZZZZ	97.175	95.023	94.688	94.01	96.329	97.186	93.935	98.555
16:43	MA39295-CCVA8	96.301	93.955	94.23	88.408	95.881	97.06	88.291	95.75
16:48	MA39295-CCB8	97.768	94.548	94.618	94.179	96.857	97.586	94.77	98.302
16:52	ZZZZZZ	94.866	97.296	95.587	93.354	93.872	93.837	91.308	90.598

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8
16:57	ZZZZZZ	95.137	96.374	95.406	94.038	94.743	96.036	92.459	91.236
17:01	ZZZZZZ	94.935	95.766	94.534	92.444	94.293	95.664	91.327	89.09
17:05	ZZZZZZ	101.262	97.601	97.481	94.811	98.346	98.793	93.808	99.169
17:10	ZZZZZZ	96.802	95.947	95.566	94.148	93.987	95.868	92.507	91.062
17:14	ZZZZZZ	98.798	96.561	97.232	95.636	94.691	96.742	94.405	91.542
17:19	ZZZZZZ	101.073	98.626	96.748	95.922	95.543	96.814	95.504	92.497
17:23	ZZZZZZ	102.144	98.994	98.253	98.106	96.81	97.258	95.826	92.7
17:28	ZZZZZZ	109.023	102.653	100.197	88.261	102.213	101.759	86.799	103.287
17:32	ZZZZZZ	102.111	97.841	98.374	100.696	95.574	97.909	97.353	91.37
17:36	MA39295-CCVA9	104.012	99.232	99.04	98.124	98.764	99.706	97.639	98.79
17:41	MA39295-CCB9	103.891	98.803	97.517	96.73	99.204	99.259	96.577	101.201
17:45	MP93407-MB1	101.701	98.765	97.369	96.494	99.707	99.136	96.533	99.994
17:50	MP93407-B1	100.271	97.069	95.973	94.445	98.665	98.054	94.863	97.777
17:54	MP93407-B1	100.479	95.537	96.126	95.845	96.768	99.312	95.23	97.278
17:59	MP93407-S1	99.328	96.773	95.588	95.04	96.995	97.783	95.869	95.697
18:03	MP93407-S1	100.304	96.759	96.352	95.897	97.115	99.105	95.727	96.387
18:07	MP93407-S2	100.641	97.924	96.461	95.798	97.648	99.163	95.724	96.929
18:12	MP93407-S2	100.853	97.719	96.8	96.208	98.895	99.778	95.931	97.612
18:16	ZZZZZZ	101.783	97.693	96.597	95.104	97.976	97.876	96.085	99.149
18:21	JC19016-17	101.529	98.227	97.637	95.136	97.874	99.526	94.655	97.89
18:25	MA39295-CCVA10	101.828	98.546	97.416	96.533	99.097	98.587	95.806	98.76
18:30	MA39295-CCB10	102.408	97.259	97.57	96.121	98.152	98.906	96.068	99.737
18:34	ZZZZZZ	103.15	99.141	97.494	97.74	99.747	99.25	96.138	98.592
18:38	ZZZZZZ	101.142	98.382	96.869	95.836	98.472	97.307	95.509	96.871
18:43	ZZZZZZ	101.945	98.546	97.176	100.154	99.992	98.972	100.164	101.112
18:47	ZZZZZZ	101.019	100.538	98.939	98.016	99.156	99.25	97.508	98.161
18:52	ZZZZZZ	101.218	98.344	98.147	97.728	97.817	99.163	96.284	97.671
18:56	ZZZZZZ	101.602	98.841	96.614	97.476	99.659	98.965	97.148	98.245
19:01	ZZZZZZ	99.461	97.239	96.324	95.662	97.942	98.741	95.777	95.132
19:05	ZZZZZZ	102.624	99.333	98.948	97.54	100.592	99.942	97.117	101.798
19:09	MA39295-CCVA11	101.975	100.016	99.28	98.795	100.552	101.201	97.807	99.833
19:14	MA39295-CCB11	102.818	98.866	98.054	97.634	100.026	100.101	97.23	101.845

! = Outside limits.

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#1	Istd#2	Istd#3	Istd#4	Istd#5	Istd#6	Istd#7	Istd#8

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#1	Lithium	60-125 %	60-125 %
Istd#2	Scandium (45-1)	60-125 %	60-125 %
Istd#3	Scandium (45-2)	60-125 %	60-125 %
Istd#4	Scandium (45-3)	60-125 %	60-125 %
Istd#5	Germanium (74-1)	60-125 %	60-125 %
Istd#6	Germanium (74-2)	60-125 %	60-125 %
Istd#7	Germanium (74-3)	60-125 %	60-125 %
Istd#8	Rhodium (103-1)	60-125 %	60-125 %

