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**
Rocky Mount Landfill
Rocky Mount, Nash County, North Carolina
ID# NONCD0000455 – Task Order 455MON

Dear Ms. Tatum:

URS Corporation – North Carolina (URS) is pleased to provide the results of potable well sampling performed in the vicinity of the Rocky Mount Landfill (the Site) in Rocky Mount, North Carolina. This report describes the details for potable well sampling conducted in accordance with the March 17, 2016 authorization associated with Task Order 455MON by the North Carolina Department of Environmental Quality (NCDEQ) Pre-Regulatory Landfill Unit (the Unit).

On April 14, 2016, URS was able to access and collect water samples from three residential potable wells located near the Site at the following addresses: 4825 Community Drive, 4832 Community Drive, and 4837 Community Drive. One field duplicate sample was also collected during the sampling event from 4832 Community Drive. URS attempted to garner access in order to collect a water sample from a residential potable well located at 4844 Community Drive; however, the home appeared to be abandoned. URS attempted to contact the property owner by knocking on the door but there was no answer. 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 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

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

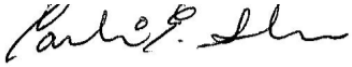
shipment of samples to the laboratory. The analytical laboratory report is included as **Attachment 3**.

URS has 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. 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. 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 4825 Community Drive (Well-4825 Community) or 4837 Community Drive (Well-4837 Community). Iron was detected above the NC 2L groundwater standard at the primary and duplicate sample collected at 4832 Community Drive (Well-4832 Community and DUP-1, respectively); however, there is currently no established EPA MCL for iron. 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
Attachment 3 – Laboratory Report

Table 1
Summary of Potable Well Analytical Results
Rocky Mount Landfill, NONCD0000455

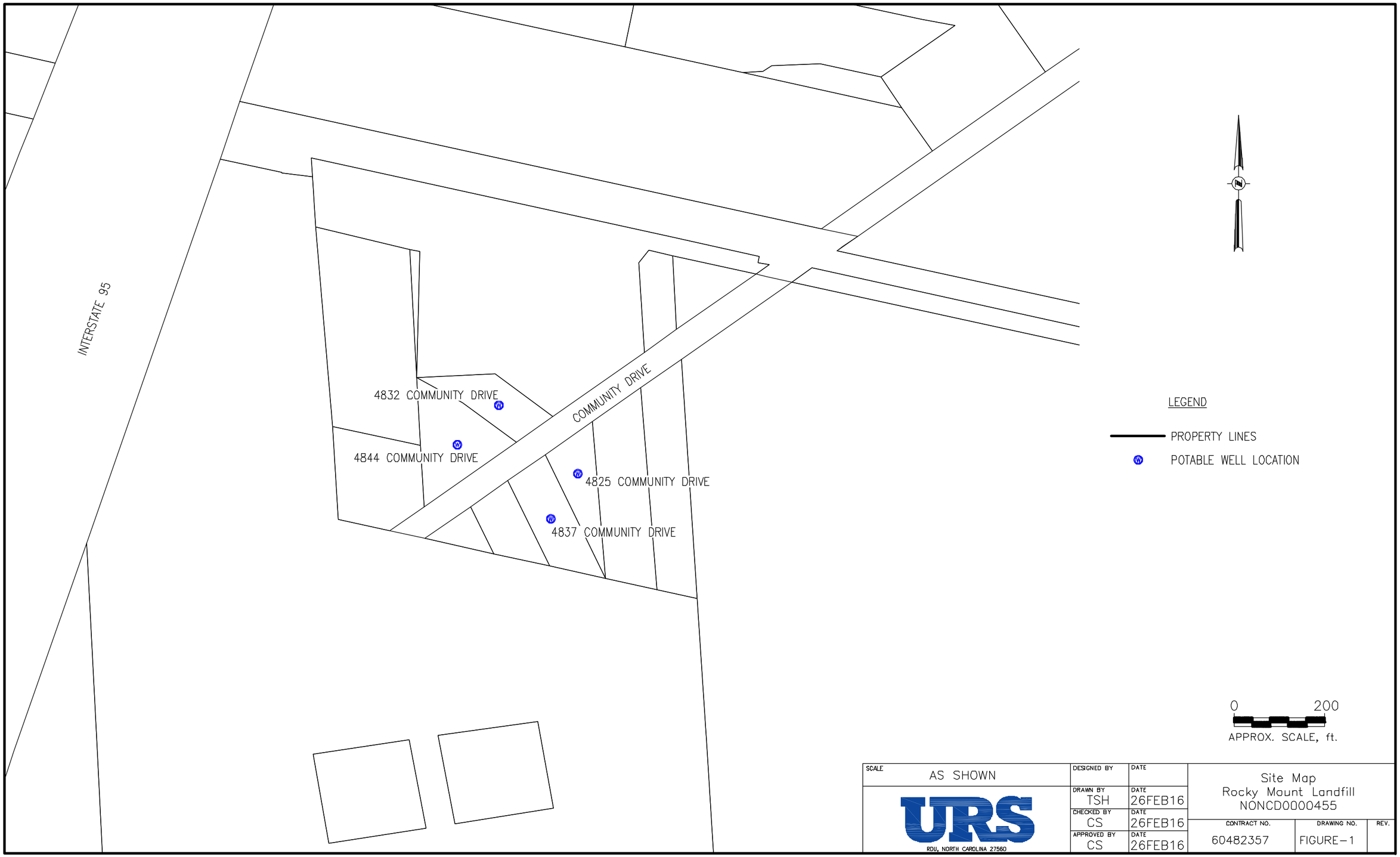
Sample ID:	**NC 2L**	**MCL**	**WELL-4825 COMMUNITY**	**WELL-4832 COMMUNITY**	**DUP-1[(1)]**	**WELL-4837 COMMUNITY**
Date Sampled:			**4/14/2016**	**4/14/2016**	**4/14/2016**	**4/14/2016**
Analytes:						
Volatiles (SW-846 8260B Full Scan)						
Carbon Disulfide	0.700	NG	ND	ND	0.00028 J	ND
Chloroform	0.070	0.08	ND	0.0010	0.0012	ND
Ethylbenzene	0.600	0.7	0.00025 J	ND	ND	ND
m,p-Xylene	0.500	10	0.00038 J	ND	ND	ND
Volatiles (SW-846 8260B SIM)						
1,4-Dioxane	0.003	NG	ND	ND	ND	ND
Semivolatiles (SW-846 8270D)	NA	NA	ND	ND	ND	ND
Metals (EPA 200.8 and 245.1)						
Antimony	0.001 (I)	0.006	ND	0.00026 J	ND	ND
Arsenic	0.010	0.01	0.00024 J	0.00046 J	0.00044 J	0.00020 J
Beryllium	0.004 (I)	0.004	ND	0.000031 J	0.000017 J	ND
Chromium	0.010	0.1	ND	0.00067 J	0.00045 J	0.00010 J
Copper	1	1.3	0.0020 J	0.0088	0.0088	0.0042
Iron	0.300	NG	0.0157 J	**0.755**	**0.643**	0.0083 J
Lead	0.015	0.015	0.000084 J	0.0014	0.0013	0.00049 J
Manganese	0.050	NG	0.00046 J	0.0419	0.0427	0.0024
Nickel	0.100	NG	0.0017 J	0.0012 J	0.0012 J	0.00046 J
Selenium	0.020	0.05	ND	0.00013 J	0.00012 J	0.00033 J
Thallium	0.0002 (I)	0.002	0.000013 J	0.000029 J	0.000016 J	0.000025 J
Zinc	1	NG	0.0109	0.0636	0.0635	0.0674
Miscellaneous Chemistry (EPA 300 and 350.1)						
Ammonia (EPA 350.1)	1.5 (I)	NG	ND	ND	0.040 J	ND
Nitrate (EPA 300)	10	10	ND	0.14	0.15	0.19
Sulfate (EPA 300)	250	NG	4.2	6.7	6.7	2.9

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-4832 COMMUNITY

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 Rocky Mount Landfill NONCD0000455		
AS SHOWN					
URS RDU, NORTH CAROLINA 27560	DRAWN BY TSH	DATE 26FEB16			
	CHECKED BY CS	DATE 26FEB16	CONTRACT NO.	DRAWING NO.	REV.
	APPROVED BY CS	DATE 26FEB16	60482357	FIGURE-1	

Daily Activity Log

Project Name: Rocky Mt Landfill
Task Order: 455MON
Field Personnel: J Abbassi; J Corbin
Project Manager: C. Slusher
Date: 4/14/16
Weather: Sunny ~50 F
Daily Objective: WSW Sampling

0900 URS arrives onsite at 4832 Community Drive and meets with property owner. URS will sample from spigot behind house (attached to house).
0940 Collect Well-4832 Community and field duplicate sample (DUP-1 @ 0945)
0955 Mob to 4844 Community Drive
1000 Abandoned home at end of Dead End. Will not sample. Photos taken.
1005 Mob to 4837 Community Drive. Meet with property owner. Will sample from spigot on back side of house.
1020 Collect well-4837 Community.
1030 Mob to 4825 Community. Meet with property owner. Will sample from standing spigot in back yard area.
1050 Collect well-4825 Community.
1105 URS offsite

Water Sample Collection Field Sheet

Project Name: Rocky Mt. Landfill

Task No: 455MON

Sample ID: Well-4825 Community

Date/Time Collected: 4/14/16 @ 1050

Personnel: J Abbassi, J Corbin

Sample Method: spigot

SAMPLE MEDIA: Groundwater | Potable Well | Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis

WELL PURGING DATA

Date: 4/14/16

Time Started: 1035

Time Completed: 1100

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
1041	—	—	7.46	13.39	0.148	2.6	7.38	210.1
1044	—	—	7.33	13.33	0.148	2.8	4.61	216.5
1047	—	—	7.37	13.29	0.148	3.1	4.48	213.4

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: Rocky Mt. Landfill

Task No: 455MON

Sample ID: Well-4837 Community

Date/Time Collected: 4/14/16 @ 1020

Sample Method: spigot

Personnel: J Abbassi
J Carbin

SAMPLE MEDIA: Groundwater **Potable Well** Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis

WELL PURGING DATA

Date: 4/14/16

Time Started: 1007

Time Completed: 1030

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
1013	—	—	6.73	13.89	0.138	2.7	8.70	218.2
1016	—	—	6.93	13.88	0.137	2.5	7.88	200.7
1019	—	—	7.02	14.56	0.139	2.4	7.44	191.8

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: Rocky Mt. Landfill

Task No: 455MON

Sample ID: Well-4832 Community

Date/Time Collected: 4/14/16 @ 0940

Sample Method: spigot

Personnel: J Abbassi, J Corbin

SAMPLE MEDIA: Groundwater **Potable Well** Surface Water

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis

WELL PURGING DATA

Date: 4/14/16

Time Started: 0910

Time Completed: 0950

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
0928	—	—	6.26	13.52	0.196	11	7.84	194.5
0931	—	—	6.49	13.81	0.139	8.7	10.21	179.7
0934	—	—	6.24	13.35	0.133	10	7.52	194.5
0937	—	—	6.24	13.31	0.133	9.4	6.62	195.1

FIELD EQUIPMENT AND CALIBRATION

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

GENERAL COMMENTS

DVP-1 Collected @ 0945

4/21/16 **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.)
0911	YSI	556MPS 07K100323	—	—	PH, ORP COND	PH 4.12 cal to 4.00 ORP 218.8 cal to 200 6.88 7.02 ↓ 10.17 ↓ 10.03 COND 1.271 cal to 1.413
	Turbidimeter	Lamotte CES-2008	—	—	Turbidity	10.0 cal to 10.0 0.00 cal to 1.0
1055	YSI	556 MPS 07K100323	—	—	PH ORP COND check	PH 4.17 ± .20 ORP ± 20% 7.08 " " COND ± 20% 10.02 " "
1350	" "	" "	—	—	" "	PH 4.08 ± .20 ORP ± 20% 6.98 " " COND ± 20% 10.01 " "
	Turbidimeter	Lamotte CES-2008	-	—	Turbidity	11.0 cal to 10 1.0 cal to 1.0
1518	Turbidimeter	" "	-	—	" "	1.0 cal to 1.0
	YSI	556 MPS 07K100323	—	—	PH	PH 7.02 ± .20
1550	" "	" "	—	—	PH Cond ORP	PH 4.16 ± 2 Cond 1.415 ± .002 ORP 184.5 ± 20%
	Turbidimeter					1.1

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: Rocky Mount Landfill	Site ID: NONCD0000455

Photo 1: Spigot used to sample water supply well for 4825 Community Drive

Photo 2: Spigot used to sample water supply well at 4832 Community Drive

Site Name: Rocky Mount Landfill	Site ID: NONCD0000455

Photo 3: Spigot used to sample water supply well at 4837 Community Drive

Photo 4: Abandoned residence located at 4844 Community Drive (not sampled)

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e-Hardcopy 2.0
Automated Report

Technical Report for

AECOM, INC.

Rocky Mtn Landfill; NC

60492352

SGS Accutest Job Number: FA33144

Sampling Date: 04/14/16

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: 228

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.

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SGS Accutest

Sample Summary

AECOM, INC.

Job No: FA33144

Rocky Mtn Landfill; NC
Project No: 60492352

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA33144-1	04/14/16	00:00	JAJC	04/15/16	AQ	Trip Blank Water	TRIP BLANK
FA33144-2	04/14/16	09:40	JAJC	04/15/16	AQ	Ground Water	WELL-4832 COMMUNITY
FA33144-3	04/14/16	10:20	JAJC	04/15/16	AQ	Ground Water	WELL-4837 COMMUNITY
FA33144-4	04/14/16	10:50	JAJC	04/15/16	AQ	Ground Water	WELL-4825 COMMUNITY
FA33144-5	04/14/16	09:45	JAJC	04/15/16	AQ	Ground Water	DUP-1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: AECOM, INC. **Job No:** FA33144

Site: Rocky Mtn Landfill; NC **Report Date** 4/29/2016 8:06:06 PM

4 Samples and 1 Trip Blank were collected on 04/14/2016 and were received at SGS Accutest Southeast (SASE) on 04/15/2016 properly preserved, at 3 Deg. C and intact. These Samples received an SASE job number of FA33144. 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:** VA1918

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33237-4MS, FA33237-4MSD were used as the QC samples indicated.

Matrix Spike / Matrix Spike Duplicate Recovery(s) for cis-1,3-Dichloropropene are outside control limits. Probable cause is due to matrix interference.

Volatiles by GCMS By Method SW846 8260B BY SIM

Matrix: AQ **Batch ID:** VZ1519

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA32983-5MS, FA32983-5MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VZ1522

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA33176-25MS, FA33176-25MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP60127

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) FA33140-1MS, FA33140-1MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for 1,1'-Biphenyl, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2-Chloronaphthalene, 2-Methylnaphthalene, 2-Methylphenol, 3&4-Methylphenol, 3,3'-Dichlorobenzidine, 4-Chloro-3-methyl Phenol, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Benzaldehyde, bis(2-Chloroethoxy)methane, bis(2-Chloroisopropyl)ether, Caprolactam, Di-n-butyl Phthalate, Dibenzofuran, Diethyl Phthalate, Fluoranthene, Fluorene, Isophorone, N-Nitrosodi-n-propylamine, N-Nitrosodiphenylamine, Phenol 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 1,1'-Biphenyl, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2-Chloronaphthalene, 2-Chlorophenol, 2-Methylnaphthalene, 2-Methylphenol, 3&4-Methylphenol, 3,3'-Dichlorobenzidine, 4-Chlorophenyl Phenyl Ether, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzaldehyde, bis(2-Chloroethoxy)methane, bis(2-Chloroethyl)ether, bis(2-Chloroisopropyl)ether, Caprolactam, Carbazole, Di-n-butyl Phthalate, Dibenzofuran, Diethyl Phthalate, Dimethyl Phthalate, Fluoranthene, Fluorene, Hexachloroethane, Isophorone, N-Nitrosodi-n-propylamine, N-Nitrosodiphenylamine, Nitrobenzene, Phenanthrene, Phenol 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 Pentachlorophenol are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP60127

RPD(s) for MSD for 2,4-Dinitrophenol, 4-Nitrophenol, Benzaldehyde, Caprolactam, Diethyl Phthalate, Hexachlorocyclopentadiene are outside control limits for sample OP60127-MSD. Probable cause is due to sample non-homogeneity.

Sample(s) OP60127-MS, OP60127-MSD have surrogates outside control limits. Probable cause is due to matrix interference.

OP60127-MS for 2-Fluorophenol: Outside control limits due to dilution.

OP60127-MS for Phenol-d5: Outside control limits due to dilution.

OP60127-MSD for 2-Fluorophenol: Outside control limits due to dilution.

OP60127-MSD for Phenol-d5: Outside control limits due to dilution.

OP60127-MSD for 2-Fluorobiphenyl: Outside control limits due to dilution.

Metals By Method EPA 200.8

Matrix: AQ **Batch ID:** N: MP93244

FA33144-2, 3, 4, 5 for Antimony: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Arsenic: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Beryllium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Cadmium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Chromium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Copper: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Iron: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Lead: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Manganese: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Nickel: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Selenium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Silver: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.

FA33144-2, 3, 4, 5 for Zinc: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method EPA 245.1

Matrix: AQ **Batch ID:** MP30277

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) FA33143-2DUP, FA33143-2MS, FA33143-2MSD, FA33143-2SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP27787

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) FA33096-6MS, FA33096-6MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.

Wet Chemistry By Method EPA 350.1

Matrix: AQ **Batch ID:** GP27841

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) FA33143-2MS, FA33143-2MSD 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: April 29, 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**	FA33144
Site:	URSNCM: Rocky Mtn Landfill; NC	**Report Date**	4/28/2016 5:13:50 PM

On 04/19/2016, 4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 4.6 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of FA33144 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:** MP93244

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC18052-16MS, JC18052-16MSD 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: FA33144
Account: AECOM, INC.
Project: Rocky Mtn Landfill; NC
Collected: 04/14/16

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FA33144-1	**TRIP BLANK**					
No hits reported in this sample.						
FA33144-2	**WELL-4832 COMMUNITY**					
Chloroform		0.0010	0.0010	0.00030	mg/l	SW846 8260B
Antimony [a]		0.00026 J	0.0020	0.00026	mg/l	EPA 200.8
Arsenic [a]		0.00046 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000031 J	0.00050	0.000013	mg/l	EPA 200.8
Chromium [a]		0.00067 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0088	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.755	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.0014	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0419	0.0010	0.000095	mg/l	EPA 200.8
Nickel [a]		0.0012 J	0.0040	0.00011	mg/l	EPA 200.8
Selenium [a]		0.00013 J	0.0010	0.00012	mg/l	EPA 200.8
Thallium [a]		0.000029 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.0636	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Nitrate		0.14	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		6.7	2.0	0.60	mg/l	EPA 300/SW846 9056A
FA33144-3	**WELL-4837 COMMUNITY**					
Arsenic [a]		0.00020 J	0.0010	0.000034	mg/l	EPA 200.8
Chromium [a]		0.00010 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0042	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.0083 J	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.00049 J	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0024	0.0010	0.000095	mg/l	EPA 200.8
Nickel [a]		0.00046 J	0.0040	0.00011	mg/l	EPA 200.8
Selenium [a]		0.00033 J	0.0010	0.00012	mg/l	EPA 200.8
Thallium [a]		0.000025 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.0674	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Nitrate		0.19	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		2.9	2.0	0.60	mg/l	EPA 300/SW846 9056A
FA33144-4	**WELL-4825 COMMUNITY**					
Ethylbenzene		0.00025 J	0.0010	0.00025	mg/l	SW846 8260B
m,p-Xylene		0.00038 J	0.0020	0.00030	mg/l	SW846 8260B
Arsenic [a]		0.00024 J	0.0010	0.000034	mg/l	EPA 200.8
Copper [a]		0.0020 J	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.0157 J	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.000084 J	0.00050	0.000011	mg/l	EPA 200.8

Summary of Hits

Job Number: FA33144
Account: AECOM, INC.
Project: Rocky Mtn Landfill; NC
Collected: 04/14/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Manganese [a]		0.00046 J	0.0010	0.000095	mg/l	EPA 200.8
Nickel [a]		0.0017 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]		0.0109	0.010	0.0012	mg/l	EPA 200.8
Sulfate		4.2	2.0	0.60	mg/l	EPA 300/SW846 9056A
FA33144-5	**DUP-1**					
Carbon Disulfide		0.00028 J	0.0020	0.00023	mg/l	SW846 8260B
Chloroform		0.0012	0.0010	0.00030	mg/l	SW846 8260B
Arsenic [a]		0.00044 J	0.0010	0.000034	mg/l	EPA 200.8
Beryllium [a]		0.000017 J	0.00050	0.000013	mg/l	EPA 200.8
Chromium [a]		0.00045 J	0.0040	0.00010	mg/l	EPA 200.8
Copper [a]		0.0088	0.0040	0.00014	mg/l	EPA 200.8
Iron [a]		0.643	0.050	0.0020	mg/l	EPA 200.8
Lead [a]		0.0013	0.00050	0.000011	mg/l	EPA 200.8
Manganese [a]		0.0427	0.0010	0.000095	mg/l	EPA 200.8
Nickel [a]		0.0012 J	0.0040	0.00011	mg/l	EPA 200.8
Selenium [a]		0.00012 J	0.0010	0.00012	mg/l	EPA 200.8
Thallium [a]		0.000016 J	0.00050	0.000013	mg/l	EPA 200.8
Zinc [a]		0.0635	0.010	0.0012	mg/l	EPA 200.8
Nitrogen, Ammonia		0.040 J	0.10	0.030	mg/l	EPA 350.1
Nitrogen, Nitrate		0.15	0.10	0.050	mg/l	EPA 300/SW846 9056A
Sulfate		6.7	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:	FA33144-1	**Date Sampled:**	04/14/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/15/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40371.D	1	04/18/16	MM	n/a	n/a	VZ1519
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	113%		74-125%
2037-26-5	Toluene-D8	97%		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:	FA33144-1	**Date Sampled:**	04/14/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200318.D	1	04/21/16	TD	n/a	n/a	VA1918
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:	FA33144-1	**Date Sampled:**	04/14/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	100%		83-118%
17060-07-0	1,2-Dichloroethane-D4	98%		79-125%
2037-26-5	Toluene-D8	105%		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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40372.D	1	04/18/16	MM	n/a	n/a	VZ1519
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	113%		74-125%
2037-26-5	Toluene-D8	97%		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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200319.D	1	04/21/16	TD	n/a	n/a	VA1918
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	0.0010	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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	102%		79-125%
2037-26-5	Toluene-D8	105%		85-112%
460-00-4	4-Bromofluorobenzene	104%		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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0686842.D	1	04/27/16	MV	04/19/16	OP60127	SL3829
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.010	0.0025	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0050	0.00074	mg/l	
95-57-8	2-Chlorophenol	ND	0.0050	0.00064	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0050	0.00063	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0050	0.00070	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.025	0.0050	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.010	0.0020	mg/l	
95-48-7	2-Methylphenol	ND	0.0050	0.00058	mg/l	
	3&4-Methylphenol	ND	0.0050	0.0011	mg/l	
88-75-5	2-Nitrophenol	ND	0.0050	0.00062	mg/l	
100-02-7	4-Nitrophenol	ND	0.025	0.0050	mg/l	
87-86-5	Pentachlorophenol	ND	0.025	0.0050	mg/l	
108-95-2	Phenol	ND	0.0050	0.00050	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0050	0.00091	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0050	0.0010	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0050	0.00086	mg/l	
83-32-9	Acenaphthene	ND	0.0050	0.00056	mg/l	
208-96-8	Acenaphthylene	ND	0.0050	0.00058	mg/l	
98-86-2	Acetophenone	ND	0.0050	0.00071	mg/l	
120-12-7	Anthracene	ND	0.0050	0.00061	mg/l	
1912-24-9	Atrazine	ND	0.0050	0.00063	mg/l	
100-52-7	Benzaldehyde	ND	0.025	0.0050	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0050	0.00050	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0050	0.00050	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0050	0.00054	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0050	0.00050	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0050	0.00063	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0050	0.00050	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0050	0.00050	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0050	0.0010	mg/l	
86-74-8	Carbazole	ND	0.0050	0.00056	mg/l	
106-47-8	4-Chloroaniline	ND	0.0050	0.00072	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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0050	0.00068	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0050	0.00069	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0050	0.00069	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0050	0.00050	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0050	0.00058	mg/l	
218-01-9	Chrysene	ND	0.0050	0.00053	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0050	0.00076	mg/l	
132-64-9	Dibenzofuran	ND	0.0050	0.00067	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0050	0.00050	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0050	0.0010	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0050	0.0010	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0050	0.0010	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0050	0.0010	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0050	0.00063	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0050	0.00058	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0050	0.0010	mg/l	
206-44-0	Fluoranthene	ND	0.0050	0.00050	mg/l	
86-73-7	Fluorene	ND	0.0050	0.00065	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0050	0.00055	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0050	0.00051	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0050	0.0010	mg/l	
67-72-1	Hexachloroethane	ND	0.0050	0.00051	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0050	0.00050	mg/l	
78-59-1	Isophorone	ND	0.0050	0.00067	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0050	0.00056	mg/l	
91-20-3	Naphthalene	ND	0.0050	0.00050	mg/l	
88-74-4	2-Nitroaniline	ND	0.0050	0.00070	mg/l	
99-09-2	3-Nitroaniline	ND	0.0050	0.00075	mg/l	
100-01-6	4-Nitroaniline	ND	0.0050	0.00072	mg/l	
98-95-3	Nitrobenzene	ND	0.0050	0.00066	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0050	0.00058	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0050	0.00070	mg/l	
85-01-8	Phenanthrene	ND	0.0050	0.00060	mg/l	
129-00-0	Pyrene	ND	0.0050	0.00055	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0050	0.00050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		14-67%
4165-62-2	Phenol-d5	26%		10-50%

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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	88%		33-118%
4165-60-0	Nitrobenzene-d5	74%		42-108%
321-60-8	2-Fluorobiphenyl	72%		40-106%
1718-51-0	Terphenyl-d14	79%		39-121%

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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; NC		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony [a]	0.00026 J	0.0020	0.00026	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.00046 J	0.0010	0.000034	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000031 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00067 J	0.0040	0.00010	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0088	0.0040	0.00014	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.755	0.050	0.0020	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.0014	0.00050	0.000011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0419	0.0010	0.000095	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.0012 J	0.0040	0.00011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	0.00013 J	0.0010	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000029 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0636	0.010	0.0012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39240
(3) Prep QC Batch: MP30277
(4) Prep QC Batch: N:MP93244

(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-4832 COMMUNITY		
Lab Sample ID:	FA33144-2	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	ND	0.10	0.030	mg/l	1	04/26/16 14:48	JK	EPA 350.1
Nitrogen, Nitrate	0.14	0.10	0.050	mg/l	1	04/15/16 14:30	LJ	EPA 300/SW846 9056A
Sulfate	6.7	2.0	0.60	mg/l	1	04/15/16 14:30	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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40455.D	1	04/21/16	MM	n/a	n/a	VZ1522
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	108%		74-125%
2037-26-5	Toluene-D8	100%		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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200320.D	1	04/21/16	TD	n/a	n/a	VA1918
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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	105%		83-118%
17060-07-0	1,2-Dichloroethane-D4	104%		79-125%
2037-26-5	Toluene-D8	105%		85-112%
460-00-4	4-Bromofluorobenzene	103%		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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0686843.D	1	04/27/16	MV	04/19/16	OP60127	SL3829
Run #2							

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
105-60-2	Caprolactam	ND	0.0099	0.0025	mg/l	
59-50-7	4-Chloro-3-methyl Phenol	ND	0.0050	0.00074	mg/l	
95-57-8	2-Chlorophenol	ND	0.0050	0.00063	mg/l	
120-83-2	2,4-Dichlorophenol	ND	0.0050	0.00062	mg/l	
105-67-9	2,4-Dimethylphenol	ND	0.0050	0.00069	mg/l	
51-28-5	2,4-Dinitrophenol	ND	0.025	0.0050	mg/l	
534-52-1	4,6-Dinitro-o-cresol	ND	0.0099	0.0020	mg/l	
95-48-7	2-Methylphenol	ND	0.0050	0.00057	mg/l	
	3&4-Methylphenol	ND	0.0050	0.0010	mg/l	
88-75-5	2-Nitrophenol	ND	0.0050	0.00061	mg/l	
100-02-7	4-Nitrophenol	ND	0.025	0.0050	mg/l	
87-86-5	Pentachlorophenol	ND	0.025	0.0050	mg/l	
108-95-2	Phenol	ND	0.0050	0.00050	mg/l	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	0.0050	0.00090	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	0.0050	0.00099	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	0.0050	0.00085	mg/l	
83-32-9	Acenaphthene	ND	0.0050	0.00055	mg/l	
208-96-8	Acenaphthylene	ND	0.0050	0.00057	mg/l	
98-86-2	Acetophenone	ND	0.0050	0.00071	mg/l	
120-12-7	Anthracene	ND	0.0050	0.00061	mg/l	
1912-24-9	Atrazine	ND	0.0050	0.00062	mg/l	
100-52-7	Benzaldehyde	ND	0.025	0.0050	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0050	0.00050	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0050	0.00050	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0050	0.00053	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0050	0.00050	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0050	0.00062	mg/l	
92-52-4	1,1'-Biphenyl	ND	0.0050	0.00050	mg/l	
101-55-3	4-Bromophenyl Phenyl Ether	ND	0.0050	0.00050	mg/l	
85-68-7	Butyl Benzyl Phthalate	ND	0.0050	0.00099	mg/l	
86-74-8	Carbazole	ND	0.0050	0.00056	mg/l	
106-47-8	4-Chloroaniline	ND	0.0050	0.00071	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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Compound	Result	RL	MDL	Units	Q
111-91-1	bis(2-Chloroethoxy)methane	ND	0.0050	0.00067	mg/l	
111-44-4	bis(2-Chloroethyl)ether	ND	0.0050	0.00069	mg/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.0050	0.00068	mg/l	
91-58-7	2-Chloronaphthalene	ND	0.0050	0.00050	mg/l	
7005-72-3	4-Chlorophenyl Phenyl Ether	ND	0.0050	0.00057	mg/l	
218-01-9	Chrysene	ND	0.0050	0.00052	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0050	0.00075	mg/l	
132-64-9	Dibenzofuran	ND	0.0050	0.00066	mg/l	
91-94-1	3,3'-Dichlorobenzidine	ND	0.0050	0.00050	mg/l	
84-66-2	Diethyl Phthalate	ND	0.0050	0.00099	mg/l	
131-11-3	Dimethyl Phthalate	ND	0.0050	0.00099	mg/l	
84-74-2	Di-n-butyl Phthalate	ND	0.0050	0.00099	mg/l	
117-84-0	Di-n-octyl Phthalate	ND	0.0050	0.00099	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	0.0050	0.00062	mg/l	
606-20-2	2,6-Dinitrotoluene	ND	0.0050	0.00058	mg/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.0050	0.00099	mg/l	
206-44-0	Fluoranthene	ND	0.0050	0.00050	mg/l	
86-73-7	Fluorene	ND	0.0050	0.00064	mg/l	
118-74-1	Hexachlorobenzene	ND	0.0050	0.00054	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0050	0.00051	mg/l	
77-47-4	Hexachlorocyclopentadiene	ND	0.0050	0.00099	mg/l	
67-72-1	Hexachloroethane	ND	0.0050	0.00050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0050	0.00050	mg/l	
78-59-1	Isophorone	ND	0.0050	0.00066	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0050	0.00055	mg/l	
91-20-3	Naphthalene	ND	0.0050	0.00050	mg/l	
88-74-4	2-Nitroaniline	ND	0.0050	0.00070	mg/l	
99-09-2	3-Nitroaniline	ND	0.0050	0.00074	mg/l	
100-01-6	4-Nitroaniline	ND	0.0050	0.00071	mg/l	
98-95-3	Nitrobenzene	ND	0.0050	0.00065	mg/l	
621-64-7	N-Nitrosodi-n-propylamine	ND	0.0050	0.00058	mg/l	
86-30-6	N-Nitrosodiphenylamine	ND	0.0050	0.00069	mg/l	
85-01-8	Phenanthrene	ND	0.0050	0.00059	mg/l	
129-00-0	Pyrene	ND	0.0050	0.00055	mg/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	0.0050	0.00050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	36%		14-67%
4165-62-2	Phenol-d5	28%		10-50%

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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	85%		33-118%
4165-60-0	Nitrobenzene-d5	80%		42-108%
321-60-8	2-Fluorobiphenyl	78%		40-106%
1718-51-0	Terphenyl-d14	80%		39-121%

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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; 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	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.00020 J	0.0010	0.000034	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	ND	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00010 J	0.0040	0.00010	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0042	0.0040	0.00014	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.0083 J	0.050	0.0020	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.00049 J	0.00050	0.000011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0024	0.0010	0.000095	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.00046 J	0.0040	0.00011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	0.00033 J	0.0010	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000025 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0674	0.010	0.0012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39240
(3) Prep QC Batch: MP30277
(4) Prep QC Batch: N:MP93244

(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-4837 COMMUNITY		
Lab Sample ID:	FA33144-3	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	ND	0.10	0.030	mg/l	1	04/26/16 14:50	JK	EPA 350.1
Nitrogen, Nitrate	0.19	0.10	0.050	mg/l	1	04/15/16 14:44	LJ	EPA 300/SW846 9056A
Sulfate	2.9	2.0	0.60	mg/l	1	04/15/16 14:44	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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40456.D	1	04/21/16	MM	n/a	n/a	VZ1522
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	100%		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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200321.D	1	04/21/16	TD	n/a	n/a	VA1918
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	0.00025	0.0010	0.00025	mg/l	J
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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	0.00038	0.0020	0.00030	mg/l	J
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	107%		83-118%
17060-07-0	1,2-Dichloroethane-D4	108%		79-125%
2037-26-5	Toluene-D8	107%		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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0686844.D	1	04/27/16	MV	04/19/16	OP60127	SL3829
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
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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	40%		14-67%
4165-62-2	Phenol-d5	30%		10-50%

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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	95%		33-118%
4165-60-0	Nitrobenzene-d5	88%		42-108%
321-60-8	2-Fluorobiphenyl	86%		40-106%
1718-51-0	Terphenyl-d14	87%		39-121%

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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; 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	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.00024 J	0.0010	0.000034	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	ND	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	ND	0.0040	0.00010	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0020 J	0.0040	0.00014	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.0157 J	0.050	0.0020	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.000084 J	0.00050	0.000011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.00046 J	0.0010	0.000095	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.0017 J	0.0040	0.00011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	ND	0.0010	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000013 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0109	0.010	0.0012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39240
(3) Prep QC Batch: MP30277
(4) Prep QC Batch: N:MP93244

(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-4825 COMMUNITY		
Lab Sample ID:	FA33144-4	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	ND	0.10	0.030	mg/l	1	04/26/16 14:53	JK	EPA 350.1
Nitrogen, Nitrate	ND	0.10	0.050	mg/l	1	04/15/16 14:58	LJ	EPA 300/SW846 9056A
Sulfate	4.2	2.0	0.60	mg/l	1	04/15/16 14:58	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:	DUP-1		
Lab Sample ID:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B BY SIM	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z40457.D	1	04/21/16	MM	n/a	n/a	VZ1522
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	101%		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:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A0200322.D	1	04/21/16	TD	n/a	n/a	VA1918
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	0.00028	0.0020	0.00023	mg/l	J
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	0.0012	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:	DUP-1		
Lab Sample ID:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	110%		83-118%
17060-07-0	1,2-Dichloroethane-D4	110%		79-125%
2037-26-5	Toluene-D8	106%		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:	DUP-1		
Lab Sample ID:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L0686845.D	1	04/27/16	MV	04/19/16	OP60127	SL3829
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:	DUP-1		
Lab Sample ID:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; 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	37%		14-67%
4165-62-2	Phenol-d5	29%		10-50%

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:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	Rocky Mtn Landfill; NC		

ABN TCL (SOM01.1) List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
118-79-6	2,4,6-Tribromophenol	95%		33-118%
4165-60-0	Nitrobenzene-d5	83%		42-108%
321-60-8	2-Fluorobiphenyl	81%		40-106%
1718-51-0	Terphenyl-d14	83%		39-121%

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:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; 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	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Arsenic [a]	0.00044 J	0.0010	0.000034	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Beryllium [a]	0.000017 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Cadmium [a]	ND	0.00050	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Chromium [a]	0.00045 J	0.0040	0.00010	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Copper [a]	0.0088	0.0040	0.00014	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Iron [a]	0.643	0.050	0.0020	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Lead [a]	0.0013	0.00050	0.000011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Manganese [a]	0.0427	0.0010	0.000095	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Mercury	ND	0.00050	0.000030	mg/l	1	04/26/16	04/26/16	JL	EPA 245.1 [1]	EPA 245.1 [3]
Nickel [a]	0.0012 J	0.0040	0.00011	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Selenium [a]	0.00012 J	0.0010	0.00012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Silver [a]	ND	0.0020	0.000041	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Thallium [a]	0.000016 J	0.00050	0.000013	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]
Zinc [a]	0.0635	0.010	0.0012	mg/l	1	04/20/16	04/21/16	ANJ	EPA 200.8 [2]	EPA 200.8 [4]

(1) Instrument QC Batch: MA13112
(2) Instrument QC Batch: N:MA39240
(3) Prep QC Batch: MP30277
(4) Prep QC Batch: N:MP93244

(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:	FA33144-5	**Date Sampled:**	04/14/16
Matrix:	AQ - Ground Water	**Date Received:**	04/15/16
		Percent Solids:	n/a
Project:	Rocky Mtn Landfill; NC		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Nitrogen, Ammonia	0.040 J	0.10	0.030	mg/l	1	04/26/16 14:54	JK	EPA 350.1
Nitrogen, Nitrate	0.15	0.10	0.050	mg/l	1	04/15/16 15:11	LJ	EPA 300/SW846 9056A
Sulfate	6.7	2.0	0.60	mg/l	1	04/15/16 15:11	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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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 # FA33144 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 Stalker E-mail:
Phone#: 919-461-1160
Sampler(s) Name(s) (Printed): J Abbessi ; J Corbin

Project Information

Project Name: Rocky Mountain Landfill
Street:
City: State:
Project #: 60492352
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	VOCs (8260B)	1,4-Dioxane (8260B SIM)	SVOCs (8270)	Metals (200.8+245.1)	AMN (350.1)	Sol+NO3 (300)
1	Trip Blank	4/14/16	—	—	—	6			X							X	X				
2	Well-4832 Community		0940	JA	DW	11		X			X	X						X	X	X	X
3	Well-4837 Community		1020																		
4	Well-4825 Community		1050																		
5	DUP-1		0945																		

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

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	4/14/16 1655		3	4-14-16 1655	
Relinquished by: 5 FX	Date Time: 4-15-16	Received By: 6 J. Corbin (URS) 09:30	Relinquished by: 7	Date Time:	Received By: 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

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FA33144: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA 33144 CLIENT: WRS CORP PROJECT: MOUNTAIN LANDFILL

DATE/TIME RECEIVED: 4-15-16 09:30 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER DELIVERY OTHER:

AIRBILL NUMBERS: 7761 0889 8307

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: 2.8
- [ ] CORRECTED TEMPS: 3.0 (USED FOR LIMS)

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}

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

SUMMARY OF COMMENTS: FOR TB RECEIVED ONLY 4 VIALS

TECHNICIAN SIGNATURE/DATE JC 4-15-16 REVIEWER SIGNATURE/DATE 4/15/16

NF 11/15 RECEIPTLOG040416.xls

5.2 5

https://www.fedex.com/shipping/html/en/PrintIFrame.html

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

5 of 17 4/14/2016 2:21 PM

FA33144: Chain of Custody
Page 3 of 3

Analyst Legend

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1519-MB	Z40352.D	1	04/18/16	MM	n/a	n/a	VZ1519

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

FA33144-1, FA33144-2

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	107%	74-125%
2037-26-5	Toluene-D8	97%	88-111%

Method Blank Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1522-MB	Z40445.D	1	04/21/16	MM	n/a	n/a	VZ1522

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

FA33144-3, FA33144-4, FA33144-5

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	108%	74-125%
2037-26-5	Toluene-D8	100%	88-111%

Method Blank Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1918-MB	A0200317.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1918-MB	A0200317.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

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	97%	83-118%
17060-07-0	1,2-Dichloroethane-D4	93%	79-125%
2037-26-5	Toluene-D8	105%	85-112%
460-00-4	4-Bromofluorobenzene	103%	83-118%

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1519-BS	Z40351.D	1	04/18/16	MM	n/a	n/a	VZ1519

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

FA33144-1, FA33144-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	22.4	112	65-121

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	105%	74-125%
2037-26-5	Toluene-D8	96%	88-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1522-BS	Z40444.D	1	04/21/16	MM	n/a	n/a	VZ1522

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

FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	20	23.1	116	65-121

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	107%	74-125%
2037-26-5	Toluene-D8	99%	88-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1918-BS	A0200316.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	102	82	50-147
71-43-2	Benzene	25	25.4	102	81-122
74-97-5	Bromochloromethane	25	24.9	100	76-123
75-27-4	Bromodichloromethane	25	23.1	92	79-123
75-25-2	Bromoform	25	21.8	87	66-123
78-93-3	2-Butanone (MEK)	125	115	92	56-143
75-15-0	Carbon Disulfide	25	28.5	114	66-148
56-23-5	Carbon Tetrachloride	25	24.2	97	76-136
108-90-7	Chlorobenzene	25	26.4	106	82-124
75-00-3	Chloroethane	25	25.1	100	62-144
67-66-3	Chloroform	25	24.5	98	80-124
110-82-7	Cyclohexane	25	25.9	104	73-138
124-48-1	Dibromochloromethane	25	22.6	90	78-122
96-12-8	1,2-Dibromo-3-chloropropane	25	20.5	82	64-123
106-93-4	1,2-Dibromoethane	25	23.0	92	75-120
75-71-8	Dichlorodifluoromethane	25	20.3	81	42-167
95-50-1	1,2-Dichlorobenzene	25	25.0	100	82-124
541-73-1	1,3-Dichlorobenzene	25	26.1	104	84-125
106-46-7	1,4-Dichlorobenzene	25	26.4	106	78-120
75-34-3	1,1-Dichloroethane	25	26.5	106	81-122
107-06-2	1,2-Dichloroethane	25	22.7	91	75-125
75-35-4	1,1-Dichloroethylene	25	25.6	102	78-137
156-59-2	cis-1,2-Dichloroethylene	25	23.8	95	78-120
156-60-5	trans-1,2-Dichloroethylene	25	27.8	111	76-127
78-87-5	1,2-Dichloropropane	25	23.8	95	76-124
10061-01-5	cis-1,3-Dichloropropene	25	21.9	88	75-118
10061-02-6	trans-1,3-Dichloropropene	25	23.8	95	80-120
100-41-4	Ethylbenzene	25	25.6	102	81-121
76-13-1	Freon 113	25	25.6	102	72-134
591-78-6	2-Hexanone	125	103	82	61-129
98-82-8	Isopropylbenzene	25	25.2	101	83-132
79-20-9	Methyl Acetate	125	120	96	65-126
74-83-9	Methyl Bromide	25	20.0	80	59-143
74-87-3	Methyl Chloride	25	22.8	91	50-159
108-87-2	Methylcyclohexane	25	26.0	104	76-129
75-09-2	Methylene Chloride	25	24.5	98	69-135

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA1918-BS	A0200316.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-10-1	4-Methyl-2-pentanone (MIBK)	125	108	86	66-122
1634-04-4	Methyl Tert Butyl Ether	25	25.3	101	72-117
100-42-5	Styrene	25	23.2	93	78-119
79-34-5	1,1,2,2-Tetrachloroethane	25	25.2	101	72-120
127-18-4	Tetrachloroethylene	25	27.3	109	76-135
108-88-3	Toluene	25	27.2	109	80-120
87-61-6	1,2,3-Trichlorobenzene	25	27.5	110	68-131
120-82-1	1,2,4-Trichlorobenzene	25	25.0	100	73-129
71-55-6	1,1,1-Trichloroethane	25	24.3	97	75-130
79-00-5	1,1,2-Trichloroethane	25	25.8	103	76-119
79-01-6	Trichloroethylene	25	26.2	105	81-126
75-69-4	Trichlorofluoromethane	25	21.1	84	71-156
75-01-4	Vinyl Chloride	25	21.7	87	69-159
	m,p-Xylene	50	52.3	105	79-126
95-47-6	o-Xylene	25	23.6	94	80-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	83-118%
17060-07-0	1,2-Dichloroethane-D4	88%	79-125%
2037-26-5	Toluene-D8	102%	85-112%
460-00-4	4-Bromofluorobenzene	101%	83-118%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA32983-5MS	Z40373.D	1	04/18/16	MM	n/a	n/a	VZ1519
FA32983-5MSD	Z40374.D	1	04/18/16	MM	n/a	n/a	VZ1519
FA32983-5 [a]	Z40353.D	1	04/18/16	MM	n/a	n/a	VZ1519

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

FA33144-1, FA33144-2

CAS No.	Compound	FA32983-5 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	22.7	114	20	22.2	111	2	65-121/27

CAS No.	Surrogate Recoveries	MS	MSD	FA32983-5	Limits
17060-07-0	1,2-Dichloroethane-D4	111%	110%	109%	74-125%
2037-26-5	Toluene-D8	96%	96%	97%	88-111%

(a) Confirmation run.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33176-25MS	Z40466.D	1	04/21/16	MM	n/a	n/a	VZ1522
FA33176-25MSD	Z40467.D	1	04/21/16	MM	n/a	n/a	VZ1522
FA33176-25	Z40447.D	1	04/21/16	MM	n/a	n/a	VZ1522

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

FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	FA33176-25 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	5.4		20	26.5	106	20	27.5	111	4	65-121/27

CAS No.	Surrogate Recoveries	MS	MSD	FA33176-25	Limits
17060-07-0	1,2-Dichloroethane-D4	102%	102%	100%	74-125%
2037-26-5	Toluene-D8	92%	92%	94%	88-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33237-4MS	A0200328.D	1	04/21/16	TD	n/a	n/a	VA1918
FA33237-4MSD	A0200329.D	1	04/21/16	TD	n/a	n/a	VA1918
FA33237-4	A0200327.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	FA33237-4 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	104	83	125	89.4	72	15	50-147/21
71-43-2	Benzene	ND		25	25.4	102	25	24.4	98	4	81-122/14
74-97-5	Bromochloromethane	ND		25	25.2	101	25	24.5	98	3	76-123/14
75-27-4	Bromodichloromethane	ND		25	24.6	98	25	23.7	95	4	79-123/19
75-25-2	Bromoform	ND		25	20.2	81	25	19.9	80	1	66-123/21
78-93-3	2-Butanone (MEK)	ND		125	105	84	125	103	82	2	56-143/18
75-15-0	Carbon Disulfide	ND		25	26.8	107	25	26.2	105	2	66-148/23
56-23-5	Carbon Tetrachloride	ND		25	28.2	113	25	26.2	105	7	76-136/23
108-90-7	Chlorobenzene	ND		25	26.9	108	25	26.0	104	3	82-124/14
75-00-3	Chloroethane	ND		25	26.8	107	25	27.4	110	2	62-144/20
67-66-3	Chloroform	ND		25	27.5	110	25	26.4	106	4	80-124/15
110-82-7	Cyclohexane	ND		25	23.3	93	25	23.2	93	0	73-138/18
124-48-1	Dibromochloromethane	ND		25	21.7	87	25	21.2	85	2	78-122/19
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	21.5	86	25	22.3	89	4	64-123/18
106-93-4	1,2-Dibromoethane	ND		25	21.4	86	25	21.3	85	0	75-120/13
75-71-8	Dichlorodifluoromethane	ND		25	24.7	99	25	24.7	99	0	42-167/19
95-50-1	1,2-Dichlorobenzene	ND		25	24.2	97	25	24.1	96	0	82-124/14
541-73-1	1,3-Dichlorobenzene	ND		25	25.3	101	25	24.8	99	2	84-125/14
106-46-7	1,4-Dichlorobenzene	ND		25	26.2	105	25	25.5	102	3	78-120/15
75-34-3	1,1-Dichloroethane	ND		25	27.5	110	25	26.9	108	2	81-122/15
107-06-2	1,2-Dichloroethane	ND		25	26.3	105	25	25.4	102	3	75-125/14
75-35-4	1,1-Dichloroethylene	ND		25	27.4	110	25	26.8	107	2	78-137/18
156-59-2	cis-1,2-Dichloroethylene	ND		25	22.2	89	25	21.8	87	2	78-120/15
156-60-5	trans-1,2-Dichloroethylene	ND		25	28.7	115	25	28.1	112	2	76-127/17
78-87-5	1,2-Dichloropropane	ND		25	22.8	91	25	22.1	88	3	76-124/14
10061-01-5	cis-1,3-Dichloropropene	ND		25	18.6	74*	25	17.9	72*	4	75-118/23
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.0	92	25	22.6	90	2	80-120/22
100-41-4	Ethylbenzene	ND		25	26.4	106	25	25.1	100	5	81-121/14
76-13-1	Freon 113	ND		25	27.7	111	25	27.0	108	3	72-134/20
591-78-6	2-Hexanone	ND		125	96.3	77	125	93.5	75	3	61-129/18
98-82-8	Isopropylbenzene	ND		25	24.3	97	25	23.4	94	4	83-132/15
79-20-9	Methyl Acetate	ND		125	123	98	125	118	94	4	65-126/18
74-83-9	Methyl Bromide	ND		25	22.6	90	25	23.9	96	6	59-143/19
74-87-3	Methyl Chloride	ND		25	25.1	100	25	25.5	102	2	50-159/19
108-87-2	Methylcyclohexane	ND		25	24.8	99	25	24.3	97	2	76-129/17
75-09-2	Methylene Chloride	ND		25	26.8	107	25	25.8	103	4	69-135/16

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA33237-4MS	A0200328.D	1	04/21/16	TD	n/a	n/a	VA1918
FA33237-4MSD	A0200329.D	1	04/21/16	TD	n/a	n/a	VA1918
FA33237-4	A0200327.D	1	04/21/16	TD	n/a	n/a	VA1918

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

FA33144-1, FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	FA33237-4 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	97.1	78	125	98.2	79	1	66-122/16
1634-04-4	Methyl Tert Butyl Ether	ND		25	22.4	90	25	23.5	94	5	72-117/14
100-42-5	Styrene	ND		25	22.3	89	25	21.8	87	2	78-119/23
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	23.9	96	25	23.1	92	3	72-120/14
127-18-4	Tetrachloroethylene	ND		25	27.0	108	25	26.0	104	4	76-135/16
108-88-3	Toluene	ND		25	26.2	105	25	25.3	101	3	80-120/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	25.2	101	25	26.2	105	4	68-131/25
120-82-1	1,2,4-Trichlorobenzene	ND		25	25.0	100	25	25.6	102	2	73-129/20
71-55-6	1,1,1-Trichloroethane	ND		25	27.5	110	25	26.3	105	4	75-130/16
79-00-5	1,1,2-Trichloroethane	ND		25	24.4	98	25	25.1	100	3	76-119/14
79-01-6	Trichloroethylene	ND		25	28.0	112	25	27.5	110	2	81-126/15
75-69-4	Trichlorofluoromethane	ND		25	27.6	110	25	26.8	107	3	71-156/21
75-01-4	Vinyl Chloride	ND		25	22.0	88	25	23.9	96	8	69-159/18
	m,p-Xylene	ND		50	52.2	104	50	50.9	102	3	79-126/15
95-47-6	o-Xylene	ND		25	22.7	91	25	21.9	88	4	80-127/14

CAS No.	Surrogate Recoveries	MS	MSD	FA33237-4	Limits
1868-53-7	Dibromofluoromethane	103%	103%	110%	83-118%
17060-07-0	1,2-Dichloroethane-D4	104%	101%	108%	79-125%
2037-26-5	Toluene-D8	96%	97%	105%	85-112%
460-00-4	4-Bromofluorobenzene	96%	96%	100%	83-118%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-BFB
Lab File ID: A0200175.D
Instrument ID: GCMSA
Injection Date: 04/14/16
Injection Time: 11:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	137169	37.8		Pass
75	30.0 - 60.0% of mass 95	212843	58.7		Pass
95	Base peak, 100% relative abundance	362453	100.0		Pass
96	5.0 - 9.0% of mass 95	22964	6.34		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	321044	88.6		Pass
175	5.0 - 9.0% of mass 174	27235	7.51	(8.48) [a]	Pass
176	95.0 - 101.0% of mass 174	309632	85.4	(96.4) [a]	Pass
177	5.0 - 9.0% of mass 176	19828	5.47	(6.40) [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
VA1913-IC1913	A0200176.D	04/14/16	11:39	00:26	Initial cal 1
VA1913-IC1913	A0200177.D	04/14/16	12:01	00:48	Initial cal 2
VA1913-IC1913	A0200178.D	04/14/16	12:22	01:09	Initial cal 3
VA1913-IC1913	A0200179.D	04/14/16	12:45	01:32	Initial cal 4
VA1913-ICC1913	A0200180.D	04/14/16	13:10	01:57	Initial cal 5
VA1913-IC1913	A0200181.D	04/14/16	13:32	02:19	Initial cal 6
VA1913-IC1913	A0200184.D	04/14/16	14:42	03:29	Initial cal 7
VA1913-ICV1913	A0200186.D	04/14/16	16:06	04:53	Initial cal verification 5
VA1913-BS	A0200187.D	04/14/16	16:29	05:16	Blank Spike
VA1913-MB	A0200188.D	04/14/16	16:56	05:43	Method Blank
ZZZZZZ	A0200189.D	04/14/16	17:19	06:06	(unrelated sample)
ZZZZZZ	A0200190.D	04/14/16	17:40	06:27	(unrelated sample)
ZZZZZZ	A0200191.D	04/14/16	18:06	06:53	(unrelated sample)
ZZZZZZ	A0200192.D	04/14/16	18:31	07:18	(unrelated sample)
FA32951-14	A0200193.D	04/14/16	18:57	07:44	(used for QC only; not part of job FA33144)
ZZZZZZ	A0200194.D	04/14/16	19:22	08:09	(unrelated sample)
ZZZZZZ	A0200195.D	04/14/16	19:48	08:35	(unrelated sample)
ZZZZZZ	A0200196.D	04/14/16	20:14	09:01	(unrelated sample)
ZZZZZZ	A0200197.D	04/14/16	20:39	09:26	(unrelated sample)
ZZZZZZ	A0200198.D	04/14/16	21:05	09:52	(unrelated sample)
ZZZZZZ	A0200199.D	04/14/16	21:31	10:18	(unrelated sample)
FA32951-14MS	A0200200.D	04/14/16	21:57	10:44	Matrix Spike
FA32951-14MSD	A0200201.D	04/14/16	22:22	11:09	Matrix Spike Duplicate
VA1913-ECC1913	A0200202.D	04/14/16	22:48	11:35	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1918-BFB
Lab File ID: A0200313.D
Instrument ID: GCMSA
Injection Date: 04/21/16
Injection Time: 10:05

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	165313	37.4		Pass
75	30.0 - 60.0% of mass 95	251819	56.9		Pass
95	Base peak, 100% relative abundance	442213	100.0		Pass
96	5.0 - 9.0% of mass 95	27760	6.28		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 100.0% of mass 95	398357	90.1		Pass
175	5.0 - 9.0% of mass 174	33603	7.60	(8.44) [a]	Pass
176	95.0 - 101.0% of mass 174	391509	88.5	(98.3) [a]	Pass
177	5.0 - 9.0% of mass 176	25496	5.77	(6.51) [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
VA1918-CC1913	A0200315.D	04/21/16	10:55	00:50	Continuing cal 5
VA1918-BS	A0200316.D	04/21/16	11:21	01:16	Blank Spike
VA1918-MB	A0200317.D	04/21/16	11:47	01:42	Method Blank
FA33144-1	A0200318.D	04/21/16	12:12	02:07	TRIP BLANK
FA33144-2	A0200319.D	04/21/16	12:38	02:33	WELL-4832 COMMUNITY
FA33144-3	A0200320.D	04/21/16	13:01	02:56	WELL-4837 COMMUNITY
FA33144-4	A0200321.D	04/21/16	13:26	03:21	WELL-4825 COMMUNITY
FA33144-5	A0200322.D	04/21/16	13:48	03:43	DUP-1
ZZZZZZ	A0200323.D	04/21/16	14:13	04:08	(unrelated sample)
ZZZZZZ	A0200324.D	04/21/16	14:39	04:34	(unrelated sample)
ZZZZZZ	A0200325.D	04/21/16	15:05	05:00	(unrelated sample)
ZZZZZZ	A0200326.D	04/21/16	15:26	05:21	(unrelated sample)
FA33237-4	A0200327.D	04/21/16	15:47	05:42	(used for QC only; not part of job FA33144)
FA33237-4MS	A0200328.D	04/21/16	16:09	06:04	Matrix Spike
FA33237-4MSD	A0200329.D	04/21/16	16:31	06:26	Matrix Spike Duplicate
ZZZZZZ	A0200330.D	04/21/16	16:56	06:51	(unrelated sample)
ZZZZZZ	A0200332.D	04/21/16	17:44	07:39	(unrelated sample)
ZZZZZZ	A0200333.D	04/21/16	18:11	08:06	(unrelated sample)
ZZZZZZ	A0200334.D	04/21/16	18:36	08:31	(unrelated sample)
ZZZZZZ	A0200336.D	04/21/16	19:28	09:23	(unrelated sample)
VA1918-ECC1913	A0200343.D	04/21/16	22:27	12:22	Ending cal 5

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1515-BFB
Lab File ID: Z40226.D
Instrument ID: GCMSZ
Injection Date: 04/12/16
Injection Time: 11:08

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	98683	28.2		Pass
75	30.0 - 60.0% of mass 95	194155	55.5		Pass
95	Base peak, 100% relative abundance	349696	100.0		Pass
96	5.0 - 9.0% of mass 95	23081	6.60		Pass
173	Less than 2.0% of mass 174	1968	0.56	(0.67) [a]	Pass
174	50.0 - 100.0% of mass 95	292075	83.5		Pass
175	5.0 - 9.0% of mass 174	22696	6.49	(7.77) [a]	Pass
176	95.0 - 101.0% of mass 174	287424	82.2	(98.4) [a]	Pass
177	5.0 - 9.0% of mass 176	17780	5.08	(6.19) [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
VZ1515-IC1515	Z40227.D	04/12/16	11:34	00:26	Initial cal 1
VZ1515-IC1515	Z40228.D	04/12/16	11:59	00:51	Initial cal 2
VZ1515-IC1515	Z40229.D	04/12/16	12:23	01:15	Initial cal 3
VZ1515-ICC1515	Z40230.D	04/12/16	12:48	01:40	Initial cal 4
VZ1515-IC1515	Z40231.D	04/12/16	13:13	02:05	Initial cal 5
VZ1515-IC1515	Z40232.D	04/12/16	13:37	02:29	Initial cal 6
VZ1515-IC1515	Z40233.D	04/12/16	14:02	02:54	Initial cal 7
VZ1515-ICV1515	Z40235.D	04/12/16	14:51	03:43	Initial cal verification 4
VZ1515-BS	Z40236.D	04/12/16	15:20	04:12	Blank Spike
VZ1515-MB	Z40237.D	04/12/16	15:44	04:36	Method Blank
ZZZZZZ	Z40238.D	04/12/16	16:09	05:01	(unrelated sample)
ZZZZZZ	Z40239.D	04/12/16	16:34	05:26	(unrelated sample)
ZZZZZZ	Z40240.D	04/12/16	16:59	05:51	(unrelated sample)
ZZZZZZ	Z40241.D	04/12/16	17:23	06:15	(unrelated sample)
ZZZZZZ	Z40242.D	04/12/16	17:48	06:40	(unrelated sample)
ZZZZZZ	Z40243.D	04/12/16	18:12	07:04	(unrelated sample)
ZZZZZZ	Z40244.D	04/12/16	18:37	07:29	(unrelated sample)
ZZZZZZ	Z40245.D	04/12/16	19:02	07:54	(unrelated sample)
ZZZZZZ	Z40246.D	04/12/16	19:26	08:18	(unrelated sample)
ZZZZZZ	Z40247.D	04/12/16	19:51	08:43	(unrelated sample)
ZZZZZZ	Z40248.D	04/12/16	20:15	09:07	(unrelated sample)
ZZZZZZ	Z40251.D	04/12/16	21:29	10:21	(unrelated sample)
VZ1515-ECC1515	Z40254.D	04/12/16	22:42	11:34	Ending cal 4

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1519-BFB
Lab File ID: Z40349.D
Instrument ID: GCMSZ
Injection Date: 04/18/16
Injection Time: 08:52

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	52504	30.5		Pass
75	30.0 - 60.0% of mass 95	99256	57.7		Pass
95	Base peak, 100% relative abundance	171947	100.0		Pass
96	5.0 - 9.0% of mass 95	11464	6.67		Pass
173	Less than 2.0% of mass 174	1598	0.93	(1.09) [a]	Pass
174	50.0 - 100.0% of mass 95	145984	84.9		Pass
175	5.0 - 9.0% of mass 174	11154	6.49	(7.64) [a]	Pass
176	95.0 - 101.0% of mass 174	142293	82.8	(97.5) [a]	Pass
177	5.0 - 9.0% of mass 176	10295	5.99	(7.24) [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
VZ1519-CC1515	Z40350.D	04/18/16	09:18	00:26	Continuing cal 4
VZ1519-BS	Z40351.D	04/18/16	09:43	00:51	Blank Spike
VZ1519-MB	Z40352.D	04/18/16	10:08	01:16	Method Blank
FA32983-5	Z40353.D	04/18/16	10:38	01:46	(used for QC only; not part of job FA33144)
ZZZZZZ	Z40354.D	04/18/16	11:02	02:10	(unrelated sample)
ZZZZZZ	Z40355.D	04/18/16	11:27	02:35	(unrelated sample)
ZZZZZZ	Z40356.D	04/18/16	11:51	02:59	(unrelated sample)
ZZZZZZ	Z40357.D	04/18/16	12:15	03:23	(unrelated sample)
ZZZZZZ	Z40358.D	04/18/16	12:40	03:48	(unrelated sample)
ZZZZZZ	Z40359.D	04/18/16	13:05	04:13	(unrelated sample)
ZZZZZZ	Z40360.D	04/18/16	13:29	04:37	(unrelated sample)
ZZZZZZ	Z40361.D	04/18/16	13:53	05:01	(unrelated sample)
ZZZZZZ	Z40362.D	04/18/16	14:18	05:26	(unrelated sample)
ZZZZZZ	Z40363.D	04/18/16	14:43	05:51	(unrelated sample)
ZZZZZZ	Z40364.D	04/18/16	15:07	06:15	(unrelated sample)
ZZZZZZ	Z40365.D	04/18/16	15:32	06:40	(unrelated sample)
ZZZZZZ	Z40366.D	04/18/16	15:56	07:04	(unrelated sample)
ZZZZZZ	Z40367.D	04/18/16	16:20	07:28	(unrelated sample)
ZZZZZZ	Z40368.D	04/18/16	16:45	07:53	(unrelated sample)
ZZZZZZ	Z40369.D	04/18/16	17:09	08:17	(unrelated sample)
ZZZZZZ	Z40370.D	04/18/16	17:34	08:42	(unrelated sample)
FA33144-1	Z40371.D	04/18/16	17:58	09:06	TRIP BLANK
FA33144-2	Z40372.D	04/18/16	18:23	09:31	WELL-4832 COMMUNITY
FA32983-5MS	Z40373.D	04/18/16	18:47	09:55	Matrix Spike

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1519-BFB
Lab File ID: Z40349.D
Instrument ID: GCMSZ
Injection Date: 04/18/16
Injection Time: 08:52

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
FA32983-5MSD	Z40374.D	04/18/16	19:12	10:20	Matrix Spike Duplicate
VZ1519-ECC1515	Z40375.D	04/18/16	19:36	10:44	Ending cal 4

Instrument Performance Check (BFB)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1522-BFB
Lab File ID: Z40442.D
Instrument ID: GCMSZ
Injection Date: 04/21/16
Injection Time: 09:11

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	75272	28.8		Pass
75	30.0 - 60.0% of mass 95	147772	56.5		Pass
95	Base peak, 100% relative abundance	261717	100.0		Pass
96	5.0 - 9.0% of mass 95	17610	6.73		Pass
173	Less than 2.0% of mass 174	2493	0.95	(1.14) [a]	Pass
174	50.0 - 100.0% of mass 95	218645	83.5		Pass
175	5.0 - 9.0% of mass 174	15767	6.02	(7.21) [a]	Pass
176	95.0 - 101.0% of mass 174	216064	82.6	(98.8) [a]	Pass
177	5.0 - 9.0% of mass 176	16064	6.14	(7.43) [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
VZ1522-CC1515	Z40443.D	04/21/16	09:47	00:36	Continuing cal 4
VZ1522-BS	Z40444.D	04/21/16	10:12	01:01	Blank Spike
VZ1522-MB	Z40445.D	04/21/16	10:36	01:25	Method Blank
ZZZZZZ	Z40446.D	04/21/16	11:02	01:51	(unrelated sample)
FA33176-25	Z40447.D	04/21/16	11:26	02:15	(used for QC only; not part of job FA33144)
ZZZZZZ	Z40448.D	04/21/16	11:51	02:40	(unrelated sample)
ZZZZZZ	Z40451.D	04/21/16	13:05	03:54	(unrelated sample)
ZZZZZZ	Z40452.D	04/21/16	13:30	04:19	(unrelated sample)
ZZZZZZ	Z40453.D	04/21/16	13:54	04:43	(unrelated sample)
ZZZZZZ	Z40454.D	04/21/16	14:19	05:08	(unrelated sample)
FA33144-3	Z40455.D	04/21/16	14:44	05:33	WELL-4837 COMMUNITY
FA33144-4	Z40456.D	04/21/16	15:08	05:57	WELL-4825 COMMUNITY
FA33144-5	Z40457.D	04/21/16	15:32	06:21	DUP-1
ZZZZZZ	Z40458.D	04/21/16	15:57	06:46	(unrelated sample)
ZZZZZZ	Z40459.D	04/21/16	16:21	07:10	(unrelated sample)
ZZZZZZ	Z40460.D	04/21/16	16:46	07:35	(unrelated sample)
ZZZZZZ	Z40461.D	04/21/16	17:11	08:00	(unrelated sample)
ZZZZZZ	Z40462.D	04/21/16	17:36	08:25	(unrelated sample)
ZZZZZZ	Z40463.D	04/21/16	18:00	08:49	(unrelated sample)
ZZZZZZ	Z40464.D	04/21/16	18:25	09:14	(unrelated sample)
ZZZZZZ	Z40465.D	04/21/16	18:49	09:38	(unrelated sample)
FA33176-25MS	Z40466.D	04/21/16	19:13	10:02	Matrix Spike
FA33176-25MSD	Z40467.D	04/21/16	19:38	10:27	Matrix Spike Duplicate
VZ1522-ECC1515	Z40468.D	04/21/16	20:02	10:51	Ending cal 4

Volatile Internal Standard Area Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	VA1918-CC1913	**Injection Date:**	04/21/16
Lab File ID:	A0200315.D	**Injection Time:**	10:55
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]	1730320	7.38	1501305	10.44	899588	12.79	173818	5.05
Check Std [b]	2057296	7.38	1734928	10.43	1012166	12.79	159666	5.05
Upper Limit [c]	4114592	7.88	3469856	10.93	2024332	13.29	319332	5.55
Lower Limit [d]	1028648	6.88	867464	9.93	506083	12.29	79833	4.55

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VA1918-BS	2049564	7.38	1723282	10.44	995705	12.79	155010	5.06
VA1918-MB	1895828	7.38	1507226	10.44	811960	12.79	138908	5.05
FA33144-1	1688350	7.38	1324728	10.44	728861	12.79	133023	5.05
FA33144-2	1571679	7.38	1240395	10.44	669814	12.79	114791	5.05
FA33144-3	1437051	7.38	1128312	10.44	615914	12.79	107046	5.05
FA33144-4	1314331	7.38	1037322	10.44	564936	12.79	100711	5.05
FA33144-5	1258880	7.38	999164	10.44	557892	12.79	87632	5.05
ZZZZZZ	1246983	7.38	1009075	10.44	530876	12.79	87092	5.04
ZZZZZZ	1212955	7.38	976618	10.44	536401	12.79	83454	5.05
ZZZZZZ	1246914	7.38	996954	10.44	546121	12.79	91487	5.05
ZZZZZZ	1263442	7.38	1004586	10.44	564890	12.79	90299	5.06
FA33237-4	1247893	7.38	998150	10.44	570987	12.79	87580	5.05
FA33237-4MS	1456075	7.38	1284863	10.44	784646	12.79	96532	5.05
FA33237-4MSD	1465071	7.38	1274227	10.44	781586	12.79	92684	5.05
ZZZZZZ	1376999	7.38	1084615	10.44	586657	12.79	99399	5.05
ZZZZZZ	1260358	7.38	1005585	10.44	540750	12.79	93533	5.06
ZZZZZZ	1237727	7.38	984882	10.44	520671	12.79	79697*	5.05
ZZZZZZ	1218847	7.38	972082	10.44	512259	12.79	86723	5.05
ZZZZZZ	1199697	7.38	943606	10.44	512049	12.79	94382	5.04
VA1918-ECC19131	632643	7.38	1423622	10.43	849120	12.79	124942	5.05

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

(a) Initial Cal is: VA1913-ICC1913 A0200180.D 04/14/16 13:10
(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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	VZ1519-CC1515	**Injection Date:**	04/18/16
Lab File ID:	Z40350.D	**Injection Time:**	09:18
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	1030044	3.68	54876	4.26
Check Std [b]	617107	3.68	29580	4.26
Upper Limit [c]	1234214	4.18	59160	4.76
Lower Limit [d]	308554	3.18	14790	3.76

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ1519-BS	614767	3.68	29559	4.26
VZ1519-MB	576728	3.68	26110	4.26
FA32983-5	565336	3.68	29518	4.26
ZZZZZZ	564615	3.68	29875	4.26
ZZZZZZ	563963	3.68	26024	4.26
ZZZZZZ	546488	3.68	30007	4.26
ZZZZZZ	540080	3.68	29884	4.26
ZZZZZZ	533203	3.68	28302	4.26
ZZZZZZ	517315	3.68	25606	4.26
ZZZZZZ	534278	3.68	26087	4.27
ZZZZZZ	515693	3.67	22546	4.27
ZZZZZZ	512445	3.68	23148	4.26
ZZZZZZ	508278	3.68	24886	4.26
ZZZZZZ	500443	3.68	24892	4.26
ZZZZZZ	495686	3.68	23786	4.27
ZZZZZZ	479255	3.68	20389	4.27
ZZZZZZ	490328	3.68	21267	4.27
ZZZZZZ	484914	3.68	21986	4.26
ZZZZZZ	490541	3.68	21489	4.27
ZZZZZZ	470991	3.68	20027	4.26
FA33144-1	463465	3.67	19227	4.25
FA33144-2	476144	3.68	21622	4.26
FA32983-5MS	488690	3.67	22111	4.26
FA32983-5MSD	500232	3.67	22569	4.26
VZ1519-ECC1515	497301	3.68	21108	4.26

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

(a) Initial Cal is: VZ1515-ICC1515 Z40230.D 04/12/16 12:48
(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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	VZ1522-CC1515	**Injection Date:**	04/21/16
Lab File ID:	Z40443.D	**Injection Time:**	09:47
Instrument ID:	GCMSZ	**Method:**	SW846 8260B BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT
Initial Cal [a]	1030044	3.68	54876	4.26
Check Std [b]	958963	3.67	51502	4.26
Upper Limit [c]	1917926	4.17	103004	4.76
Lower Limit [d]	479482	3.17	25751	3.76

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT
VZ1522-BS	1024245	3.66	48096	4.25
VZ1522-MB	995527	3.66	45401	4.25
ZZZZZZ	993062	3.64	42739	4.24
FA33176-25	1233230	3.68	56459	4.26
ZZZZZZ	1171703	3.68	60338	4.26
ZZZZZZ	1048740	3.68	68353	4.26
ZZZZZZ	897838	3.71	54291	4.25
ZZZZZZ	951348	3.68	60548	4.25
ZZZZZZ	1121154	3.68	60105	4.26
FA33144-3	1056249	3.68	48721	4.26
FA33144-4	1042671	3.68	42607	4.26
FA33144-5	1055730	3.68	53441	4.26
ZZZZZZ	1004938	3.68	41432	4.26
ZZZZZZ	1012930	3.68	42001	4.26
ZZZZZZ	966875	3.68	40659	4.26
ZZZZZZ	982342	3.68	42109	4.26
ZZZZZZ	1003268	3.68	42707	4.26
ZZZZZZ	933909	3.68	43843	4.26
ZZZZZZ	945640	3.68	45367	4.25
ZZZZZZ	930474	3.68	48212	4.25
FA33176-25MS	1015615	3.68	56744	4.26
FA33176-25MSD	1063269	3.68	52842	4.25
VZ1522-ECC1515	939725	3.68	43656	4.26

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

(a) Initial Cal is: VZ1515-ICC1515 Z40230.D 04/12/16 12:48
(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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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
FA33144-1	Z40371.D	113	97
FA33144-2	Z40372.D	113	97
FA33144-3	Z40455.D	108	100
FA33144-4	Z40456.D	109	100
FA33144-5	Z40457.D	109	101
FA32983-5MS	Z40373.D	111	96
FA32983-5MSD	Z40374.D	110	96
FA33176-25MS	Z40466.D	102	92
FA33176-25MSD	Z40467.D	102	92
VZ1519-BS	Z40351.D	105	96
VZ1519-MB	Z40352.D	107	97
VZ1522-BS	Z40444.D	107	99
VZ1522-MB	Z40445.D	108	100

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

Volatile Surrogate Recovery Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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
FA33144-1	A0200318.D	100	98	105	102
FA33144-2	A0200319.D	103	102	105	104
FA33144-3	A0200320.D	105	104	105	103
FA33144-4	A0200321.D	107	108	107	105
FA33144-5	A0200322.D	110	110	106	102
FA33237-4MS	A0200328.D	103	104	96	96
FA33237-4MSD	A0200329.D	103	101	97	96
VA1918-BS	A0200316.D	96	88	102	101
VA1918-MB	A0200317.D	97	93	105	103

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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-ICC1913
Lab FileID: A0200180.D

Response Factor Report MSVOA10

```
Method       : C:\msdchem\1\METHODS\041416oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Thu Apr 14 16:38:59 2016
Response via : Initial Calibration

Calibration Files
1   =A0200176.D  2   =A0200177.D  3   =A0200178.D  4   =A0200179.D
5   =A0200180.D  6   =A0200181.D  7   =A0200184.D

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

1) I   Fluorobenzene         ----------------ISTD---------------------
2)  Dichlorodifluorom 0.255 0.313 0.451 0.392 0.424 0.423 0.361 0.374  18.69
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9959
              Response Ratio = 0.00000 + 0.47103 *A + -0.05132 *A^2

3)P Chloromethane     0.506 0.451 0.631 0.543 0.594 0.612 0.540 0.554  11.40
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9928
              Response Ratio = 0.00000 + 0.56604 *A

4)C Vinyl Chloride    0.182 0.208 0.309 0.278 0.313 0.324 0.278 0.270  20.27
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9941
              Response Ratio = 0.00000 + 0.34059 *A + -0.02781 *A^2

5)  Bromomethane      0.122 0.109 0.161 0.132 0.156 0.169 0.161 0.144  16.18
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9966
              Response Ratio = 0.00000 + 0.16165 *A

6)  Chloroethane      0.136 0.118 0.169 0.143 0.152 0.160 0.149 0.147  11.44
7)  Trichlorofluorome 0.327 0.416 0.632 0.543 0.572 0.570 0.514 0.510  20.47
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9945
              Response Ratio = 0.00000 + 0.53666 *A

8)  Ethyl Ether       0.226 0.207 0.265 0.247 0.257 0.268 0.254 0.246   9.01
9)  1,2-Dichlorotrifl 0.270 0.234 0.313 0.295 0.296 0.297 0.259 0.281   9.77
10)C 1,1-Dichloroethen 0.494 0.460 0.614 0.583 0.594 0.610 0.535 0.556  10.87
11)  Freon 113        0.206 0.210 0.289 0.267 0.269 0.268 0.233 0.249  13.06
12)  Carbon Disulfide 0.528 0.472 0.625 0.582 0.608 0.622 0.547 0.569   9.97
13)  Iodomethane      0.417 0.391 0.501 0.453 0.462 0.469 0.423 0.445   8.37
14)  Methylene Chlorid 1.103 0.698 0.756 0.634 0.628 0.619 0.574 0.716  25.22
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9974
              Response Ratio = 0.00000 + 0.59512 *A

15)  Acetone          0.142 0.098 0.096 0.095 0.114 0.100 0.091 0.105  16.98
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9964
              Response Ratio = 0.00000 + 0.11581 *A + -0.00246 *A^2

16)  Methyl acetate   0.237 0.230 0.272 0.258 0.277 0.267 0.259 0.257   6.82
17)  trans-1,2-Dichlor 0.373 0.378 0.491 0.464 0.456 0.470 0.410 0.434  10.85
18)  Hexane           0.327 0.270 0.357 0.352 0.362 0.394 0.313 0.339  11.85
19)  Methyl Tert Butyl 0.544 0.496 0.660 0.636 0.690 0.716 0.668 0.630  12.75
20)  Di-isopropyl ethe 0.908 0.902 1.310 1.351 1.470 1.584 1.516 1.291  21.69
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 1.52299 *A

21)P 1,1-Dichloroethan 0.462 0.480 0.610 0.575 0.575 0.587 0.529 0.545  10.38
22)  Acrylonitrile    0.093 0.090 0.100 0.104 0.123 0.118 0.114 0.106  11.94
```