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
09:17	MA39295-STD1	100	100	100	100	100	100	100	100
09:22	MA39295-STD2	100	100	100	100	100	100	100	100
09:26	MA39295-STD3	100	100	100	100	100	100	100	100
09:31	MA39295-STD4	100	100	100	100	100	100	100	100
09:35	MA39295-STD5	99.751	100.133	99.425	100.105	99.524	99.477	100.063	100.279
09:40	MA39295-STD6	99.034	100.697	98.527	99.144	99.374	98.547	99.738	98.806
09:44	MA39295-STD7	98.216	100.177	98.404	99.161	99.638	98.873	99.014	99.077
09:48	MA39295-STD8	98.267	98.69	98.515	98.743	99.121	99.369	99.288	99.297
09:53	MA39295-STD9	99.269	99.578	98.355	99.363	99.344	99.312	100.127	99.132
09:57	MA39295-STD10	97.861	97.918	98.378	99.809	98.666	99.286	98.864	98.696
10:02	MA39295-STD11	98.908	98.48	98.591	99.901	99.26	99.872	100.578	99.409
10:06	MA39295-STD12	97.956	97.512	99.87	99.264	101.594	101.044	99.496	101.449
10:11	MA39295-STD13	96.7	96.824	98.084	98.356	101.089	100.225	99.568	101.112
10:25	ZZZZZZ	101.649	100.498	101.028	102.642	101.014	101.331	100.311	102.083
10:30	MA39295-ICVA1	98.335	97.812	99.75	100.71	101.719	102.226	100.015	102.455
10:34	MA39295-ICV1	100.233	100.012	99.242	100.732	101.01	100.574	100.636	100.875
10:38	MA39295-ICB1	100.675	99.431	100.73	100.757	100.75	100.149	99.378	100.898
10:43	MA39295-CCVA1	98.788	98.201	100.146	100.306	100.968	101.128	100.262	102.07
10:47	MA39295-CCB1	102.36	100.87	101.221	102.234	102.388	101.772	100.706	102.328
10:52	MA39295-CRI1	101.448	99.908	101.387	101.802	101.074	100.812	100.702	101.763
10:56	ZZZZZZ	90.382	90.705	94.355	93.749	98.266	97.099	96.232	98.632
11:01	ZZZZZZ	91.211	90.58	96.963	95.796	100.853	98.076	96.203	101.405
11:05	ZZZZZZ	103.015	101.547	105.108	104.88	103.694	102.882	101.027	104.125
11:13	ZZZZZZ	90.133	89.221	95.511	94.664	98.425	97.489	94.668	99.069
11:18	ZZZZZZ	90.919	90.218	95.504	94.675	99.191	97.824	95.546	99.49
11:23	ZZZZZZ	102.538	100.99	104.853	104.59	104.456	103.881	100.355	104.421
11:27	ZZZZZZ	101.715	98.267	101.828	103.532	103.58	104.418	101.002	104.328
11:31	ZZZZZZ	102.721	101.177	103.535	103.664	103.29	102.992	100.323	104.327
11:36	ZZZZZZ	103.824	102.841	103.979	104.59	104.165	104.147	101.623	104.082
11:40	MA39295-ICSA1	91.932	91.058	96.882	95.683	99.691	98.837	96.379	100.542
11:45	MA39295-ICSAB1	93.015	91.239	97.337	97.769	100.928	99.269	96.285	101.263
11:49	ZZZZZZ	105.415	103.349	107.897	107.188	105.862	104.595	102.061	105.905
11:54	MA39295-CCVA2	103.403	101.073	103.359	104.564	105.394	105.81	101.966	105.799

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
11:58	MA39295-CCB2	104.643	102.964	105.376	105.246	105.037	103.877	101.813	106.024
12:04	ZZZZZZ	106.207	102.704	105.652	106.5	105.581	105.324	102.577	106.075
12:11	ZZZZZZ	106.918	103.633	106.382	107.036	107.717	106.591	103.254	108.354
12:15	ZZZZZZ	103.716	104.768	104.242	102.387	105.008	102.423	102.715	105.004
12:20	ZZZZZZ	106.849	106.042	106.039	105.396	106.077	104.013	103.69	106.512
12:24	ZZZZZZ	107.162	106.3	107.414	105.382	107.904	104.336	103.076	107.846
12:28	ZZZZZZ	106.764	106.181	108.039	105.964	107.996	103.99	102.913	108.07
12:34	ZZZZZZ	107.099	106.103	107.585	105.288	107.937	103.811	103.126	107.55
12:39	MA39295-CRI2	106.722	105.553	107.35	104.843	107.351	102.93	102.619	107.804
12:43	MA39295-CCVA3	104.224	102.293	105.985	103.747	106.16	103.542	100.913	107.567
12:47	MA39295-CCB3	106.532	104.614	106.879	104.541	107.122	102.266	101.478	107.505
12:52	MP93378-MB1	105.011	105.381	108.534	103.922	107.511	101.786	102.421	107.915
12:56	MP93378-B1	106.927	110.532	108.117	105.418	108.278	104.398	107.871	109.823
13:01	MP93378-B1	106.711	105.117	107.226	104.983	107.198	104.875	103.08	108.186
13:05	MP93378-S1	102.6	100.743	104.867	103.35	106.439	103.502	102.952	107.571
13:10	MP93378-S1	102.818	102.68	105.748	102.823	106.552	102.928	103.202	107.417
13:14	MP93378-S2	101.083	99.946	103.688	102.467	104.81	103.625	102.196	106.593
13:18	MP93378-S2	103.132	102.006	104.634	102.361	105.908	103.671	102.266	106.579
13:23	ZZZZZZ	107.555	105.094	106.853	104.384	107.273	103.267	102.274	107.398
13:27	FA33323-2	101.496	100.16	103.3	101.299	105.841	102.188	101.766	106.676
13:32	MA39295-CCVA4	104.591	102.143	104.408	102.29	106.874	103.436	102.574	108.564
13:36	MA39295-CCB4	106.342	104.959	106.016	103.405	106.81	102.684	101.299	106.516
13:41	ZZZZZZ	103.157	101.669	105.433	104.082	105.98	103.861	101.99	107.026
13:45	ZZZZZZ	103.586	102.131	105.382	103.648	106.755	103.606	103.141	107.9
13:49	ZZZZZZ	102.199	101.158	103.565	102.671	105.623	104	102.614	106.207
13:54	ZZZZZZ	101.787	98.452	103.304	102.567	104.549	102.805	99.867	105.165
13:58	ZZZZZZ	98.203	97.587	102.02	100.223	104.348	101.314	100.564	104.67
14:03	ZZZZZZ	103.608	101.883	104.125	103.269	105.149	103.107	102.414	105.742
14:07	ZZZZZZ	102.618	100.84	103.382	101.521	104.785	102.224	100.896	104.861
14:12	ZZZZZZ	98.034	96.06	101.513	99.362	102.948	101.186	99.53	104.812
14:16	ZZZZZZ	101.006	98.864	103.425	101.899	103.793	102.061	100.712	104.729
14:20	MA39295-CCVA5	103.128	101.155	103.401	101.194	105.467	102.863	101.036	105.854
14:25	MA39295-CCB5	105.24	102.214	104.844	102.267	105.807	102.213	100.58	106.442

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
14:29	MP93359-MB1	105.356	102.961	104.599	102.06	104.86	102.184	100.269	105.502
14:34	MP93359-B1	105.719	102.531	104.286	102.926	105.727	104.793	101.871	106.732
14:38	MP93359-B1	103.368	100.932	102.316	101.539	102.883	102.005	100.532	104.218
14:43	MP93359-S1	96.552	94.034	98.153	97.832	102.971	100.623	97.986	103.205
14:47	MP93359-S2	93.966	92.932	96.858	96.058	100.668	100.545	98.375	101.755
14:51	JC18650-23	94.293	92.174	96.578	97.013	101.37	99.8	98.092	102.071
14:56	FA33324-2	98.842	96.335	100.433	100.741	102.122	101.722	99.186	102.092
15:00	FA33324-3	98.425	95.67	99.988	101.042	101.565	102.168	99.021	102.292
15:05	FA33324-4	96.434	95.612	97.804	97.444	99.29	98.465	98.146	100.197
15:09	MA39295-CCVA6	98.505	96.72	98.155	98.269	100.635	100.362	98.445	100.493
15:13	MA39295-CCB6	101.951	100.605	101.136	101.117	102.045	100.853	98.467	102.447
15:18	MP93391-MB1	102.622	104.07	101.657	100.135	101.941	100.904	102.846	103.309
15:22	MP93391-B1	101.315	99.804	101.117	99.784	103.077	101.139	100.449	103.704
15:27	MP93391-S1	93.872	91.497	95.022	94.467	99.979	98.048	95.993	100.071
15:31	MP93391-S2	93.276	90.222	95.819	93.945	100.125	97.84	95.504	101.013
15:36	ZZZZZZ	100.276	98.769	99.828	98.678	100.944	98.832	97.804	101.321
15:40	JC18739-12	92.081	90.827	94.337	93.598	98.22	97.225	95.975	99.41
15:44	ZZZZZZ	85.842	83.56	89.935	91.498	93.827	92.654	89.748	94.618
15:49	ZZZZZZ	88.05	87.046	93.042	93.937	96.832	95.017	93.2371	97.454
15:54	MA39295-CCVA7	99.025	95.093	97.472	101.596	99.376	102.522	99.121	100.167
15:58	MA39295-CCB7	97.663	94.54	94.848	98.897	95.781	98.557	95.289	95.985
16:02	MP93359-S1	94.774	92.477	94.876	97.11	98.186	100.308	97.378	97.921
16:07	MP93359-S2	96.259	92.025	95.405	98.258	99.857	100.989	98.341	100.315
16:11	ZZZZZZ	90.486	88.046	94.635	96.375	100.493	100.188	98.249	101.243
16:16	ZZZZZZ	103.022	98.209	103.727	103.673	104.864	104.614	99.591	105.308
16:20	ZZZZZZ	103.242	99.277	103.009	103.504	104.578	104.927	99.697	104.634
16:25	MP93391-B1	103.249	98.076	102.831	103.809	105.701	106.351	100.765	106.245
16:30	MP93391-S1	97.699	93.545	98.107	98.908	102.386	103.202	99.055	103.666
16:34	MP93391-S2	97.118	92.78	97.87	97.915	101.861	102.314	98.252	103.224
16:39	ZZZZZZ	100.203	97.066	99.481	100.332	101.435	101.265	97.585	101.015
16:43	MA39295-CCVA8	99.098	89.55	98.606	98.754	102.056	102.913	92.972	102.378
16:48	MA39295-CCB8	100.881	97.496	99.786	101.422	102.643	101.843	98.829	103.145
16:52	ZZZZZZ	93.533	89.157	94.721	95.11	100.371	101.267	97.064	101.305

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16
16:57	ZZZZZZ	93.365	88.831	95.475	95.83	100.555	100.373	96.653	101.039
17:01	ZZZZZZ	91.507	87.716	93.114	95.325	99.735	99.68	94.391	100.74
17:05	ZZZZZZ	101.306	97.649	100.783	101.536	102.979	101.857	98.847	103.106
17:10	ZZZZZZ	93.145	89.537	95.641	95.684	100.238	99.398	95.643	100.161
17:14	ZZZZZZ	94.79	91.4	95.281	96.194	100.359	100.05	97.264	101.572
17:19	ZZZZZZ	93.202	90.493	95.337	95.774	100.709	100.669	95.847	102.24
17:23	ZZZZZZ	94.315	91.637	96.203	96.857	101.156	100.532	97.92	102.524
17:28	ZZZZZZ	104.436	88.183	104.094	101.959	105.338	104.199	88.479	105.477
17:32	ZZZZZZ	94.147	93.955	96.138	96.373	99.56	100.394	99.889	100.949
17:36	MA39295-CCVA9	100.352	97.814	100.473	100.867	103.459	103.672	101.019	104.72
17:41	MA39295-CCB9	102.705	98.268	101.663	100.825	103.81	101.76	98.11	104.871
17:45	MP93407-MB1	101.247	98.888	102.121	101.309	103.379	102.015	98.851	103.617
17:50	MP93407-B1	100.434	96.589	100.555	99.416	101.986	101.655	98.458	102.497
17:54	MP93407-B1	100.568	97.732	99.712	99.95	101.759	101.778	99.065	101.824
17:59	MP93407-S1	98.984	95.517	98.415	98.845	101.552	102.85	99.282	101.718
18:03	MP93407-S1	100.061	96.364	98.98	100.152	100.428	102.269	100.112	101.581
18:07	MP93407-S2	99.671	96.061	99.659	100.457	101.845	103.674	99.83	102.836
18:12	MP93407-S2	101.098	97.036	100.738	100.791	102.389	103.901	99.754	103.144
18:16	ZZZZZZ	101.232	98.244	100.779	99.59	102.242	101.845	97.712	103.041
18:21	JC19016-17	100.202	96.125	101.635	101.787	103.092	103.234	98.921	103.932
18:25	MA39295-CCVA10	100.174	96.475	100.292	100.028	104.452	103.074	99.005	104.798
18:30	MA39295-CCB10	102.41	98.058	100.897	100.682	102.866	102.878	98.356	104.082
18:34	ZZZZZZ	102.03	97.887	102.067	101.966	104.097	103.941	100.5	104.715
18:38	ZZZZZZ	99.19	95.347	100.999	100.674	103.282	102.425	99.044	104.225
18:43	ZZZZZZ	102.605	101.763	102.182	101.963	104.664	104.439	102.645	105.367
18:47	ZZZZZZ	100.658	97.401	100.958	100.356	104.139	103.676	100.655	104.916
18:52	ZZZZZZ	101.321	98.764	100.505	101.715	103.012	103.597	100.678	103.471
18:56	ZZZZZZ	100.525	97.195	102.082	100.797	104.434	103.238	100.418	105.287
19:01	ZZZZZZ	98.483	93.975	99.303	99.595	102.312	102.985	98.393	103.282
19:05	ZZZZZZ	103.682	100.523	102.897	103.693	104.876	105.525	101.267	105.048
19:09	MA39295-CCVA11	102.38	98.274	102.414	102.529	105.213	105.992	101.419	106.464
19:14	MA39295-CCB11	103.638	100.263	103.273	102.411	104.882	104.674	100.76	105.454