Initial Calibration Summary

Job Number: FA33144 **Sample:** VA1913-ICC1913
Account: URSNCM AECOM, INC. **Lab FileID:** A0200180.D
Project: Rocky Mtn Landfill; NC

```
23)  ETBE                0.544 0.598 0.919 0.944 1.019 1.081 1.047 0.879  24.81
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 1.04880 *A

24)  Vinyl acetate       0.553 0.717 1.038 1.102 1.109 1.094 0.991 0.943  23.31
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9956
              Response Ratio = 0.00000 + 1.04413 *A

25)  cis-1,2-Dichloroe 0.184 0.175 0.257 0.251 0.264 0.281 0.259 0.239  17.44
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9968
              Response Ratio = 0.00000 + 0.26550 *A

26)  2,2-Dichloropropa 0.269 0.254 0.328 0.289 0.307 0.295 0.247 0.284  10.28
27)  Bromochloromethan 0.130 0.129 0.163 0.156 0.159 0.160 0.152 0.150   9.63
28)  Cyclohexane         0.282 0.321 0.515 0.592 0.632 0.675 0.597 0.516  29.97
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9931
              Response Ratio = 0.00000 + 0.62146 *A

29)C Chloroform          0.487 0.484 0.635 0.581 0.581 0.590 0.534 0.556  10.15
30)  Tetrahydrofuran     0.108 0.065 0.080 0.090 0.098 0.101 0.108 0.093  17.12
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9974
              Response Ratio = 0.00000 + 0.10436 *A

31)S Dibromofluorometh 0.363 0.355 0.353 0.344 0.341 0.331 0.333 0.346   3.37
32)  Carbon Tetrachlor 0.408 0.418 0.562 0.544 0.557 0.574 0.504 0.510  13.64
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 0.53065 *A

33)  1,1,1-Trichloroet 0.457 0.432 0.581 0.546 0.555 0.552 0.475 0.514  11.31
34)  2-Butanone          0.138 0.108 0.129 0.147 0.170 0.171 0.160 0.146  15.71
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9967
              Response Ratio = 0.00000 + 0.16328 *A

35)  1,1-Dichloroprope 0.204 0.216 0.331 0.357 0.374 0.391 0.345 0.317  23.82
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9929
              Response Ratio = 0.00000 + 0.36099 *A

36)  tert-Butyl Format 0.154 0.181 0.248 0.254 0.278 0.294 0.277 0.241  21.96
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.28098 *A

37)  Benzene             0.611 0.673 0.895 0.886 0.899 0.921 0.826 0.816  15.15
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9946
              Response Ratio = 0.00000 + 0.86191 *A

38)  TAME                0.339 0.428 0.599 0.592 0.645 0.665 0.643 0.559  22.37
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.64683 *A

39)S 1,2-Dichloroethan 0.588 0.581 0.576 0.543 0.537 0.523 0.514 0.552   5.37
40)  1,2-Dichloroethan 0.641 0.565 0.702 0.645 0.653 0.665 0.614 0.641   6.69
41)  Trichloroethene     0.236 0.241 0.318 0.307 0.317 0.321 0.281 0.289  12.74
42)  Methylcyclohexane 0.225 0.225 0.341 0.381 0.405 0.419 0.366 0.337  23.89
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9914
              Response Ratio = 0.00000 + 0.38476 *A

43)  Dibromomethane      0.148 0.137 0.189 0.178 0.179 0.189 0.181 0.172  11.93
44)C 1,2-Dichloropropa 0.169 0.200 0.255 0.255 0.269 0.293 0.274 0.245  17.98
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9977
              Response Ratio = 0.00000 + 0.27828 *A
```

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-ICC1913
Lab FileID: A0200180.D

```
45)  Bromodichlorometh 0.313 0.315 0.405 0.400 0.424 0.443 0.415 0.388  13.51
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.42324 *A

46)  2-Chloroethyl vin 0.059 0.071 0.120 0.154 0.162 0.177 0.172 0.131  37.28
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 0.17138 *A

47)  cis-1,3-Dichlorop 0.172 0.237 0.338 0.360 0.394 0.431 0.406 0.334  28.62
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 0.40984 *A


48) I   Chlorobenzene-d5      ----------------ISTD---------------------
49)S Toluene-d8        1.139 1.131 1.107 1.101 1.107 1.114 1.127 1.118   1.29
50)C Toluene           0.937 0.903 1.154 1.176 1.223 1.274 1.128 1.114  12.65
51)  2-Nitropropane    0.085 0.083 0.116 0.126 0.134 0.144 0.146 0.119  21.65
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 0.14325 *A

52)  4-Methyl-2-pentan 0.366 0.273 0.392 0.449 0.483 0.498 0.477 0.419  19.33
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 0.48143 *A

53)  trans-1,3-Dichlor 0.231 0.281 0.399 0.418 0.443 0.475 0.449 0.385  24.04
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9982
              Response Ratio = 0.00000 + 0.45433 *A

54)  Tetrachloroethene 0.278 0.310 0.409 0.403 0.413 0.426 0.375 0.373  15.29
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9927
              Response Ratio = 0.00000 + 0.39398 *A

55)  1,1,2-Trichloroet 0.164 0.168 0.213 0.208 0.209 0.218 0.207 0.198  11.25
56)  Dibromochlorometh 0.252 0.263 0.361 0.365 0.386 0.420 0.401 0.350  18.96
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.40328 *A

57)  1,3-Dichloropropa 0.292 0.293 0.385 0.407 0.427 0.456 0.436 0.385  17.46
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 0.43924 *A

58)  1,2-Dibromoethane 0.182 0.198 0.264 0.271 0.288 0.307 0.299 0.258  19.05
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.29877 *A

59)  2-hexanone        0.219 0.210 0.307 0.341 0.369 0.378 0.357 0.312  22.50
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9980
              Response Ratio = 0.00000 + 0.36315 *A

60)  1-Chlorohexane    0.138 0.178 0.286 0.360 0.394 0.430 0.383 0.310  36.54
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9933
              Response Ratio = 0.00000 + 0.39569 *A

61)C Ethylbenzene      1.067 1.135 1.462 1.484 1.517 1.563 1.381 1.373  14.19
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9931
              Response Ratio = 0.00000 + 1.44920 *A

62)P Chlorobenzene     0.720 0.722 0.915 0.863 0.885 0.904 0.804 0.830   9.97
63)  1,1,1,2-Tetrachlo 0.279 0.303 0.387 0.379 0.394 0.418 0.383 0.363  14.17
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            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9966
              Response Ratio = 0.00000 + 0.39377 *A

64)  m,p-Xylene        0.567 0.725 1.093 1.173 1.229 1.236 1.089 1.016  25.91
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9919
              Response Ratio = 0.00000 + 1.14609 *A

65)  o-Xylene          0.454 0.538 0.834 1.039 1.178 1.281 1.155 0.925  35.19
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9942
              Response Ratio = 0.00000 + 1.18584 *A

66)  Styrene           0.320 0.405 0.673 0.817 0.893 0.944 0.851 0.700  35.22
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9945
              Response Ratio = 0.00000 + 0.87803 *A

67)P Bromoform         0.176 0.168 0.220 0.226 0.242 0.261 0.252 0.221  16.36
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 0.25262 *A

68)  Isopropylbenzene  0.476 0.658 1.098 1.354 1.505 1.610 1.416 1.160  37.73
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9919
              Response Ratio = 0.00000 + 1.47392 *A


69) I   1,4-Dichlorobenzene-d ----------------ISTD---------------------
70)S 4-Bromofluorobenz 0.868 0.822 0.807 0.810 0.824 0.817 0.837 0.826   2.50
71)  n-Propylbenzene   1.165 1.387 2.023 2.082 2.200 2.193 1.982 1.862  22.19
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9946
              Response Ratio = 0.00000 + 2.06507 *A

72)  Bromobenzene      0.586 0.601 0.779 0.754 0.785 0.785 0.730 0.717  12.08
73)P 1,1,2,2-Tetrachlo 0.438 0.445 0.552 0.538 0.553 0.553 0.536 0.517   9.99
74)  1,3,5-Trimethylbe 1.013 1.198 1.910 2.208 2.389 2.415 2.189 1.903  30.06
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9947
              Response Ratio = 0.00000 + 2.26937 *A

75)  2-Chlorotoluene   1.165 1.387 2.023 2.082 2.200 2.193 1.982 1.862  22.19
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9946
              Response Ratio = 0.00000 + 2.06507 *A

76)  trans-1,4-Dichlor 0.087 0.094 0.150 0.191 0.213 0.249 0.246 0.176  38.29
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9965
              Response Ratio = 0.00000 + 0.24109 *A

77)  1,2,3-Trichloropr 0.171 0.149 0.207 0.198 0.200 0.200 0.195 0.188  11.12
78)  Cyclohexanone     0.017 0.013 0.021 0.019 0.021 0.023 0.022 0.019  18.04
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9971
              Response Ratio = 0.00000 + 0.02178 *A

79)  4-Chlorotoluene   0.966 1.158 1.699 1.886 2.035 2.070 1.880 1.671  26.13
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9952
              Response Ratio = 0.00000 + 1.94676 *A

80)  tert-Butylbenzene 0.590 0.673 1.048 1.290 1.433 1.458 1.335 1.118  32.09
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9954
              Response Ratio = 0.00000 + 1.37448 *A

81)  1,2,4-Trimethylbe 0.825 1.170 2.001 2.274 2.397 2.442 2.214 1.903  33.77
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9950
              Response Ratio = 0.00000 + 2.29511 *A
```

```
82)  sec-Butylbenzene  1.088 1.391 2.263 2.626 2.866 2.893 2.569 2.242  32.18
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9925
              Response Ratio = 0.00000 + 2.68710 *A

83)  4-Isopropyltoluen 0.788 1.110 1.891 2.348 2.581 2.647 2.370 1.962  37.66
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9934
              Response Ratio = 0.00000 + 2.46308 *A

84)  1,3-Dichlorobenze 0.858 0.978 1.363 1.348 1.429 1.478 1.352 1.258  19.04
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9963
              Response Ratio = 0.00000 + 1.39422 *A

85)  1,4-Dichlorobenze 1.280 1.224 1.541 1.448 1.510 1.530 1.398 1.419   8.83
86)  n-Butylbenzene    0.496 0.613 0.967 1.217 1.329 1.380 1.219 1.032  34.18
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9922
              Response Ratio = 0.00000 + 1.27270 *A

87)  Benzyl Chloride   0.141 0.147 0.208 0.227 0.251 0.268 0.251 0.213  24.03
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9973
              Response Ratio = 0.00000 + 0.25469 *A

88)  1,2-Dichlorobenze 0.846 0.893 1.232 1.263 1.352 1.394 1.301 1.183  18.69
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9976
              Response Ratio = 0.00000 + 1.32959 *A

89)  1,2-Dibromo-3-Chl 0.080 0.077 0.094 0.099 0.104 0.111 0.110 0.096  14.24
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.10936 *A

90)  Hexachlorobutadie 0.368 0.383 0.500 0.522 0.565 0.556 0.526 0.488  16.42
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.53767 *A

91)  1,2,4-Trichlorobe 0.445 0.447 0.655 0.792 0.903 0.985 0.924 0.736  30.53
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9968
              Response Ratio = 0.00000 + 0.93192 *A

92)  Naphthalene       0.532 0.556 0.856 1.191 1.426 1.645 1.566 1.110  42.01
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9954
              Response Ratio = 0.00000 + 1.55637 *A

93)  1,2,3-Trichlorobe 0.400 0.440 0.609 0.721 0.796 0.834 0.775 0.654  26.78
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9970
              Response Ratio = 0.00000 + 0.79031 *A


94) I   Tert Butyl Alcohol-d1 ----------------ISTD---------------------
95)  Ethanol           0.100 0.156 0.104 0.104 0.111 0.090 0.091 0.108  20.86
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9942
              Response Ratio = 0.00000 + 0.10977 *A + -0.00248 *A^2

96)  acrolein          2.669 1.899 2.503 2.318 2.412 2.646 2.728 2.453  11.64
97)  Tert Butyl Alcoho 1.225 1.001 1.310 1.064 1.108 1.186 1.167 1.152   8.99
98)  tert Amyl alcohol 0.517 0.451 0.677 0.719 0.732 0.865 0.797 0.680  21.72
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9952
              Response Ratio = 0.00000 + 0.80635 *A

99)  1,4-Dioxane       0.026 0.035 0.052 0.050 0.065 0.077 0.070 0.054  34.67
            ---- Linear regr., Force(0,0) ----  Coefficient =  0.9911
```

Initial Calibration Summary

Job Number: FA33144
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Project: Rocky Mtn Landfill; NC

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Lab FileID: A0200180.D

```
                Response Ratio = 0.00000 + 0.07084 *A

100)  3,3-Dimethyl-1-bu 0.392 0.465 0.830 0.942 0.867 1.128 1.096 0.817  35.24
              ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9946
                Response Ratio = 0.00000 + 0.88117 *A + 0.01178 *A^2

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

           041416oxy.m        Fri Apr 15 11:22:28 2016
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6.7.1

6

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-ICV1913
Lab FileID: A0200186.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\041416\A0200186.D Vial: 14
Acq On : 14 Apr 2016 4:06 pm Operator: TRANGD
Sample : ICV1913-5 Inst : MSVOA10
Misc : MS33566,VA1913,,,,, Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\041416oxy.m (RTE Integrator)
Title : SW-846 Method 5030B/8260B & EPA 624
Last Update : Thu Apr 14 16:38:59 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	103	0.00	7.38
		Amount	Calc.	%Drift			
2	Dichlorodifluoromethane	40.000	35.020	12.4	92	0.00	2.59
3 P	Chloromethane	40.000	39.071	2.3	96	0.00	2.84
4 C	Vinyl Chloride	40.000	34.739	13.2	91	0.00	2.96
5	Bromomethane	40.000	39.182	2.0	104	0.00	3.34
		AvgRF	CCRF	%Dev			
6	Chloroethane	0.147	0.149	-1.4	101	0.00	3.49
		Amount	Calc.	%Drift			
7	Trichlorofluoromethane	40.000	40.422	-1.1	97	0.00	3.65
		AvgRF	CCRF	%Dev			
8	Ethyl Ether	0.246	0.247	-0.4	99	0.00	3.95
9	1,2-Dichlorotrifluoroetha	0.281	0.303	-7.8	105	0.00	4.16
10 C	1,1-Dichloroethene	0.556	0.547	1.6	94	0.00	4.18
11	Freon 113	0.249	0.242	2.8	92	0.00	4.24
12	Carbon Disulfide	0.569	0.580	-1.9	98	0.00	4.24
13	Iodomethane	0.445	0.438	1.6	97	0.00	4.35
		Amount	Calc.	%Drift			
14	Methylene Chloride	40.000	41.140	-2.9	100	0.00	4.79
15	Acetone	200.000	209.371	-4.7	100	0.00	4.84
		AvgRF	CCRF	%Dev			
16	Methyl acetate	0.257	0.283	-10.1	105	0.00	4.95
17	trans-1,2-Dichloroethene	0.434	0.455	-4.8	102	0.00	4.95
18	Hexane	0.339	0.325	4.1	92	0.00	5.01
19	Methyl Tert Butyl Ether	0.630	0.628	0.3	93	0.00	5.05
		Amount	Calc.	%Drift			
20	Di-isopropyl ether	40.000	37.592	6.0	100	0.00	5.41
		AvgRF	CCRF	%Dev			
21 P	1,1-Dichloroethane	0.545	0.557	-2.2	99	0.00	5.59
22	Acrylonitrile	0.106	0.121	-14.2	101	0.00	5.65
		Amount	Calc.	%Drift			
23	ETBE	40.000	36.777	8.1	97	0.00	5.79
24	Vinyl acetate	200.000	187.214	6.4	90	0.00	5.81

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25		cis-1,2-Dichloroethene	40.000	36.268	9.3	93	0.00	6.14
		----------	AvgRF	CCRF	%Dev	----------		
26		2,2-Dichloropropane	0.284	0.266	6.3	89	0.00	6.25
27		Bromochloromethane	0.150	0.150	0.0	97	0.00	6.34
		----------	Amount	Calc.	%Drift	----------		
28		Cyclohexane	40.000	37.018	7.5	93	0.00	6.35
		----------	AvgRF	CCRF	%Dev	----------		
29	C	Chloroform	0.556	0.548	1.4	97	0.00	6.40
		----------	Amount	Calc.	%Drift	----------		
30		Tetrahydrofuran	40.000	38.601	3.5	105	0.00	6.57
		----------	AvgRF	CCRF	%Dev	----------		
31	S	Dibromofluoromethane	0.346	0.337	2.6	102	0.00	6.58
		----------	Amount	Calc.	%Drift	----------		
32		Carbon Tetrachloride	40.000	38.585	3.5	94	0.00	6.56
		----------	AvgRF	CCRF	%Dev	----------		
33		1,1,1-Trichloroethane	0.514	0.493	4.1	91	0.00	6.62
		----------	Amount	Calc.	%Drift	----------		
34		2-Butanone	200.000	211.945	-6.0	104	0.00	6.70
35		1,1-Dichloropropene	40.000	38.949	2.6	96	0.00	6.74
36		tert-Butyl Formate	400.000	418.667	-4.7	109	0.00	6.83
37		Benzene	40.000	39.319	1.7	97	0.00	6.99
38		TAME	40.000	36.925	7.7	95	0.00	7.06
		----------	AvgRF	CCRF	%Dev	----------		
39	S	1,2-Dichloroethane-d4	0.552	0.522	5.4	100	0.00	7.12
40		1,2-Dichloroethane	0.641	0.626	2.3	98	0.00	7.19
41		Trichloroethene	0.289	0.294	-1.7	95	0.00	7.55
		----------	Amount	Calc.	%Drift	----------		
42		Methylcyclohexane	40.000	38.673	3.3	94	0.00	7.54
		----------	AvgRF	CCRF	%Dev	----------		
43		Dibromomethane	0.172	0.184	-7.0	105	0.00	7.98
		----------	Amount	Calc.	%Drift	----------		
44	C	1,2-Dichloropropane	40.000	37.937	5.2	101	0.00	8.06
45		Bromodichloromethane	40.000	38.878	2.8	100	0.00	8.11
46		2-Chloroethyl vinyl ether	200.000	192.326	3.8	104	0.00	8.63
47		cis-1,3-Dichloropropene	40.000	36.618	8.5	98	0.00	8.72
		----------	AvgRF	CCRF	%Dev	----------		
48	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	10.44
49	S	Toluene-d8	1.118	1.114	0.4	103	0.00	8.90
50	C	Toluene	1.114	1.139	-2.2	96	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
51		2-Nitropropane	200.000	180.271	9.9	99	0.00	9.18
52		4-Methyl-2-pentanone	200.000	196.048	2.0	100	0.00	9.29
53		trans-1,3-Dichloropropene	40.000	40.482	-1.2	107	0.00	9.35
54		Tetrachloroethene	40.000	41.227	-3.1	101	0.00	9.34

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-ICV1913
Lab FileID: A0200186.D

			AvgRF	CCRF	%Dev			
55		1,1,2-Trichloroethane	0.198	0.205	-3.5	101	0.00	9.51
			Amount	Calc.	%Drift			
56		Dibromochloromethane	40.000	37.820	5.4	101	0.00	9.70
57		1,3-Dichloropropane	40.000	36.893	7.8	97	0.00	9.79
58		1,2-Dibromoethane	40.000	37.813	5.5	101	0.00	9.96
59		2-hexanone	200.000	189.629	5.2	96	0.00	10.10
60		1-Chlorohexane	40.000	35.735	10.7	92	0.00	10.39
61	C	Ethylbenzene	40.000	39.611	1.0	97	0.00	10.45
			AvgRF	CCRF	%Dev			
62	P	Chlorobenzene	0.830	0.849	-2.3	98	0.00	10.46
			Amount	Calc.	%Drift			
63		1,1,1,2-Tetrachloroethane	40.000	39.242	1.9	101	0.00	10.51
64		m,p-Xylene	80.000	80.437	-0.5	96	0.00	10.59
65		o-Xylene	40.000	38.014	5.0	98	0.00	11.03
66		Styrene	40.000	37.363	6.6	94	0.00	11.08
67	P	Bromoform	40.000	38.513	3.7	103	0.00	11.14
68		Isopropylbenzene	40.000	38.863	2.8	98	0.00	11.33
			AvgRF	CCRF	%Dev			
69	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	12.79
70	S	4-Bromofluorobenzene	0.826	0.830	-0.5	103	0.00	11.65
			Amount	Calc.	%Drift			
71		n-Propylbenzene	40.000	40.474	-1.2	97	0.00	11.94
			AvgRF	CCRF	%Dev			
72		Bromobenzene	0.717	0.750	-4.6	98	0.00	11.77
73	P	1,1,2,2-Tetrachloroethane	0.517	0.541	-4.6	100	0.00	11.83
			Amount	Calc.	%Drift			
74		1,3,5-Trimethylbenzene	40.000	39.008	2.5	95	0.00	11.94
75		2-Chlorotoluene	40.000	40.474	-1.2	97	0.00	11.94
76		trans-1,4-Dichloro-2-Bute	40.000	33.717	15.7	98	0.00	12.01
			AvgRF	CCRF	%Dev			
77		1,2,3-Trichloropropane	0.188	0.200	-6.4	103	0.00	11.99
			Amount	Calc.	%Drift			
78		Cyclohexanone	200.000	163.364	18.3	86	0.00	12.05
79		4-Chlorotoluene	40.000	39.019	2.5	95	0.00	12.10
80		tert-Butylbenzene	40.000	38.832	2.9	95	0.03	12.27
81		1,2,4-Trimethylbenzene	40.000	38.968	2.6	95	0.00	12.35
82		sec-Butylbenzene	40.000	40.359	-0.9	97	0.00	12.46
83		4-Isopropyltoluene	40.000	38.208	4.5	93	0.00	12.59
84		1,3-Dichlorobenzene	40.000	40.328	-0.8	101	0.00	12.72
			AvgRF	CCRF	%Dev			
85		1,4-Dichlorobenzene	1.419	1.459	-2.8	99	0.00	12.81
			Amount	Calc.	%Drift			
86		n-Butylbenzene	40.000	38.551	3.6	94	0.00	13.03
87		Benzyl Chloride	40.000	34.698	13.3	90	0.00	13.05
88		1,2-Dichlorobenzene	40.000	39.452	1.4	99	0.00	13.24
89		1,2-Dibromo-3-Chloropropa	40.000	37.930	5.2	102	0.00	14.00
90		Hexachlorobutadiene	40.000	38.011	5.0	92	0.00	14.55

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1913-ICV1913
Lab FileID: A0200186.D

91	1,2,4-Trichlorobenzene	40.000	36.629	8.4	97	0.00	14.60
92	Naphthalene	40.000	39.309	1.7	110	0.00	14.88
93	1,2,3-Trichlorobenzene	40.000	38.616	3.5	98	0.00	15.05

		AvgRF	CCRF	%Dev			
94 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	98	0.00	5.05

		Amount	Calc.	%Drift			
95	Ethanol	800.000	902.911	-12.9	100	0.00	4.09

		AvgRF	CCRF	%Dev			
96	acrolein	2.453	2.476	-0.9	100	0.00	4.54
97	Tert Butyl Alcohol	1.152	1.201	-4.3	106	0.00	5.13

		Amount	Calc.	%Drift			
98	tert Amyl alcohol	400.000	350.388	12.4	94	0.00	7.23
99	1,4-Dioxane	800.000	719.329	10.1	95	0.00	8.30
100	3,3-Dimethyl-1-butanol	2000.000	1778.692	11.1	97	0.00	10.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A0200180.D 041416oxy.m Fri Apr 15 11:21:45 2016

6.7.2
6

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1918-CC1913
Lab FileID: A0200315.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042116\A0200315.D          Vial: 2
Acq On    : 21 Apr 2016  10:55 am                     Operator: TRANGD
Sample    : CC1913-5                                  Inst    : MSVOA10
Misc      : MS33640,VA1918,,,,,                       Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\msdchem\1\METHODS\041416oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Thu Apr 14 16:38:59 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	119	0.00	7.38
			Amount	Calc.	%Drift			
2		Dichlorodifluoromethane	40.000	34.181	14.5	105	0.00	2.60
3	P	Chloromethane	40.000	40.396	-1.0	115	0.00	2.84
4	C	Vinyl Chloride	40.000	38.246	4.4	116	0.00	2.95
5		Bromomethane	40.000	36.567	8.6	112	0.00	3.34
			AvgRF	CCRF	%Dev			
6		Chloroethane	0.147	0.157	-6.8	123	0.00	3.49
			Amount	Calc.	%Drift			
7		Trichlorofluoromethane	40.000	38.111	4.7	106	0.00	3.65
			AvgRF	CCRF	%Dev			
8		Ethyl Ether	0.246	0.248	-0.8	115	0.00	3.95
9		1,2-Dichlorotrifluoroetha	0.281	0.275	2.1	111	0.00	4.16
10	C	1,1-Dichloroethene	0.556	0.545	2.0	109	0.00	4.18
11		Freon 113	0.249	0.251	-0.8	111	0.00	4.23
12		Carbon Disulfide	0.569	0.590	-3.7	115	0.00	4.24
13		Iodomethane	0.445	0.449	-0.9	115	0.00	4.35
			Amount	Calc.	%Drift			
14		Methylene Chloride	40.000	37.421	6.4	105	0.00	4.79
15		Acetone	200.000	180.096	10.0	101	0.00	4.84
			AvgRF	CCRF	%Dev			
16		Methyl acetate	0.257	0.250	2.7	107	0.00	4.95
17		trans-1,2-Dichloroethene	0.434	0.431	0.7	112	0.00	4.95
18		Hexane	0.339	0.330	2.7	108	0.00	5.01
19		Methyl Tert Butyl Ether	0.630	0.611	3.0	105	0.00	5.05
			Amount	Calc.	%Drift			
20		Di-isopropyl ether	40.000	37.803	5.5	116	0.00	5.41
			AvgRF	CCRF	%Dev			
21	P	1,1-Dichloroethane	0.545	0.542	0.6	112	0.00	5.59
22		Acrylonitrile	0.106	0.125	-17.9	121	0.00	5.65
			Amount	Calc.	%Drift			
23		ETBE	40.000	37.317	6.7	114	0.00	5.79
24		Vinyl acetate	200.000	193.774	3.1	108	0.00	5.81

Continuing Calibration Summary

Job Number: FA33144 **Sample:** VA1918-CC1913
Account: URSNCM AECOM, INC. **Lab FileID:** A0200315.D
Project: Rocky Mtn Landfill; NC

25		cis-1,2-Dichloroethene	40.000	38.581	3.5	115	0.00	6.14
		----------	AvgRF	CCRF	%Dev	----------		
26		2,2-Dichloropropane	0.284	0.281	1.1	109	0.00	6.25
27		Bromochloromethane	0.150	0.152	-1.3	113	0.00	6.34
		----------	Amount	Calc.	%Drift	----------		
28		Cyclohexane	40.000	41.217	-3.0	121	0.00	6.35
		----------	AvgRF	CCRF	%Dev	----------		
29	C	Chloroform	0.556	0.531	4.5	109	0.00	6.40
		----------	Amount	Calc.	%Drift	----------		
30		Tetrahydrofuran	40.000	35.457	11.4	112	0.00	6.57
		----------	AvgRF	CCRF	%Dev	----------		
31	S	Dibromofluoromethane	0.346	0.331	4.3	116	0.00	6.58
		----------	Amount	Calc.	%Drift	----------		
32		Carbon Tetrachloride	40.000	36.917	7.7	104	0.00	6.56
		----------	AvgRF	CCRF	%Dev	----------		
33		1,1,1-Trichloroethane	0.514	0.502	2.3	108	0.00	6.62
		----------	Amount	Calc.	%Drift	----------		
34		2-Butanone	200.000	190.724	4.6	109	0.00	6.70
35		1,1-Dichloropropene	40.000	38.839	2.9	111	0.00	6.74
36		tert-Butyl Formate	400.000	387.551	3.1	117	0.00	6.83
37		Benzene	40.000	39.400	1.5	112	0.00	6.99
38		TAME	40.000	36.559	8.6	109	0.00	7.06
		----------	AvgRF	CCRF	%Dev	----------		
39	S	1,2-Dichloroethane-d4	0.552	0.484	12.3	107	0.00	7.12
40		1,2-Dichloroethane	0.641	0.564	12.0	103	0.00	7.18
41		Trichloroethene	0.289	0.289	0.0	108	0.00	7.55
		----------	Amount	Calc.	%Drift	----------		
42		Methylcyclohexane	40.000	40.922	-2.3	116	0.00	7.54
		----------	AvgRF	CCRF	%Dev	----------		
43		Dibromomethane	0.172	0.164	4.7	109	0.00	7.98
		----------	Amount	Calc.	%Drift	----------		
44	C	1,2-Dichloropropane	40.000	38.351	4.1	118	0.00	8.06
45		Bromodichloromethane	40.000	35.493	11.3	105	0.00	8.11
46		2-Chloroethyl vinyl ether	200.000	189.925	5.0	119	0.00	8.63
47		cis-1,3-Dichloropropene	40.000	35.329	11.7	109	0.00	8.72
		----------	AvgRF	CCRF	%Dev	----------		
48	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	10.43
49	S	Toluene-d8	1.118	1.143	-2.2	119	0.00	8.90
50	C	Toluene	1.114	1.182	-6.1	112	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
51		2-Nitropropane	200.000	161.271	19.4	100	0.00	9.18
52		4-Methyl-2-pentanone	200.000	185.027	7.5	107	0.00	9.29
53		trans-1,3-Dichloropropene	40.000	35.376	11.6	105	0.00	9.35
54		Tetrachloroethene	40.000	41.141	-2.9	114	0.00	9.34

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1918-CC1913
Lab FileID: A0200315.D

			AvgRF	CCRF	%Dev			
55		1,1,2-Trichloroethane	0.198	0.197	0.5	109	0.00	9.51

			Amount	Calc.	%Drift			
56		Dibromochloromethane	40.000	36.056	9.9	109	0.00	9.70
57		1,3-Dichloropropane	40.000	37.451	6.4	111	0.00	9.79
58		1,2-Dibromoethane	40.000	36.989	7.5	111	0.00	9.96
59		2-hexanone	200.000	181.225	9.4	103	0.00	10.10
60		1-Chlorohexane	40.000	38.718	3.2	112	0.00	10.39
61	C	Ethylbenzene	40.000	39.349	1.6	109	0.00	10.45

			AvgRF	CCRF	%Dev			
62	P	Chlorobenzene	0.830	0.835	-0.6	109	0.00	10.45

			Amount	Calc.	%Drift			
63		1,1,1,2-Tetrachloroethane	40.000	37.610	6.0	108	0.00	10.51
64		m,p-Xylene	80.000	80.589	-0.7	109	0.00	10.59
65		o-Xylene	40.000	37.526	6.2	109	0.00	11.03
66		Styrene	40.000	38.217	4.5	109	0.00	11.08
67	P	Bromoform	40.000	35.514	11.2	107	0.00	11.14
68		Isopropylbenzene	40.000	39.045	2.4	110	0.00	11.33

			AvgRF	CCRF	%Dev			
69	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	113	0.00	12.79
70	S	4-Bromofluorobenzene	0.826	0.826	0.0	113	0.00	11.65

			Amount	Calc.	%Drift			
71		n-Propylbenzene	40.000	39.960	0.1	106	0.00	11.94

			AvgRF	CCRF	%Dev			
72		Bromobenzene	0.717	0.758	-5.7	109	0.00	11.77
73	P	1,1,2,2-Tetrachloroethane	0.517	0.515	0.4	105	0.00	11.83

			Amount	Calc.	%Drift			
74		1,3,5-Trimethylbenzene	40.000	40.029	-0.1	107	0.00	11.94
75		2-Chlorotoluene	40.000	39.960	0.1	106	0.00	11.94
76		trans-1,4-Dichloro-2-Bute	40.000	24.914	37.7#	80	0.00	12.01

			AvgRF	CCRF	%Dev			
77		1,2,3-Trichloropropane	0.188	0.184	2.1	104	0.00	11.99

			Amount	Calc.	%Drift			
78		Cyclohexanone	200.000	169.246	15.4	99	0.00	12.05
79		4-Chlorotoluene	40.000	38.841	2.9	105	0.00	12.10
80		tert-Butylbenzene	40.000	39.063	2.3	105	0.03	12.27
81		1,2,4-Trimethylbenzene	40.000	39.676	0.8	107	0.00	12.35
82		sec-Butylbenzene	40.000	40.844	-2.1	108	0.00	12.46
83		4-Isopropyltoluene	40.000	40.123	-0.3	108	0.00	12.59
84		1,3-Dichlorobenzene	40.000	39.105	2.2	107	0.00	12.72

			AvgRF	CCRF	%Dev			
85		1,4-Dichlorobenzene	1.419	1.427	-0.6	106	0.00	12.81

			Amount	Calc.	%Drift			
86		n-Butylbenzene	40.000	39.486	1.3	106	0.00	13.03
87		Benzyl Chloride	40.000	36.464	8.8	104	0.00	13.05
88		1,2-Dichlorobenzene	40.000	38.855	2.9	107	0.00	13.24
89		1,2-Dibromo-3-Chloropropa	40.000	35.069	12.3	104	0.00	14.00
90		Hexachlorobutadiene	40.000	42.824	-7.1	115	0.00	14.55

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1918-CC1913
Lab FileID: A0200315.D

91	1,2,4-Trichlorobenzene	40.000	40.118	-0.3	116	0.00	14.60
92	Naphthalene	40.000	39.116	2.2	120	0.00	14.88
93	1,2,3-Trichlorobenzene	40.000	41.956	-4.9	117	0.00	15.05
		AvgRF	CCRF	%Dev			
94 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	92	0.00	5.05
		Amount	Calc.	%Drift			
95	Ethanol	800.000	980.559	-22.6#	102	0.00	4.09
		AvgRF	CCRF	%Dev			
96	acrolein	2.453	3.018	-23.0#	115	0.00	4.54
97	Tert Butyl Alcohol	1.152	1.364	-18.4	113	0.00	5.13
		Amount	Calc.	%Drift			
98	tert Amyl alcohol	400.000	436.306	-9.1	110	0.00	7.23
99	1,4-Dioxane	800.000	731.846	8.5	91	0.00	8.29
100	3,3-Dimethyl-1-butanol	2000.000	2240.749	-12.0	117	0.00	10.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A0200180.D 041416oxy.m Mon Apr 25 13:01:49 2016

6.7.3
6

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VA1918-ECC1913
Lab FileID: A0200343.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042116\A0200343.D          Vial: 30
Acq On    : 21 Apr 2016  10:27 pm                     Operator: TRANGD
Sample    : ECC1913-5                                 Inst    : MSVOA10
Misc      : MS33640,VA1918,,,,,                       Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\msdchem\1\METHODS\041416oxy.m (RTE Integrator)
Title        : SW-846 Method 5030B/8260B & EPA 624
Last Update  : Thu Apr 14 16:38:59 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	94	0.00	7.38
		Amount	Calc.	%Drift			
2	Dichlorodifluoromethane	40.000	36.914	7.7	89	0.00	2.59
3 P	Chloromethane	40.000	40.352	-0.9	91	0.00	2.84
4 C	Vinyl Chloride	40.000	38.505	3.7	93	0.00	2.96
5	Bromomethane	40.000	38.915	2.7	95	0.00	3.34
		AvgRF	CCRF	%Dev			
6	Chloroethane	0.147	0.160	-8.8	99	0.00	3.48
		Amount	Calc.	%Drift			
7	Trichlorofluoromethane	40.000	41.832	-4.6	93	0.00	3.65
		AvgRF	CCRF	%Dev			
8	Ethyl Ether	0.246	0.267	-8.5	98	0.00	3.95
9	1,2-Dichlorotrifluoroetha	0.281	0.304	-8.2	97	0.00	4.16
10 C	1,1-Dichloroethene	0.556	0.609	-9.5	97	0.00	4.18
11	Freon 113	0.249	0.282	-13.3	99	0.00	4.23
12	Carbon Disulfide	0.569	0.627	-10.2	97	0.00	4.24
13	Iodomethane	0.445	0.489	-9.9	100	0.00	4.35
		Amount	Calc.	%Drift			
14	Methylene Chloride	40.000	40.719	-1.8	91	0.00	4.79
15	Acetone	200.000	195.243	2.4	86	0.00	4.84
		AvgRF	CCRF	%Dev			
16	Methyl acetate	0.257	0.276	-7.4	94	0.00	4.95
17	trans-1,2-Dichloroethene	0.434	0.469	-8.1	97	0.00	4.95
18	Hexane	0.339	0.339	0.0	88	0.00	5.01
19	Methyl Tert Butyl Ether	0.630	0.643	-2.1	88	0.00	5.05
		Amount	Calc.	%Drift			
20	Di-isopropyl ether	40.000	37.021	7.4	90	0.00	5.41
		AvgRF	CCRF	%Dev			
21 P	1,1-Dichloroethane	0.545	0.571	-4.8	94	0.00	5.59
22	Acrylonitrile	0.106	0.127	-19.8	97	0.00	5.64
		Amount	Calc.	%Drift			
23	ETBE	40.000	37.012	7.5	90	0.00	5.79
24	Vinyl acetate	200.000	193.789	3.1	86	0.00	5.81

Continuing Calibration Summary

Job Number: FA33144 **Sample:** VA1918-ECC1913
Account: URSNCM AECOM, INC. **Lab FileID:** A0200343.D
Project: Rocky Mtn Landfill; NC

25		cis-1,2-Dichloroethene	40.000	38.272	4.3	91	0.00	6.14
		----------	AvgRF	CCRF	%Dev	----------		
26		2,2-Dichloropropane	0.284	0.268	5.6	83	0.00	6.25
27		Bromochloromethane	0.150	0.155	-3.3	92	0.00	6.34
		----------	Amount	Calc.	%Drift	----------		
28		Cyclohexane	40.000	39.710	0.7	92	0.00	6.35
		----------	AvgRF	CCRF	%Dev	----------		
29	C	Chloroform	0.556	0.571	-2.7	93	0.00	6.40
		----------	Amount	Calc.	%Drift	----------		
30		Tetrahydrofuran	40.000	35.546	11.1	89	0.00	6.57
		----------	AvgRF	CCRF	%Dev	----------		
31	S	Dibromofluoromethane	0.346	0.350	-1.2	97	0.00	6.58
		----------	Amount	Calc.	%Drift	----------		
32		Carbon Tetrachloride	40.000	41.428	-3.6	93	0.00	6.56
		----------	AvgRF	CCRF	%Dev	----------		
33		1,1,1-Trichloroethane	0.514	0.544	-5.8	93	0.00	6.62
		----------	Amount	Calc.	%Drift	----------		
34		2-Butanone	200.000	198.613	0.7	90	0.00	6.70
35		1,1-Dichloropropene	40.000	40.375	-0.9	92	0.00	6.74
36		tert-Butyl Formate	400.000	383.154	4.2	91	0.00	6.83
37		Benzene	40.000	39.586	1.0	89	0.00	6.99
38		TAME	40.000	36.652	8.4	87	0.00	7.06
		----------	AvgRF	CCRF	%Dev	----------		
39	S	1,2-Dichloroethane-d4	0.552	0.542	1.8	95	0.00	7.12
40		1,2-Dichloroethane	0.641	0.629	1.9	91	0.00	7.18
41		Trichloroethene	0.289	0.306	-5.9	91	0.00	7.55
		----------	Amount	Calc.	%Drift	----------		
42		Methylcyclohexane	40.000	39.755	0.6	89	0.00	7.54
		----------	AvgRF	CCRF	%Dev	----------		
43		Dibromomethane	0.172	0.173	-0.6	91	0.00	7.98
		----------	Amount	Calc.	%Drift	----------		
44	C	1,2-Dichloropropane	40.000	37.082	7.3	90	0.00	8.06
45		Bromodichloromethane	40.000	37.395	6.5	88	0.00	8.11
46		2-Chloroethyl vinyl ether	200.000	186.331	6.8	93	0.00	8.63
47		cis-1,3-Dichloropropene	40.000	35.406	11.5	87	0.00	8.72
		----------	AvgRF	CCRF	%Dev	----------		
48	I	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00	10.43
49	S	Toluene-d8	1.118	1.104	1.3	95	0.00	8.90
50	C	Toluene	1.114	1.166	-4.7	90	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
51		2-Nitropropane	200.000	168.385	15.8	85	0.00	9.18
52		4-Methyl-2-pentanone	200.000	189.299	5.4	90	0.00	9.29
53		trans-1,3-Dichloropropene	40.000	35.555	11.1	86	0.00	9.35
54		Tetrachloroethene	40.000	54.327	-35.8	123	0.00	9.34

Continuing Calibration Summary

Job Number: FA33144 **Sample:** VA1918-ECC1913
Account: URSNCM AECOM, INC. **Lab FileID:** A0200343.D
Project: Rocky Mtn Landfill; NC

			AvgRF	CCRF	%Dev			
55		1,1,2-Trichloroethane	0.198	0.194	2.0	88	0.00	9.51
			Amount	Calc.	%Drift			
56		Dibromochloromethane	40.000	36.535	8.7	91	0.00	9.70
57		1,3-Dichloropropane	40.000	36.572	8.6	89	0.00	9.79
58		1,2-Dibromoethane	40.000	36.406	9.0	90	0.00	9.95
59		2-hexanone	200.000	186.075	7.0	87	0.00	10.10
60		1-Chlorohexane	40.000	37.221	6.9	89	0.00	10.39
61	C	Ethylbenzene	40.000	39.780	0.5	90	0.00	10.45
			AvgRF	CCRF	%Dev			
62	P	Chlorobenzene	0.830	0.836	-0.7	90	0.00	10.45
			Amount	Calc.	%Drift			
63		1,1,1,2-Tetrachloroethane	40.000	38.374	4.1	91	0.00	10.51
64		m,p-Xylene	80.000	81.280	-1.6	90	0.00	10.59
65		o-Xylene	40.000	37.425	6.4	89	0.00	11.03
66		Styrene	40.000	38.079	4.8	89	0.00	11.08
67	P	Bromoform	40.000	36.016	10.0	89	0.00	11.14
68		Isopropylbenzene	40.000	38.736	3.2	90	0.00	11.33
			AvgRF	CCRF	%Dev			
69	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	12.79
70	S	4-Bromofluorobenzene	0.826	0.810	1.9	93	0.00	11.65
			Amount	Calc.	%Drift			
71		n-Propylbenzene	40.000	39.993	0.0	89	0.00	11.94
			AvgRF	CCRF	%Dev			
72		Bromobenzene	0.717	0.752	-4.9	90	0.00	11.77
73	P	1,1,2,2-Tetrachloroethane	0.517	0.513	0.8	88	0.00	11.83
			Amount	Calc.	%Drift			
74		1,3,5-Trimethylbenzene	40.000	40.011	-0.0	90	0.00	11.94
75		2-Chlorotoluene	40.000	39.993	0.0	89	0.00	11.94
76		trans-1,4-Dichloro-2-Bute	40.000	25.656	35.9	69	0.00	12.01
			AvgRF	CCRF	%Dev			
77		1,2,3-Trichloropropane	0.188	0.191	-1.6	90	0.00	11.99
			Amount	Calc.	%Drift			
78		Cyclohexanone	200.000	138.541	30.7	68	0.00	12.05
79		4-Chlorotoluene	40.000	38.884	2.8	88	0.00	12.10
80		tert-Butylbenzene	40.000	39.409	1.5	89	0.03	12.27
81		1,2,4-Trimethylbenzene	40.000	39.975	0.1	90	0.00	12.34
82		sec-Butylbenzene	40.000	39.916	0.2	88	0.00	12.46
83		4-Isopropyltoluene	40.000	39.537	1.2	89	0.00	12.59
84		1,3-Dichlorobenzene	40.000	39.059	2.4	90	0.00	12.72
			AvgRF	CCRF	%Dev			
85		1,4-Dichlorobenzene	1.419	1.416	0.2	89	0.00	12.81
			Amount	Calc.	%Drift			
86		n-Butylbenzene	40.000	38.848	2.9	88	0.00	13.03
87		Benzyl Chloride	40.000	30.509	23.7	73	0.00	13.05
88		1,2-Dichlorobenzene	40.000	38.371	4.1	89	0.00	13.24
89		1,2-Dibromo-3-Chloropropa	40.000	35.804	10.5	89	0.00	14.00
90		Hexachlorobutadiene	40.000	40.750	-1.9	92	0.00	14.55

Continuing Calibration Summary

Job Number: FA33144 **Sample:** VA1918-ECC1913
Account: URSNCM AECOM, INC. **Lab FileID:** A0200343.D
Project: Rocky Mtn Landfill; NC

91	1,2,4-Trichlorobenzene	40.000	37.700	5.7	92	0.00	14.60
92	Naphthalene	40.000	38.707	3.2	100	0.00	14.88
93	1,2,3-Trichlorobenzene	40.000	40.662	-1.7	95	0.00	15.05

		AvgRF	CCRF	%Dev			
94 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	72	0.00	5.05

		Amount	Calc.	%Drift			
95	Ethanol	800.000	1299.716	-62.5#	102	0.00	4.09

		AvgRF	CCRF	%Dev			
96	acrolein	2.453	3.172	-29.3	95	0.00	4.54
97	Tert Butyl Alcohol	1.152	1.369	-18.8	89	0.00	5.13

		Amount	Calc.	%Drift			
98	tert Amyl alcohol	400.000	437.228	-9.3	87	0.00	7.23
99	1,4-Dioxane	800.000	569.443	28.8	55	0.00	8.30
100	3,3-Dimethyl-1-butanol	2000.000	2027.755	-1.4	82	0.00	10.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
A0200180.D 041416oxy.m Mon Apr 25 13:02:46 2016

6.7.4 6

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1515-ICC1515
Lab FileID: Z40230.D