! = Outside limits.

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#9	Istd#10	Istd#11	Istd#12	Istd#13	Istd#14	Istd#15	Istd#16

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#9	Rhodium (103-2)	60-125 %	60-125 %
Istd#10	Rhodium (103-3)	60-125 %	60-125 %
Istd#11	Indium (115-1)	60-125 %	60-125 %
Istd#12	Indium (115-2)	60-125 %	60-125 %
Istd#13	Terbium (159-1)	60-125 %	60-125 %
Istd#14	Terbium (159-2)	60-125 %	60-125 %
Istd#15	Terbium (159-3)	60-125 %	60-125 %
Istd#16	Holmium (165-1)	60-125 %	60-125 %

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
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File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
09:17	MA39295-STD1	100	100	100
09:22	MA39295-STD2	100	100	100
09:26	MA39295-STD3	100	100	100
09:31	MA39295-STD4	100	100	100
09:35	MA39295-STD5	100.093	101.1	100.476
09:40	MA39295-STD6	99.536	99.981	100.454
09:44	MA39295-STD7	98.437	100.293	99.09
09:48	MA39295-STD8	98.668	100.48	99.924
09:53	MA39295-STD9	100.163	99.863	99.997
09:57	MA39295-STD10	99.753	97.976	98.922
10:02	MA39295-STD11	100.365	98.565	99.995
10:06	MA39295-STD12	101.277	99.132	99.138
10:11	MA39295-STD13	101.143	97.245	96.955
10:25	ZZZZZZ	102.225	101	101.835
10:30	MA39295-ICVA1	102.132	99.389	100.265
10:34	MA39295-ICV1	101.124	101.325	100.413
10:38	MA39295-ICB1	100.738	100.681	100.964
10:43	MA39295-CCVA1	102.157	100.236	100.001
10:47	MA39295-CCB1	102.645	101.949	102.21
10:52	MA39295-CRI1	101.458	101.761	101.192
10:56	ZZZZZZ	98.459	91.538	90.518
11:01	ZZZZZZ	98.262	92.403	90.794
11:05	ZZZZZZ	102.688	102.751	101.843
11:13	ZZZZZZ	97.726	92.162	90.94
11:18	ZZZZZZ	98.057	91.237	91.027
11:23	ZZZZZZ	104.03	103.181	102.803
11:27	ZZZZZZ	105.153	101.444	102.335
11:31	ZZZZZZ	103.376	102.755	102.425
11:36	ZZZZZZ	104.375	103.533	103.124
11:40	MA39295-ICSA1	99.66	92.591	92.001
11:45	MA39295-ICSAB1	99.909	92.799	91.833
11:49	ZZZZZZ	105.612	103.416	104.303
11:54	MA39295-CCVA2	106.661	102.117	102.51

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
11:58	MA39295-CCB2	104.81	103.885	103.773
12:04	ZZZZZZ	106.587	106.515	106.875
12:11	ZZZZZZ	107.772	106.469	106.045
12:15	ZZZZZZ	103.488	105.621	103.024
12:20	ZZZZZZ	105.407	106.229	104.874
12:24	ZZZZZZ	105.319	105.996	104.499
12:28	ZZZZZZ	105.052	107.021	103.772
12:34	ZZZZZZ	104.196	105.459	103.346
12:39	MA39295-CRI2	104.221	105.709	104.075
12:43	MA39295-CCVA3	104.469	103.433	101.13
12:47	MA39295-CCB3	103.298	105.263	101.605
12:52	MP93378-MB1	101.885	108.313	103.282
12:56	MP93378-B1	105.837	106.545	104.443
13:01	MP93378-B1	106.001	105.876	104.337
13:05	MP93378-S1	105.23	103.263	101.533
13:10	MP93378-S1	104.256	105.479	102.887
13:14	MP93378-S2	103.571	103.433	100.896
13:18	MP93378-S2	104.555	104.545	102.946
13:23	ZZZZZZ	104.078	106.686	102.831
13:27	FA33323-2	103.323	103.694	100.851
13:32	MA39295-CCVA4	104.594	103.997	101.757
13:36	MA39295-CCB4	103.68	105.739	103.082
13:41	ZZZZZZ	104.799	103.657	102.135
13:45	ZZZZZZ	105.073	104.056	102.514
13:49	ZZZZZZ	104.246	104.141	102.561
13:54	ZZZZZZ	103.571	103.055	101.338
13:58	ZZZZZZ	102.264	99.323	96.643
14:03	ZZZZZZ	104.546	103.368	101.834
14:07	ZZZZZZ	103.573	102.742	101.683
14:12	ZZZZZZ	102.047	99.132	96.6
14:16	ZZZZZZ	103.263	101.313	99.817
14:20	MA39295-CCVA5	103.732	101.687	99.275
14:25	MA39295-CCB5	102.81	104.704	102.056