```
                         Response Factor Report  MSVOA15

 Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
 Title        : 1,4-Dioxane by SIM
 Last Update  : Wed Apr 13 07:43:36 2016
 Response via : Initial Calibration

 Calibration Files
 1   =Z40227.D    2   =Z40228.D    10  =Z40229.D    40  =Z40230.D
 80  =Z40231.D    140 =Z40232.D    200 =Z40233.D

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

 1) I   Fluorobenzene         ----------------ISTD---------------------
 2)S 1,2-Dichloroethan 0.570 0.565 0.570 0.563 0.554 0.531 0.530 0.555   3.15
 3)S Toluene-d8        0.921 0.927 0.923 0.916 0.871 0.825 0.809 0.885   5.67

 4) I   1,4-Dioxane-d8        ----------------ISTD---------------------
 5)  1,4-Dioxane       1.280 1.468 1.695 1.484 1.786 1.750 1.827 1.613  12.66
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
              Response Ratio = 0.00000 + 1.58984 *A + 0.14826 *A^2

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

          simm041216.m        Wed Apr 13 08:14:39 2016
```

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1515-ICV1515
Lab FileID: Z40235.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\041216\Z40235.D            Vial: 9
Acq On    : 12 Apr 2016   2:51 pm                    Operator: melissam
Sample    : icv1515-4                                Inst    : MSVOA15
Misc      : MS33549,VZ1515,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Wed Apr 13 07:43:36 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	120	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.555	0.541	2.5	116	0.00	3.49
3	S	Toluene-d8	0.885	0.804	9.2	106	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	84	0.00	4.26
			Amount	Calc.	%Drift			
5		1,4-Dioxane	20.000	21.683	-8.4	102	0.00	4.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40230.D simm041216.m Wed Apr 13 08:13:42 2016

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1519-CC1515
Lab FileID: Z40350.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\041816\Z40350.D            Vial: 1
Acq On    : 18 Apr 2016   9:18 am                     Operator: melissam
Sample    : cc1515-4                                  Inst    : MSVOA15
Misc      : MS33583,VZ1519,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Wed Apr 13 07:43:36 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	60	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.555	0.595	-7.2	63	0.00	3.49
3	S	Toluene-d8	0.885	0.858	3.1	56	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	54	0.00	4.26
			Amount	Calc.	%Drift			
5		1,4-Dioxane	20.000	20.837	-4.2	62	0.00	4.28

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40230.D simm041216.m Tue Apr 19 10:53:07 2016

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1519-ECC1515
Lab FileID: Z40375.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\041816\Z40375.D            Vial: 25
Acq On    : 18 Apr 2016   7:36 pm                    Operator: melissam
Sample    : ECC1515-4                                Inst    : MSVOA15
Misc      : MS33601,VZ1519,,,,,                      Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Wed Apr 13 07:43:36 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	48#	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.555	0.613	-10.5	53	0.00	3.49
3	S	Toluene-d8	0.885	0.852	3.7	45#	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	38#	0.00	4.26
			Amount	Calc.	%Drift			
5		1,4-Dioxane	20.000	21.128	-5.6	45	0.00	4.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40230.D simm041216.m Tue Apr 19 10:53:23 2016

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1522-CC1515
Lab FileID: Z40443.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042116\Z40443.D            Vial: 1
Acq On    : 21 Apr 2016   9:47 am                     Operator: melissam
Sample    : cc1515-4                                  Inst    : MSVOA15
Misc      : MS33630,VZ1522,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Wed Apr 13 07:43:36 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	93	-0.01	3.67
2	S	1,2-Dichloroethane-d4	0.555	0.606	-9.2	100	0.00	3.48
3	S	Toluene-d8	0.885	0.875	1.1	89	0.00	4.57
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	94	0.00	4.26
			Amount	Calc.	%Drift			
5		1,4-Dioxane	20.000	22.395	-12.0	117	0.00	4.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40230.D simm041216.m Thu Apr 21 14:35:40 2016

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: VZ1522-ECC1515
Lab FileID: Z40468.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\042116\Z40468.D            Vial: 25
Acq On    : 21 Apr 2016   8:02 pm                     Operator: melissam
Sample    : ECC1515-4                                 Inst    : MSVOA15
Misc      : MS33650,VZ1522,,,,,                       Multiplr: 1.00
MS Integration Params: RTEINT.P

Method       : C:\msdchem\1\METHODS\simm041216.m (RTE Integrator)
Title        : 1,4-Dioxane by SIM
Last Update  : Wed Apr 13 07:43:36 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	91	0.00	3.68
2	S	1,2-Dichloroethane-d4	0.555	0.607	-9.4	98	0.00	3.49
3	S	Toluene-d8	0.885	0.878	0.8	87	0.00	4.58
4	I	1,4-Dioxane-d8	1.000	1.000	0.0	80	0.00	4.26
			Amount	Calc.	%Drift			
5		1,4-Dioxane	20.000	21.278	-6.4	94	0.00	4.27

(#) = Out of Range SPCC's out = 0 CCC's out = 0
Z40230.D simm041216.m Fri Apr 22 07:35:12 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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MB	L0686839.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MB	L0686839.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

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	47%	14-67%

Method Blank Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MB	L0686839.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Surrogate Recoveries		Limits
4165-62-2	Phenol-d5	38%	10-50%
118-79-6	2,4,6-Tribromophenol	93%	33-118%
4165-60-0	Nitrobenzene-d5	87%	42-108%
321-60-8	2-Fluorobiphenyl	87%	40-106%
1718-51-0	Terphenyl-d14	82%	39-121%

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-BS	L0686838.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
105-60-2	Caprolactam	50	12.8	26	11-68
59-50-7	4-Chloro-3-methyl Phenol	50	43.1	86	54-103
95-57-8	2-Chlorophenol	50	37.9	76	52-98
120-83-2	2,4-Dichlorophenol	50	42.1	84	53-103
105-67-9	2,4-Dimethylphenol	50	29.9	60	43-90
51-28-5	2,4-Dinitrophenol	100	78.9	79	44-112
534-52-1	4,6-Dinitro-o-cresol	100	95.1	95	66-121
95-48-7	2-Methylphenol	50	34.9	70	43-90
	3&4-Methylphenol	100	57.7	58	36-88
88-75-5	2-Nitrophenol	50	43.3	87	53-102
100-02-7	4-Nitrophenol	100	40.0	40	18-62
87-86-5	Pentachlorophenol	100	95.3	95	61-115
108-95-2	Phenol	50	17.7	35	19-56
58-90-2	2,3,4,6-Tetrachlorophenol	50	45.0	90	62-110
95-95-4	2,4,5-Trichlorophenol	50	43.9	88	62-109
88-06-2	2,4,6-Trichlorophenol	50	43.1	86	59-107
83-32-9	Acenaphthene	50	43.0	86	61-107
208-96-8	Acenaphthylene	50	40.2	80	60-104
98-86-2	Acetophenone	50	37.3	75	53-106
120-12-7	Anthracene	50	43.9	88	65-108
1912-24-9	Atrazine	50	44.1	88	62-114
100-52-7	Benzaldehyde	50	35.1	70	36-129
56-55-3	Benzo(a)anthracene	50	46.3	93	66-111
50-32-8	Benzo(a)pyrene	50	46.5	93	62-107
205-99-2	Benzo(b)fluoranthene	50	45.2	90	65-114
191-24-2	Benzo(g,h,i)perylene	50	47.3	95	66-116
207-08-9	Benzo(k)fluoranthene	50	45.6	91	65-114
92-52-4	1,1'-Biphenyl	50	39.3	79	57-104
101-55-3	4-Bromophenyl Phenyl Ether	50	50.3	101	65-109
85-68-7	Butyl Benzyl Phthalate	50	49.3	99	65-112
86-74-8	Carbazole	50	44.4	89	59-113
106-47-8	4-Chloroaniline	50	39.1	78	49-105
111-91-1	bis(2-Chloroethoxy)methane	50	33.3	67	51-102
111-44-4	bis(2-Chloroethyl)ether	50	39.8	80	53-100
108-60-1	bis(2-Chloroisopropyl)ether	50	44.3	89	45-106
91-58-7	2-Chloronaphthalene	50	40.3	81	57-103

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-BS	L0686838.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
7005-72-3	4-Chlorophenyl Phenyl Ether	50	42.1	84	62-105
218-01-9	Chrysene	50	45.3	91	66-111
53-70-3	Dibenzo(a,h)anthracene	50	47.8	96	66-119
132-64-9	Dibenzofuran	50	41.4	83	61-106
91-94-1	3,3'-Dichlorobenzidine	50	48.4	97	46-117
84-66-2	Diethyl Phthalate	50	45.4	91	64-108
131-11-3	Dimethyl Phthalate	50	43.9	88	63-106
84-74-2	Di-n-butyl Phthalate	50	46.8	94	65-107
117-84-0	Di-n-octyl Phthalate	50	50.6	101	62-118
121-14-2	2,4-Dinitrotoluene	50	47.9	96	61-110
606-20-2	2,6-Dinitrotoluene	50	45.5	91	63-108
117-81-7	bis(2-Ethylhexyl)phthalate	50	49.9	100	61-117
206-44-0	Fluoranthene	50	44.3	89	63-106
86-73-7	Fluorene	50	42.6	85	62-108
118-74-1	Hexachlorobenzene	50	43.5	87	63-108
87-68-3	Hexachlorobutadiene	50	39.2	78	42-102
77-47-4	Hexachlorocyclopentadiene	50	32.2	64	39-102
67-72-1	Hexachloroethane	50	37.8	76	42-100
193-39-5	Indeno(1,2,3-cd)pyrene	50	47.7	95	64-119
78-59-1	Isophorone	50	41.0	82	43-87
91-57-6	2-Methylnaphthalene	50	39.5	79	51-102
91-20-3	Naphthalene	50	38.6	77	47-100
88-74-4	2-Nitroaniline	50	44.6	89	54-128
99-09-2	3-Nitroaniline	50	41.7	83	56-106
100-01-6	4-Nitroaniline	50	48.8	98	55-120
98-95-3	Nitrobenzene	50	39.8	80	50-104
621-64-7	N-Nitrosodi-n-propylamine	50	40.4	81	52-104
86-30-6	N-Nitrosodiphenylamine	50	43.6	87	64-108
85-01-8	Phenanthrene	50	43.8	88	66-110
129-00-0	Pyrene	50	45.0	90	64-113
95-94-3	1,2,4,5-Tetrachlorobenzene	50	38.5	77	47-111

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-BS	L0686838.D	1	04/27/16	MV	04/19/16	OP60127	SL3829

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Surrogate Recoveries	BSP	Limits
4165-62-2	Phenol-d5	36%	10-50%
118-79-6	2,4,6-Tribromophenol	89%	33-118%
4165-60-0	Nitrobenzene-d5	83%	42-108%
321-60-8	2-Fluorobiphenyl	80%	40-106%
1718-51-0	Terphenyl-d14	89%	39-121%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MS	X046070.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
OP60127-MSD	X046072.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
FA33140-1	X046040.D	8	04/28/16	MV	04/19/16	OP60127	SX2039
FA33140-1	X046071.D	50	04/28/16	MV	04/19/16	OP60127	SX2040

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	FA33140-1 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	82	U	102	ND	0*	102	ND	0*	nc	11-68/39
59-50-7	4-Chloro-3-methyl Phenol	41	U	102	106	104*	102	105	103	2	54-103/23
95-57-8	2-Chlorophenol	41	U	102	100	98	102	103	101*	7	52-98/25
120-83-2	2,4-Dichlorophenol	41	U	102	101	99	102	108	106*	6	53-103/26
105-67-9	2,4-Dimethylphenol	41	U	102	99.2	97*	102	106	104*	9	43-90/27
51-28-5	2,4-Dinitrophenol	200	U	204	ND	0*	204	ND	0*	nc	44-112/25
534-52-1	4,6-Dinitro-o-cresol	82	U	204	146	72	204	156	76	12	66-121/23
95-48-7	2-Methylphenol	41	U	102	102	100*	102	104	102*	8	43-90/28
	3&4-Methylphenol	41	U	204	207	101*	204	218	107*	13	36-88/28
88-75-5	2-Nitrophenol	41	U	102	89.7	88	102	95.8	94	3	53-102/29
100-02-7	4-Nitrophenol	200	U	204	ND	0*	204	ND	0*	nc	18-62/33
87-86-5	Pentachlorophenol	1720	b	204	1780	221*	a	204	1700	181*	a	21	61-115/26
108-95-2	Phenol	41	U	102	71.3	70*	102	80.6	79*	11	19-56/35
58-90-2	2,3,4,6-Tetrachlorophenol	249		102	337	86	102	345	94	10	62-110/22
95-95-4	2,4,5-Trichlorophenol	41	U	102	102	100	102	110	108	7	62-109/22
88-06-2	2,4,6-Trichlorophenol	41	U	102	95.4	93	102	108	106	6	59-107/23
83-32-9	Acenaphthene	41	U	102	114	112*	102	116	114*	9	61-107/22
208-96-8	Acenaphthylene	41	U	102	107	105*	102	114	112*	12	60-104/22
98-86-2	Acetophenone	41	U	102	104	102	102	107	105	11	53-106/27
120-12-7	Anthracene	41	U	102	110	108	102	117	115*	9	65-108/20
1912-24-9	Atrazine	41	U	102	95.5	94	102	115	113	16	62-114/24
100-52-7	Benzaldehyde	200	U	102	ND	0*	102	ND	0*	nc	36-129/29
56-55-3	Benzo(a)anthracene	41	U	102	94.8	93	102	95.3	93	2	66-111/22
50-32-8	Benzo(a)pyrene	41	U	102	90.6	89	102	102	100	2	62-107/23
205-99-2	Benzo(b)fluoranthene	41	U	102	98.6	97	102	97.0	95	2	65-114/23
191-24-2	Benzo(g,h,i)perylene	41	U	102	99.6	98	102	109	107	4	66-116/23
207-08-9	Benzo(k)fluoranthene	41	U	102	102	100	102	111	109	7	65-114/24
92-52-4	1,1'-Biphenyl	41	U	102	111	109*	102	117	115*	14	57-104/23
101-55-3	4-Bromophenyl Phenyl Ether	41	U	102	102	100	102	111	109	5	65-109/23
85-68-7	Butyl Benzyl Phthalate	41	U	102	91.8	90	102	96.1	94	6	65-112/24
86-74-8	Carbazole	41	U	102	115	113	102	124	122*	15	59-113/21
106-47-8	4-Chloroaniline	41	U	102	62.0	61	102	69.5	68	9	49-105/27
111-91-1	bis(2-Chloroethoxy)methane	41	U	102	106	104*	102	106	104*	11	51-102/28
111-44-4	bis(2-Chloroethyl)ether	41	U	102	100	98	102	105	103*	5	53-100/27
108-60-1	bis(2-Chloroisopropyl)ether	41	U	102	124	122*	102	128	125*	17	45-106/26
91-58-7	2-Chloronaphthalene	41	U	102	121	119*	102	125	123*	16	57-103/23

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MS	X046070.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
OP60127-MSD	X046072.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
FA33140-1	X046040.D	8	04/28/16	MV	04/19/16	OP60127	SX2039
FA33140-1	X046071.D	50	04/28/16	MV	04/19/16	OP60127	SX2040

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Compound	FA33140-1 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	41	U	102	107	105	102	116	114*	18	62-105/20
218-01-9	Chrysene	41	U	102	94.4	93	102	104	102	5	66-111/22
53-70-3	Dibenzo(a,h)anthracene	41	U	102	84.6	83	102	102	100	1	66-119/24
132-64-9	Dibenzofuran	41	U	102	111	109*	102	113	111*	13	61-106/21
91-94-1	3,3'-Dichlorobenzidine	41	U	102	ND	0*	102	ND	0*	nc	46-117/29
84-66-2	Diethyl Phthalate	41	U	102	114	112*	102	121	119*	22*	64-108/21
131-11-3	Dimethyl Phthalate	41	U	102	108	106	102	116	114*	12	63-106/22
84-74-2	Di-n-butyl Phthalate	41	U	102	112	110*	102	120	118*	5	65-107/21
117-84-0	Di-n-octyl Phthalate	41	U	102	87.0	85	102	93.9	92	18	62-118/24
121-14-2	2,4-Dinitrotoluene	41	U	102	77.3	76	102	83.5	82	0	61-110/21
606-20-2	2,6-Dinitrotoluene	41	U	102	86.4	85	102	95.6	94	2	63-108/21
117-81-7	bis(2-Ethylhexyl)phthalate	41	U	102	89.4	88	102	101	99	8	61-117/23
206-44-0	Fluoranthene	41	U	102	109	107*	102	114	112*	5	63-106/21
86-73-7	Fluorene	41	U	102	116	114*	102	117	115*	16	62-108/20
118-74-1	Hexachlorobenzene	41	U	102	88.1	86	102	99.4	97	2	63-108/22
87-68-3	Hexachlorobutadiene	41	U	102	89.7	88	102	103	101	11	42-102/28
77-47-4	Hexachlorocyclopentadiene	41	U	102	72.9	71	102	72.0	71	37*	39-102/29
67-72-1	Hexachloroethane	41	U	102	101	99	102	107	105*	11	42-100/29
193-39-5	Indeno(1,2,3-cd)pyrene	41	U	102	87.3	86	102	84.1	82	21	64-119/24
78-59-1	Isophorone	41	U	102	99.6	98*	102	111	109*	9	43-87/25
91-57-6	2-Methylnaphthalene	41	U	102	109	107*	102	108	106*	12	51-102/26
91-20-3	Naphthalene	45.3		102	113	66	102	115	68	12	47-100/29
88-74-4	2-Nitroaniline	41	U	102	108	106	102	123	121	13	54-128/24
99-09-2	3-Nitroaniline	41	U	102	77.9	76	102	87.0	85	0	56-106/27
100-01-6	4-Nitroaniline	41	U	102	90.6	89	102	94.6	93	23	55-120/24
98-95-3	Nitrobenzene	41	U	102	103	101	102	110	108*	9	50-104/28
621-64-7	N-Nitrosodi-n-propylamine	41	U	102	120	118*	102	122	120*	15	52-104/25
86-30-6	N-Nitrosodiphenylamine	41	U	102	117	115*	102	122	120*	16	64-108/23
85-01-8	Phenanthrene	41	U	102	112	110	102	118	116*	12	66-110/21
129-00-0	Pyrene	41	U	102	101	99	102	104	102	1	64-113/23
95-94-3	1,2,4,5-Tetrachlorobenzene	41	U	102	98.8	97	102	108	106	13	47-111/27

CAS No.	Surrogate Recoveries	MS	MSD	FA33140-1	FA33140-1	Limits
367-12-4	2-Fluorophenol	74%* [c]	81%* [c]	43%	0%* [c]	14-67%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP60127-MS	X046070.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
OP60127-MSD	X046072.D	20	04/28/16	MV	04/19/16	OP60127	SX2040
FA33140-1	X046040.D	8	04/28/16	MV	04/19/16	OP60127	SX2039
FA33140-1	X046071.D	50	04/28/16	MV	04/19/16	OP60127	SX2040

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

FA33144-2, FA33144-3, FA33144-4, FA33144-5

CAS No.	Surrogate Recoveries	MS	MSD	FA33140-1	FA33140-1	Limits
4165-62-2	Phenol-d5	68%* c	72%* c	32%	0%* c	10-50%
118-79-6	2,4,6-Tribromophenol	91%	97%	97%	0%* c	33-118%
4165-60-0	Nitrobenzene-d5	98%	108%	85%	0%* c	42-108%
321-60-8	2-Fluorobiphenyl	105%	111%* c	89%	0%* c	40-106%
1718-51-0	Terphenyl-d14	93%	93%	81%	0%* c	39-121%

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

* = Outside of Control Limits.

Instrument Performance Check (DFTPP)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-DFTPP
Lab File ID: L0686805.D
Instrument ID: GCMSL
Injection Date: 04/26/16
Injection Time: 09:13

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	25874	36.6		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	29568	41.8		Pass
70	Less than 2.0% of mass 69	219	0.31	(0.74) [a]	Pass
127	40.0 - 60.0% of mass 198	32653	46.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	70725	100.0		Pass
199	5.0 - 9.0% of mass 198	4870	6.89		Pass
275	10.0 - 30.0% of mass 198	18394	26.0		Pass
365	1.0 - 100.0% of mass 198	2162	3.06		Pass
441	Present, but less than mass 443	6313	8.93	(67.3) [b]	Pass
442	40.0 - 100.0% of mass 198	46830	66.2		Pass
443	17.0 - 23.0% of mass 442	9381	13.3	(20.0) [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
SL3828-IC3828	L0686806.D	04/26/16	09:29	00:16	Initial cal 5
SL3828-IC3828	L0686807.D	04/26/16	09:57	00:44	Initial cal 10
SL3828-IC3828	L0686808.D	04/26/16	10:24	01:11	Initial cal 25
SL3828-ICC3828	L0686809.D	04/26/16	10:52	01:39	Initial cal 50
SL3828-IC3828	L0686810.D	04/26/16	11:19	02:06	Initial cal 60
SL3828-IC3828	L0686811.D	04/26/16	11:47	02:34	Initial cal 75
SL3828-IC3828	L0686812.D	04/26/16	12:14	03:01	Initial cal 100
SL3828-ICV3828	L0686813.D	04/26/16	12:42	03:29	Initial cal verification 50
SL3828-ICV3828	L0686814.D	04/26/16	13:10	03:57	Initial cal verification 50
SL3828-ICV3828	L0686815.D	04/26/16	13:43	04:30	Initial cal verification 50

Instrument Performance Check (DFTPP)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3829-DFTPP
Lab File ID: L0686831.D
Instrument ID: GCMSL
Injection Date: 04/27/16
Injection Time: 09:12

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	30373	37.1		Pass
68	Less than 2.0% of mass 69	209	0.26	(0.59) [a]	Pass
69	Mass 69 relative abundance	35653	43.5		Pass
70	Less than 2.0% of mass 69	272	0.33	(0.76) [a]	Pass
127	40.0 - 60.0% of mass 198	37722	46.0		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	81920	100.0		Pass
199	5.0 - 9.0% of mass 198	5174	6.32		Pass
275	10.0 - 30.0% of mass 198	21013	25.7		Pass
365	1.0 - 100.0% of mass 198	2297	2.80		Pass
441	Present, but less than mass 443	9065	11.1	(78.3) [b]	Pass
442	40.0 - 100.0% of mass 198	58610	71.5		Pass
443	17.0 - 23.0% of mass 442	11582	14.1	(19.8) [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
SL3829-CC3828	L0686832.D	04/27/16	09:28	00:16	Continuing cal 50
OP60156-BS	L0686833.D	04/27/16	09:55	00:43	Blank Spike
OP60156-MB	L0686834.D	04/27/16	10:23	01:11	Method Blank
ZZZZZZ	L0686835.D	04/27/16	10:50	01:38	(unrelated sample)
ZZZZZZ	L0686836.D	04/27/16	11:18	02:06	(unrelated sample)
ZZZZZZ	L0686837.D	04/27/16	11:45	02:33	(unrelated sample)
OP60127-BS	L0686838.D	04/27/16	12:13	03:01	Blank Spike
OP60127-MB	L0686839.D	04/27/16	12:40	03:28	Method Blank
ZZZZZZ	L0686840.D	04/27/16	13:08	03:56	(unrelated sample)
ZZZZZZ	L0686841.D	04/27/16	13:36	04:24	(unrelated sample)
FA33144-2	L0686842.D	04/27/16	14:04	04:52	WELL-4832 COMMUNITY
FA33144-3	L0686843.D	04/27/16	14:31	05:19	WELL-4837 COMMUNITY
FA33144-4	L0686844.D	04/27/16	14:59	05:47	WELL-4825 COMMUNITY
FA33144-5	L0686845.D	04/27/16	15:27	06:15	DUP-1
ZZZZZZ	L0686846.D	04/27/16	15:55	06:43	(unrelated sample)
ZZZZZZ	L0686847.D	04/27/16	16:22	07:10	(unrelated sample)
ZZZZZZ	L0686848.D	04/27/16	16:50	07:38	(unrelated sample)
ZZZZZZ	L0686849.D	04/27/16	17:18	08:06	(unrelated sample)
ZZZZZZ	L0686850.D	04/27/16	17:46	08:34	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3829-DFTPP
Lab File ID: L0686831.D
Instrument ID: GCMSL
Injection Date: 04/27/16
Injection Time: 09:12

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L0686851.D	04/27/16	18:13	09:01	(unrelated sample)
ZZZZZZ	L0686852.D	04/27/16	18:41	09:29	(unrelated sample)
ZZZZZZ	L0686853.D	04/27/16	19:09	09:57	(unrelated sample)
ZZZZZZ	L0686854.D	04/27/16	19:36	10:24	(unrelated sample)
ZZZZZZ	L0686855.D	04/27/16	20:04	10:52	(unrelated sample)
ZZZZZZ	L0686856.D	04/27/16	20:31	11:19	(unrelated sample)
ZZZZZZ	L0686857.D	04/27/16	20:58	11:46	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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 FA33144)
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 FA33144)
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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2040-DFTPP
Lab File ID: X046060.D
Instrument ID: GCMSX
Injection Date: 04/28/16
Injection Time: 09:07

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	83975	47.0		Pass
68	Less than 2.0% of mass 69	0	0.00	(0.00) [a]	Pass
69	Mass 69 relative abundance	58452	32.7		Pass
70	Less than 2.0% of mass 69	396	0.22	(0.68) [a]	Pass
127	40.0 - 60.0% of mass 198	102091	57.2		Pass
197	Less than 1.0% of mass 198	0	0.00		Pass
198	Base peak, 100% relative abundance	178560	100.0		Pass
199	5.0 - 9.0% of mass 198	11899	6.66		Pass
275	10.0 - 30.0% of mass 198	30331	17.0		Pass
365	1.0 - 100.0% of mass 198	2832	1.59		Pass
441	Present, but less than mass 443	8540	4.78	(48.8) [b]	Pass
442	40.0 - 100.0% of mass 198	92987	52.1		Pass
443	17.0 - 23.0% of mass 442	17506	9.80	(18.8) [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
SX2040-CC2038	X046061.D	04/28/16	09:23	00:16	Continuing cal 50
OP60198-BS	X046062.D	04/28/16	09:47	00:40	Blank Spike
OP60198-MB	X046063.D	04/28/16	10:11	01:04	Method Blank
FA33376-4	X046064.D	04/28/16	10:35	01:28	(used for QC only; not part of job FA33144)
OP60198-MS	X046065.D	04/28/16	10:59	01:52	Matrix Spike
OP60198-MSD	X046066.D	04/28/16	11:23	02:16	Matrix Spike Duplicate
ZZZZZZ	X046067.D	04/28/16	11:47	02:40	(unrelated sample)
ZZZZZZ	X046068.D	04/28/16	12:10	03:03	(unrelated sample)
ZZZZZZ	X046069.D	04/28/16	12:34	03:27	(unrelated sample)
OP60127-MS	X046070.D	04/28/16	12:58	03:51	Matrix Spike
FA33140-1	X046071.D	04/28/16	13:22	04:15	(used for QC only; not part of job FA33144)
OP60127-MSD	X046072.D	04/28/16	13:46	04:39	Matrix Spike Duplicate
ZZZZZZ	X046073.D	04/28/16	14:10	05:03	(unrelated sample)
ZZZZZZ	X046074.D	04/28/16	14:35	05:28	(unrelated sample)
ZZZZZZ	X046075.D	04/28/16	14:59	05:52	(unrelated sample)
ZZZZZZ	X046076.D	04/28/16	15:23	06:16	(unrelated sample)
ZZZZZZ	X046077.D	04/28/16	15:47	06:40	(unrelated sample)
ZZZZZZ	X046078.D	04/28/16	16:11	07:04	(unrelated sample)
ZZZZZZ	X046079.D	04/28/16	16:36	07:29	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2040-DFTPP
Lab File ID: X046060.D
Instrument ID: GCMSX
Injection Date: 04/28/16
Injection Time: 09:07

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	X046080.D	04/28/16	17:00	07:53	(unrelated sample)
ZZZZZZ	X046081.D	04/28/16	17:24	08:17	(unrelated sample)
ZZZZZZ	X046082.D	04/28/16	17:48	08:41	(unrelated sample)
ZZZZZZ	X046083.D	04/28/16	18:12	09:05	(unrelated sample)
ZZZZZZ	X046084.D	04/28/16	18:36	09:29	(unrelated sample)
ZZZZZZ	X046085.D	04/28/16	19:00	09:53	(unrelated sample)

Semivolatile Internal Standard Area Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	SL3829-CC3828	**Injection Date:**	04/27/16
Lab File ID:	L0686832.D	**Injection Time:**	09:28
Instrument ID:	GCMSL	**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]	225511	5.46	803511	6.65	457688	8.96	660089	11.39	444285	16.17	476599	18.69
Check Std [b]	247795	5.46	849864	6.64	462872	8.96	670836	11.39	433608	16.18	465077	18.69
Upper Limit [c]	495590	5.96	1699728	7.14	925744	9.46	1341672	11.89	867216	16.68	930154	19.19
Lower Limit [d]	123898	4.96	424932	6.14	231436	8.46	335418	10.89	216804	15.68	232539	18.19

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
OP60156-BS	242892	5.46	828896	6.64	473689	8.96	657777	11.39	449787	16.17	466831	18.68
OP60156-MB	329205	5.46	1090018	6.64	614493	8.96	841557	11.38	634142	16.17	620997	18.68
ZZZZZZ	258393	5.46	881062	6.64	488550	8.96	666209	11.38	495249	16.16	469925	18.68
ZZZZZZ	266877	5.46	892417	6.64	504044	8.96	689791	11.38	514575	16.17	502059	18.68
ZZZZZZ	268155	5.46	923404	6.64	507096	8.96	679661	11.38	511635	16.17	475711	18.68
OP60127-BS	238621	5.46	812368	6.64	455077	8.96	644307	11.38	436111	16.17	458801	18.69
OP60127-MB	273976	5.46	940413	6.64	511055	8.96	701837	11.38	516930	16.17	499108	18.68
ZZZZZZ	285384	5.46	981858	6.64	541533	8.96	734931	11.38	497844	16.18	513748	18.69
ZZZZZZ	281618	5.46	955763	6.64	527872	8.96	711281	11.38	481951	16.17	491731	18.69
FA33144-2	282478	5.46	961062	6.64	531397	8.96	721289	11.38	521099	16.17	501973	18.68
FA33144-3	276266	5.46	917101	6.64	504646	8.96	687917	11.38	498626	16.17	471915	18.68
FA33144-4	286633	5.46	961733	6.64	537212	8.96	734395	11.38	536127	16.16	521545	18.68
FA33144-5	284275	5.46	955575	6.64	531777	8.96	716480	11.38	519732	16.17	497732	18.68
ZZZZZZ	289602	5.46	974163	6.64	537621	8.96	731264	11.38	524480	16.16	502604	18.68
ZZZZZZ	274199	5.46	928367	6.64	518354	8.96	701011	11.38	509741	16.17	489020	18.68
ZZZZZZ	237450	5.46	745084	6.64	418772	8.96	578163	11.38	428935	16.17	438376	18.68
ZZZZZZ	291987	5.46	886495	6.64	352720	8.97	417242	11.42	418888	16.19	466912	18.69
ZZZZZZ	299978	5.46	1005128	6.64	568889	8.96	774614	11.38	583654	16.17	561268	18.68
ZZZZZZ	291249	5.46	958824	6.64	541902	8.96	733735	11.38	542526	16.16	520316	18.68
ZZZZZZ	275993	5.46	919524	6.64	519372	8.96	718795	11.38	526453	16.16	503489	18.68
ZZZZZZ	272119	5.46	917481	6.64	515038	8.96	706253	11.38	512418	16.16	488471	18.68
ZZZZZZ	277214	5.46	929937	6.64	508303	8.96	704281	11.38	521124	16.16	514905	18.68
ZZZZZZ	279322	5.46	916584	6.64	508788	8.96	694773	11.38	504796	16.17	486061	18.68
ZZZZZZ	280962	5.46	941854	6.64	526912	8.96	717206	11.38	530391	16.17	504261	18.68
ZZZZZZ	268016	5.46	918700	6.64	494589	8.96	686133	11.38	513933	16.16	496079	18.68
SL3829-CCV3828	230967	5.46	811291	6.64	444431	8.96	646202	11.39	416214	16.17	446221	18.69
OP60170-BS	252600	5.46	852758	6.64	483927	8.96	677259	11.38	453568	16.17	478540	18.69
OP60170-MB	259506	5.46	877426	6.64	486987	8.96	662201	11.38	486147	16.16	471163	18.68
FA33250-1	372978	5.46	1199897	6.64	687594	8.96	922639	11.38	719597	16.17	707578	18.68
OP60156-MS	244638	5.46	835961	6.64	460856	8.96	648559	11.38	441623	16.17	459180	18.68
OP60156-MSD	243545	5.46	817127	6.64	461560	8.96	643350	11.38	440877	16.17	464339	18.68
ZZZZZZ	270855	5.46	908972	6.64	499786	8.96	688638	11.38	501525	16.17	466032	18.68
ZZZZZZ	255233	5.46	856377	6.64	470354	8.96	636203	11.38	472592	16.16	452246	18.68

Semivolatile Internal Standard Area Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	SL3829-CC3828	**Injection Date:**	04/27/16
Lab File ID:	L0686832.D	**Injection Time:**	09:28
Instrument ID:	GCMSL	**Method:**	SW846 8270D

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	259414	5.46	885521	6.64	479019	8.95	642430	11.38	471367	16.16	435072	18.68
ZZZZZZ	253309	5.46	873642	6.64	481862	8.96	647213	11.38	474424	16.16	453475	18.68
ZZZZZZ	264270	5.46	905582	6.64	493690	8.96	664437	11.38	487368	16.16	455209	18.68
FA33214-3	267850	5.46	907944	6.64	502382	8.95	675693	11.38	495207	16.17	472326	18.68
OP60170-MS1	250622	5.46	841997	6.64	468566	8.96	655642	11.38	436564	16.17	448913	18.68
OP60170-MSD1	241735	5.46	816081	6.64	456358	8.96	620942	11.38	421990	16.17	434534	18.68
ZZZZZZ	274409	5.46	921225	6.64	497204	8.95	672850	11.38	501051	16.16	472175	18.68
ZZZZZZ	253613	5.46	858237	6.64	468672	8.96	632220	11.38	472224	16.16	446635	18.68
ZZZZZZ	258439	5.46	882736	6.64	484431	8.96	658536	11.38	490625	16.16	463555	18.68
ZZZZZZ	263026	5.46	894782	6.64	492573	8.96	666854	11.38	496581	16.16	463633	18.68
ZZZZZZ	265456	5.46	899055	6.64	483474	8.95	647149	11.38	473921	16.17	448095	18.68
ZZZZZZ	256109	5.46	871630	6.64	467320	8.95	646935	11.38	474355	16.16	449028	18.68
ZZZZZZ	267864	5.46	907195	6.64	489080	8.96	664071	11.38	491020	16.16	461816	18.68
ZZZZZZ	265352	5.46	886906	6.64	488575	8.96	658498	11.38	478259	16.16	450193	18.68
ZZZZZZ	273646	5.46	918636	6.64	508009	8.95	686399	11.38	509372	16.16	478168	18.68
ZZZZZZ	272573	5.46	930413	6.64	510605	8.95	675189	11.38	493835	16.17	473526	18.68
ZZZZZZ	262438	5.46	912545	6.64	502331	8.96	672397	11.38	485803	16.16	461775	18.68
ZZZZZZ	273028	5.46	916177	6.64	498934	8.96	672043	11.38	500865	16.16	465344	18.68

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: SL3828-ICC3828 L0686809.D 04/26/16 10:52
(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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	SX2040-CC2038	**Injection Date:**	04/28/16
Lab File ID:	X046061.D	**Injection Time:**	09:23
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]	282893	5.49	985218	6.91	456089	8.96	647934	10.66	465637	13.83	362816	15.81
Upper Limit [c]	565786	5.99	1970436	7.41	912178	9.46	1295868	11.16	931274	14.33	725632	16.31
Lower Limit [d]	141447	4.99	492609	6.41	228045	8.46	323967	10.16	232819	13.33	181408	15.31

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
OP60198-BS	304573	5.49	1076969	6.91	489402	8.96	672744	10.66	469614	13.83	389646	15.81
OP60198-MB	297041	5.49	1128443	6.91	531450	8.95	729197	10.66	481782	13.83	381223	15.80
FA33376-4	297457	5.49	1111777	6.91	522753	8.95	726366	10.66	493091	13.83	381224	15.80
OP60198-MS	319774	5.49	1137639	6.91	524253	8.96	716911	10.66	492260	13.83	409092	15.81
OP60198-MSD	293503	5.49	1041360	6.91	476701	8.96	649442	10.66	439052	13.83	364373	15.81
ZZZZZZ	301299	5.49	1144522	6.91	538639	8.95	759719	10.66	514831	13.83	406092	15.81
ZZZZZZ	293116	5.49	1103438	6.91	516689	8.95	729378	10.66	493916	13.83	387450	15.80
ZZZZZZ	315350	5.49	1182606	6.91	553869	8.95	778664	10.66	534414	13.83	416346	15.80
OP60127-MS	294753	5.49	1092214	6.91	511776	8.95	718735	10.66	530532	13.83	389100	15.81
FA33140-1	297901	5.49	1091958	6.91	507749	8.95	717456	10.66	518586	13.83	373372	15.81
OP60127-MSD	285618	5.49	1052012	6.91	486426	8.95	680869	10.66	502565	13.83	370336	15.81
ZZZZZZ	309990	5.49	1179684	6.91	554084	8.95	772554	10.66	526198	13.83	411066	15.80
ZZZZZZ	308399	5.49	1152429	6.91	536162	8.95	750724	10.66	501561	13.83	388824	15.80
ZZZZZZ	303024	5.49	1138825	6.91	541509	8.95	746511	10.66	507768	13.83	397919	15.81
ZZZZZZ	312433	5.49	1177218	6.91	558038	8.95	780763	10.66	527086	13.83	414646	15.80
ZZZZZZ	288290	5.49	1120563	6.91	529884	8.95	750710	10.66	496162	13.83	390287	15.80
ZZZZZZ	302889	5.49	1144012	6.91	537555	8.95	754112	10.66	497297	13.82	387936	15.80
ZZZZZZ	296282	5.49	1124015	6.91	542570	8.95	766785	10.66	528482	13.82	394775	15.80
ZZZZZZ	313215	5.49	1176479	6.91	558693	8.95	801370	10.66	541155	13.82	407468	15.80
ZZZZZZ	283540	5.49	1080107	6.91	506217	8.95	712075	10.66	473505	13.82	372560	15.80
ZZZZZZ	298516	5.49	1135061	6.91	525630	8.95	728955	10.66	492965	13.83	381624	15.80
ZZZZZZ	325504	5.49	1235773	6.91	572930	8.95	802781	10.66	542846	13.83	418321	15.81
ZZZZZZ	302663	5.49	1136158	6.91	526024	8.95	743959	10.66	498750	13.83	383556	15.80
ZZZZZZ	309178	5.49	1174934	6.91	551350	8.95	765123	10.66	512030	13.82	396500	15.80

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

Semivolatile Internal Standard Area Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Check Std:	SX2040-CC2038	**Injection Date:**	04/28/16
Lab File ID:	X046061.D	**Injection Time:**	09:23
Instrument ID:	GCMSX	**Method:**	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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
FA33144-2	L0686842.D	33	26	88	74	72	79
FA33144-3	L0686843.D	36	28	85	80	78	80
FA33144-4	L0686844.D	40	30	95	88	86	87
FA33144-5	L0686845.D	37	29	95	83	81	83
OP60127-BS	L0686838.D	48	36	89	83	80	89
OP60127-MB	L0686839.D	47	38	93	87	87	82
OP60127-MS	X046070.D	74* [a]	68* [a]	91	98	105	93
OP60127-MSD	X046072.D	81* [a]	72* [a]	97	108	111* [a]	93

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%

(a) Outside control limits due to dilution.

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICC3828
Lab FileID: L0686809.D

Response Factor Report MSBNA02

Method : C:\msdchem\1\METHODS\8270daOP0426.m (RTE Integrator)
Title : SW846 8270D OR EPA 625
Last Update : Thu Apr 28 11:51:10 2016
Response via : Initial Calibration

Calibration Files
5 =L0686806.D 10 =L0686807.D 25 =L0686808.D 50 =L0686809.D
60 =L0686810.D 75 =L0686811.D 100 =L0686812.D

Compound	5	10	25	50	60	75	100	Avg	%RSD
1) I 1,4-Dichlorobenzene-d	----------ISTD----------								
2) 1,4-Dioxane	0.928	1.019	0.997	0.994	0.999	0.957	0.845	0.963	6.24
3) N-nitrosodimethyl	0.815	0.881	0.826	0.798	0.801	0.761	0.683	0.795	7.71
4) Pyridine	2.493	2.569	2.372	2.228	2.191	2.117	1.868	2.263	10.56
5)P Benzaldehyde	1.779	1.688	1.581	1.403	1.362	1.211	1.066	1.442	17.82
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 1.75341 *A + -0.27686 *A^2									
6) Aniline	2.761	2.771	2.443	2.227	2.215	2.072	1.804	2.327	15.30
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9992									
Response Ratio = 0.00000 + 2.74001 *A + -0.37040 *A^2									
7)S 2-Fluorophenol	1.756	1.795	1.622	1.423	1.366	1.293	1.098	1.479	17.31
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 1.78511 *A + -0.13668 *A^2									
8)P bis(2-Chloroethyl	1.719	1.806	1.661	1.503	1.480	1.423	1.276	1.552	11.90
9)S Phenol-d5	2.107	2.064	1.760	1.499	1.452	1.363	1.167	1.630	21.94
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9993									
Response Ratio = 0.00000 + 1.90581 *A + -0.14792 *A^2									
10)P Phenol	2.341	2.257	1.926	1.821	1.784	1.685	1.439	1.893	16.72
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9987									
Response Ratio = 0.00000 + 2.23917 *A + -0.31463 *A^2									
11)P 2-Chlorophenol	1.578	1.593	1.529	1.446	1.417	1.379	1.198	1.448	9.47
12) 1,3-Dichlorobenze	1.994	1.949	1.800	1.663	1.648	1.540	1.320	1.702	13.82
13) 1,4-Dichlorobenze	1.684	1.718	1.603	1.485	1.491	1.399	1.216	1.514	11.49
14) 1,2-Dichlorobenze	1.761	1.794	1.697	1.559	1.527	1.438	1.246	1.575	12.36
15) Benzyl alcohol	1.025	1.099	1.080	1.061	1.043	1.015	0.908	1.033	6.04
16)P bis(2-chloroisopr	1.733	1.846	1.655	1.515	1.480	1.392	1.222	1.549	13.72
17)P 2-Methylphenol	1.452	1.531	1.434	1.328	1.321	1.250	1.110	1.347	10.46
18)P Acetophenone	2.344	2.266	2.056	1.840	1.800	1.709	1.609	1.946	14.45
19)P Hexachloroethane	0.641	0.679	0.634	0.613	0.616	0.582	0.505	0.610	9.04
20)P N-Nitroso-di-n-pr	1.105	1.168	1.039	0.962	0.949	0.936	0.819	0.997	11.70
21)P 3&4-Methylphenol	1.546	1.611	1.526	1.428	1.406	1.342	1.157	1.431	10.62
22) I Naphthalene-d8	----------ISTD----------								
23)S Nitrobenzene-d5	0.487	0.515	0.477	0.446	0.438	0.419	0.372	0.451	10.55
24)P Nitrobenzene	0.523	0.535	0.475	0.427	0.423	0.396	0.347	0.447	15.27
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 0.52497 *A + -0.07076 *A^2									
25)P Isophorone	1.013	1.012	0.913	0.803	0.793	0.757	0.674	0.852	15.29
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 0.97100 *A + -0.11840 *A^2									

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICC3828
Lab FileID: L0686809.D

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26)P 2-Nitrophenol     0.188 0.208 0.221 0.213 0.220 0.206 0.183 0.205   7.25
27)P 2,4-Dimethylpheno 0.484 0.482 0.429 0.377 0.365 0.347 0.301 0.398  17.47
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 0.48893 *A + -0.07840 *A^2

28)  O,O,O-Triethylpho 0.274 0.261 0.218 0.187 0.187 0.173 0.161 0.209  21.00
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9986
              Response Ratio = 0.00000 + 0.22472 *A + -0.02598 *A^2

29)P bis(2-Chloroethox 0.744 0.737 0.635 0.538 0.521 0.489 0.431 0.585  20.95
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.67126 *A + -0.09701 *A^2

30)  Benzoic Acid      0.145 0.198 0.251 0.272 0.288 0.307 0.294 0.251  23.47
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9965
              Response Ratio = 0.00000 + 0.26108 *A + 0.01560 *A^2

31)P 2,4-Dichloropheno 0.395 0.397 0.381 0.352 0.344 0.330 0.285 0.355  11.32
32)  1,2,4-Trichlorobe 0.471 0.462 0.411 0.371 0.361 0.344 0.298 0.388  16.29
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9994
              Response Ratio = 0.00000 + 0.45513 *A + -0.06237 *A^2

33)  alpha-Terpineol                                            0.000  -1.00
34)P Naphthalene       1.158 1.153 1.018 0.894 0.863 0.796 0.679 0.937  19.29
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9998
              Response Ratio = 0.00000 + 1.13234 *A + -0.18115 *A^2

35)P 4-Chloroaniline   0.534 0.520 0.492 0.443 0.432 0.413 0.342 0.454  14.74
36)  2,6-Dichloropheno 0.393 0.385 0.350 0.315 0.310 0.295 0.254 0.329  15.16
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9992
              Response Ratio = 0.00000 + 0.38743 *A + -0.05247 *A^2

37)P Hexachlorobutadie 0.244 0.246 0.233 0.213 0.208 0.200 0.174 0.217  11.97
38)P Caprolactam       0.155 0.150 0.152 0.147 0.150 0.145 0.149 0.150   2.19
39)P 4-Chloro-3-methyl 0.359 0.387 0.380 0.345 0.339 0.329 0.292 0.347   9.26
40)P 2-Methylnaphthale 0.882 0.874 0.785 0.668 0.656 0.614 0.526 0.715  18.91
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.84812 *A + -0.12852 *A^2

41)  1-Methylnaphthale 0.789 0.795 0.700 0.603 0.599 0.572 0.484 0.649  17.95
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
              Response Ratio = 0.00000 + 0.76490 *A + -0.11096 *A^2

42)P 1,2,4,5-Tetrachlo 0.464 0.438 0.400 0.354 0.342 0.328 0.282 0.373  17.30
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9993
              Response Ratio = 0.00000 + 0.43678 *A + -0.06138 *A^2


43) I   Acenaphthene-d10      ----------------ISTD---------------------
44)P Hexachlorocyclope 0.356 0.387 0.406 0.382 0.394 0.383 0.334 0.377   6.48
45)P 2,4,6-Trichloroph 0.441 0.488 0.453 0.419 0.434 0.416 0.365 0.431   8.74
46)P 2,4,5-Trichloroph 0.471 0.486 0.472 0.429 0.438 0.426 0.377 0.443   8.48
47)S 2-Fluorobiphenyl  1.611 1.595 1.380 1.188 1.196 1.121 0.957 1.293  19.04
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 1.51566 *A + -0.22143 *A^2

48)P 1,1'-Biphenyl     1.873 1.791 1.558 1.306 1.315 1.232 1.101 1.454  20.16
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 1.62407 *A + -0.21047 *A^2
```