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
14:29	MP93359-MB1	102.623	105.897	103.777
14:34	MP93359-B1	105.225	104.275	104.123
14:38	MP93359-B1	102.905	102.43	101.942
14:43	MP93359-S1	101.75	95.409	94.397
14:47	MP93359-S2	102.018	94.579	94.013
14:51	JC18650-23	100.878	94.608	93.132
14:56	FA33324-2	102.082	99.35	99.959
15:00	FA33324-3	102.364	99.644	99.126
15:05	FA33324-4	99.469	97.364	97.198
15:09	MA39295-CCVA6	101.488	97.59	97.969
15:13	MA39295-CCB6	101.353	100.704	100.684
15:18	MP93391-MB1	101.729	102.588	101.284
15:22	MP93391-B1	102.608	102.247	100.772
15:27	MP93391-S1	98.873	94.257	92.779
15:31	MP93391-S2	98.94	94.235	92.457
15:36	ZZZZZZ	100.081	99.176	98.333
15:40	JC18739-12	97.121	93.407	91.997
15:44	ZZZZZZ	94.657	85.231	84.449
15:49	ZZZZZZ	96.261	86.042	85.927
15:54	MA39295-CCVA7	103.266	96.317	99.623
15:58	MA39295-CCB7	99.73	95.201	98.462
16:02	MP93359-S1	101.123	93.473	95.349
16:07	MP93359-S2	103.068	95.127	96.937
16:11	ZZZZZZ	101.713	74.928	71.899
16:16	ZZZZZZ	105.483	104.806	103.13
16:20	ZZZZZZ	105.346	103.913	104.392
16:25	MP93391-B1	107.382	113.364	111.983
16:30	MP93391-S1	104.438	104.183	103.47
16:34	MP93391-S2	102.871	101.517	100.933
16:39	ZZZZZZ	102.067	101.048	100.954
16:43	MA39295-CCVA8	103.246	103.566	103.079
16:48	MA39295-CCB8	103.288	101.562	102.008
16:52	ZZZZZZ	102.282	95.361	95.564

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
16:57	ZZZZZZ	101.867	94.35	94.798
17:01	ZZZZZZ	100.584	92.387	92.826
17:05	ZZZZZZ	103.425	103.514	103.888
17:10	ZZZZZZ	100.409	94.305	93.597
17:14	ZZZZZZ	101.21	95.229	95.79
17:19	ZZZZZZ	101.263	95.326	94.267
17:23	ZZZZZZ	101.015	95.299	94.805
17:28	ZZZZZZ	104.941	105.665	104.427
17:32	ZZZZZZ	101.199	94.378	95.101
17:36	MA39295-CCVA9	103.846	102.976	102.549
17:41	MA39295-CCB9	102.661	102.715	100.647
17:45	MP93407-MB1	102.825	103.823	103.409
17:50	MP93407-B1	102.395	103.965	102.134
17:54	MP93407-B1	102.937	101.605	102.462
17:59	MP93407-S1	103.748	100.912	101.955
18:03	MP93407-S1	102.709	101.478	102.213
18:07	MP93407-S2	104.756	101.883	102.472
18:12	MP93407-S2	104.274	102.034	103.355
18:16	ZZZZZZ	102.034	101.175	101.029
18:21	JC19016-17	104.541	102.832	104.219
18:25	MA39295-CCVA10	104.142	101.876	100.6
18:30	MA39295-CCB10	102.615	101.525	102.025
18:34	ZZZZZZ	104.56	104.637	104.546
18:38	ZZZZZZ	103.079	102.561	101.582
18:43	ZZZZZZ	104.861	104.751	104.649
18:47	ZZZZZZ	104.77	103.422	103.012
18:52	ZZZZZZ	104.318	103.164	103.43
18:56	ZZZZZZ	103.513	103.12	101.955
19:01	ZZZZZZ	103.942	99.552	99.99
19:05	ZZZZZZ	105.381	105.21	106.02
19:09	MA39295-CCVA11	106.682	102.312	103.304
19:14	MA39295-CCB11	104.293	104.617	103.215

! = Outside limits.

INTERNAL STANDARD SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39295
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19

LEGEND:

Istd#	Parameter	Limits	CCV/CCB Limits
Istd#17	Holmium (165-2)	60-125 %	60-125 %
Istd#18	Bismuth (209-1)	60-125 %	60-125 %
Istd#19	Bismuth (209-2)	60-125 %	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39295 Units: ug/l