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICC3828
Lab FileID: L0686809.D

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49)P 2-Chloronaphthale 1.373 1.379 1.194 1.022 1.020 0.974 0.826 1.113  18.85
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9981
              Response Ratio = 0.00000 + 1.30120 *A + -0.18796 *A^2

50)P 2-Nitroaniline    0.320 0.373 0.376 0.370 0.387 0.373 0.339 0.363   6.57
51)  p-Dinitrobenzene  0.179 0.201 0.250 0.255 0.275 0.277 0.251 0.241  15.49
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9952
              Response Ratio = 0.00000 + 0.27712 *A + -0.00781 *A^2

52)P Acenaphthylene    2.101 2.102 1.825 1.527 1.526 1.416 1.211 1.673  20.61
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9987
              Response Ratio = 0.00000 + 1.96903 *A + -0.30265 *A^2

53)P Dimethylphthalate 1.603 1.613 1.464 1.253 1.248 1.174 1.009 1.338  17.06
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9989
              Response Ratio = 0.00000 + 1.58345 *A + -0.22826 *A^2

54)  m-Dinitrobenzene  0.176 0.198 0.213 0.210 0.213 0.214 0.194 0.203   6.97
55)P 2,6-Dinitrotoluen 0.304 0.319 0.329 0.297 0.306 0.291 0.251 0.299   8.35
56)  o-Dinitrobenzene  0.150 0.183 0.178 0.174 0.183 0.184 0.166 0.174   7.12
57)P Acenaphthene      1.095 1.144 1.040 0.940 0.952 0.897 0.789 0.980  12.47
58)P 3-Nitroaniline    0.346 0.382 0.383 0.351 0.371 0.361 0.327 0.360   5.63
59)P 2,4-Dinitrophenol 0.061 0.088 0.114 0.144 0.170 0.174 0.168 0.131  34.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9911
              Response Ratio = 0.00000 + 0.13370 *A + 0.01591 *A^2

60)P Dibenzofuran      1.822 1.865 1.645 1.425 1.417 1.330 1.140 1.521  17.53
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9990
              Response Ratio = 0.00000 + 1.80088 *A + -0.26236 *A^2

61)P 2,4-Dinitrotoluen 0.328 0.384 0.401 0.395 0.409 0.402 0.367 0.384   7.32
62)P 4-Nitrophenol     0.160 0.195 0.208 0.212 0.224 0.232 0.210 0.206  11.37
63)  2,3,5,6-Tetrachlo 0.294 0.342 0.354 0.339 0.351 0.342 0.297 0.331   7.51
64)P 2,3,4,6-Tetrachlo 0.310 0.345 0.344 0.327 0.335 0.320 0.284 0.324   6.67
65)P Fluorene          1.432 1.479 1.285 1.083 1.081 1.020 0.870 1.179  19.13
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 1.38545 *A + -0.20479 *A^2

66)P 4-Chlorophenyl-ph 0.669 0.698 0.607 0.515 0.513 0.496 0.426 0.561  17.76
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9979
              Response Ratio = 0.00000 + 0.64682 *A + -0.08728 *A^2

67)P Diethylphthalate  1.392 1.443 1.387 1.200 1.229 1.175 1.020 1.264  11.94
68)  Thionazin         0.310 0.319 0.302 0.272 0.284 0.278 0.276 0.292   6.35
69)P 4-Nitroaniline    0.296 0.326 0.321 0.305 0.317 0.313 0.283 0.309   4.90

70) I   Phenanthrene-d10      ----------------ISTD---------------------
71)P 4,6-Dinitro-2-met 0.078 0.096 0.130 0.148 0.159 0.159 0.146 0.131  24.43
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9941
              Response Ratio = 0.00000 + 0.15328 *A + -0.00108 *A^2

72)P n-Nitrosodiphenyl 0.690 0.713 0.638 0.541 0.547 0.510 0.436 0.582  17.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 0.69302 *A + -0.08496 *A^2

73)  Diphenylamine     0.828 0.856 0.765 0.650 0.657 0.612 0.523 0.699  17.37
            ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9984
              Response Ratio = 0.00000 + 0.83162 *A + -0.12235 *A^2
```

```
 74)  1,2-Diphenylhydra 0.999 1.031 0.930 0.787 0.811 0.747 0.637 0.849  16.85
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9977
               Response Ratio = 0.00000 + 1.01801 *A + -0.15089 *A^2

 75)S 2,4,6-Tribromophe 0.122 0.124 0.123 0.108 0.113 0.105 0.093 0.113  10.01
 76)  Sulfotep          0.163 0.178 0.166 0.151 0.154 0.140 0.136 0.155   9.52
 77)  Phorate           0.634 0.664 0.616 0.526 0.539 0.491 0.451 0.560  14.15
 78)P 4-Bromophenyl-phe 0.286 0.285 0.255 0.218 0.220 0.205 0.173 0.235  18.04
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
               Response Ratio = 0.00000 + 0.28110 *A + -0.04261 *A^2

 79)P Hexachlorobenzene 0.293 0.303 0.273 0.237 0.245 0.232 0.200 0.255  14.35
 80)  Dimethoate        0.342 0.370 0.362 0.324 0.342 0.324 0.319 0.340   5.76
 81)  Simazine          0.099 0.109 0.093 0.091 0.096 0.093 0.084 0.095   7.91
 82)P Atrazine          0.289 0.283 0.260 0.233 0.244 0.234 0.224 0.252  10.19
 83)P Pentachlorophenol 0.114 0.138 0.159 0.153 0.167 0.157 0.141 0.147  12.21
 84)P Phenanthrene      1.236 1.262 1.160 0.990 0.999 0.928 0.802 1.054  16.16
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9988
               Response Ratio = 0.00000 + 1.25352 *A + -0.17937 *A^2

 85)P Anthracene        1.271 1.325 1.184 1.001 1.012 0.940 0.797 1.076  17.72
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
               Response Ratio = 0.00000 + 1.29224 *A + -0.19637 *A^2

 86)  Disulfoton        0.421 0.431 0.407 0.416 0.433 0.394 0.367 0.410   5.66
 87)P Carbazole         1.187 1.244 1.153 0.976 0.989 0.927 0.791 1.038  15.59
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
               Response Ratio = 0.00000 + 1.24592 *A + -0.17990 *A^2

 88)  Methyl Parathion  0.157 0.205 0.242 0.247 0.264 0.251 0.249 0.231  16.14
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
               Response Ratio = 0.00000 + 0.25228 *A + -0.00047 *A^2

 89)P Di-n-butylphthala 1.299 1.375 1.344 1.149 1.169 1.081 0.922 1.191  13.54
 90)  Ethyl Parathion   0.093 0.117 0.153 0.153 0.163 0.155 0.155 0.141  18.28
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9983
               Response Ratio = 0.00000 + 0.15580 *A + 0.00001 *A^2

 91)P Fluoranthene      1.242 1.316 1.202 1.010 1.037 0.959 0.837 1.086  15.83
             ---- Quadratic regr., Force(0,0) ----  Coefficient =  0.9982
               Response Ratio = 0.00000 + 1.28201 *A + -0.17712 *A^2


 92) I   Chrysene-d12          ----------------ISTD---------------------
 93)  Benzidine         0.713 0.805 0.821 0.780 0.808 0.756 0.596 0.754  10.48
 94)P Pyrene            1.707 1.784 1.645 1.440 1.469 1.409 1.238 1.527  12.57
 95)S Terphenyl-d14     1.063 1.149 1.130 1.013 1.058 1.026 0.890 1.047   8.16
 96)  Famphur           0.522 0.551 0.600 0.544 0.567 0.538 0.497 0.546   6.04
 97)P Butylbenzylphthal 0.594 0.688 0.699 0.655 0.691 0.671 0.590 0.655   6.99
 98)P 3,3'-Dichlorobenz 0.308 0.359 0.404 0.377 0.396 0.390 0.336 0.367   9.50
 99)P Benzo[a]anthracen 1.194 1.313 1.310 1.230 1.252 1.235 1.101 1.234   5.89
100)P Chrysene          1.051 1.134 1.123 1.028 1.083 1.061 0.952 1.062   5.80
101)P bis(2-Ethylhexyl) 0.607 0.761 0.834 0.801 0.841 0.836 0.735 0.774  10.84

102) I   Perylene-d12         ----------------ISTD---------------------
103)P Di-n-octylphthala 0.974 1.261 1.396 1.331 1.393 1.357 1.165 1.268  12.09
104)P Benzo[b]fluoranth 1.034 1.182 1.159 1.062 1.169 1.113 1.051 1.110   5.54
105)P Benzo[k]fluoranth 1.202 1.241 1.193 1.019 1.021 1.035 0.838 1.079  13.20
106)P Benzo[a]pyrene    1.007 1.183 1.158 1.077 1.136 1.102 0.989 1.093   6.74
107)P Indeno[1,2,3-cd]p 0.909 1.032 1.117 1.096 1.127 1.167 1.048 1.071   7.92
```

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICC3828
Lab FileID: L0686809.D

```
108)P Dibenz[a,h]anthra 0.897 1.145 1.143 1.070 1.127 1.108 0.984 1.068   8.80
109)P Benzo[g,h,i]peryl 1.099 1.248 1.243 1.159 1.221 1.191 1.061 1.175   6.15
 ----------------------------------------------------------------------------
 (#) = Out of Range

          8270daOP0426.m        Thu Apr 28 11:58:10 2016
```

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686813.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sl3828\L0686813.D          Vial: 9
Acq On    : 26 Apr 2016  12:42 pm                     Operator: marthav
Sample    : icv3828-50                                Inst    : MSBNA02
Misc      : op60129,sl3828,1000,,,1,1,water           Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270daOP0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Thu Apr 28 11:51:10 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	99	0.00	5.46
2		1,4-Dioxane	50.000	46.726	6.5	90	0.00	3.14
3		N-nitrosodimethylamine	50.000	51.083	-2.2	101	0.00	3.45
4		Pyridine		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde	50.000	46.729	6.5	95	0.00	5.12
6		Aniline		----------NA----------				
7	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
8	P	bis(2-Chloroethyl)ether	50.000	48.795	2.4	100	0.00	5.26
		----------	Amount	Calc.	%Drift		----------	
9	S	Phenol-d5		----------NA----------				
10	P	Phenol	50.000	53.174	-6.3	106	0.00	5.20
		----------	Amount	Calc.	%Drift		----------	
11	P	2-Chlorophenol	50.000	48.946	2.1	98	0.00	5.32
12		1,3-Dichlorobenzene	50.000	47.286	5.4	96	0.00	5.44
13		1,4-Dichlorobenzene	50.000	48.418	3.2	98	0.00	5.47
14		1,2-Dichlorobenzene	50.000	49.112	1.8	99	0.00	5.63
15		Benzyl alcohol		----------NA----------				
16	P	bis(2-chloroisopropyl)eth	50.000	49.651	0.7	101	0.00	5.70
17	P	2-Methylphenol	50.000	46.512	7.0	94	0.00	5.68
18	P	Acetophenone	50.000	41.055	17.9	86	0.00	5.81
19	P	Hexachloroethane	50.000	47.289	5.4	94	0.00	5.90
20	P	N-Nitroso-di-n-propylamin	50.000	46.333	7.3	96	0.00	5.83
21	P	3&4-Methylphenol	100.000	77.867	22.1#	105	0.00	5.79
22	I	Naphthalene-d8	40.000	40.000	0.0	95	0.00	6.64
23	S	Nitrobenzene-d5		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
24	P	Nitrobenzene	50.000	52.191	-4.4	100	0.00	5.97
25	P	Isophorone	50.000	46.935	6.1	92	0.00	6.18
		----------	Amount	Calc.	%Drift		----------	
26	P	2-Nitrophenol	50.000	53.082	-6.2	97	0.00	6.27
		----------	Amount	Calc.	%Drift		----------	
27	P	2,4-Dimethylphenol	50.000	42.366	15.3	86	0.00	6.28

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686813.D

28		O,O,O-Triethylphosphoroth		----------NA----------				
29	P	bis(2-Chloroethoxy)methan	50.000	38.637	22.7#	78	0.00	6.38
30		Benzoic Acid	100.000	102.600	-2.6	107	0.04	6.42
		----------	Amount	Calc.	%Drift		----------	
31	P	2,4-Dichlorophenol	50.000	47.320	5.4	90	0.00	6.50
		----------	Amount	Calc.	%Drift		----------	
32		1,2,4-Trichlorobenzene	50.000	47.307	5.4	92	0.00	6.60
		----------	Amount	Calc.	%Drift		----------	
33		alpha-Terpineol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
34	P	Naphthalene	50.000	48.416	3.2	94	0.00	6.66
		----------	Amount	Calc.	%Drift		----------	
35	P	4-Chloroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
36		2,6-Dichlorophenol	50.000	51.184	-2.4	99	0.00	6.74
		----------	Amount	Calc.	%Drift		----------	
37	P	Hexachlorobutadiene	50.000	48.257	3.5	93	0.00	6.85
38	P	Caprolactam	50.000	47.288	5.4	91	0.00	7.10
39	P	4-Chloro-3-methylphenol	50.000	47.565	4.9	91	0.00	7.28
		----------	Amount	Calc.	%Drift		----------	
40	P	2-Methylnaphthalene		----------NA----------				
41		1-Methylnaphthalene	50.000	50.698	-1.4	99	0.00	7.61
42	P	1,2,4,5-Tetrachlorobenzen	50.000	45.250	9.5	89	0.00	7.74
		----------	Amount	Calc.	%Drift		----------	
43	I	Acenaphthene-d10	40.000	40.000	0.0	95	0.00	8.96
44	P	Hexachlorocyclopentadiene	50.000	50.861	-1.7	96	0.00	7.77
45	P	2,4,6-Trichlorophenol	50.000	47.232	5.5	93	0.00	7.87
46	P	2,4,5-Trichlorophenol	50.000	48.105	3.8	95	0.00	7.92
		----------	Amount	Calc.	%Drift		----------	
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl	50.000	44.858	10.3	91	0.00	8.10
49	P	2-Chloronaphthalene	50.000	45.027	9.9	92	0.00	8.11
		----------	Amount	Calc.	%Drift		----------	
50	P	2-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
51		p-Dinitrobenzene		----------NA----------				
52	P	Acenaphthylene	50.000	46.401	7.2	94	0.00	8.73
53	P	Dimethylphthalate	50.000	48.505	3.0	96	0.00	8.61
		----------	Amount	Calc.	%Drift		----------	
54		m-Dinitrobenzene		----------NA----------				
55	P	2,6-Dinitrotoluene	50.000	46.412	7.2	89	0.00	8.71
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene	50.000	46.674	6.7	93	0.00	9.01
58	P	3-Nitroaniline		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686813.D

			Amount	Calc.	%Drift			
59	P	2,4-Dinitrophenol	100.000	87.760	12.2	93	0.00	9.07
60	P	Dibenzofuran		----------NA----------				
			Amount	Calc.	%Drift			
61	P	2,4-Dinitrotoluene	50.000	50.076	-0.2	93	0.00	9.32
62	P	4-Nitrophenol	100.000	91.213	8.8	94	0.00	9.20
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol	50.000	46.589	6.8	88	0.00	9.52
			Amount	Calc.	%Drift			
65	P	Fluorene	50.000	44.545	10.9	91	0.00	9.81
66	P	4-Chlorophenyl-phenylethe	50.000	45.481	9.0	92	0.00	9.83
			Amount	Calc.	%Drift			
67	P	Diethylphthalate	50.000	45.132	9.7	91	0.00	9.75
68		Thionazin		----------NA----------				
69	P	4-Nitroaniline		----------NA----------				
70	I	Phenanthrene-d10	40.000	40.000	0.0	87	0.00	11.38
			Amount	Calc.	%Drift			
71	P	4,6-Dinitro-2-methylpheno	100.000	111.657	-11.7	106	0.00	9.99
72	P	n-Nitrosodiphenylamine	50.000	46.834	6.3	74	0.00	10.04
73		Diphenylamine		----------NA----------				
74		1,2-Diphenylhydrazine	50.000	50.168	-0.3	92	0.00	10.08
			Amount	Calc.	%Drift			
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
			Amount	Calc.	%Drift			
78	P	4-Bromophenyl-phenylether	50.000	58.138	-16.3	101	0.00	10.64
			Amount	Calc.	%Drift			
79	P	Hexachlorobenzene	50.000	48.189	3.6	90	0.00	10.87
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine	50.000	48.190	3.6	91	0.00	11.04
83	P	Pentachlorophenol	100.000	104.484	-4.5	101	0.00	11.19
			Amount	Calc.	%Drift			
84	P	Phenanthrene	50.000	48.204	3.6	88	0.00	11.42
85	P	Anthracene	50.000	48.360	3.3	88	0.00	11.50
			Amount	Calc.	%Drift			
86		Disulfoton		----------NA----------				
			Amount	Calc.	%Drift			
87	P	Carbazole		----------NA----------				
88		Methyl Parathion		----------NA----------				
			Amount	Calc.	%Drift			
89	P	Di-n-butylphthalate	50.000	50.286	-0.6	91	0.00	12.63
			Amount	Calc.	%Drift			
90		Ethyl Parathion		----------NA----------				
91	P	Fluoranthene	50.000	47.050	5.9	87	0.00	13.56

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686813.D

			Amount	Calc.	%Drift			
92	I	Chrysene-d12	40.000	40.000	0.0	87	0.00	16.17
93		Benzidine		----------NA----------				
94	P	Pyrene	50.000	49.037	1.9	91	0.00	13.95
95	S	Terphenyl-d14		----------NA----------				
96		Famphur		----------NA----------				
97	P	Butylbenzylphthalate	50.000	51.665	-3.3	90	0.00	15.36
98	P	3,3'-Dichlorobenzidine		----------NA----------				
99	P	Benzo[a]anthracene	50.000	48.724	2.6	85	0.00	16.14
100	P	Chrysene	50.000	48.435	3.1	87	0.00	16.22
101	P	bis(2-Ethylhexyl)phthalat	50.000	50.975	-2.0	86	0.00	16.50
102	I	Perylene-d12	40.000	40.000	0.0	81	0.00	18.68
103	P	Di-n-octylphthalate	50.000	54.492	-9.0	84	0.00	17.60
104	P	Benzo[b]fluoranthene	50.000	51.014	-2.0	86	0.00	18.05
105	P	Benzo[k]fluoranthene	50.000	47.585	4.8	81	0.00	18.09
106	P	Benzo[a]pyrene	50.000	51.005	-2.0	84	0.00	18.58
107	P	Indeno[1,2,3-cd]pyrene	50.000	51.406	-2.8	81	0.00	20.37
108	P	Dibenz[a,h]anthracene	50.000	51.439	-2.9	83	0.00	20.42
109	P	Benzo[g,h,i]perylene	50.000	50.257	-0.5	82	0.00	20.76

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L0686809.D 8270daOP0426.m Thu Apr 28 11:55:30 2016

7.7.2

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686814.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sl3828\L0686814.D          Vial: 10
Acq On    : 26 Apr 2016   1:10 pm                    Operator: marthav
Sample    : icv3828-50                               Inst    : MSBNA02
Misc      : op60129,sl3828,1000,,,1,1,water          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270daOP0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Tue Apr 26 13:09:53 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	108	0.00	5.46
2		1,4-Dioxane		----------NA----------				
3		N-nitrosodimethylamine		----------NA----------				
4		Pyridine	50.000	44.125	11.8	97	0.00	3.45
		----------	Amount	Calc.	%Drift		----------	
5	P	Benzaldehyde		----------NA----------				
6		Aniline	50.000	46.522	7.0	104	0.00	5.22
7	S	2-Fluorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
8	P	bis(2-Chloroethyl)ether		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
9	S	Phenol-d5		----------NA----------				
10	P	Phenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
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	43.845	12.3	92	0.00	5.58
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	98	0.00	6.64
23	S	Nitrobenzene-d5		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
24	P	Nitrobenzene		----------NA----------				
25	P	Isophorone		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
26	P	2-Nitrophenol		----------NA----------				
		----------	Amount	Calc.	%Drift		----------	
27	P	2,4-Dimethylphenol		----------NA----------				

7.7.3

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686814.D

			Amount	Calc.	%Drift			
28		O,O,O-Triethylphosphoroth	50.000	58.946	-17.9	115	0.00	6.38
29	P	bis(2-Chloroethoxy)methan		----------NA----------				
30		Benzoic Acid		----------NA----------				
		----------	Amount	Calc.	%Drift			
31	P	2,4-Dichlorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift			
32		1,2,4-Trichlorobenzene		----------NA----------				
		----------	Amount	Calc.	%Drift			
33		alpha-Terpineol		----------NA----------				
		----------	Amount	Calc.	%Drift			
34	P	Naphthalene		----------NA----------				
		----------	Amount	Calc.	%Drift			
35	P	4-Chloroaniline	50.000	47.498	5.0	95	0.00	6.72
		----------	Amount	Calc.	%Drift			
36		2,6-Dichlorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift			
37	P	Hexachlorobutadiene		----------NA----------				
38	P	Caprolactam		----------NA----------				
39	P	4-Chloro-3-methylphenol		----------NA----------				
		----------	Amount	Calc.	%Drift			
40	P	2-Methylnaphthalene	50.000	46.546	6.9	95	0.00	7.46
41		1-Methylnaphthalene		----------NA----------				
42	P	1,2,4,5-Tetrachlorobenzen		----------NA----------				
		----------	Amount	Calc.	%Drift			
43	I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00	8.96
44	P	Hexachlorocyclopentadiene		----------NA----------				
45	P	2,4,6-Trichlorophenol		----------NA----------				
46	P	2,4,5-Trichlorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift			
47	S	2-Fluorobiphenyl		----------NA----------				
48	P	1,1'-Biphenyl		----------NA----------				
49	P	2-Chloronaphthalene		----------NA----------				
		----------	Amount	Calc.	%Drift			
50	P	2-Nitroaniline	50.000	50.455	-0.9	89	0.00	8.29
		----------	Amount	Calc.	%Drift			
51		p-Dinitrobenzene		----------NA----------				
52	P	Acenaphthylene		----------NA----------				
53	P	Dimethylphthalate		----------NA----------				
		----------	Amount	Calc.	%Drift			
54		m-Dinitrobenzene	50.000	54.277	-8.6	95	0.00	8.63
55	P	2,6-Dinitrotoluene		----------NA----------				
56		o-Dinitrobenzene		----------NA----------				
57	P	Acenaphthene		----------NA----------				
58	P	3-Nitroaniline	50.000	52.349	-4.7	97	0.00	8.92
		----------	Amount	Calc.	%Drift			

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686814.D

			Amount	Calc.	%Drift			
59	P	2,4-Dinitrophenol		----------NA----------				
60	P	Dibenzofuran	50.000	51.882	-3.8	96	0.00	9.25
61	P	2,4-Dinitrotoluene		----------NA----------				
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	52.763	-5.5	102	0.00	9.89
69	P	4-Nitroaniline	50.000	52.567	-5.1	96	-0.01	9.91
70	I	Phenanthrene-d10	40.000	40.000	0.0	95	0.00	11.38
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
72	P	n-Nitrosodiphenylamine	60.000	57.040	4.9	96	0.00	10.03
73		Diphenylamine	50.000	47.534	4.9	96	0.00	10.03
74		1,2-Diphenylhydrazine		----------NA----------				
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep	50.000	48.482	3.0	95	0.00	10.51
77		Phorate	50.000	44.814	10.4	91	0.00	10.62
78	P	4-Bromophenyl-phenylether		----------NA----------				
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate	50.000	50.915	-1.8	102	0.00	10.91
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
83	P	Pentachlorophenol		----------NA----------				
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
86		Disulfoton	50.000	47.308	5.4	89	0.00	11.53
87	P	Carbazole	50.000	47.287	5.4	95	0.00	11.81
88		Methyl Parathion	50.000	47.371	5.3	92	0.00	12.19
89	P	Di-n-butylphthalate		----------NA----------				
90		Ethyl Parathion	50.000	48.552	2.9	94	0.00	12.93
91	P	Fluoranthene		----------NA----------				

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686814.D

			Amount	Calc.	%Drift			
92	I	Chrysene-d12	40.000	40.000	0.0	106	-0.01	16.16
93		Benzidine	50.000	49.627	0.7	102	0.00	13.86
94	P	Pyrene		NA				
95	S	Terphenyl-d14		NA				
96		Famphur		NA				
97	P	Butylbenzylphthalate		NA				
98	P	3,3'-Dichlorobenzidine	50.000	47.625	4.8	99	0.00	16.19
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	95	0.00	18.68
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
L0686809.D 8270daOP0426.m Tue Apr 26 14:19:53 2016

7.7.3

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686815.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sl3828\L0686815.D          Vial: 11
Acq On    : 26 Apr 2016   1:43 pm                    Operator: marthav
Sample    : icv3828-50                               Inst    : MSBNA02
Misc      : op60129,sl3828,1000,,,1,1,water          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270daOP0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Tue Apr 26 13:09:53 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  116   0.00    5.46
2     1,4-Dioxane                          ----------NA----------
3     N-nitrosodimethylamine               ----------NA----------
4     Pyridine                             ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
5 P   Benzaldehyde                         ----------NA----------
6     Aniline                              ----------NA----------
7 S   2-Fluorophenol                       ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
8 P   bis(2-Chloroethyl)ether              ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
9 S   Phenol-d5                            ----------NA----------
10 P  Phenol                               ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
11 P  2-Chlorophenol                       ----------NA----------
12    1,3-Dichlorobenzene                  ----------NA----------
13    1,4-Dichlorobenzene                  ----------NA----------
14    1,2-Dichlorobenzene                  ----------NA----------
15    Benzyl alcohol                       ----------NA----------
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  104   0.00    6.64
23 S  Nitrobenzene-d5                      ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
24 P  Nitrobenzene                         ----------NA----------
25 P  Isophorone                           ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
26 P  2-Nitrophenol                        ----------NA----------

          ----------------------- Amount  Calc.    %Drift   -------------
27 P  2,4-Dimethylphenol                   ----------NA----------
```

7.7.4

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686815.D

			Amount	Calc.	%Drift			
28		O,O,O-Triethylphosphoroth		NA				
29	P	bis(2-Chloroethoxy)methan		NA				
30		Benzoic Acid		NA				
31	P	2,4-Dichlorophenol		NA				
32		1,2,4-Trichlorobenzene		NA				
33		alpha-Terpineol		NA				
34	P	Naphthalene		NA				
35	P	4-Chloroaniline		NA				
36		2,6-Dichlorophenol		NA				
37	P	Hexachlorobutadiene		NA				
38	P	Caprolactam		NA				
39	P	4-Chloro-3-methylphenol		NA				
40	P	2-Methylnaphthalene		NA				
41		1-Methylnaphthalene		NA				
42	P	1,2,4,5-Tetrachlorobenzen		NA				
			Amount	Calc.	%Drift			
43	I	Acenaphthene-d10	40.000	40.000	0.0	101	0.00	8.96
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		NA				
51		p-Dinitrobenzene		NA				
52	P	Acenaphthylene		NA				
53	P	Dimethylphthalate		NA				
54		m-Dinitrobenzene		NA				
55	P	2,6-Dinitrotoluene		NA				
56		o-Dinitrobenzene		NA				
57	P	Acenaphthene		NA				
58	P	3-Nitroaniline		NA				

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686815.D

59	P	2,4-Dinitrophenol		----------NA----------				
60	P	Dibenzofuran		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
61	P	2,4-Dinitrotoluene		----------NA----------				
62	P	4-Nitrophenol		----------NA----------				
63		2,3,5,6-Tetrachlorophenol		----------NA----------				
64	P	2,3,4,6-Tetrachlorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
65	P	Fluorene		----------NA----------				
66	P	4-Chlorophenyl-phenylethe		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
67	P	Diethylphthalate		----------NA----------				
68		Thionazin		----------NA----------				
69	P	4-Nitroaniline		----------NA----------				
70	I	Phenanthrene-d10	40.000	40.000	0.0	95	0.00	11.38
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno		----------NA----------				
72	P	n-Nitrosodiphenylamine		----------NA----------				
73		Diphenylamine		----------NA----------				
74		1,2-Diphenylhydrazine		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
75	S	2,4,6-Tribromophenol		----------NA----------				
76		Sulfotep		----------NA----------				
77		Phorate		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
78	P	4-Bromophenyl-phenylether		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
79	P	Hexachlorobenzene		----------NA----------				
80		Dimethoate		----------NA----------				
81		Simazine		----------NA----------				
82	P	Atrazine		----------NA----------				
83	P	Pentachlorophenol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
84	P	Phenanthrene		----------NA----------				
85	P	Anthracene		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
86		Disulfoton		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
87	P	Carbazole		----------NA----------				
88		Methyl Parathion		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
89	P	Di-n-butylphthalate		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
90		Ethyl Parathion		----------NA----------				
91	P	Fluoranthene		----------NA----------				

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3828-ICV3828
Lab FileID: L0686815.D

			Amount	Calc.	%Drift			
92	I	Chrysene-d12	40.000	40.000	0.0	103	0.00	16.17
93		Benzidine		----------NA----------				
94	P	Pyrene		----------NA----------				
95	S	Terphenyl-d14		----------NA----------				
96		Famphur	50.000	41.494	17.0	86	0.00	15.26
97	P	Butylbenzylphthalate		----------NA----------				
98	P	3,3'-Dichlorobenzidine		----------NA----------				
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	90	0.00	18.69
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
L0686809.D 8270daOP0426.m Tue Apr 26 14:19:54 2016

7.7.4

7

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3829-CC3828
Lab FileID: L0686832.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sl3829\L0686832.D          Vial: 2
Acq On    : 27 Apr 2016   9:28 am                    Operator: marthav
Sample    : cc3828-50                                Inst    : MSBNA02
Misc      : op60129,sl3829,1000,,,1,1,water          Multiplr: 1.00
MS Integration Params: lscint.p

Method       : C:\msdchem\1\METHODS\8270daOP0426.m (RTE Integrator)
Title        : SW846 8270D OR EPA 625
Last Update  : Thu Apr 28 11:51:10 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	110	0.00	5.46
2		1,4-Dioxane	0.963	1.007	-4.6	111	0.00	3.14
3		N-nitrosodimethylamine	0.795	0.778	2.1	107	0.00	3.45
4		Pyridine	2.263	2.236	1.2	110	0.00	3.45
			Amount	Calc.	%Drift			
5	P	Benzaldehyde	50.000	45.251	9.5	102	0.00	5.12
6		Aniline	50.000	48.597	2.8	110	0.00	5.23
7	S	2-Fluorophenol	100.000	97.436	2.6	109	0.00	4.52
			AvgRF	CCRF	%Dev			
8	P	bis(2-Chloroethyl)ether	1.552	1.475	5.0	108	0.00	5.26
			Amount	Calc.	%Drift			
9	S	Phenol-d5	100.000	94.772	5.2	108	0.00	5.19
10	P	Phenol	50.000	49.054	1.9	110	0.00	5.21
			AvgRF	CCRF	%Dev			
11	P	2-Chlorophenol	1.448	1.402	3.2	107	0.00	5.32
12		1,3-Dichlorobenzene	1.702	1.670	1.9	110	0.00	5.43
13		1,4-Dichlorobenzene	1.514	1.486	1.8	110	0.00	5.48
14		1,2-Dichlorobenzene	1.575	1.536	2.5	108	0.00	5.63
15		Benzyl alcohol	1.033	1.049	-1.5	109	0.00	5.58
16	P	bis(2-chloroisopropyl)eth	1.549	1.523	1.7	110	0.00	5.70
17	P	2-Methylphenol	1.347	1.341	0.4	111	0.00	5.68
18	P	Acetophenone	1.946	1.816	6.7	108	0.00	5.81
19	P	Hexachloroethane	0.610	0.608	0.3	109	0.00	5.90
20	P	N-Nitroso-di-n-propylamin	0.997	0.943	5.4	108	0.00	5.82
21	P	3&4-Methylphenol	1.431	1.427	0.3	110	0.00	5.79
22	I	Naphthalene-d8	1.000	1.000	0.0	106	0.00	6.64
23	S	Nitrobenzene-d5	0.451	0.449	0.4	106	0.00	5.95
			Amount	Calc.	%Drift			
24	P	Nitrobenzene	50.000	50.228	-0.5	108	0.00	5.97
25	P	Isophorone	50.000	50.283	-0.6	109	0.00	6.18
			AvgRF	CCRF	%Dev			
26	P	2-Nitrophenol	0.205	0.218	-6.3	108	0.00	6.27
			Amount	Calc.	%Drift			
27	P	2,4-Dimethylphenol	50.000	47.477	5.0	105	0.00	6.28

Continuing Calibration Summary

Job Number: FA33144 **Sample:** SL3829-CC3828
Account: URSNCM AEOM, INC. **Lab FileID:** L0686832.D
Project: Rocky Mtn Landfill; NC

28		O,O,O-Triethylphosphoroth	50.000	50.524	-1.0	110	0.00	6.39
29	P	bis(2-Chloroethoxy)methan	50.000	49.690	0.6	108	0.00	6.38
30		Benzoic Acid	50.000	49.183	1.6	107	0.00	6.39
		----------	AvgRF	CCRF	%Dev	----------		
31	P	2,4-Dichlorophenol	0.355	0.362	-2.0	109	0.00	6.50
		----------	Amount	Calc.	%Drift	----------		
32		1,2,4-Trichlorobenzene	50.000	49.551	0.9	107	0.00	6.59
		----------	AvgRF	CCRF	%Dev	----------		
33		alpha-Terpineol		----------NA----------				
		----------	Amount	Calc.	%Drift	----------		
34	P	Naphthalene	50.000	49.548	0.9	106	0.00	6.67
		----------	AvgRF	CCRF	%Dev	----------		
35	P	4-Chloroaniline	0.454	0.453	0.2	108	0.00	6.73
		----------	Amount	Calc.	%Drift	----------		
36		2,6-Dichlorophenol	50.000	51.322	-2.6	110	0.00	6.74
		----------	AvgRF	CCRF	%Dev	----------		
37	P	Hexachlorobutadiene	0.217	0.215	0.9	107	0.00	6.86
38	P	Caprolactam	0.150	0.155	-3.3	111	0.00	7.11
39	P	4-Chloro-3-methylphenol	0.347	0.358	-3.2	110	0.00	7.28
		----------	Amount	Calc.	%Drift	----------		
40	P	2-Methylnaphthalene	50.000	48.300	3.4	106	0.00	7.46
41		1-Methylnaphthalene	50.000	49.428	1.1	109	0.00	7.61
42	P	1,2,4,5-Tetrachlorobenzen	50.000	49.549	0.9	107	0.00	7.74
		----------	AvgRF	CCRF	%Dev	----------		
43	I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00	8.96
44	P	Hexachlorocyclopentadiene	0.377	0.388	-2.9	103	0.00	7.76
45	P	2,4,6-Trichlorophenol	0.431	0.444	-3.0	107	0.00	7.87
46	P	2,4,5-Trichlorophenol	0.443	0.451	-1.8	106	0.00	7.92
		----------	Amount	Calc.	%Drift	----------		
47	S	2-Fluorobiphenyl	50.000	49.430	1.1	105	0.00	7.97
48	P	1,1'-Biphenyl	50.000	50.636	-1.3	106	0.00	8.10
49	P	2-Chloronaphthalene	50.000	50.729	-1.5	107	0.00	8.12
		----------	AvgRF	CCRF	%Dev	----------		
50	P	2-Nitroaniline	0.363	0.395	-8.8	108	0.00	8.30
		----------	Amount	Calc.	%Drift	----------		
51		p-Dinitrobenzene	50.000	51.497	-3.0	109	0.00	8.46
52	P	Acenaphthylene	50.000	50.522	-1.0	106	0.00	8.73
53	P	Dimethylphthalate	50.000	50.181	-0.4	105	0.00	8.62
		----------	AvgRF	CCRF	%Dev	----------		
54		m-Dinitrobenzene	0.203	0.223	-9.9	107	0.00	8.63
55	P	2,6-Dinitrotoluene	0.299	0.315	-5.4	107	0.00	8.71
56		o-Dinitrobenzene	0.174	0.188	-8.0	109	0.00	8.82
57	P	Acenaphthene	0.980	0.980	0.0	105	0.00	9.01
58	P	3-Nitroaniline	0.360	0.381	-5.8	110	0.00	8.92
		----------	Amount	Calc.	%Drift	----------		

Continuing Calibration Summary

Job Number: FA33144 **Sample:** SL3829-CC3828
Account: URSNCM AECOM, INC. **Lab FileID:** L0686832.D
Project: Rocky Mtn Landfill; NC

59	P	2,4-Dinitrophenol	50.000	49.097	1.8	106	0.00	9.08
60	P	Dibenzofuran	50.000	50.484	-1.0	105	0.00	9.26
		----------	AvgRF	CCRF	%Dev	----------		
61	P	2,4-Dinitrotoluene	0.384	0.419	-9.1	107	0.00	9.32
62	P	4-Nitrophenol	0.206	0.224	-8.7	107	0.00	9.20
63		2,3,5,6-Tetrachlorophenol	0.331	0.355	-7.3	106	0.00	9.46
64	P	2,3,4,6-Tetrachlorophenol	0.324	0.339	-4.6	105	0.00	9.53
		----------	Amount	Calc.	%Drift	----------		
65	P	Fluorene	50.000	49.531	0.9	105	0.00	9.81
66	P	4-Chlorophenyl-phenylethe	50.000	49.853	0.3	105	0.00	9.83
		----------	AvgRF	CCRF	%Dev	----------		
67	P	Diethylphthalate	1.264	1.253	0.9	106	0.00	9.76
68		Thionazin	0.292	0.280	4.1	104	0.00	9.90
69	P	4-Nitroaniline	0.309	0.319	-3.2	106	0.00	9.92
70	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00	11.39
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno	50.000	50.022	-0.0	104	0.00	9.99
72	P	n-Nitrosodiphenylamine	60.000	58.875	1.9	105	0.00	10.04
73		Diphenylamine	50.000	49.063	1.9	105	0.00	10.04
74		1,2-Diphenylhydrazine	50.000	49.570	0.9	106	0.00	10.09
		----------	AvgRF	CCRF	%Dev	----------		
75	S	2,4,6-Tribromophenol	0.113	0.111	1.8	105	0.00	10.24
76		Sulfotep	0.155	0.157	-1.3	106	0.00	10.51
77		Phorate	0.560	0.550	1.8	106	0.00	10.62
		----------	Amount	Calc.	%Drift	----------		
78	P	4-Bromophenyl-phenylether	50.000	49.248	1.5	105	0.00	10.64
		----------	AvgRF	CCRF	%Dev	----------		
79	P	Hexachlorobenzene	0.255	0.247	3.1	106	0.00	10.88
80		Dimethoate	0.340	0.342	-0.6	107	0.00	10.92
81		Simazine	0.095	0.101	-6.3	112	0.00	10.96
82	P	Atrazine	0.252	0.249	1.2	109	0.00	11.04
83	P	Pentachlorophenol	0.147	0.163	-10.9	108	0.00	11.19
		----------	Amount	Calc.	%Drift	----------		
84	P	Phenanthrene	50.000	49.103	1.8	104	0.00	11.43
85	P	Anthracene	50.000	48.873	2.3	104	0.00	11.50
		----------	AvgRF	CCRF	%Dev	----------		
86		Disulfoton	0.410	0.423	-3.2	103	0.00	11.54
		----------	Amount	Calc.	%Drift	----------		
87	P	Carbazole	50.000	48.856	2.3	104	0.00	11.81
88		Methyl Parathion	50.000	52.583	-5.2	109	0.00	12.19
		----------	AvgRF	CCRF	%Dev	----------		
89	P	Di-n-butylphthalate	1.191	1.171	1.7	104	0.00	12.63
		----------	Amount	Calc.	%Drift	----------		
90		Ethyl Parathion	50.000	50.964	-1.9	105	0.00	12.94
91	P	Fluoranthene	50.000	48.451	3.1	104	0.00	13.56

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SL3829-CC3828
Lab FileID: L0686832.D

			AvgRF	CCRF	%Dev			
92	I	Chrysene-d12	1.000	1.000	0.0	98	0.00	16.18
93		Benzidine	0.754	0.825	-9.4	103	0.00	13.86
94	P	Pyrene	1.527	1.519	0.5	103	0.00	13.96
95	S	Terphenyl-d14	1.047	1.072	-2.4	103	0.00	14.34
96		Famphur	0.546	0.570	-4.4	102	0.00	15.26
97	P	Butylbenzylphthalate	0.655	0.697	-6.4	104	0.00	15.36
98	P	3,3'-Dichlorobenzidine	0.367	0.400	-9.0	104	0.00	16.19
99	P	Benzo[a]anthracene	1.234	1.290	-4.5	102	0.00	16.15
100	P	Chrysene	1.062	1.071	-0.8	102	0.00	16.23
101	P	bis(2-Ethylhexyl)phthalat	0.774	0.872	-12.7	106	0.00	16.50
102	I	Perylene-d12	1.000	1.000	0.0	98	0.00	18.69
103	P	Di-n-octylphthalate	1.268	1.426	-12.5	104	0.00	17.60
104	P	Benzo[b]fluoranthene	1.110	1.154	-4.0	106	0.00	18.05
105	P	Benzo[k]fluoranthene	1.079	1.094	-1.4	105	0.00	18.10
106	P	Benzo[a]pyrene	1.093	1.137	-4.0	103	0.00	18.59
107	P	Indeno[1,2,3-cd]pyrene	1.071	1.147	-7.1	102	0.00	20.38
108	P	Dibenz[a,h]anthracene	1.068	1.147	-7.4	105	0.00	20.42
109	P	Benzo[g,h,i]perylene	1.175	1.223	-4.1	103	0.00	20.77

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L0686809.D 8270daOP0426.m Thu Apr 28 13:03:04 2016

7.7.5

7

Initial Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144 **Sample:** SX2038-ICC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X045998.D
Project: Rocky Mtn Landfill; NC

```
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: FA33144 **Sample:** SX2038-ICC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X045998.D
Project: Rocky Mtn Landfill; 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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7.7.6

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Rocky Mtn Landfill; 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		----------	

7.2.7

7

Initial Calibration Verification

Job Number: FA33144 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046002.D
Project: Rocky Mtn Landfill; 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

7.2.7

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2038-ICV2038
Lab FileID: X046002.D

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

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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	----------		

Initial Calibration Verification

Job Number: FA33144 **Sample:** SX2038-ICV2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046006.D
Project: Rocky Mtn Landfill; 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

7.7.8

7

Initial Calibration Verification

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2040-CC2038
Lab FileID: X046061.D

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2040\x046061.D          Vial: 2
Acq On    : 28 Apr 2016   9:23 am                   Operator: marthav
Sample    : cc2038-50                               Inst    : MSBNA05
Misc      : op60029,sx2040,1000,,,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	100	0.00	5.49
2		1,4-Dioxane	0.782	0.764	2.3	96	-0.02	2.36
3		N-nitrosodimethylamine	0.815	0.858	-5.3	103	-0.01	2.74
4		Pyridine	1.992	1.952	2.0	98	-0.02	2.73
5	P	Benzaldehyde	1.186	1.324	-11.6	109	0.00	5.03
6		Aniline	2.241	2.306	-2.9	100	0.00	5.18
7	S	2-Fluorophenol	1.521	1.544	-1.5	99	0.00	4.19
8	P	bis(2-Chloroethyl)ether	1.416	1.452	-2.5	100	0.00	5.26
9	S	Phenol-d5	1.579	1.594	-0.9	101	0.00	5.20
10	P	Phenol	1.795	1.745	2.8	100	0.00	5.21
11	P	2-Chlorophenol	1.536	1.539	-0.2	100	0.00	5.30
12		1,3-Dichlorobenzene	1.606	1.593	0.8	99	0.00	5.45
13		1,4-Dichlorobenzene	1.573	1.550	1.5	98	0.00	5.51
14		1,2-Dichlorobenzene	1.478	1.482	-0.3	99	0.00	5.71
15		Benzyl alcohol	0.962	0.974	-1.2	100	0.00	5.68
16	P	bis(2-chloroisopropyl)eth	2.373	2.469	-4.0	102	0.00	5.86
17	P	2-Methylphenol	1.253	1.273	-1.6	100	0.00	5.84
18	P	Acetophenone	1.771	1.763	0.5	101	0.00	5.97
19	P	Hexachloroethane	0.580	0.585	-0.9	99	0.00	6.04
20	P	N-Nitroso-di-n-propylamin	0.708	0.734	-3.7	104	0.01	6.01
21	P	3&4-Methylphenol	1.280	1.291	-0.9	101	0.01	6.01
22	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00	6.91
23	S	Nitrobenzene-d5	0.324	0.348	-7.4	102	0.00	6.13
24	P	Nitrobenzene	0.326	0.342	-4.9	101	0.00	6.15
25	P	Isophorone	0.620	0.652	-5.2	101	0.00	6.42
26	P	2-Nitrophenol	0.194	0.215	-10.8	102	0.00	6.51
27	P	2,4-Dimethylphenol	0.312	0.323	-3.5	101	0.00	6.59
28		O,O,O-Triethylphosphoroth	0.136	0.137	-0.7	100	0.00	6.72
29	P	bis(2-Chloroethoxy)methan	0.428	0.430	-0.5	95	0.00	6.69
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	51.927	-3.9	104	0.02	6.73
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.292	-3.9	100	0.00	6.79
32		1,2,4-Trichlorobenzene	0.281	0.282	-0.4	98	0.00	6.87
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	1.006	-1.6	99	0.00	6.93
35	P	4-Chloroaniline	0.429	0.440	-2.6	100	0.00	7.04
36		2,6-Dichlorophenol	0.266	0.269	-1.1	99	0.00	7.05
37	P	Hexachlorobutadiene	0.122	0.124	-1.6	97	0.00	7.16

Continuing Calibration Summary

Job Number: FA33144 **Sample:** SX2040-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046061.D
Project: Rocky Mtn Landfill; NC

38	P	Caprolactam	0.109	0.118	-8.3	104	0.03	7.41
39	P	4-Chloro-3-methylphenol	0.257	0.272	-5.8	101	0.00	7.63
40	P	2-Methylnaphthalene	0.662	0.687	-3.8	100	0.00	7.73
41		1-Methylnaphthalene	0.613	0.634	-3.4	100	0.00	7.85
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.234	-2.2	98	0.00	7.97
43	I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	8.96
44	P	Hexachlorocyclopentadiene	0.270	0.304	-12.6	109	0.00	8.00
45	P	2,4,6-Trichlorophenol	0.358	0.369	-3.1	101	0.00	8.11
46	P	2,4,5-Trichlorophenol	0.372	0.381	-2.4	103	0.00	8.15
47	S	2-Fluorobiphenyl	1.306	1.299	0.5	100	0.00	8.20
48	P	1,1'-Biphenyl	1.497	1.459	2.5	102	0.00	8.29
49	P	2-Chloronaphthalene	1.119	1.102	1.5	100	0.00	8.29
50	P	2-Nitroaniline	0.330	0.359	-8.8	102	0.00	8.46
		----------	Amount	Calc.	%Drift	----------		
51		p-Dinitrobenzene	50.000	53.951	-7.9	111	0.00	8.59
		----------	AvgRF	CCRF	%Dev	----------		
52	P	Acenaphthylene	1.960	1.973	-0.7	100	0.00	8.77
53	P	Dimethylphthalate	1.242	1.254	-1.0	100	0.00	8.73
		----------	Amount	Calc.	%Drift	----------		
54		m-Dinitrobenzene	50.000	52.236	-4.5	105	0.00	8.73
55	P	2,6-Dinitrotoluene	50.000	49.968	0.1	104	0.00	8.80
		----------	AvgRF	CCRF	%Dev	----------		
56		o-Dinitrobenzene	0.197	0.213	-8.1	106	0.00	8.87
57	P	Acenaphthene	1.168	1.169	-0.1	100	0.00	8.99
58	P	3-Nitroaniline	0.387	0.405	-4.7	103	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
59	P	2,4-Dinitrophenol	50.000	57.432	-14.9	129	0.00	9.06
		----------	AvgRF	CCRF	%Dev	----------		
60	P	Dibenzofuran	1.558	1.543	1.0	101	0.00	9.18
		----------	Amount	Calc.	%Drift	----------		
61	P	2,4-Dinitrotoluene	50.000	51.686	-3.4	104	0.00	9.25
		----------	AvgRF	CCRF	%Dev	----------		
62	P	4-Nitrophenol	0.135	0.147	-8.9	103	0.00	9.19
63		2,3,5,6-Tetrachlorophenol	0.229	0.257	-12.2	105	0.00	9.34
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.252	-7.2	101	0.00	9.38
65	P	Fluorene	1.209	1.199	0.8	100	0.00	9.58
66	P	4-Chlorophenyl-phenylethe	0.498	0.511	-2.6	101	0.00	9.60
67	P	Diethylphthalate	1.230	1.230	0.0	100	0.00	9.57
68		Thionazin	0.264	0.263	0.4	102	0.00	9.66
		----------	Amount	Calc.	%Drift	----------		
69	P	4-Nitroaniline	50.000	50.449	-0.9	103	0.01	9.67
		----------	AvgRF	CCRF	%Dev	----------		
70	I	Phenanthrene-d10	1.000	1.000	0.0	99	0.00	10.66
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno	50.000	54.683	-9.4	116	0.00	9.72
		----------	AvgRF	CCRF	%Dev	----------		

7.7.9

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Continuing Calibration Summary

Job Number: FA33144 **Sample:** SX2040-CC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046061.D
Project: Rocky Mtn Landfill; NC

72	P	n-Nitrosodiphenylamine	0.591	0.583	1.4	103	0.00	9.75
73		Diphenylamine	0.710	0.699	1.5	103	0.00	9.75
74		1,2-Diphenylhydrazine	0.817	0.787	3.7	101	0.00	9.78
75	S	2,4,6-Tribromophenol	0.076	0.084	-10.5	106	0.00	9.89
76		Sulfotep	0.133	0.132	0.8	104	0.00	10.09
77		Phorate	0.521	0.517	0.8	102	0.00	10.15
78	P	4-Bromophenyl-phenylether	0.176	0.176	0.0	100	0.00	10.17
79	P	Hexachlorobenzene	0.174	0.179	-2.9	102	0.00	10.32
80		Dimethoate	0.369	0.375	-1.6	103	0.00	10.35
81		Simazine	0.081	0.080	1.2	100	0.00	10.39
82	P	Atrazine	0.194	0.197	-1.5	103	0.00	10.44
		----------	Amount	Calc.	%Drift	----------		
83	P	Pentachlorophenol	50.000	60.208	-20.4#	126	0.00	10.54
		----------	AvgRF	CCRF	%Dev	----------		
84	P	Phenanthrene	1.116	1.103	1.2	101	0.00	10.69
85	P	Anthracene	1.118	1.105	1.2	101	0.00	10.74
86		Disulfoton	0.452	0.439	2.9	104	0.00	10.76
87	P	Carbazole	1.133	1.127	0.5	101	0.00	10.95
		----------	Amount	Calc.	%Drift	----------		
88		Methyl Parathion	50.000	52.673	-5.3	107	0.00	11.20
		----------	AvgRF	CCRF	%Dev	----------		
89	P	Di-n-butylphthalate	1.418	1.467	-3.5	102	0.00	11.48
		----------	Amount	Calc.	%Drift	----------		
90		Ethyl Parathion	50.000	54.182	-8.4	110	0.00	11.68
		----------	AvgRF	CCRF	%Dev	----------		
91	P	Fluoranthene	1.069	1.079	-0.9	101	0.00	12.09
92	I	Chrysene-d12	1.000	1.000	0.0	107	0.00	13.83
		----------	Amount	Calc.	%Drift	----------		
93		Benzidine	50.000	41.813	16.4	96	0.00	12.28
		----------	AvgRF	CCRF	%Dev	----------		
94	P	Pyrene	1.648	1.534	6.9	102	0.00	12.34
95	S	Terphenyl-d14	0.915	0.862	5.8	102	0.00	12.58
96		Famphur	0.559	0.511	8.6	98	0.00	13.18
97	P	Butylbenzylphthalate	0.927	0.893	3.7	102	0.00	13.24
98	P	3,3'-Dichlorobenzidine	0.414	0.417	-0.7	106	0.00	13.83
99	P	Benzo[a]anthracene	1.255	1.192	5.0	104	0.00	13.81
100	P	Chrysene	1.180	1.101	6.7	102	0.00	13.87
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.090	0.6	104	0.00	14.05
102	I	Perylene-d12	1.000	1.000	0.0	101	0.00	15.81
103	P	Di-n-octylphthalate	2.196	2.399	-9.2	106	0.00	14.92
104	P	Benzo[b]fluoranthene	1.203	1.224	-1.7	104	0.00	15.30
105	P	Benzo[k]fluoranthene	1.179	1.199	-1.7	102	0.00	15.33
106	P	Benzo[a]pyrene	1.142	1.164	-1.9	104	0.00	15.73
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.950	-4.7	104	0.00	17.15
108	P	Dibenz[a,h]anthracene	0.947	0.955	-0.8	101	0.00	17.18
109	P	Benzo[g,h,i]perylene	1.020	1.025	-0.5	102	0.00	17.44

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

7.7.9

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Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2040-CC2038
Lab FileID: X046061.D

```
x045998.D  8270d0426.m       Fri Apr 29 13:56:54 2016
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Continuing Calibration Summary

Job Number: FA33144 **Sample:** SX2040-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046095.D
Project: Rocky Mtn Landfill; NC

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\DATA\sx2040\x046095.D          Vial: 2
Acq On    : 28 Apr 2016  10:49 pm                   Operator: marthav
Sample    : ecc2038-50                              Inst    : MSBNA05
Misc      : op60029,sx2040,1000,,,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	5.49
2		1,4-Dioxane	0.782	0.749	4.2	89	0.00	2.37
3		N-nitrosodimethylamine	0.815	0.846	-3.8	97	0.00	2.74
4		Pyridine	1.992	2.014	-1.1	96	0.00	2.74
5	P	Benzaldehyde	1.186	1.171	1.3	92	0.00	5.03
6		Aniline	2.241	2.358	-5.2	98	0.00	5.19
7	S	2-Fluorophenol	1.521	1.591	-4.6	97	0.00	4.19
8	P	bis(2-Chloroethyl)ether	1.416	1.475	-4.2	97	0.00	5.26
9	S	Phenol-d5	1.579	1.618	-2.5	97	0.00	5.20
10	P	Phenol	1.795	1.965	-9.5	107	0.00	5.21
11	P	2-Chlorophenol	1.536	1.599	-4.1	98	0.00	5.30
12		1,3-Dichlorobenzene	1.606	1.644	-2.4	97	0.00	5.45
13		1,4-Dichlorobenzene	1.573	1.603	-1.9	96	0.00	5.51
14		1,2-Dichlorobenzene	1.478	1.516	-2.6	96	0.00	5.71
15		Benzyl alcohol	0.962	1.016	-5.6	99	0.00	5.68
16	P	bis(2-chloroisopropyl)eth	2.373	2.522	-6.3	99	0.00	5.86
17	P	2-Methylphenol	1.253	1.324	-5.7	99	0.00	5.84
18	P	Acetophenone	1.771	1.815	-2.5	98	0.00	5.97
19	P	Hexachloroethane	0.580	0.598	-3.1	96	0.00	6.05
20	P	N-Nitroso-di-n-propylamin	0.708	0.738	-4.2	99	0.01	6.01
21	P	3&4-Methylphenol	1.280	1.350	-5.5	100	0.00	6.01
22	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00	6.91
23	S	Nitrobenzene-d5	0.324	0.339	-4.6	99	0.00	6.13
24	P	Nitrobenzene	0.326	0.335	-2.8	98	0.00	6.15
25	P	Isophorone	0.620	0.641	-3.4	98	0.00	6.42
26	P	2-Nitrophenol	0.194	0.218	-12.4	103	0.00	6.51
27	P	2,4-Dimethylphenol	0.312	0.318	-1.9	98	0.00	6.59
28		O,O,O-Triethylphosphoroth	0.136	0.136	0.0	98	0.00	6.72
29	P	bis(2-Chloroethoxy)methan	0.428	0.429	-0.2	94	0.00	6.69
		----------	Amount	Calc.	%Drift		----------	
30		Benzoic Acid	50.000	55.860	-11.7	111	0.02	6.73
		----------	AvgRF	CCRF	%Dev		----------	
31	P	2,4-Dichlorophenol	0.281	0.287	-2.1	97	0.00	6.78
32		1,2,4-Trichlorobenzene	0.281	0.287	-2.1	98	0.00	6.87
33		alpha-Terpineol		----------NA----------				
34	P	Naphthalene	0.990	1.002	-1.2	98	0.00	6.93
35	P	4-Chloroaniline	0.429	0.443	-3.3	100	0.00	7.04
36		2,6-Dichlorophenol	0.266	0.268	-0.8	98	0.00	7.05
37	P	Hexachlorobutadiene	0.122	0.124	-1.6	96	0.00	7.16

Continuing Calibration Summary

Job Number: FA33144 **Sample:** SX2040-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046095.D
Project: Rocky Mtn Landfill; NC

38	P	Caprolactam	0.109	0.118	-8.3	103	0.03	7.41
39	P	4-Chloro-3-methylphenol	0.257	0.270	-5.1	99	0.00	7.63
40	P	2-Methylnaphthalene	0.662	0.681	-2.9	98	0.00	7.73
41		1-Methylnaphthalene	0.613	0.631	-2.9	98	0.00	7.85
42	P	1,2,4,5-Tetrachlorobenzen	0.229	0.236	-3.1	99	0.00	7.97
43	I	Acenaphthene-d10	1.000	1.000	0.0	99	0.00	8.95
44	P	Hexachlorocyclopentadiene	0.270	0.287	-6.3	103	0.00	8.00
45	P	2,4,6-Trichlorophenol	0.358	0.361	-0.8	99	0.00	8.10
46	P	2,4,5-Trichlorophenol	0.372	0.375	-0.8	102	0.00	8.15
47	S	2-Fluorobiphenyl	1.306	1.277	2.2	99	0.00	8.19
48	P	1,1'-Biphenyl	1.497	1.446	3.4	102	0.00	8.29
49	P	2-Chloronaphthalene	1.119	1.091	2.5	100	0.00	8.28
50	P	2-Nitroaniline	0.330	0.359	-8.8	102	0.00	8.46
		----------	Amount	Calc.	%Drift	----------		
51		p-Dinitrobenzene	50.000	53.205	-6.4	110	0.00	8.59
		----------	AvgRF	CCRF	%Dev	----------		
52	P	Acenaphthylene	1.960	1.991	-1.6	102	0.00	8.77
53	P	Dimethylphthalate	1.242	1.250	-0.6	100	0.00	8.73
		----------	Amount	Calc.	%Drift	----------		
54		m-Dinitrobenzene	50.000	52.754	-5.5	106	0.00	8.72
55	P	2,6-Dinitrotoluene	50.000	51.548	-3.1	107	0.00	8.80
		----------	AvgRF	CCRF	%Dev	----------		
56		o-Dinitrobenzene	0.197	0.214	-8.6	106	0.00	8.87
57	P	Acenaphthene	1.168	1.159	0.8	100	0.00	8.99
58	P	3-Nitroaniline	0.387	0.405	-4.7	103	0.00	8.95
		----------	Amount	Calc.	%Drift	----------		
59	P	2,4-Dinitrophenol	50.000	63.276	-26.6	150	0.00	9.06
		----------	AvgRF	CCRF	%Dev	----------		
60	P	Dibenzofuran	1.558	1.543	1.0	101	0.00	9.18
		----------	Amount	Calc.	%Drift	----------		
61	P	2,4-Dinitrotoluene	50.000	51.675	-3.3	104	0.00	9.25
		----------	AvgRF	CCRF	%Dev	----------		
62	P	4-Nitrophenol	0.135	0.146	-8.1	103	0.00	9.18
63		2,3,5,6-Tetrachlorophenol	0.229	0.251	-9.6	103	0.00	9.33
64	P	2,3,4,6-Tetrachlorophenol	0.235	0.249	-6.0	101	0.00	9.38
65	P	Fluorene	1.209	1.192	1.4	100	0.00	9.58
66	P	4-Chlorophenyl-phenylethe	0.498	0.501	-0.6	100	0.00	9.60
67	P	Diethylphthalate	1.230	1.236	-0.5	101	0.00	9.57
68		Thionazin	0.264	0.262	0.8	102	0.00	9.66
		----------	Amount	Calc.	%Drift	----------		
69	P	4-Nitroaniline	50.000	49.908	0.2	102	0.01	9.67
		----------	AvgRF	CCRF	%Dev	----------		
70	I	Phenanthrene-d10	1.000	1.000	0.0	100	0.00	10.66
		----------	Amount	Calc.	%Drift	----------		
71	P	4,6-Dinitro-2-methylpheno	50.000	58.155	-16.3	126	0.00	9.71
		----------	AvgRF	CCRF	%Dev	----------		

7.7.10

7

Continuing Calibration Summary

Job Number: FA33144 **Sample:** SX2040-ECC2038
Account: URSNCM AECOM, INC. **Lab FileID:** X046095.D
Project: Rocky Mtn Landfill; NC

72	P	n-Nitrosodiphenylamine	0.591	0.580	1.9	103	0.00	9.75
73		Diphenylamine	0.710	0.696	2.0	103	0.00	9.75
74		1,2-Diphenylhydrazine	0.817	0.779	4.7	101	0.00	9.78
75	S	2,4,6-Tribromophenol	0.076	0.082	-7.9	104	0.00	9.89
76		Sulfotep	0.133	0.129	3.0	102	0.00	10.09
77		Phorate	0.521	0.503	3.5	100	0.00	10.15
78	P	4-Bromophenyl-phenylether	0.176	0.174	1.1	100	0.00	10.17
79	P	Hexachlorobenzene	0.174	0.175	-0.6	101	0.00	10.32
80		Dimethoate	0.369	0.384	-4.1	106	0.00	10.35
81		Simazine	0.081	0.079	2.5	99	0.00	10.39
82	P	Atrazine	0.194	0.196	-1.0	104	0.00	10.44
		----------	Amount	Calc.	%Drift		----------	
83	P	Pentachlorophenol	50.000	58.461	-16.9	123	0.00	10.53
		----------	AvgRF	CCRF	%Dev		----------	
84	P	Phenanthrene	1.116	1.100	1.4	101	0.00	10.68
85	P	Anthracene	1.118	1.110	0.7	102	0.00	10.74
86		Disulfoton	0.452	0.433	4.2	103	0.00	10.76
87	P	Carbazole	1.133	1.151	-1.6	104	0.00	10.95
		----------	Amount	Calc.	%Drift		----------	
88		Methyl Parathion	50.000	54.014	-8.0	111	0.00	11.20
		----------	AvgRF	CCRF	%Dev		----------	
89	P	Di-n-butylphthalate	1.418	1.472	-3.8	103	0.00	11.48
		----------	Amount	Calc.	%Drift		----------	
90		Ethyl Parathion	50.000	55.244	-10.5	113	0.00	11.67
		----------	AvgRF	CCRF	%Dev		----------	
91	P	Fluoranthene	1.069	1.092	-2.2	103	0.00	12.09
92	I	Chrysene-d12	1.000	1.000	0.0	114	0.00	13.83
		----------	Amount	Calc.	%Drift		----------	
93		Benzidine	50.000	38.775	22.5	96	0.00	12.28
		----------	AvgRF	CCRF	%Dev		----------	
94	P	Pyrene	1.648	1.460	11.4	103	0.00	12.34
95	S	Terphenyl-d14	0.915	0.820	10.4	103	0.00	12.58
96		Famphur	0.559	0.514	8.1	105	0.00	13.17
97	P	Butylbenzylphthalate	0.927	0.847	8.6	103	0.00	13.24
98	P	3,3'-Dichlorobenzidine	0.414	0.386	6.8	104	0.00	13.83
99	P	Benzo[a]anthracene	1.255	1.161	7.5	108	0.00	13.81
100	P	Chrysene	1.180	1.074	9.0	106	0.00	13.86
101	P	bis(2-Ethylhexyl)phthalat	1.097	1.029	6.2	104	-0.01	14.05
102	I	Perylene-d12	1.000	1.000	0.0	106	0.00	15.80
103	P	Di-n-octylphthalate	2.196	2.278	-3.7	106	0.00	14.92
104	P	Benzo[b]fluoranthene	1.203	1.222	-1.6	110	0.00	15.29
105	P	Benzo[k]fluoranthene	1.179	1.208	-2.5	108	0.00	15.33
106	P	Benzo[a]pyrene	1.142	1.155	-1.1	109	0.00	15.72
107	P	Indeno[1,2,3-cd]pyrene	0.907	0.913	-0.7	105	0.00	17.14
108	P	Dibenz[a,h]anthracene	0.947	0.940	0.7	105	0.00	17.18
109	P	Benzo[g,h,i]perylene	1.020	1.033	-1.3	108	0.00	17.43