Time:			10:38		10:47		11:58		12:47	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	25	.34								
Antimony	2.0	.12	-0.37	<2.0	-0.21	<2.0	-0.22	<2.0	-0.21	<2.0
Arsenic	0.50	.025	-0.012	<0.50	-0.010	<0.50	0.0094	<0.50	0.0082	<0.50
Barium	1.0	.011								
Beryllium	0.50	.004	0.00066	<0.50	0.013	<0.50	0.011	<0.50	0.015	<0.50
Boron	25	3.2								
Cadmium	0.50	.011	0.0092	<0.50	0.011	<0.50	0.018	<0.50	0.033	<0.50
Calcium	250	2.7								
Chromium	1.0	.016	0.013	<1.0	-0.00048	<1.0	-0.019	<1.0	-0.0031	<1.0
Cobalt	0.50	.003								
Copper	2.0	.1	0.054	<2.0	0.054	<2.0	0.11	<2.0	0.093	<2.0
Iron	25	.51	-0.025	<25	0.51	<25	1.5	<25	1.1	<25
Lead	0.50	.009	0.00084	<0.50	0.019	<0.50	0.017	<0.50	0.020	<0.50
Magnesium	250	.39								
Manganese	1.0	.02	0.0020	<1.0	0.010	<1.0	0.023	<1.0	0.019	<1.0
Molybdenum	1.0	.02								
Nickel	1.0	.025	-0.014	<1.0	-0.030	<1.0	0.0092	<1.0	-0.015	<1.0
Potassium	250	4.9								
Selenium	0.50	.031	0.0074	<0.50	0.021	<0.50	-0.0055	<0.50	0.023	<0.50
Silver	0.50	.019	0.0041	<0.50	0.017	<0.50	0.014	<0.50	0.011	<0.50
Sodium	250	8.7								
Strontium	5.0	.009								
Thallium	0.50	.016	0.0092	<0.50	0.051	<0.50	0.052	<0.50	0.048	<0.50
Tin	5.0	.019								
Titanium	1.0	.047								
Vanadium	1.0	.045								
Zinc	5.0	.11	-0.077	<5.0	-0.034	<5.0	-0.033	<5.0	0.40	<5.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39295 Units: ug/l

Time:			13:36		14:25		15:13		15:58	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	25	.34								
Antimony	2.0	.12	-0.15	<2.0	-0.22	<2.0	-0.15	<2.0	-0.19	<2.0
Arsenic	0.50	.025	0.033	<1.0	0.017	<1.0	0.040	<1.0	0.0077	<1.0
Barium	1.0	.011								
Beryllium	0.50	.004	0.023	<0.50	0.019	<0.50	0.021	<0.50	0.029	<0.50
Boron	25	3.2								
Cadmium	0.50	.011	0.024	<0.50	0.0099	<0.50	0.023	<0.50	0.022	<0.50
Calcium	250	2.7								
Chromium	1.0	.016	0.032	<4.0	0.024	<4.0	0.014	<4.0	-0.00042	<4.0
Cobalt	0.50	.003								
Copper	2.0	.1	0.083	<4.0	0.078	<4.0	0.088	<4.0	0.18	<4.0
Iron	25	.51	1.4	<50	1.3	<50	1.5	<50	1.2	<50
Lead	0.50	.009	0.025	<0.50	0.020	<0.50	0.027	<0.50	0.040	<0.50
Magnesium	250	.39								
Manganese	1.0	.02	0.028	<1.0	0.023	<1.0	0.026	<1.0	0.023	<1.0
Molybdenum	1.0	.02								
Nickel	1.0	.025	-0.000048	<4.0	0.011	<4.0	0.040	<4.0	0.031	<4.0
Potassium	250	4.9								
Selenium	0.50	.031	0.049	<1.0	0.022	<1.0	0.050	<1.0	0.060	<1.0
Silver	0.50	.019	0.023	<2.0	0.013	<2.0	0.019	<2.0	0.027	<2.0
Sodium	250	8.7								
Strontium	5.0	.009								
Thallium	0.50	.016	0.069	<0.50	0.056	<0.50	0.053	<0.50	0.069	<0.50
Tin	5.0	.019								
Titanium	1.0	.047								
Vanadium	1.0	.045								
Zinc	5.0	.11	0.40	<10	0.41	<10	0.49	<10	0.40	<10

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39295 Units: ug/l

Time:			16:48	
Sample ID:			CCB8	
Metal	RL	IDL	raw	final
Aluminum	25	.34		
Antimony	2.0	.12	-0.19	<2.0
Arsenic	0.50	.025	0.0094	<1.0
Barium	1.0	.011		
Beryllium	0.50	.004	0.023	<0.50
Boron	25	3.2		
Cadmium	0.50	.011	0.014	<0.50
Calcium	250	2.7		
Chromium	1.0	.016	-0.0019	<4.0
Cobalt	0.50	.003		
Copper	2.0	.1	0.087	<4.0
Iron	25	.51	1.8	<50
Lead	0.50	.009	0.025	<0.50
Magnesium	250	.39		
Manganese	1.0	.02	0.036	<1.0
Molybdenum	1.0	.02		
Nickel	1.0	.025	0.038	<4.0
Potassium	250	4.9		
Selenium	0.50	.031	0.36	<1.0
Silver	0.50	.019	0.39	<2.0
Sodium	250	8.7		
Strontium	5.0	.009		
Thallium	0.50	.016	0.068	<0.50
Tin	5.0	.019		
Titanium	1.0	.047		
Vanadium	1.0	.045		
Zinc	5.0	.11	0.35	<10