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

7.7.10

7

Continuing Calibration Summary

Job Number: FA33144
Account: URSNCM AECOM, INC.
Project: Rocky Mtn Landfill; NC

Sample: SX2040-ECC2038
Lab FileID: X046095.D

```
x045998.D  8270d0426.m       Fri Apr 29 14:59:17 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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

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

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

Methods: EPA 245.1

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 FA33144)
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	FA33144-2	1		
12:30	FA33144-3	1		
12:32	MA13112-CCV2	1		
12:33	MA13112-CCB2	1		
12:35	FA33144-4	1		
12:36	FA33144-5	1		
----------> Last reportable sample/prep for job FA33144				
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 FA33144)

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

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

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

Methods: EPA 245.1

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 FA33144)
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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

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

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

Methods: EPA 245.1

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 FA33144)
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	ZZZZZZ	1		
14:16	MA13112-CRI2	1		
14:18	MA13112-CCV8	1		
14:19	MA13112-CCB8	1		

----------> Last reportable CCB for job FA33144
Refer to raw data for calibration curve and standards.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: H50426W2.CSV
QC Limits: 90 to 110 % Recovery

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

Methods: EPA 245.1
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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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

HIGH STANDARD CHECK SUMMARY

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; 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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

QC Batch ID: MP30277
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	0.0039	<0.50

Associated samples MP30277: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

QC Batch ID: MP30277
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

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

Metal	FA33143-2 Original	DUP	RPD	QC Limits	FA33143-2 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	3.0	3	100.0	70-130

Associated samples MP30277: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

QC Batch ID: MP30277 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/26/16

Metal	FA33143-2 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.1	3	103.3	3.3	

Associated samples MP30277: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

QC Batch ID: MP30277
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.1	3	103.3	85-115

Associated samples MP30277: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

QC Batch ID: MP30277
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 04/26/16

Metal	FA33143-2 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP30277: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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

8.2.4

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: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP27787/GN70588	0.50	0.0	mg/l	12.5	13.1	104.8	90-110%
Chloride	GP27787/GN70588	2.0	0.0	mg/l	50	50.9	101.8	90-110%
Fluoride	GP27787/GN70588	0.20	0.0	mg/l	2.5	2.77	110.8*(a)	90-110%
Nitrogen, Ammonia	GP27841/GN70710	0.10	0.0	mg/l	2.5	2.47	98.8	90-110%
Nitrogen, Nitrate	GP27787/GN70588	0.10	0.0	mg/l	2.5	2.45	98.0	90-110%
Nitrogen, Nitrite	GP27787/GN70588	0.10	0.0	mg/l	2.5	2.73	109.2	90-110%
Sulfate	GP27787/GN70588	2.0	0.0	mg/l	50	51.2	102.4	90-110%

Associated Samples:
Batch GP27787: FA33144-2, FA33144-3, FA33144-4, FA33144-5
Batch GP27841: FA33144-2, FA33144-3, FA33144-4, FA33144-5
(*) Outside of QC limits
(a) Possible positive bias, but associated sample results < DL

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP27787/GN70588	FA33096-6	mg/l	0.12 U	12.5	12.6	100.8	90-110%
Chloride	GP27787/GN70588	FA33096-6	mg/l	6.9	50	56.1	98.4	90-110%
Fluoride	GP27787/GN70588	FA33096-6	mg/l	0.11	2.5	2.7	103.6	90-110%
Nitrogen, Ammonia	GP27841/GN70710	FA33143-2	mg/l	0.026	2.5	2.4	96.0	90-110%
Nitrogen, Nitrate	GP27787/GN70588	FA33096-6	mg/l	1.4	2.5	3.8	96.0	90-110%
Nitrogen, Nitrite	GP27787/GN70588	FA33096-6	mg/l	0.050 U	2.5	2.6	104.0	90-110%
Sulfate	GP27787/GN70588	FA33096-6	mg/l	16.9	50	66.3	98.8	90-110%

Associated Samples:
Batch GP27787: FA33144-2, FA33144-3, FA33144-4, FA33144-5
Batch GP27841: FA33144-2, FA33144-3, FA33144-4, FA33144-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP27787/GN70588	FA33096-6	mg/l	0.12 U	12.5	12.6	0.0	20%
Chloride	GP27787/GN70588	FA33096-6	mg/l	6.9	50	56.2	0.2	20%
Fluoride	GP27787/GN70588	FA33096-6	mg/l	0.11	2.5	2.7	0.0	20%
Nitrogen, Ammonia	GP27841/GN70710	FA33143-2	mg/l	0.026	2.5	2.4	0.0	20%
Nitrogen, Nitrate	GP27787/GN70588	FA33096-6	mg/l	1.4	2.5	3.8	0.0	20%
Nitrogen, Nitrite	GP27787/GN70588	FA33096-6	mg/l	0.050 U	2.5	2.7	3.8	20%
Sulfate	GP27787/GN70588	FA33096-6	mg/l	16.9	50	66.3	0.0	20%

Associated Samples:
Batch GP27787: FA33144-2, FA33144-3, FA33144-4, FA33144-5
Batch GP27841: FA33144-2, FA33144-3, FA33144-4, FA33144-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: 316041501.TXT Date Analyzed: 04/15/16 Methods: EPA 300/SW846 9056A
Analyst: LJ Run ID: GN70588
Parameters: Nitrogen, Nitrate,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
08:28	GN70588-CCV1	1		
08:41	GP27787-MB1	1		
08:55	ZZZZZZ	1		
09:09	ZZZZZZ	1		
09:23	ZZZZZZ	1		
09:37	ZZZZZZ	1		
09:51	ZZZZZZ	1		
10:05	ZZZZZZ	1		
10:19	ZZZZZZ	1		
10:33	ZZZZZZ	1		
10:47	ZZZZZZ	1		
11:01	FA33096-6	1		(sample used for QC only; not part of login FA33144)
11:15	GN70588-CCV2	1		
11:29	GN70588-CCB1	1		
11:42	GP27786-S1	1		
11:56	GP27786-S2	1		
12:10	GP27786-S3	1		
12:24	GP27786-S4	1		
12:38	GP27787-B1	1		
12:52	ZZZZZZ	1		
13:06	ZZZZZZ	1		
13:20	GP27787-S1	1		
13:34	GP27787-S2	1		
13:48	ZZZZZZ	2		
14:02	GN70588-CCV3	1		
14:16	GN70588-CCB2	1		
14:30	FA33144-2	1		
14:44	FA33144-3	1		
14:58	FA33144-4	1		
15:11	FA33144-5	1		
15:25	ZZZZZZ	1		
15:39	ZZZZZZ	1		
15:53	FA33143-3	1		(sample used for QC only; not part of login FA33144)

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: 316041501.TXT Date Analyzed: 04/15/16 Methods: EPA 300/SW846 9056A
Analyst: LJ Run ID: GN70588
Parameters: Nitrogen, Nitrate,Sulfate

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:07	GP27787-S3	1		
16:21	GP27787-S4	1		
16:35	ZZZZZZ	2		
16:49	GN70588-CCV4	1		
17:02	GN70588-CCB3	1		
17:16	ZZZZZZ	2		
17:30	ZZZZZZ	2		
17:44	ZZZZZZ	10		
17:58	ZZZZZZ	10		
18:12	ZZZZZZ	10		
18:54	FA33094-4	1		(sample used for QC only; not part of login FA33144)
19:08	GP27797-S1	1		
19:22	GP27797-S2	1		
19:36	GN70588-CCV5	1		
19:50	GN70588-CCB4	1		
20:04	GP27797-MB1	1		
20:17	GP27797-B1	1		
20:31	GN70588-CCV6	1		
20:45	GN70588-CCB5	1		

Refer to raw data for calibration curve and standards.

Instrument QC Summary
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: 316041501.TXT
Date Analyzed: 04/15/16
Run ID: GN70588
Methods: EPA 300/SW846 9056A
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70588-CCV1	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70588-CCV1	Sulfate	50.0	2.0	0.60	50	100.0	90-110
GN70588-CCV2	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70588-CCV2	Sulfate	50.0	2.0	0.60	50	100.0	90-110
GN70588-CCB1	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70588-CCB1	Sulfate	0.60 U	2.0	0.60			
GN70588-CCV3	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70588-CCV3	Sulfate	50.0	2.0	0.60	50	100.0	90-110
GN70588-CCB2	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70588-CCB2	Sulfate	0.60 U	2.0	0.60			
GN70588-CCV4	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70588-CCV4	Sulfate	50.2	2.0	0.60	50	100.4	90-110
GN70588-CCB3	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70588-CCB3	Sulfate	0.60 U	2.0	0.60			
GN70588-CCV5	Nitrogen, Nitrate	2.4	0.10	0.050	2.5	96.0	90-110
GN70588-CCV5	Sulfate	50.2	2.0	0.60	50	100.4	90-110
GN70588-CCB4	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70588-CCB4	Sulfate	0.60 U	2.0	0.60			
GN70588-CCV6	Nitrogen, Nitrate	2.5	0.10	0.050	2.5	100.0	90-110
GN70588-CCV6	Sulfate	50.7	2.0	0.60	50	101.4	90-110
GN70588-CCB5	Nitrogen, Nitrate	0.050 U	0.10	0.050			
GN70588-CCB5	Sulfate	0.60 U	2.0	0.60			

(!) Outside of QC limits

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: B042616AMN1.CSV Date Analyzed: 04/26/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70710
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:36	GN70710-ICV1	1		
14:37	GN70710-CCV1	1		
14:38	GN70710-CCB1	1		
14:39	GP27841-MB1	1		
14:41	GP27841-B1	1		
14:44	GP27841-S1	1		
14:45	GP27841-S2	1		
14:46	FA33143-2	1		(sample used for QC only; not part of login FA33144)
14:47	ZZZZZZ	1		
14:48	FA33144-2	1		
14:50	FA33144-3	1		
14:51	GN70710-CCV2	1		
14:52	GN70710-CCB2	1		
14:53	FA33144-4	1		
14:54	FA33144-5	1		
14:55	ZZZZZZ	1		
14:56	ZZZZZZ	1		
14:57	ZZZZZZ	1		
14:58	ZZZZZZ	1		
15:00	GP27841-S3	1		
15:01	GP27841-S4	1		
15:02	FA33088-1	1		(sample used for QC only; not part of login FA33144)
15:03	ZZZZZZ	1		
15:04	GN70710-CCV3	1		
15:05	GN70710-CCB3	1		
15:06	ZZZZZZ	1		
15:07	ZZZZZZ	1		
15:09	ZZZZZZ	1		
15:10	ZZZZZZ	1		
15:11	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:13	ZZZZZZ	1		
15:14	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: B042616AMN1.CSV Date Analyzed: 04/26/16 Methods: EPA 350.1
Analyst: JK Run ID: GN70710
Parameters: Nitrogen, Ammonia

Time	Sample Description	Dilution Factor	PS Recov	Comments
15:17	GN70710-CCV4	1		
15:18	GN70710-CCB4	1		

Refer to raw data for calibration curve and standards.

9.5

9

Instrument QC Summary
Inorganics Analyses

Login Number: FA33144
Account: URSNCM - AECOM, INC.
Project: Rocky Mtn Landfill; NC

File ID: B042616AMN1.CSV
Date Analyzed: 04/26/16
Run ID: GN70710
Methods: EPA 350.1
Units: mg/l

Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN70710-ICV1	Nitrogen, Ammonia	2.6	0.10	0.030	2.5	104.0	90-110
GN70710-CCV1	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70710-CCB1	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70710-CCV2	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70710-CCB2	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70710-CCV3	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70710-CCB3	Nitrogen, Ammonia	0.030 U	0.10	0.030			
GN70710-CCV4	Nitrogen, Ammonia	2.5	0.10	0.030	2.5	100.0	90-110
GN70710-CCB4	Nitrogen, Ammonia	0.030 U	0.10	0.030			

(!) Outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(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 0053
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest Job FA33144

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: Rocky Mtn Landfill; 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	WELL-4832 COMMUNITY		4/14/16	9:40:00 AM	JAJC	AQ	1			1						X	
3	WELL-4837 COMMUNITY		4/14/16	10:20:00 AM	JAJC	AQ	1			1						X	FL
4	WELL-4825 COMMUNITY		4/14/16	10:50:00 AM	JAJC	AQ	1			1						X	
5	DUP-1		4/14/16	9:45:00 AM	JAJC	AQ	1			1						X	

Number of preserved Bottles

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
- [x] 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)
- [x] Other REDT1
- [ ] EDD Format

Comments / Special Instructions

ALNJ

INITIAL ASESSMENT mm 28

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 J. Cooper (AJ35)	4-18-16 17:00	1 Fx	2 Fx	4-19-16 9:40	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 [ ] On Ice [ ] Cooler Temp. 4.2°C IP

10.1 10

FA33144: Chain of Custody
Page 1 of 2
Accutest New Jersey

SGS Accutest Sample Receipt Summary

Job Number: FA33144 **Client:** _____ **Project:** _____

Date / Time Received: 4/19/2016 9:40:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (4.2);

Cooler Temps (Corrected) °C: Cooler 1: (4.6);

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

FA33144: Chain of Custody

Page 2 of 2

Analyst Legend

Job Number: FA33144
Account: ALSE Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

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

Metals Analysis

QC Data Summaries

(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: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:21	MA39240-STD1	1		STDA
09:25	MA39240-STD2	1		STDA
09:30	MA39240-STD3	1		STDA
09:34	MA39240-STD4	1		STDB
09:39	MA39240-STD5	1		STDC
09:43	MA39240-STD6	1		STDD
09:48	MA39240-STD7	1		STDE
09:52	MA39240-STD8	1		STDF
09:56	MA39240-STD9	1		STDG
10:01	MA39240-STD10	1		STDH
10:05	MA39240-STD11	1		STDI
10:10	MA39240-STD12	1		STDJ
10:14	ZZZZZZ	1		
10:19	MA39240-ICVA1	1		
10:23	MA39240-ICV1	1		60ppb Al.
10:27	MA39240-ICB1	1		
10:32	MA39240-CRI1	1		
10:36	MA39240-ICSA1	1		
10:41	MA39240-ICSAB1	1		
10:46	ZZZZZZ	1		
10:50	MA39240-CCVA1	1		
10:54	MA39240-CCB1	1		
11:04	MA39240-CCVA2	1		
11:11	MA39240-CCB2	1		
11:15	ZZZZZZ	1		
11:19	ZZZZZZ	1		
11:24	ZZZZZZ	2		
11:28	ZZZZZZ	1		
11:33	ZZZZZZ	1		
11:37	ZZZZZZ	1		
11:41	ZZZZZZ	1		
11:46	MA39240-CRI2	1		
11:50	MA39240-CCVA3	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:56	MA39240-CCB3	1		
12:00	ZZZZZZ	1		
12:04	ZZZZZZ	10		
12:09	ZZZZZZ	2		
12:13	ZZZZZZ	2		
12:18	ZZZZZZ	2		
12:22	MA39240-CRI3	1		
12:27	MA39240-CCVA4	1		
12:31	MA39240-CCB4	1		
12:35	ZZZZZZ	1		
12:40	ZZZZZZ	10		
12:44	ZZZZZZ	5		
12:49	ZZZZZZ	5		
12:53	ZZZZZZ	1		
12:58	MA39240-CRI4	1		
13:02	ZZZZZZ	1		
13:06	MA39240-CCVA5	1		
13:11	MA39240-CCB5	1		
13:15	ZZZZZZ	5		
13:20	ZZZZZZ	1		
13:24	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:37	ZZZZZZ	1		
13:42	MA39240-CCVA6	1		
13:46	MA39240-CCB6	1		
13:51	MP93121-MB2	2		
13:55	MP93121-B2	10		
13:59	MP93121-S3	20		
14:04	MP93121-S4	20		
14:08	ZZZZZZ	1		
14:13	MA39240-CRI5	1		
14:17	MA39240-CCVA7	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	14:22	MA39240-CCB7	1		
	14:26	MP93244-MB1	1		
	14:31	ZZZZZZ	1		
	14:35	MP93244-S1	1		
	14:42	MP93244-S2	1		
	14:46	MP93244-B1	1		
	14:51	ZZZZZZ	1		
	14:55	JC18052-16	1		(sample used for QC only; not part of login FA33144)
	15:00	FA33144-2	1		
	15:04	MA39240-CCVA8	1		
	15:08	MA39240-CCB8	1		
	15:13	FA33144-3	1		
	15:17	FA33144-4	1		
	15:22	FA33144-5	1		
	15:26	MA39240-CCVA9	1		
	15:31	MA39240-CCB9	1		
	15:35	MP93244-B1	2		Ag
	15:40	MP93244-S1	2		Ag
	15:44	MP93244-S2	2		Ag
---------->	Last reportable sample/prep for job FA33144				
	15:48	ZZZZZZ	1		
	15:53	ZZZZZZ	1		
	15:57	ZZZZZZ	1		
	16:02	ZZZZZZ	1		
	16:06	ZZZZZZ	1		
	16:11	MA39240-CCVA10	1		
	16:15	MA39240-CCB10	1		
---------->	Last reportable CCB for job FA33144				
	16:19	MP93260-MB1	1		Batch to reanalysis for Cu and Ni, CCV out
	16:24	MP93260-B1	1		To dilution for Ag
	16:28	MP93260-S1	1		To reanalysis at 1:10
	16:33	MP93260-S2	1		To reanalysis at 1:10
	16:38	ZZZZZZ	1		
	16:42	ZZZZZZ	1		
	16:46	ZZZZZZ	1		

SGS Accutest Instrument Runlog
Inorganics Analyses

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
16:51	ZZZZZZ	1		
16:56	ZZZZZZ	1		
17:01	MA39240-CCVA11	1		
17:05	MA39240-CCB11	1		
17:10	MP93260-S1	25		Not needed
17:14	MP93260-S2	25		Not needed
17:19	JC18617-3	25		(sample used for QC only; not part of login FA33144)
17:23	ZZZZZZ	25		
17:28	ZZZZZZ	1		
17:32	ZZZZZZ	1		
17:37	ZZZZZZ	1		
17:41	ZZZZZZ	1		
17:46	ZZZZZZ	1		
17:50	MA39240-CCVA12	1		
17:54	MA39240-CCB12	1		
17:59	ZZZZZZ	1		
18:03	ZZZZZZ	1		
18:08	ZZZZZZ	1		
18:12	ZZZZZZ	1		
18:17	ZZZZZZ	1		
18:22	ZZZZZZ	1		
18:26	ZZZZZZ	1		
18:30	MA39240-CCVA13	1		
18:35	MA39240-CCB13	1		
18:39	ZZZZZZ	1		
18:44	ZZZZZZ	1		
18:48	ZZZZZZ	1		
18:53	ZZZZZZ	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
09:21	MA39240-STD1	100	100	100	100	100	100	100	100
09:25	MA39240-STD2	100	100	100	100	100	100	100	100
09:30	MA39240-STD3	100	100	100	100	100	100	100	100
09:34	MA39240-STD4	100.16	99.707	99.448	99.635	99.831	99.907	99.668	100.709
09:39	MA39240-STD5	102.092	100.051	100.229	100.165	100.243	100.098	100.116	99.793
09:43	MA39240-STD6	102.38	100.399	99.648	100.613	100.641	99.838	100.35	100.512
09:48	MA39240-STD7	103.912	100.964	99.205	99.948	100.725	100.263	99.944	101.197
09:52	MA39240-STD8	103.333	99.943	98.036	99.375	100.09	100.115	99.544	100.548
09:56	MA39240-STD9	101.852	98.215	97.623	98.749	98.498	97.529	98.739	97.631
10:01	MA39240-STD10	101.959	99.988	98.393	101.044	98.208	98.355	99.578	97.902
10:05	MA39240-STD11	103.159	100.308	97.63	99.043	99.874	97.633	97.461	97.274
10:10	MA39240-STD12	102.561	98.411	97.25	98.98	96.02	96.991	97.024	95.509
10:14	ZZZZZZ	102.898	96.927	96.39	98.239	97.354	97.603	97.974	98.197
10:19	MA39240-ICVA1	103.021	97.769	96.33	97.132	95.843	96.566	97.558	95.659
10:23	MA39240-ICV1	102.937	96.394	95.145	95.633	97.085	97.061	96.38	97.744
10:27	MA39240-ICB1	103.725	96.81	95.329	96.594	97.021	96.463	97.332	97.908
10:32	MA39240-CRI1	102.568	95.742	94.923	97.224	96.433	96.759	97.8	97.136
10:36	MA39240-ICSA1	93.555	90.729	92.717	95.588	89.022	91.023	91.135	84.095
10:41	MA39240-ICSAB1	98.733	97.797	98.92	101.071	94.331	96.658	96.476	87.661
10:46	ZZZZZZ	109.032	105.289	103.781	104.901	104.309	105.037	103.551	103.311
10:50	MA39240-CCVA1	107.181	102.879	102.173	101.947	101.565	102.689	101.125	100.144
10:54	MA39240-CCB1	106.729	101.945	101.294	101.832	101.417	102.68	102.919	101.953
11:04	MA39240-CCVA2	106.613	102.247	102.468	101.252	100.785	102.914	100.308	99.608
11:11	MA39240-CCB2	107.407	102.625	100.461	100.584	101.932	102.646	100.542	102.227
11:15	ZZZZZZ	110.132	104.493	103.107	104.606	104.174	104.419	104.522	102.631
11:19	ZZZZZZ	107.245	103.912	102.134	99.406	102.743	103.641	100.119	101.104
11:24	ZZZZZZ	105.086	101.565	99.405	100.129	101.602	102.189	101.51	101.733
11:28	ZZZZZZ	103.638	100.472	98.068	99.791	100.33	101.373	100.587	99.55
11:33	ZZZZZZ	107.809	102.519	102.254	103.031	102.48	103.209	103.403	101.146
11:37	ZZZZZZ	106.868	102.054	100.435	101.973	101.455	101.578	101.913	100.194
11:41	ZZZZZZ	105.475	101.43	99.337	100.992	101.215	100.839	101.081	101.804
11:46	MA39240-CRI2	105.123	100.779	98.226	100.697	100.047	100.4	99.575	99.543
11:50	MA39240-CCVA3	104.334	100.956	99.483	100.864	100.781	100.572	99.266	98.606

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
11:56	MA39240-CCB3	105.243	100.416	98.235	99.215	99.695	100.376	99.815	99.751
12:00	ZZZZZZ	107.265	100.124	98.889	102.345	101.385	103.298	108.289	96.579
12:04	ZZZZZZ	105.961	101.449	99.342	100	102.257	101.544	99.358	100.71
12:09	ZZZZZZ	107.012	98.821	97.727	101.015	100.161	102.216	104.347	96.321
12:13	ZZZZZZ	105.214	99.063	97.411	101.132	99.907	100.438	103.514	95.459
12:18	ZZZZZZ	99.832	95.902	93.619	95.918	96.18	95.305	96.296	96.418
12:22	MA39240-CRI3	98.731	95.25	94.058	95.584	96.353	95.538	95.577	96.066
12:27	MA39240-CCVA4	97.094	96.1	93.947	95.525	95.318	94.901	95.529	94.111
12:31	MA39240-CCB4	99.411	95.041	94.097	95.236	94.965	95.932	95.133	95.504
12:35	ZZZZZZ	100.69	97.147	96.391	98.66	96.355	98.201	99.978	94.762
12:40	ZZZZZZ	99.207	98.004	95.617	95.966	97.375	97.165	96.642	96.583
12:44	ZZZZZZ	100.971	95.581	94.939	98.939	96.413	97.115	98.911	93.773
12:49	ZZZZZZ	100.447	96.793	95.963	99.09	97.766	98.225	100.482	93.881
12:53	ZZZZZZ	99.613	96.977	94.674	96.445	96.936	96.175	97.229	96.738
12:58	MA39240-CRI4	100.061	95.754	94.405	95.977	96.759	96.498	96.327	97.147
13:02	ZZZZZZ	99.407	95.69	94.237	95.72	94.667	96.007	95.498	96.199
13:06	MA39240-CCVA5	98.785	96.054	94.293	94.983	95.289	95.789	94.947	94.498
13:11	MA39240-CCB5	98.954	95.448	93.468	95.026	95.295	95.226	94.945	96.399
13:15	ZZZZZZ	99.582	94.699	93.623	95.593	95.799	95.648	94.796	96.267
13:20	ZZZZZZ	99.415	96.167	93.768	97.203	95.377	95.58	96.656	95.857
13:24	ZZZZZZ	99.006	95.855	94.138	96.192	96.537	95.758	95.852	95.393
13:29	ZZZZZZ	99.082	96.046	94.21	95.664	95.94	95.428	95.986	97.042
13:33	ZZZZZZ	98.963	95.301	94.38	95.538	94.818	95.144	94.695	95.359
13:37	ZZZZZZ	97.485	95.587	93.776	95.27	95.628	96.097	95.657	96.094
13:42	MA39240-CCVA6	97.571	95.687	94.221	95.239	95.973	95.778	94.096	93.845
13:46	MA39240-CCB6	98.463	95.095	93.327	94.453	95.247	94.615	94.577	95.29
13:51	MP93121-MB2	101.954	95.726	94.665	98.198	96.262	96.631	99.128	94.708
13:55	MP93121-B2	98.907	96.239	94.464	95.33	96.606	95.877	94.625	95.86
13:59	MP93121-S3	95.955	93.049	91.03	92.734	93.638	94.168	94.244	92.357
14:04	MP93121-S4	94.951	92.578	90.693	90.467	93.544	94.137	92.233	92.346
14:08	ZZZZZZ	94.911	91.699	90.118	91.531	93.943	93.081	92.851	94.172
14:13	MA39240-CRI5	93.747	93.077	91.208	91.854	94.142	95.127	92.735	95.191
14:17	MA39240-CCVA7	95.133	93.1	92.792	92.29	93.513	95.355	93.291	93.495

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
14:22	MA39240-CCB7	96.281	93.567	92.1	93.265	95.091	94.613	93.677	94.723
14:26	MP93244-MB1	96.455	93.805	92.307	94.889	94.325	95.415	95.072	94.912
14:31	ZZZZZZ	96.606	94.015	92.112	93.63	95.114	95.176	94.37	94.281
14:35	MP93244-S1	95.709	93.223	92.258	93.674	94.28	95.606	94.93	93.033
14:42	MP93244-S2	97.083	93.709	92.322	93.107	94.19	94.949	94.182	92.614
14:46	MP93244-B1	96.123	93.079	91.16	91.624	94.781	93.897	93.165	93.17
14:51	ZZZZZZ	95.37	90.793	89.715	91.019	91.99	92.779	91.585	93.123
14:55	JC18052-16	96.271	91.77	91.256	92.526	91.941	93.566	92.958	90.694
15:00	FA33144-2	95.598	92.8	91.986	92.438	92.348	93.851	92.709	90.765
15:04	MA39240-CCVA8	94.758	91.789	91.001	92.063	92.074	93.331	92.407	91.464
15:08	MA39240-CCB8	96.865	91.53	90.534	91.764	92.514	93.476	92.399	94.001
15:13	FA33144-3	95.098	91.735	89.074	89.372	90.381	93.001	90.359	89.482
15:17	FA33144-4	93.251	90.61	88.836	89.877	90.504	91.352	89.984	88.94
15:22	FA33144-5	96.15	93.634	91.577	93.5	92.313	94.01	92.771	90.865
15:26	MA39240-CCVA9	97.85	92.893	91.626	91.747	92.998	93.877	91.621	91.44
15:31	MA39240-CCB9	97.218	92.577	90.91	92.366	93.17	92.816	92.728	92.499
15:35	MP93244-B1	98.759	93.382	91.514	92.127	93.923	94.433	92.77	92.771
15:40	MP93244-S1	97.092	91.899	90.622	91.328	92.463	92.928	92.859	91.393
15:44	MP93244-S2	96.893	91.333	90.269	91.262	92.049	93.941	92.471	90.614
15:48	ZZZZZZ	96.617	92.562	90.968	93.242	92.805	93.431	93.077	91.327
15:53	ZZZZZZ	97.288	91.8	90.571	91.375	93.5	93.565	93.42	91.011
15:57	ZZZZZZ	96.744	91.625	90.619	90.928	92.103	93.635	92.601	90.695
16:02	ZZZZZZ	97.463	93.053	91.028	92.159	92.844	93.652	92.631	90.891
16:06	ZZZZZZ	98.127	91.673	90.621	91.82	92.467	93.183	91.963	92.534
16:11	MA39240-CCVA10	96.477	92.849	91.451	92.054	92.691	92.394	92.241	91.438
16:15	MA39240-CCB10	95.248	90.677	88.913	89.802	91.569	91.001	90.362	91.642
16:19	MP93260-MB1	96.974	91.707	90.521	92.019	92.091	92.667	92.83	92.784
16:24	MP93260-B1	95.958	92.476	90.539	91.741	92.681	93.733	92.427	91.924
16:28	MP93260-S1	No results reported for the elements associated with this internal standard.							
16:33	MP93260-S2	No results reported for the elements associated with this internal standard.							
16:38	ZZZZZZ	118.39	120.976	121.318	114.069	112.5	115.076	107.424	107.531
16:42	ZZZZZZ	117.415	112.33	115.027	109.435	106.332	109.696	103.205	101.335
16:46	ZZZZZZ	117.316	107.763	111.068	106.839	104.227	105.81	100.631	100.067

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
16:51	ZZZZZZ	114.629	106.381	109.672	105.922	102.575	105.743	100.945	97.928
16:56	ZZZZZZ	111.648	105.741	109.718	106.332	102.905	105.947	101.66	98.121
17:01	MA39240-CCVA11	110.497	107.1	108.737	104.746	103.5	106.022	100.749	98.943
17:05	MA39240-CCB11	108.831	102.539	105.5	102.99	101.302	102.25	99.25	98.651
17:10	MP93260-S1	No results reported for the elements associated with this internal standard.							
17:14	MP93260-S2	No results reported for the elements associated with this internal standard.							
17:19	JC18617-3	No results reported for the elements associated with this internal standard.							
17:23	ZZZZZZ	No results reported for the elements associated with this internal standard.							
17:28	ZZZZZZ	100.24	95.697	94.935	93.674	95.115	95.513	92.611	93.044
17:32	ZZZZZZ	100.328	93.76	93.647	92.232	92.272	94.749	91.812	92.107
17:37	ZZZZZZ	97.701	96.541	94.412	94.196	92.703	94.873	92.869	90.189
17:41	ZZZZZZ	97.663	97.16	95.792	96.826	92.135	95.244	93.219	88.124
17:46	ZZZZZZ	108.22	106.606	104.349	102.129	99.494	101.112	98.74	94.901
17:50	MA39240-CCVA12	107.548	103.081	102.497	102.068	100.955	101.743	98.135	97.701
17:54	MA39240-CCB12	108.656	102.418	101.282	101.524	100.755	99.68	99.037	98.11
17:59	ZZZZZZ	103.107	102.909	102.219	103.36	98.139	99.799	97.732	90.639
18:03	ZZZZZZ	107.19	106.294	104.778	104.358	100.478	100.264	99.205	92.735
18:08	ZZZZZZ	106.109	106.088	104.286	103.684	99.69	99.226	97.013	91.118
18:12	ZZZZZZ	105.721	106.771	105.193	105.044	99.863	102.138	99.01	93.512
18:17	ZZZZZZ	102.984	104.682	102.188	102.647	97.737	98.054	97.169	90.423
18:22	ZZZZZZ	112.141	105	103.441	103.475	102.932	102.522	100.306	100.422
18:26	ZZZZZZ	107.939	101.132	99.992	100.207	100.035	99.654	97.312	98.461
18:30	MA39240-CCVA13	102.773	97.698	97.63	97.824	95.783	98.588	95.369	93.539
18:35	MA39240-CCB13	103.639	97.78	97.433	97.713	96.46	98.088	97.093	95.874
18:39	ZZZZZZ	98.737	97.001	97.04	98	94.455	96.708	95.114	89.382
18:44	ZZZZZZ	106.114	100.737	99.583	99.266	99.34	99.713	97.185	97.763
18:48	ZZZZZZ	106.083	99.579	98.58	99.509	98.197	99.065	96.845	97.289
18:53	ZZZZZZ	102.824	97.079	96.836	98.291	96.865	97.128	96.633	94.952

! = Outside limits.

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 %

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
Istd#8	Rhodium (103-1)		60-125 %	60-125 %					

11.1.1

11

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
09:21	MA39240-STD1	100	100	100	100	100	100	100	100
09:25	MA39240-STD2	100	100	100	100	100	100	100	100
09:30	MA39240-STD3	100	100	100	100	100	100	100	100
09:34	MA39240-STD4	99.47	100.26	99.598	99.662	100.961	100.252	100.256	101.113
09:39	MA39240-STD5	99.292	99.414	100.034	98.428	100.562	99.573	99.563	100.485
09:43	MA39240-STD6	100.195	100.245	100.565	98.271	101.464	100.642	99.905	101.176
09:48	MA39240-STD7	99.119	99.781	100.434	98.81	101.873	100.613	100.236	101.572
09:52	MA39240-STD8	99.307	99.784	100.246	98.435	102.16	101.765	100.612	101.331
09:56	MA39240-STD9	97.882	98.714	98.504	98.391	100.849	100.299	100.159	100.722
10:01	MA39240-STD10	98.036	98.887	99.423	97.525	100.847	99.313	100.844	101.477
10:05	MA39240-STD11	96.439	95.785	99.408	96.42	101.31	99.542	99.365	101.806
10:10	MA39240-STD12	94.722	95.654	96.301	95.781	100.137	99.754	100.212	100.687
10:14	ZZZZZZ	98.659	98.863	98.841	98.072	100.866	99.512	100.422	100.246
10:19	MA39240-ICVA1	96.009	95.187	96.687	95.695	99.503	99.041	99.195	99.535
10:23	MA39240-ICV1	98.404	98.191	98.751	97.556	100.853	99.876	100.202	100.347
10:27	MA39240-ICB1	98.293	98.589	98.849	97.889	100.555	99.837	100.331	100.896
10:32	MA39240-CRI1	98.087	98.106	97.648	97.124	100.244	99.048	100.233	100.521
10:36	MA39240-ICSA1	85.191	85.054	89.025	88.755	95.332	94.266	93.826	95.33
10:41	MA39240-ICSAB1	87.76	87.98	92.322	92.729	97.877	95.719	94.941	97.882
10:46	ZZZZZZ	102.947	102.166	103.952	104.053	104.471	103.242	102.059	103.621
10:50	MA39240-CCVA1	100.198	98.288	101.643	101.951	105.039	104.102	101.593	105.146
10:54	MA39240-CCB1	102.908	100.959	103.006	102.615	103.525	103.58	102.573	103.714
11:04	MA39240-CCVA2	100.4	97.21	101.061	101.674	103.466	104.309	100.126	104.174
11:11	MA39240-CCB2	102.303	100.124	101.97	101.897	103.614	103.439	100.635	104.087
11:15	ZZZZZZ	103.562	103.584	103.9	103.23	104.458	104.126	102.954	104.619
11:19	ZZZZZZ	101.633	96.105	101.566	100.971	104.082	103.342	97.847	104.044
11:24	ZZZZZZ	102.271	100.296	102.869	102.76	105.355	104.844	103.291	105.702
11:28	ZZZZZZ	100.425	99.023	100.112	99.416	103.026	102.111	101.213	102.58
11:33	ZZZZZZ	102.64	101.328	101.839	101.892	103.075	103.845	102.595	103.597
11:37	ZZZZZZ	101.32	99.907	101.649	100.89	103.055	101.947	101.28	102.781
11:41	ZZZZZZ	101.885	100.811	101.517	100.858	102.746	102.739	102.532	103.58
11:46	MA39240-CRI2	99.773	98.963	100.02	99.075	101.824	100.302	100.81	101.591
11:50	MA39240-CCVA3	98.59	97.554	99.62	99.365	103.896	102.168	101.563	103.174

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
11:56	MA39240-CCB3	100.31	98.735	100.184	99.106	102.259	101.291	99.24	102.103
12:00	ZZZZZZ	98.196	97.616	97.552	95.401	98.495	97.678	97.012	98.135
12:04	ZZZZZZ	101.034	99.444	100.881	100.199	104.557	103.443	102.604	104.823