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		10:30			10:34			10:43	
Sample ID:	ICVA	ICVA1		ICV	ICV1		CCVA	CCVA1	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	60	60.9	101.5				50	52.7	105.4
Arsenic	60	56.7	94.5				50	48.6	97.2
Barium									
Beryllium	60	56.2	93.7				50	49.7	99.4
Boron									
Cadmium	60	55.5	92.5				50	48.3	96.6
Calcium									
Chromium	60	55.8	93.0				50	49.2	98.4
Cobalt									
Copper	60	55.3	92.2				50	48.4	96.8
Iron	5500	5260	95.6				5000	4950	99.0
Lead	60	57.4	95.7				50	49.7	99.4
Magnesium									
Manganese	60	56.3	93.8				50	48.8	97.6
Molybdenum									
Nickel	60	55.3	92.2				50	48.6	97.2
Potassium									
Selenium	60	56.2	93.7				50	50.0	100.0
Silver	60	58.1	96.8				50	48.0	96.0
Sodium									
Strontium									
Thallium	60	59.2	98.7				50	49.4	98.8
Tin									
Titanium									
Vanadium									
Zinc	60	54.7	91.2				50	47.9	95.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		11:54			12:43			13:32	
Sample ID:	CCVA	CCVA2		CCVA	CCVA3		CCVA	CCVA4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	52.5	105.0	50	53.3	106.6	50	53.0	106.0
Arsenic	50	50.2	100.4	50	48.0	96.0	50	48.4	96.8
Barium									
Beryllium	50	50.8	101.6	50	52.3	104.6	50	51.4	102.8
Boron									
Cadmium	50	49.2	98.4	50	49.1	98.2	50	50.3	100.6
Calcium									
Chromium	50	49.6	99.2	50	49.0	98.0	50	49.6	99.2
Cobalt									
Copper	50	48.7	97.4	50	48.3	96.6	50	48.9	97.8
Iron	5000	5020	100.4	5000	4920	98.4	5000	4980	99.6
Lead	50	50.0	100.0	50	50.4	100.8	50	50.7	101.4
Magnesium									
Manganese	50	49.7	99.4	50	48.3	96.6	50	48.3	96.6
Molybdenum									
Nickel	50	48.5	97.0	50	48.4	96.8	50	48.6	97.2
Potassium									
Selenium	50	49.7	99.4	50	49.3	98.6	50	49.4	98.8
Silver	50	48.0	96.0	50	48.8	97.6	50	48.4	96.8
Sodium									
Strontium									
Thallium	50	50.0	100.0	50	50.4	100.8	50	50.3	100.6
Tin									
Titanium									
Vanadium									
Zinc	50	48.6	97.2	50	47.2	94.4	50	47.9	95.8

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		14:20			15:09			15:54	
Sample ID:	CCVA	CCVA5		CCVA	CCVA6		CCVA	CCVA7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	52.3	104.6	50	51.8	103.6	50	52.6	105.2
Arsenic	50	48.0	96.0	50	48.8	97.6	50	48.6	97.2
Barium									
Beryllium	50	50.5	101.0	50	49.9	99.8	50	49.2	98.4
Boron									
Cadmium	50	49.6	99.2	50	49.6	99.2	50	48.3	96.6
Calcium									
Chromium	50	49.3	98.6	50	49.3	98.6	50	48.6	97.2
Cobalt									
Copper	50	48.6	97.2	50	48.6	97.2	50	48.0	96.0
Iron	5000	4910	98.2	5000	5000	100.0	5000	4950	99.0
Lead	50	50.2	100.4	50	49.8	99.6	50	50.4	100.8
Magnesium									
Manganese	50	48.2	96.4	50	48.6	97.2	50	48.5	97.0
Molybdenum									
Nickel	50	48.4	96.8	50	48.5	97.0	50	47.6	95.2
Potassium									
Selenium	50	48.7	97.4	50	49.5	99.0	50	50.8	101.6
Silver	50	47.7	95.4	50	47.3	94.6	50	48.1	96.2
Sodium									
Strontium									
Thallium	50	50.1	100.2	50	49.3	98.6	50	50.3	100.6
Tin									
Titanium									
Vanadium									
Zinc	50	47.0	94.0	50	47.7	95.4	50	47.0	94.0

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39295 Units: ug/l

Time:		16:43	
Sample ID:	CCVA	CCVA8	
Metal	True	Results	% Rec
Aluminum			
Antimony	50	50.9	101.8
Arsenic	50	50.2	100.4
Barium			
Beryllium	50	49.9	99.8
Boron			
Cadmium	50	49.3	98.6
Calcium			
Chromium	50	50.0	100.0
Cobalt			
Copper	50	50.0	100.0
Iron	5000	5070	101.4
Lead	50	47.9	95.8
Magnesium			
Manganese	50	48.9	97.8
Molybdenum			
Nickel	50	49.8	99.6
Potassium			
Selenium	50	53.1	106.2
Silver	50	45.4	90.8
Sodium			
Strontium			
Thallium	50	47.3	94.6
Tin			
Titanium			
Vanadium			
Zinc	50	48.6	97.2

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 70 to 130 % Recovery Run ID: MA39295 Units: ug/l

Time:			10:52		12:39	
Sample ID:	CRI	CRIA	CRI1		CRI2	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	25	25				
Antimony	2.0	0.25	2.0	100.0	1.9	95.0
Arsenic	0.50	0.50	0.52	104.0	0.50	100.0
Barium	1.0	0.50				
Beryllium	0.50	0.25	0.50	100.0	0.51	102.0
Boron	25	2.5				
Cadmium	0.50	0.25	0.53	106.0	0.56	112.0
Calcium	250	125				
Chromium	1.0	2.0	1.0	100.0	1.0	100.0
Cobalt	0.50	0.25				
Copper	2.0	2.0	2.2	110.0	2.2	110.0
Iron	25	25	25.9	103.6	25.6	102.4
Lead	0.50	0.25	0.50	100.0	0.50	100.0
Magnesium	250	125				
Manganese	0.50	0.25	0.54	108.0	0.52	104.0
Molybdenum	1.0	0.50				
Nickel	1.0	2.0	1.1	110.0	0.98	98.0
Potassium	250	125				
Selenium	0.50	0.50	0.57	114.0	0.53	106.0
Silver	0.50	1.0	0.51	102.0	0.52	104.0
Sodium	250	125				
Strontium	5.0	0.50				
Thallium	0.50	0.25	0.48	96.0	0.48	96.0
Tin	5.0	0.50				
Titanium	1.0	0.50				
Vanadium	1.0	2.0				
Zinc	5.0	2.0	5.2	104.0	4.9	98.0

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

File ID: XB042916M1.CSV Date Analyzed: 04/29/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA39295 Units: ug/l