12:09	ZZZZZZ	98.106	97.419	96.424	94.739	98.865	97.582	98.885	99.234
12:13	ZZZZZZ	96.705	96.413	96.054	93.535	97.582	96.088	97.608	98.799
12:18	ZZZZZZ	96.664	95.766	96.703	94.958	98.268	96.49	97.264	98.448
12:22	MA39240-CRI3	96.406	95.638	96.922	95.19	98.592	95.99	98.018	99.011
12:27	MA39240-CCVA4	94.745	93.334	94.869	95.221	97.799	97.716	96.968	97.761
12:31	MA39240-CCB4	96.529	95.665	96.1	96.459	96.758	97.408	96.856	97.949
12:35	ZZZZZZ	95.012	96.206	94.171	94.2	96.041	94.93	95.905	96.641
12:40	ZZZZZZ	97.133	94.704	98.112	97.554	100.071	98.657	97.972	100.336
12:44	ZZZZZZ	94.97	95.315	94.702	93.987	95.679	94.75	97.05	96.664
12:49	ZZZZZZ	95.967	95.118	94.804	94.299	95.951	94.903	96.885	97.111
12:53	ZZZZZZ	96.277	96.247	97.527	96.82	98.498	96.97	98.172	98.924
12:58	MA39240-CRI4	97.341	96.507	97.853	96.63	98.386	98.477	99.204	99.069
13:02	ZZZZZZ	96.487	95.371	95.848	95.255	97.304	96.449	97.394	97.51
13:06	MA39240-CCVA5	94.089	92.599	95.466	95.991	98.412	97.518	96.763	99.329
13:11	MA39240-CCB5	96.427	94.82	96.657	96.268	98.102	97.284	97.048	98.165
13:15	ZZZZZZ	97.193	95.303	96.094	97.23	97.661	97.577	97.326	97.806
13:20	ZZZZZZ	96.85	96.088	95.478	96.036	96.899	96.566	97.956	97.817
13:24	ZZZZZZ	96.021	95.357	96.561	96.428	97.053	97.018	97.477	97.742
13:29	ZZZZZZ	96.872	95.444	95.765	95.643	97.506	96.975	96.803	97.513
13:33	ZZZZZZ	96.35	95.248	96.11	96.799	97.518	96.443	97.632	97.553
13:37	ZZZZZZ	96.396	95.447	96.964	96.118	97.61	97.223	96.868	97.984
13:42	MA39240-CCVA6	94.628	91.871	95.697	95.486	97.485	97.099	96.784	98.567
13:46	MA39240-CCB6	95.287	94.207	96.697	95.644	97.338	96.437	96.495	97.977
13:51	MP93121-MB2	95.932	95.255	94.568	94.92	95.802	95.306	96.177	96.121
13:55	MP93121-B2	95.627	94.058	96.487	96.728	99.065	98.252	97.579	99.468
13:59	MP93121-S3	93.525	92.287	95.714	96.762	98.879	98.326	99.002	98.441
14:04	MP93121-S4	93.681	90.681	96.219	97.137	99.554	98.218	97.408	100.05
14:08	ZZZZZZ	95.145	93.239	95.622	95.807	96.461	96.092	95.968	97.026
14:13	MA39240-CRI5	95.289	93.396	95.649	97.288	97.403	97.275	95.984	97.015
14:17	MA39240-CCVA7	94.342	92.11	95.526	95.691	98.081	97.607	96.423	97.717

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
14:22	MA39240-CCB7	95.682	93.913	95.758	97.537	96.766	96.494	95.066	96.883
14:26	MP93244-MB1	96.019	93.82	95.307	96.899	96.497	96.182	95.699	97.313
14:31	ZZZZZZ	95.313	93.147	95.45	96.418	97.707	98.36	97.228	97.801
14:35	MP93244-S1	93.729	92.481	95.096	96.294	97.786	98.071	96.648	97.974
14:42	MP93244-S2	94.259	91.795	95.138	97.179	96.547	97.898	96.52	97.474
14:46	MP93244-B1	94.243	92.266	94.033	95.32	96.627	96.899	96.349	96.89
14:51	ZZZZZZ	94.241	92.813	93.668	94.217	95.603	95.381	95.323	95.506
14:55	JC18052-16	93.087	91.42	94.068	95.641	95.809	96.338	96.084	96.639
15:00	FA33144-2	92.725	90.887	93.597	95.977	95.946	97.277	97.051	96.178
15:04	MA39240-CCVA8	92.783	91.471	93.607	95.671	96.926	97.418	97.263	97.298
15:08	MA39240-CCB8	94.96	93.711	95.315	95.379	97.195	97.787	96.776	97.435
15:13	FA33144-3	91.951	89.612	91.411	93.988	95.465	95.721	95.458	95.378
15:17	FA33144-4	89.649	87.448	91.669	93.079	94.64	94.344	92.951	94.666
15:22	FA33144-5	92.051	90.705	93.615	95.342	95.63	95.913	96.631	96.313
15:26	MA39240-CCVA9	91.894	90.213	93.06	94.482	96.341	96.032	95.413	96.631
15:31	MA39240-CCB9	94.611	92.647	93.319	95.144	93.826	94.216	93.63	94.574
15:35	MP93244-B1	94.409	91.427	93.683	95.86	94.721	96.581	94.375	96.025
15:40	MP93244-S1	92.439	90.95	93.728	93.847	95.454	95.381	95.329	95.988
15:44	MP93244-S2	92.757	90.909	93.273	95.033	94.006	95.844	95.618	94.775
15:48	ZZZZZZ	93.484	91.964	92.944	95.231	94.519	96.443	96.439	95.401
15:53	ZZZZZZ	93.676	90.686	94.406	95.079	96.284	95.945	96.56	96.045
15:57	ZZZZZZ	92.112	90.656	93.21	94.847	95.967	96.355	95.899	96.414
16:02	ZZZZZZ	93.146	90.221	93.531	94.542	95.487	96.078	94.885	95.738
16:06	ZZZZZZ	94.306	92.14	93.918	95.163	96.299	95.481	94.614	95.894
16:11	MA39240-CCVA10	92.75	90.987	92.628	94.362	96.682	95.789	95.878	96.542
16:15	MA39240-CCB10	92.294	91.069	93.068	93.021	94.363	93.23	93.068	95.079
16:19	MP93260-MB1	93.542	92.088	94.055	95.157	94.931	94.927	94.319	95.148
16:24	MP93260-B1	93.005	92.132	93.744	94.646	95.001	95.698	95.163	95.759
16:28	MP93260-S1	No results reported for the elements associated with this internal standard.							
16:33	MP93260-S2	No results reported for the elements associated with this internal standard.							
16:38	ZZZZZZ	102.734	97.596	106.409	111.566	99.579	100.436	94.682	99.514
16:42	ZZZZZZ	99.663	95.974	100.516	106.928	95.708	97.759	92.809	95.812
16:46	ZZZZZZ	97.824	94.131	99.507	105.288	95.896	96.326	92.556	95.51

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
16:51	ZZZZZZ	96.6	92.406	97.899	104.097	95.806	98.652	93.311	96.556
16:56	ZZZZZZ	97.361	93.563	98.981	104.722	96.915	99.145	94.849	96.584
17:01	MA39240-CCVA11	97.211	92.75	99.661	103.865	97.631	98.293	94.196	97.067
17:05	MA39240-CCB11	96.388	93.873	98.183	102.194	95.279	96.271	92.637	94.636
17:10	MP93260-S1	No results reported for the elements associated with this internal standard.							
17:14	MP93260-S2	No results reported for the elements associated with this internal standard.							
17:19	JC18617-3	No results reported for the elements associated with this internal standard.							
17:23	ZZZZZZ	No results reported for the elements associated with this internal standard.							
17:28	ZZZZZZ	92.578	89.615	92.961	96.835	93.047	93.247	90.329	92.646
17:32	ZZZZZZ	92.583	90.047	93.002	95.649	92.792	93.2	91.683	93.071
17:37	ZZZZZZ	90.65	88.457	93.306	97.299	93.558	95.753	92.869	94.813
17:41	ZZZZZZ	88.966	85.6	91.035	94.894	93.849	94.498	91.016	93.837
17:46	ZZZZZZ	95.362	91.512	98.409	101.819	97.544	98.788	94.996	98.391
17:50	MA39240-CCVA12	95.906	92.279	98.259	100.556	97.282	98.036	95.214	97.869
17:54	MA39240-CCB12	98.004	95.082	98.598	100.384	96.456	97.498	94.613	96.39
17:59	ZZZZZZ	91.211	87.901	94.183	96.65	96.068	96.065	93.853	96.187
18:03	ZZZZZZ	91.409	88.825	95.881	98.507	97.171	96.834	94.012	96.965
18:08	ZZZZZZ	90.399	87.838	94.23	96.755	96.875	96.146	93.065	97.023
18:12	ZZZZZZ	93.143	89.808	97.078	99.797	97.932	97.882	94.843	97.901
18:17	ZZZZZZ	89.007	86.374	94.269	95.933	95.956	95.25	92.678	96.506
18:22	ZZZZZZ	99.648	96.397	100.907	103.317	99.038	99.815	96.709	98.741
18:26	ZZZZZZ	98.926	94.333	98.281	101.212	97.859	97.812	94.367	98.215
18:30	MA39240-CCVA13	94.623	91.458	95.373	98.199	95.86	97.613	94.065	95.299
18:35	MA39240-CCB13	96.193	93.658	96.608	98.282	96.199	96.411	94.525	95.715
18:39	ZZZZZZ	90.575	87.699	92.809	97.125	93.264	95.294	93.548	94.392
18:44	ZZZZZZ	97.101	94.057	98.225	100.355	97.279	97.197	95.262	97.516
18:48	ZZZZZZ	97.966	94.976	98.396	99.673	96.309	97.017	95.535	97.248
18:53	ZZZZZZ	95.741	94.057	96.746	98.094	94.833	95.354	94.66	96.017

! = Outside limits.

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 %

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
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
Istd#16 Holmium (165-1)			60-125 %	60-125 %					

11.1.1

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INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
09:21	MA39240-STD1	100	100	100
09:25	MA39240-STD2	100	100	100
09:30	MA39240-STD3	100	100	100
09:34	MA39240-STD4	99.977	101.062	100.456
09:39	MA39240-STD5	98.831	100.835	99.696
09:43	MA39240-STD6	99.618	101.818	100.511
09:48	MA39240-STD7	100.069	103.028	101.067
09:52	MA39240-STD8	101.341	103.632	102.231
09:56	MA39240-STD9	99.455	100.722	99.012
10:01	MA39240-STD10	99.249	100.549	99.138
10:05	MA39240-STD11	98.804	101.463	97.515
10:10	MA39240-STD12	99.449	98.241	96.737
10:14	ZZZZZZ	99.413	100.385	99.631
10:19	MA39240-ICVA1	99.421	99.77	97.783
10:23	MA39240-ICV1	99.67	101.898	100.286
10:27	MA39240-ICB1	100.053	102.13	100.325
10:32	MA39240-CRI1	100.007	101.393	100.302
10:36	MA39240-ICSA1	94.185	89.551	87.689
10:41	MA39240-ICSAB1	96.074	90.267	88.825
10:46	ZZZZZZ	102.653	102.664	101.748
10:50	MA39240-CCVA1	104.345	102.243	101.794
10:54	MA39240-CCB1	103.584	103.517	102.685
11:04	MA39240-CCVA2	104.473	101.252	101.586
11:11	MA39240-CCB2	103.297	103.808	103.503
11:15	ZZZZZZ	103.949	106.694	105.426
11:19	ZZZZZZ	103.681	103.819	103.108
11:24	ZZZZZZ	104.604	106.111	105.166
11:28	ZZZZZZ	102.73	103.28	102.327
11:33	ZZZZZZ	104.327	104.153	103.962
11:37	ZZZZZZ	102.378	103.271	102.725
11:41	ZZZZZZ	102.464	103.502	102.363
11:46	MA39240-CRI2	101.42	103.087	101.535
11:50	MA39240-CCVA3	102.147	101.162	100.051

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
11:56	MA39240-CCB3	101.317	102.761	100.583
12:00	ZZZZZZ	97.416	106.014	100.714
12:04	ZZZZZZ	103.908	104.426	102.862
12:09	ZZZZZZ	96.8	101.788	98.361
12:13	ZZZZZZ	96.391	98.734	95.831
12:18	ZZZZZZ	96.722	97.567	95.965
12:22	MA39240-CRI3	96.041	98.733	96.725
12:27	MA39240-CCVA4	97.551	96.487	94.976
12:31	MA39240-CCB4	96.668	97.725	96.592
12:35	ZZZZZZ	94.812	98.586	95.836
12:40	ZZZZZZ	98.243	99.219	98.542
12:44	ZZZZZZ	94.981	97.668	95.316
12:49	ZZZZZZ	95.018	98.234	94.974
12:53	ZZZZZZ	96.752	98.482	96.442
12:58	MA39240-CRI4	98.043	98.916	98.558
13:02	ZZZZZZ	95.963	97.971	96.467
13:06	MA39240-CCVA5	96.933	97.166	94.672
13:11	MA39240-CCB5	96.397	98.253	96.353
13:15	ZZZZZZ	97.518	97.522	97.149
13:20	ZZZZZZ	96.863	98.985	97.944
13:24	ZZZZZZ	96.641	97.598	97.012
13:29	ZZZZZZ	95.926	98.335	96.868
13:33	ZZZZZZ	96.549	98.02	96.082
13:37	ZZZZZZ	96.271	98.128	96.626
13:42	MA39240-CCVA6	97.201	96.687	95.1
13:46	MA39240-CCB6	96.1	97.967	96.135
13:51	MP93121-MB2	95.166	100.896	97.543
13:55	MP93121-B2	97.497	98.061	97.308
13:59	MP93121-S3	98.472	98.153	97.456
14:04	MP93121-S4	98.49	98.807	97.838
14:08	ZZZZZZ	96.274	96.121	95.482
14:13	MA39240-CRI5	97.265	97.054	97.151
14:17	MA39240-CCVA7	97.195	95.963	96.256

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
14:22	MA39240-CCB7	96.466	96.955	97.014
14:26	MP93244-MB1	96.016	98.355	97.959
14:31	ZZZZZZ	97.51	98.588	97.61
14:35	MP93244-S1	97.438	97.238	96.023
14:42	MP93244-S2	97.558	96.958	96.483
14:46	MP93244-B1	97.055	97.395	97.046
14:51	ZZZZZZ	95.982	95.912	95.622
14:55	JC18052-16	96.783	96.722	96.965
15:00	FA33144-2	97.797	96.461	97.487
15:04	MA39240-CCVA8	97.043	95.931	95.871
15:08	MA39240-CCB8	97.243	97.665	97.615
15:13	FA33144-3	96.094	96.162	96.548
15:17	FA33144-4	94.354	94.604	94.672
15:22	FA33144-5	95.545	95.695	95.624
15:26	MA39240-CCVA9	95.828	94.761	93.606
15:31	MA39240-CCB9	94.503	95.729	94.436
15:35	MP93244-B1	96.408	95.447	96.41
15:40	MP93244-S1	95.215	94.726	94.703
15:44	MP93244-S2	95.489	95.684	94.967
15:48	ZZZZZZ	95.774	96.299	96.179
15:53	ZZZZZZ	95.722	96.353	96.799
15:57	ZZZZZZ	96.557	96.241	95.932
16:02	ZZZZZZ	95.511	96.194	95.366
16:06	ZZZZZZ	95.277	97.679	96.456
16:11	MA39240-CCVA10	96.102	93.407	93.694
16:15	MA39240-CCB10	92.92	94.554	93.054
16:19	MP93260-MB1	94.562	97.544	95.894
16:24	MP93260-B1	95.339	95.134	95.226
16:28	MP93260-S1	No results reported for the elements associated with this internal standard.		
16:33	MP93260-S2	No results reported for the elements associated with this internal standard.		
16:38	ZZZZZZ	99.51	94.09	96.611
16:42	ZZZZZZ	96.634	91.348	94.66
16:46	ZZZZZZ	96.192	91.482	93.97

INTERNAL STANDARD SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
Analyst: JO Run ID: MA39240
Parameters: Sb,As,Be,Cd,Cr,Cu,Fe,Pb,Mn,Ni,Se,Ag,Tl,Zn

Time	Sample Description	Istd#17	Istd#18	Istd#19
16:51	ZZZZZZ	97.392	90.776	93.922
16:56	ZZZZZZ	98.957	91.98	94.559
17:01	MA39240-CCVA11	98.644	92.357	94.456
17:05	MA39240-CCB11	95.887	92.086	93.74
17:10	MP93260-S1	No results reported for the elements associated with this internal standard.		
17:14	MP93260-S2	No results reported for the elements associated with this internal standard.		
17:19	JC18617-3	No results reported for the elements associated with this internal standard.		
17:23	ZZZZZZ	No results reported for the elements associated with this internal standard.		
17:28	ZZZZZZ	93.081	91.723	91.972
17:32	ZZZZZZ	92.836	91.991	92.787
17:37	ZZZZZZ	95.486	93.927	95.072
17:41	ZZZZZZ	94.353	90.195	91.569
17:46	ZZZZZZ	98.57	95.349	96.352
17:50	MA39240-CCVA12	98.095	93.741	94.457
17:54	MA39240-CCB12	96.204	95.58	95.093
17:59	ZZZZZZ	96.203	89.125	89.878
18:03	ZZZZZZ	97.345	90.494	90.141
18:08	ZZZZZZ	95.72	87.988	88.153
18:12	ZZZZZZ	97.951	91.229	90.985
18:17	ZZZZZZ	95.458	86.937	85.97
18:22	ZZZZZZ	98.72	96.85	97.629
18:26	ZZZZZZ	97.902	97.478	96.615
18:30	MA39240-CCVA13	97.214	93.301	95.305
18:35	MA39240-CCB13	95.892	94.699	95.531
18:39	ZZZZZZ	94.937	88.748	90.006
18:44	ZZZZZZ	96.94	96.635	96.677
18:48	ZZZZZZ	97.469	96.932	96.858
18:53	ZZZZZZ	95.122	95.348	94.681

! = Outside limits.

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: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39240 Units: ug/l

Time:			10:27		10:54		11:11		11:56	
Sample ID:			ICB1		CCB1		CCB2		CCB3	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	25	.34								
Antimony	2.0	.12	-0.21	<2.0	-0.32	<2.0	-0.035	<2.0	0.47	<2.0
Arsenic	0.50	.025	-0.021	<0.50	0.0018	<0.50	-0.012	<0.50	-0.0076	<0.50
Barium	1.0	.011								
Beryllium	0.50	.004	0.00076	<0.50	0.0057	<0.50	0.0022	<0.50	0.0068	<0.50
Boron	25	3.2								
Cadmium	0.50	.011	-0.0022	<0.50	0.016	<0.50	0.0028	<0.50	0.0085	<0.50
Calcium	250	2.7								
Chromium	1.0	.016	-0.011	<1.0	-0.011	<1.0	-0.017	<1.0	-0.013	<1.0
Cobalt	0.50	.003								
Copper	2.0	.1	-0.24	<2.0	-0.21	<2.0	-0.22	<2.0	-0.23	<2.0
Iron	25	.51	-0.10	<25	1.3	<25	0.20	<25	0.23	<25
Lead	0.50	.009	0.0036	<0.50	0.025	<0.50	0.015	<0.50	0.021	<0.50
Magnesium	250	.39								
Manganese	1.0	.02	0.0040	<1.0	0.023	<1.0	0.039	<1.0	0.019	<1.0
Molybdenum	1.0	.02								
Nickel	1.0	.025	0.024	<1.0	0.027	<1.0	0.014	<1.0	0.025	<1.0
Potassium	250	4.9								
Selenium	0.50	.031	0.0024	<0.50	0.016	<0.50	0.0051	<0.50	0.018	<0.50
Silver	0.50	.019	0.0014	<0.50	0.014	<0.50	0.0096	<0.50	0.011	<0.50
Sodium	250	8.7								
Strontium	5.0	.009								
Thallium	0.50	.016	0.015	<0.50	0.070	<0.50	0.014	<0.50	0.025	<0.50
Tin	5.0	.019								
Titanium	1.0	.047								
Vanadium	1.0	.045								
Zinc	5.0	.11	-0.040	<5.0	0.0019	<5.0	0.044	<5.0	0.11	<5.0

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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39240 Units: ug/l

Time:			12:31		13:11		13:46		14:22	
Sample ID:			CCB4		CCB5		CCB6		CCB7	
Metal	RL	IDL	raw	final	raw	final	raw	final	raw	final
Aluminum	25	.34								
Antimony	2.0	.12	0.28	<2.0	0.20	<2.0	0.095	<2.0	0.19	<2.0
Arsenic	0.50	.025	-0.0062	<0.50	0.016	<0.50	0.0048	<0.50	0.0044	<0.50
Barium	1.0	.011								
Beryllium	0.50	.004	0.013	<0.50	0.011	<0.50	0.012	<0.50	0.018	<0.50
Boron	25	3.2								
Cadmium	0.50	.011	0.0090	<0.50	0.0081	<0.50	0.0082	<0.50	0.016	<0.50
Calcium	250	2.7								
Chromium	1.0	.016	-0.0049	<1.0	-0.014	<1.0	-0.013	<1.0	-0.013	<1.0
Cobalt	0.50	.003								
Copper	2.0	.1	-0.23	<2.0	-0.23	<2.0	-0.23	<2.0	-0.24	<2.0
Iron	25	.51	0.62	<25	0.60	<25	0.55	<25	1.3	<25
Lead	0.50	.009	0.030	<0.50	0.027	<0.50	0.020	<0.50	0.036	<0.50
Magnesium	250	.39								
Manganese	1.0	.02	0.012	<1.0	0.020	<1.0	0.019	<1.0	0.041	<1.0
Molybdenum	1.0	.02								
Nickel	1.0	.025	0.028	<1.0	0.026	<1.0	0.030	<1.0	0.023	<1.0
Potassium	250	4.9								
Selenium	0.50	.031	0.051	<0.50	0.013	<0.50	0.015	<0.50	0.013	<0.50
Silver	0.50	.019	0.013	<0.50	0.013	<0.50	0.0097	<0.50	0.014	<0.50
Sodium	250	8.7								
Strontium	5.0	.009								
Thallium	0.50	.016	0.044	<0.50	0.038	<0.50	0.032	<0.50	0.055	<0.50
Tin	5.0	.019								
Titanium	1.0	.047								
Vanadium	1.0	.045								
Zinc	5.0	.11	0.13	<5.0	0.082	<5.0	0.12	<5.0	0.12	<5.0

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

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: result < RL Run ID: MA39240 Units: ug/l

Time:			15:08		15:31		16:15	
Sample ID:			CCB8		CCB9		CCB10	
Metal	RL	IDL	raw	final	raw	final	raw	final
Aluminum	25	.34						
Antimony	2.0	.12	0.37	<2.0	0.33	<2.0	0.24	<2.0
Arsenic	0.50	.025	-0.0042	<1.0	0.056	<1.0	0.060	<1.0
Barium	1.0	.011						
Beryllium	0.50	.004	0.020	<0.50	0.012	<0.50	0.016	<0.50
Boron	25	3.2						
Cadmium	0.50	.011	0.018	<0.50	0.011	<0.50	0.014	<0.50
Calcium	250	2.7						
Chromium	1.0	.016	-0.0074	<4.0	-0.0017	<4.0	-0.0085	<4.0
Cobalt	0.50	.003						
Copper	2.0	.1	-0.23	<4.0	-0.23	<4.0	-0.23	<4.0
Iron	25	.51	0.79	<50	1.0	<50	0.82	<50
Lead	0.50	.009	0.034	<0.50	0.029	<0.50	0.036	<0.50
Magnesium	250	.39						
Manganese	1.0	.02	0.029	<1.0	0.036	<1.0	0.020	<1.0
Molybdenum	1.0	.02						
Nickel	1.0	.025	0.026	<4.0	0.024	<4.0	0.048	<4.0
Potassium	250	4.9						
Selenium	0.50	.031	0.049	<1.0	0.050	<1.0	0.054	<1.0
Silver	0.50	.019	0.013	<2.0	0.014	<2.0	0.012	<2.0
Sodium	250	8.7						
Strontium	5.0	.009						
Thallium	0.50	.016	0.048	<0.50	0.035	<0.50	0.040	<0.50
Tin	5.0	.019						
Titanium	1.0	.047						
Vanadium	1.0	.045						
Zinc	5.0	.11	0.14	<10	0.16	<10	0.11	<10

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39240 Units: ug/l

Time:		10:19			10:23			10:50	
Sample ID:	ICVA	ICVA1		ICV	ICV1		CCVA	CCVA1	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	60	64.5	107.5				50	55.8	111.6*(a
Arsenic	60	58.3	97.2				50	49.8	99.6
Barium									
Beryllium	60	56.6	94.3				50	49.8	99.6
Boron									
Cadmium	60	57.3	95.5				50	49.5	99.0
Calcium									
Chromium	60	56.8	94.7				50	49.1	98.2
Cobalt									
Copper	60	55.0	91.7				50	47.2	94.4
Iron	5500	5560	101.1				5000	5340	106.8
Lead	60	58.9	98.2				50	50.6	101.2
Magnesium									
Manganese	60	56.9	94.8				50	49.4	98.8
Molybdenum									
Nickel	60	56.9	94.8				50	48.2	96.4
Potassium									
Selenium	60	56.6	94.3				50	50.9	101.8
Silver	60	59.6	99.3				50	49.7	99.4
Sodium									
Strontium									
Thallium	60	59.6	99.3				50	50.5	101.0
Tin									
Titanium									
Vanadium									
Zinc	60	56.6	94.3				50	49.4	98.8

(*) Outside of QC limits
(anr) Analyte not requested
(a) No samples reported for this element in the area bracketed by this QC.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39240 Units: ug/l

Time:		11:04			11:50			12:27	
Sample ID:	CCVA	CCVA2		CCVA	CCVA3		CCVA	CCVA4	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	50.3	100.6	50	49.2	98.4	50	50.1	100.2
Arsenic	50	49.0	98.0	50	48.9	97.8	50	49.0	98.0
Barium									
Beryllium	50	49.5	99.0	50	49.6	99.2	50	49.5	99.0
Boron									
Cadmium	50	48.8	97.6	50	48.8	97.6	50	48.5	97.0
Calcium									
Chromium	50	47.9	95.8	50	48.6	97.2	50	48.5	97.0
Cobalt									
Copper	50	46.6	93.2	50	47.3	94.6	50	47.2	94.4
Iron	5000	4880	97.6	5000	4920	98.4	5000	4880	97.6
Lead	50	49.9	99.8	50	49.7	99.4	50	49.6	99.2
Magnesium									
Manganese	50	48.6	97.2	50	48.5	97.0	50	48.3	96.6
Molybdenum									
Nickel	50	47.7	95.4	50	48.3	96.6	50	48.0	96.0
Potassium									
Selenium	50	49.2	98.4	50	49.8	99.6	50	48.5	97.0
Silver	50	48.9	97.8	50	48.8	97.6	50	48.8	97.6
Sodium									
Strontium									
Thallium	50	50.1	100.2	50	49.7	99.4	50	49.6	99.2
Tin									
Titanium									
Vanadium									
Zinc	50	48.4	96.8	50	48.3	96.6	50	48.5	97.0

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39240 Units: ug/l

Time:		13:06			13:42			14:17	
Sample ID:	CCVA	CCVA5		CCVA	CCVA6		CCVA	CCVA7	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	49.4	98.8	50	49.9	99.8	50	49.8	99.6
Arsenic	50	48.5	97.0	50	49.1	98.2	50	49.0	98.0
Barium									
Beryllium	50	48.8	97.6	50	49.4	98.8	50	48.5	97.0
Boron									
Cadmium	50	48.0	96.0	50	48.6	97.2	50	48.9	97.8
Calcium									
Chromium	50	48.1	96.2	50	48.3	96.6	50	48.2	96.4
Cobalt									
Copper	50	46.6	93.2	50	46.9	93.8	50	46.8	93.6
Iron	5000	4830	96.6	5000	4890	97.8	5000	4880	97.6
Lead	50	49.3	98.6	50	49.4	98.8	50	49.4	98.8
Magnesium									
Manganese	50	48.0	96.0	50	48.2	96.4	50	48.6	97.2
Molybdenum									
Nickel	50	47.4	94.8	50	47.9	95.8	50	47.7	95.4
Potassium									
Selenium	50	48.6	97.2	50	49.2	98.4	50	49.3	98.6
Silver	50	48.3	96.6	50	48.1	96.2	50	48.0	96.0
Sodium									
Strontium									
Thallium	50	49.1	98.2	50	49.6	99.2	50	49.9	99.8
Tin									
Titanium									
Vanadium									
Zinc	50	47.5	95.0	50	48.2	96.4	50	48.3	96.6

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

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 90 to 110 % Recovery Run ID: MA39240 Units: ug/l

Time:		15:04			15:26			16:11	
Sample ID:	CCVA	CCVA8		CCVA	CCVA9		CCVA	CCVA10	
Metal	True	Results	% Rec	True	Results	% Rec	True	Results	% Rec
Aluminum									
Antimony	50	50.0	100.0	50	50.3	100.6	50	49.3	98.6
Arsenic	50	49.6	99.2	50	48.9	97.8	50	49.2	98.4
Barium									
Beryllium	50	48.3	96.6	50	47.8	95.6	50	48.1	96.2
Boron									
Cadmium	50	48.9	97.8	50	48.1	96.2	50	48.2	96.4
Calcium									
Chromium	50	48.3	96.6	50	48.4	96.8	50	48.4	96.8
Cobalt									
Copper	50	47.3	94.6	50	47.3	94.6	50	47.2	94.4
Iron	5000	4920	98.4	5000	4910	98.2	5000	4920	98.4
Lead	50	49.3	98.6	50	49.5	99.0	50	49.6	99.2
Magnesium									
Manganese	50	48.6	97.2	50	48.3	96.6	50	48.6	97.2
Molybdenum									
Nickel	50	48.3	96.6	50	48.0	96.0	50	48.3	96.6
Potassium									
Selenium	50	48.9	97.8	50	49.2	98.4	50	49.3	98.6
Silver	50	48.3	96.6	50	48.9	97.8	50	48.9	97.8
Sodium									
Strontium									
Thallium	50	49.1	98.2	50	49.7	99.4	50	50.0	100.0
Tin									
Titanium									
Vanadium									
Zinc	50	48.3	96.6	50	48.6	97.2	50	48.6	97.2

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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 70 to 130 % Recovery Run ID: MA39240 Units: ug/l

Time:			10:32		11:46		12:22		12:58	
Sample ID:	CRI	CRIA	CRI1		CRI2		CRI3		CRI4	
Metal	True	True	Results	% Rec	Results	% Rec	Results	% Rec	Results	% Rec
Aluminum	25	25								
Antimony	2.0	0.25	2.2	110.0	2.6	130.0	2.1	105.0	2.1	105.0
Arsenic	0.50	0.50	0.51	102.0	0.49	98.0	0.49	98.0	0.54	108.0
Barium	1.0	0.50								
Beryllium	0.50	0.25	0.50	100.0	0.50	100.0	0.50	100.0	0.48	96.0
Boron	25	2.5								
Cadmium	0.50	0.25	0.48	96.0	0.54	108.0	0.51	102.0	0.52	104.0
Calcium	250	125								
Chromium	1.0	2.0	0.98	98.0	1.0	100.0	0.99	99.0	1.0	100.0
Cobalt	0.50	0.25								
Copper	2.0	2.0	2.0	100.0	2.1	105.0	1.9	95.0	1.9	95.0
Iron	25	25	25.9	103.6	26.3	105.2	25.2	100.8	25.3	101.2
Lead	0.50	0.25	0.50	100.0	0.51	102.0	0.53	106.0	0.52	104.0
Magnesium	250	125								
Manganese	0.50	0.25	0.54	108.0	0.53	106.0	0.54	108.0	0.53	106.0
Molybdenum	1.0	0.50								
Nickel	1.0	2.0	1.0	100.0	1.1	110.0	1.0	100.0	1.0	100.0
Potassium	250	125								
Selenium	0.50	0.50	0.55	110.0	0.59	118.0	0.54	108.0	0.54	108.0
Silver	0.50	1.0	0.54	108.0	0.55	110.0	0.54	108.0	0.50	100.0
Sodium	250	125								
Strontium	5.0	0.50								
Thallium	0.50	0.25	0.50	100.0	0.49	98.0	0.50	100.0	0.53	106.0
Tin	5.0	0.50								
Titanium	1.0	0.50								
Vanadium	1.0	2.0								
Zinc	5.0	2.0	5.3	106.0	5.4	108.0	5.3	106.0	5.4	108.0

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

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 70 to 130 % Recovery Run ID: MA39240 Units: ug/l

Time:			14:13	
Sample ID:	CRI	CRIA	CRI5	
Metal	True	True	Results	% Rec
Aluminum	25	25		
Antimony	2.0	0.25	2.0	100.0
Arsenic	0.50	0.50	0.52	104.0
Barium	1.0	0.50		
Beryllium	0.50	0.25	0.49	98.0
Boron	25	2.5		
Cadmium	0.50	0.25	0.48	96.0
Calcium	250	125		
Chromium	1.0	2.0	1.0	100.0
Cobalt	0.50	0.25		
Copper	2.0	2.0	1.9	95.0
Iron	25	25	27.2	108.8
Lead	0.50	0.25	0.51	102.0
Magnesium	250	125		
Manganese	0.50	0.25	0.58	116.0
Molybdenum	1.0	0.50		
Nickel	1.0	2.0	1.1	110.0
Potassium	250	125		
Selenium	0.50	0.50	0.57	114.0
Silver	0.50	1.0	0.54	108.0
Sodium	250	125		
Strontium	5.0	0.50		
Thallium	0.50	0.25	0.55	110.0
Tin	5.0	0.50		
Titanium	1.0	0.50		
Vanadium	1.0	2.0		
Zinc	5.0	2.0	5.4	108.0

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

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

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

File ID: XB042116M1.CSV Date Analyzed: 04/21/16 Methods: EPA 200.8, SW846 6020A
QC Limits: 80 to 120 % Recovery Run ID: MA39240 Units: ug/l

Time:			10:36		10:41	
Sample ID:	ICSA	ICSAB	ICSA1		ICSAB1	
Metal	True	True	Results	% Rec	Results	% Rec
Aluminum	100000	100000	95400	95.4	98300	98.3
Antimony			-0.12		-0.11	
Arsenic		20	0.10		19.9	99.5
Barium			0.11		0.12	
Beryllium			0.014		0.012	
Boron			4.4		2.9	
Cadmium		20	0.64		19.7	98.5
Calcium	100000	100000	96100	96.1	98300	98.3
Chromium		20	1.2		20.2	101.0
Cobalt		20	0.017		18.5	92.5
Copper		20	0.39		17.6	88.0
Iron	100000	100000	90100	90.1	91200	91.2
Lead			0.21		0.22	
Magnesium	100000	100000	91800	91.8	93900	93.9
Manganese		20	0.32		19.7	98.5
Molybdenum	2000	2000	1990	99.5	2030	101.5
Nickel		20	0.30		18.1	90.5
Potassium	100000	100000	95400	95.4	98800	98.8
Selenium		20	0.063		19.2	96.0
Silver		20	0.019		18.9	94.5
Sodium	100000	100000	92900	92.9	96200	96.2
Strontium			0.72		0.74	
Thallium			0.0096		0.0081	
Tin			0.081		0.055	
Titanium	2000	2000	1950	97.5	1980	99.0
Vanadium		20	-0.019		21.4	107.0
Zinc		20	1.2		18.9	94.5

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

QC Batch ID: MP93244
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/20/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.34	1.3		
Antimony	2.0	.12	.26	-0.013	<2.0
Arsenic	1.0	.025	.034	0.033	<1.0
Barium	1.0	.011	.028		
Beryllium	0.50	.004	.013	0.0089	<0.50
Boron	50	3.2			
Cadmium	0.50	.011	.12	0.00060	<0.50
Calcium	250	2.7	3.7		
Chromium	4.0	.016	.1	0.023	<4.0
Cobalt	0.50	.003	.018		
Copper	4.0	.1	.14	0.14	<4.0
Iron	50	.51	2	2.2	<50
Lead	0.50	.009	.011	0.072	<0.50
Magnesium	250	.39	3.6		
Manganese	1.0	.02	.095	0.058	<1.0
Molybdenum	1.0	.02	.23		
Nickel	4.0	.025	.11	0.43	<4.0
Potassium	250	4.9	8.8		
Selenium	1.0	.031	.12	0.035	<1.0
Silver	2.0	.019	.041	0.0054	<2.0
Sodium	250	8.7	2.5		
Strontium	5.0	.009	.015		
Thallium	0.50	.016	.013	0.030	<0.50
Tin	5.0	.019	.38		
Titanium	1.0	.047	.56		
Vanadium	4.0	.045	.2		
Zinc	10	.11	1.2	3.2	<10

Associated samples MP93244: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

QC Batch ID: MP93244
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/20/16

Metal	JC18052-16 Original	MS	Spikelot MPXDW7	% Rec	QC Limits
Aluminum					
Antimony	0.44	117	100	116.6	70-130
Arsenic	0.37	106	100	105.6	70-130
Barium					
Beryllium	0.075	104	100	103.9	70-130
Boron					
Cadmium	0.094	102	100	101.9	70-130
Calcium					
Chromium	1.2	104	100	102.8	70-130
Cobalt					
Copper	0.39	103	100	102.6	70-130
Iron	344	2030	2000	84.3	70-130
Lead	1.0	105	100	104.0	70-130
Magnesium					
Manganese	22.7	127	100	104.3	70-130
Molybdenum					
Nickel	1.7	105	100	103.3	70-130
Potassium					
Selenium	0.13	204	200	101.9	70-130
Silver	0.020	104	100	104.0	70-130
Sodium					
Strontium					
Thallium	0.048	105	100	105.0	70-130
Tin					
Titanium					
Vanadium					
Zinc	15.0	118	100	103.0	70-130

Associated samples MP93244: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

QC Batch ID: MP93244
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/20/16

Metal	JC18052-16 Original	MSD	Spikelot MPXDW7	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.44	116	100	115.6	0.9	10
Arsenic	0.37	104	100	103.6	1.9	10
Barium						
Beryllium	0.075	103	100	102.9	1.0	10
Boron						
Cadmium	0.094	101	100	100.9	1.0	10
Calcium						
Chromium	1.2	104	100	102.8	0.0	10
Cobalt						
Copper	0.39	100	100	99.6	3.0	11
Iron	344	2070	2000	86.3	2.0	10
Lead	1.0	105	100	104.0	0.0	10
Magnesium						
Manganese	22.7	125	100	102.3	1.6	10
Molybdenum						
Nickel	1.7	103	100	101.3	1.9	10
Potassium						
Selenium	0.13	202	200	100.9	1.0	10
Silver	0.020	102	100	102.0	1.9	10
Sodium						
Strontium						
Thallium	0.048	104	100	104.0	1.0	10
Tin						
Titanium						
Vanadium						
Zinc	15.0	116	100	101.0	1.7	10

Associated samples MP93244: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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: FA33144
Account: ALSE - Accutest Laboratories Southeast, Inc.
Project: URSNCM: Rocky Mtn Landfill; NC

QC Batch ID: MP93244
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/20/16

Metal	BSP Result	Spikelot MPXDW7	% Rec	QC Limits
Aluminum				
Antimony	89.1	100	89.1	85-115
Arsenic	94.9	100	94.9	85-115
Barium				
Beryllium	92.5	100	92.5	85-115
Boron				
Cadmium	93.2	100	93.2	85-115
Calcium				
Chromium	93.2	100	93.2	85-115
Cobalt				
Copper	91.7	100	91.7	85-115
Iron	1830	2000	91.5	85-115
Lead	93.7	100	93.7	85-115
Magnesium				
Manganese	94.0	100	94.0	85-115
Molybdenum				
Nickel	94.0	100	94.0	85-115
Potassium				
Selenium	185	200	92.5	85-115
Silver	106	100	106.0	85-115
Sodium				
Strontium				
Thallium	94.0	100	94.0	85-115
Tin				
Titanium				
Vanadium				
Zinc	93.9	100	93.9	85-115

Associated samples MP93244: FA33144-2, FA33144-3, FA33144-4, FA33144-5

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