Time:			11:40		11:45	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	82700	82.7	84300	84.3
Antimony			-0.22		-0.21	
Arsenic		20	0.15		18.8	94.0
Barium			0.20		0.22	
Beryllium			0.027		0.045	
Boron			1.9		1.6	
Cadmium		20	0.78		19.3	96.5
Calcium	100000	100000	91700	91.7	92700	92.7
Chromium		20	1.2		19.5	97.5
Cobalt		20	0.090		18.0	90.0
Copper		20	0.80		17.5	87.5
Iron	100000	100000	84100	84.1	85600	85.6
Lead			0.23		0.25	
Magnesium	100000	100000	87500	87.5	88200	88.2
Manganese		20	0.39		18.9	94.5
Molybdenum	2000	2000	1920	96.0	1940	97.0
Nickel		20	0.74		17.8	89.0
Potassium	100000	100000	96100	96.1	97200	97.2
Selenium		20	0.062		18.5	92.5
Silver		20	0.041		18.4	92.0
Sodium	100000	100000	90600	90.6	91500	91.5
Strontium	2000	2000	2200	110.0	2240	112.0
Thallium			0.019		0.030	
Tin	2000	2000	1910	95.5	2040	102.0
Titanium	2000	2000	1980	99.0	2000	100.0
Vanadium		20	0.25		20.6	103.0
Zinc		20	1.9		17.5	87.5

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93359
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.34	1.3		
Antimony	2.0	.12	.26	0.037	<2.0
Arsenic	1.0	.025	.034	0.12	<1.0
Barium	1.0	.011	.028		
Beryllium	0.50	.004	.013	0.0043	<0.50
Boron	50	3.2			
Cadmium	0.50	.011	.12	0.012	<0.50
Calcium	250	2.7	3.7		
Chromium	4.0	.016	.1	0.037	<4.0
Cobalt	0.50	.003	.018		
Copper	4.0	.1	.14	0.25	<4.0
Iron	50	.51	2	5.9	<50
Lead	0.50	.009	.011	0.016	<0.50
Magnesium	250	.39	3.6		
Manganese	1.0	.02	.095	0.047	<1.0
Molybdenum	1.0	.02	.23		
Nickel	4.0	.025	.11	0.00019	<4.0
Potassium	250	4.9	8.8		
Selenium	1.0	.031	.12	0.054	<1.0
Silver	2.0	.019	.041	0.024	<2.0
Sodium	250	8.7	2.5		
Strontium	5.0	.009	.015		
Thallium	0.50	.016	.013	0.013	<0.50
Tin	5.0	.019	.38		
Titanium	1.0	.047	.56		
Vanadium	4.0	.045	.2		
Zinc	10	.11	1.2	0.23	<10

Associated samples MP93359: FA33324-2, FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93359
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	JC18650-23 Original	MS	Spikelot MPXDW7	% Rec	QC Limits
Aluminum					
Antimony	0.0	104	100	104.0	70-130
Arsenic	0.28	95.7	100	95.4	70-130
Barium					
Beryllium	0.050	102	100	102.0	70-130
Boron					
Cadmium	0.038	95.7	100	95.7	70-130
Calcium					
Chromium	14.4	111	100	96.6	70-130
Cobalt					
Copper	0.87	90.7	100	89.8	70-130
Iron	124	1910	2000	89.3	70-130
Lead	2.0	102	100	100.0	70-130
Magnesium					
Manganese	4.8	98.4	100	93.6	70-130
Molybdenum					
Nickel	0.38	90.7	100	90.3	70-130
Potassium					
Selenium	0.85	203	200	101.1	70-130
Silver	0.041	93.7	100	93.7	70-130
Sodium					
Strontium					
Thallium	0.10	101	100	100.9	70-130
Tin					
Titanium					
Vanadium					
Zinc	1.3	87.5	100	86.2	70-130

Associated samples MP93359: FA33324-2, FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93359
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	JC18650-23 Original	MSD	Spikelot MPXDW7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	105	100	105.0	1.0	10
Arsenic	0.28	96.2	100	95.9	0.5	10
Barium						
Beryllium	0.050	102	100	102.0	0.0	10
Boron						
Cadmium	0.038	97.3	100	97.3	1.7	10
Calcium						
Chromium	14.4	112	100	97.6	0.9	10
Cobalt						
Copper	0.87	91.6	100	90.7	1.0	11
Iron	124	1960	2000	91.8	2.6	10
Lead	2.0	104	100	102.0	1.9	10
Magnesium						
Manganese	4.8	100	100	95.2	1.6	10
Molybdenum						
Nickel	0.38	91.9	100	91.5	1.3	10
Potassium						
Selenium	0.85	204	200	101.6	0.5	10
Silver	0.041	95.2	100	95.2	1.6	10
Sodium						
Strontium						
Thallium	0.10	102	100	101.9	1.0	10
Tin						
Titanium						
Vanadium						
Zinc	1.3	90.3	100	89.0	3.1	10

Associated samples MP93359: FA33324-2, FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA33324
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Atlantic Refuse Dump; NC

QC Batch ID: MP93359
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/27/16

Metal	BSP Result	Spikelot MPXDW7	% Rec	QC Limits
Aluminum				
Antimony	106	100	106.0	85-115
Arsenic	98.0	100	98.0	85-115
Barium				
Beryllium	103	100	103.0	85-115
Boron				
Cadmium	100	100	100.0	85-115
Calcium				
Chromium	101	100	101.0	85-115
Cobalt				
Copper	102	100	102.0	85-115
Iron	1910	2000	95.5	85-115
Lead	100	100	100.0	85-115
Magnesium				
Manganese	98.2	100	98.2	85-115
Molybdenum				
Nickel	99.8	100	99.8	85-115
Potassium				
Selenium	212	200	106.0	85-115
Silver	96.8	100	96.8	85-115
Sodium				
Strontium				
Thallium	99.9	100	99.9	85-115
Tin				
Titanium				
Vanadium				
Zinc	97.9	100	97.9	85-115

Associated samples MP93359: FA33324-2, FA33324-3, FA33324-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested